e-Film Reading Examination – August 2018

Question 1	
History	A 58 year old female with lower back and left leg pain.
Imaging	A MRI was performed on 6 November 2017.

Findings	**The purpose of the case is for the candidate to:**
	1. Report standard degenerative changes in a clear and sequential manner.
	2. Identify the more important foraminal disc protrusion
	
	Major Findings:
	• L2/3:
	  • Disc degeneration
	  • Modic 2 changes
	• L3/4:
	  • Left foraminal/lateral disc protrusion
	  • Compresses L3 nerve root
	• L4/5:
	  • Grade 1 anterolisthesis
	  • Bilateral facet joint arthrosis
	  • Bilateral ligamentum flavum thickening
	  • Severe canal stenosis
	  • Disc degeneration
	  • Mild right L4 foraminal narrowing
	• L5/S1:
	  • Grade 1 anterolisthesis
	  • Disc degeneration
	  • Bilateral facet joint arthrosis
	• Interspinous bursitis either level (L3/4 and/or L4/5)
	• Cord/conus normal
	• Normal age-related marrow changes

Likely Diagnosis	• Left L3/4 foraminal/lateral disc protrusion compressing the L3 nerve root • Severe spinal canal stenosis at L4/5
Differential	N/A
Further Investigation or Management	• Periarticular injection left L3 with steroid and local anaesthetic

Question 2	
History	A 82 year old male presents with chest pain and increasing shortness of breath, query PE
Imaging	A CTPA study was performed.
Findings	There is CT evidence of both asbestos and silica exposure. **Modality CTPA** **Major Findings:** • No pulmonary embolus detected Multiple sigmoid diverticula • Bilateral large confluent perihilar masses, upper and lower lobes • Multiple smaller pulmonary nodules, some are calcified, and some are subpleural in distribution • Multiple calcified mediastinal and hilar lymph nodes • Small calcified pleural plaques and pleural effusions • Thickened interlobular septa in the upper and lower zones **Minor Findings:** • Cardiomegaly- right heart enlargement • Enlarged main pulmonary trunk/central pulmonary arteries- PAH
Likely Diagnosis	• Progressive massive fibrosis due to occupational lung disease with cor pulmonale. • Silicosis • Asbestos exposure/asbestos pleural disease • Right heart strain/pulmonary artery hypertension/Cor pulmonale
Differential	Sarcoidosis
Further Investigation or Management	Correlation with occupational history

Question 3	
History	A 52 year old female presented with slowly progressive bilateral lower limb paresthesia.
Imaging	A MRI Spine was performed on 20 December 2017 (pre-contrast and postcontrast sequences)

Findings	**Major Findings:**
	• Heterogeneous signal symmetrically expansile relatively well-defined intramedullary mass in the cervical cord extending from the medullary obex to the T2/3 level - 15cm
	• Low T2 focus which demonstrates a “solid” contrast enhancement 2.5cm
	• Small haemorrhagic foci – increase T1 in superior cyst, and cap inferior to solid component
	• Slight canal expansion due to the lesion and CSF block at level of tumour
	• Associated cord signal alteration and marginal/polar cysts
	  • inferiorly contrast enhancing indicating this to be neoplastic
	  • Majority non-enhancing – associated and syrinx
	
	Minor Findings:
	• Minor degenerative change –neuro foraminal narrowing: right C5/6 and C3/4

Likely Diagnosis	• Cervical cord intramedullary Ependymoma
Differential	• Astrocytoma and/or hemangioblastoma
Further Investigation or Management	• Complete MRI spine and MRI brain • Inform team as probably unexpected finding

Question 4	
History	A previously well 4 year old boy presents acutely with a short history of abdominal pain and weight loss. On examination he was pale, with abdominal distension and hepatosplenomegaly.
Imaging	1. A limited abdominal ultrasound was performed acutely on 18 February 2014 2. A contrast chest, abdominal and pelvic (CAP) CT was performed the next day on 19 February 2014 a. Axial chest/abdo/pelvis soft tissue window b. Sagittal soft tissue window
Findings	**Point of Case:** Identification of an obvious abdominal malignancy and ability to recognise this is not one of the more common causes of abdominal malignancy at this age neuroblastoma, Wilms, hepatoblastoma. There are numerous obvious mass lesions involving liver, bowel, kidneys, as well as peritoneal disease. **Abdominal Ultrasound**: • Multiple thick walled bowel loops **Score in either US or CT area:** • Large (max size approx 10 cm) left sided retroperitoneal abdominal mass. • Mass encases a loop of small bowel but does NOT obstruct. • Ascites **Chest/Abdo/Pelvis CT:** • Multiple large liver masses • Multiple bilateral renal masses • Peritoneal seedling/ disease/ diaphragmatic nodes. **Minor Findings:** • Right pleural effusion - moderate size • No mediastinal/hila/axillary nodes • Spleen normal • Bones normal • Lungs unremarkable • Adrenals normal • Renal masses non-obstructing
Likely Diagnosis	BURKITT LYMPHOMA (Non Hodgkin's Lymphoma)
Differential	None other than lymphoma
Further Investigation or Management	• Urgent Paediatric Surgical/Oncology Referral • Percutaneous Biopsy • PET/CT for staging

