



TECHNICAL NOTE

# Orientation of a breast specimen with radio-opaque thread—a novel solution

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Breast surgeons usually mark the specimen of a wide excision of a breast cancer with sutures (e.g. short-superior, long-lateral and double-deep), so the pathologist may orientate it and identify which margins of excision are close to, or involved with the cancer. When an impalpable, radiologically detected lesion is excised, a specimen radiograph is taken to ascertain the position of the suspicious lesion within the specimen. Here, the orientation markers need to be radio-opaque and metal clips such as ligaclips (e.g. one clip superior, two clips anterior and three clips lateral), or special grids have been used. Unfortunately, the metal clips may be difficult to locate in the specimen, become dislodged during histopathological processing, or may damage the microtome. Orientation using special grids or templates<sup>1</sup> is accurate, but it can be cumbersome and is lost as soon as the pathologist takes the specimen off the grid.

A simple solution is to render the same silk sutures that are usually used for orientation, but to make them radio-opaque by soaking them with

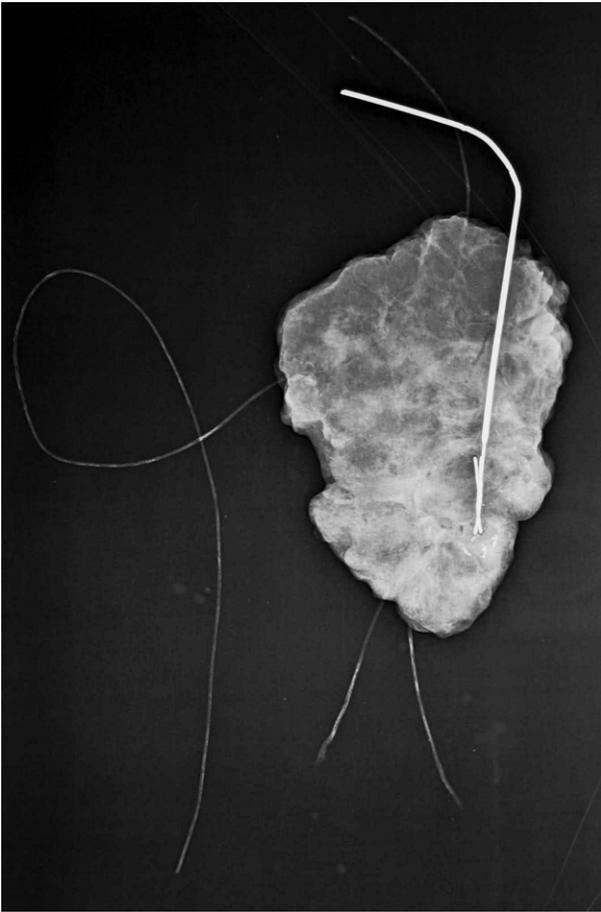
contrast medium such as Omnipaque (350 mg/ml). The whole suture (No.1 braided Silk, manufactured by Ethicon) is dipped in an opened 50 ml bottle which can be reused because sterility is not necessary. The excess contrast is wiped away with a gauze swab after allowing it to soak for few seconds. This avoids contamination of the specimen with the dye but leaves the braided suture sufficiently radio-opaque. The suture is now used to create the orienting stitches on the specimen. Being radio-opaque, these are seen in the specimen radiograph and allow its easy orientation (see Fig. 1).

Ideally, the pathology room should be next to the operating theatre so that the surgeon and pathologist are able to examine and orientate the specimen. This is a simple alternative technique for those who do not enjoy such privilege.

## References

1. Loh A, Salman A, Arthur GW. Use of a breast template: an aid for orientation of breast biopsy specimens. *Ann R Coll Surg Engl* 1991;73(5):276–277.

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**Figure 1** In this diagnostic biopsy including the localisation wire, the double suture marks the deep margin and the long suture marks the lateral margin and the short suture near the wire, marks the superior aspect of the specimen (17 g). The microcalcifications are seen near the inferior and the medial margin. Adjustment of the actual exposure or tweaking the image on the digital mammography machine achieves the best picture.