



## **Higher Specialist Diploma**

### **Cytopathology**

**September 2025**

#### **Short Answer Questions**

**60 minutes**

**Attempt all four questions**

#### **Instructions to Candidates**

1. Record your candidate number and HSD discipline on the front sheet of the answer booklet.
2. Record your candidate number, the question number and the page number in the spaces provided on the answer sheets.
3. Begin each new answer on a new page.
4. Each question is worth 25 marks.

1. You have been asked to do a presentation to colleagues on the cytological criteria for distinguishing small cell carcinoma from other high-grade neuroendocrine neoplasms in bronchial washings and FNA specimens. Outline the information you would include in such a presentation.
2. You are reviewing a bronchial brush cytology reported initially as non-small cell carcinoma by a consultant medical colleague. You feel the cells dotted are reactive pneumocytes. You have passed this back to your colleague but they remain adamant the cells are non-small cell carcinoma. The MDT is that afternoon and no other colleagues are available.

Discuss how you would deal with this in the short and long term.

3. A member of your team has come to you asking for help with a sample from a woman age 38 who has had a smear reported as containing abnormal glandular cells. Describe the possible cytological findings and what their likely clinical significance is.
4. You are training colleagues on urinary tract cytology. Explain what you would inform them are the possible causes of false positive diagnoses in this type of cytology.



## **Higher Specialist Diploma**

### **Cytopathology**

**September 2025**

**ESSAY PAPER**

**120 minutes**

**Attempt 2 out of 5 questions**

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1. Record your candidate number and HSD discipline on the front sheet of the answer booklet
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3. Begin each new answer on a new page
4. Each question is worth 100 marks

1. Describe the principles of 'duty of candour' and how it applies to the cervical screening programme in the UK.
2. Discuss the morphological and immunocytochemical challenges in distinguishing reactive mesothelial proliferation from metastatic adenocarcinoma in effusion cytology.
3. Critically evaluate the use of peritoneal washing (PW) samples.
4. Explain the cytomorphological and molecular hallmarks of urothelial carcinoma with divergent differentiation and their diagnostic pitfalls in urine cytology.
5. Cervical Screening Laboratories – 'Big is beautiful'. Critically discuss this statement in relation to the reorganisation of cytology services.



