



## **Fleitz Continuing Education**

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# ***CT Secrets-24*** ***Approved for 24 Category A CE***

***American Society of Radiologic Technologists (ASRT)***

***Approved for 24 Category A CE Credits***

***Course Approval Start Date 02/01/10***

***Course Approval End Date 02/01/14***

***(This course was previously approved for 12/23 Category A CE Credits with start date of 01/01/2008 and end date of 02/01/2010)***

***Florida Radiation Control: Radiologic Technology Program***

***Approved for 24 Category A CE Credits (00 – Technical)***

***Course Approval Start Date 08/10/09***

***Course Approval End Date 01/31/15***

***Iowa Department of Public Health Bureau of Radiological Health***

***Approved for 24 Category A CE credits for***

***Course Approval Start Date 08/13/09***

***Course Approval End Date 05/01/13***

***Kentucky Radiation Control***

***Radiation Operator Certification Program***

***Approved for 24 Category A CE credits***

***Course Approval Start Date 2009***

***Course Approval End Date 02/01/14***

***Please call our office after the course approval end date for course renewal status  
Please let us know if your mailing address or email address changes. Thank you.***

# *CT Secrets-24 CE Homestudy Course*

## **Course Description**

The CT Secrets homestudy course provides current information about computed tomography imaging. This course provides current information about CT of the body and includes information in the following categories: Basic Concepts, Chest CT, and Abdomen and Pelvis. Information is provided regarding the sensitivity of CT and radiation protection concepts, scanning protocols, and appropriate and inappropriate applications of CT screening.

Radiation protection in CT imaging is a necessary component of any imaging course and is included as an appendix to the reading reference.

### **Objectives**

Upon completion of this homestudy course, the participant will

1. Recall general facts and concepts about computed tomography (CT).
2. Identify terminology related to CT.
3. Match common signs and symptoms of diseases and conditions to the correct disease or condition.
4. Select correct responses about the sensitivity of CT.
5. Recall facts about CT scanning protocols.
6. Identify appropriate and inappropriate applications of CT scanning.
7. Given facts or questions concerning radiation protection during CT imaging procedures, select the best response.

## ***Homestudy Course Directions***

### **Directions**

- To complete this course read the reference included with your homestudy course.
- We suggest that you read the reference prior to answering the post-test questions.
- Complete the post-test questions. If you have difficulty in answering any question, refer to the reference.

### **Complete the Answer Sheet and Course Evaluation**

- Complete the post-test and record your responses on the answer sheet and complete the course evaluation. You may mail your answer sheet to 6511 Glenridge Park Place, Suite 6, Louisville, KY 40222.
- **If you mail your answer sheet and course evaluation, retain a copy before mailing.**
- **We request that you do not fax your answer sheet unless you are within two weeks of your expiration date. If you fax your answer sheet and course evaluation, obtain verification from the machine that the fax was delivered or call our office for verification.**

### **OR**

- Use **the Online Answer Sheet** on our website homepage at [www.x-raylady.com](http://www.x-raylady.com). After completing the ONLINE Answer sheet, just hit submit to send via email. Remember to also complete the online course evaluation.

### **Grading and Issuance of a Certificate**

Your answer sheet will be scored within 1-2 days of arrival in our office. To obtain continuing education credit, you must have a cumulative average score of at least 75%. **Verification of awarded continuing education for this course will be submitted to the following states: KY, IA, FL.** For ARRT and all other states, please self-report to the state radiation certification agency in your state and the ARRT and any other organizations.

You will be awarded a certificate verifying satisfactory completion of this course, or notification if you do not. **We are now emailing certificates so be sure to include your email address.** Please let us know if you prefer to receive a copy in the mail and allow 4-5 days to receive your copy.

### **Need Additional Information**

You may call our office (502) 425-0651 voice mail. Our office hours are 9 a.m. –6 p.m. Monday through Friday. The office operates on Eastern Standard Time and is closed on major holidays. You may also e-mail us at [xraylady@insightbb.com](mailto:xraylady@insightbb.com). For information, about courses or to order online, visit our web site at [www.x-raylady.com](http://www.x-raylady.com).

