

Histology specimen

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Summary box 11.3 Histological processing: sequence of events

Figure 11.2 (a) A colon from a patient with familial adenomatous polyposis has been opened longitudinally, and the brown appearance reflects adequate fixation. Numerous polyps and a carcinoma are apparent. In this example, there is less fixation, as a result of which the mucosa in the lower part of the picture remains red rather than brown. (b) An oesophagogastric resection containing a distal oesophageal tumour. (c) A uterus and an adjacent cystic lesion after slicing to allow fixation (all figures courtesy of Dr J Chin Aleong, Barts Health NHS Trust, London, UK).

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Figure 11.3 A pathologist takes a sample from a resection specimen with a scalpel and forceps. (a) (b)

Figure 11.4 (a) An unopened pancreatoduodenectomy specimen (posterior view). Four inks of different colours have been painted onto separate margins and surfaces. (b) Yellow ink on the edge of a histology section (thick arrow). Tumour (thin arrow) lies

close to the surface. The pathologist can measure the distance between the tumour and a surface or a resection margin (double-headed arrow). Figure 11.5 A pathologist places a tissue sample from a resection specimen in a cassette. Figure 11.6 Paraffin wax blocks. Cassettes of different colours allow the organisation of samples and specimens into groups, e.g. according to specialty or degree of urgency. Figure 11.7 A section (thick arrow) being cut from a

paraf /f_i n wax block (thin arrow)
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Figure 11.8 A double-headed microscope allows a consultant histo

pathologist and a trainee to view a slide simultaneously.

Frozen section diagnosis is useful when a very rapid answer is necessary . Surgeons are the main users. The surgeon supplies a small representative fresh tissue sample of the area of interest. A BMS freezes the tissue quickly in the pathology laboratory and can produce sections for microscopic examination within several minutes. There are a few disadvantages in comparison with routine processing: fresh tissue carries a higher risk of infection; the quality is inferior to that of routine material, resulting in a potential reduction in diagnostic accuracy and precision; small but representative samples are necessary; certain types of tissue (e.g. fat) are di ffi cult to process; and the process is time-consuming and disruptive (Summary box 11.4). Summary box 11.4 Frozen section: advantages and disadvantages /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF /uni25CF

Advantages	Quick diagnosis	Disadvantages	Poorer quality sections	Potential reduction in accuracy and precision of histological diagnosis
	Labour intensive		Disruptive	Risk of infection
	Small sample required		Some tissue types dif /f_i cult to process	

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