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**Multidetector CT for the Technologist DVD Series 2006
QUESTIONS**

Answer the following questions and complete the answer sheet provided.

06/520336

MDCT OF LIVER MASSES

1. Blood supply to the liver comes from the:

1. Hepatic artery.
2. Portal vein.
3. Hepatic veins.
 - A. 1 and 2.
 - B. 2 and 3.
 - C. 1 and 3.
 - D. 1, 2 and 3.

2. For the detection of hypovascular metastases, optimum imaging should be performed in:

- A. Hepatic arterial phase.
- B. Portal venous phase.
- C. Both phases are indicated in all masses.
- D. Delayed phase.

3. Which of the following is NOT a feature of a simple cyst:

- A. Sharply defined.
- B. Water density.
- C. Thick enhancing septation.
- D. No visible wall.

4. Which of the following is the most common benign liver tumor:

- A. Focal nodular hyperplasia
- B. Hepatic adenoma
- C. Hepatic cystadenoma
- D. Hepatocellular carcinoma.

5. Which of the following is NOT a feature of classic hepatic hemangioma:

- A. On unenhanced CT the lesion is isodense to blood vessels.
- B. On delayed phase the lesion remains isodense to blood vessels.
- C. Progressive contrast filling in on delayed images.
- D. Central necrosis

6. Focal nodular hyperplasia is detected best on:

- A. Un-enhanced CT.
- B. Arterial phase images.
- C. Portal venous phase images
- D. Delayed images.

7. Which of the following occurs exclusively in liver that has abnormal metabolism due to exogenous steroids:

- A. Hepatic adenoma.
- B. Focal nodular hyperplasia.
- C. Hemangioma
- D. Cholangiocarcinoma.

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MDCT OF LIVER MASSES (continued)

8. A large cystic lesion with thick wall and enhancing nodule should raise the possibility of:

- A. Simple cyst.
- B. Hemangioma.
- C. Biliary cystadenoma.
- D. Cholangiocarcinoma

9. Which of the following is NOT a feature of hepatic metastases:

- A. Central necrosis
- B. Peripheral nodular enhancement.
- C. Surrounding satellite lesions.
- D. Focal or diffuse process.

10. When imaging patients with cirrhosis, dual phase CT with 3D image processing should be performed to:

- 1. Delineate retroperitoneal collaterals
- 2. Detect hepatocellular carcinoma
- 3. Detect portal vein thrombosis
- 4. Map the arterial anatomy before transplantation.
 - A. 1 and 2
 - B. 2 and 3
 - C. 3 and 4
 - D. 1, 2 3 and 4

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MDCT OF PARENCHYMAL

- 1. Advantages of using a 64-detector CT include for all the following EXCEPT:**
 - A. High quality 3D image processing.
 - B. Very thin detector collimation.
 - C. Isotropic data sets.
 - D. Lower contrast volume (<2 mL/Kg) when imaging the liver.

- 2. All the following are features of liver cirrhosis EXCEPT:**
 - A. Nodularity of the liver surface.
 - B. Enlargement of the right lobe.
 - C. Shrinkage of the right lobe.
 - D. Hypertrophy of the left lobe.

- 3. In patients with portal hypertension the portal vein may be:**
 1. Thrombosed.
 2. Occluded.
 3. Calcified.
 4. Recanalized.
 - A. 1 and 2
 - B. 2 and 3
 - C. 2 and 4
 - D. 1, 2, 3, and 4

- 4. All the following are features of fatty infiltration of the liver EXCEPT:**
 - A. Mass effect.
 - B. Sharp angulation.
 - C. Non-spherical shape.
 - D. Typical location.

- 5. Which of the following primary tumors is likely to result in hypervascular metastases:**
 - A. Colon cancer.
 - B. Pancreatic islet cell cancer.
 - C. Pancreatic adenocarcinoma.
 - D. Cervical cancer.

- 6. Which of the following is LEAST likely to result in hypervascular metastases:**
 - A. Colon cancer.
 - B. Pancreatic islet cell cancer.
 - C. Renal cancer.
 - D. Breast cancer.