**The X-ray Lady Refund and Exchange Policy, Certificate Replacement Policy, and other related policies are included in each course.**

### ***Important Information***

#### **Refund Policy (1/2009) Applies to Hardcopy Courses**

Customers have 30 days from the date of the original purchase to receive a refund. After 30 days customers may receive a credit towards future purchases for any materials/book returned to us. All refunds and credits will be subject to a **\$5 re-stocking fee per course**. There will be no refunds or credits for shipping & handling charges once a course has already shipped to you. Refunds will not be issued until the course material/book is received in our office and considered to be in excellent condition. Customers are responsible for the shipping costs when returning materials to our company for a refund.

#### **Refund Policy (3/2011) Applies to Ebook Courses**

No refunds will be issued for Ebook courses once the materials have already been sent. Customers wishing to return an Ebook course will have 30 days from the original date of purchase to receive a credit towards a future purchase minus a \$5 processing fee.

#### **Exchange Policy (1/2009)**

An exchange of a course may be made up to 30 days after the date of purchase. Customers are responsible for the shipping costs when returning materials for an exchange. After materials have arrived at our office and are inspected and are in excellent condition the replacement materials will be shipped. Customers are responsible for payment of new shipping costs and any difference in price for the replacement course

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Please DO NOT FAX your course answer sheet(s) and evaluation form(s) to us unless your certificate is going to expire within two weeks of the date you complete the course. **Instead we request that you maintain a copy of your answer sheet for each course you complete, and mail these to us at** the address listed above OR use our online generic answer sheet on our website at [www.x-raylady.com](http://www.x-raylady.com) (the link is in the top right hand corner on the homepage).

#### **Certificate Replacement Charge**

A \$5 replacement fee per certificate will be charged for any request that occurs 30 days after the issuance date on the original certificate. We can send a duplicate certificate via your email address or U.S. mail service. If you request that your replacement certificate be faxed, there will be a \$3 fee per page.

Please retain your course certificates in case the ARRT or state licensing agency conducts an audit of your records. Because of the staff time required to research and prepare a replacement certificate, we assess a charge for this service. This will not affect the majority of customers.

# Disclaimer Notice

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CT Secrets 24 Posttest

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Use our 24/7 Online webpage Answer Sheet & course evaluation and automatically email your answer sheet to our office

Section I

1. The sensitivity of computed tomography (CT) to subtle differences in x-ray attenuation is at least a factor of \_\_\_ higher than normally achieved by screen-film systems.
  - a. 5
  - b. 10
  - c. 20
  - d. 35
  
2. The ratio of table travel per gantry rotation to the x-ray beam width is known as:
  - a. pitch
  - b. field of view (FOV)
  - c. voxel
  - d. slip-ring
  
3. In CT imaging, changing from 120 to 140 kVp will increase the dose by about \_\_\_%.
  - a. 15
  - b. 25
  - c. 40
  - d. 55
  
4. **All** of the following are reasons why CT scanners should have dose-reduced pediatric protocols for scanning children, **except**:
  - a. the smaller bodies of children attenuates less of the x-ray beam
  - b. the dose at the center of a child's body is greater than the dose at their skin
  - c. the skin dose for children is slightly smaller because the skin is slightly farther away from the beam source
  - d. the dose will be higher for children only if the same scan parameters are used for them as for adults

5. If the fetus is in the direct x-ray beam during a CT scan, the fetal dose will be in the range of 10 to \_\_\_mGy.
- 15
  - 20
  - 25
  - 30
6. Many of the side effects of contrast media are entirely or mainly due to:
- high osmolality
  - ionic dimers
  - nonionic monomers
  - nonionic dimers
7. The **major** risk factor for contrast-induced nephropathy is:
- liver cirrhosis
  - heart arrhythmia
  - renal dysfunction
  - pulmonary compromise
8. The **most** common anaphylactoid reaction to contrast is limited to the:
- blood vessels
  - heart
  - pulmonary disturbances
  - skin and subcutaneous soft tissue
9. The term used for a treatment used in conjunction with primary treatment for patients with localized disease is:
- adjuvant
  - conformal
  - isodose
  - pulsed
10. Brown fat is **most** commonly found in the:
- axillary area
  - supraclavicular area
  - inferior sternal location
  - pericoronary artery location
- possible responses**
- 1 and 3
  - 2 and 4
  - 1, 2, & 4
  - 2, 3, & 4

