SAVI SCOUT versus wire-guided localization in non-palpable breast lesions – Comparison of breast tissue volume and weight, and excision safety margin

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Abstract

Background: wire-guided localization (WL) is the most widely used method for localization of non-palpable breast lesions. SAVI SCOUT occult lesion localization' (SSL) is a new technique in the breast conservative surgery. SSL has potential benefits of improving radiology workflow as well as accurate localization.

Purpose: The purpose of this study is to compare the breast tissue specimen volume and weight, and margin excision between WL and SSL.

Materials and methods: A single institution retrospective analysis of 377 female patients underwent wide local breast excision with SAVI SCOUT and or wire guided technique between 2018 and 2021 in a UK University teaching hospital. breast department. Breast tissue specimen volume and weight, and margin excision have been evaluated in the three groups of different localization.

Results: Three hundred and seventy seven patients were studied. Of these, 261 had wire localization, 88 had SCOUT and 28 had dual localization technique. Tumor size ranged from 1 to 75mm (Median 20mm). The pathology specimen weight ranged from 1 to 466gm (Median 46.8) and the volume ranged from 1.305 to 1560cm^3 (Median 106.32 cm^3). SCOUT localization was associated with a significant low specimen weight than wire or the dual technique localization (Median 41gm vs 47.3gm and 47gm, p = 0.029). SCOUT was not associated with better specimen volume with a border line significance in comparison to wire and combined techniques (Median 108cm3 vs 105cm3 and 105cm3, p = 0.047). There was a

significance correlation between tumor size and pathology specimen weight in the three groups. SCOUT showed better >2mm safety margin in comparison to the other 2 techniques (p = 0.031).

Conclusion: Preoperative SCOUT localization is associated with better specimen weight and better specimen margin. SCOUT did not show any benefits in terms of specimen volume that may be due to difficulty in getting the accurate specimen volume due to irregularity of the soft tissue specimen.