## Wire Localization Procedures in Non-Palpable Breast Cancers: An Audit Report and Review of Literature

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**Abstract:** Background: Breast conservation surgery applies a number of techniques for accurate localization of lesions. Wire localization remains the method of choice in non-palpable breast cancers post-neoadjuvant chemotherapy. Objective: The aim of our study was to determine the accuracy of wire localization procedures in our department and compare it with internationally set protocols as per the Royal College of Radiologists. Post wire mammography, as well as the margin status of the postoperative specimen, assessed the accuracy of the procedure. Methods: We retrospectively reviewed the data of 225 patients who presented to our department from May 2014 to June 2015 post neoadjuvant chemotherapy with non-palpable cancers. These patients are candidates for wire localized lumpectomies either under ultrasound or stereotactic guidance. Metallic marker was placed in all the patients at the time of biopsy. Post wire mammogram was performed in all the patients and the distance of the wire tip from the marker was calculated. The presence or absence of the metallic clip in the postoperative specimen, as well as the marginal status of the postoperative specimen, was noted. Results: 157 sonographic and 68 stereotactic wire localization procedures were performed. 95% of the wire tips were within 1 cm of the metallic marker. Marginal status was negative in 94% of the patients in histopathological specimen. Conclusion: Our audit report declares more than 95% accuracy of image guided wire localization in successful excision of non-palpable breast lesions.

**Keywords:** breast, cancer, non-palpable, wire localization

Conference Title: ICRDT 2016: International Conference on Radiology, Diagnostics and Therapeutics

**Conference Location :** Paris, France **Conference Dates :** July 25-26, 2016