The Royal Australian and New Zealand College of Radiologists®

The Faculty of Clinical Radiology

2023 PHASE 2 SAMPLE QUESTIONS

Pathology, Clinical Radiology, Case Reporting and OSCER

Phase 2 Sample Examination Questions

Clinical Radiology

Sample Examination Questions

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About RANZCR

The Royal Australian and New Zealand College of Radiologists (RANZCR) is committed to improving health outcomes for all, by educating and supporting clinical radiologists and radiation oncologists. RANZCR is dedicated to setting standards, professional training, assessment and accreditation, and advocating access to quality care in both professions to create healthier communities.

RANZCR creates a positive impact by driving change, focusing on the professional development of its members and advancing best practice health policy and advocacy, to enable better patient outcomes. RANZCR members are critical to health services: radiation oncology is a vital component in the treatment of cancer; clinical radiology is central to the diagnosis and treatment of disease and injury.

RANZCR is led by clinicians who are democratically elected by the membership. The ultimate oversight and responsibility for RANZCR is vested in the Board of Directors. The work of the RANZCR is scrutinised and externally accredited against industry standards by the Australian Medical Council and the Medical Council of New Zealand.

Our Vision

RANZCR as the peak group driving best practice in clinical radiology and radiation oncology for the benefit of our patients.

Our Mission

To drive the appropriate, proper and safe use of radiological and radiation oncological medical services for optimum health outcomes by leading, training and sustaining our professionals.

Our Values

Commitment to Best Practice

Exemplified through an evidence-based culture, a focus on patient outcomes and equity of access to high quality care; an attitude of compassion and empathy.

Acting with Integrity

Exemplified through an ethical approach: doing what is right, not what is expedient; a forward thinking and collaborative attitude and patient-centric focus.

Accountability

Exemplified through strong leadership that is accountable to members; patient engagement at professional and organisational levels.

Code of Ethics

The Code defines the values and principles that underpin the best practice of clinical radiology and radiation oncology and makes explicit the standards of ethical conduct the College expects of its members.

1. INTRODUCTION

1.1 Purpose

The purpose of this Phase 2 Examination Sample Questions document to assist The Royal Australian and New Zealand College of Radiologists, its staff, trainees, members and other individuals with what is expected for the Phase 2 Examinations.

This document provides information and sample questions on each of the Phase 2 examinations, these are Pathology Multiple Choice Questions (MCQ), Pathology Short Answer Questions (SAQ), Radiology Multiple Choice Questions (MCQ), Case Reporting questions and Objective Structured Clinical Examination in Radiology Questions (OSCER).

Please keep in mind the format in which these sample questions are shown in this document are not how they will look in Practique. This is a guide on how each question will be structured, you are able to practice some of these exams via the RANZCR website (A link to this page is found in section 3 of this document).

2. PHASE 2 EXAMINATIONS

2.1 Pathology

The Pathology examination will be a three-hour exam which consists of 100 MCQs and 10 SAQs. Each MCQ is worth one mark per question, each SAQ is worth six marks per question. For each SAQ there will be two general questions and one question per topic area.

2.2 Radiology

The Radiology examination will be a two-hour exam which consists of 100 MCQs. Each MCQ is worth one mark per question.

2.3 Case Reporting

The case reporting examination will consist of 20 short cases, 10 medium length cases, and 5 long cases. Short cases are each worth 3 marks, medium cases are worth 6 marks, and long cases are worth 12 marks. The exam will be 3 hours in length for a total of 180 marks. Exams are marked with reference to carefully planned marking templates that reflect candidates' competencies in perception, interpretation, diagnosis and communication. The selected sample cases are representative only, and do not necessarily reflect the degree of difficulty or complexity of all exam cases.

2.4 OSCER

The OSCER is the new capstone assessment to assess competence to practice autonomously as a Clinical Radiologist, incorporating clinical reasoning, clinical judgement, medical skills and knowledge, Anatomy, AIT and Pathology as well as broader intrinsic roles including communication and professionalism.

The OSCER has seven stations across seven topic areas:

- Abdominal
- Neuroradiology/Head & Neck
- Thoracic and cardiovascular
- Breast
- Obstetrics and Gynaecology
- Musculoskeletal
- Paediatrics

2.5 Declaration

These sample questions and cases are used for illustrative purposes only. Selected sample questions and cases do not reflect the degree of difficulty or complexity of all questions and cases in an examination.

3. SAMPLE PATHOLOGY MCQ QUESTIONS

Candidates access practice examinations here under the preparing for Phase 2 examinations tab. Also via this weblink under the 'Preparing for Phase 2 Examinations' tab the candidate will be able to take online practice examinations for Case Reporting, Pathology and Radiology MCQs. The candidate will need to click on the 'Demonstration site' link which will take them to the online practice version of the Practique system. ID and examination pins are located under this tab of the webpage.

3.1 What is a MCQ and what is required?

MCQs are an objective assessment in which candidates will need to select a correct answer from the choices presented to them. MCQs are just a question and answer they do not consist of images. MCQ will consist of a stem and multiple answers to choose from. For each MCQ there will be one correct answer (which is known as the key) and multiple incorrect answers (which are known a distractors). The correct answers equal one mark, and incorrect answers equal no marks. A candidate will only be able to select one answer.

Pathology MCQ Sample 1	
Question number	**1**
Question Text	Which of the following statements is the MOST accurate concerning Wilms tumour (nephroblastoma)?
Maximum Marks	1
Available Answers	
☐ A	Peak age of presentation is at about 3 to 6 months
☒ B	**Presents as a large asymptomatic abdominal mass.**
☐ C	Most tumours are associated with a germline mutation.
☐ D	Significant association with von Hippel-Lindau disease.
☐ E	Significant association with tuberous sclerosis complex.

Pathology MCQ Sample 2	
Question number	**2**
Question Text	Of the following testicular tumours, which has peak incidence at around 20-25 years?
Maximum Marks	1
Available Answers	
☐ A	Seminoma
☐ B	Lymphoma
☐ C	Yolk sac tumour.
☐ D	Choriocarcinoma
☒ E	**Embryonal carcinoma.**

Pathology MCQ Sample 3	
Question number	**3**
Question Text	Which of the following regarding classic Dandy-Walker malformation is MOST correct?
Maximum Marks	1
Available Answers	
☐ A	Small posterior fossa and 4th ventricle obstruction.
☒ B	**Cystic dilatation of the 4th ventricle extending posteriorly.**
☐ C	Diffuse cerebellar hypoplasia with an enlarged subarachnoid space.
☐ D	Congenital splitting of the leptomeninges and cerebrospinal fluid accumulation.
☐ E	Batwing configuration of the 4th ventricle with elongated superior cerebellar peduncle.

Pathology MCQ Sample 4	
Question number	**4**
Question Text	Which of the following regarding intracranial saccular aneurysms is the MOST correct?
Maximum Marks	1
Available Answers	
☐ A	Multiple aneurysms exist in more than half of patients.
☐ B	Majority have a known predisposing genetic condition.
☐ C	Majority of aneurysms are detected in the posterior circulation.
☒ D	**Basal subarachnoid bleed makes the risk of vasospasm high.**
☐ E	Intimal elastic lamina thickening and attenuation of media are seen in aneurysmal sac.

Pathology MCQ Sample 5	
Question number	**5**
Question Text	Which statement regarding atherosclerosis is MOST correct?
Maximum Marks	1
Available Answers	
☐ A	Key process is thickening of the media with accumulation of lipid material.
☒ B	**Vulnerable plaques have thin fibrous caps and inflammatory response.**
☐ C	Plaques responsible for acute coronary syndromes are almost always stenotic
☐ D	Not considered a significant factor in the pathogenesis of true aneurysm formation
☐ E	Underlying mechanism now thought to be driven by an acute inflammatory response

Pathology MCQ Sample 6	
Question number	**6**
Question Text	Which of these statements on pulmonary vascular conditions is MOST correct?
Maximum Marks	1
Available Answers	
☐ A	Pulmonary infarcts commonly occur following pulmonary emboli.
☐ B	Pulmonary infarcts secondary to pulmonary emboli rarely cavitate.
☒ C	**Septic pulmonary emboli may occur secondary to Lemierre syndrome.**
☐ D	Ground glass change in a pulmonary infarct is due to an inflammatory response.
☐ E	Septic pulmonary emboli may seed via pulmonary arteriovascular malformations.

Pathology MCQ Sample 7	
Question number	**7**
Question Text	Which of the following is MOST correct regarding cystic fibrosis?
Maximum Marks	1
Available Answers	
☐ A	Male infertility is a rare association.
☒ B	**Commonly presents with salty sweat in infancy.**
☐ C	Commonly affects transmembrane calcium channels
☐ D	Airways are most commonly colonised by aspergillus
☐ E	Morphologic changes in the pancreas are most severe in the islets of Langerhans

Pathology MCQ Sample 8	
Question number	**8**
Question Text	Which of the following nasal lesions is most likely to have malignant transformation?
Maximum Marks	1
Available Answers	
☐ A	Angiofibroma.
☒ B	**Inverted papilloma**
☐ C	Exophytic papilloma
☐ D	Inflammatory sinonasal polyp
☐ E	Respiratory epithelial adenomatoid hamartoma

Pathology MCQ Sample 9	
Question number	**9**
Question Text	Which of the following bone tumours is USUALLY non-aggressive?
Maximum Marks	1
Available Answers	
☐ A	Chordoma
☐ B	Liposarcoma
☒ C	**Osteoblastoma**
☐ D	Adamantinoma
☐ E	Mesenchymal chondrosarcoma

4. SAMPLE PATHOLOGY SAQ QUESTIONS

4.1 What is a SAQ and what is required?

For a SAQ a candidate is required to construct a response to answer the question. The SAQ will consist of a lead in and sub questions. The candidate will need to answer all sub questions. The examples provided below show how the questions are marked using the answering criteria.

All Pathology SAQs fall under either a category 1 or 2 which is outlined in the CR Learning Outcome (Category 1 is a Common Condition and category 2 is Clinically Relevant). The questions range from easy to moderate to hard difficulty, covering one of the three classifications which are Knowledge, Application/ Understanding or Higher Order. The estimated time to answer an SAQ is dependent the total marks per question. These SAQs are worth six marks each, therefore, totalling six minutes per SAQ.

Note: The Practique system currently does not allow the use of the Greek alphabet symbols. As some questions may require these symbols in their answers, candidates will need to represent these by using the first letter of those words in an uppercase format. For example, Alpha (α) use **A,** Beta (β) use **B,** Delta (Δ) use **D,** Omega (Ω) use **O**, etc.

Here are examples of Pathology SAQs. Please note that the answers are in dot points in the examples, however, the examiners are looking for the candidate to answer these in a concise and focused response that may be factual, interpretive or a combination of the two. Typically, very short – no more than three to four sentences.