## **Higher Specialist Diploma**

### **Cytopathology**

**September 2025**

### **Case Studies**

**120 minutes**

**Attempt all Case Studies**

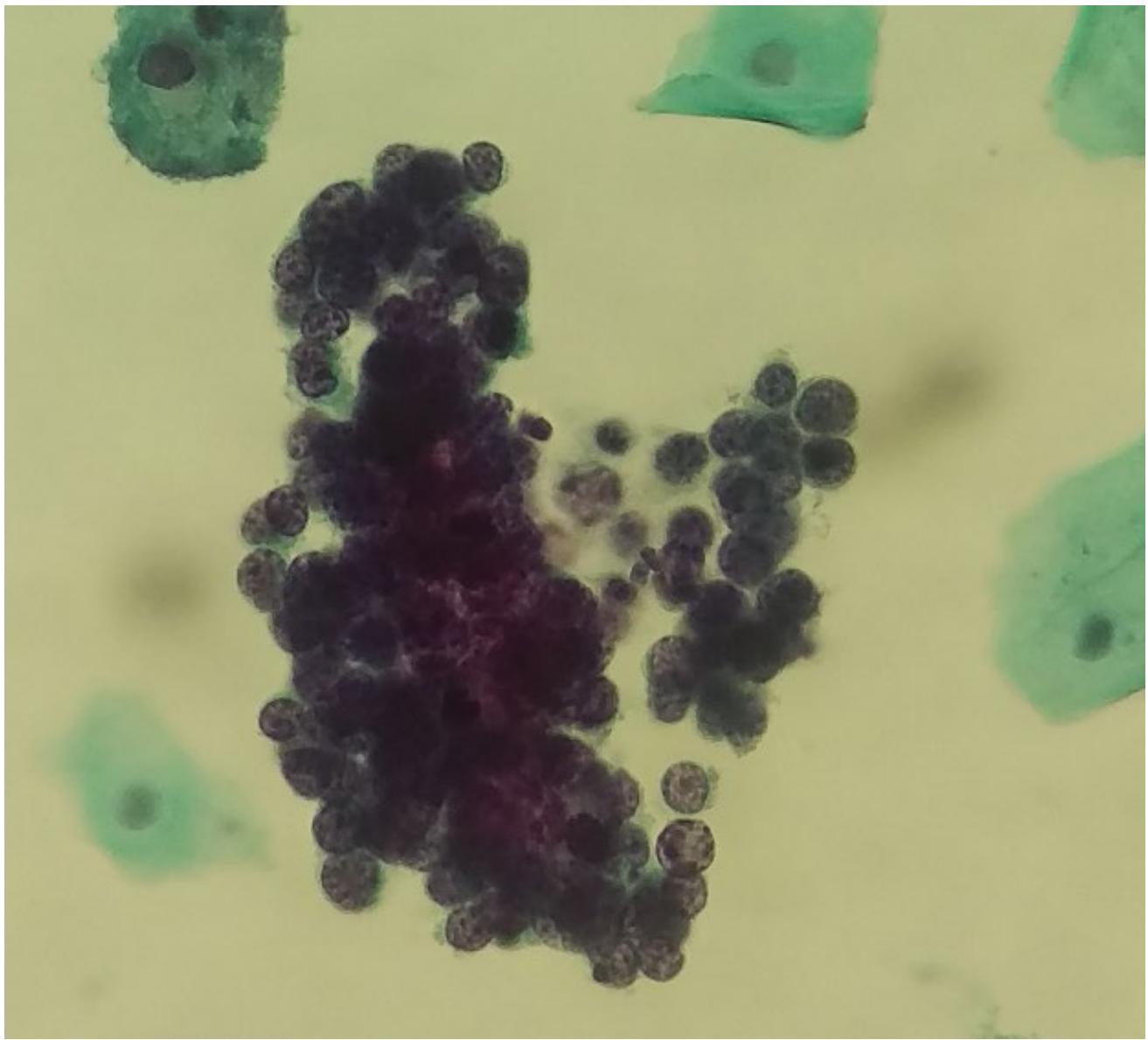
### **Instructions to Candidates**

1. Record your candidate number and HSD discipline on the front sheet of the answer booklet.
2. Record your candidate number, the question number and the page number in the spaces provided on the answer sheets
3. Begin each new answer on a new page.
4. Each question is worth 100 marks.
5. For these case study questions you are strongly advised to answer the questions as they arise during the case study to avoid later information impacting adversely on your answers to the earlier questions by presuming an "outcome".

### SEEN CASE STUDY

1.

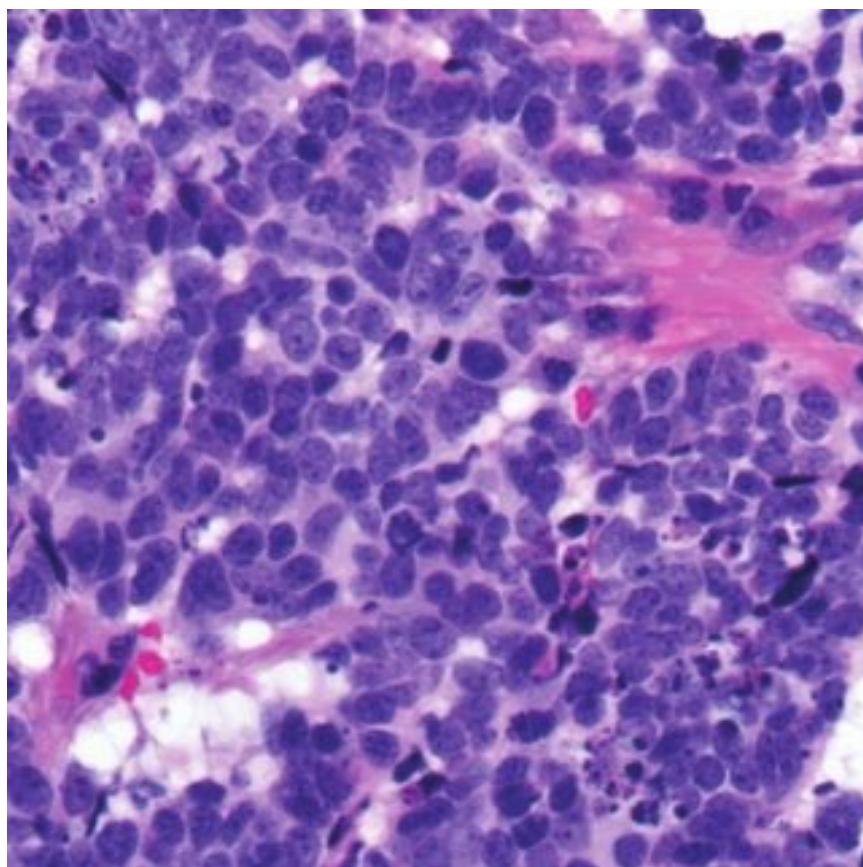
A 33 woman presented for her routine cervical screening test. Her LMP was day 11 and at the time she complained of post coital bleeding (PCB). The sample was processed for LBC. Figure 1 shows a typical example of the cells found in the preparation.



