

## MammoMARK™ Wire Localization

### Clinical History

42 year-old female presented for an asymptomatic screening mammogram. The patient was called back for additional imaging evaluation of an indeterminate mass in the left breast.

### Findings

Additional mammographic images and ultrasound evaluation revealed an irregular hypoechoic 2.7 cm mass with a hyperechoic rim in the 5:00 10 CFN-C position of the left breast. Vascular flow was demonstrated with color Doppler evaluation. The imaging appearance of the mass is suspicious. Biopsy was recommended.

### Procedure

Utilizing sterile technique, 1% lidocaine buffered with bicarbonate for local anesthesia, and ultrasound guidance, an 8 gauge Mammotome® EX was advanced to the posterior surface of the mass (figure 1). The mass is located in the 5:00 10 CFN-C position of the left breast adjacent to the pectoralis muscle near the inframammary fold. 1% lidocaine was used to elevate the mass anterior to the pectoralis muscle and to hydro-dissect the tract for ease of placement of the 8G Mammotome® EX. Several samples of the mass were obtained. A MammoMARK™ U-shaped tissue marker was deployed successfully in the biopsy cavity (figure 2). The marker is readily visible at deployment. There were no complications.

### Pathology

The pathology results revealed a spindle cell neoplasm consist with a dermatofibrosarcoma protuberans, grade 1. Surgery with wide margins remains the standard treatment. Surgical excision of the left breast mass was recommended.

### Wire Localization and Surgical Excision

The patient presented 28 days later for surgical excision. Ultrasound evaluation of the MammoMARK™ tissue marker revealed a hypoechoic mass (collagen) with a central hyperechoic focus (titanium) (figure 3). Ultrasound-guided localization of the left breast MammoMARK™ tissue marker was performed prior to surgical excision (figure 4). This appearance of the collagen and titanium components of the MammoMARK™ is routine at 30 days. Most lesions requiring surgical excision usually present within 30 days for image-directed wire localization prior to surgical excision.

### Discussion

First, posterior masses adjacent to the pectoralis muscle are easily accessible with the Mammotome® EX after adequate use of anesthesia to elevate the mass and hydro-dissect the plane for ease of the probe positioning. Second, I routinely place a tissue marker following any type of image guided breast biopsy. MammoMARK™ tissue markers are my facility's marker of choice. The markers deploy appropriately in the biopsy cavity. If surgical excision is recommended based on the pathology results from the image guided biopsy, most patients present within 30 days for definitive surgical treatment. MammoMARK™ markers are visible at 30 days as a hypoechoic mass (collagen) with a central hyperechoic focus (titanium).

### Courtesy

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Figure 1

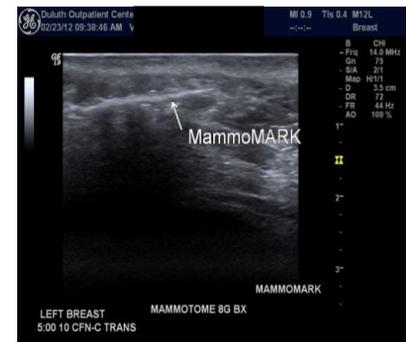


Figure 2



Figure 3



Figure 4