FRCPath Part 2 Autumn 2013. Short cases: preferred diagnoses and commentary.	
Case 1. F 25. Abnormal cervical screening smear. Loop excision biopsy of cervix.	CGIN and CIN2 Mean score: 2.23/5. To achieve a pass mark candidates had to correctly and confidently identify both CIN and CGIN. Additional marks were given to those candidates who correctly identified high grade CIN and CGIN, noted the likely incomplete excision of the CIN, made comment on the need to determine cytohistological correlation, noted the need to take further levels to cover the block or made useful observations on HPV associations. Many candidates only identified one or other of the two lesions. A number of candidates overcalled the endocervical glands as adenoma malignum. One or two candidates missed both the CIN and the CGIN and gave benign diagnoses. There were some excellent answers, indicating deep understanding of the role of HPV in cervical pre-neoplasia and good understanding of the cervical cancer screening process.
Case 2. F 13, enlarged lymph nodes, left posterior triangle of neck.	Lymph node, reactive changes, suggesting cat scratch disease. Mean score 2.4/5 Pass marks were awarded to candidates who correctly identified reactive changes with follicular hyperplasia, granulomata and stellate abscesses and gave an appropriate differential diagnosis to include cat scratch, tularaemia, mycobacterial infection, brucellosis, fungi and LGV. Additional marks were made for favouring cat scratch disease and suggesting serology or PCR to detect *Bartonella heneslae.* More than half the candidates passed this question. The lesion was commonly misdiagnosed as a Kikuchi's disease. A few candidates preferred malignant diagnoses. Some candidates gave excellent and carefully reasoned diagnoses.
Case 3. F, 52. Total thyroidectomy for Graves' disease.	Micropapillary carcinoma of thyroid, background treated thyrotoxicosis. Mean score 2.3/5 To pass candidates had to recognise a papillary microcarcinoma. Additional marks were awarded to candidates who added value by additional description and measurement and correctly identified the lack of vascular invasion and the complete excision of the lesion or recognised the association with autoimmune thyroiditis. Credit was given for the discussion of relevant immunohistochemistry (CK 19 and high molecular weight

	cytokeratins) and its limitations. A proportion of candidates failed to recognise the micropapillary carcinoma or miscategorised it as follicular carcinoma, follicular adenoma or medullary carcinoma. Many candidates gave good answers, measuring and staging the lesion as well as commenting on background benign disease.
Case 4. F, 5. Lesion right wrist. Recent change in colour.	Compound Spitz naevus. Mean score 2.7 Candidates who passed identified a compound melanocytic lesion and favoured a diagnosis of a Spitz naevus. To gain additional marks candidates had to reach a confident diagnosis and make useful comment such as noting the symmetry of the lesion, the lack of Pagetoid invasion, the presence of Spitzoid cytomorphology, the presence of dermal maturation and the lack of deep mitoses. This case was generally well answered, with only very few candidates choosing malignant diagnoses or resorting to broad differential diagnoses.
Case 5. M, 43. Right testicular enlargement. Orchidectomy.	Choriocarcinoma/ seminoma. Mean score 2.8/5 A basic pass was awarded to candidates who identified a mixed germ cell tumour suggestive of seminoma and possible choriocarcinoma, and requested appropriate immunohistochemistry without committing to a definite diagnosis. Additional marks were given to candidates committing to a definite diagnosis of choriocarcinoma and seminoma with appropriate immunohistochemistry and noting important findings for clinical correlation and staging such as tumour size, invasion into rete testis, vascular invasion, invasion into tunica vaginalis and spermatic cord. This case was generally well answered, with most candidates identifying a mixed germ cell tumour. The most common reasons for failing this question were non-identification of choriocarcinoma and inadequate or unhelpful immunohistochemical panels.

Case 6. F, 70. Anaemia and epigastric discomfort. Polyp found at upper GI endoscopy.	Hyperplastic polyp, stomach . Mean score 2.37/5 Candidates who passed made a correct diagnosis of a benign polyp showing reactive and degenerate epithelial changes but lacking evidence of dysplasia. Additional marks were awarded to candidates who correctly attributed the epithelial changes as those of reaction and regeneration in association with inflammation and ulceration, or suggested the use of ancillary stains to exclude Helicobacter-like organisms. Errors included diagnosing high grade dysplasia and/or categorising the lesion as an adenoma. A few candidates chose a diagnosis of CMV gastritis. Other errors included diagnosis as a juvenile polyp, or misinterpretation as a fundic gland polyp.
Case 7. F 54. Well defined opacity, upper inner quadrant right breast.	Lobular carcinoma in situ and papillary lesion. Mean score 2.4/5 Pass marks were awarded to candidates recognising both an in situ lobular neoplasia and a B3 papillary lesion, favouring a benign process. Additional marks were awarded to candidates who proposed appropriate immunohistochemical investigation using epithelial, myoepithelial and hormone receptor immunohistochemistry to confirm the nature of the lesion. Appropriate comments on the molecular biology of benign papillary lesions and in situ lobular neoplasia would also have gained additional marks. Many candidates failed to observe the double diagnosis of in situ lobular neoplasia and a papillary lesion/ papilloma. Some candidates overcalled the apocrine and columnar changes as atypical hyperplasia or ductal carcinoma in situ. There was also a failing to recognise the biopsy in its context as a needle core biopsy of breast and apply “B” gradings (B3). Few candidates chose to correlate the histology with clinical and radiological findings. Some candidates gave excellent answers, addressing each of the key issues.
Case 8. M. 23. Haematuria. Bladder biopsy.	Schistosomiasis. Mean score 2.7/5 To pass candidates had to diagnose schistosomiasis and give a good basic description of the histological changes. Additional marks were given to candidates who added value by enquiring as to travel history, identified the organisms as likely to be Schistosoma haematobium, or commented on the natural history of the infestation, or described potential complications.

