

Specimens are often mixed with agar to lock the cells into a gel, a cell block, which can then be processed and sectioned using histology (Table 1). Cell blocks can be processed from most cytology specimens if required but are commonly made from fluid and fine needle aspirates when adequate material is received.

Immunohistochemistry

Immunostains are not one test but a selection of possibly hundreds of antibodies or stains that detect specific cell markers. The amount of sample and cost limit their use to a small number on any occasion. A clear request establishing what question needs answering together with basic clinical information can make all the difference in the outcome of the investigation. For example, a history of colonic carcinoma or a known ovarian mass would enable targeting of the test to markers for those malignancies. The use of molecular markers to define eligibility for new anticancer drugs is increasing, putting pressure on fine needle aspiration as an adequate source of

tissue. This may shift the diagnostic process towards more invasive core biopsies processed as histology specimens. However, new needle designs may increase the tissue recovery and provide larger and more consistent fragments for cell blocks. These have been developed initially for endoscopic fine needle aspiration and currently await approval from the US Food and Drug Administration.

Conclusion

Cytology is the original minimally invasive diagnostic technology beginning with exfoliated cells, aspirated fluid and subsequently fine needle aspirations. As endoscopic and imaging technologies have advanced, the surgical diagnostic specimen is being replaced by small image-guided fine needle aspirations and core biopsy specimens which provide a challenge for pathologists to do more with less. ◀

Conflict of interest: none declared

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SELF-TEST QUESTIONS

True or false?

9. Urine cytology is sensitive for detecting solid renal tumours.
10. Fine needle aspiration is as effective as core biopsies for diagnosing breast cancer.

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Valediction

Dr Shanthi Kanagarajah

Dr Shanthi Kanagarajah joined the Editorial Executive Committee of *Australian Prescriber* in 1997. Despite a career which has seen her move between Newcastle, Wollongong, Melbourne, Sydney and Brisbane, she has always maintained her strong commitment to *Australian Prescriber*. Dr Kanagarajah firmly believes in the importance of independent information about therapeutics and helped to ensure editorial independence was maintained when the National Prescribing Service – now NPS, Better choices, Better health – took over the publication of the journal in 2002.

In view of Dr Kanagarajah's extensive experience with *Australian Prescriber*, it was appropriate that she concluded her time with the journal as the chair of the Editorial Executive Committee. The editorial team has appreciated Dr Kanagarajah's good humour in steering the Committee through many manuscripts. Dr Kanagarajah has a sound understanding of the matters which are important to practising clinicians and this has supported the continuing growth in the readership of the journal. She has particularly supported the journal's online development. Despite retiring from the Committee, Dr Kanagarajah will continue to contribute to the quality use of medicines in Australia.

