

2023 National FFA Veterinary Science CDE – Small Animal Workstream

Ms. Carroll brings her dog Ricky in today for his annual wellness visit. He weighs 17 pounds and is 5 years old. There is a note in his chart that warns he is a fear-biter. The veterinary nurse collects pertinent information from Ms. Carroll about how Ricky is doing at home. He eats Hill's® Science Diet® adult dry dog food and is on Simparica TRIO® (*sarolaner, moxidectin and pyrantel*) monthly. Ms. Carroll will need more of this today. She doesn't travel with Ricky, except to the groomer, because he gets so fearful. Their neighbors have dogs that Ricky plays with. He has a normal appetite and normal elimination habits though lately; he has seemed itchy and restless. She would like Dr. Peelman to investigate this.

1. What breed of dog is Ricky?

101. West Highland White terrier
102. Scottish terrier
103. Parson Russell terrier
104. Cairn terrier

2. Which trait does not describe a typical terrier? ([American Kennel Club](#))

105. Fearless
106. Independent
107. Shy
108. Bold

Ms. Carroll's neighbor has two indoor pets that Ricky routinely spends time with.

3. Identify the breed of dog belonging to the neighbor?

109. Bernese Mountain Dog
110. Pug
111. Beagle
112. Pembroke Corgi

4. Identify the breed of cat belonging to the neighbor.

113. Abyssinian
114. Manx
115. Russian Blue
116. Sphynx

Ms. Carroll lets you know she recently added a new puppy to her family.

5. Identify the correct breed and AKC group combination for the picture provided.

117. Bichon Frise – Non-Sporting Group
118. Bichon Frise – Toy Group
119. Pekingese - Non-Sporting Group
120. Pekingese – Toy Group

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6. Identify the breed of dog that is not typically as high energy as Ricky?
- 121. Belgian Malinois
 - 122. Doberman Pinscher
 - 123. Newfoundland
 - 124. Border Collie
7. Based on age, Ricky is currently in what life stage? (McCurnin pg. 243 9th edition)
- 125. Pediatric
 - 126. Adult
 - 127. Senior
 - 128. Geriatric
8. Convert Ricky's weight to kilograms.
- 129. 7.7 kg
 - 130. 17.4 kg
 - 131. 27.7 kg
 - 132. 37.4 kg
9. What is not part of Ricky's signalment? (McCurnin pg. 82 9th edition)
- 133. Neutered male
 - 134. Canine
 - 135. Fear biter
 - 136. 5 years old

Ms. Carroll reminds the veterinary nurse that Ricky can be fearful and act out.

10. Which behavior would you observe in an aggressive dog that you wouldn't see in fearful Ricky? (McCurnin pg. 139 9th edition)
- 137. Showing teeth
 - 138. Direct eye contact
 - 139. Growling
 - 140. Laying down

The veterinary nurse asks Ms. Carroll to further discuss her concerns. Ricky scratches his ears, rubs his face along the couch, and licks his toes often. Sometimes she notices hair loss and scaly skin patches.

11. What is most likely the underlying cause of Ricky's clinical signs? ([Merck Veterinary Manual](#))
- 141. Atopy
 - 142. Otitis externa
 - 143. Pododermatitis
 - 144. Conjunctivitis

The veterinary nurse asks if Ms. Carroll has seen Ricky paw at his mouth, drool excessively, or "chatter" his lower jaw.

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12. What ailment does the nurse have in mind? (McCurnin pg. 1236 9th edition)

- 145. Arthritis
- 146. Inner ear infection
- 147. Dermatitis
- 148. Periodontal disease

The veterinary nurse starts to discuss Dr. Peelman's plan for Ricky today.

13. Which diagnostic tool is NOT a typical recommendation given during a wellness visit for dog's similar in age to Ricky? (McCurnin pg. 243 9th edition)

- 149. Blood parasite screen
- 150. Intestinal parasite screen
- 151. Survey radiographs
- 152. Physical exam

Dr. Peelman is glad Ms. Carroll has agreed to a wellness panel as Ricky's breed is predisposed to chronic hepatitis. The blood chemistry portion of a wellness panel provides indices used to determine internal organ function.

14. Which organ would chronic hepatitis affect? (McCurnin pg. 648 9th edition)

- 153. Kidneys
- 154. Pancreas
- 155. Gallbladder
- 156. Liver

Another breed predisposition is hypoadrenocorticism (Addison's disease). This is a dangerous disorder if left unchecked.

