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39	A	B	C	D	E

PRACTICE QUESTIONS

Dubai Health Authority (DHA)

SDRAD

Specialist Diagnostic Radiology

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Dubai Health Authority (DHA) SDRAD , each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, SDRAD
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

MULTIPLE CHOICE

A 30-year-old female patient is referred for a CT pulmonary angiogram (CTPA) for suspected pulmonary embolism. She is 18 weeks pregnant. Which of the following considerations are appropriate before proceeding? (Choose two.)

- ☒ **A** Verify that the clinical indication justifies the radiation exposure to the fetus and document the risk-benefit assessment.
- ☐ **B** Administer the standard adult contrast dose without modification because pregnancy does not affect iodinated contrast safety.
- ☒ **C** Use a low-dose CT protocol with adjusted mAs/kVp and apply abdominal shielding to minimize fetal dose.
- ☐ **D** Proceed without pregnancy testing or consent discussion if the referral states the examination is urgent.

ANSWER A - C

WHY Pregnancy is not an absolute contraindication to a clinically justified CTPA, but the ALARA principle mandates a documented risk-benefit assessment and dose-reduction measures such as a low-dose protocol and shielding. Iodinated contrast crosses the placenta, so dose and indication must be reviewed rather than assumed safe. Pregnancy status must be confirmed and consent documented for ionizing radiation procedures, regardless of urgency.

QUESTION 2

MULTIPLE CHOICE

Which of the following BI-RADS categories mandate additional imaging, prior studies for comparison, and/or tissue sampling before a final assessment? (Choose two.)

- ☒ **A** BI-RADS 0 – Assessment incomplete
- ☐ **B** BI-RADS 1 – Negative
- ☒ **C** BI-RADS 3 – Probably benign
- ☐ **D** BI-RADS 6 – Known biopsy-proven malignancy

ANSWER A • C

WHY BI-RADS 0 indicates an incomplete assessment requiring additional imaging evaluation and/or comparison with prior studies. BI-RADS 3 (probably benign) requires short-interval follow-up imaging (typically 6 months) and may warrant sampling depending on clinical context. BI-RADS 1 is a complete negative assessment and BI-RADS 6 is reserved for lesions already proven malignant on biopsy, awaiting definitive therapy.

QUESTION 3

SINGLE CHOICE

A chest radiograph shows a well-defined, thin-walled cavity in the right upper lobe containing an air-fluid level, in a febrile patient with a history of alcohol use disorder. What is the most likely diagnosis?

- ☒ **A** Lung abscess
- ☐ **B** Bronchogenic carcinoma
- ☐ **C** Pulmonary tuberculosis
- ☐ **D** Pulmonary embolism

ANSWER A

WHY A thick (or thin) walled cavity with an air-fluid level in a febrile, at-risk patient (alcohol use, aspiration risk) is classic for a lung abscess, typically caused by anaerobic organisms from aspiration. Bronchogenic carcinoma usually presents as a solid mass, often spiculated. Tuberculosis classically produces upper lobe cavitation but typically with surrounding consolidation/ground-glass and a clinical context of weight loss, night sweats, and a positive exposure history. Pulmonary embolism is not a cavitory lesion.

QUESTION 4

SINGLE CHOICE

On contrast-enhanced CT of the liver, a lesion in segment VIII demonstrates peripheral nodular enhancement with centripetal fill-in on delayed phases. Which lesion characteristic does this enhancement pattern most strongly suggest?

- ☒ **A** Hepatic hemangioma
- ☐ **B** Hepatocellular carcinoma
- ☐ **C** Focal nodular hyperplasia
- ☐ **D** Simple hepatic cyst

ANSWER A

WHY Peripheral nodular enhancement with progressive centripetal fill-in that follows the blood pool on delayed imaging is the hallmark of a hepatic hemangioma. Hepatocellular carcinoma typically shows arterial hyperenhancement with washout in the portal venous or delayed phase. Focal nodular hyperplasia is a homogeneously hyperenhancing lesion in the arterial phase with a central scar. A simple cyst shows no enhancement at all and is water density on non-contrast CT.

QUESTION 5

SINGLE CHOICE

A patient with an implanted cardiac device is referred for an MRI of the lumbar spine. Which of the following is the most appropriate initial step?

- ☐ A Proceed with the MRI and scan at 1.5T, as all modern devices are MRI-conditional.
- ☐ B Refuse the MRI unconditionally because the patient has a cardiac device.
- ☒ C Identify the exact device model and manufacturer, then verify MRI-conditional parameters and obtain cardiology input.
- ☐ D Substitute a non-contrast CT without discussion with the referring clinician.