11. The recommended interval for re-imaging following chemotherapy in patients with lymphoma is:
- a. one month
  - b. three months
  - c. six months
  - d. one year
12. The sensitivity of positron emission tomography (PET) **alone** for evaluating a solitary pulmonary lung nodule for lung carcinoma is \_\_\_%.
- a. 65
  - b. 76
  - c. 89
  - d. 96

**Section II**

13. Approximately \_\_\_% of aortic transections occurs at the aortic isthmus at the level of the ligamentum arteriosum.
- a. 99
  - b. 90
  - c. 88
  - d. 77
14. The deep sulcus sign is a lucent costophrenic sulcus and represents \_\_\_ in a supine patient.
- a. pulmonary embolus
  - b. aortic laceration
  - c. pneumothorax
  - d. multiple fracture
15. A sign that is specific of tracheobronchial disruption is the \_\_\_ sign.
- a. fallen lung
  - b. double diaphragm
  - c. deep sulcus
  - d. flail chest
16. Half of the patients with community-acquired lobar pneumonia have radiographic resolution at:
- a. 1 - 2 weeks
  - b. 3 - 5 weeks
  - c. 6 months
  - d. 9 months



17. The first known outbreak of Legionnaire's disease was at the American Legion Convention in Philadelphia, in July:
- 1952
  - 1966
  - 1976
  - 1985
18. The pulmonary lesion of primary tuberculosis (TB) is a \_\_\_ tubercle.
- Ranke
  - Miliary
  - Brant
  - Ghon
19. A ring of ground glass opacity around a lung nodule or mass is referred to as the \_\_\_ sign.
- halo
  - whirl
  - Ranke
  - Split pleura
20. The smallest object size that can be resolved on a high-resolution chest CT is \_\_\_ to \_\_\_ microns.
- 25 - 50
  - 100 - 400
  - 600 - 1000
  - 1200 -1500
21. The \_\_\_ sign is pathognomonic for bronchiectasis.
- halo
  - Ghon
  - signet ring
  - wooly cotton
22. Up to \_\_\_% of children with human immunodeficiency virus (HIV) will have lymphocytic interstitial pneumonia (LIP).
- 13
  - 30
  - 63
  - 70
23. Lymphangiomyotosis (LAM) is an uncommon condition that occurs almost exclusively in:
- men
  - infants
  - adolescents
  - women of childbearing age

24. Pneumoconioses are a diverse group of occupationally acquired respiratory disorders secondary to inhalation of various particles.
- a. True
  - b. False
25. Inhalation of dust containing a large amount of iron is associated with:
- a. silicosis
  - b. berylliosis
  - c. siderosis
  - d. asbestosis
26. About 10% of asbestos workers will develop malignant mesothelioma, which has a latency period of \_\_\_ to \_\_\_ years after asbestos exposure.
- a. 5 - 10
  - b. 20 - 40
  - c. 30 - 50
  - d. 45 - 60
27. The classic sign and symptom of interstitium rheumatoid disease is:
- a. hilar pneumonia
  - b. pleural fibrosis
  - c. lymphadenopathy
  - d. progressive dyspnea
28. Goodpasture is a \_\_\_ syndrome.
- a. pulmonary-renal
  - b. reproductive
  - c. gastrointestinal
  - d. hepatic-renal
29. It is estimated that 1 in \_\_\_ women will die of lung cancer in the United States.
- a. 5
  - b. 13
  - c. 17
  - d. 27

