

## 2023 AIMVT Cardiology Advanced Skills Reference List

This is **NOT** the list you will submit with your application. Use this only as a reference.

The submission form can be found here: [Cardiology skills list](#)

1. Characterize cardiac murmurs in five patients of two different species. Include grade (1-6), location (right or left hemithorax; apex; or base), and timing (systolic, diastolic, or continuous).	2. Identify two patients with a gallop sound, split sound, or mid-systolic click.
3. Identify normal respiratory rhythm variations on auscultation.	4. Identify abnormal rhythms on auscultation.
5. Identify ectopic beats on auscultation / palpation of pulse deficits.	6. Identify paroxysmal tachycardia on auscultation.
7. Utilize a central venous pressure manometer.	8. Utilize a Doppler non-invasive blood pressure device.
9. Utilize a nasal oxygen delivery system.	10. Utilize a pulse oximeter.
11. Calculate and administer a prescribed continuous rate infusion.	12. Collect arterial blood samples.
13. Place an indwelling central venous line or catheter introducer using a modified Seldinger technique.	14. Produce diagnostic quality thoracic radiographs in the cat.
15. Produce diagnostic quality thoracic radiographs in the dog.	16. Calculate a Vertebral Heart Score / Sum on a lateral thoracic radiograph.
17. Identify pericardial effusion on a ventrodorsal (VD) radiograph.	18. Identify pleural effusion on a VD radiograph.
19. Identify pulmonary edema on a VD radiograph.	20. Identify pulmonary artery enlargement on a VD radiograph.
21. Identify right ventricular enlargement on a VD radiograph.	22. Identify a pacemaker lead wire on a VD radiograph.
23. Identify pleural effusion on a lateral thoracic radiograph.	24. Identify pericardial effusion on a lateral thoracic radiograph.
25. Identify pulmonary edema on a lateral thoracic radiograph.	26. Identify left atrial enlargement on a lateral thoracic radiograph.
27. Identify left ventricular enlargement on a lateral thoracic radiograph.	28. Identify bronchi on a lateral thoracic radiograph.
29. Identify pulmonary arteries on a lateral thoracic radiograph.	30. Identify pulmonary veins on a lateral thoracic radiograph.
31. Identify the caudal vena cava on a lateral thoracic radiograph.	32. Identify the aorta on a lateral thoracic radiograph.
33. Acquire and print a 10 lead ECG including 6 lead frontal + 4 chest.	34. Acquire and print a 50mm/sec strip for measurement.
35. Acquire and print a rhythm strip.	36. Record a base-apex lead ECG in a large animal species.
37. Demonstrate the application of Holter or event monitors.	38. Calculate the Mean Electrical Axis (MEA) of one normal and three abnormal ECG's. At least one ECG should be of a cat.
39. Calculate the P-R interval of one normal and two abnormal ECG's.	40. Calculate the Q-T interval of one normal and two abnormal ECG's.
41. Calculate the P wave amplitude and duration of one normal and two abnormal ECG's.	42. Calculate the QRS complex duration of one normal and two abnormal ECG's.
43. Calculate the R wave amplitude of one normal and two abnormal ECG's.	44. Calculate the T wave amplitude of one normal and two abnormal ECG's.
45. Identify ECG artifacts due to motion (i.e., respiration, shiver, or limb movement).	46. Identify ECG artifacts due to poor electrode contact.
47. Identify ECG artifacts due to alternating current interference.	48. Identify supraventricular tachycardia on an ECG.
49. Identify atrial fibrillation on an ECG.	50. Identify sinus arrest on an ECG.
51. Identify sinus arrhythmia on an ECG.	52. Identify atrial premature complexes on an ECG.
53. Identify 1st degree atrioventricular (AV) block on an ECG.	54. Identify 2nd degree AV block on an ECG.
55. Identify 3rd degree or complete AV block on an ECG.	56. Identify a right bundle branch block on an ECG.
57. Identify a left bundle branch block on an ECG.	58. Identify a left anterior fascicular block on an ECG.
59. Identify ventricular premature complexes on an ECG.	60. Identify ventricular escape complexes on an ECG.