- 7. Dense opacification of the IVC and reflux of contrast into the hepatic veins are features of:**
 - A. Budd Chiari syndrome.
 - B. Hepatic infarction.
 - C. Congestive heart failure.
 - D. Portal vein thrombosis.

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MDCT OF PARENCHYMAL (continued)

8. Parenchymal perfusion changes of the liver may be due to:

1. Budd Chiari syndrome.
2. Hepatic infarction.
3. Portal vein thrombosis
 - A. 1 and 2
 - B. 1 and 3
 - C. 2 and 3
 - D. 1, 2, and 3

9. To characterize a mass seen on ultrasound, imaging protocol should include:

- A. Un-enhanced CT only.
- B. Hepatic arterial phase only.
- C. Portal venous phase only.
- D. Dual phase CT.

10. Obstruction of the SVC may result in:

1. Collateral veins along the chest wall.
2. Collateral veins along the surface of the liver.
3. "Pseudo mass" in the left lobe of the liver.
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

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CT IMAGING OF THE SPLEEN

1. Which of the following statements regarding size is TRUE size.

- A. Splenic size varies by age, patient size and nutritional status.
- B. The spleen usually measures 12-13 cm in length.
- C. The splenic index should be > 480
- D. Normal splenic volume should be 200-250g

2. What is the most common cause of Splenomegaly?

- A. Portal hypertension
- B. Lymphoma
- C. Leukemia
- D. ITP

3. Which of the following statement about splenic density is TRUE

- A. The spleen is usually 10 HU more than the liver on arterial phase scans
- B. The spleen is usually 10 HU more than the liver on non contrast scans
- C. The spleen is usually 10 HU less than the liver on non contrast scans
- D. The spleen is usually 10 HU less than the liver on arterial phase scans

4. Which of the following statements regarding the spleen in sickle cell patients is TRUE

- A. In sickle cell disease, Splenomegaly is common
- B. In sickle cell disease, splenic hemorrhage is very common
- C. There is an increased risk of splenic hemangioma in sickle cell disease
- D. In sickle cell disease, the spleen usually undergoes auto-infarction, resulting in a small calcified spleen

5. Which of the following statements regarding accessory spleens is TRUE

- A. Present in < 1% of patients undergoing abdominal CT
- B. Do not enhance after IV contrast.
- C. Usually measure 5-7 cm in size.
- D. Results from failure of fusion of splenic anlage

6. Which of the following statements regarding splenosis is FALSE

- A. Splenosis is heterotopic splenic tissue
- B. Splenosis is a congenital condition
- C. Splenosis foci are usually small due to limited blood supply.
- D. Typically found near the small bowel serosa, omentum, peritoneum, diaphragm

7. Which of the following statements regarding true splenic cysts is FALSE?

- A. True cysts are congenital epithelial lined cysts.
- B. True cysts represent < 20% of splenic cysts.
- C. True cysts are usually unilocular and solitary.
- D. True cysts demonstrate 20-30HU enhancement after IV contrast.

8. Which of the following statements regarding False splenic cysts is FALSE?

- A. False cysts are non-epithelial-lined cysts
- B. False cysts are less common than true cysts
- C. False cysts are thought to represent final evolution of splenic hematoma
- D. False cysts more commonly have calcification and septation when compared to True cysts

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Answer the following questions and complete the answer sheet provided.

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CT IMAGING OF THE SPLEEN (continued)

9. Which of the following statement regarding splenic hemangiomas is TRUE

- A. Hemangioma is a rare splenic tumor
- B. Splenic hemangioma usually measure < 1 cm in size
- C. Splenic hemangioma usually does not enhance after IV contrast
- D. There is an increased incidence of multiple hemangiomas in patients with Klippel-Trenuany-Weber syndrome

10. Which is the most common primary malignancy of the spleen?

- A. Lymphoma
- B. Angiosarcoma
- C. Spindle cell tumor
- D. Hemangioblastoma

Answer the following questions and complete the answer sheet provided.