30. Non-resectable lung cancer includes stages:

1. IB
2. IIA
3. IIIB
4. IV

**Possible responses**

- a. 1 and 3
  - b. 3 and 4
  - c. 1, 2, & 3
  - d. 1, 2, 3, & 4
31. **All** of the following patterns of calcifications are considered benign, **except**:
- a. diffuse and central
  - b. concentric (laminar)
  - c. eccentric and stippled
  - d. popcorn-like
32. The **most** common benign neoplasm of the lung is:
- a. hamartoma
  - b. pulmonary infarct
  - c. round atelectasis
  - d. arteriovenous malformation
33. The type of lung cancer that has the **strongest** association with cigarette smoking and the poorest survival rate is:
- a. large cell
  - b. small cell
  - c. bronchial caronoid
  - d. squamous
34. Small cell and large cell neuroendocrine carcinoma generally occurs in:
- a. smokers who are older
  - b. young adults who smoke
  - c. teenagers exposed to secondhand smoke
  - d. those who have never smoked
35. The human eye misses about \_\_\_% of the lung nodules, and this estimate is size-dependent.
- a. 50
  - b. 42
  - c. 20
  - d. 15

36. The minimum size of a colon polyp that may be detected is \_\_\_\_\_mm.
- 1.5
  - 3.0
  - 5.0
  - 7.5
37. Germ cell tumors **almost** exclusively occur in:
- infants
  - pregnant females
  - the elderly
  - young men
38. **All** of the following are the most common extrapulmonary primary neoplasms that metastasize to the mediastinal lymph nodes, **except**:
- ovarian carcinoma
  - breast carcinoma
  - head and neck carcinoma
  - renal tumors and melanoma
39. The **most** common benign tracheal tumors are:
1. papilloma
  2. hamartoma
  3. hemangioma
  4. adenoid cystic carcinoma
- possible responses**
- 1 and 4
  - 2 and 3
  - 1, 2, & 3
  - 2, 3, & 4
40. Achalasia, literally means:
- difficulty breathing
  - failure of relaxation
  - inability to talk
  - massive hemorrhage
41. Tetralogy of Fallot is the most common congenital heart disease associated with a right arch with mirror image branching.
- True
  - False

42. Today, the **most** common causes of upper extremity and thoracic venous thrombosis are from:
1. acute infection
  2. metastatic tumors
  3. clots forming on indwelling venous catheters
  4. pacemaker wires
- possible responses**
- a. 1 and 2
  - b. 2 and 3
  - c. 3 and 4
  - d. 2, 3, & 4
43. **All** of the following are true regarding Lemierre's syndrome, **except**:
- a. is an infection in the pharynx that extends to the parapharyngeal space and the jugular vein
  - b. usually affects the elderly
  - c. produces hemoptysis
  - d. associated with fever and cough
44. A systemic disease that causes venous and arterial occlusion as well as arterial aneurysm is characteristic of \_\_\_ disease.
- a. Rendu-Osler-Weber
  - b. Goodpasture
  - c. Behçet
  - d. Wegener's
45. The mortality rate for patients with type A aortic dissection who do not undergo surgery is \_\_\_% within 7 days.
- a. 38
  - b. 50
  - c. 65
  - d. 70
46. Pseudoaneurysm is usually caused by **all** of the following, **except**:
- a. infection and trauma
  - b. surgery
  - c. tumors
  - d. penetrating ulcer
47. The word atheroma comes from the Greek word, meaning:
- a. blood
  - b. sand
  - c. stones
  - d. gruel

48. A back flow leak from collateral circulation is classified as a type \_\_\_ stent-graft endoleak.
- a. I
  - b. II
  - c. III
  - d. IV
49. About \_\_\_% of those with Turner's syndrome has coarctation of the aorta.
- a. 5
  - b. 10
  - c. 15
  - d. 20

**Section III**

50. The phase in a contrast-enhanced renal scan that occurs about 80 seconds after injection and lasts up to 180 seconds after the start of the injection is the \_\_\_phase.
- a. corticomedullary
  - b. nephrographic
  - c. circulatory
  - d. excretory
51. In the Bosniak classification of renal cysts, a clearly malignant lesion is a category:
- a. II
  - b. III
  - c. IV
  - d. V
52. Autosomal dominant polycystic kidney disease (ADPKD) is one of the **most** commonly inherited diseases in the United States and accounts for \_\_\_ to \_\_\_% of patients with end-stage renal disease.
- a. 2 - 3
  - b. 5 - 10
  - c. 15 - 20
  - d. 25 - 25
53. Staghorn calculus are usually made up of compounds of:
- a. uric acid
  - b. calcium oxalate
  - c. chloride oxide
  - d. triple ammonium phosphate

