### CASE STUDY – Markers

# MammoStar<sup>™</sup> Tissue Markers Ultrasound Visibility

#### **Clinical History**

40 year-old female presented for diagnostic breast imaging to evaluate a 1 month palpable mass in the left breast.

#### **Imaging Findings**

Mammogram and breast ultrasound revealed an oval lobulated 1.5cm hypoechoic mass in the 1:00 8 CFN-B position of the left breast. Biopsy was recommended.

#### **Procedure**

Ultrasound guided vacuum-assisted Mammotome<sup>®</sup> EX biopsy was performed. A MammoStar<sup>™</sup> was deployed at the biopsy site. Pathology results revealed a fibroadenoma (*figure 1*).

#### **Follow-Up Imaging**

Ultrasound images of MammoStar<sup>™</sup> 11g after deployment revealed a carbon coated ceramic marker (2 hyperechoic foci) surrounded by beta-glucan (hyperechoic convex lines and/or hyperechoic oval mass).

- Figure 2 Visibility at 7 days
- Figure 3 Visibility at 38 days
- Figure 4 Visibility at 60 days

#### **Discussion**

Ultrasound evaluation of MammoStar<sup>™</sup> at 60 days maintains a similar appearance as 7 days after deployment. The walls of the beta-glucan are seen as a hyperechoic oval mass surrounding 2 hyperechoic foci which are the 2 ends of the barbell shape of the carbon coated ceramic marker.

#### **Courtesy**

Kimberly C. Hutcherson, M.D. North Metropolitan Radiology Associates, LLP Director, Breast Imaging and Intervention Gwinnett Breast Center, Gwinnett Medical Center Lawrenceville, GA 30046











MammoStar™ at 60 Days – Fig. 4

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## MammoStar<sup>™</sup> Tissue Markers Ultrasound Visibility

MammoStar<sup>™</sup> 8G – Visibility Examples at 6 months 27 days





LEFT BREAST 1:00 8 CFN-B

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