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Minimally invasive breast biopsy lags in Texas

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PALM BEACH, FLA. – More than a fifth of women in Texas with image-detected breast abnormalities failed to undergo minimally invasive breast biopsy as recently as 2008, according to a review of statewide Medicare data, even though in 2005 a U.S. consensus panel declared the minimally invasive approach the procedure of choice and that few patients should have excisional biopsy as their initial procedure.

The analysis also revealed substantial disparities in use of minimally-invasive breast biopsy (MIBB) relative to open-surgical biopsy. In several rural health service areas (HSA) of Texas during 2005-2008, fewer than 40% of women undergoing biopsy of an image-detected breast abnormality had MIBB, Dr. Taylor S. Riall said at the annual meeting of the Southern Surgical Association. During 2005-2008, 5% of Texas HSAs had MIBB rates greater than 90%, the target set by U.S. cancer organizations. The researchers also identified low levels of MIBB use for Hispanic women, and women of low socioeconomic status.

Dr. Taylor S. Riall

"Our studies identify targets for interventions to improve MIBB rates, such as the Hispanic disparity and geographic variations in practice pattern," she said. "Our findings highlight that the strategies for intervention need to vary by geographic region and the underlying etiology of the failure to adopt this cost-effective practice," said Dr. Riall, a cancer surgeon at the University of Texas Medical Branch in Galveston.

"This is by far the most detailed study of MIBB [practice patterns] performed to date," commented Dr. Stephen Grobmyer, a surgical oncologist and director of breast services at the Cleveland Clinic.

The data documented that surgeons were an important contributor to MIBB underuse. Throughout the 9 years of data studied by Dr. Riall and her associates during 2001-2008, 70% of MIBB were performed by radiologists, while 26% were performed by surgeons. In contrast, surgeons performed 94% of open, excisional biopsies. When a woman's breast mass was first identified by a surgeon, 44% of the women had MIBB; when first identified by a primary care physician, 58% had MIBB; when first identified by an oncologist, 59% had MIBB; and when first identified by a gynecologist, 67% had MIBB.

The low levels of MIBB use occurred despite increasingly strong recommendations during the period studied to move MIBB to the forefront of breast-abnormality assessment. In 2001, the first international consensus conference on image-detected breast cancer, organized by the University of Southern California, said that "percutaneous biopsy is the preferred initial diagnostic procedure in most patients with mammographically detected abnormalities"(J. Amer. Coll. Surg. 2001;193:297-302).

In 2005, the second international consensus conference on image-detected breast cancer racheted up the recommendation, saying "minimally invasive breast biopsy is the optimal tissue-acquisition method and the procedure of choice for image-detected breast abnormalities. It should be readily available to all patients with image-detected lesions" (J. Amer. Coll. Surg. 2005;201:586-597).

Although the third international consensus conference did not take place until 2009, the year after the end of the period studied by Dr. Riall, the statement at that time showed how MIBB had become the clear standard of care for biopsy of suspicious breast masses. The 2009 panel said that "percutaneous needle biopsy represents 'best practice' and should be the new 'gold standard' for initial diagnosis. It should essentially replace open biopsy in this role. The Panel called on the medical community to change their current practice if they are using open surgical breast biopsy as a standard diagnostic procedure. Surgeons should audit their practice and make adjustments to decrease their rate of open biopsy for initial diagnosis to less than 5% to 10%" (J. Amer. Coll. Surg. 2009;209:504-20).

"We need to get a message out to surgeons because they are the ones doing many of the open biopsies," Dr. Riall said in an interview. "Surgeons are a group to target, but we also need to target primary care physicians and other referring physicians so that they understand that MIBB is appropriate. The decision to do MIBB versus open biopsy should be made with the surgeon and with the oncologist who will ultimately treat the breast cancer; the decision should not be made just by a radiologist," who is usually the first person to see a mass when it is first detected by mammography.

Dr. Riall also stressed that the causes of MIBB underuse are multifactorial, and require multiple solutions.

"In very rural areas, the primary problem is access to mammography. In the cases where women cluster in primary care practices that don't do MIBB, we need to provide better physician education. In regions where there is a high density of private practice surgeons, open biopsy is driven by reimbursement. I think there is an interaction of patient preference, surgeon preference, education and training, geographic region, and availability of radiologists and mammography facilities. Trying to dissect it is very hard."

Her study identified in Texas Medicare records 67,582 unique women aged 66 years or older who underwent 75,518 unique breast mass episodes during 2001-2008, including 49,653 (66%) of masses that underwent MIBB and 25,865 (34%) that underwent open surgical biopsy. Use of MIBB rose steadily during the period, starting at 44% of masses in 2001 and increasing to 79% by 2008.

Analysis of MIBB use by Medicare health service area showed stark geographic disparities, with MIBB use as low as 21% in one HSA. During 2005-2008, MIBB use remained at 40% or less in several HSA along the Rio Grande border and in East Texas, including the HSAs in the south Texas towns of McAllen and Harlingen. In contrast, the HSA immediately adjacent to these that includes Brownsville had a MIBB rate greater than 70%. The analysis also showed than many of the HSAs with the lowest rates of MIBB use were located in Texas regions with high Hispanic populations, Dr. Riall said.

Dr. Riall and Dr. Grobmyer had no disclosures.