Pathology SAQ Sample 1	
Questions number	**10**
History/Lead-in	**A 35 year old Indigenous man presents with haemoptysis, fever and weight loss.**
Maximum Marks	6
Sub question 1	**List four main risk factors for pulmonary mycobacterial tuberculosis (TB).**
Mark	**Maximum of 2 marks**
Rubric	• Diabetes (0.5) • Malnutrition/Poverty/ Overcrowding (0.5) • Immunosuppression/HIV (0.5) • Comorbidities (Lung, Renal, Lymphoma) (0.5) • Travel history/Exposure (0.5) • Alcohol (0.5)
Sub question 2	**Define primary and secondary TB.**
Mark	**Maximum of 0.5 marks (Note: Both points must be given to receive 0.5 marks)**
Rubric	Definition: • In unexposed patients (P) • Reactivation of primary when host resistance is weakened (S)
Sub question 3	**Compare and contrast primary and secondary TB in terms of location, cavitation and nodal involvement.**
Mark	**Maximum of 1.5 marks**
Rubric	• Location (0.5) Starts in lungs – no apical/ upper lobe predilection (P), Lung apices / upper lobes (S) • Cavitation (0.5) - Less cavitation (P), More cavitation (S) • Nodal involvement (0.5) - Primary has more nodal involvement than secondary
Sub question 4	**Discuss the local progression of primary and secondary TB.**

Mark	**Maximum of 1 mark for any four of below (0.5 marks if only three points given)**
Rubric	Progression: • Ghon focus in lungs or Ghon complex with lymph nodes (P) • Progressive secondary TB (S) • Resolution/dormancy/progression (P) • Calcification (S) Caseating granuloma (P/S)
Sub question 5	**Describe two local and two systemic complications of TB.**
Mark	**Maximum of 1 mark**
Rubric	Local - **Must provide min 2 for max 0.5 marks** • Abscess • Bleeding/Haemorrhage (Rasmussen aneurysm) • Pleural effusion/ empyema necessitans • Fungal colonisation/secondary infection Systemic - **Must provide both for 0.5 marks** • Miliary TB • Organ system involvement (e.g., Pott disease of spine, brain abscess, meningitis)

Pathology SAQ Sample 2	
Question number	**11**
History/Lead-in	**A 35 year old Caucasian man presents with a seizure and investigations reveal a left cerebral lesion.**
Maximum Marks	6
Sub question 1	**Biopsy shows a diffuse glioma, with positive IDH1 mutation on immunohistochemistry.** **a) How does the results of the biopsy affect the prognosis for the patient based on the current 5th edition 2021 WHO classification?** **b) What would be the next molecular test performed?** **a) c) How can this test further subtype the lesion?**
Mark	**Maximum of 2 marks**
Rubric	**a)** Better prognosis for IDH 1 mutant type (0.5) **b)** Next test is 1p 19q co-deletion status (0.5) **c)** Further subclassify based on: • astrocytoma IDH-mutant (0.5) • oligodendroglioma IDH-mutant 1p19q co-deleted (0.5)
Sub question 2	**Suppose the IDH1 status was wild type instead.** **a) What subtype does this usually indicate?** **b) Discuss macroscopic features used to make this diagnosis.** **a) c) In the current WHO classification, how can molecular markers be used to further establish the above diagnosis?**
Mark	**Maximum of 2.5 marks**
Rubric	**a)** Glioblastoma (0.5) **b)** Macroscopic features: • necrosis (0.5) and • microvascular proliferation (0.5) **c)** The molecular features supersede histologic findings, so if only molecular status is positive but not the macroscopic, then it is still classified as a grade 4 glioblastoma (1)

Sub question 3	List three tumours having association with neurocutaneous syndromes.
Mark	**Maximum of 1.5 marks**
Rubric	• Vestibular/acoustic schwannoma (0.5) • Ependymoma (0.5) • Meningioma (0.5) • Optic glioma (0.5) • Hamartomas (0.5) • Cerebellar hemangioblastoma (0.5)

Pathology SAQ Sample 3	
Question number	**12**
History/Lead-in	**Thalassemia.**
Maximum Marks	6
Sub question 1	**b) Describe pathogenesis of Beta thalassemia major.** **c) How is anaemia caused in thalassemia?**
Mark	**Overall maximum of 2 marks**
Rubric	**a) For a maximum of 1 mark:** • Reduced Beta globin synthesis (0.5) • Increased Alpha globin as compared to beta (0.5) • Aggregates of unpaired alpha globin - HbA (0.5) **b)** • Ineffective erythropoiesis (0.5) in marrow • Extravascular hemolysis (0.5)/ destruction of aggregate containing red cells in spleen
Sub question 2	**What are the causes of systemic iron overload?**
Mark	**Maximum of 1 mark**
Rubric	• Increased gut iron absorption (0.5) • Recurrent blood transfusions (0.5)
Sub question 3	**List any three clinical thalassemia syndromes with matching genotype.**
Mark	**Maximum of 3 marks** **(0.5 mark each for correct syndrome and 0.5 mark each for correct genotype, candidates get 0.5 mark only if they state the syndrome only and not the genotype or vice-versa, up to a maximum of 3 marks)**
Rubric	**ß -Thalassemia** • ß-Thalassemia major (0.5 mark) • Homozygous ß-Thalassemia ($ß^0/ß^0$,$ß^+/ß^+$,$ß^0/ß^+$) (0.5) • ß-Thalassemia intermedia (0.5 mark) • Variable ($ß^0/ß^+$,$ß^+/ß^+$,$ß^0/ß$, $ß^+/ß$) (0.5 mark) • ß-Thalassemia minor (0.5 mark) • Heterozygous ß-Thalassemia ($ß^0/ß$, $ß^+/ß$) (0.5 mark) **α -Thalassemia** • Silent carrier (-/α α/α) (0.5 marks) • α -Thalassemia trait (-/- α/α, -/α -/α) (0.5 marks) • HbH disease (-/- -/α) (0.5 marks) • Hydrops fetalis (-/- -/-) (0.5 marks)

Pathology SAQ Sample 4	
Question number	**13**
History/Lead-in	**A 65 year old male patient undergoes transperineal biopsy of a firm 10mm prostate nodule palpable on PR examination. Histopathology confirms an adenocarcinoma.**
Maximum Marks	6
Sub question 1	**a) In which zone of the prostate do carcinomas most commonly arise? (0.5 marks)** **i) List any three anatomical zones and/or regions of the prostate. (1.5 marks)**
Mark	**Maximum of 2 marks**
Rubric	**a) Peripheral zone (0.5 mark)** i) **0.5 marks each – maximum of 1.5 marks** Peripheral zone Central zone Transitional zone Periurethral zone Anterior fibromuscular stroma
Sub question 2	**b) Name, list and discuss the criteria for grading of prostate adenocarcinoma. (1.5 marks)**
Mark	**Maximum of 1.5 marks**
Rubric	**0.5 marks for each. Maximum of 1.5 marks.** • Gleason system • Grades 1 to 5 • Only glandular pattern evaluated • One number assigned to dominant tumour pattern, 2nd number assigned to next most frequent pattern, numbers added together (e.g. 4 +3 = 7)
Sub question 3	**c) In the pTNM, AJCC 8th edition, list any two pathological parameters for the local staging of primary prostate adenocarcinoma. (1 mark)**
Mark	**Maximum of 1 mark**
Rubric	**0.5 marks for each. Maximum of 1 mark.** • pT2- organ confined • pT3- extraprostatic extension • pT3a- +/- bladder neck • pT3b- + seminal vesicles • pT4- fixed tumour or invades adjacent structures e.g. rectum, pelvic wall

Sub question 4	d) In the urinary tract, list three structural complications of adenocarcinoma of the prostate and/or prostatomegaly? (1.5 marks)
Mark	**Maximum of 1.5 marks**
Rubric	**0.5 marks for each. Maximum of 1.5 marks** • Hydronephrosis • Hydroureter • Renal parenchymal atrophy • Urinary retention • Bladder diverticula • Bladder calculi • Urinary tract infection • Tumour invasion of bladder, internal sphincter, external sphincter, vesicoureteric junction • Metastases, e.g. to kidney

Pathology SAQ Sample 5	
Question number	**14**
History/Lead-in	**A 55 year old otherwise well patient undergoes US guided biopsy of a 25mm focal liver lesion. Histopathology confirms that the lesion is malignant.**
Maximum Marks	6
Sub question 1	**a) Apart from the range of hepatocellular and cholangiocarcinomas, list three other primary malignant neoplasms arising in the liver. (1.5 marks)**
Mark	**Maximum of 1.5 marks**
Rubric	**0.5 marks each. Maximum of 1.5 marks.** • Angiosarcoma • Epithelioid haemangioendothelioma • Primary hepatic lymphoma • Hepatoblastoma • Malignant fibrous histiocytoma • Leiomyosarcoma • Mucinous cystic neoplasm of the liver and bile duct
Sub question 2	**b) List three conditions that predispose to intrahepatic cholangiocarcinoma. (1.5 marks)**
Mark	**Maximum of 1.5 marks**
Rubric	**0.5 marks each. Maximum of 1.5 marks.** • Primary sclerosing cholangitis • Fibropolycystic liver disease (biliary developmental anomalies) • Infestation by liver flukes • Mucinous cystic neoplasms • Intraductal papillary neoplasms • Hepatolithiasis • Hepatitis B • Hepatitis C • Nonalcoholic fatty liver disease

Sub question 3	c) List two modes of local and/or distant spread of conventional primary hepatocellular carcinoma. (1 mark)
Mark	**Maximum of 1 mark**
Rubric	**0.5 marks each. Maximum of 1 mark.** • Vascular invasion, including portal and hepatic veins • Intra hepatic metastases • Haematogenous metastases to lungs
Sub question 4	**d) List four features that differentiate fibrolamellar carcinoma from conventional hepatocellular carcinomas. (2 marks)**
Mark	**Maximum of 2 marks**
Rubric	**0.5 marks each. Maximum of 2 marks.** • Tends to arise in young adults and adolescents • Absence of underlying liver disease • Central fibrous scar • Better prognosis • Lymph nodal metastases • Not associated with elevated serum alpha fetoprotein

5. SAMPLE RADIOLOGY MCQ QUESTIONS

5.1 What is Radiology MCQ and what is required?

MCQs are an objective assessment in which candidates will need to select a correct answer from the choices presented to them. MCQs are just a question and answer they do not consist of images. MCQ will consist of a stem and multiple answers to choose from. For each MCQ there will be one correct answer (which is known as the key) and multiple incorrect answers (which are known a distractors). The correct answers equal one mark, and incorrect answers equal no marks. A candidate will only be able to select one answer.

New to the format starting in Sitting 1 2024 will be **Pictorial Multiple-choice Questions (PMQs).** These are identical in format to a regular MCQ aside from the introduction of a single image or image montage. The answers will still be presented in an MCQ format. Examples of PMQs are at the end of this section.

Radiology MCQ Sample 1	
Question number	**15**
Question Text	A 65-year-old woman with weight loss undergoes a CT which shows a single enhancing liver mass. A cholangiocarcinoma is suspected. Which of the following additional radiological signs is most likely to be present?
Maximum Marks	1
Available Answers	
☐ A	Avid central enhancement
☐ B	Calcification
☒ **C**	**Capsular retraction**
☐ D	High attenuation on unenhanced CT
☐ E	Venous compression

Radiology MCQ Sample 2	
Question number	**16**
Question Text	A 65 year old female who is allergic to Iodine undergoes an MRI to characterise a renal mass seen on Ultrasound. The mass has low T2 signal intensity. Which of the following imaging features is most supportive of a papillary renal cell carcinoma over an angiomyolipoma?
Maximum Marks	1
Available Answers	
☐ A	Avidly enhancing on the arterial phase
☐ B	Endophytic
☐ C	Exophytic
☐ D	Signal drop-out on out-of-phase imaging
☒ E	**Slow progressive enhancement**

Radiology MCQ Sample 3	
Question number	**17**
Question Text	Based on the current PIRADS classification (v2.1), which of the following is the dominant sequence in the transition zone?
Maximum Marks	1
Available Answers	
☐ A	T1
☒ **B**	T2
☐ C	Diffusion weighted imaging (DWI)
☐ D	Dynamic contrast enhanced (DCE)
☐ E	MR spectroscopy (MRS)

Radiology MCQ Sample 4	
Question number	**18**
Question Text	An adult diabetic and immunosuppressed patient presents with ear pain. Contrast-enhanced CT shows enhancing soft tissue thickening in the external auditory canal with cortical bone destruction and formation of a phlegmon. Which of the following organisms is most likely to be responsible for these appearances?
Maximum Marks	1
Available Answers	
☐ A	Actinomycosis
☐ B	Candida albicans
☐ C	Mucormycosis
☒ **D**	**Pseudomonas aeruginosa**
☐ E	Staphylococcus aureus

Radiology MCQ Sample 5	
Question number	**19**
Question Text	A 50 year old presents with headache and seizures. An MRI scan of the brain shows unilateral cortical swelling, cortical and subcortical T2 hyperintensity and blooming artifact on SWI. Which of the following is the most likely diagnosis?
Maximum Marks	1
Available Answers	
☐ A	Glioblastoma
☐ B	PCA territory infarct
☐ C	Cerebral toxoplasmosis
☒ **D**	**Herpes simplex encephalitis**
☐ E	Paraneoplastic encephalopathy