06/520336

MDCT: From 4 to 16 to 64

1. As we move from 4 to 16 to 64 slice, changes include:

1. decrease in slice thickness
2. decrease in scanner collimation
3. increase in the number of slices per study
 - A. 1 and 2
 - B. 1 and 3
 - C. 2 and 3
 - D. 1, 2 and 3

2. Which of the following parameter sets gives the best 3D datasets?

- A. 75 mm thick sections/.5 mm reconstruction interval
- B. 1.0 mm thick sections/.75 mm reconstruction interval
- C. 1.0 mm thick sections/1.0 mm reconstruction interval
- D. 1.0 mm thick sections/.5 mm reconstruction interval

3. The best technique to visualize a pancreatic mass is

- A. Shaded surface technique
- B. Volume rendering
- C. MIP
- D. Minimum intensity technique

4. 64 slice MDCT provides:

1. higher spatial resolution
2. increased temporal resolution
3. isotropic datasets
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

5. Reducing the radiation dose with MDCT is possible by:

1. dose modulation programs
2. more efficient detectors
3. customized scan protocols for each patient
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

6. Advantages of increased scan speed with 64 MDCT include:

1. pure arterial phase imaging
2. true volume acquisitions
3. better definition of zones
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

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MDCT: From 4 to 16 to 64 (continued)

7. Techniques used for CT angiography post processing include:

1. multiplanar reconstruction (MPR)
2. Volume Rendering (VRT)
3. Maximum intensity projection (MIP)
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

8. The key steps in designing a CT study include all of the following EXCEPT:

- A. timing of acquisition
- B. random protocols
- C. defined contrast volume and injection rate
- D. defined scan parameters

9. Color mapping with 3D CTA allows us to visualize:

1. skin
2. muscle
3. vessels
 - A. 1
 - B. 1 and 2
 - C. 2 and 3
 - D. 1, 2 and 3

10. Errors in CTA include:

1. poor injection of IV contrast
2. poor timing of the study
3. patient motion
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

Answer the following questions and complete the answer sheet provided.

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MDCT CLINICAL APPLICATIONS

1. Applications of CTA of the small bowel include

1. Evaluation for ischemia
2. Crohns disease activity
3. Detection of small bowel tumors
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

2. CTA imaging of the liver can enhance axial images by

1. Detecting tumors with neovascularity but no mass effect
2. Extent of portal hypertension
3. Patency of the portal vein
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

3. Which of the following applications CANNOT use a preset timing delay in most cases?

- A. Renal donor evaluation
- B. Liver transplant evaluation
- C. Define a abdominal aortic aneurysm
- D. Coronary artery imaging

4. Which study DOES NOT require cardiac gating in routine practice?

- A. Coronary artery imaging
- B. R/O SVC syndrome
- C. Aortic valve evaluation
- D. Mitral valve evaluation

5. When using MIP and VRT of the renal vasculature, what statement is NOT TYPICALLY TRUE?

- A. Both techniques show the correct number of renal arteries.
- B. VRT better defines the venous map.
- C. Calcifications can cause pseudostenosis on MIP technique
- D. Both techniques define 3D of the renal veins with equal accuracy.

6. Automated bone editing tools

1. Help with workflow
2. Allow better definition of vascular maps
3. Require 20-30 minutes of technologist's time
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

7. CTA of the lower extremities can do all of the following EXCEPT:

- A. Define presence of stenosis
- B. Define presence of AV malformation
- C. Define vessel occlusion
- D. Measure flow gradients across a stenosis

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MDCT CLINICAL APPLICATIONS (continued)

8. CTA of the pancreas is the study of choice for staging pancreatic cancer to determine respectability. The key vessels analyzed are all of the following EXCEPT:

- A. SMA
- B. Celiac axis
- C. Portal vein
- D. Renal vein

9. CTA of the hand or foot with volume rendering can image all of the following EXCEPT:

- A. Skin
- B. Muscle
- C. Vascular structures
- D. Nerve roots

10. CTA of the aorta can routinely do all of the following EXCEPT:

- A. Define the extent of a dissection.
- B. Determine the presence of a false lumen.
- C. Define the gradient across a stenosis.
- D. Define the presence of AV fistulae.