54. The unilateral absence of the \_\_\_ sign has been described as an additional secondary sign of urinary tract obstruction.
- white pyramids
  - soft tissue rim
  - drape
  - halo
55. The **most** common predisposing factor in the development of emphysematous pyelonephritis (EPN) is:
- hepatitis
  - hypertension
  - diabetes mellitus
  - hypotension
56. The \_\_\_ sign signifies the replacement of the renal parenchyma by an indolent infectious process in the diffuse form of xanthogranulomatous pyelonephritis.
- white pyramids
  - soft tissue rim
  - putty kidney
  - bear paw
57. A clinical entity caused by chronic subcapsular hematomas that compress the renal parenchyma is known as \_\_\_ kidney.
- staghorn
  - page
  - putty
  - bear paw
58. The **most** common cause of renal artery aneurysm is:
- hepatitis
  - hypertension
  - diabetes mellitus
  - atherosclerosis
59. The left adrenal gland may have the shape of **all** of the following, **except**:
- inverted V
  - inverted Y
  - reversed L
  - reversed V
60. The "rule of 10" regarding pheochromocytoma includes **all** of the following, **except**:
- 10% are multiple or bilateral
  - 10% are benign
  - 10% are malignant
  - 10% are familial

61. The **most** common cause of adrenal calcification is:
- sequel of adrenal hemorrhage
  - tuberculosis (TB) and histoplasmosis
  - ganglioneuroma
  - Wolman's disease
62. A fulminant variety of meningococcal infections in which organisms colonize in the central nervous system, skin, adrenal glands, and serosal surfaces are known as \_\_\_ syndrome.
- Carney's
  - Woman's
  - Von Hippel-Lindau
  - Waterhouse-Friderichsen
63. Approximately \_\_\_% of neuroblastomas occurs in the adrenal medulla.
- 10
  - 20
  - 30
  - 40
64. Poor prognostic indicators of adrenal carcinoma includes:
- a mass greater than 12 centimeters
  - high mitotic count
  - intra-tumor hemorrhage
  - calcifications present
- possible responses**
- 1 and 2
  - 2 and 3
  - 1, 2, & 3
  - 2, 3, & 4
65. Images of the adrenal gland usually demonstrate adrenal hyperplasia in approximately\_\_\_% of the patients with Cushing's syndrome.
- 10
  - 20
  - 70
  - 90
66. Carcinoma of the \_\_\_ is the **most** common source for adrenal metastatic disease.
- lung
  - kidney
  - brain
  - spine



67. When \_\_\_\_ is expected, water-soluble oral contrast material is used to opacify the gastrointestinal (GI) tract.
- intussusception
  - obstruction
  - perforation
  - torsion

68. The incidence of gastric adenocarcinoma is **highest** in:

- Africa
- Japan
- South America
- Eastern Europe

**Possible responses**

- 1 and 4
  - 2 and 3
  - 1, 2, & 3
  - 2, 3, & 4
69. Gastric volvulus is classified according to:
- location in the stomach
  - centimeter size
  - method of twisting
  - shape and formation

**possible responses**

- 1 and 2
  - 1 and 3
  - 2 and 3
  - 3 and 4
70. The mortality rate for emphysematous gastritis is greater than \_\_\_\_%.
- 10
  - 20
  - 40
  - 60

71. Meckel's diverticulum is the **most** common congenital anomaly of the gastrointestinal (GI) tract and occurs in \_\_\_\_ to \_\_\_\_% of the total population.