Radiology MCQ Sample 6	
Question number	**20**
Question Text	A core biopsy of a breast lesion shows features in keeping with a tubular carcinoma. Which of the following features is most likely to be seen on Mammography?
Maximum Marks	1
Available Answers	
☒ **A**	**Small stellate lesion**
☐ B	Linear branching calcifications
☐ C	Centrally lucent architectural distortion
☐ D	Mass associated with skin thickening
☐ E	Rounded lesion with partly obscured margins

Radiology MCQ Sample 7	
Question number	**21**
Question Text	A 30 year old male smoker undergoes a CT chest following a presentation to ED with spontaneous pneumothorax. This demonstrates multiple bilateral mid and upper lobe, bizarrely shaped pulmonary cysts with sparing of the peripheral lung bases. Which of the following additional features is most likely to be present?
Maximum Marks	1
Available Answers	
☐ A	Airspace consolidation and calcified pulmonary nodules
☐ B	Cysts are uniformly thin walled
☐ C	Honeycombing
☐ D	Lower zone patchy ground-glass opacities
☒ **E**	**Small irregular, bronchiolocentric nodules**

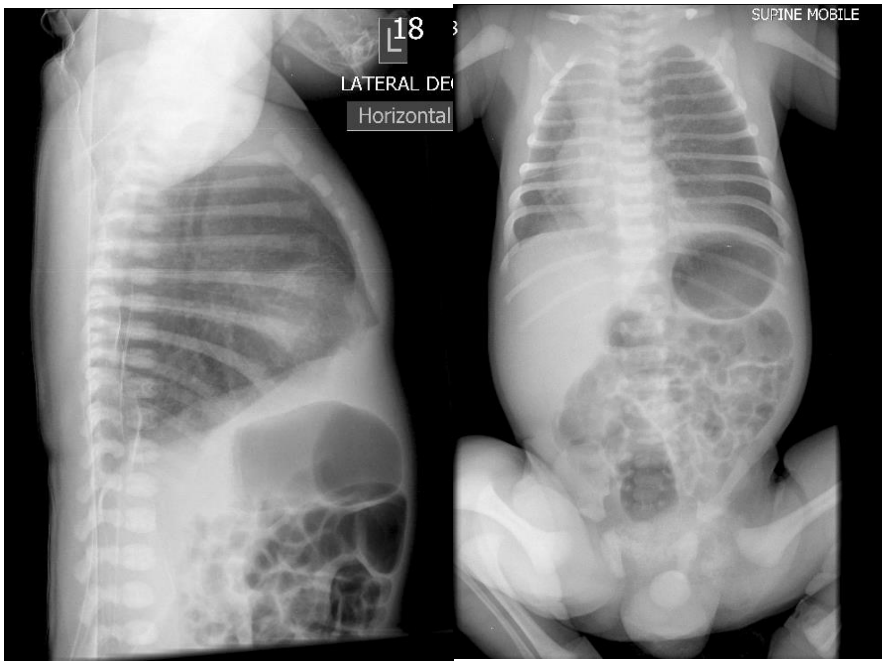
Radiology MCQ Sample 8	
Question number	**22**
Question Text	A 45 year old undergoes a CT scan of the chest and abdomen which demonstrates dextrocardia and polysplenia. Which of the following additional radiological features is likely to be present?
Maximum Marks	1
Available Answers	
☐ A	Malrotated kidney
☐ B	Portal vein thrombosis
☒ **C**	**Bilateral bi-lobed lungs**
☐ D	Enlarged internal mammary lymph nodes
☐ E	Drainage of the hepatic veins into the azygos vein

Radiology MCQ Sample 9	
Question number	**23**
Question Text	A 65 year old retired builder presents with shortness of breath. A CT scan of the chest shows a 4 cm subpleural mass with adjacent pleural thickening. Which of the following features is most likely to be shown in relation to the abnormality?
Maximum Marks	1
Available Answers	
☐ A	Cavitation
☐ B	Macroscopic fat
☒ **C**	**Air bronchograms**
☐ D	Adjacent rib notching
☐ E	Centrilobular nodularity

Radiology MCQ Sample 10	
Question number	**24**
Question Text	A 34 year old patient attends for HSG to investigate infertility. During the procedure you are unable to pass the catheter through the cervical canal. Which of the following findings are you most likely to see on ultrasound?
Maximum Marks	1
Available Answers	
☐ A	Inferior endometrial polyp
☐ B	Reduced uterine mobility
☒ **C**	**Fluid distended uterine cavity**
☐ D	Lower uterine segment intramural fibroid
☐ E	Large Nabothian cyst

Radiology MCQ Sample 11	
Question number	**25**
Question Text	An 8 year old boy has a severe salt wasting syndrome which has required lifelong glucocorticoid replacement since birth. Periodic testicular ultrasound is performed. Which of the following radiological features is most likely to be seen?
Maximum Marks	1
Available Answers	
☐ A	An anechoic avascular lesion in the epididymis head
☒ **B**	**Bilateral asymmetric hypoechoic testicular lesions with some vascularity**
☐ C	Enlarged heterogenous testes with increased flow
☐ D	Irregular testicular contour with interruption of echogenic tunica albuginea
☐ E	Scrotal skin thickening, enlarged epididymis, hydrocele and normal testis

Radiology MCQ – PMQ Sample 1	
Question number	**26**
Question Text	50 year old jaundiced patient. Which of the following is most likely to be seen on MRI of the splenic nodules?
Image Resources	
Maximum Marks	1
Available Answers	
☒ A	Blooming on gradient echo
☐ B	High signal on T1w
☐ C	High signal on T2w
☐ D	Reduction in signal on out of phase images
☐ E	Restricted diffusion

Radiology MCQ – PMQ Sample 2	
Question number	**27**
Question Text	Afebrile neonate with tachypnoea. Which of the following is the most likely diagnosis?
Image Resources	
Maximum Marks	1
Available Answers	
☐ A	Anal atresia
☐ B	Bronchial atresia
☒ C	Congenital lobar overinflation
☐ D	Hurler syndrome
☐ E	Right lower lobe pneumonia

6. SAMPLE CASE REPORTING QUESTIONS

6.1 What is Case Reporting and what is required?

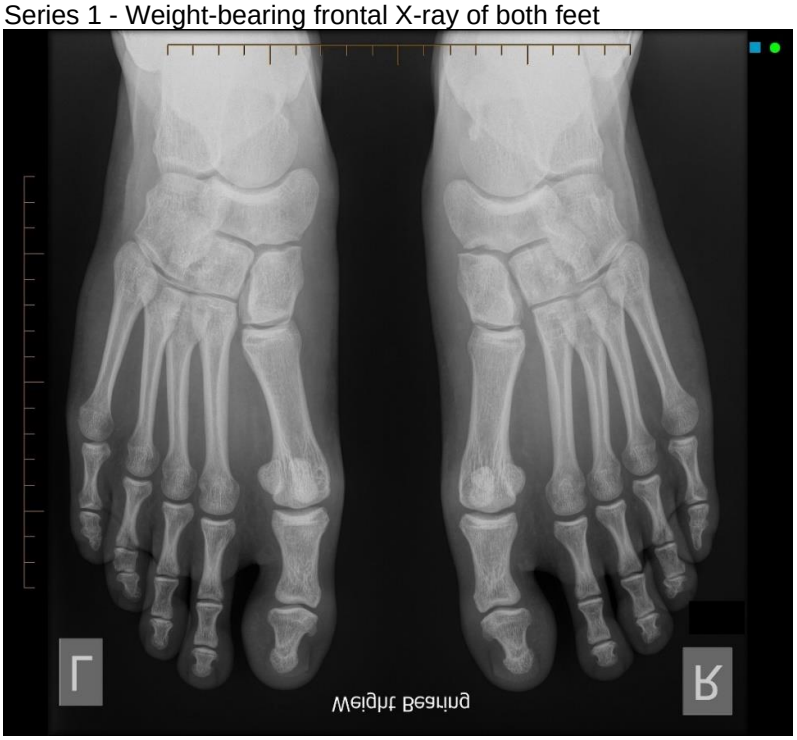
Case Reporting questions consist of short, medium, and long cases. Short case answers require the candidate to give the likely diagnosis. Medium and long case answers require the candidate to provide the a) findings, b) likely diagnosis, c) differential and further investigation, and d) management. Not all four categories are necessarily used in all cases.

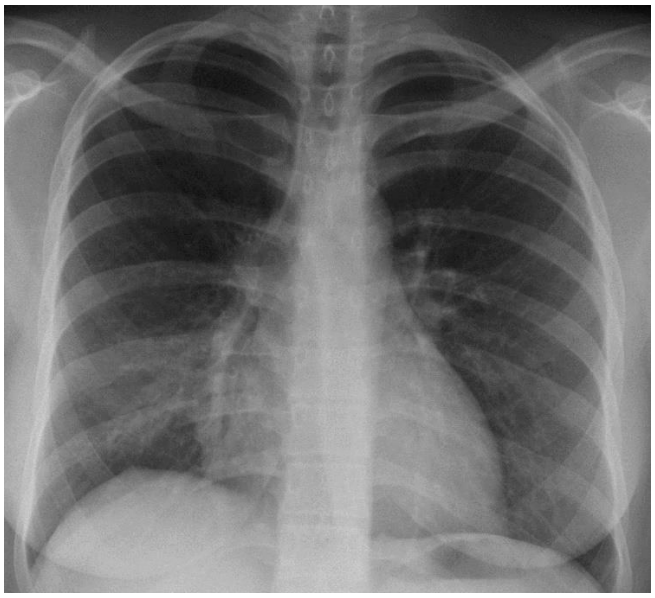
Note: The tools that are available when viewing the images are magnifying Glass, Zoom In, Zoom Out, Zoom to Window, Pan Image, Window Width & Window Level, Cine on Mouse, Invert, Rectangular ROI, Elliptical ROI, Angle Measurement, Distance Measurement, Rotate Left, Rotate Right, Flip Horizontal and Flip Vertical.

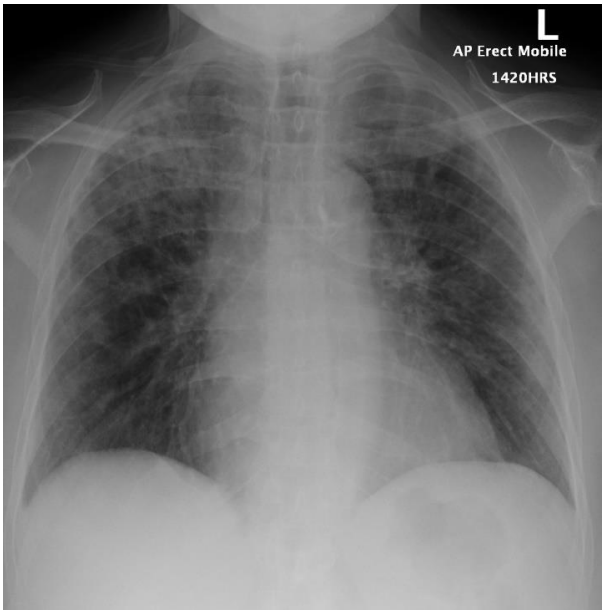
Short Cases

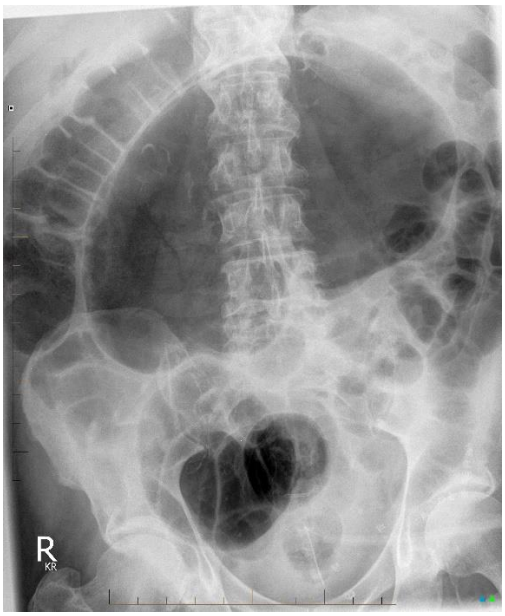
Short cases will consist of one or two images, most commonly radiographs, mammograms, or images from a fluoroscopic study. These cases will require a single likely diagnosis based on the findings correlated with the provided clinical history.