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CARDIAC CTA

1. CTA of the heart requires

1. High spatial resolution
2. High temporal resolution
3. A gated study
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

2. Gating of the cardiac cycle results in all of the following, EXCEPT:

- A. Display of optimal timing for visualization of each coronary artery
- B. 4D motion image displays
- C. Better quality datasets
- D. Lower radiation dose

3. With current CT technology, the optimal heart rate for a CT angiogram of the heart is

- A. 60-65 bpm
- B. Under 50 bpm
- C. 70-80 bpm
- D. Greater than 80 bpm

4. The average radiation dose in 2005-2006 for a cardiac CT is

- A. Less than 5 milliSiverts
- B. 5-10 milliSiverts
- C. 10-15 milliSiverts
- D. 20 milliSiverts

5. The reported negative predictive value for cardiac CT evaluation of the coronary arteries is closest to:

- A. 99%
- B. 75%
- C. 50%
- D. 25%

6. Calcium scoring uses the Agaston scoring system. The normal score is

- A. 0
- B. 10-50
- C. 50-100
- D. Under 175

7. The average size of the left main coronary artery is

- A. 1.2 cm
- B. 1.0 cm
- C. 4 mm
- D. 2 mm

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CARDIAC CTA (continued)

8. Artifacts generated on cardiac CT scans include

1. Patient motion
 2. Extensive calcifications
 3. Too fast a heart rate
- A. 1
 - B. 1 and 2
 - C. 2 and 3
 - D. 1, 2 and 3

9. Most centers grade cardiac stenosis as significant if the stenosis is

- A. Greater than 50%
- B. 25%
- C. 25-50%
- D. 15%

10. Which technique is useful for analysis of a cardiac CT?

1. 3D VRT and MIP
 2. Multiplanar reconstruction (MPR)
 3. Axial images
- A. 1
 - B. 1 and 2
 - C. 2 and 3
 - D. 1, 2 and 3

Answer the following questions and complete the answer sheet provided.

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MDCT: EVALUATION OF SMALL BOWEL NEOPLASMS

- 1. What is the incidence of small bowel neoplasm in the USA?**
 - A. 1 in 10,000
 - B. 1 in 25,000
 - C. 1 in 50,000
 - D. 1 in 100,000

- 2. What is the most common primary malignancy of the small bowel?**
 - A. Carcinoid
 - B. Adenocarcinoma
 - C. Gastrointestinal stromal tumor
 - D. Lymphoma

- 3. Which of the following conditions carries an increased risk of small bowel adenocarcinoma?**
 - A. Ulcerative colitis
 - B. Crohns Disease
 - C. Giardiasis
 - D. Shigella

- 4. What is the most common location for small bowel adenocarcinoma to occur?**
 - A. Duodenum
 - B. Jejunum
 - C. Ileum
 - D. Ileocecal valve

- 5. What percentage of all GI tumors does small bowel carcinoid represent?**
 - A. 0.5
 - B. 2
 - C. 20
 - D. 50

- 6. What is the typical CT appearance of carcinoid liver metastases?**
 - A. Calcified lesions
 - B. Fat density lesions
 - C. Hypovascular lesions, best seen on delayed images
 - D. Hypervascular lesions, best seen in arterial phase

- 7. What is the most common site for lymphoma in the GI tract?**
 - A. Esophagus
 - B. Stomach
 - C. Small Bowel
 - D. Colon

- 8. Gastrointestinal stromal tumors most commonly occur in which of the following age groups?**
 - A. 10-20 years old
 - B. 20-30 years old
 - C. 50-60 years old
 - D. 70-80 years old

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MDCT: EVALUATION OF SMALL BOWEL NEOPLASMS (continued)

9. What percentage of gastrointestinal stromal tumors is malignant?

- A. < 10
- B. 10-30
- C. 50-80
- D. 100

10. Gastrointestinal stromal tumors make up what percentage of small bowel malignancies?

- A. 5
- B. 15
- C. 50
- D. 75

Answer the following questions and complete the answer sheet provided.

