

The Radioactive Seed localization For Impalpable Breast Cancer Conservative Surgery: Meta-Analysis

EIXO 1: SUSTENTABILIDADE NOS SISTEMAS DE SAÚDE

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Introduction: This study performs a meta-analysis of the Radioactive seed localization (RSL) technique efficiency for women who underwent impalpable breast lesions surgical localization, in comparison with Radio-guided occult lesion localization (ROLL) and wire-guided localization (WGL).

Methods: The systematic research was performed in PubMed, Embase, LILACS, SciELO, and Web of Science with the key words. The selected studies went through a standard form of data extraction. The ROBINS-1 and ROB-2 tool was applied to analyze the bias risk and methodological quality. The review manager 5.4 software was used to perform the meta-analysis by the random effects analysis model.

Aftermath: In the comparison RSL x ROLL, the results found by the outcome were: positive surgical margins (RR 0.83, 95% CI 0.50 – 1.39, I² 39%; 763 patients), reoperation (RR 1.14, 95 % CI 0.75 – 1.74, I² 17%; 1550 patients), and recurrence (RR 0.50, 95% CI 0.29 – 0.87, I² 0; 939 patients). In the comparison RSL x WGL, the results found by the outcome were: positive surgical margins (RR 0.78, 95% CI 0.70 – 0.88, I² 37%; 15095 patients), reoperation (RR 0.71, 95% CI 0.61 – 0.84; I² 61%; 13884 patients), recurrence (RR 0.41, 95% CI 0.19 – 0.86; I² 0%; 1525 patients).

Discussions and conclusions: The results demonstrated that RSL is superior to WGL in surgical efficiency in the impalpable breast lesions intraoperative localization and is, at a minimum, equivalent to ROLL. RSL also presented promising results regarding the organization of services, proving to be superior to WGL and ROLL technologies, because a longer time between the lesion localization and the surgery allows greater flexibility in the scheduling of the radiology and surgery sectors, in addition to the possibility of the seed placement procedure taking place before neoadjuvant chemotherapy.

Keywords: Meta-analysis; Radioactive seed; Intraoperative localization; Impalpable breast cancer; Conservative surgery