

# Directed Reading Continuing Education Quiz

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## Chest Radiography for Radiologic Technologists

To receive Category A continuing education credit for this Directed Reading, read the preceding article and circle the correct response to each statement. Choose the answer that is most correct based on the text. **Transfer your responses to the answer sheet on Page 549** and then follow the directions for submitting the answer sheet to the American Society of Radiologic Technologists. You also may take Directed Reading quizzes online at [www.asrt.org](http://www.asrt.org). **Effective October 1, 2002, new and reinstated members are ineligible to take DRs from journals published prior to their most recent join date unless they have purchased a back issue from ASRT. Your access to Directed Reading quizzes for continuing education credit is determined by your area of interest. For access to other quizzes, go to [www.asrt.org/store](http://www.asrt.org/store).**

**\*Your answer sheet for this Directed Reading must be received in the ASRT office on or before this date.**

1. According to the American College of Radiology Practice Guidelines for the Performance of Pediatric and Adult Chest Radiography, there are several indications for a chest exam. Which of the following is *not* an indication?
  - a. evaluation of signs and symptoms potentially related to the respiratory, cardiovascular and upper gastrointestinal systems
  - b. follow-up of known thoracic disease processes
  - c. compliance with government regulations
  - d. documentation of amorphous silicon detector calibration when performing digital chest radiography
2. The ribs descend approximately \_\_\_\_\_ inches as they wrap around the thoracic cavity, posteriorly to anteriorly.
  - a. 1 to 3
  - b. 2 to 4
  - c. 3 to 5
  - d. 4 to 6
3. At approximately what vertebral level does the carina divide?
  - a. T1-T2
  - b. T2-T3
  - c. T4-T5
  - d. T5-T6
4. The lungs are composed of a spongy material called the \_\_\_\_\_.
  - a. interstitium
  - b. aveoli
  - c. parenchyma
  - d. hila
5. The purpose of surfactant is to:
  - a. reduce the surface tension at the alveolar level.
  - b. increase the surface tension at the alveolar level.
  - c. maintain the structure of the cell wall.
  - d. provide Type II cells with nourishment.
6. Which of the following correctly describes the lobes of the lungs?
  - a. The right lung has 2 lobes and the left lung has 3 lobes.
  - b. The right lung has 3 lobes and the left lung has 2 lobes.
  - c. Both lungs have 3 lobes.
  - d. Both lungs have 2 lobes.

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7. Which of the following statements are true regarding body piercings?
1. Some body piercings cannot be removed because they have been welded closed.
  2. Removing a recent body piercing can result in closure of the piercing.
  3. The decision to remove a piercing should rest with the patient.
- a. 1 and 2
  - b. 1 and 3
  - c. 2 and 3
  - d. 1, 2 and 3
8. It has been estimated that in many medical centers up to \_\_\_\_\_% of all chest radiographs are performed with a portable x-ray machine.
- a. 40
  - b. 50
  - c. 60
  - d. 70
9. Chest radiographs should be centered to T7 because this vertebral level correlates to the center of the chest. On the average woman, T7 is \_\_\_\_\_ inches inferior to the vertebra prominens; on the average man, T7 is \_\_\_\_\_ inches inferior to the vertebra prominens.
- a. 4, 5
  - b. 5, 6
  - c. 7, 8
  - d. 8, 9
10. Whenever possible, a portable chest radiograph should be performed in a(n) \_\_\_\_\_ position.
- a. supine
  - b. decubitus
  - c. lordotic
  - d. erect
11. In their study, Marik and Janower found that \_\_\_\_\_% of intubated patients and \_\_\_\_\_% of nonintubated patients in the ICU had modifications in treatment based on results of daily chest radiographs.
- a. 46, 10
  - b. 56, 15
  - c. 66, 25
  - d. 76, 30
12. Which of the following best describes situs inversus?
- a. The lungs are filled with exudates.
  - b. The heart is large and a silhouette sign is evident.
  - c. The chest anatomy is a mirror image of normal.
  - d. The apices are consolidated.
13. On a correctly exposed radiograph of the chest, the pulmonary blood vessels should be visualized to the distal \_\_\_\_\_ of the peripheral lung fields.
- a. one-quarter
  - b. one-third
  - c. one-half
  - d. two-thirds
14. When evaluating a frontal chest radiograph for rotation, the medial ends of the clavicles should appear equidistant from the spinous processes of the thoracic vertebrae. Variation of more than \_\_\_\_\_ cm could affect the appearance of the lung.
- a. one-quarter
  - b. one-half
  - c. three-quarters
  - d. 1
15. How much rotation is acceptable on a lateral image of the chest?
- a. one-eighth to one-quarter inch
  - b. one-quarter to one-half inch
  - c. three-eighths to five-eighths inch
  - d. No rotation is acceptable.

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16. How many posterior ribs should be visualized above the diaphragm on a frontal projection of the chest to document sufficient inspiration?
- 7
  - 8
  - 9
  - 10
17. If 2 structures of equal density are adjacent to each other, the border of neither structure can be detected. This is called the \_\_\_\_\_ sign.
- radiopaque
  - Roentgen
  - density difference
  - silhouette
18. The distal end of an endotracheal tube should be positioned \_\_\_\_\_ cm above the carina.
- 2
  - 3
  - 4
  - 5
19. The correct location for a tracheostomy tube tip is:
- halfway between the stoma and the carina.
  - 5 cm above the carina.
  - at the jugular notch.
  - at the laryngeal prominence.
20. The tip of a central venous catheter or peripherally inserted central catheter line should be in the:
- subclavian vein.
  - left atrium.
  - jugular vein.
  - superior vena cava.
21. The lithium batteries in an automatic implantable cardioverter defibrillator device can defibrillate a patient approximately \_\_\_\_\_ times.
- 25
  - 50
  - 75
  - 100
22. Which of the following positions or projections often is ordered by radiologists to accentuate a pneumothorax?
- inspiratory PA chest
  - expiratory PA chest
  - apical lordotic
  - dorsal decubitus
23. To demonstrate a left pleural effusion, the radiographer should perform a lateral decubitus with the left side:
- down.
  - up.
  - against the imaging receptor.
  - toward the Bucky.
24. The normal heart occupies slightly less than \_\_\_\_\_ % of the transverse dimension of the thorax.
- 20
  - 30
  - 40
  - 50
25. Which of the following could cause pneumoperitoneum?
1. bowel obstruction
  2. penetrating injury to the abdomen
  3. sexual intercourse
- 1 and 2
  - 1 and 3
  - 2 and 3
  - 1, 2 and 3