15. Abnormalities on which portion of the bloodwork would NOT signal Dr. Peelman to investigate this? (McCurnin pg. 656 9th edition)

- 157. Electrolyte panel
- 158. Glucose level
- 159. Thyroid panel
- 160. Kidney levels

16. Which commercial blood collection tube would be used for a chemistry as it does not contain an anticoagulant? (McCurnin pg. 393 9th edition)

- 161. Lavender top tube
- 162. Green top tube
- 163. Blue top tube
- 164. Red top tube

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17. Which complete blood count (CBC) value would Dr. Peelman expect to see elevated if Ricky had an allergic reaction or intestinal parasites? (McCurnin pg. 383 9th edition)

- 165. Eosinophils
- 166. Platelets
- 167. Spherocytes
- 168. Monocytes

18. What is true about the “big three” of radiation safety? (McCurnin pg. 504 9th edition)

- 169. Shielding matters only with older patients.
- 170. Time means avoiding retakes, do it right the first time.
- 171. Distance means getting as close to the x-ray beam as is comfortable.
- 172. When shielding, use aprons made of a poly blend.

19. What is not associated with radiography settings? (McCurnin pg. 492 9th edition)

- 173. kVp
- 174. mAs
- 175. PACS
- 176. Thickness, cm

The veterinary nurse also collects a urine sample through cystocentesis for evaluation.

20. Which value would be elevated if Ricky developed diabetes mellitus? (McCurnin pg. 400 9th edition)

- 177. Ketones
- 178. Specific gravity
- 179. pH
- 180. Bilirubin

21. Which value indicates the kidneys are concentrating the urine properly? (McCurnin pg. 398 9th edition)

- 181. Ketones
- 182. Specific gravity
- 183. pH
- 184. Bilirubin

22. What information cannot be determined by the instrument pictured?

- 185. Grade of murmur
- 186. Respiratory rate
- 187. Heart rate
- 188. PCV

23. Which instrument can signal hyperthermia? (189-192)

- 189.
- 190. Thermometer
- 191.
- 192.

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Since Ricky's ears have been bothering him, the veterinary nurse swabs his ears and prepares a slide for microscopic examination.

24. What organism did she identify?

- 193. Yeast
- 194. Ear mite
- 195. Cocci
- 196. Rods

25. Which instrument is used to examine Ricky's tympanum? (197-200)

- 197.
- 198.
- 199.
- 200. Otoscope

If left untreated, Ricky's ear infection will worsen, he'll continue to shake his head, and multiple health issues may arise.

26. Which is not associated with an untreated ear infection? (McCurnin pg. 1282 9th edition)

- 201. Aural hematoma
- 202. Anterior uveitis
- 203. Otitis media
- 204. Ruptured tympanum

27. If Ricky continues to scratch his ears, Dr. Peelman may send this home to avoid injury. (205-208)

- 205. Elizabethan collar
- 206.
- 207.
- 208.

In addition to the scales and hair loss Ms. Carroll reported, Dr. Peelman identified pustules on Ricky's abdomen during her physical exam.

28. These clinical signs are consistent with which ailment below? (McCurnin pg. 224 9th edition)

- 209. Excoriations
- 210. Mange
- 211. Dermatophytosis
- 212. Bacterial skin infection

It's time to vaccinate Ricky! He goes to the groomer every 8 weeks, so Ms. Carroll wants to make sure he has everything he needs to stay healthy.

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29. Which organism does NOT contribute to canine infectious respiratory disease complex, more commonly known as “kennel cough”? (McCurnin pg. 254 9th edition)
- 213. Canine adenovirus type 2
 - 214. Canine parainfluenza virus
 - 215. **Leptospira**
 - 216. Bordetella bronchiseptica
30. Which virus is NOT considered a core canine vaccine by the American Animal Hospital Association? (McCurnin pg. 255 9th edition)
- 217. Rabies virus
 - 218. Canine parvovirus
 - 219. **Canine influenza virus**
 - 220. Canine distemper virus
31. Which vaccine is regulated across the United States to protect public health? (McCurnin pg. 253 9th edition)
- 221. **Rabies vaccine**
 - 222. Canine coronavirus vaccine
 - 223. Canine influenza vaccine
 - 224. Canine distemper vaccine
32. Most vaccines are given subcutaneously. Use the diagram provided to identify the subcutaneous layer of the skin. **(225-228)**
- 225.
 - 226.
 - 227.
 - 228.
33. Which needle is most appropriate for giving Ricky a subcutaneous injection?
- 229. 20 G x 1 1/2"
 - 230. **22 G x 3/4"**
 - 231. 14 G x 2"
 - 232. 25 G x 5/8"
34. Which syringe is most appropriate for a vaccine volume of 1 milliliter?
- 233. **3 ml syringe**
 - 234. TB syringe
 - 235. 5 ml syringe
 - 236. 6 ml syringe
35. What is the pictured equipment used for?
- 237. Urine collection
 - 238. Stool collection
 - 239. **Blood collection**
 - 240. Saliva collection

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The blood parasite screening Dr. Peelman recommended checks for heartworm disease and 3 tickborne diseases.

