

## CONTINUING EDUCATION TEST

# Technical Procedures for Use of the New Kidney Agent Technetium-99m MAG3

For each of the following questions, select the best answer. Then circle the reader service card number that corresponds to the answer you have selected. 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 the *Journal*. Answers to these test questions should be returned on the reader service card no later than December 1, 1991. Supply your name, address, and VOICE number in the spaces provided on the card. Your VOICE number appears on the upper left hand corner of your *Journal* mailing label. No credit can be recorded without it. A 70% correct response rate is required to receive 0.1 CEU credit for this article. Members participating in the continuing education activity will receive documentation on their VOICE transcript, which is issued in March of each year. Nonmembers may request verification of their participation but do not receive transcripts.

**A.** The excretion of MAG3 is primarily by \_\_\_\_\_ secretion.

- 101. glomerular
- 102. tubular
- 103. capillary
- 104. nephron

**B.** The percentage of MAG3 activity which is extracted from the blood is approximately \_\_\_\_\_ percent.

- 105. 20
- 106. 30
- 107. 40
- 108. 50

**C.** When using DTPA, the percentage of activity extracted is \_\_\_\_\_ percent.

- 109. 20
- 110. 30
- 111. 40
- 112. 50

**D.** Effective renal plasma flow (ERPF) is \_\_\_\_\_ times greater than the glomerular filtration rate (GFR) in chronic kidney disorders.

- 113. 2
- 114. 3
- 115. 4
- 116. 5

**E.** The anterior supine position is the ideal imaging position for patients with \_\_\_\_\_.

- 117. ileal loops

- 118. horse-shoe kidneys
- 119. renal transplants
- 120. all of the above

**F.** The effective renal plasma flow (ERPF) cannot be used to evaluate function and monitor changes.

- 121. True
- 122. False

**G.** During renal allograft rejection or acute renal failure, the MAG3 study images appear to have \_\_\_\_\_.

- 123. an increased excretory index
- 124. an increased GFR
- 125. a normal ERPF
- 126. a prolonged parenchymal transit

**H.** MAG3 can be used \_\_\_\_\_ hours post reconstitution.

- 127. 2
- 128. 4
- 129. 6
- 130. 8

**I.** When performing ERPF measurements along with imaging, as little as \_\_\_\_\_ millicuries of activity can be used.

- 131. 0.1
- 132. 2.0
- 133. 5.0
- 134. 10.0

**J.** The standard used when performing a ERPF study, is diluted to a volume of \_\_\_\_\_.

- 135. 10 milliliters
- 136. 10 liters
- 137. 100 milliliters
- 138. 100 liters

**K.** The blood sample for ERPF calculation should be drawn \_\_\_\_\_ minutes post-injection of MAG3.

- 139. 15
- 140. 30
- 141. 45
- 142. 60

**L.** The ratio of activity recovered in the urine to what is lost from the blood is the excretory index.

- 143. True
- 144. False

**M.** To calculate the excretory index the following is/are necessary.

- 145. acquisition of an imaging study
- 146. the volume of urine collected
- 147. an ERPF measurement
- 148. pre- and post-void bladder images
- 149. urine counts
- 150. only 145, 146, 148, & 149
- 151. all of the above

**N.** Diuretics are used in renography to aid in the diagnosis of \_\_\_\_\_.

- 152. renal transplant rejection
- 153. renal artery stenosis
- 154. urinary tract obstruction
- 155. renal failure

**O.** The use of ACE-inhibitors, such as captopril, prior to renography studies using MAG3 has been helpful in diagnosing \_\_\_\_\_.

- 156. renal transplant rejection
- 157. renal artery stenosis
- 158. urinary tract obstruction
- 159. renal failure

**P.** A florid captopril-induced unilateral response is not specific for functionally significant renovascular disease.

- 160. True
- 161. False

#### Answers to CE Article Tests, June 1991

The Continuing Education article "An Optimized Protocol for Detection of Coronary Artery Disease (CAD) Using Technetium-99m (Tc-99m) Sestamibi" by Lynne Roy, Kenneth Van Train, James Bietendorf, Ernest Garcia, Russel Folks, Hose Kiat, Jamshid Maddahi, and Daniel S. Berman was accompanied by a CE article test. The correct answers are as follows.

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|--------|--------|--------|--------|--------|
| A. 102 | D. 115 | G. 127 | J. 140 | M. 150 |
| B. 110 | E. 118 | H. 134 | K. 144 | N. 151 |
| C. 112 | F. 125 | I. 137 | L. 147 |        |

The answers to the CE article test on "Comparison of IMP and HMPAO for SPECT Brain Imaging" by David L. Bushnell, Gary Eastman, and W. Earl Barnes are as follows.

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|--------|--------|--------|--------|--------|
| A. 153 | D. 167 | G. 179 | J. 187 | M. 200 |
| B. 159 | E. 169 | H. 182 | K. 193 | N. 202 |
| C. 161 | F. 174 | I. 183 | L. 196 | O. 206 |
|        |        |        |        | P. 212 |