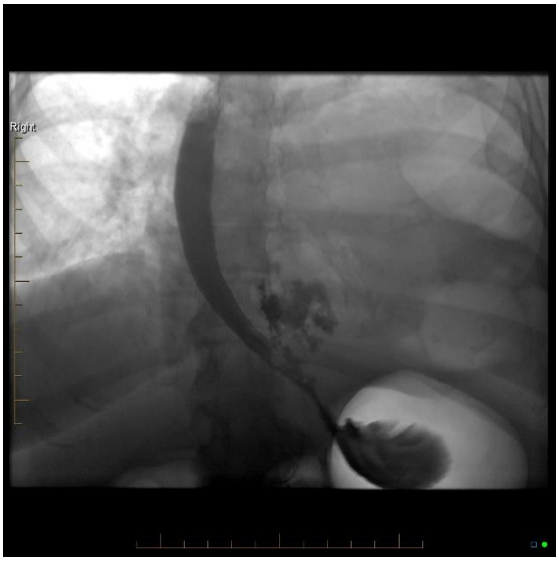
Disclaimer: The ability to scroll through series is not available in this document and only available on the Practique platform.

Case Reporting Short Case Sample 1	
Question number	**28**
History	A 30-year-old male with severe right midfoot pain following a twisting injury
Imaging	Series 1 - Weight-bearing frontal X-ray of both feet 
Maximum Marks	3
Marking Rubric	
Likely Diagnosis	Lisfranc ligament tear/ rupture

Case Reporting Short Case Sample 2	
Question number	**29**
History	A 24-year-old female with cough and shortness of breath, and a background history of asthma.
Imaging	Series 1 - PA chest X-ray 
Maximum Marks	3
Marking Rubric	
Likely Diagnosis	Right middle lobe collapse

Case Reporting Short Case Sample 3	
Question number	**30**
History	A 35 year old male who is HIV positive presents with acute shortness of breath, cough and fever.
Imaging	Chest X-ray AP 
Maximum Marks	3
Marking Rubric	
Likely Diagnosis	Pneumocystis jirovecii pneumonia (PJP)

Case Reporting Short Case Sample 4	
Question number	**31**
History	87 year old male presents with abdominal pain and constipation.
Imaging	AXR 
Maximum Marks	3
Marking Rubric	
Likely Diagnosis	Caecal volvulus (3)

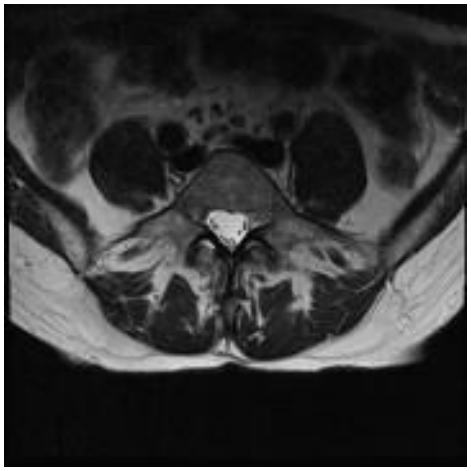
Case Reporting Short Case Sample 5	
Question number	**32**
History	57 year old female presents with chest and epigastric pain, day 1 post endoscopic gastro-oesophageal junction stricture dilatation.
Imaging	Contrast swallow 
Maximum Marks	3
Marking Rubric	
Likely Diagnosis	57 year old female presents with chest and epigastric pain, day 1 post endoscopic gastro-oesophageal junction stricture dilatation.

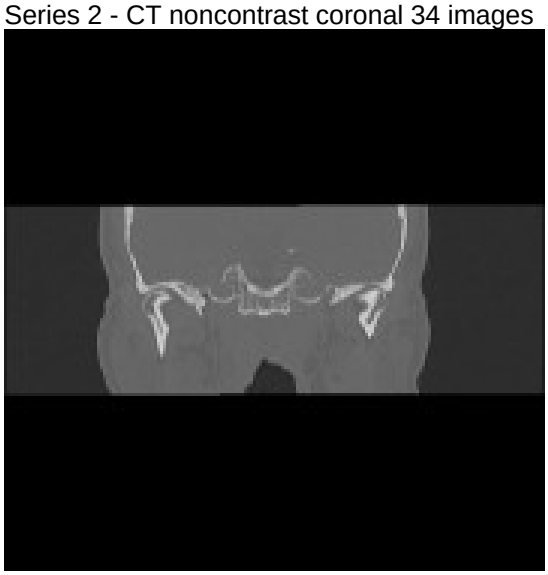
Case Reporting Short Case Sample 6	
Question number	**33**
History	A 50 year old male presents with chronic ankle pain.
Imaging	X-rays right ankle – 2 images  
Maximum Marks	3
Marking Rubric	
Likely Diagnosis	Talocalcaneal coalition (3)

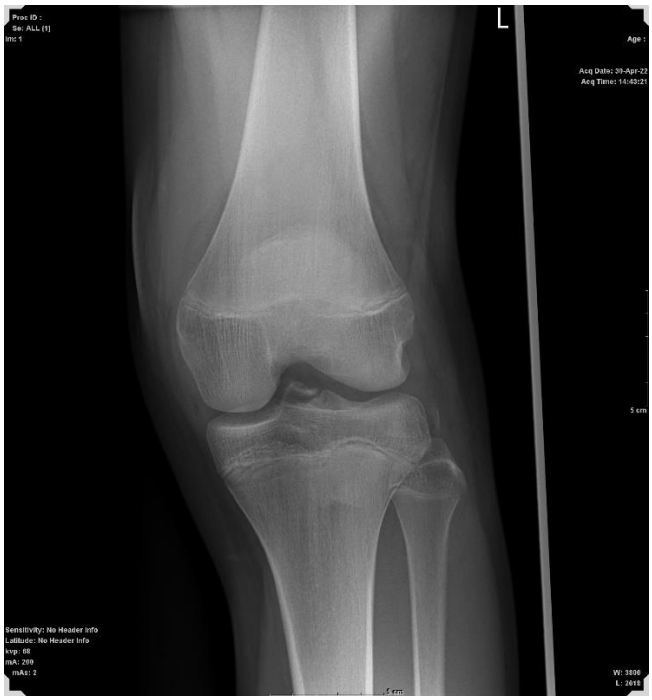
Medium Cases

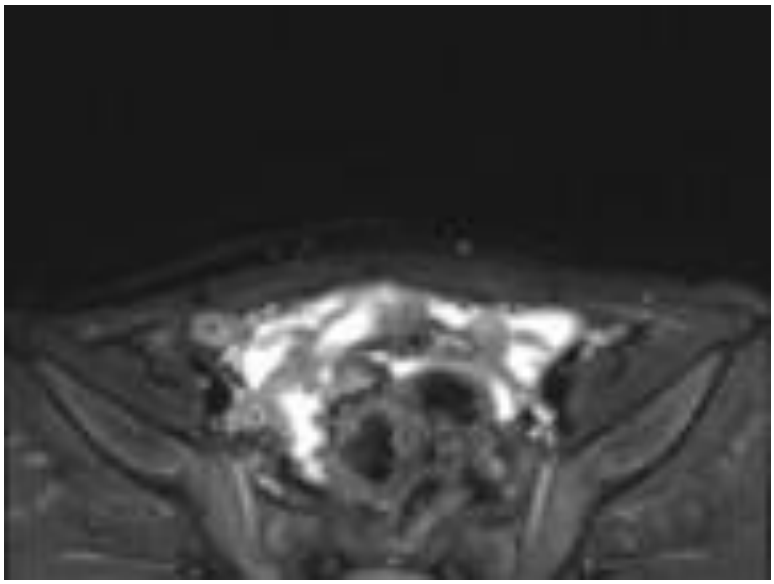
Medium cases will usually consist of one or two series of images. These may be two separate modalities e.g., a chest X-ray plus a single CT series OR two series of a single modality e.g., transverse and sagittal MRI of a body region. These cases will usually require a short list of findings and a likely diagnosis based on these findings correlated with the provided clinical history. In some cases there may be a short differential diagnosis required and this will be indicated as appropriate.

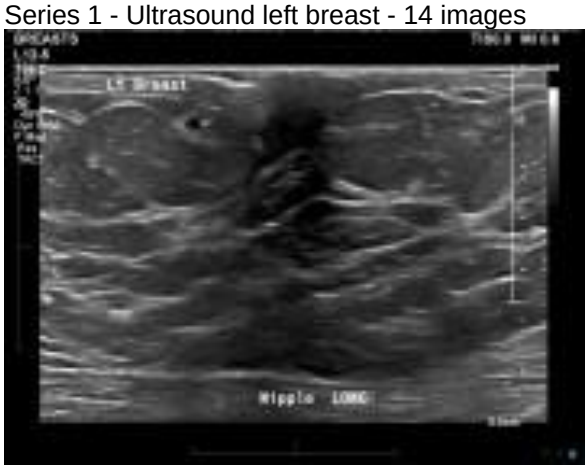
Disclaimer: The ability to scroll through series is not available in this document and only available on the Practique platform.

<table>
<tr><th colspan="2">Sample Medium Case Sample 1</th></tr>
<tr><th>Question number</th><th>34</th></tr>
<tr><td>History</td><td>A 43-year-old female with a 2-month history of slowly worsening left sciatica.</td></tr>
<tr><td>Imaging</td><td>Series 1 - T2 sagittal lumbar spine
 
Series 2 - T2 transverse L5/S1 disc level
  </td></tr>
<tr><td>Maximum Marks</td><td>6</td></tr>
<tr><td colspan="2">Marking Rubric</td></tr>
<tr><td>Findings</td><td>• Severe osteoarthritis of left facet (zygo-apophyseal) joint (1)
• Round lesion on medial surface of left facet joint (0.5)
• Lesion has a thin wall and high T2 signal (0.5)
• Lesion projects into the left subarticular spinal canal (0.5)
• Lesion is impinging on/ compressing/ displacing the left S1 nerve root (origin) (1)
• No disc herniation/ protrusion (0.5)</td></tr>
<tr><td>Likely Diagnosis</td><td>Synovial cyst (2)</td></tr>
</table>

Case Reporting Medium Case Sample 2	
Question number	**35**
History	A 60 year old male with a long history of recurrent left mastoiditis. Recent increase in pain plus left conductive hearing loss.
Imaging	Series 1 - CT noncontrast axial 21 images  Series 2 - CT noncontrast coronal 34 images 
Maximum Marks	6
Marking Rubric	
Findings	• Opacification of left mastoid air cells (0.5) • Opacification of upper middle ear/attic (1) (0.5 for 'middle ear' only) • Blunting/erosion of scutum (1) • Erosion/ thinning of ossicles (1) (1.5 if specify malleus and/ or incus)
Likely Diagnosis	Cholesteatoma (2)

Case Reporting Medium Case Sample 3	
Question number	**36**
History	12 year old boy tackled in football game.
Imaging	X-ray knee - 2 images  
Maximum Marks	6
Marking Rubric	
Findings	• Large joint effusion/haemarthrosis (1) • Segond fracture (2) • Tibial spine fracture (2)
Likely Diagnosis	ACL avulsion (not tear) (1)

Case Reporting Medium Case Sample 4	
Question number	**37**
History	16 month old female with epispadias and leaking urine. MRI to assess bladder and internal pelvic organs. Right groin lump.
Imaging	Series 1 - MRI pelvis T2FS axial - 18 images 
Maximum Marks	6
Marking Rubric	
Findings	• Right inguinal hernia (1), if specify canal of Nuck hernia (2) • Hernia contents: - (right) ovary (0.5) - hydrocoele (0.5) • Normal/ normally located left ovary (0.5) • Wide symphysis pubis (0.5)
Likely Diagnosis	Ovarian hernia or similar wording (herniation etc) (2)