36. What disease causes lameness, swollen joints, fever, and possibly swollen lymph nodes?

(McCurnin pg. 116 9th edition)

- 241. Ehrlichiosis
- 242. Lyme disease
- 243. Anaplasmosis
- 244. Heartworm disease

While waiting for the blood parasite screening results you decide to use your free time to remove equipment from the autoclave.

37. What piece of equipment is used to determine that the autoclave successfully sterilized the equipment? (245-248)

- 245.
- 246.
- 247. Chemical indicator strip
- 248.

Ricky was kicked by a horse recently and has been limping occasionally. The veterinarian recommends a radiograph.

38. What piece of equipment is needed for the veterinary staff to be able to take the radiograph safely? (249-252)

- 249. Muzzle
- 250.
- 251.
- 252.

39. While completing the fecal float on Ricky, you identify this abnormal finding.

- 253. Genus *Trichuris*
- 254. Genus *Dipylidium*
- 255. Genus *Toxocara*
- 256. Genus *Taenia*

Ricky has several ticks and Dr. Peelman is concerned about his risk of Rocky Mountain Spotted Fever.

40. Identify the tick in the image.

- 257. American Dog
- 258. Black Legged Deer
- 259. Brown Dog
- 260. Lonestar

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HANDLING AND RESTRAINT PRACTICUMS 1 & 2

Because Ricky has been known to be a fear biter, demonstrate how to place a gauze muzzle.

Once Ricky is properly muzzled demonstrate how to restrain him for jugular venipuncture.

The veterinary nurse has performed the venipuncture and the rapid blood parasite screening is complete. The results are negative so Ricky can receive his heartworm prevention injection! Dr. Peelman tells you to be sure and remove Ricky's "band-aid" before he goes home.

41. Ricky's band aid consists of a cotton ball and what material? **(261-264)**

261.

262.

263.

264.

42. What instrument will you choose to remove Ricky's bandage before he goes home? **(265-268)**

265.

266.

267.

268.

Now Ms. Carroll is unsure if she wants a ProHeart® 12 (*moxidectin*) injection to prevent heartworms or to order Heartgard® Plus (*ivermectin/pyrantel*) from an online pharmacy to save money. Compare the **annual** cost of the two products.

Product	Months Covered	Cost
Heartgard® Plus (ivermectin/pyrantel)	6 months	\$58.59 plus \$12.00 shipping
ProHeart® 12 (moxidectin)	12 months	\$121.54 plus \$15.00 online rebate

43. What is the monthly cost of Heartgard® Plus (*ivermectin/pyrantel*)?

269. \$8.88

270. \$9.77

271. \$11.38

272. \$11.77

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44. Which product is the cheapest annual cost?

273. Heartgard® Plus (*ivermectin/pyrantel*)

274. ProHeart® 12 (*moxidectin*)

After weighing the benefits and drawbacks of both products, Ms. Carroll chooses to proceed with the ProHeart® 12 (*moxidectin*) injection. The dose of ProHeart® 12 (*moxidectin*) is 0.05 milliliter per kilogram.

45. How many milliliters of ProHeart® 12 (*moxidectin*) will Dr. Peelman administer to Ricky?

275. 0.85 ml

276. 0.05 ml

277. 0.38 ml

278. 0.60 ml

As Ms. Carroll has recently added a new puppy to her household, she asks Dr. Peelman by what age should she start giving her puppy heartworm preventative?

46. Dr. Peelman advises that puppies should begin heartworm preventative by the time they are:

279. 3 months old

280. 6 months old

281. 9 months old

282. 12 months old

47. Ms. Carroll brought Ricky's fecal sample as requested. If she had not brought the sample in, what piece of equipment would be required to obtain a fecal sample? **(283-286)**

283.

284.

285.

286.

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CLINICAL PROCEDURE PRACTICUMS 1 & 2

Dr. Peelman asks you to set up a fecal flotation with Ricky's sample.

