



1. Male, 27 years old. Pigmented lesion left side of neck. Excised as skin ellipse.

Pigmented naevus of Reed

Average score 2.59/5

This case was chosen as a good example of a relatively common melanocytic lesion that any pathologist might encounter in routine practice. The great majority of candidates passed this case with only a small proportion making erroneous malignant diagnoses. Malignant diagnoses were awarded a clear fail and candidates lacking confidence by offering broad differential diagnoses or noting the presence of atypia were given borderline fails.

To pass a candidate had to describe a pigmented and benign junctional naevus. Additional marks were given to candidates correctly identifying a pigmented naevus of Reed (or a Spitz naevus) and making clinical correlations with the age of the patient. This was a relatively simple case and it was difficult for candidates to score very high marks by adding value.

2. Female, 62 years old. Post-menopausal bleeding. Endometrial biopsy.

Carcinosarcoma of endometrium

Average score 2.58/5

This case was chosen as a good example of a well-recognised endometrial lesion which any candidate with reasonable experience of gynaecological pathology should have been able to diagnose. Most candidates passed this question and many added value to their answers. Approximately 20% of candidates failed this question, often by failing to observe one or other component of this biphasic tumour. In a case such as this it is important that candidates examine the whole slide. Candidates using inappropriate or outdated terminology were awarded borderline fails. Any suggestion of likely benign or low grade behaviour was given a fail mark.

Pass marks were given to candidates correctly identifying the biphasic nature of the tumour and correctly calling this a carcinosarcoma. Additional marks were given to candidates who commented on heterologous elements, noted the presence of high grade serous elements, suggested appropriate confirmatory immunohistochemistry or commented on likely poor prognosis.

3. Female, 33 years old. Palpable mass, left breast. Needle core biopsy.

Breast: cellular fibroepithelial lesion

Average score 2.32/5

This case was chosen as an example of a breast lesion where candidates had to make an important judgement regarding atypia and uncertain clinical behaviour. This is a common problem in breast pathology in routine clinical practice. This was a cellular fibroepithelial lesion where it was not possible to distinguish on the basis of histological features between a benign fibroadenoma and a phyllodes tumour. To gain a pass mark candidates had to recognise the uncertain behaviour of this fibroepithelial lesion, and grade the lesions as “B3” (or use words to this effect). Candidates had to recognise the limitations of a needle core biopsy in this context and indicate the need for further investigation and MDTM discussion of management.

Candidates whose approach was over-confident were penalised. Confident diagnoses of fibroadenoma or benign phyllodes tumour were given a borderline fail, as were candidates who confidently graded this as “B2”. Any candidates who preferred a malignant diagnosis were awarded a clear fail.

This case was not well answered, and only about half of the candidates secured clear passes, with few adding much value to their answers. Common reasons for borderline fails were imprecise use of “B” grades (calling this a B2 lesion) and over-dogmatic diagnosis of fibroadenoma or phyllodes tumour.

4. Female, 17 years old. Clinically pilar cyst, mid-back. Excised.

Nodular fasciitis

Average score: 2.63/5

This case was chosen as a good example of a relatively uncommon lesion which candidates

should be aware of, and a lesion where there is an important benign/ malignant differential to resolve. This case was answered exceptionally well by most candidates, with only approximately 10% failing the question. Many candidates added significant value to their answers, and only a small number failed by making inappropriate malignant diagnoses.

To pass candidates had to give an adequate description and a differential diagnosis including and favouring nodular fasciitis. Additional marks were given for appropriate use of immunohistochemistry and cytogenetics and indicating an understanding of the natural history of nodular fasciitis.

Confident diagnoses of low grade malignancy were given borderline fails, and diagnoses of high grade malignancy resulted in clear fails.

5. Female, 83 years old. Surgical excision of 21mm diameter lesion left breast.

Adenoid cystic carcinoma of breast.

Average score: 2.5/5

This is a good example of an uncommon lesion encountered on occasion in routine clinical practice. Adenoid cystic carcinoma has a characteristic morphology which candidates with appropriate experience should be able to recognise. 70% of candidates achieved pass marks in this question, and many candidates added significant value to their answers. Many candidates added value by making correct comments regarding favourable prognosis, oestrogen receptor status, immunohistochemistry and special stains.