**Figure 1**

- a. Describe the cytological features seen in Figure 1. (30 marks)
- b. How should the morphological changes be reported? (10 marks)
- c. Discuss how this patient should be managed with rationale for this decision. (20 marks)

The patient attended colposcopy where a large loop excision of the transformation zone (LLETZ) was performed. Figure 2 shows a typical example of the histological findings of the LLETZ.



**Figure 2**

Immunocytochemistry was performed and was positive for p16, synaptophysin and chromagranin.

- d. Discuss the choice of immunocytochemical panel. (10 marks)
- e. Based on the morphology, histology and immunochemistry suggest a possible diagnosis. (20 marks)
- f. In the era of primary HPV screening discuss whether this type of diagnosis is still possible. (10 marks)

#### **UNSEEN CASE STUDIES**

2.

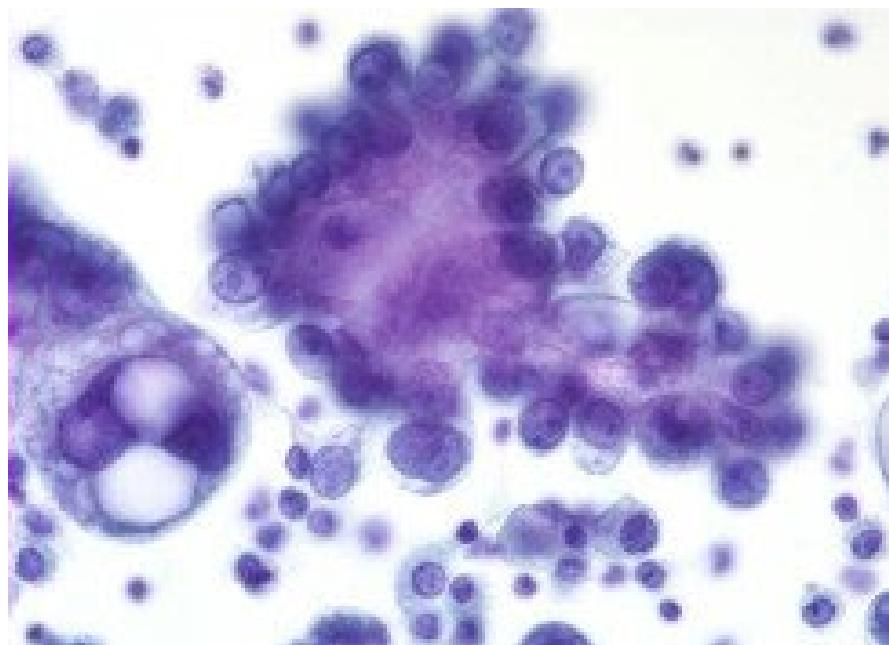
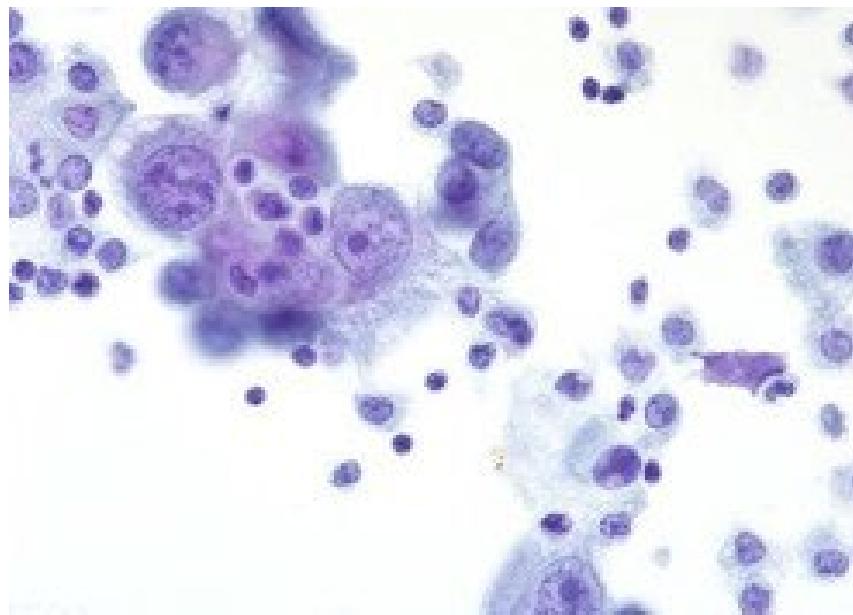
A 67-year-old male with a history of smoking and four months of weight loss presents with left-sided chest pain and shortness of breath.

