

MammoStar™ Tissue Markers

Ultrasound Visibility

Clinical History

46 year-old female presented for a screening mammogram, which revealed an indeterminate mass in the right breast. The patient was noncompliant and declined to schedule additional imaging evaluation at that time. She presented a week later for a diagnostic mammogram.

Findings

Mammogram and breast ultrasound revealed a highly suspicious 1.9cm mass in the 9:00 6 CFN-C position of the right breast. Biopsy was recommended.

Procedure & Pathology

Ultrasound guided, vacuum-assisted Mammotome® Elite biopsy of the right breast mass was performed. A MammoStar™ was deployed at the biopsy site adjacent to the residual mass (*figure 1*). Pathology results revealed an infiltrating ductal carcinoma, grade I

MRI Imaging

A preoperative staging breast MRI was performed. A signal void at the site of the right breast MammoStar™ at 6 days after deployment is identified adjacent to the residual malignant mass (*figure 2*). Breast MRI also revealed a contralateral mammographic occult highly suspicious mass in the left breast.

Follow-Up Ultrasound at 8 days / Left Breast VAB

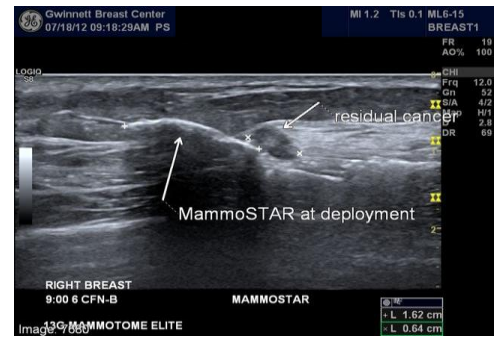
Ultrasound images of MammoStar™ at 8 days after deployment revealed a hyperechoic oval mass (beta-glucan) adjacent to the residual malignant mass in the right breast (*figure 3*). Ultrasound guided vacuum-assisted breast biopsy (VAB) of the MRI identified highly suspicious left breast mass was performed. Pathology results revealed a grade II infiltrating ductal carcinoma, with associated grade II ductal carcinoma in situ.

Summary

The patient scheduled for definitive surgery--bilateral mastectomies and bilateral sentinel lymph node biopsies 41 days after the initial diagnosis. Ultrasound images of the MammoStar were obtained at the time of the radioisotope injections. MammoStar™ is visible by ultrasound at 41 days. Beta-glucan is seen as the hyperechoic oval mass. The carbon coated ceramic marker (2 hyperechoic foci) is not always easily seen, but can be quite visible in certain patients (*figure 4*).

Courtesy

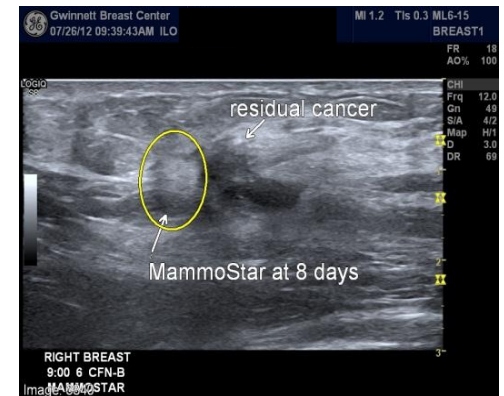
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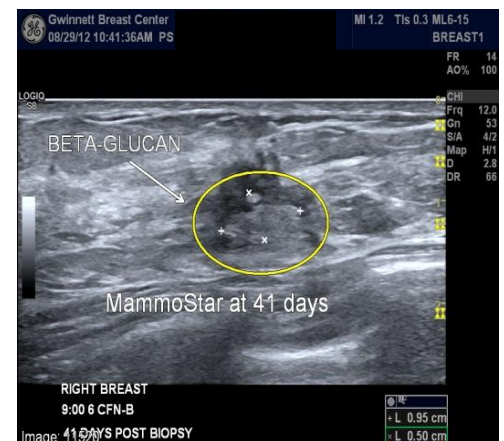
MammoStar™ at Deployment - Fig. 1



MammoStar™ at 6 Days - Fig. 2



MammoStar™ at 8 Days - Fig. 3



MammoStar™ at 41 Days - Fig. 4