Around 30% of candidates had borderline fails, often by lacking confidence and resorting to differential diagnoses without a favoured diagnosis, or by favouring other forms of invasive carcinoma.

6. Female, 65 years old. Vulval lesion, 20mm diameter. Punch biopsy of lesion.

Granular cell tumour, vulva

Average score: 2.81/5

Granular cell tumours are relatively uncommon lesions which may be encountered in a variety of anatomical locations. All pathologists need to be aware of this lesion, and need to be aware of the common association with pseudo-epitheliomatous epithelial hyperplasia, which can sometimes be confused with squamous cell carcinoma. This case was answered well by most candidates, and many candidates added significant value to their answers. A minority of candidates over-diagnosed the epithelial changes and indicated an inappropriate diagnosis of squamous carcinoma.

Pass marks were given for a competent description and confident diagnosis of benign granular cell tumour and extra marks were given for mention of appropriate immunohistochemistry and other special stains, or for indicating knowledge of the likely histogenesis of these tumours, benign behaviour and minimal risk of recurrence.

Any malignant diagnoses were awarded clear fails.

7. Female, 49 years old. Asymmetric swelling thyroid gland. Cytology THY3f. Right hemithyroidectomy.

Hashimoto's thyroiditis

Average score 2.44/5.

This case was chosen as a slightly challenging example of Hashimoto's thyroiditis which required some judgement on the part of candidates. Just over 50% of candidates passed this question, and many added significant value. A significant number of candidates over-interpreted epithelial changes as neoplastic, with a surprising number of answers indicating the presence of various forms of thyroid carcinoma.

Pass marks were awarded for adequate descriptions of the lesion and diagnosis of auto-immune/ Hashimoto's thyroiditis, and additional marks were given for more complete descriptions, clinical correlation and indicating the need for review of the THY3f cytology. Candidates lacking confidence in the diagnosis, or over-interpreting epithelial changes as adenomatous were awarded borderline fails, and confident diagnosis of malignancy resulted in a clear fail.

8. Female, 81 years old. Mass lesion left breast. Mammogram and ultrasound suggest malignancy. Needle core biopsy.

Plasmacytoma, breast

Average score: 2.6/5

This was a difficult case which required some lateral thinking on the part of candidates. Plasmacytoma is an unusual diagnosis in breast, readily confused with lobular carcinoma. Most candidates recognised the unusual nature of this neoplastic infiltrate, and many added considerable value. Just less than 25% of candidates misinterpreted the lesion, and the most common error was to make an overconfident diagnosis of lobular carcinoma without indicating the need for immunohistochemical staining to consider other possibilities.

To gain a pass mark candidates had to proffer a differential diagnosis including plasmacytoma or plasmacytoid variants of lymphoma, and indicate the need for further investigation. Additional marks were given for appropriate immunohistochemical investigation and seeking additional clinical history and the results of other investigations. Clear fails were given to candidates making confident diagnoses of epithelial malignancy, or arriving at benign, reactive or inflammatory diagnoses. Borderline fails were given to candidates giving differential diagnoses favouring carcinoma.

9. Female, 41 years old. Long history of left parotid swelling. Surgical resection, swelling left parotid gland.

Low grade mucoepidermoid carcinoma, parotid

Average 2.64

This case was chosen as a good example of a parotid gland tumour which should have been recognisable to any candidate with reasonable experience of salivary gland pathology. Most candidates answered this question very competently and less than 20% failed the question. Many candidates added considerable value to their answers.

Pass marks were awarded for a confident diagnosis of mucoepidermoid carcinoma. Candidates adding value with better than average descriptions, appropriate grading of the lesion, knowledge of diagnostic chromosomal translocations and understanding of the favourable prognosis were awarded extra marks. Marks were deducted for inappropriate diagnosis of other

forms of malignancy (awarded a borderline fail) or for benign diagnoses (a clear fail). A surprising number of candidates mistook this tumour for a benign Warthin's tumour.