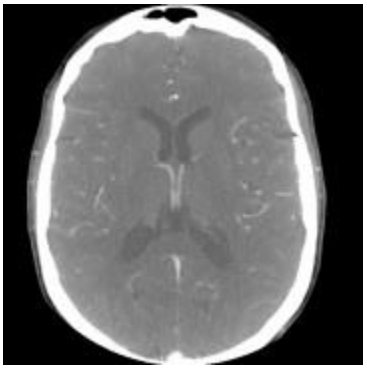
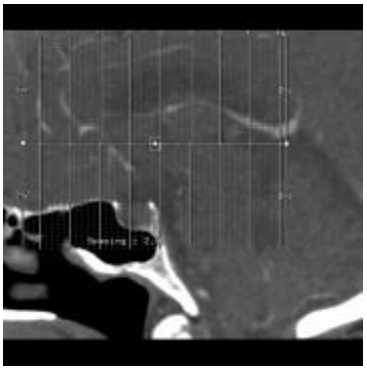
Case Reporting Medium Case Sample 5	
Question number	**38**
History	78 year-old male presents with painful left breast lump.
Imaging	Series 1 - Ultrasound left breast - 14 images 
Maximum Marks	6
Marking Rubric	
Findings	Left breast mass (3 o'clock, 5 cm from nipple) (0.5 each to max of 1.5 marks) - Not parallel (taller than wide) - Not circumscribed/ spiculated - Hypoechoic - Posterior acoustic shadowing - Internal vascularity on Doppler Chest wall involvement/ invasion (0.5 mark) 2nd left breast mass (1 mark) (3 o'clock, 2 cm from nipple) Left axillary lymph node. Focal cortical nodular thickening/ irregular appearance/ suspicious for malignancy. (1 mark
Likely Diagnosis	Multifocal (1) invasive ductal carcinoma (1)

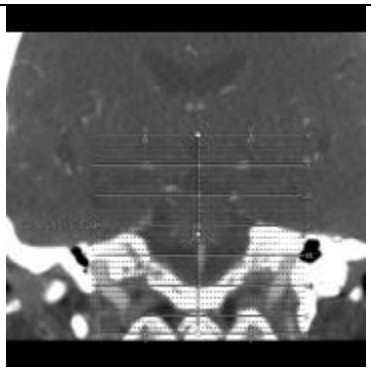
Long Cases

Long cases can have 4 categories for allocation of marks: Findings, Likely diagnosis, Differential diagnosis, Further investigation and management. Not all four categories are necessarily used in all cases. For example, an MRI showing a complex knee injury may only allocate marks for the list of findings. In other cases, there may be only one possible diagnosis based on imaging findings and history; in such cases a differential diagnosis is not relevant.

In the category of 'Further investigation and management' marks are allocated for recommendations relevant to the particular case e.g. 'further staging with PET-CT', 'refer to neurointervention', 'image guided biopsy or FNA', 'obtain previous imaging for comparison' etc. Marks are not automatically given for simple statements like 'notify referrer or treating team'. Exceptions to this may occur if there are unexpected or urgent findings in the context of the provided history e.g., pulmonary embolism in a cancer staging scan.

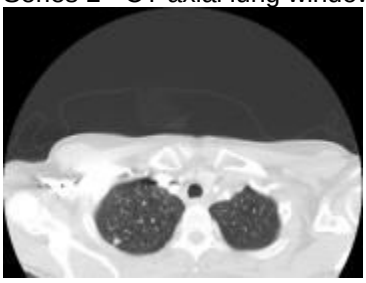
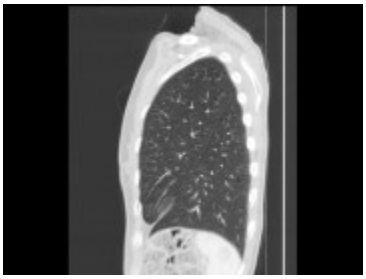
Disclaimer: The ability to scroll through series is not available in this document and only available on the Practique platform.

<table>
<tr><th colspan="2">Case Reporting Long Case Sample 1</th></tr>
<tr><th>Question number</th><th>39</th></tr>
<tr><td>History</td><td>A 35-year-old female with 3 months of headache and painful left sixth cranial nerve palsy. No history of trauma.</td></tr>
<tr><td>Imaging</td><td>Series 1 - Axial CTA Orbits 29 Images
 
Series 2 - Coronal CTA Circle of Willis 45 Images
 
Series 3 - Axial CTA Circle of Willis 34 Images</td></tr>
</table>

	
Maximum Marks	12
Marking Rubric	

Findings	• Contrast filling/opacification of both cavernous sinuses on arterial phase (2)
	• Bilateral enlargement of cavernous sinuses (1)
	• Dilated bilateral ophthalmic veins (1)
	• Bilateral proptosis (1)
	• No aneurysm (1)
	• Bony erosion/remodelling (1)
	• 0.5 for each anatomical site of bony remodelling, max 1 mark:
	  ○ sella turcica (0.5)
	  ○ posteromedial sphenoid sinus (0.5)
	  ○ clinoid processes (0.5)
	  ○ left carotid canal (0.5)

Likely Diagnosis	Bilateral carotico-cavernous fistula (2) If "chronic" mentioned (1)
Differential Diagnosis	None
Further Investigation and Management	(max 1 mark) Contact referring doctor and recommend Neurosurgical referral (1) Neurointerventional referral/consultation (1)

Case Reporting Long Case Sample 2	
Question number	**40**
History	A 60 year old female presents with cough and haemoptysis.
Imaging	Series 1 - CT axial contrast enhanced - 72 images  Series 2 - CT axial lung windows - 59 images  Series 3 - CT sagittal lung windows - 49 images 
Maximum Marks	12
Marking Rubric	
Findings	• Soft tissue spiculated lung mass (0.5) • Continuous with right hilum (0.5) • Projects into/ lies within (superior segment) right lower lobe (1) • Right hilar lymphadenopathy (1) • Encasing/ narrowing right pulmonary artery (0.5) • Mediastinal lymphadenopathy (pretracheal/ precarinal/ subcarinal) (1) • Multiple pulmonary nodules (1) • Adrenals normal (1) • Emphysema (1) • No pleural effusion (0.5)
Likely Diagnosis	Metastatic (1) Bronchogenic carcinoma/ lung cancer (1)
Further Investigation and Management	• Further staging with PET (PET-CT) (1) • Tissue diagnosis (0.5) • Refer to MDT (0.5)

7. SAMPLE OSCER CASE QUESTIONS

6.1 What is an OCSER and what is required?

Standardised digital cases will be used to align with contemporary practice and to reduce the variation across the exam. Structured and standardised questions will be presented to ensure candidates have the same opportunity to display proficiency. All OSCER case questions will be mapped to one of the following domains:

- Interpretation
- Observation
- Management
- Pathology
- Anatomy
- AIT/ Patient Safety
- Intrinsic Roles

The format:

- Each station will be 25 minutes long
- Each station will have 8 cases
- Each case will have a maximum of 10 marks
- Each station will have a maximum of 80 marks
- The whole exam will have a maximum of 560 marks (7 stations x 80 marks)
- Candidates will be assessed by two examiners at each station

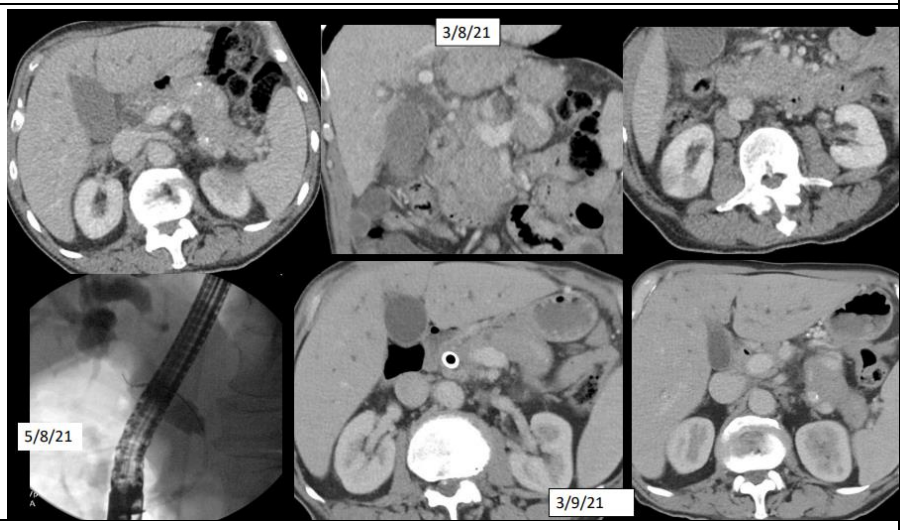
Standardisation:

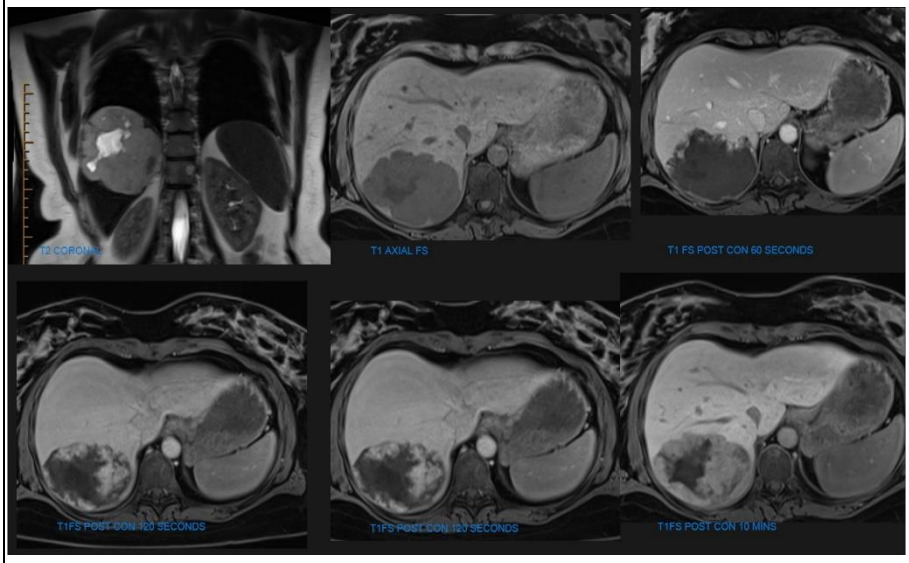
- Each case will only include the images or series that are relevant to the case.
- Each case will have a series of structured questions (between three and five).
- Each question within each case will have a defined number of marks (between one and five).

