

# **Evaluation of intra-operative cavity shave and margin re-excision in SAVI SCOUT versus wire-guided localization in non-palpable breast lesions**

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## **Abstract**

**Background:** Pre-operative localization of non-palpable breast lesions with non-wired technique, such as SAVI SCOUT localization (SSL) may have an impact on intra-operative cavity shave incidence and clinical outcomes as re-excision rate. However there are limited literatures available comparing SSL and wire-guided localization (WL).

**Purpose:** The purpose of this study is to compare the intra-operative cavity shave and post-operative margin re-excision rate between WL and SSL techniques.

**Materials and methods:** A single institution retrospective analysis of 382 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. Intra-operative cavity shave and post-operative margin re-excision have been evaluated in the three groups of different localization.

**Results:** Three hundred and eighty two patients were studied. 263 had wire localization, 95 had SCOUT, and 24 had dual localization technique. Tumor median size was 20mm. There was no significance in tumour size between the three groups. There was no significance in safety margin in general between the three groups; however, WL superior safety margin >2mm was significant in comparison to SSL and dual techniques (91.3% vs 88.4% and 87.5%,  $p = <0.001$ ) and SSL superior safety margin 1-2mm was weak significant in comparison to WL and dual techniques (8.4% vs 3.8% and 8.3%,  $p = <0.047$ ). Intra-operative cavity shaving was higher and significant in case

of SSL technique in comparison to the WL and dual techniques (63.2% vs 56.5% and 45.8%,  $p = 0.009$ ). Post-operative margin re-excision was not significant between the three techniques ( $p = 0.964$ ).

**Conclusion:** There is no difference between the SSL, WL and dual techniques in case of post-operative margin re-excision. Preoperative SCOUT localization is associated with higher rate of intra-operative cavity shaving in comparison to the SSL and dual techniques.