10. Male, 19 years old. Right orchidectomy for testicular lesion. Right testis.

Yolk sac tumour, testis

Average score 2.87/5

This was a good example of a pure yolk sac tumour. The case aimed to assess candidates' knowledge of testicular tumours, and their capacity to describe these lesions and suggest appropriate ancillary investigations.

Candidates answered this question very well, with only just over 20% suffering marginal fails. A pass mark was given for a competent description and a confident diagnosis of yolk sac tumour. Additional marks were given for appropriate immunohistochemistry, better than average description, knowledge of epidemiology and understanding of favourable prognosis given appropriate diagnosis and treatment, as well as understanding the need to seek correlation with biochemical investigations. Borderline fails were awarded to candidates who inappropriately recognised other forms of testicular tumour, or lacked confidence by resorting to differential diagnoses. Some candidates preferred a diagnosis of mixed germ cell tumour

11. Male, 60 years old. Colonoscopy to investigate diarrhoea. 12mm polypoid mucosal lesion ascending colon. Removed by endoscopic mucosal resection.

Sessile serrated lesion, colon

Average 2.73

Sessile serrated lesion is a relatively recently described colonic lesion. A number of recent publications and review articles have described this lesion. The question was set to assess the ability of candidates to recognise this recently described lesion, as well as to assess their knowledge of the pathogenesis and significance of these lesions.

Given current indecision as to the nomenclature of these lesions considerable latitude was extended in terms of nomenclature: sessile serrated polyp and sessile serrated adenoma were

also accepted as correct diagnoses. Pass marks were awarded to candidates able to recognise and name the lesion, and additional marks were given to candidates demonstrating deeper understanding of these lesions in terms of molecular biology, association with other pathways of colorectal neoplasia, anatomical distribution and size. Borderline fails were given to candidates who diagnosed the lesion as a hyperplastic polyp, mixed polyp or traditional serrated adenoma, as well as to candidates identifying low grade dysplasia. Any malignant diagnoses or diagnoses of high grade dysplasia were awarded clear fails.

Many candidates coped very well with this question, often adding considerable value to their answers. A significant proportion of candidates mistook the lesion for other forms of benign polyp, including hyperplastic polyps, or saw low grade dysplasia. One or two candidates saw high grade dysplasia.

12. Female, 56 years old. Large calculus, right renal pelvis. Atrophic right kidney. Right simple nephrectomy.

Xanthogranulomatous pyelonephritis

Average 2.51

This case sought to assess the ability of candidates to assess a specific pattern of inflammation in a resected kidney. Candidates were given a very helpful history.

Pass marks were awarded to candidates able to describe the lesion and the pattern of inflammation and arrive at a diagnosis of a benign inflammatory condition, preferably naming the lesion as xanthogranulomatous pyelonephritis. Additional marks were given to candidates offering accurate comments regarding aetiology, and proffering better than average descriptions.

Borderline fails were given to candidates observing other specific forms of inflammation (eg- granulomatous inflammation). Malignant/neoplastic diagnoses were given clear fails.

The great majority of candidates answered this question well, and many added considerable value to their answers. A surprising number of candidates mistook the inflammatory lesion for an angiomyolipoma, and a few significantly overcalled this inflammatory lesion, finding evidence

of renal cell carcinoma. Surprisingly, some candidates found evidence of endometriosis.

13. Female, 51 years old. 280mm retroperitoneal mass. Resected.

Well differentiated liposarcoma

Average score: 2.86

This case considered the ability of candidates to recognise well differentiated liposarcoma in a characteristic location. Pass marks were given for a diagnosis of well differentiated liposarcoma (or atypical lipomatous tumour, despite the anatomical location). Additional marks were given to candidates suggesting relevant immunohistochemical and cytogenetic / molecular investigations. Marks were also given for an appreciation of the need to sample the lesion widely to exclude dedifferentiated liposarcoma and the need to assess the adequacy of excision.

