Intra-operative specimen analysis using faxitron microradiography for excision of mammographically suspicious, non-palpable breast lesions.

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Source

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Abstract

Recent advances in digital imaging have made Faxitron microradiography an attractive alternative to intra-operative conventional specimen radiography (CSR) for the excision of wire-localized breast lesions. Faxitron specimen analysis time, usefulness of digital image manipulation and re-excision rates were evaluated in comparison to CSR in 299 consecutive wire-localized excisions for mammographically suspicious non-palpable breast lesions (172 procedures with Faxitron, 127 with CSR) in a non-randomized study. The corresponding mean operation times were 34.7 vs. 42.7 min and the respective re-excision rates were 19.8% vs. 31.5% (no significant difference on chi analysis P < 0.1). Faxitron digital image manipulation led to cavity biopsies in 50% (60/121) of the cancer excisions. In 19 of these (16%), histological excision margins were converted from incomplete to complete. The shorter Faxitron mean operating time enables an additional wire-localized operation per theatre list. Digital imaging guides the surgeon for additional cavity biopsies, resulting in re-excision rates as good as CSR.