Breast cancer detection and diagnosis has changed dramatically secondary to improvements in imaging, screening, and public awareness. The goal of these improvements is the diagnosis of breast cancer at an early or curable stage. This means finding the tumor before it has grown and developed the ability to spread to regional lymph nodes as well as to the rest of the body. Because of these improvements, most women today are diagnosed at an early stage with over 60% of women being node negative, with tumors less than 2 centimeters in size at the time of their presentation. The development of percutaneous (or minimally invasive) breast biopsy techniques has emerged over the last 15 years as the standard for care for biopsying image detected lesions. In the past, all women with nonpalpable image detected lesions were subject to open surgical breast biopsies with wire needle localization for diagnosis. This requires anesthesia, insertion of a guide wire, a surgical incision 2-3 inches in length, removal of a large portion of uninvolved tissue, sutures, and a longer recovery. Because a large majority of open surgical biopsies were negative, the development of a minimally invasive technique was certainly needed. This is where stereotactic core needle biopsy (SCNB) with vacuum-assisted technology has emerged as the procedure of choice in dealing with imaged detected abnormalities.

Stereotactic core needle biopsy is a minimally invasive, highly accurate, image guided outpatient procedure that has replaced open surgical biopsy as the procedure of choice for biopsing suspicious mammographic findings. Mammographic lesions are categorized according to the American College of Radiology BIRADS final assessment category. Lesions classified as a BIRADS category 4 (suspicious abnormality) or BIRADS category 5 (highly suggestive of malignancy) warrant a biopsy. Lesions classified lower than this, ie BIRADS 1-3 are usually benign and can be followed closely. Mammographic findings that are considered suspicious and require a biopsy include microcalcifications, asymmetric densities, architectural distortion, stellate lesions, and spiculations. Most image detected abnormalities can be biopsied with percutaneous methods.

The advantages of stereotactic core needle biopsy include: it is a shorter
Coastal Carolina Breast Center is the area’s only surgical practice dedicated solely to breast health and is one of only eight centers in South Carolina to be accredited by NAPBC. Recognized as a Center of Excellence, Coastal Carolina Breast Center demonstrates a commitment to patient education, advocacy, and awareness of advanced breast cancer treatments. In the last fifteen years, they have treated an estimated 25,000 patients.

procedure (20-30 minutes), it causes no cosmetic deformity, it is half the cost of traditional open biopsy, it doesn’t cause scarring that makes future mammograms difficult to interpret, it decreases the number of subsequent operations, you can resume normal activities sooner, and it is just as accurate as open excisional breast biopsy.

The contraindications to stereotactic core needle biopsy include: lesions that are not seen stereotactically, lesions too close to the chest wall, lesions too close to the skin, lesions that are just behind the nipple areola complex, lesions that are too vague to be seen on multiple images, and some widespread calcifications. Finally, some patients due to preexisting medical conditions cannot be properly positioned for the procedure.

Noncancerous lesions requiring open surgical excision after image guided stereotactic core needle biopsy include: atypical ductal hyperplasia, atypical lobular hyperplasia, radial scars, lobular carcinoma in situ, and when there is discordance between the pathological and radiographical findings. These lesions need to be excised as they have a higher incidence of association with invasive breast cancer. Ductal Carcinoma in Situ and Invasive Breast Cancer also warrant further surgical treatments.

The device that we use at Georgetown Memorial Hospital and Waccamaw Community Hospital is the automated vacuum-assisted 9 gauge Suros Eviva device. This device employs an outer cannula that remains in the breast while multiple samples are collected. This instrument employs a vacuum to pull breast tissue into the probe aperture while an electronically driven hollow cylindrical cutter removes a core of tissue. Its advantages include increased sample weights, directional sampling capability, only one insertion, and it is relatively well tolerated. The Fischer or Hologic tables that are compatible with it offer superb flexibility when trying to biopsy hard to reach lesions.

At our hospital system, the surgeons and radiologist work together in performing stereotactic core needle biopsies. This team approach, along with the help of our pathologists, provides a multidisciplinary approach to image detected lesions. Since we started performing Stereotactic core needle biopsy in 1996, we have done over 2,000 cases to date.

In summary, stereotactic core needle biopsy has been shown nationally through numerous studies to be a safe, accurate, less expensive, and cosmetically acceptable approach to image detected, nonpalpable breast lesions.

Turn to the professionals that women know and trust.

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