Pleural tap: 500 mL straw-coloured fluid.

Biochemistry: Exudate (Protein: 4.2 g/dL, LDH: 320 U/L).

Microbiology: Negative for acid-fast bacilli and bacterial growth.

Chest X-ray shows a large left-sided pleural effusion. Images of typical cells found below:



a. Describe and interpret the cytomorphological features and provide a differential diagnosis. Justify your answer. (30 marks)

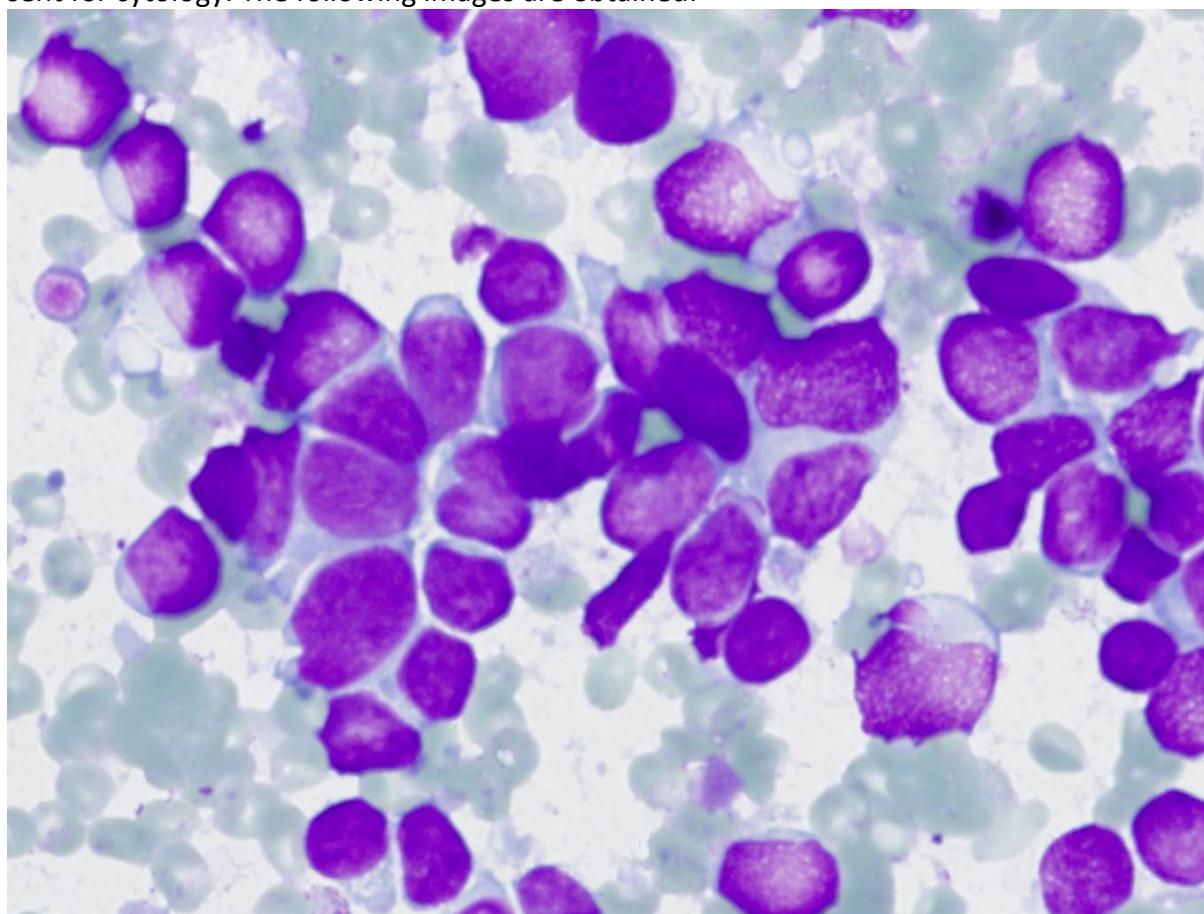
b. Explain with reasons the immunocytochemical stains that can be used to distinguish between reactive mesothelial proliferation and metastatic carcinoma. (20 marks)

