CONTINUING EDUCATION TEST #1

Breast Tumor Scintigraphy

For each of the following questions, select the best answer. Then circle the number on the CE Tests Answer Sheet that corresponds to the answer you have selected. Complete the answer sheet. Keep a record of your responses so that you can compare them with the correct answers, which will be published in the next issue of *JNMT*. Answers to these test questions should be returned on the Answer Sheet no later than **November 15, 1996**. An 80% correct response rate is required to receive 1.0 CEH (Continuing Education Hour) credit for each article. SNM Technologist Section members can find their VOICE number on the upper left-hand corner of their *JNMT* mailing labels. If you've joined our Nonmember VOICE Tracking Program, please check the ***NMVTP*** box on the Answer Sheet (no extra fee is required). Documentation will appear on your VOICE transcript which is issued in March of each year. Nonmembers who have not joined our Nonmember VOICE Tracking Program must mail a $10.00 check or money order, made payable to SNM, along with the completed quiz. You will receive a certificate of completion indicating credit awarded for receiving a passing score of 80% or better.

A. *Breast cancer is the most common visceral neoplasm affecting American women and the incidence is increasing.*

101. true
102. false

B. *Early breast cancer detection methods include which of the following?*

103. screening mammography
104. breast self-examination
105. clinical breast examination
106. 103, 104 and 105

C. *Breast neoplasms as small as 1–2 cm can be detected through good patient education and the performance of monthly breast self-examination.*

107. true
108. false

D. *Screening mammography's threshold for detection of breast lesions may be as low as _____.*

109. 1 mm
110. 1 cm
111. 2 mm
112. 2 cm

E. *Mortality in women over 50 yr old has been reduced 30% by early mammographic detection of breast tumors.*

113. true
114. false

F. *Breast tissue for evaluation of the presence of cancer can be acquired through _____ .*

115. fine-needle aspiration cytology
116. surgical open breast biopsy
117. stereotactic needle biopsy
118. 115, 116 and 117

G. *A neoplastic cell has a _____ times higher rate of metabolism when compared to a normal cell.*

119. 2–8
120. 4–10
121. 6–12
122. 8–14

H. *Positioning is of major importance when performing breast scintigraphy.*

123. true
124. false

I. *Breast neoplasms will take up ^{99m}Tc-sestamibi in the range of just above normal breast activity to more than _____ times that found in normal tissue.*

125. 3
126. 5
127. 7
128. 9

J. *Visualization of a breast tumor can be seen as early as _____ postinjection of ^{99m}Tc-sestamibi.*

129. 1–2 min
130. 3–4 min
131. 5–6 min
132. 7–8 min

K. *The negative predictive value in the authors' laboratory for ^{99m}Tc-sestamibi imaging of palpable breast lumps was _____ .*

133. 91.6%
134. 93.1%
135. 94.0%
136. 100%

L. *Benign hypercellular breast lesions and inflammation may have false-positive uptake of ^{99m}Tc-sestamibi.*

137. true
138. false

M. *Other radiopharmaceuticals used in breast scintigraphy include _____ .*

139. ^{67}Ga-citrate
140. ^{201}Tl-chloride
141. ^{99m}Tc-labeled WBCs
142. ^{18}F-FDG
143. 140 and 142

Calculation and Prevention of Radionuclide Intake

N. *Reasons to perform bioassays include which of the following?*

144. confirm contamination
145. demonstrate adequate protection
146. confirm violation of regulations
147. demonstrate nonstochastic effects
148. all of the above are correct

O. *Stochastic effects are health effects that do not occur randomly and the severity of the effect varies with the radiation dose.*

149. true
150. false

P. *Stochastic effects have a dose threshold and are distinguished pathologically from randomly occurring disease.*

151. true
152. false

Q. *10 CFR 20 requires licensees to limit the occupational dose to individuals to a TEDE of _____ .*

153. 0.05 Sv
154. 0.50 Sv
155. 5.00 Sv
156. 50.0 Sv
157. 500 Sv

R. *10 CFR 20 requires licensees to limit the sum of the occupational dose to individuals from the DDE plus the CDE to any organ (except the skin, lens of the eye and extremities) to _____ .*

158. 0.1 Sv
159. 0.2 Sv
160. 0.3 Sv
161. 0.4 Sv
162. 0.5 Sv

S. *10 CFR 35 requires bioassays to be performed within 72 hr of administration of greater than _____ of ^{131}I.*

163. 3 mCi
164. 5 mCi
165. 10 mCi
166. 30 mCi
167. 50 mCi

T. *ALI values for a given radionuclide can differ dramatically based upon the chemical form or the route of intake.*

168. true
169. false

U. *A stochastic ALI value is the amount of radionuclide intake that will result in a CEDE of _____ .*

170. 0.01 Sv
171. 0.05 Sv
172. 0.10 Sv
173. 0.50 Sv
174. 1.00 Sv

V. *The DAC is the concentration of radionuclides in air that, if breathed by reference man for 2000 hr under conditions of light work, would result in an intake of one ALI or an external exposure of _____ .*

175. 0.01 Sv
176. 0.05 Sv
177. 0.10 Sv
178. 0.50 Sv
179. 1.00 Sv

W. *The most common routes of radioiodine intake in nuclear medicine are by inhalation or ingestion.*

180. true
181. false

X. *Which of the following affect the volatility of ^{131}I?*

182. temperature
183. pH
184. contact with tap water
185. 182 and 184
186. 182, 183, and 184

Answers to CE Article Test #1, June 1996

The Continuing Education article "The Declared Pregnant Woman in Nuclear Medicine" by Daniel F. Kane, et al. was accompanied by a CE test. The correct answers are as follows.

A. 101	D. 115	G. 129	J. 138	M. 156	P. 168
B. 110	E. 122	H. 134	K. 146	N. 161	
C. 112	F. 125	I. 135	L. 150	O. 162	

Answers to CE Article Test #2, June 1996

The Continuing Education article "Effective Interacting with the Terminally Ill Patient" by Kathy S. Thomas was accompanied by a CE test. The correct answers are as follows.

Q. 169	T. 181	W. 194	Z. 208	CC. 216
R. 176	U. 184	X. 197	AA. 212	
S. 180	V. 191	Y. 203	BB. 214	

CONTINUING EDUCATION TESTS #1 and #2

Answer Sheet

101	111	121	131	141	151	161	171	181	191	201	211	221	231	241
102	112	122	132	142	152	162	172	182	192	202	212	222	232	242
103	113	123	133	143	153	163	173	183	193	203	213	223	233	243
104	114	124	134	144	154	164	174	184	194	204	214	224	234	244
105	115	125	135	145	155	165	175	185	195	205	215	225	235	245
106	116	126	136	146	156	166	176	186	196	206	216	226	236	246
107	117	127	137	147	157	167	177	187	197	207	217	227	237	247
108	118	128	138	148	158	168	178	188	198	208	218	228	238	248
109	119	129	139	149	159	169	179	189	199	209	219	229	239	249
110	120	130	140	150	160	170	180	190	200	210	220	230	240	250

Name _____ Title _____

Hospital or Facility _____ Dept. _____

Street Address _____

City _____ State _____ Zip _____ Phone (____) _____

VOICE No. _____ Or please check one: ☒ NMVTP participant (no fee required) ☐ Nonmember—$10 check or money order enclosed

Return a copy of this answer sheet no later than November 15, 1996 to:
Continuing Education Coordinator, *Journal of Nuclear Medicine Technology*
Marcia Ferg, The Society of Nuclear Medicine, 1850 Samuel Morse Dr., Reston, VA 22090-5316.
FAX: (703) 708-9015.

9/96