

Continuing professional development (CPD) test

The CPD test is based on the article *The Use of Contrast-Enhanced Ultrasonography for the Characterization of Focal Liver Lesions* by J Bagley, D Paul, S Halferty and D DiGiacinto. This article was reprinted from the *Journal of Medical Sonography*

1. What is the most common liver mass?
 - A. Focal nodular hyperplasia
 - B. Hemangioma**
 - C. Hepatocellular carcinoma
 - D. Metastatic carcinoma
2. At what rate does conventional sonography detect focal liver lesions?
 - A. 8%
 - B. 20%
 - C. 50%**
 - D. 70%
3. Current ultrasound contrast agents go to which location when injected?
 - A. To a single target organ
 - B. To a single target organ-system
 - C. To the organ systems in the vicinity of the injection
 - D. To the entire vascular system**
4. How are current ultrasound contrast agents expelled from the body?
 - A. Through the digestive system
 - B. Through the renal system**
 - C. Through the respiratory system
 - D. Microbubbles implode as they move through the system
5. Increase of blood perfusion in a liver lesion will appear as _____.
 - A. Hyperenhancement**
 - B. Hypoenhancement
 - C. Isoenhancement
 - D. Either hyperenhancement or hypoenhancement
6. What is the enhancement pattern for a hemangioma in the portal venous phase?
 - A. Early rim enhancement
 - B. Hyperenhancement**
 - C. Hypoenhanced
 - D. Spoke-wheel enhancement

7. Which lesion is associated with spoke wheel enhancement in the arterial phase?
- A. Hemangioma
 - B. HCC
 - C. FNH**
 - D. Metastasis
8. What is a characteristic contrast feature for malignant lesions in the late venous phase?
- A. Hyperenhancement
 - B. Hypoenhancement**
 - C. Isoenhancement
 - D. Central scar
9. Which of the following steps should occur in the pre-injection phase of the examination?
- A. Inject a 2.4 ml bolus of contrast agents
 - B. Monitor the patient for adverse events
 - C. Store clips
 - D. Observe lesion movement with respiration**
10. Which safety index value should be displayed on screen during the examination?
- A. Total output power
 - B. TIb
 - C. Tis
 - D. Mechanical Index**