

CE ARTICLE TEST

For each of the following fourteen questions, select the best answer. Then circle the number on the reader service card 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.

A. *What percent of the injected Tl-201 concentrates in the myocardium?*

- 91. 5%.
 - 92. 10%.
 - 93. 50%.
 - 94. 85%.
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B. *The circulating half-life of Tl-201 in the blood stream is typically less than _____.*

- 95. 10 sec.
 - 96. 40 sec.
 - 97. 10 min.
 - 98. 40 min.
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C. *Approximately what percent of the Tl-201 that reaches the myocardium is concentrated intracellularly?*

- 99. 5%.
 - 100. 20%.
 - 101. 85%.
 - 102. 100%.
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D. *Which of the following factors will diminish thallium uptake by the myocardium?*

- 103. decreased regional perfusion.
 - 104. fasting of six hours prior to imaging.
 - 105. failure of the sodium-potassium pump.
 - 106. both 103 and 105 are correct.
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E. *As much as _____ percent occlusion of a coronary artery may permit normal myocardial perfusion as visualized by Tl-201 imaging in resting patients.*

- 107. 60%.
- 108. 70%.
- 109. 80%.
- 110. 90%.

F. *Physiologic motion artifacts on thallium images can, to an extent, be controlled by using which of the following techniques?*

- 111. gated images.
 - 112. contrast enhancement.
 - 113. background subtraction.
 - 114. seven-pinhole collimator.
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G. *The collimator most frequently recommended for clinical thallium imaging is the:*

- 115. high resolution collimator.
 - 116. high sensitivity collimator.
 - 117. all purpose parallel hole collimator.
 - 118. converging collimator.
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H. *Various background subtraction techniques attempt to improve the target-to-background ratio of thallium, which is typically:*

- 119. 1 to 1.
 - 120. 3 to 1.
 - 121. 5 to 1.
 - 122. 10 to 1.
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I. *Circumferential profile analysis of thallium images can be helpful in _____.*

- 123. standardizing the interpretation of thallium studies.
 - 124. quantitative evaluation of thallium images.
 - 125. reducing the time necessary to obtain adequate data for interpretation.
 - 126. both 123 and 124 are correct.
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J. *All of the following are true except:*

- 127. pronounced visualization of the right ventricle is normal.
- 128. the apex of the heart usually concentrates much less thallium.
- 129. absence of activity in the aortic outflow region in the LAO view is normal.
- 130. the atria are rarely visualized.

K. *Thallous chloride when used for myocardial imaging is administered in doses of:*

- 131. 200 μ Ci.
 - 132. 2 mCi.
 - 133. 5 mCi.
 - 134. 10 mCi.
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L. *To insure adequate distribution of the tracer, the patient continues to exercise for at least _____ after administration of Tl-201.*

- 135. 10 sec.
- 136. 30 sec.
- 137. 90 sec.
- 138. 120 sec.

M. _____ *substantially diminishes the sensitivity of the thallium stress test.*

- 139. Left bundle branch block.
 - 140. Submaximal exercise.
 - 141. Prior myocardial infarction.
 - 142. Failure to obtain an ECG during exercise.
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N. *Once the exercise portion of the thallium stress test has been terminated, imaging should begin within:*

- 143. 3-10 min.
- 144. 10-30 min.
- 145. 1-3 hr.
- 146. 3-4 hr.

Your answers to the above questions should be returned on a reader service card (found in the back of the Journal) no later than June 1, 1984. Remember to supply your name and address in the space provided on the card; also write your VOICE number following your name. Your VOICE number appears on the upper left hand corner of your Journal mailing label. No credit can be recorded without it.