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CTA OF NON-NEOPLASTIC CONDITIONS OF THE SMALL BOWEL

1. Which of the following is NOT an example of a neutral oral contrast agent?

- A. CO₂
- B. Water
- C. Methylcellulose
- D. PEG solutions

2. What is the normal diameter of a small bowel loop?

- A. < 2.5cm
- B. 5cm
- C. 7cm
- D. >12.5cm

3. What is the normal thickness for the wall of a small bowel loop?

- A. <3mm
- B. 5mm
- C. 7mm
- D. 10mm

4. Which of the following arteries supplies the small bowel?

- A. Inferior mesenteric artery
- B. Middle mesenteric artery
- C. Superior mesenteric artery
- D. Left gastric artery

5. What is the best type of oral contrast to use when detailed visualization of the mesenteric vasculature is desired?

- A. Hypaque
- B. Barium
- C. Water
- D. Co₂

6. Which slice thickness is appropriate when detailed CT angiography of the mesenteric vessels is desired using 64 slice MDCT?

- A. 0.6mm
- B. 5 mm
- C. 7mm
- D. 1cm

7. What is the most common cause of acute mesenteric ischemia?

- A. Embolism to SMA
- B. Embolism to the celiac artery
- C. Thrombosis of SMA
- D. Low flow

8. Air in the bowel wall is known as?

- A. Pneumomediastinum
- B. Pneumoperitoneum
- C. Pneumatosis
- D. Pneumobilia

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CTA OF NON-NEOPLASTIC CONDITIONS OF THE SMALL BOWEL (continued)

9. Which of the following is a typical CT finding in patients with chronic mesenteric ischemia?

- A. Clot in SMA
- B. Clot in SMV
- C. Atherosclerotic plaque involving the mesenteric arteries.
- D. Atherosclerotic plaque involving the mesenteric veins.

10. Which if the following is NOT a common cause of small bowel obstruction?

- A. Adhesions
- B. Hernia
- C. Tumors
- D. Ischemia

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VIRTUAL COLONOSCOPY UPDATE 2006

1. Which of the following statements regarding colon cancer is TRUE?

- A. Colon cancer is most common cancer in the US.
- B. Colon cancer is the most frequent cause of cancer death in the US
- C. Most colorectal cancers arise from detectable precancerous polyps
- D. Colon cancer most commonly occurs in patients < 40 years old

2. Which of the following polyps is most likely to be cancerous?

- A. 2mm polyp
- B. 3mm polyp
- C. 5mm polyp
- D. 15mm polyp

3. Which of the following polyps is most likely to be cancerous?

- A. Hyperplastic polyps
- B. Post-inflammatory polyps
- C. Pseudopolyps
- D. Adenomatous polyps

4. For an average risk patient, colon cancer screening should begin at what age?

- A. 60
- B. 50
- C. 40
- D. 30

5. For a high-risk patient, colon cancer screening should begin at what age?

- A. 60
- B. 50
- C. 40
- D. 30

6. Which of the following statements regarding bowel cleansing for virtual colonoscopy is TRUE?

- A. No bowel cleansing is needed for virtual colonoscopy
- B. Fleets enema is usually adequate
- C. A complete colon prep is needed to completely cleanse the colon
- D. A clear liquid diet alone is adequate

7. Which of the following statements regarding colonic distension for virtual colonoscopy is FALSE?

- A. Adequate colonic insufflation is necessary
- B. Room air can be used for colonic insufflation
- C. Carbon dioxide can be used for colonic insufflation
- D. Nitrogen oxide can be used for colonic insufflation

8. Which of the following statements regarding Virtual colonoscopy is TRUE?

- A. Patients need to be scanned twice: both in supine position
- B. Patients need to be scanned twice: once in prone and once in supine
- C. Patients need to be scanned twice: both in prone position
- D. Patients only need to be scanned once in the left lateral decubitus position

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VIRTUAL COLONOSCOPY UPDATE 2006 (continued)

9. Which of the following statements is TRUE regarding reviewing 2D images for polyps?

- A. It is most helpful to utilize soft tissue windows.
- B. It is most helpful to utilize bone windows.
- C. It is most helpful to utilize liver windows.
- D. It is most helpful to utilize lung windows.