	Most candidates answered this question well: a few candidates didn't see the parasites and gave inappropriate answers.
Case 9. F, 35. Curettage, lesion in epiphysis of right proximal tibia.	Giant cell tumour of bone. Mean score 2.2/5 Candidates who passed described a giant cell tumour-rich tumour of bone and favoured a giant cell tumour of bone, as well as considering the important differential diagnosis of hyperparathyroidism. Additional marks were awarded to those who considered the relevance of the anatomical location of the tumour (epiphysis), the age of the patient, appropriate clinicopathological and radiological staging, and the natural history of giant cell tumour of bone (local aggression, occasional metastasis). Thoughtful differential diagnoses of brown cell tumour of hyperparathyroidism, giant cell-rich osteosarcoma, aneurismal bone cyst and chondroblastoma were also marked favourably, as long as giant cell tumour was the preferred diagnosis. Given the characteristic histology, the age of the patient and the anatomical site candidates should have been able to arrive at a diagnosis in this case. Many candidates didn't mention the need to exclude the possibility of hyperparathyroid bone disease. Some candidates offered confident diagnoses of oseosarcoma or aneurismal bone cyst. Some candidates offered excellent answers including the key diagnosis and appropriate clinical investigations.
Case 10. M, 89. Acute abdomen. Emergency colectomy	Pseudomembranous colitis. Mean score 2.5/5 To pass candidates had to give a confident diagnosis of pseudomembranous colitis and give a good basic description of the histological features. Additional marks were awarded to candidates who enquired as to recent antibiotic exposure and/or understood the role of C Difficile and the clinical issues relating to this condition. This was a good example of pseudomembranous colitis, chosen as a straightforward case. Errors made by some candidates included categorisation as ischaemic colitis only and diagnosis of CMV infection (there are no inclusions).
Case 11. Left parotid swelling. Left parotidectomy.	Carcinoma arising in pleomorphic adenoma: high grade salivary duct type. Mean score 2.1/5 Candidates who described a high grade salivary carcinoma and recognised the infiltrative and aggressive nature of the tumour

	were awarded a pass mark. Additional marks were awarded to candidates who recognised the presence of a scarred pleomorphic adenoma and identified that this was a high grade salivary duct carcinoma and made appropriate comment on the aggressive and infiltrative nature of these tumours. Many candidates appeared uncomfortable with salivary gland neoplasms. There was a common failure to comment on the high grade nature of this neoplasm.
Case 12. F 35. R4/U5 mass lower inner quadrant right breast. Excision biopsy.	Fibromatosis, breast. Mean score 2.1/5 To pass candidates had to give an adequate differential diagnosis to include fibromatosis and metaplastic carcinoma. To gain additional marks candidates had to propose an appropriate immunohistochemical panel including epithelial markers to exclude metaplastic carcinoma and/or to note that the lesion extended close to resection margins. Additional marks were also awarded to candidates noting that the lesion infiltrated skeletal muscle and/or required further excision. Some candidates answers including Kaposi's sarcoma, scarring and post-chemotherapy changes. Differential diagnoses were limited and the immunohistochemical panels suggested by many candidates would not have excluded the clinically important differential diagnosis of metaplastic carcinoma.
Case 13. F 18. Evacuation retained products of conception.	Partial hydatidiform mole Mean score 2.5/5 If candidates gave a good description of a partial hydatidiform mole and arrived at a confident diagnosis of this lesion pass marks were awarded. Candidates who added value by suggesting appropriate immunohistochemistry, correctly describing the chromosomal constitution of partial moles, indicating an understanding of epidemiological considerations or understanding the risk of potential complications were awarded additional marks. This case was answered well by many candidates, but a significant proportion preferred a diagnosis of complete mole. Candidates generally showed a good understanding of immunohistochemistry and cytogenetics in the diagnosis of molar disease. A small number of candidates diagnosed of hydropic abortion.
Case 14. M 50 Abnormal chest x-ray.	Chondroid hamartoma of lung.