Process:

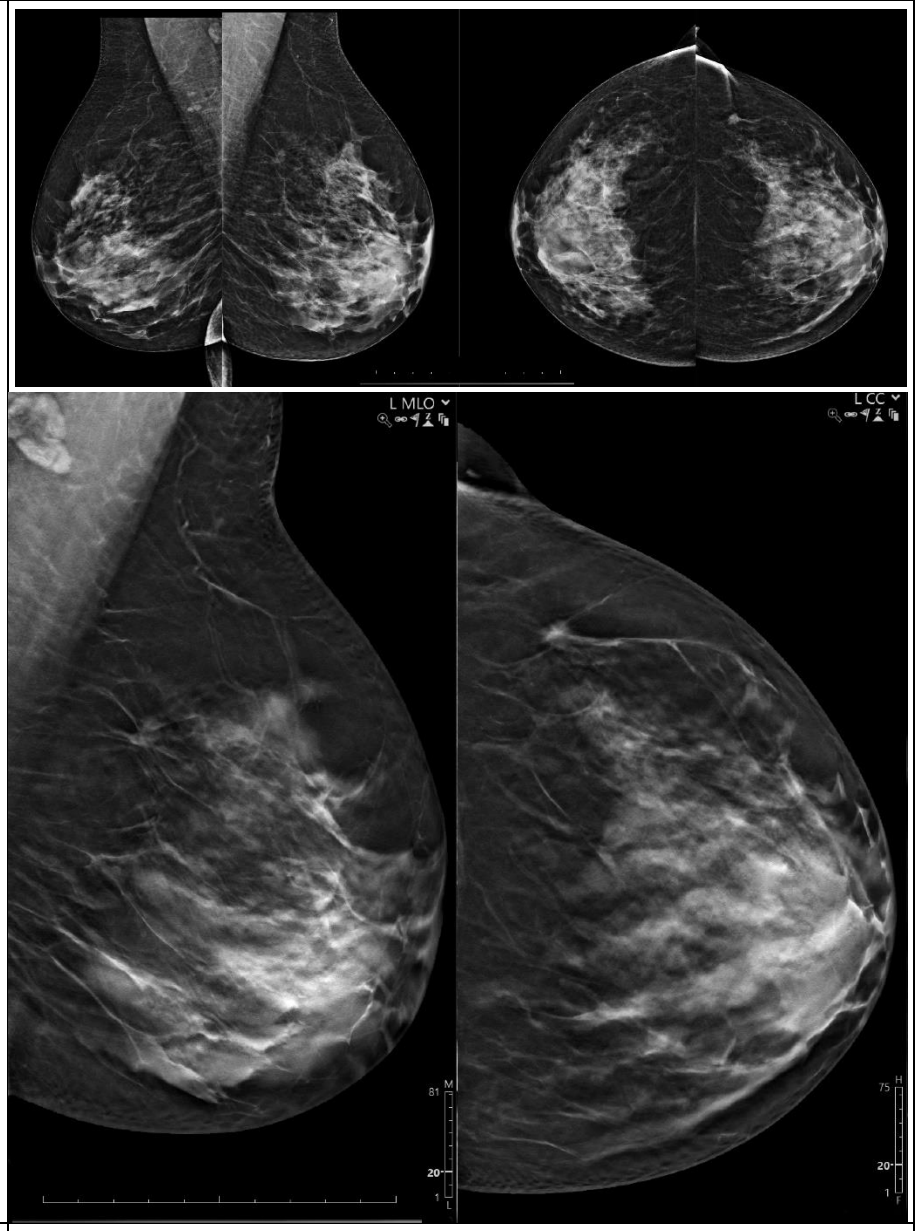
- Examiners will provide a case history
- Examiners will release images to the candidate dashboard
- Candidates are able to open and navigate images once available
- Examiner will begin asking the candidate standardised questions
- Candidates should wait for the first question before speaking about the case
- Candidates should allow 2 ½ -3 minutes per case
- Examiner will indicate when it is time to move to next case and repeat this process

Disclaimer: The number of marks and domains the question is mapped to will not be visible or provided to the candidate.

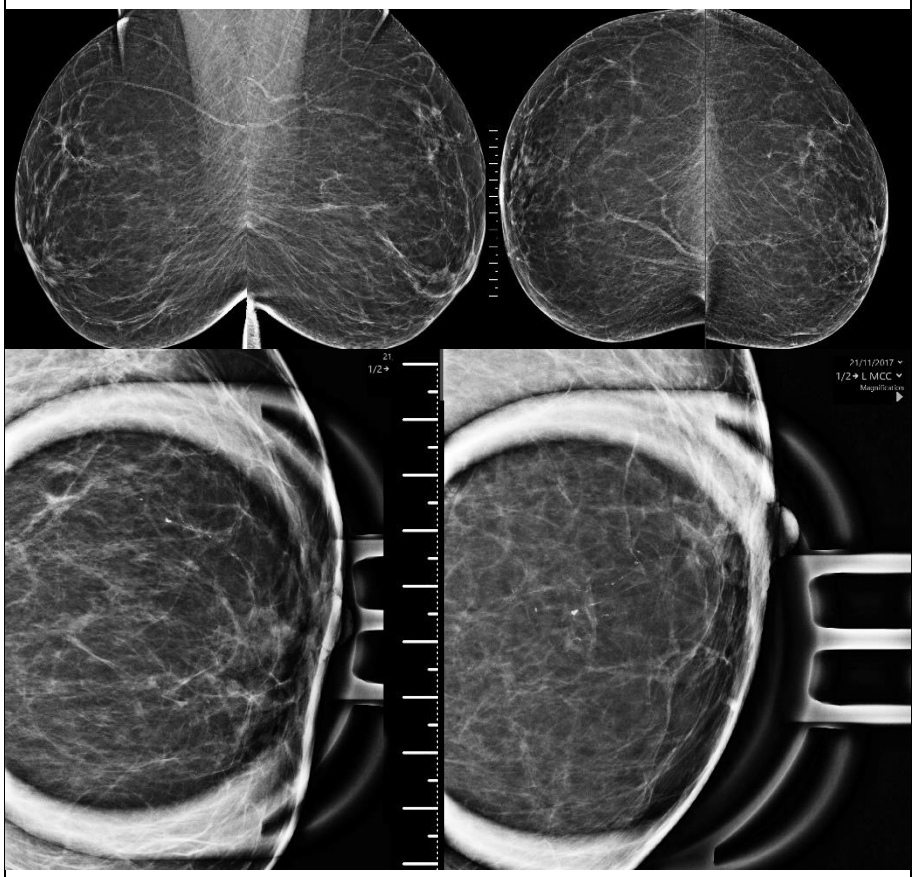
Abdominal OSCER Sample Case 1	
History	80-year-old male presents for further investigation with deranged LFTs with CT and ERCP
Imaging	
Maximum Marks	10
Question 1	**What are your observations?**
Domain	**Observation**
Mark	**4 marks**
Rubric	• Diffusely enlarged "sausage-shaped" pancreas (1) • Dilated intrahepatic ducts (1) • Smooth CBD stricture (1) • Hypoenhancing lesion L renal upper pole (1)
Question 2	**FDG PET/CT shows diffuse uptake in the pancreas, around central portal tracts, and in the lungs. How do you interpret all the imaging findings?**
Domain	**Interpretation**
Mark	**4 marks**
Rubric	• Multisystem disease (1) • Unlikely due to a single malignancy eg Ca pancreas or Ca lung (1) • Most likely IgG4 disease given morphology of pancreas (1) • Lymphoma is a differential (1)
Question 3	**Describe the retroperitoneal structures outside the pancreas commonly affected by IgG4 disease**
Domain	**Anatomy**
Mark	**2 marks**
Rubric	• RP fibrosis/periaortic soft tissue mass (1) • Lymphadenopathy (1) • Renal "pseudotumour" (1) • Ureteric strictures (1)

Abdominal OSCER Sample Case 2	
History	35-year-old female presents for MRI evaluation of an incidental US findings while being investigated for raised LFT's.
Imaging	
Maximum Marks	10
Question 1	**What is your interpretation of MRI findings and differential?**
Domain	**Interpretation**
Mark	**2 marks**
Rubric	• Diagnosis: Giant Hepatic Haemangioma (1) • Differential: None (1)
Question 2	**Describe 2 common types of contrast used for liver imaging and the advantages of both.**
Domain	**Management**
Mark	**4 marks**
Rubric	Up to 2.5 marks awarded from any of the following responses: • Primovist [gadoexetate] (0.5) • 50% hepatic excretion i.e., indicates presence of functioning hepatocytes, which is useful in differentiating FNH from adenoma (0.5) • Improved sensitivity in detecting small metastases (0.5) • Bile leak/cholangiography (0.5) • Hight T1 relaxity improves lesion detection (0.5) • Increased sensitivity for detection of early HCC (0.5) Up to 1.5 marks awarded from the following responses: • Gadovist [gadobutrol] (0.5) • Less likely to produce respiratory motion artifact (0.5) • Superior in evaluation of hepatic haemangioma (0.5) • Cost is lower (0.5)

Question 3	Describe the pathological hallmarks of giant hepatic haemangioma.
Domain	**Pathology**
Mark	**3 marks**
Rubric	• Benign vascular tumour (1) • To be classified as “giant” should be >10cm (1) • Circumscribed lesion with red-brown, spongy/honeycombed cut surface (1) • Vascular compartments of various sizes separated by fibrous tissue (1) • No risk of malignant transformation, but can haemorrhage spontaneously (1)
Question 4	**Describe 2 absolute contra-indications to MRI.**
Domain	**AIT/Patient Safety**
Mark	**1 mark**
Rubric	• Incompatible cardia pacemaker/wires (0.5) • Metallic intraocular foreign bodies (0.5) • Neuro/biostimulators (0.5) • Programmable/Drug infusion pump (0.5)

Breast OSCER Sample Case 1	
History	66-year-old woman screening
Imaging	
Maximum Marks	10
Question 1	**Describe the main mammographic abnormalities.**
Domain	**Observation**
Mark	**2 marks**
Rubric	• Moderate residual breast density – BIRADS C (1) • Small spiculated mass Lt breast UOQ (or 2-3 o'clock) (1) • Suspicious (1)
Question 2	**Describe the general principles of digital breast tomosynthesis.**
Domain	**AIT/Patient Safety**
Mark	**1 mark**
Rubric	The tube and detector move relative to each other Reconstructed images can be produced giving planes of tissue sharply in focus, while tissues either side are blurred

	Gives reconstructed “slices” through the breast (1).
Question 3	**What is the value of the tomographic images in this case?**
Domain	**AIT/Patient Safety**
Mark	**3 marks**
Rubric	• Help localize the lesion more precisely (1) • Confirm the suspicious nature of the lesion (assessing margins and more extensive spiculations) (1) • Assess for other lesions in the breast (1)
Question 4	**The percutaneous biopsy shows invasive cancer, what other information will you particularly look for in the pathology report?**
Domain	**Pathology**
Mark	**4 marks**
Rubric	• Likely subtype – probably NST, would accept “invasive ductal” or “NOS” (1) • Histological grade (1) • Hormonal markers status (ER, PR) (1) • HER2 marker status (1) • Associated DCIS (1)

Breast OSCER Sample Case 2	
History	69-year-old woman breast screening, first round
Imaging	
Maximum Marks	10
Question 1	**Describe mammographic abnormality.**
Domain	**Observation**
Mark	**3 marks**
Rubric	• 30 – 40mm linear distribution indeterminate micro calcs Lt breast (2) • Lt breast 10 o'çlock 20 – 30mm from nipple (1)
Question 2	**What is the likely diagnosis after workup (magnification & US)?**
Domain	**Interpretation**
Mark	**4 marks**
Rubric	• Malignant microcalcifications (HG DCIS) (2) • Linear group calcs – almost "snakeskin" (2)
Question 3	**What are the likely next steps?**
Domain	**Management**
Mark	**3 marks**
Rubric	• Lt breast ultrasound – see if there is an US lesion suitable for biopsy (1) • Adequate tissue sampling – probably MG VACB (US if US lesion – there was), diagnostic surgical excision may have been necessary (2)

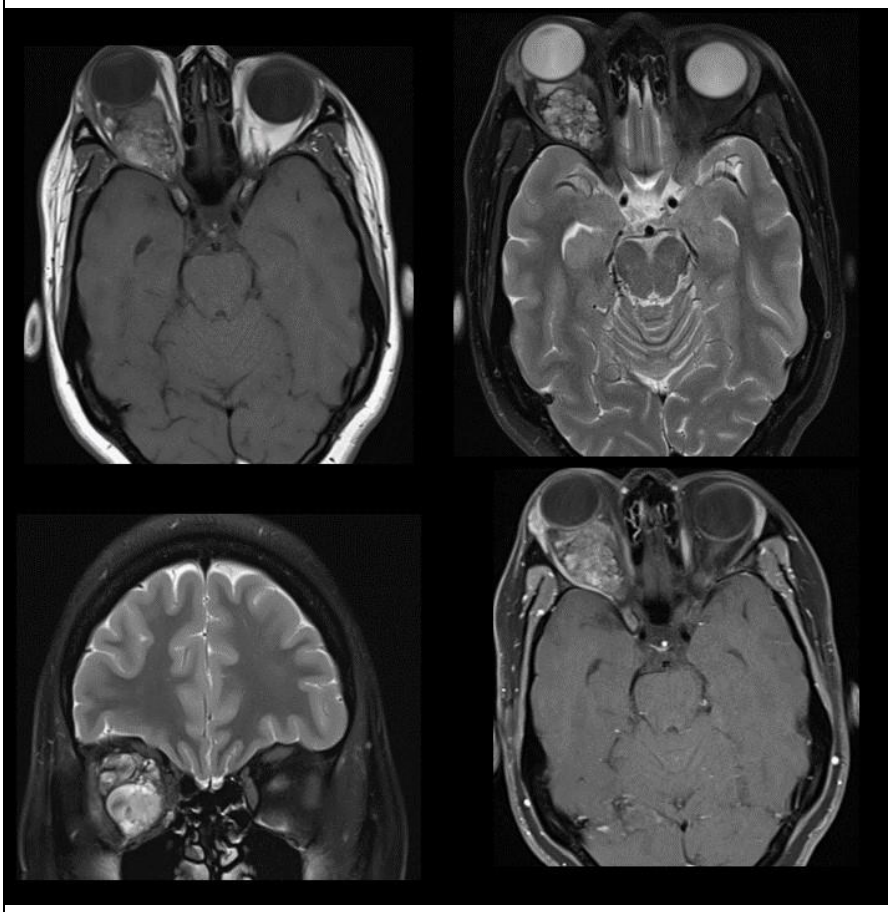
Question 4	What are the main antigens implicated in Hypersensitivity Pneumonitis?
Domain	**Management**
Mark	**3 marks**
Rubric	• Animal proteins – Birds (1) • Moulds (1) • Bacteria (thermophilic actinomyces) (1) • Fungi (1) • Protozoa (1)