While you wait for those results, she asks that you demonstrate to the owner how to treat Ricky's ears.

Dr. Peelman prescribed Ricky easOtic® (*hydrocortisone aceponate, miconazole nitrate, gentamicin sulfate*) for his ears. The medication has been on backorder and a new shipment came in today with a new cost. The new cost is \$18.63 for a case of 12 bottles. The office manager instructed you to calculate the new cost using a 24% markup per bottle and a \$8.00 prescription fee.

48. The new cost for a bottle of easOtic® (*hydrocortisone aceponate, miconazole nitrate, gentamicin sulfate*) is:

- 287. \$8.00 bottle
- 288. \$9.92 bottle
- 289. \$26.63 bottle
- 290. \$31.10 bottle

49. Identify the coccidia egg the veterinary nurse found on Ricky's fecal flotation. **(291-294)**

- 291.
- 292.
- 293.
- 294.

50. Identify the hookworm egg. **(295-298)**

- 295.
- 296.
- 297.
- 298.

1B. Ms. Carroll has misplaced Ricky's information for his microchip. What piece of equipment could you use to check his microchip number? **(299-302)**

- 299.
- 300.
- 301.
- 302.

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2B. Ms. Carroll is concerned that sometimes Ricky runs into things when it is dark in the house. Which piece of equipment is needed to check Ricky's eyes? (303-306)

303.

304.

305.

306.

Dr. Peelman has read the patient history, finished her exam, interpreted the results of diagnostic tests, and formed a treatment plan.

3B. Since the kidney is the major organ for _____ and the liver is the primary site of _____, she's glad that Ricky's blood chemistry was all within normal limits. (McCurnin pg. 957 9th edition)

307. drug elimination, drug metabolism

308. drug catabolism, drug elimination

309. drug metabolism, drug elimination

310. drug elimination, drug maturation

Dr. Peelman has decided to address Ricky's pruritis with a Cytopoint® (*lokivetmab*) injection. The dose for Cytopoint® (*lokivetmab*) is 0.9 milligrams per pound of body weight.

4B. Determine the appropriate vial size that should be used for Ricky's injection?

311. 10 mg

312. 20 mg

313. 30 mg

314. 40 mg

Dr. Peelman will also be sending home a prescription of SIMPLICEF® (*cefpodoxime proxetil*) for a secondary skin infection because of the allergic dermatitis. The dose for SIMPLICEF® (*cefpodoxime proxetil*) is 5 milligrams per kilogram once per day.

5B. How many milligrams of SIMPLICEF® (*cefpodoxime proxetil*) will be given to Ricky in each dose?

315. 7.5 mg

316. 38.6 mg

317. 85 mg

318. 187 mg

6B. How many 100 mg tablets will you send home with Ricky for a two-week (14 days) therapy?

319. 28 tablets

320. 14 tablets

321. 7 tablets

322. 4 tablets

Dr. Peelman prescribes ALBON® (*sulfadimethoxine*) liquid PO SID to treat the coccidia found on Ricky's fecal screening. The manufacturer recommends giving the first dose at 25 mg/lb and then 12.5 mg/lb for 5 days.

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7B. Use the drug label provided to determine how many milliliters of ALBON® (*sulfadimethoxine*) will be required for Ricky's first dose (loading dose)?

- 323. 3.86 ml
- 324. 4.25 ml
- 325. 8.50 ml
- 326. 425 ml

8B. If you are sending home a loading dose and 5 maintenance doses for Ricky, what is the total volume of ALBON® (*sulfadimethoxine*) that you will be sending home?

- 327. 45 ml
- 328. 30 ml
- 329. 25 ml
- 330. 20 ml

As Dr. Peelman wraps up Ricky's appointment, Ms. Carroll asks if someone could trim Ricky's nails. You aren't sure this appointment will ever end but smile as you collect Ricky and trim his nails.

9B. What should you have on hand while trimming? (331-334)

- 331.
- 332.
- 333.
- 334.

Ms. Carroll asks you when she should bring Ricky back in, pending any health problems.

10B. The American Animal Hospital Association (AAHA) and the American Veterinary Medical Association (AVMA) recommend canine wellness exams to occur at least once every: (McCurnin pg. 243 9th edition)

- 335. 3 months
- 336. 6 months
- 337. 1 year
- 338. 3 years

You remind Ms. Carroll to call if Ricky needs anything and to have a great afternoon! Ricky gives you a growl and follows his owner out the door.