10. Which of the following statements regarding stool tagging agents is TRUE?

- A. Tagging agents are administered through a rectal tube during the exam.
- B. Tagging agents are taken the day before the study, during the bowel prep.
- C. Tagging agents help identify polyps by coating them.
- D. Tagging agents appear as fat density on the CT.

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MUSCULOSKELETAL MDCT APPLICATION

1. The 3D rendering technique that can show vessels, bone and soft tissue is

- A. Volume rendering technique
- B. Maximum intensity projection
- C. Minimum intensity projection
- D. Shaded surface imaging

2. For routine skeletal trauma which is NOT TRUE?

- A. IV contrast use is mandatory
- B. VRT is ideal to define the relationship of fractures and fracture fragments.
- C. 3D imaging provides critical information in acetabular fx's for patient management.
- D. Patients can be scanned even though they are wearing a cast.

3. To image small parts like the carpal bones, which statement is NOT TRUE?

- A. Bone detail is accentuated with a high resolution filter
- B. Slice thickness of .5-.75 mm is ideal
- C. MIP is useful for visualize bone interfaces
- D. Reconstruct the data for CT at .5 mm or less

4. Typical protocols for a 64 MDCT scanner for optimal evaluation of bone include:

- 1. .75 mm slice thickness
- 2. .5 mm reconstruction interval
- 3. bone algorithmn
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

5. Regarding vascular trauma with either a gun shot wound or stab wound, CT Angiography can be used to do all of the following EXCEPT:

- A. Define patency of the vessel
- B. Detect a vessel injury or bleed
- C. Detect active extravasation
- D. Determine rate of bleeding

6. Which is the best slice thickness for evaluation of the tarsal bones?

- A. .75 mm
- B. 2.0 mm
- C. 5.0 mm
- D. 8.0 mm

7. Using a high-resolution bone algorithm is ideal for looking at bone detail. What is its limitation?

- A. Subtle bone detail
- B. Detecting subtle fractures
- C. Visualizing the soft tissues
- D. detection of periosteal reaction

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MUSCULOSKELETAL MDCT APPLICATION (continued)

8. A great bone editing tool meets all of the following requirements EXCEPT:

- A. It difficult to use
- B. It is automated
- C. It is highly accurate
- D. It provides easy disarticulation

9. The uses of pelvic CT in pediatric patients include all of the following EXCEPT:

- A. Trauma
- B. Congenital hip disease
- C. Osteoporosis
- D. Tumor evaluation

10. CT in sinusitis can:

- 1. define the extent of disease
 - 2. estimate volume of mucosal inflammation
 - 3. detect complications like osteomyelitis
- A. 1 and 2
 - B. 1 and 3
 - C. 2 and 3
 - D. 1, 2 and 3

Answer the following questions and complete the answer sheet provided.

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ANATOMY OF THE PARANASAL SINUS

1. **The new endoscopic sinus surgery procedures are based on which physiologic processes?**
 1. Mucociliary clearance
 2. Air exchange
 3. Nasal cycle
 - A. 1 and 2
 - B. 2 and 3
 - C. 1 and 3
 - D. 1, 2 and 3

2. **CT is the modality of choice to evaluate:**
 - A. Bony architecture and mucosa of the nasal cavity and paranasal sinuses
 - B. Intracranial extension of disease
 - C. Intraorbital extension of disease
 - D. Distinction between infection and tumor

3. **MRI is the modality of choice to evaluate:**
 1. The bony architecture of the nasal cavity and paranasal sinuses
 2. For intracranial extension of disease
 3. Intraorbital extension of disease
 4. The distinction between inflammation and neoplasm
 - A. 1 and 2
 - B. 2 and 3
 - C. 2, 3 and 4
 - D. 1, 2, 3 and 4