Wedge excision lower lobe left lung.	Mean score 2.5/5 To pass candidates had to indicate a diagnosis of benign pulmonary hamartoma or chondroid hamartoma and give a competent description of the lesion as well as indicating that the lesion is benign. Additional marks were awarded to candidates who confirmed complete excision and made useful comments regarding further management (ie- no further surgery is required). This case was generally answered well, with most candidates being confident of the diagnosis. One or two candidates offered inappropriate and unnecessary differential diagnoses or suggested unnecessary immunohistochemistry. A few candidates were unable to name the lesion, but knew that it was benign.
Case 15. M 55. Previous colectomy for Dukes' stage C colonic carcinoma. Abnormal liver imaging at follow up. Non-anatomical resection left lobe of liver.	Focal nodular hyperplasia. Mean score 1.7/5 Candidates were awarded a pass mark for arriving at a benign diagnosis and a differential diagnosis between adenoma and focal nodular hyperplasia. Additional marks were awarded to candidates who made a confident diagnosis of focal nodular hyperplasia and suggested appropriate immunohistochemistry to confirm the diagnosis and distinguish the lesion from an adenoma (eg- glutamine synthetase, serum amyloid A, CK 7, beta catenin). Use of other special stains (eg- reticulin, copper associated protein) would also have been helpful. Candidates who sought to achieve correlation with radiology also gained marks. This case proved difficult, with many candidates failing to spot the focality of the lesion, and thereby not arriving at a a diagnosis. Some candidates arrived at diagnoses of cholangiocarcinoma, hepatitis, bile duct adenoma or obstructive bile duct disorders. Even when the correct diagnosis of FNH was arrived at candidates often didn't describe the histological features which led them to this diagnosis. Other candidates arrived at broad differentials without indicating how they might resolve the differential. A small proportion of candidates correctly identified the lesion and made valid suggestions as to further investigations.
Case 16. F, 74. Change in bowel habit. Colonoscopy: diverticulosis. Random biopsy.	Metastatic lobular carcinoma of breast. Mean score 2.4/5 Pass marks were given for a good description of the histology and arriving at a differential diagnosis favouring lobular carcinoma of breast (although other tumours such as metastatic signet ring carcinoma could be included in the differential).

	Additional marks were given to candidates proposing to use appropriate immunohistochemical or tinctorial stains to resolve the differential diagnosis and guide further treatment. Most candidates correctly identified this lesion as metastatic carcinoma, but didn't suggest sufficiently broad immunohistochemical panels. A significant number of candidates missed the lesion and chose to identify microscopic colitis and a few candidates favoured non-epithelial neoplasia, including Kaposi's sarcoma.
Case 17. F 27. Neurofibromatosis. Lesion right side of neck.	Malignant peripheral nerve sheath tumour. Mean score 2.5/5 To pass candidates had to recognise this as a sarcoma and include malignant peripheral nerve tumour in the differential diagnosis. Candidates were provided with the helpful history of neurofibromatosis. Additional marks were given to candidates recognising the histological features of a malignant peripheral nerve sheath tumour and suggesting a relevant panel of immunohistochemistry to confirm the diagnosis and exclude other differentials. Given that the history of neurofibromatosis was provided this was a straightforward case, which was well answered by many candidates. Some candidates didn't note the clinical history and offered other less likely malignant diagnoses.
Case 18. F, 43. Lesion left axilla, beneath pectoralis major muscle.	HIbernoma. Mean score 2.0/5 A basic pass was given to candidates who diagnosed a benign hibernoma. Additional marks were given to candidates who gave a good description of the lesion, indicated an understanding of the origin of these lesions and suggested additional blocks to rule out malignant diagnoses. Credit was also given to candidates who correctly recognised this as the lipoma-like variant of hibernoma. The most common error in this case was to misinterpret the multivacuolate brown fat cells as lipoblasts and over-diagnose the lesion as a liposarcoma. A few candidates failed to observe the vacuolated cells and diagnosed lipoma (this resulted in a borderline fail). Some candidates did arrive at the diagnosis, correctly identifying the characteristic microvacuolate cytoplasm.
Case 19. F, 78. Lobulated lesion, right lung on chest x-ray. Right upper lobectomy.	Pulmonary blastoma. Mean score 2.3/5

	This question was marked generously, recognising that pulmonary blastoma is a rare lesion that candidates are unlikely to have encountered in routine practice, and that this is a difficult lesion to diagnose. Candidates who recognised this as a biphasic malignant tumour were given pass marks. Additional marks were given to candidates who correctly identified this as a pulmonary blastoma and offered useful comment as to the prognosis of these lesions and the use of immunohistochemical stains to confirm the biphasic nature of the tumour. A few candidates failed to identify the biphasic nature of the lesion or suggested inappropriate diagnoses such as small cell carcinoma.
Case 20. M, 59. Cutaneous eruption: itchy and painful.	Acantholytic dermatosis, consistent with Darier's disease. Mean score 2.7/5 To pass candidates had to identify that this is an acantholytic dermatosis and give a basic description of the lesion. Additional marks were given to candidates listing an appropriate differential diagnosis, the value of negative immunohistochemistry in confirming the diagnosis and the use of clinical history to resolve the differential diagnosis of Darier's disease (persistent) as opposed to Grover's disease (transient). This case was generally well answered, with many candidates adding considerable value to their answers. A small proportion of candidates chose malignant diagnoses.