Storage of sliced breast biopsy specimens

In their review of the laboratory handling of impalpable breast lesions Drs Armstrong and Davies emphasise the need to be able to identify individual slices of the specimen during storage in case further blocks of tissue are required.1 Their method of placing each slice into a separate compartment of a plastic bag clearly achieves this aim but is quite time consuming.

In our laboratory, once blocks of tissue have been taken, the remaining slices are strung on to suture material in the same order as on the laboratory x-ray picture of the slices. Once the ends of the suture are knotted the slices will remain in that order and can be easily identified if further blocks are required. The “necklace” of slices can then be stored in plastic bags or specimen pots according to local practice.

Depending on the number of slices, one packet of suture material will be adequate for several specimens. 3/0 silk (salvaged from theatre) has proved quite satisfactory and does not damage the tissue. We have found this technique to be quick, effective, and relatively cheap.

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Use of whole mount sections for reporting mammographic specimens

Armstrong and Davies are correct to highlight the advantage that large sections have in showing the resection margins of mammographic specimens. We take issue concerning the claim that the sections are of inferior quality to the standard sized sections, require expensive equipment, and specialised skills. In Worthing we have been reporting mammographic specimens using whole mount sections for more than two years, based on the method described by Gibbs.1 After initial, teething troubles we had no difficulty in perfecting this method.

The tissue slices are processed overnight in a Miles VIP tissue processor, together with the routine tissue blocks, for sectioning the next day. Most of the sections are mounted on 3 x 2 inch slides, though occasionally 4 x 3 inch slides are used. To obtain these sections we use a standard Leitz 1400 base sledge microtome that is very old. We find that the sections produced are of excellent quality and certainly as good as those from standard blocks. No special technical expertise is required. The only additional costs are those of the larger specimen block holders, slides, and cover slips.

The advantages of this method are that it reveals the whole of the lesion and its relation to the excision margins, and permits an accurate measurement of the lesion. We do not wish to be too dogmatic about this approach and realise that individual pathologists have their own preferences, but there is clearly no reason to abandon this method.

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1 Gibbs NM. Large paraffin sections and chemical clearance of auxiliary tissues as a routine procedure in the pathological examination of the breast. Histopathology 1982;6:647-60.

Laboratory handling of impalpable breast lesions

I was surprised to read the authors’ comments on the large section method which we have developed for both mammographic specimens in general and which has been in routine use in Guildford since 1979. These specimens include localisation biopsy specimens which only form a small proportion of screening pathology examinations.

Most of the blocks we cut measure no more than 7 cm in maximum diameter after fixation and are cut at 4 μm in the line of the duct system on a standard sledge microtome using a large block holder which is readily available (fibre block or standard vice; Anglia Scientific).

Each localisation specimen is thus reduced to two or three blocks which are cut and stained to provide a permanent record which can then be re-examined by any pathologist without the need to refer to jigsaw puzzles of numerous small blocks cut at right angles to the duct system. Laboratory x-ray machines are not required and there is no need to paint the peripheries. This enables clearance margins to be measured accurately as well as the size of the lesions. Discontinuous lesions, such as in situ ductal carcinoma, can be accurately mapped.

The opinion expressed in this review has wider implications because the breast screening programme relies on pathologists to provide not only the diagnosis but full and accurate data concerning microinvasion, multiple malignancy, and multicentric malignancy in all breast resections for cancer. Accurate staging comparisons will be required to assess the progress and comparative efficiency of the screening centres, because mortality statistics will take at least a decade to produce hard facts. It follows that the pathologist who alone makes the diagnosis of cancer is a key figure in the programme and must use techniques suitable for all breast resections where a visible lesion is often only the “tip of the iceberg” of extended field change.

The histological methods outlined in this paper are merely a restatement of conventional time honoured small block histology which was barely adequate when large symptomatic cancers were the rule but this wouldn’t do any more.1 The authors give no data to support their views, presumably because it is too early in the programme to have anything worthwhile publishing. Why not forget Rokitsansky and get into the 20th century while there is still time?


Drs Armstrong and Davies comment:

Professor Gibbs reiterates the advantages of large sections which we mention in our paper—namely, the ease of measurement of clearance margins and size of the lesion. We have contrasting experience in the cutting of large sections, however. The technical staff find the cutting of large blocks on an unfamiliar microtome demanding, and the resulting sections are of significantly poorer quality. This is a particular problem in these days of high staff turnover. The distinction of borderline lesions and microinvasion is rendered difficult by the resultant thicker sections, together with score and chatter marks. Perhaps use of this technique for 12 years may account for the fact that Professor Gibbs finds his sections adequate.

We are somewhat surprised that Professor Gibbs does not use routine marking of resection margins or specimen slice mammography. The former is necessary to avoid the problem of a false edge caused by buckling of the block during embedding. The latter is invaluable for assessing the extent of tumour in both impalpable and easily visible lesions. Slice mammography is a more sensitive tool than histological and whole specimen mammography for visualising the microlcification and diluted ducts seen in disseminated carcinoma in situ. It thus needs the differentiation of a multicentric carcinoma from a multifocal tumour, as well as identifying associated disseminated carcinoma in situ in palpable tumours.

The method we advocated has been specifically devised to produce conventional size blocks that can be dealt with once they reach the automatic processor. We have now used this method in more than 200 cases, and we have no cases in which we were unable to produce the data Professor Gibbs demands, although we obviously recognise that size would be more accurately measured on large sections.

We like to feel we are building on Rokitsanski rather than forgetting him.

Postoperative necrotising granulomas in the ovary

We read with interest the cases presented by L J McWilliam et al2 and would like to report a further case of postoperative necrotising granuloma in the ovary.

A 41 year old woman had primary infertility. A laparoscopy in 1985 showed noticeable adhesions around both ovaries and tubes. No biopsy specimens were taken at this time. Laparotomy was performed a year later. The right ovary and tube were freed from adhesions and the left ovary was removed. The histology of the left ovary showed no clinically relevant abnormality. Subsequently, sexual intercourse was not successful and sperm penetration was made. A total hysterectomy and right salpingo-oophorectomy was done in 1990.