INTRODUCTION

Radioactive seed localization (RSL) is an effective method for localizing non-palpable breast lesions in breast conserving therapy (BCT). The logistical coordination required to implement the use of RSL in the hospital setting is difficult. The SAVI SCOUT radar technology removes the cumbersome logistics and allows for convenient localization of the tumor. This IRB approved study evaluates radar to determine its equivalence to RSL.

METHODS

119 patients with early stage breast cancer treated with BCT were retrospectively reviewed after having either RSL or radar localization. 2 surgeons participated in this study. All patients requiring localization were enrolled and had BCT. 59 agreed to radar and 60 patients had RSL.

RESULTS

Volume of Resection in cm3

Rate of Re-excision

119 patients had successful removal of the marker. Average VR for RSL was 94.7 cm3 vs 77.7 cm3 with radar. p=0.141. Within the RSL group 7 of 60 (12%) patients had RTO for re-excision secondary to 8 positive margins while in the radar group 8 of 59 (13.5%) patients had RTO due to 12 positive margins. Surgeon A had a 5.5% re-excision rate for both RSL and radar. Average VR for Surgeon A was 121 cm3 with RSL and 97.2 cm3 with radar. Surgeon B had a 20.8% re-excision rate with the RSL vs 26% with the radar. Average VR for Surgeon B was 55.2 cm3 with RSL and 47.3 cm3 with radar.

The use of radar tumor localization was equivalent to RSL when comparing volume of resection and return to OR. Surgeon A and Surgeon B had similar VR and RTO regardless as to whether their patients had RSL or SSR. We conclude that SAVI SCOUT localization is an excellent alternative in breast cancer localization and can be safely implemented in most hospitals for BCT.

REFERENCES

1. Evaluation of the SaviScout surgical guidance system for localization and excision of nonpalpable breast lesions: A feasibility study, AJR.2016; 207 W1-1W4