61. Identify ventricular tachycardia on an ECG.	62. Identify ventricular fibrillation on an ECG.
63. Identify right ventricular enlargement on an ECG.	64. Identify left ventricular enlargement on an ECG.
65. Identify pulmonary artery dilation in the short axis basilar view on echocardiogram.	66. Identify pericardial effusion on echocardiogram.
67. Identify pleural effusion on echocardiogram.	68. Identify valvular regurgitation/insufficiency on color flow (CF) Doppler on echocardiogram.
69. Identify aliasing on pulsed wave Doppler on echocardiogram.	70. Identify aliasing on CF Doppler on echocardiogram.
71. Identify spontaneous echo contrast on echocardiogram.	72. Identify <i>Dirofilaria immitis</i> (heartworms) on echocardiogram.
73. Identify mitral valve thickening and prolapse on echocardiogram.	74. Identify cardiac masses on echocardiogram (e.g. hemangiosarcoma, chemodectoma).
75. Identify systolic dysfunction or ventricular hypokinesis on echocardiogram.	76. Identify ventricular hypertrophy on echocardiogram.
77. Identify left atrial enlargement on echocardiogram.	78. Identify subvalvular aortic stenosis on echocardiogram.
79. Identify pulmonic valve stenosis on echocardiogram.	80. Identify patent ductus arteriosus on echocardiogram.
81. Identify ventricular septal defects on echocardiogram.	82. Identify right sided pressure overload on echocardiogram.
83. Record the right parasternal four chamber long axis view on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.	84. Record the right parasternal long axis five chamber or left ventricular outflow view on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.
85. Record the right parasternal short axis view at the chordae tendineae level on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.	86. Record the right parasternal short axis mitral valve view on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.
87. Record the right parasternal short axis view of the aorta/left atrium on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.	88. Record the right parasternal short axis view of the pulmonary artery on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.
89. Record M-Mode of the left ventricle from either a long or short axis view on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.	90. Record M-Mode of the mitral valve from either a long or short axis view on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.
91. Record M-Mode of the aorta and left atrium from either a long or short axis view on echocardiography in a dog and identify the chambers and/or major vessels visible in the view.	92. Measure M-Mode of left ventricle fractional shortening (shortening fraction).
93. Measure M-Mode of the aorta and left atrium ratio.	94. Measure M-Mode of the mitral valve E-point to septal separation (EPSS).
95. Measure spectral Doppler velocity profiles.	96. Set up and calibrate physiologic transducers to measure direct intracardiac and intravascular pressures.
97. Identify a pigtail catheter and describe its use in interventional cardiac catheterization.	98. Identify a multipurpose catheter and describe its use in interventional cardiac catheterization.
99. Identify a Judkins style (both right and left) catheter and describe its use in interventional cardiac catheterization.	100. Identify balloon valvuloplasty equipment and describe this interventional technique.
101. Identify vascular introducers and describe their use in interventional cardiac catheterization.	102. Identify a MPA catheter and describe its use in interventional cardiac catheterization.
103. Identify a Berman catheter and describe its use in interventional cardiac catheterization.	104. Identify heartworm retrieval systems and describe their use in interventional cardiac catheterization.
105. Identify normal cardiac structure on angiography.	106. Identify a patent ductus arteriosus on angiography.
107. Identify pulmonic stenosis on angiography.	108. Interrogate a pacemaker to determine battery life.

The following pull lists are **MANDATORY**:

- 109. Abdominocentesis pull list
- 110. Thoracocentesis pull list
- 111. Pericardiocentesis pull list
- 112. Balloon valvuloplasty pull list
- 113. Micro-bubble air contrast echocardiogram pull list

- 114. Transvenous temporary pacing pull list
- 115. Transvenous permanent pacing pull list
- 116. PDA embolization pull list (with coils and/or Amplatz devices)