

# Preop Axillary US Useful in Early Breast Cancer

BY DOUG BRUNK

A SYMPOSIUM SPONSORED BY THE SOCIETY OF SURGICAL ONCOLOGY

ST. LOUIS — The overall diagnostic accuracy of preoperative axillary ultrasound for determining lymph node status in early-stage breast cancer patients was 73%, results from a single-center study have shown.

The method might have spared 14% of patients from having to undergo a sentinel lymph node biopsy, allowing them to proceed directly to axillary node dissection, Dr. Jonathan Cools-Lartigue reported during a poster session at the symposium.

**VITALS** **Major Finding:** The overall diagnostic accuracy of preoperative axillary ultrasound for determining lymph node status in early-stage breast cancer patients was 73%.

**Data Source:** Single-center study of 319 patients with early-stage breast cancer.

**Disclosures:** None was reported.

Although sentinel lymph node biopsy is considered the standard of care in the operative management of breast cancer, it comes with its share of drawbacks, said Dr. Cools-Lartigue, a first-year resident in the department of general surgery at McGill University Health Centre, Montreal. For example, having a falsely negative sentinel lymph node biopsy on frozen section “may result in having to subject the patient to a second procedure, and the costs associated with that. Ultrasound—particularly when combined with fine-needle aspiration—provides a potential opportunity to streamline an algorithm for care of patients.”

For the study, he and his associates evaluated clinical, imaging, and laboratory data from 319 consecutive patients with early-stage breast cancer who underwent preoperative axillary ultrasound evaluation at McGill between 2005 and 2007. “All patients with primary breast cancer referred to our center routinely receive axillary ultrasound,” Dr. Cools-Lartigue said. “We didn’t select patients based on the degree of disease we [thought] that they had. We took all comers.”

The median age of the 319 patients was 58 years, 67% of patients had ductal disease, 80% were estrogen-receptor positive, 61% were progesterone-receptor positive, 11% were human epidermal growth factor receptor 2 (HER2/neu) positive, and 45% had positive axillary nodes.

The sensitivity and specificity values for any ultrasound abnormality in identifying nodal metastases were 54% and 89%, respectively, while the positive and negative predictive values of ultrasound in the diagnosis of nodal metastases were 80% and 70%, respectively. The overall accuracy was 73%.

The diagnostic accuracy improved

with a higher number of positive lymph nodes (greater than 3 vs. fewer than 3) and a larger size of metastatic disease (greater than 2 mm vs. less than 2 mm).

Certain clinical and pathologic factors were associated with having abnormal ultrasound findings, including the number of involved nodes, estrogen receptor and HER2/neu positivity, size of metastasis, presence of lymphovascular invasion, and tumor grade. “Those are interesting

results,” Dr. Cools-Lartigue commented. “I think they reflect the biology of the malignancy. More aggressive malignancies are likely to be associated with an abnormal ultrasound, compared [with] less aggressive malignancies.”

A subset analysis of 75 patients who had undergone concomitant fine-needle aspiration revealed that 61% had nodal metastases, with a positive predictive value of 100%.

Fine-needle aspiration was more likely to be positive with increasing tumor size. It also had an accuracy of 80% when combined with ultrasound.

Dr. Cools-Lartigue acknowledged certain limitations of the study including its single-center design and that fact that it included patients with all types of early-stage breast cancer. “Because we looked at all comers, the sensitivity was lower than what has been seen in other studies.” ■



Introducing

**Prenate** Essential™  
Rx prenatal vitamin & DHA With METAFOLIN®

*DHA plus iodine and biotin!*

*Nothing is too good for  
her little prince*

- > 150 mcg of iodine to compensate for the general reduction in iodine status in the USA<sup>1\*</sup>
- > Severe iodine deficiency during pregnancy has been shown to lead to mental retardation and other developmental abnormalities in infants<sup>2</sup>
- > 250 mcg of biotin to maintain levels during pregnancy<sup>3</sup>
- > 300 mg of DHA may help to improve cognitive development and visual acuity<sup>4-7†</sup>
- > The Prenate® Vitamin Family contains Metafolin®, which may help reduce the risk of neural tube defects, especially in those who have difficulty metabolizing folic acid<sup>8-10</sup>

Learn more at [www.prenate.com](http://www.prenate.com) and [www.prenateperl.com](http://www.prenateperl.com).

\*The NHANES I and NHANES III surveys showed that from 1988-1994, 11.7% of Americans exhibited iodine deficiency, which represents a 4.5-fold increase compared with 1971-1974.<sup>1</sup>

†Supportive, but not conclusive, research shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease. One capsule of PRENATE ESSENTIAL™ provides 340 mg of omega-3 fatty acids, of which 300 mg are DHA.

**WARNING:** Accidental overdose of iron-containing products is a leading cause of fatal poisoning in children under 6. Keep this product out of reach of children. In case of accidental overdose, call a doctor or poison control center immediately.

**WARNING:** Ingestion of more than 3 grams of omega-3 fatty acids (such as DHA) per day has been shown to have potential antithrombotic effects, including an increased bleeding time and International Normalized Ratio (INR). Administration of omega-3 fatty acids should be avoided in patients taking anticoagulants and in those known to have an inherited or acquired predisposition to bleeding.

Please see full Product Information on reverse.

**Prenate** Essential™  
Rx prenatal vitamin & DHA With METAFOLIN®  
With them all the way