4. **There are how many "tight spots" within the osteomeatal channels?**
 - A. 1
 - B. 2
 - C. 3
 - D. 4

5. **The mucus blanket within the paranasal sinuses flows in a:**
 - A. Predetermined path
 - B. Haphazard path
 - C. Always towards the midline
 - D. Always laterally

6. **The agger nasi cell is:**
 - A. The most anterior ethmoid cell
 - B. Anterior to the sphenoid sinus
 - C. On the border between anterior and posterior ethmoid sinuses
 - D. In the maxillary sinus

7. **The onodi cell represents the relationship between the optic nerve and the:**
 - A. The frontal sinus
 - B. The anterior ethmoid sinus
 - C. The posterior ethmoid sinus
 - D. Maxillary sinus

Answer the following questions and complete the answer sheet provided.

06/520336

ANATOMY OF THE PARANASAL SINUS (continued)

- 8. The structure dividing the anterior from posterior ethmoid sinus is the:**
- A. Nasal septum
 - B. Middle turbinate
 - C. Middle meatus
 - D. Uncinate process
- 9. A concha bullosa represents an aeration of the:**
- A. Middle turbinate
 - B. Uncinate process
 - C. Middle meatus
 - D. Anterior wall of sphenoid sinus
- 10. A fungal concretion on a T2 weighted MRI image has:**
- A. No signal
 - B. Isointense signal
 - C. Bright signal
 - D. Heterogeneous signal

Answer the following questions and complete the answer sheet provided.

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SPIRAL CT OF THE NECK

1. Contrast administration for CT evaluation of neck and soft tissues is performed to:

1. Outline the vascular channels
2. Distinguish nodes
3. Demonstrate pathologic enhancement
 - A. 1
 - B. 1 and 2
 - C. 1, 2 and 3
 - D. 2 and 3

2. Criteria determining pathologic nodule involvement are:

1. Node size >1.5 cm
2. Node size > 5mm
3. Central nodule necrosis
 - A. 1
 - B. 1 and 2
 - C. 1 and 3
 - D. 1, 2 and 3

3. What is the optimal examination to evaluate for pathologic nodes?

1. Contrast CT exam
2. Contrast T1 weighted MRI exam
3. T2 weighted MRI images
 - A. 1
 - B. 1 and 2
 - C. 1 and 3
 - D. 1, 2 and 3

4. In the presence of unilaterally draining ear, do not fail to evaluate the:

- A. Tonsillar fossa
- B. Nasal pharynx
- C. Larynx
- D. Thyroid gland

5. In the presence of a masticator space neoplasm:

1. Administer intravenous contrast material
2. Evaluate foramen ovale on ipsilateral side
3. Evaluate Meckel's Cave
 - A. 1
 - B. 1 and 2
 - C. 2 and 3
 - D. 1, 2 and 3

6. What is the most common benign lesion of the carotid gland?

- A. Pleomorphic adenoma
- B. Bronchial cleft cyst
- C. Acinic cell carcinoma
- D. Squamous cell carcinoma

Answer the following questions and complete the answer sheet provided.

06/520336

SPIRAL CT OF THE NECK (continued)

- 7. Which afford communication between neck and thorax?**
- A. Maxillary sinus
 - B. The masticator space
 - C. The retropharyngeal space
 - D. The parotid space
- 8. The space bordering all Suprahyoid spaces is the:**
- A. Nasal pharyngeal mucosa space
 - B. Retropharyngeal space
 - C. Parapharyngeal space
 - D. Masticator space
- 9. The hallmark of a Glomus tumor is intratumoral:**
- A. Calcifications
 - B. Necrosis
 - C. Vascular channels
 - D. Fatty deposits
- 10. The most common bilateral primary malignant parotid lesion is:**
- A. Acinic cell carcinoma
 - B. Pleomorphic adenoma
 - C. Metastasis
 - D. Squamous cell carcinoma