Borderline fails were given for under-confident differential diagnoses. Clear fails were given for benign diagnoses or unequivocal diagnoses of high grade sarcoma.

Most candidates answered this question very well, with many adding considerable added value. A few candidates overcalled high grade malignancy, and confidently identified high grade dedifferentiated areas.

14. Male, 40 years old. History of intravenous drug abuse. Enlarged right inguinal lymph node.

Lymph node biopsy.

Mycobacterium avium- intracellulare

Average score: 2.29/5

This was a difficult lymph node. The history provided some clues, although candidates had to think laterally to establish the association between intravenous drug abuse and immunocompromise secondary to HIV infection.

This lymph node showed characteristic MAI morphology, and the non-caesating granulomatous appearance with histiocytes exhibiting pink granular cytoplasm should have provided a clue as to likely aetiology. The case was marked leniently and over 50% of candidates achieved a pass mark. Pass marks were awarded to candidates noting the pattern of inflammation and

appreciating the need for mycobacteria stains. Additional marks were given to those who appreciated the clinical context and suggested atypical mycobacterial aetiology, and indicated the need for additional investigation to consider this possibility.

Borderline fails were given to candidates who did not appreciate the clinical context, but recognised a granulomatous lymphadenitis. Clear fails were given to candidates who did not consider mycobacterial infection in the aetiology and did not choose to investigate this possibility.

Although more than 50% of candidates achieved a pass mark in this question, there were many fails. Many candidates considered only mycobacterium tuberculosis and hence suggested inappropriate mycobacterial stains. A significant subset of candidates over-interpreted the pale swollen histiocytes as neoplastic and considered inappropriate malignant diagnoses. There was a further subset of candidates who found features of dermatopathic lymphadenopathy in this node.

15. Male, 38 years old. Abdominal pain. CT scan: small bowel stricture. Small bowel resection: localised stenosis measuring 35mm long.

Crohn's disease, small bowel

Average score 2.40/5

This case was chosen as a good example of a case encountered regularly in routine practice- Crohn's disease, but without obvious granulomas. The FRCPath Cellular Pathology examination is based on North European practice, and candidates sitting the exam must be aware of disease patterns common in this part of the world. 70% of candidates achieved pass marks in this case. This case sought to assess candidates capable of making a common diagnosis safely.

To gain a pass mark candidates had to describe the histology in a satisfactory fashion and favour a diagnosis of Crohn's disease. Additional marks were awarded to candidates who noted additional histological features of Crohn's disease (but only those that were present in the section). Candidates who noted the need to achieve clinicopathological correlation with radiological and immunological findings were also given additional marks, as were those who noted the need to correlate with previous biopsy histology and discuss at an MDTM.

Borderline fails were awarded to candidates whose answers lacked confidence (usually in the form of indefinite differential diagnoses) or who preferred other inflammatory diagnoses. Clear fails were given for diagnoses of malignancy.

Although more than half of the candidates achieved pass marks in this question, there were a surprising number of fails, largely attributable to candidates over-interpreting histology and seeking problems which weren't in the sections. Candidates found parasites, viral inclusions, granulomas and a variety of malignant lesions, as well as evidence of ganglioneuropathic disorders.

16. Male, 83 years old. Pleural effusion. Pleural biopsies obtained by video assisted thoracoscopic surgery (VATS).

Sarcomatoid mesothelioma, pleura

Mean score: 2.54

This case was a slightly unusual example of a malignant mesothelioma showing sarcomatoid rather than biphasic or epithelioid morphology. The majority of candidates passed this question, but a significant minority failed to consider the anatomical location and did not adequately consider the possibility of malignant mesothelioma, preferring other malignant diagnoses.

To gain a pass mark candidates had to consider the differential diagnosis of sarcomatoid lesions in the pleura and consider the possibility of mesothelioma. Additional marks were given to candidates suggesting appropriate immunohistochemical stains and seeking clinical correlation (to include occupational history and radiological findings). Candidates who considered but did not favour mesothelioma were given borderline fails, and those who favoured benign diagnoses or clearly favoured other malignant diagnoses were awarded clear fails.

