

CPD QUESTIONNAIRE

Give ONE correct answer for each question.

1. Regarding radiation due to chest X-ray, which of the following statements is false?

- A. Ionising radiation is potentially harmful to humans, with a tendency to induce malignancy.
- B. Routine chest radiography is the most frequent radiological examination performed worldwide, in both adults and children, accounting for a significant proportion of ionising radiation attributable to diagnostic imaging.
- C. A reduction in the radiation dose of a chest radiograph would have significant advantages for both public health and individual radiation risk.
- D. Radiation dose reduction is less important in paediatric practice as the increased risk of radiation-induced malignancy in children is independent of dose.

2. Which of the following statements is true?

- A. Purchasing a PACS & RIS solution is as simple as purchasing a new modality.
- B. PACS & RIS is not a modality; it is an information system requiring integration into the business processes of the institution.
- C. Patient administrative information systems are used widely across South Africa and should not be set up to extend to the clinical environment.
- D. The difference in the benefits gained from a PACS & RIS installation does not necessarily correlate with the number of resources allocated to this process.

3. Which of the following statements is false?

- A. The Statscan has limitations in erect chest radiography in terms of movement artefacts, exposure fluctuations, and poor definition of lung markings.
- B. Supine chest images obtained with the Statscan also show these movement and exposure artefacts.
- C. It is clear that Statscan chest images, both in the supine and erect positions, allow better visualisation of the major airways, equivalent to a 'high KV' film at a fraction of the radiation dose.
- D. Therefore, Statscan chest images have the potential to play a role in the diagnosis of tuberculosis in children, especially in high-prevalence countries, and also in the imaging of cases where airway narrowing or compression are suspected but not clearly seen on the CR images.

4. Regarding Chilaiditi syndrome, all the following statements are correct except:

- A. Chilaiditi's sign is a radiographic term that is used when the hepatic flexure of the colon is seen interposed between the liver and right hemidiaphragm.
- B. This syndrome is a rare condition and most often an asymptomatic anomaly that is typically an incidental finding.
- C. It is seen in 0.1 - 0.25% of chest X-rays, most frequently in females and almost always adolescent.
- D. It is usually asymptomatic.

5. Factors contributing to the occurrence of Chilaiditi syndrome are all the following except:

- A. Absence of normal suspensory ligaments of the transverse colon.
- B. Abnormality or absence of the falciform ligament.
- C. Redundant colon as might be seen in patients with chronic constipation.
- D. Eventration of the right hemidiaphragm but only when associated with chronic lung disease, cirrhosis and ascites.

6. Chilaiditi syndrome may present with all of the following except:

- A. Abdominal pain.
- B. Nausea, vomiting and constipation.
- C. Chest pain and dysphagia.
- D. Ultrasonography will always fail to show a loop of intestine between the liver and diaphragm.

7. Regarding radiation dose in mammography, all the following are false except:

- A. Exposure time is not decreased by immobilisation.
- B. The main method of achieving increased image quality and reduced radiation dose is by compression.
- C. Decreasing breast thickness does not necessarily reduce radiation dose.
- D. Theoretically, an increase in breast compression gives a reduction in thickness, resulting in a change in density.

8. Identify the one false statement among the following.

- A. Reduction of the breast dose is important, as the risk of carcinogenesis in the breast is cumulative and directly related to the absorbed breast dose.
- B. Improvement of image quality gives better visualisation of small lesions and therefore leads to earlier malignancy detection.
- C. There exists a point beyond which an increase in compression of the breast does not give spreading of the tissues but rather a change in breast density.
- D. Compression beyond the point in C (above) is essential to identify small calcifications.

9. Regarding intimomedial mucoid degeneration, identify a single false statement.

- A. Intimomedial mucoid degeneration is a rare vascular condition that predominantly affects the abdominal aorta.
- B. The condition can also involve other large arteries including the superior mesenteric artery, and carotid, subclavian and iliac arteries.
- C. Extra-aortic involvement only occurs in the presence of aortic disease.
- D. The aneurysmal morphological characteristics may be fusiform, saccular or both.

10. X-ray diagnosis was first utilised in:

- A. The Crimean War.
- B. The First World War.
- C. The Anglo-Boer War.
- D. The Franco-Prussian War.

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