Musculoskeletal OSCER Sample Case 1	
History	54-year-old male with pain in the right hip
Imaging	 
Maximum Marks	10

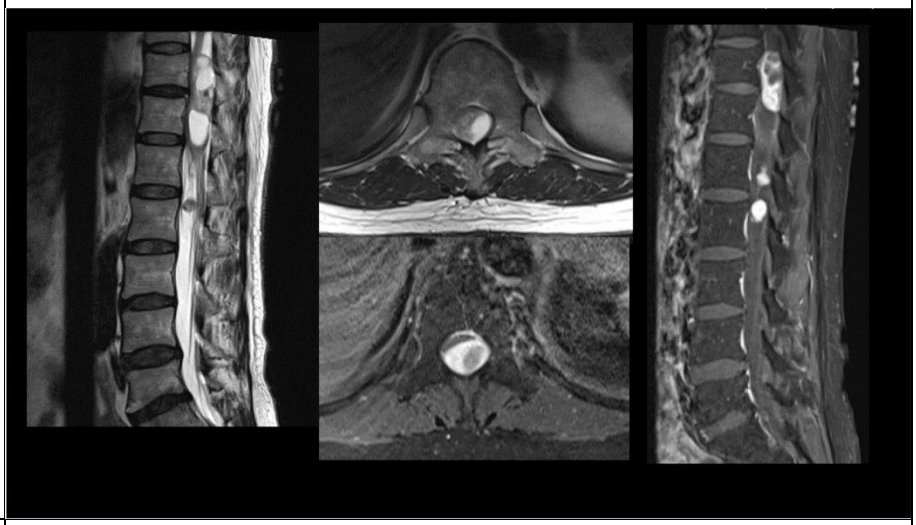
Question 1	What are your observations?
Domain	**Observation**
Mark	**3marks**
Rubric	• Bilateral femoral head sclerosis (1) • Bilateral subchondral collapse (1) • Osteoarthritic change in the hip joints (1)
Question 2	**What is your diagnosis?**
Domain	**Interpretation**
Mark	**1 mark**
Rubric	• Bilateral AVN of hips (1)
Question 3	**We felt the patient had AVN of the hips. What staging system would you use for this and what stage is this case?**
Domain	**Management**
Mark	**2 marks**
Rubric	• Ficat (and Arlett) (1) stage 4 (1)
Question 4	**What is the blood supply of the femoral head?**
Domain	**Anatomy**
Mark	**4 marks**
Rubric	• Ascending cervical/retinacular arteries (1) • From the medial and lateral circumflex arteries (mostly medial) (1) • Arise from profunda femoris (1) • Small contribution from artery of ligamentum teres via obturator artery (1)

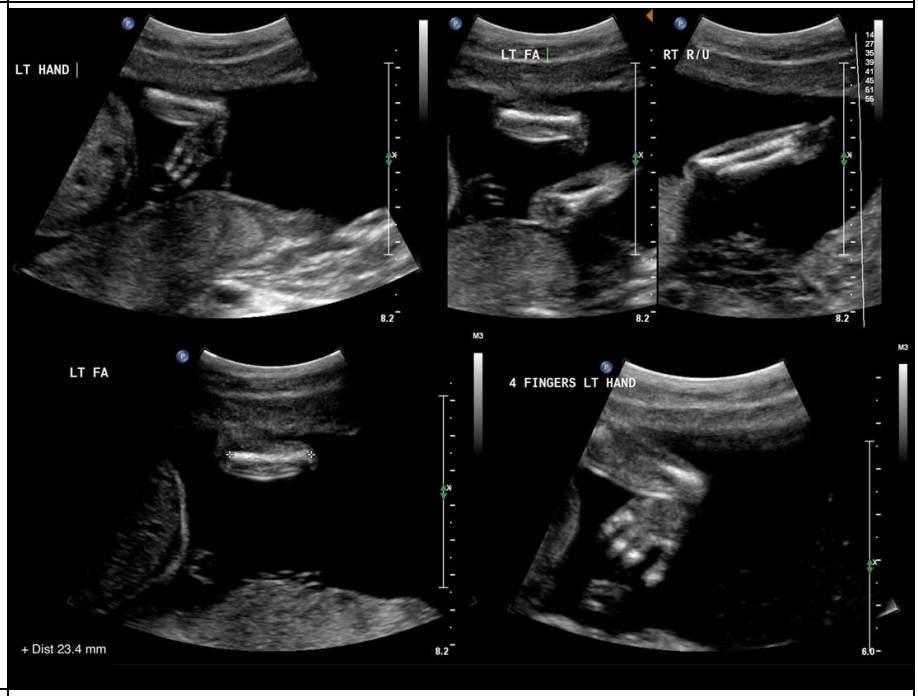
Musculoskeletal OSCER Sample Case 2	
History	15-year-old presents with a fall and ankle pain.
Imaging	

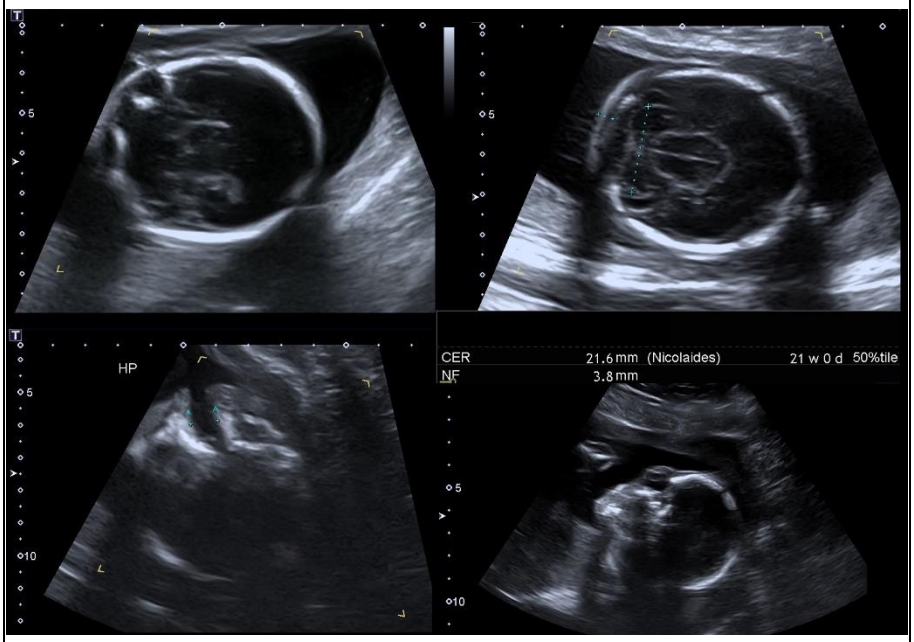
	
Maximum Marks	10
Question 1	**What are your observations?**
Domain	**Observation**
Mark	**4 marks**
Rubric	• Fracture of the anterior medial epiphysis of the tibia (1) • Does not extend beyond the physis (1) • Anterior displacement (1) • Joint effusion (1)
Question 2	**How do you classify this fracture according to the Salter Harris system and can you give its eponymous name?**
Domain	**Interpretation**
Mark	**3 marks**
Rubric	• SH Type 3 injury (1) • Tilleaux Fracture (2)
Question 3	**Which demographic group does Tilleaux fracture occur in and why?**
Domain	**Pathology**
Mark	**3 marks**
Rubric	• Adolescents typically 12 – 15-year-old (1) • Physis fuses from medial to lateral therefore this region is last to fuse (2)

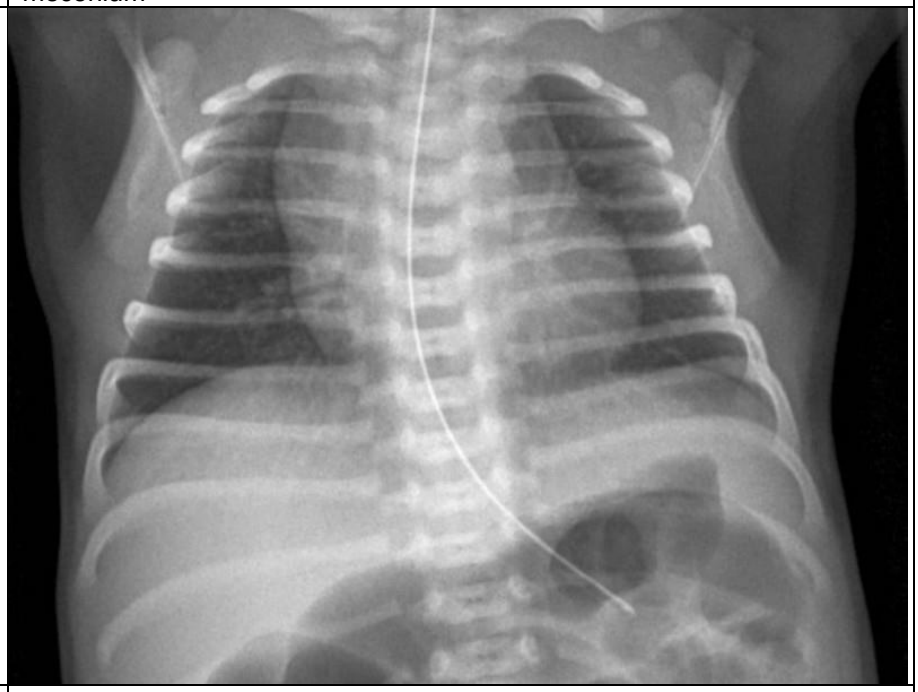
Neuroradiology/Head & Neck OSCER Sample Case 1	
History	42-year-old presents with proptosis
Imaging	
Maximum Marks	10
Question 1	**What are your observations?**
Domain	**Observation**
Mark	**3 marks**
Rubric	• Proptosis of the right globe (1) • Lobulated, poorly circumscribed heterogenous mass (1) • Variable enhancement (1)
Question 2	**What is your differential for this lesion?**
Domain	**Interpretation**
Mark	**3 marks**
Rubric	• Orbital lymphangioma (2) • Cavernous haemangioma (1) usually well circumscribed • Lymphoma (1)
Question 3	**Describe the pathology of this lesion**
Domain	**Pathology**
Mark	**2 marks**
Rubric	• Congenital Hamartoma with dilated vascular channels surrounded by lymphoid tissue (2)

Question 4	Can you name 2 methods to obtain fat saturation sequences on MR studies?
Domain	**AIT/Patient Safety**
Mark	**2 marks**
Rubric	• Dixon Method (1) • STIR method (1) • Phase contrast method (1) • Chess Method (1)