Question 5	
History	A 40-year-old woman with a history of ulcerative colitis, who had a pancolectomy 20 years ago, presents with weight loss.
Imaging	A CT of the abdomen was performed on 30 September 2014
Findings	**Notes:** • Consider fail if candidate does not diagnose rectal carcinoma at stump. **CT:** • Tumour - Mucosal thickening proximal to rectal sutures • Lymph nodes - none seen **Metastases:** • Liver • Bones • Lung bases – none seen **Minor finding:** • Terminal ileostomy
Likely Diagnosis	• Rectal carcinoma at stump • Metastatic disease
Differential	N/A
Further Investigation or Management	• Sigmoidoscopy with a biopsy • Complete staging with CT scan of the chest and PET-CT

Question 6	
History	A 32-year-old female presented at 35 weeks' gestation, clinically large for dates. Normal anatomy scan at 19 weeks. She presents on 24 March 2014.
Imaging	A transabdominal ultrasound was performed on 24 March 2014

Findings	**US**
	Major Findings:
	• Dilated bowel loops
	• Prominent stomach
	• Polyhydramnios (AFI 26.6.MVP 11cm)
	• Averagely grown/appropriately sized fetus
	
	Minor Findings:
	• Cephalic presentation
	• Placenta anterior and clear
	• Normal umbilical artery dopplers/ Normal SD ratio of umbilical artery
	• No other cause of polyhydramnios
	  • Normal lips
	  • Chest
	  • Head
	  • Abdominal wall

Likely Diagnosis	• Small bowel • Atresia/obstruction • Polyhydramios
Differential	N/A
Further Investigation or Management	• Urgent referral to tertiary centre/MFM • Consider karyotyping

Question 7	
History	A 76 year old male presented with right upper quadrant pain. A week post operative for right hemicolectomy.
Imaging	A CT scan was performed on 27 June 2017
Findings	**Contained perforation of gallbladder as gallbladder is distended – not a ruptured gallbladder** **Major Findings:** • Distended thick walled gallbladder • Defects in gallbladder wall, with contained perforation around the gall bladder • No radio-opaque gallstones • No free fluid • No free air **Minor Findings:** • No portal vein thrombus • Large simple cysts in kidneys • Consolidation right base • Sacral Pressure sore
Likely Diagnosis	• Perforated gallbladder with contained peri-cholecystic abscess
Differential	N/A
Further Investigation or Management	• Percutaneous cholecystostomy • Surgical review/antibiotics

Question 8	
History	A 56 year old female presents with right neck swelling, which was only noticed in the last couple of days. Ultrasound performed elsewhere reports a 'cystic lesion' with MRI recommended for further assessment.
Imaging	MRI was performed on 20 October 2016.
Findings	The candidate should pass the case if they see both lesions and realise that the right neck lesion is contralateral lymphadenopathy due to a left sided SCC. The primary SCC is oropharyngeal but 'base of tongue' or 'tonsillar' also acceptable. The candidate should not pass the case if they do not see the left primary lesion, even if they correctly suggest metastatic SCC as a diagnosis for the right sided lesion. **Major Findings:** **Right neck lesion:** • Multiloculated cystic appearance 40 x 31 x 21mm (CC x AP x TV) • Posterior to submandibular gland, lateral to CCA and IJV: level II • T1: isointense to muscle/ low signal • T2: 2 cystic components with fluid-fluid levels indicating debris or blood product • T1-Gd: enhancing wall **Mass in left oropharynx:** • Irregular margins, 46 x 32 x 34mm (CC x AP x TV) • T1: isointense to muscle/ low signal • T2: intermediate/ high signal • T1-Gd: enhances uniformly • Invades tongue muscles and crosses midline • No ICA encasement or pterygoid muscle invasion
Likely Diagnosis	• Oropharyngeal SCC • Contralateral neoplastic lymphadenopathy
Differential	N/A
Further Investigation or Management	• Recommend staging: (PET-CT) • 'Would look up staging system' or T4N2 or T4aN2c