DGDispatch

ASBS: Ultrasound Core Breast Biopsy Shown to Negate Need for Excisional Breast Biopsy for Large Patient Population

By Jill Taylor

ATLANTA, GA -- May 5, 2003 -- Principal histology obtained by ultrasound-guided breast needle biopsy accurately predicts excisional biopsy findings in 90% of procedures, according to a study presented here on May 3rd at the 4th Annual Meeting of the American Society of Breast Surgeons.

"Many physicians have been concerned about core biopsy because it's a sampling procedure, and may not accurately reflect the true nature of the lesion," lead researcher J.P. Crowe, MD said in an interview. "But in our experience, we really have been able to sort out those patients who, even with a benign core biopsy, need to go to the operating room for an excisional [biopsy] and those patients who have a benign core biopsy truly reflective of a benign lesion."

Dr. Crowe and colleagues at The Cleveland Clinic Breast Center, Cleveland Clinic Foundation, in Cleveland, Ohio, collected data from 832 USB procedures followed by excisional biopsy procedures within 1 year. Histologies obtained at ultrasound-guided and excisional biopsies were ranked, with categories defined as invasive breast cancer, ductal carcinoma in-situ (DCIS), atypical ductal or lobular carcinoma in-situ (atypia/LCIS), and benign.

Investigators found the strongest agreement between ultrasound-guided and excisional biopsy occurred for invasive breast cancer, comprising 78% of the sample. Ultrasound-guided diagnosis of invasive cancer occurred at 96%, and confirmed by excisional biopsy at 98%, suggesting that for like cases, excisional biopsy may be an unnecessary surgical procedure.

While ultrasound-guided biopsy results for all benign diagnoses (15% of the sample) contradicted radiologic and clinical examination, agreement between ultrasound-guided and excisional biopsies occurred at a rate of 73%. Excisional biopsy findings resulted in an upgrade to cancer for 21% of benign findings on ultrasound-guided biopsies (17 instances invasive, 9 instances DCIS), and a 6% upgrade to atypia/LCIS.

Dr. Crowe reported that ultrasound-guided biopsy histology is useful in keeping patients with benign lesions out of the operating room. "Not reported in this study is a large group of patients with ultrasound identifiable lesions that turned out to be benign on core biopsy, and where the ultrasound and mammographic features were concordant with the benign biopsy," he said.

The findings for the remainder of the sample (4% DCIS and 3% atypia/LCIS) showed significantly reduced agreement. Excisional biopsy findings for DCIS diagnosed by ultrasound-guided biopsy resulted in an upgrade to invasive cancer at a rate of 52%, and an upgrade rate of 50% for atypia/LCIS (nine instances invasive, five instances DCIS).

Where disagreement occurred between ultrasound and excisional biopsy principal histology, researchers reported ultrasound histology correct versus excisional biopsy in 3% of procedures, and excisional histology correct versus ultrasound in 7% of procedures.

Overall, the study showed a moderate agreement between ultrasound-guided and excisional biopsy principal histology (Kappa = 0.701, $P<0.001$).

For clinical purposes, the researchers concluded that the excisional biopsy procedure is required for all ultrasound-guided histologic findings of DCIS, atypia/LCIS, or benign, where indicated by radiologic or clinical examination.

[*Study title: Does Ultrasound Core Breast Biopsy Predict Histologic Finding on Excisional Biopsy?*]