- 2 - 3
- 5 - 7
- 10 - 12
- 15 - 20

72. Kaposi's sarcoma is the most common GI tract malignancy associated with \_\_\_\_ and related to the herpes virus.

- Turner's syndrome
- Crohn's disease
- Tuberculosis
- Acquired immunodeficiency syndrome (AIDS)

73. The target sign implies the presence of submucosal edema.
- True
  - False
74. The comb sign is mostly seen in:
- Turner's syndrome
  - Crohn's disease
  - AIDS
  - Tuberculosis
75. **All** of the following have been implicated in the etiology of Henoch-Schöelein syndrome, **except**:
- immunizations
  - insect bites
  - certain medications
  - hereditary factors
76. Following radiation therapy, enteritis may occur from \_\_\_ to \_\_\_ months.
- 1 - 2
  - 3 - 4
  - 6 - 24
  - 24 - 46
77. Adhesions are responsible for \_\_\_% of cases of small bowel obstruction.
- 40
  - 60
  - 80
  - 100
78. The Bouvert syndrome is related to:
- gallstone ileus
  - diverticulitis
  - ulcerative colitis
  - retained masses of animal or vegetable material
79. Bezoars are associated with:
- gallstone ileus
  - diverticulitis
  - ulcerative colitis
  - retained masses of animal or vegetable
80. Intussusception is the **most** common cause of intestinal obstruction among:
- children
  - the elderly
  - middle aged males
  - women in their early 20s

81. Paraduodenal hernias represent \_\_\_ to \_\_\_% of internal hernias and are usually on the left side.
- 15 - 25
  - 30 - 45
  - 50 - 75
  - 80 - 90
82. Important clinical signs of small bowel strangulation include:
1. abdominal tenderness
  2. tachycardia
  3. fever
  4. leukocytosis
- possible responses**
- 1 and 3
  - 2 and 4
  - 2, 3, & 4
  - 1, 2, 3, & 4
83. **All** of the following are the **most** common pathologic conditions affecting the colon, **except**:
- neoplasm
  - appendicitis
  - parasitic and fungal conditions
  - diverticular and inflammatory bowel disease
84. The word vermiform means:
- tangled
  - weblike
  - wormlike
  - fluid-filled
85. Approximately \_\_\_% of neuroendocrine tumors arise in the GI tract.
- 90
  - 80
  - 70
  - 50
86. The coffee bean sign is a plain film sign of:
- gastric inflammation
  - appendicitis
  - diverticulitis
  - sigmoid volvulus
87. CT sensitivities of \_\_\_ to \_\_\_% have been reported for colonic polyps measuring 10 mm or larger.
- 20 - 22
  - 40 - 45
  - 60 - 68
  - 82 - 93

88. The bare area of the liver is the portion of the liver:
- adjacent to the small bowel
  - not covered by peritoneum
  - most affected by cysts
  - that is most affected by cirrhosis
89. Central-dot sign is suggestive of:
- Wilson's disease
  - Turner's syndrome
  - acute appendicitis
  - Caroli's disease
90. **All** of the following cause "bright liver" on noncontrast CT, **except**:
- glycogen storage disease
  - Caroli's disease
  - Wilson's disease
  - Primary hemochromatosis
91. About half of the cases of Budd-Chiari syndrome are due to:
- thrombotic disorders
  - compensatory hypertension
  - liver cirrhosis
  - pancreatitis
92. The cluster sign is considered characteristic of a hepatic pyogenic abscess.
- True
  - False
93. Amebiasis refers to an infection caused by a:
- virus
  - bacteria
  - chemical toxin
  - protozoan parasite
94. The bright-dot sign is suggestive of liver:
- rupture
  - hemangioma
  - adenoma
  - hematoma
95. Lipiodol, a contrast agent that is known to concentrate semi-selectively in liver tumors, is made from iodized:
- flax seed oil
  - ionic salts
  - poppy seed oil
  - walnut oil

96. Hepatoblastoma typically affects the elderly.
- True
  - False
97. The **most** common type of gallbladder carcinoma is:
- adenocarcinoma
  - anaplastic
  - squamous
  - carcinoid
98. The term porcelain derives from the \_\_\_ discoloration and brittle consistency of the gallbladder.
- pink
  - blue
  - yellow
  - green
99. The fundus is the **most** common site of gallbladder perforation because of its poor blood supply.
- True
  - False
100. An impacted stone in the cystic duct and surrounding inflammation resulting in obstruction of adjacent common hepatic duct is referred to as \_\_\_ syndrome.
- Henoch-Schönlein's
  - Mirizzi's
  - Bouveret
  - None of the above
101. Approximately \_\_\_% of **all** cholangiocarcinomas is located in the extrahepatic bile duct.
- 85
  - 75
  - 65
  - 55
102. The CT appearance of the pancreas in cystic fibrosis is:
- fatty replacement
  - calcifications
  - increased vascularity
  - single or multiple parenchymal cysts
- possible responses**
- 2 and 3
  - 3 and 4
  - 1, 2, & 4
  - 2, 3, & 4

