

Placement Accuracy and Ultrasonographic Visualization of a New Percutaneous Breast Biopsy Marker

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PURPOSE: To determine the placement accuracy of a new breast biopsy marker and its visibility by ultrasound.

METHODS AND MATERIALS: The new marker consists of seven, catheter delivered air-impregnated gel-foam pledgets with the center pledget containing a mammographically visible metallic marker. 113 of the new markers were placed following 11 gauge directional vacuum assisted biopsy (DVAB). The mammographic location of the marker on the post-biopsy mammogram was compared to the initial mammographic location of the lesion that underwent biopsy. The difference between the two locations was measured and recorded. 10 patients with the new marker were followed with breast ultrasound on 5 sequential visits in the one month following the biopsy to determine whether or not the marker could still be visualized by ultrasound at each visit.

RESULTS: The new marker demonstrated less variability in placement compared with that reported for the standard, conventional clip (1.0mm vs. 4.9mm). Potential clinically meaningful deployment error (> 24mm) was also reduced compared to that reported for the standard, conventional clip (3% vs. 7%). The new marker could be seen with ultrasound up to 20 days following biopsy.

CONCLUSION: The new marker appears to be a more accurate means of identifying a biopsy site than the standard, conventional clip and can be visualized with ultrasound in addition to mammography.