

JOURNAL-BASED LEARNING EXERCISES



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DEADLINE WEDNESDAY 5 FEBRUARY 2020

Cell blocks in cytopathology: an update

Nambirajan A, Jain D. *Cytopathology* 2018; **29** (6): 505–24. Assessment No: 110819

01	The study looked at three different factors: improving diagnostic yield, CB preparation method optimisation, and looking at factors influencing ancillary testing success and validity in CB preparations.	11	P63, p40 and TTF1 ancillary tests on CB can aid diagnosis of lung carcinomas.
02	There are only two methods for preparing cell blocks.	12	The cell tube method has shown to yield up to 100 serial sections with better morphology.
03	49% of cytopathologists in the USA are dissatisfied with their current cell block quality.	13	In general, alcohol-fixed Cellient cell blocks show inferior results for hormone receptor status and <i>HER2/neu</i> CISH.
04	Exudative cavity fluids do not have adhesive properties and need an additional additive to be added (eg albumin).	14	<i>ALK</i> rearrangement in NSLC can be assessed using a combination of ICC for screening with FISH confirmation testing.
05	Plasma thrombin CB method is not ideal for cases requiring NGS.	15	EBUSTBNA are reportedly better than core biopsies for PDL1 testing as they show less crush artefact and yield more tumour cells.
06	Using a methanol-based fixative provides good morphology but gives rise to a large number of false-negative results for ICC antibodies when using the Cellient CB methodology.	16	According to current guidelines, routine testing for <i>EGFR</i> mutations along with <i>ALK</i> and <i>ROS-1</i> rearrangements are recommended for melanoma patients.
07	The colloidin bag methodology yields lower cellularity in comparison with plasma thrombin and Histogel methods.	17	DNA extracted from cytology samples is usually of better quality in comparison with histology samples.
08	LBC preparations show poor long-term DNA preservation.	18	Formalin-fixed, paraffin wax-embedded (FFPE) CBs offer the best-quality DNA.
09	Cell scrapes cannot be used for any cell block methodology.	19	The adequacy criteria for NG sequencing requires at least 20% tumour fraction in a CB measuring 3 mm or greater.
10	The principle of the AFFECT cell block method is cytocentrifugation.	20	PDL1 status can be easily assessed in serous fluid specimens.

REFLECTIVE LEARNING

01	Look into the cell block methods within your department and compare findings with the different preparatory methods reviewed in this paper.	02	Discuss the utility of cytological specimens for molecular profiling and targeted therapy.
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Safety and perception: what are the greatest enemies of HPV vaccination programmes? Bonanni P, Zanella B, Santomauro F, Lorini C, Bechini A, Boccalini S. *Vaccine* 2018; **36** (36): 5424–9. Assessment No: 110619

01	The most recently available HPV vaccine is designed to protect against nine serotypes.	11	For people over 14 years old, a two-dose schedule for the HPV vaccine is recommended.
02	It is theoretically possible for a vaccine to produce an immunological adverse event.	12	The HPV vaccines currently available are subunit vaccines containing virus-like particles.
03	'Vaccine hesitancy' relating to HPV in Japan has arisen because the perceived health risk from the vaccine is more immediate than the potential for protection from HPV-related cancers.	13	Extensive data from follow-up studies of girls who have been vaccinated against HPV suggests that their rates of sexual activity and pregnancy are increased.
04	Adverse effects following immunisation (AEFIs) are not officially recorded.	14	There is a fear that HPV vaccination can cause demyelinating diseases such as multiple sclerosis.
05	One aim of a universal vaccination programme is to establish herd immunity in the population.	15	The Global Advisory Committee on Vaccine Safety (GACVS) is part of the World Health Organization.
06	There is substantial evidence that complex regional pain syndrome (CPRS) can arise as a complication of at least one form of the HPV vaccine.	16	The European Centre for Disease Prevention and Control (ECDC) issues specific information about the HPV vaccine for healthcare professionals for use in advising patients.
07	Although HPV is a sexually transmitted virus, the main aim of the vaccine is to prevent cancers.	17	The nonvalent HPV vaccine is mainly expected to protect against genital warts.
08	Bonanni <i>et al.</i> suggest that the nonvalent HPV vaccine should be promoted on social media only.	18	The first HPV vaccine was licensed in 2006.
09	When the chance of an adverse event after administration of a particular vaccine is similar to that for all vaccines, the proportional reporting ratio (PRR) will be close to one.	19	'Vaccine hesitancy' can be an issue among healthcare professionals.
10	In Japan, the bivalent Cervarix HPV vaccine was recommended but then withdrawn.	20	Mechanisms for monitoring adverse events following immunisation include the Vaccine Adverse Event Surveillance and Communication (VAESCO) network, which is funded by the Centers for Diseases Control and Prevention (CDC).

REFLECTIVE LEARNING

01	Discuss how 'vaccine hesitancy' has affected the uptake of other vaccines, such as MMR.	02	Evaluate the role of the routine diagnostic laboratory in monitoring the efficacy of HPV vaccination.
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is easy to use and meets the requirements for achieving and maintaining professional registration. The scheme is now electronic, so recording, amending and validating are all carried out online.

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