Landmarks and Landmines in the Early History of Radiopharmaceuticals

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. 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 Answer Sheet no later than March 1, 1993. Supply your name, address, and VOICE number in the spaces provided on the Answer Sheet. 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. *Strontium nitrate ^{85}Sr and sodium fluoride ^{18}F were once useful for* _____.

171. brain imaging
172. cardiovascular imaging
173. bone imaging
174. pulmonary imaging

B. *All of the following are true statements except the statement that* _____.

175. fluoride ^{18}F has a longer half-life than ^{85}Sr
176. ^{18}F is produced by a cyclotron
177. upon injection, ^{85}Sr took a few days to clear from the abdomen before imaging could commence
178. the radiation dose to the patient was very high with ^{85}Sr

---

C. *One of the early successful materials used in brain scanning was* _____.

179. sodium iodide ^{131}I
180. hippuran ^{131}I
181. rose bengal ^{131}I
182. albumin ^{131}I

D. *One of the early successful materials used in liver function studies was* _____.

183. sodium iodide ^{131}I
184. hippuran ^{131}I
185. rose bengal ^{131}I
186. albumin ^{131}I

E. *^{197}Hg has a shorter half-life and lower energy gamma radiation than ^{203}Hg.*

187. True
188. False

F. _____ *was reported in the literature to have erythrocyte denaturation properties.*

189. ^{197}Hg-chlormerodrin
190. ^{197}Hg-MHP
191. ^{203}Hg-chlormerodrin
192. ^{131}I-albumin

G. *^{75}Se-1-selenomethionine was used in* _____.

193. pancreatic imaging
194. brain imaging
195. renal imaging
196. pulmonary imaging

H. *Brookhaven National Laboratory produced a generator that contained ^{90}Y on an ion-exchange resin and produced ^{90}Sr upon elution with a citrate buffer.*

197. True
198. False

I. *Prior to the use of isotonic saline as an eluant of ^{99m}Tc in generators,* _____ *was used.*

199. oxygen
200. sodium hydroxide
201. hydrochloric acid
202. none of the above

J. *The availability of reactor produced ^{99}Mo for use in generators reduced the amount of radionuclide impurities present in the eluate.*

203. True
204. False

K. *^{99m}Tc produced from generators can be reduced for labeling with other compounds by* _____.

205. ferrous ascorbate
206. ascorbic acid
207. stannous ion
208. 205 & 206 only
209. 205 & 207 only

L. *Making macroaggregated albumin with a ^{99m}Tc label for lung imaging in earlier years required* _____.

210. a mixture of ^{99m}Tc sulfur colloid with a small quantity of serum albumin
211. denaturing albumin by a heating process
212. no quality control
213. all of the above
214. none of the above
215. 210 & 211 only