ANSWER C

WHY MRI safety for cardiac devices depends entirely on the specific make and model. Many contemporary pacemakers and ICDs are MR-conditional, but scanning conditions (field strength, SAR limits, lead configuration, monitoring) are device-specific. The correct workflow is to identify the device, verify conditional labeling, obtain cardiology/EP approval, and program the device appropriately before scanning. Assuming all devices are safe, blanket refusal, or arbitrarily switching modalities without consultation are all inappropriate.

QUESTION 6

SINGLE CHOICE

A non-contrast CT of the head performed for sudden thunderclap headache demonstrates hyperdense material filling the basal cisterns with effacement of the suprasellar cistern. What is the most likely diagnosis?

- ☒ **A** Subarachnoid hemorrhage
- ☐ **B** Ischemic stroke
- ☐ **C** Cerebral venous sinus thrombosis
- ☐ **D** Subdural hematoma

ANSWER A

WHY Hyperdense material in the basal cisterns following a thunderclap headache is the classic CT appearance of acute subarachnoid hemorrhage, most commonly due to a ruptured saccular (berry) aneurysm. Ischemic stroke may be occult on early non-contrast CT or show loss of grey-white differentiation. Cerebral venous sinus thrombosis shows hyperdensity in a dural venous sinus, not the cisterns. A subdural hematoma is a crescentic extra-axial collection, not within the cisterns.

QUESTION 7

SINGLE CHOICE

A 35-year-old woman with a clinically suspected simple ovarian cyst on transvaginal ultrasound is referred for MRI 'to characterize the cyst further.' According to evidence-based imaging utilization principles, what is the most appropriate recommendation?

- ☐ A Proceed with MRI as requested to provide definitive characterization.
- ☐ B Perform CT of the pelvis for better characterization of cystic ovarian lesions.
- ☒ C Avoid MRI; the ultrasound findings are sufficient and no further imaging is required for a simple cyst.
- ☐ D Perform MRI with gadolinium in every case regardless of cyst morphology on ultrasound.

ANSWER C

WHY A simple ovarian cyst on transvaginal ultrasound (thin wall, anechoic, posterior acoustic enhancement, no solid component or septation) is definitively benign and requires no additional imaging. MRI is reserved for sonographically indeterminate adnexal lesions. CT does not characterize cystic ovarian lesions well and adds unnecessary radiation. Gadolinium is not indicated when the diagnosis is already established by ultrasound.

QUESTION 8

SINGLE CHOICE

A radiograph of the wrist demonstrates a fracture of the distal radius with dorsal angulation, dorsal displacement, and radial shortening. What is the eponymous name for this fracture pattern?

- ☐ A Smith fracture
- ☒ B Colles fracture
- ☐ C Barton fracture
- ☐ D Scaphoid fracture

ANSWER B

WHY A Colles fracture is an extra-articular fracture of the distal radius with dorsal angulation, dorsal displacement, and often radial shortening, classically resulting from a fall on an outstretched hand. A Smith fracture is the volar-displaced counterpart. A Barton fracture is an intra-articular distal radius fracture with carpal subluxation. A scaphoid fracture involves the carpal scaphoid, not the distal radius.

QUESTION 9

SINGLE CHOICE

During a CT examination with iodinated contrast, a patient develops generalized urticaria, facial swelling, and mild wheezing within minutes of injection, with stable vital signs. According to standard contrast reaction management, what is the most appropriate first-line treatment?

- ☐ A Intravenous epinephrine 1:10,000 bolus
- ☐ B Intramuscular epinephrine 1:1,000 into the anterolateral thigh
- ☒ C Intravenous diphenhydramine and hydrocortisone
- ☐ D Nebulized albuterol and observation only

ANSWER C

WHY A mild to moderate iodinated contrast reaction with urticaria, facial edema, and bronchospasm with stable hemodynamics is initially managed with intravenous H1-antihistamine (e.g., diphenhydramine) and intravenous corticosteroid (e.g., hydrocortisone), plus observation and supportive care. Intramuscular epinephrine 1:1,000 is reserved for anaphylaxis with cardiovascular compromise or severe airway symptoms. IV epinephrine 1:10,000 is a cardiopulmonary arrest dose, not first-line for stable urticaria. Nebulized albuterol alone is inadequate when there is generalized cutaneous involvement.