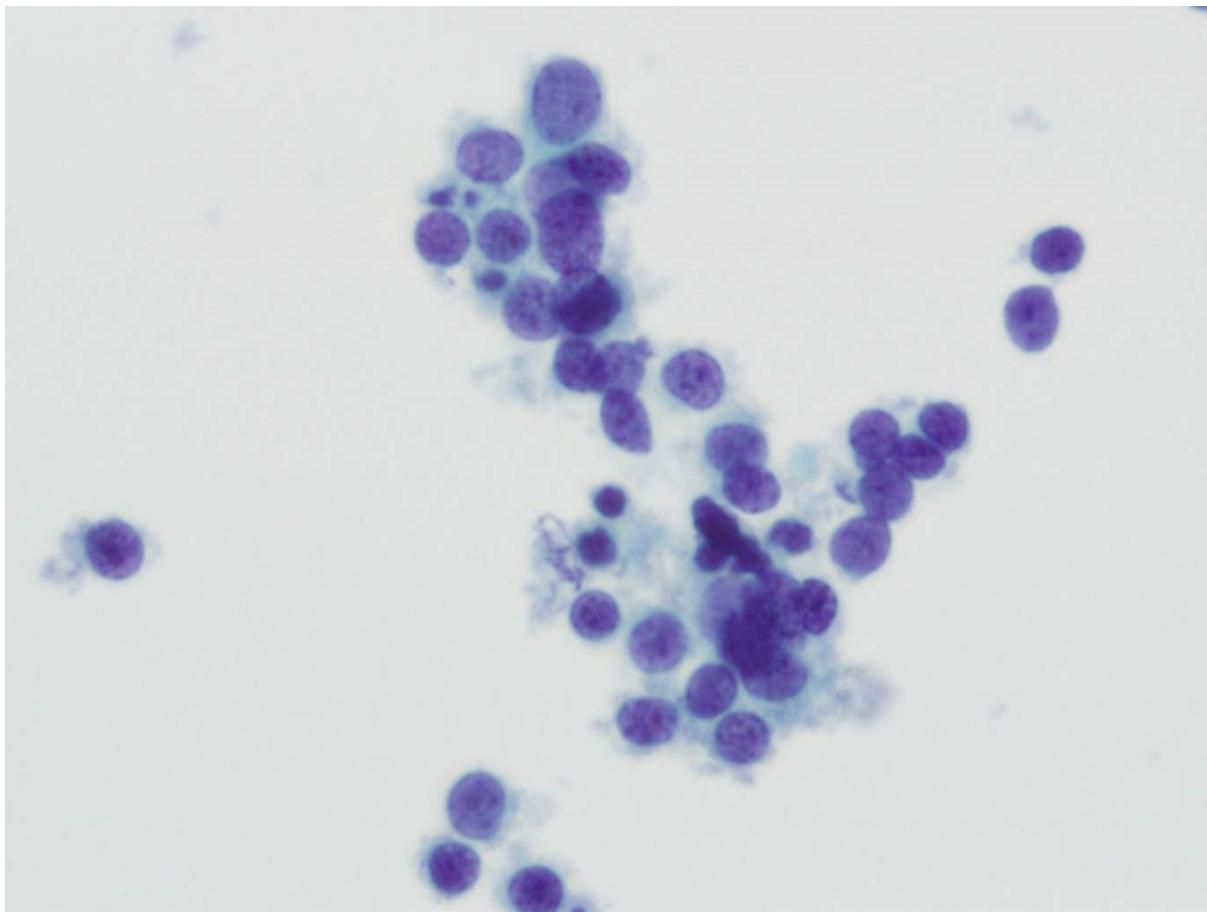
c. How would you integrate the clinical and cytological findings to arrive at the most likely diagnosis? (30 marks)

d. Describe, with reasons, the next steps in patient management of this case following your cytological interpretation. (20 marks)

3.

A 55-year-old female, lifelong smoker, presents with persistent cough and intermittent hemoptysis for six weeks. Chest CT: central irregular bronchial mass. Bronchial washing fluid sent for cytology. The following images are obtained:





- a. Describe the key cytological features observed. (20 marks)
- b. Explain, with reasons, the most likely diagnosis and the differentials. (20 marks)
- c. Which immunocytochemical panel would you recommend to confirm your diagnosis, and why? (30 marks)
- d. Describe the clinical significance and prognosis of this lesion. Justify your answer. (30 marks)