**Multidetector CT for the Technologist DVD Series 2006
ANSWER SHEET**

Indicate your responses on this sheet and return with applicable forms. Be sure to sign. Note: The ASRT requires a passing grade of at least 75%, within three attempts, when taking this test. 06/520336

MDCT OF LIVER MASSES

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

MDCT OF PARENCHYMAL

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

CT IMAGING OF THE SPLEEN

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

MDCT: From 4 to 16 to 64

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

MDCT CLINICAL APPLICATIONS

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

CARDIAC CTA

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

MDCT: EVALUATION OF SMALL BOWEL NEOPLASMS

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

**CTA OF NON-NEOPLASTIC CONDITIONS OF THE
SMALL BOWEL**

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

VIRTUAL COLONOSCOPY UPDATE 2006

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

MUSCULOSKELETAL MDCT APPLICATION

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

ANATOMY OF THE PARANASAL SINUS

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

SPIRAL CT OF THE NECK

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

I, _____ hereby attest that I have reviewed and studied the Multidetector CT for the
(print full name)
Technologist 2006 DVD Series and claim _____ hours of credit. Signature: _____ Date: _____
OCME: _____

ACTIVITY EVALUATION

Please fill in the corresponding circle:

1. Your present status is:

- Radiologic Technologist Other (please specify) _____

2. Your primary specialty is:

- Radiology Other (please specify) _____

3. This course met the objectives of:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
▪ Improve your understanding of the principles of spiral and multidetector CT scanning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
▪ Learn how to optimize CT scanning techniques for more accurate diagnoses in the head, chest and abdomen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
▪ Learn how to optimize scanning techniques to improve patient throughput and exam efficiently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
▪ Learn more about the newest CT applications, including 3D CT, CT angiography, virtual colonoscopy and cardiac imaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
▪ Learn about multislice CT and its advantages over standard spiral CT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Will you change your practice in any way as a result of attending this course?

- Yes No

If yes, please specify: _____

5. Do you feel the activity was objective, balanced and free of commercial bias?

- Yes No

If no, please specify: _____

6. Did presenters disclose discussion of off-label drugs and devices?

- Yes No

If yes, please specify: _____

7. Please evaluate this activity as a whole:

	Excellent	Very Good	Good	Fair	Poor
Overall evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Course content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usefulness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Audiovisual aids	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Syllabus materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ACTIVITY EVALUATION CONTINUED

8. What was the most effective aspect(s) of this activity, and why? _____

9. What was the least effective aspect(s) of this activity? _____

10. This activity has contributed to my professional effectiveness and should improve my ability to:

	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Treat/manage patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with the radiologist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other _____

11. Compared with other CME activities, this activity was:

- Better than average
- Average
- Below average

12. Please evaluate the lectures:

Topic/Speaker						Has the objective(s) been met?		Was commercial bias perceived?	
	Excellent	Very Good	Good	Fair	Poor	YES	NO	YES	NO
Volume 1									
MDCT of Liver Masses Ihab Kamel, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MDCT of Parenchymal Ihab Kamel, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CT Imaging of the Spleen Karen Horton, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volume 2									
MDCT: From 4 to 16 to 64 Elliot K. Fishman, MD, FACR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MDCT: Clinical Applications Elliot K. Fishman, MD, FACR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cardiac CTA Elliot K. Fishman, MD, FACR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Topic/Speaker						Has the objective(s) been met?		Was commercial bias perceived?	
	Excellent	Very Good	Good	Fair	Poor	YES	NO	YES	NO
Volume 3									
MDCT: Evaluation of Small Bowel Neoplasms Karen Horton, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CTA of Non-Neoplastic Conditions of the Small Bowel Karen Horton, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Virtual Colonoscopy Update for 2006 Karen Horton, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volume 4									
Musculoskeletal MDCT Application Elliot Fishman, MD, FACR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anatomy of the Paranasal Sinus S. James Zinreich, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spiral CT of the Neck S. James Zinreich, MD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional comments are welcome: _____