103. The **most** common malignancy of the spleen is:
- a. lymphoma
  - b. angiosarcoma
  - c. melanoma
  - d. leiomyosarcoma
104. The imaging modality considered to be the gold standard for imaging the retroperitoneum is:
- a. nuclear medicine imaging
  - b. magnetic resonance imaging
  - c. computed tomography
  - d. plain (non-contrast) radiography
105. Retroperitoneal fibrosis secondary to an idiopathic etiology is termed \_\_\_ disease.
- a. Ormond's
  - b. Caroli's
  - c. Mirizzi's
  - d. Bouvert
106. The rind sign indicates a/an:
- a. abscess
  - b. infarct
  - c. volvulus
  - d. hernia
107. Benign prostatic hypertrophy (BPH) is the **most** common disorder of the prostate gland.
- a. True
  - b. False

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108. A report released in 2009 by the National Council on Radiation Protection and Measurements (NCRP) noted that in 2006, Americans were exposed to more than \_\_\_ times as much ionizing radiation from medical procedures as was the case in the early 1980s.
- a. 3
  - b. 7
  - c. 11
  - d. 15
109. Radiography staff bears responsibility for their own personal safety in awareness of potential radiation hazards, ALARA operating policies and procedures, and compliance in wearing personnel radiation monitoring badges.
- a. True
  - b. False

110. The Institute for Energy and Environmental Research (IERR) recommends a reduction in maximum allowable radiation dose to the general public from 100 millirem of radiation per year to \_\_\_ millirem per year.
- 5
  - 10
  - 15
  - 25
111. The ICRP publication No. 84 states that the risk to the fetus is highest during organogenesis, a period from 2 to \_\_\_ weeks after conception.
- 3
  - 7
  - 12
  - 18
112. The NCRP guidelines currently recommend that a monthly equivalent radiation dose limit for the embryo should not exceed \_\_\_ rem.
- 0.05
  - 0.5
  - 1.0
  - 1.5
113. In the Image Gently™ campaign, the first action is to encourage clinicians to:
- reduce the number of imaging examinations requested on pediatric patients
  - review the patient's prior imaging history before scheduling new examinations
  - require gonadal shielding on any pediatric imaging examination
  - obtain complete informed consent from the patient's legal guardian
114. Data from a study conducted by Slechta and Reagan found that the more important factors in determining radiographer compliance with ALARA practices include:
- initial professional education
  - type of work site
  - years of employment in medical imaging
  - gender and age
- possible responses**
- 1 and 3
  - 2 and 3
  - 1, 2, & 3
  - 2, 3, & 4

115. The use of ceramic computed tomography (CT) detector material has provided a \_\_\_% radiation dose reduction.
- a. 15
  - b. 25
  - c. 50
  - d. 75
116. Radiation monitoring is recommended for those who are exposed occupationally on a regular basis to ionizing radiation and who are at risk of receiving \_\_\_% or more of the annual occupational effective dose.
- a. 1
  - b. 5
  - c. 10
  - d. 20
117. The optically stimulated luminescent dosimeter, in actual practice, is usually worn for a \_\_\_ period.
- a. 1 week
  - b. 2 week
  - c. 2 month
  - d. 6 month
118. The new ionizing radiation warning symbol is a universal radiation-warning symbol with the message of:
- a. enter at your own risk
  - b. entry only by authorized personnel
  - c. danger-stay away
  - d. none of the above
119. The USRT study is unique because it represents the most comprehensive study of people who are exposed to radiation in medical jobs.
- a. True
  - b. False
120. In the 1982 USRT study, almost \_\_\_% of radiologic technologists had worn a dosimeter at least on one of their most recent jobs.
- a. 90
  - b. 88
  - c. 78
  - d. 68