Neuroradiology/Head & Neck OSCER Sample Case 2	
History	60-year-old presented with a long history of backpain
Imaging	
Maximum Marks	10
Question 1	**What are your observations?**
Domain	**Observation**
Mark	**3 marks**
Rubric	• Large extra medullary partially cystic lesion enhancing mass near the conus (2) • Two small masses associated with the nerve roots of the cauda equina (1)
Question 2	**How would you interpret those findings?**
Domain	**Interpretation**
Mark	**3 marks**
Rubric	• Multiple schwannomas (2) • Myxopapillary ependymomas (1) • Metastases (1)
Question 3	**How are these lesions managed?**
Domain	**Management**
Mark	**2 marks**
Rubric	• Observation for small lesions (1) • Surgery for larger lesions (1)
Question 4	**The lesions were considered to all be extramedullary. What is the likely pathology and how do they present?**
Domain	**Pathology**
Mark	**2 marks**
Rubric	• Schwannoma's (0.5) • Tumour arises from the Schwann cell of the sensory root (1) • Usually well circumscribed, with a globular share and associated capsule (0.5) • Commonly present with pain which may be radicular (1)

Obstetrics & Gynaecology OSCER Sample Case 1	
History	28-year-old, routine morphology scan at 20 weeks
Imaging	
Maximum Marks	10
Question 1	**Describe the findings relating to the fetal left upper limb**
Domain	**Observation**
Mark	**4 marks**
Rubric	• Single forearm bone (1) • Single bone is short (1) • Only 4 digits on left hand (1) • Abnormal angulation of the left wrist (1)
Question 2	**What is the name for this constellation of findings?**
Domain	**Interpretation**
Mark	**1 mark**
Rubric	• Radial ray anomaly (1)
Question 3	**What conditions are associated with a radial ray anomaly?**
Domain	**Pathology**
Mark	**5 marks**
Rubric	• VACTERL (vertebral, anorectal, cardiac, tracheoesophageal fistula, oesophageal atresia, renal and limb anomalies) (1) • Chromosomal (T18, 13q deletion) (1) • Fanconi anaemia (1) • Holt-Oram syndrome (1) • TAR syndrome (thrombocytopaenia absent radius) (1) • Diabetic embryopathy (1) • Teratogens (1) • Cornelia-de-Lange syndrome (1)

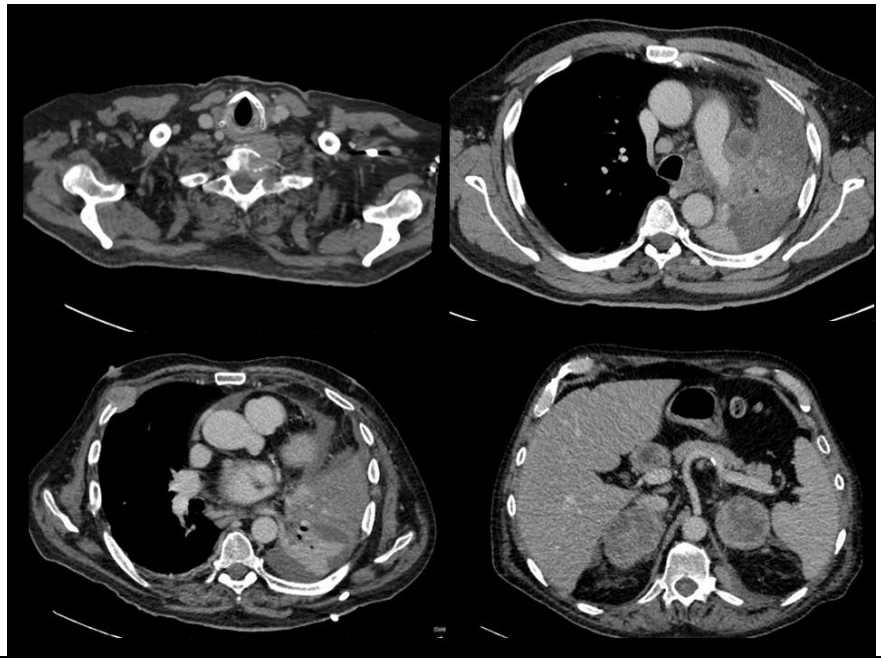
Obstetrics & Gynaecology OSCER Sample Case 2	
History	34-year-old Morphology Scan at 21 weeks
Imaging	
Maximum Marks	10
Question 1	**What are the abnormalities?**
Domain	**Observation**
Mark	**3 marks**
Rubric	• Monoventricle with fused thalami (1) = holoprosencephaly (1) • Midline facial cleft (1)
Question 2	**What is the most likely underlying genetic abnormality?**
Domain	**Interpretation**
Mark	**3 marks**
Rubric	• Trisomy 13 (3)
Question 3	**What other fetal abnormalities are common in trisomy 13?**
Domain	**Interpretation**
Mark	**4 marks**
Rubric	• Fused orbits with single eye (1) • Proboscis (1) • Dandy-Walker Malformation (1) • Polydactyly (1) • Omphalocoele (1) • Cardiac anomalies (1)

Paediatrics OSCER Sample Case 1	
History	2-day-old term infant with abdominal distension and failure to pass meconium
Imaging	
Maximum Marks	10
Question 1	**What are your observations?**
Domain	**Observation**
Mark	**2 marks**
Rubric	• No gas in rectum (1) • Mildly gas distended bowel (1) • Normal sacrum/no skeletal abnormality (1)
Question 2	**What Is your interpretation?**
Domain	**Interpretation**
Mark	**1 mark**
Rubric	• Distal bowel obstruction (1)
Question 3	**What is your differential?**
Domain	**Interpretation**
Mark	**2 marks**
Rubric	• Imperforate anus (0.5) • Hirschsprung's disease (0.5) • Small left colon (0.5) • Colonic atresia (0.5) • Meconium ileum (0.5) • Ileal atresia (0.5)
Question 4	**Describe how you would perform a contrast enema for this patient.**
Domain	**Management**
Mark	**2 marks**
Rubric	• Informed consent (0.5) • Foley catheter without balloon distension (0.5)

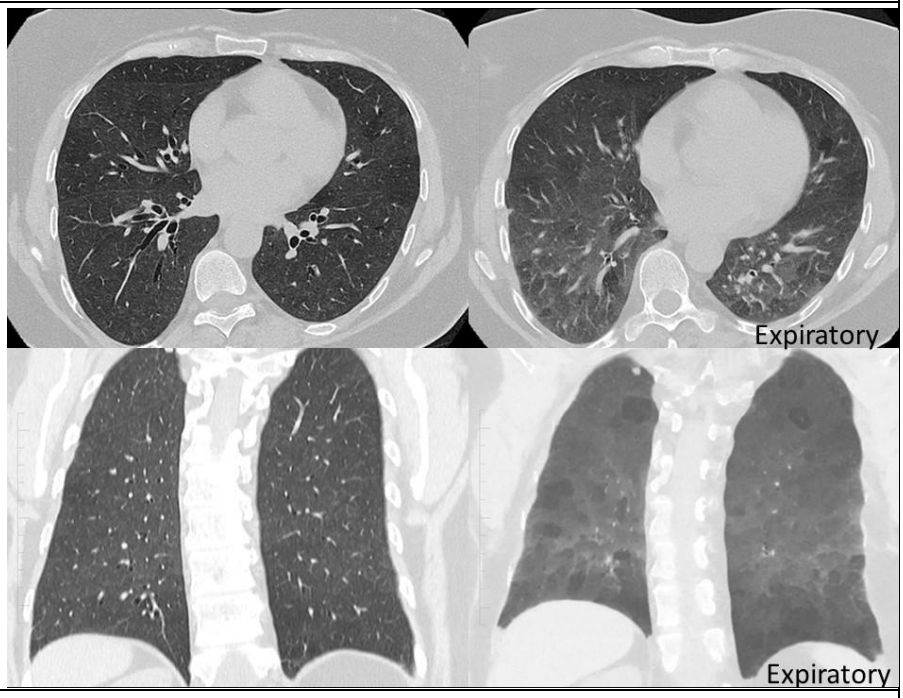
	• Water soluble contract (0.5) • Start in the lateral projection (0.5) • Assess rectosigmoid ratio (0.5) • Contrast around cecal pole if possible (0.5)
Question 5	**What is the pathologic basis for Hirschsprung's disease?**
Domain	**Pathology**
Mark	**3 marks**
Rubric	• Absence of ganglion cells in Meissner's plexus (1), Auerbach's plexus (1) that extends in a variable distance proximally from the anus (1)

Paediatrics OSCER Sample Case 2	
History	12-year-old with acute knee pain
Imaging	 
Maximum Marks	10

Question 1	What are your observations?
Domain	**Observation**
Mark	**3 marks**
Rubric	• No cause for knee pain seen (no effusion or fracture) (1) • Description of NOF (good description – eccentric, bubbly sclerotic well defined border, no PR, meta-diaphyseal etc…) (2)
Question 2	**What is your diagnosis?**
Domain	**Interpretation**
Mark	**1 mark**
Rubric	• NOF (1)
Question 3	**What is your recommendation for the management of this finding?**
Domain	**Management**
Mark	**2 marks**
Rubric	• It's a no touch lesion, marks only if that or the equivalent is recommended (2)
Question 4	**We thought this was a non-ossifying fibroma. Can you describe the pathology?**
Domain	**Pathology**
Mark	**3 marks**
Rubric	• Benign, fibrogenic lesions, typically metaphyseal, majority lower limbs particularly around the knee. Called FCD when smaller than 3cm. (3)
Question 5	**What is the natural history of NOF?**
Domain	**Pathology**
Mark	**1 mark**
Rubric	• Move away from the metaphysis with growth (0.5) and progressively ossify/become sclerotic (0.5)

Thoracic/Cardiovascular OSCER Sample Case 1	
History	64-year-old smoker increasing SOB, weight loss, haemoptysis, and recent L arm Neurology
Imaging	 
Maximum Marks	10
Question 1	**What is the pertinent finding?**
Domain	**Observation**
Mark	**2 marks**
Rubric	L lung process with obstruction of upper lobe (including lingula) (2)
Question 2	**What is the likely diagnosis? How do you proceed?**
Domain	**Interpretation**
Mark	**2 marks**

Rubric	• Left central lung cancer with LUL obstruction (1) • CT and/or FDG-PET scan (1)
Question 3	**A CT was done. Based on presented slides, what is the N and M staging?**
Domain	**Management**
Mark	**4 marks**
Rubric	• N2 (assuming same morphology with central hypodensity) (2) (N3 acceptable) (1) • M1c (rib, spine, adrenals, LN L axilla, porta hepatis) (2)
Question 4	**Who do you inform urgently about the findings and why?**
Domain	**Intrinsic roles**
Mark	**2 marks**
Rubric	Referrer/rad onc for palliative XRT of upper thoracic spine, as at risk of spinal compression (2)

Thoracic/Cardiovascular OSCER Sample Case 2	
History	64-year-old woman with progressive shortness of breath. Non-smoker. Owns a cockatiel.
Imaging	
Maximum Marks	10
Question 1	**What do you observe?**
Domain	**Observation**
Mark	**2 marks**
Rubric	• Subtle ground glass opacity (1) • Mosaic attenuation of lungs (1) • Expiratory air trapping – three density signs (1)
Question 2	**What are your differential diagnoses for this appearance?**
Domain	**Interpretation**
Mark	**3 marks**
Rubric	• Hypersensitivity pneumonia (non-fibrotic) (2) • Acute interstitial pneumonia (0.5) • Respiratory bronchiolitis (0.5) • NSIP (0.5) • Viral infection (0.5)
Question 3	**What are some key pathological features of HP?**
Domain	**Pathology**
Mark	**2 marks**
Rubric	• Poorly formed noncaseating granulomas (1) +/- multinucleated giant cells (1) • Lymphocytic infiltrates (0.5) • Cellular bronchiolitis (0.5) • Peribronchiolar fibrosis (0.5)

7. RELATED DOCUMENTS

- Clinical Radiology Training Program Handbook
- Clinical Radiology Curriculum Learning Outcomes
- RANZCR Code of Ethics
- Video Example – Phase 2 OSCER Musculoskeletal Sample Case 2 (also available on Examinations webpage)
- Phase 2 Examinations (Clinical Radiology) Policy