Approximately 20% of candidates failed this question, either by lacking confidence by listing extensive differential diagnoses, or by strongly favouring malignant diagnoses other than malignant mesothelioma.

17. Male, 79 years old. Dysphagia. Oesophageal biopsies.

Barrett's oesophagus, low grade epithelial dysplasia

Average score 2.38/5

This case was chosen as an uncontroversial example of low grade epithelial dysplasia in Barrett's oesophagus. Assessment of dysplasia in Barrett's oesophagus is a common issue for many pathologists in routine daily practice.

The case was marked leniently and pass marks were awarded to candidates able to give a good description of the lesion and favouring a diagnosis of either low grade dysplasia or indefinite dysplasia. Additional marks were given if candidates noted the need for review by a second pathologist, the need for MDTM discussion and appropriate follow up, and the value of immunohistochemical staining in confirming dysplasia.

Borderline fails were awarded to candidates favouring high grade dysplasia, or not classifying the dysplasia. Clear fails were given if candidates did not find evidence of dysplasia, or diagnosed invasive malignancy.

Approximately 45% of candidates failed this question, mainly by failing to observe dysplasia, over diagnosis of high grade dysplasia or inappropriate diagnosis of invasive malignancy.

18. Male, 28 years old. Lesion right middle finger. Skin biopsy, right middle finger.

Papillary intravascular endothelial hyperplasia

Average score 2.34/5

This case is from district general hospital practice and was submitted by a general practitioner. It is a good example of a lesion seen by many pathologists as part of day-to-day practice, and should not have caused any problem to candidates with good routine reporting experience.

Less than half of the candidates achieved pass marks for this case. Candidates lacked a holistic approach to the case, and did not identify organising thrombus in this case, or appreciate the reactive nature of the process. Many candidates favoured neoplastic lesions, and a small minority overcalled the lesion as Kaposi's sarcoma. The majority of candidates preferred benign neoplastic diagnoses.

To gain a pass mark candidates were expected to correctly describe the process of organising thrombosis, but not name the lesion as IVPEH or “Masson’s tumour”. Additional marks were awarded to candidates able to name the lesion and comment on the (non-neoplastic) process. Borderline fails were given for diagnosis of benign vascular neoplasms, and clear fails were given to candidates making malignant diagnoses.

19. Male, 75 years old. Two week history of blistering lesions lower legs and anterior chest.

Incisional biopsy skin lesion anterior chest.

Bullous pemphigoid

Average score 2.73/5 marks

This case was chosen as a good example of a blistering skin disorder. Candidates were assessed on their ability to arrive at a diagnosis and suggest appropriate immunofluorescent stains. Most candidates answered this question well and arrived the correct diagnosis of bullous pemphigoid: many added value by indicating the need for appropriate immunohistochemical stains. Some candidates failed to recognise the presence of eosinophils and favoured other less appropriate blistering disorders.

To pass candidates were expected to assess correctly the nature of the vesicle, comment on the presence of eosinophils and favour a diagnosis of bullous pemphigoid, as well as indicating the need for immunofluorescent studies. Additional marks were given to candidates able to make specific recommendations as to appropriate immunohistochemistry, comment on look-alike lesions and comment on the pathogenesis of bullous pemphigoid.

Borderline fails were given to candidates offering differential diagnoses including but not favouring bullous pemphigoid, or omitting to mention the need for immunofluorescent staining.

20. Male, 56 years old. Abnormality on chest X-ray. Wedge resection of 30mm left lung lower lobe nodule.

Rheumatoid nodule, lung

Average score: 2.86/5 marks

This case aimed to assess the ability of candidates to assess a granulomatous lung lesion and suggest appropriate differential diagnoses and initiate other investigations. Pass marks were given to candidates describing the lesion, giving an adequate differential diagnosis and indicating the need for ZN stain to exclude tuberculosis. Additional marks were given to candidates specifically considering the diagnosis of rheumatoid nodule and seeking appropriate clinicopathological correlation. Borderline fails were given to candidates not seeking to exclude TB.

Most candidates answered this question well, although answers and descriptions were of variable quality.