

PATIENT

Scooby Clinton

SPECIES

Canine

BREED

Boxer Mix

SEX

Neutered male

AGE

13 years

WEIGHT

82.4 lbs

INTERPRETED BY

Bradley Harris, DVM,
 DACVECC, DACVIM
 (cardiology)

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Shallowford AH

REFERRING VET

Dr. Eads

INVOICE

68908

DATE

11/20/25

PRESENTING CLINICAL SIGNS

History: P presented 11/17/25 for ADR and possible seizure, vomiting, abd tight rad report- cardio structures normal size and shape, reduced serosal definition abdomen, wispy appearance ventrally, size of spleen normal however there is an irregular margination with undulating borders to the spleen, The liver is mild to mod enlarged Drained a large amount of fluid- P weighed 77.6# post abdominocentesis P treated with steroids, B12, Cerenia, and fluids P presented 11/20/25 for US- rDVM requests DOUBLE Cavity with Comprehensive echo TP 4.4, Alb 2.5, ALKP 294, SDMA 16.1, WBC 15.6, Neu 11,388, Monocytes 1,092 T4 0.6 Urinalysis usg 1.009, Protein 2+, Cocci and Rods

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The left atrium is normal in dimension. The left ventricle is normal in dimension with normal systolic function. The right atrium and ventricle are severely dilated with reduced systolic function. The mitral valve is thickened and redundant consistent with myxomatous changes, and there is no significant prolapse. There is evidence of mild mitral regurgitation. The tricuspid valve leaflets are thickened and redundant with severe tricuspid regurgitation and evidence of severe pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, with a dilated main pulmonary artery and reduced distensibility. There is no evidence of semilunar valve insufficiency. There is no visible pericardial or pleural, but free peritoneal fluid is noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

CANINE CARDIAC PARAMETERS	Body Weight (kg)	HR BPM	LAD 4ch Long	RAD 4ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	37.45 kg	150	3.67	4.89	1.28	2.78	1.17
CANINE CARDIAC PARAMETERS	FS	EPSS	PV V MAX (m/s)	AV V Max (m/sec)	MR Vmax	TR Vmax	RPA distensibility (normal >30%)
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	58	0.4	0.7	1.4	4.0	4.5	13

ECG:

The underlying rhythm is sinus in origin with a varying R-R interval and average heart rate of 150 bpm. The majority of the QRS complexes are supraventricular in origin with consistent P-Q intervals (80 ms). There is a single QRS complex with a prolonged duration (>70ms), suggesting a ventricular origin. There is no evidence of atrioventricular block or atrial ectopy identified. This is most consistent with an underlying sinus rhythm with rare ventricular ectopy.



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ULTRASONOGRAPHIC FINDINGS

These findings identify significant pulmonary hypertension in conjunction with degenerative mitral disease. The lack of chamber enlargement is consistent with ACVIM stage B1, making cor pulmonale secondary to primary pulmonary disease/PH the likely cause for morbidity. Pulmonary hypertension in dogs is most commonly secondary to primary respiratory disease (chronic bronchitis, pulmonary fibrosis, or other forms of pulmonary interstitial disease). Pulmonary hypertension can also develop in dogs with severe heartworm disease or secondary to pulmonary thromboembolism (PTE). Less commonly, pulmonary hypertension is identified in dogs as an idiopathic condition. The degree of PH has resulted in right sided cardiac enlargement (cor pulmonale), and subsequent congestive heart failure. The clinical signs are likely attributable to this condition. The ventricular ectopy is likely due to the cor pulmonale.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Therapy for CHF is recommended, and should include Lasix (1-2 mg/kg BID), enalapril (0.5 mg/kg BID), and Vetmedin (0.25-0.35 mg/kg BID), and sildenafil (2 mg/kg BID), and spironolactone (1-2 mg/kg BID). Evaluation for primary pulmonary disease with thoracic radiographs, a heartworm test, and bronchoscopy are indicated. The merits of an airway scope/wash should be discussed with the owner, especially prior to any steroid use. A repeat echo is indicated in 3-6 months. Given the frequency of the ventricular ectopy, no anti-arrhythmic therapy will be recommended at this time.

Anesthesia considerations:

Anesthesia should be avoided if possible. If anesthesia is necessary, then alpha-2 agonists, ketamine, and Telazol should be avoided. If an ACE inhibitor (enalapril, benazepril) or spironolactone is being given, it should not be administered on the morning of general anesthesia. Other cardiac medications should be administered per the normal dosing schedule. Fluid therapy during anesthesia should be considered at a reduced rate (5 ml/kg/hour) if possible (i.e., if not hypotensive). A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is mandatory. Premedication with an opioid (e.g., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:

A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition with mild dietary sodium restriction (< 100 mg/100 kcal) is recommended. Consider omega-3 fatty acid supplementation. Ensure the patient is not currently receiving a boutique, exotic, or grain-free diet.

Activity:

Moderate physical activity (meandering walks, exploring the backyard, playing with toys inside, getting excited when family gets home, etc.) is encouraged, but periods of strenuous aerobic activity (jogging, strenuous outdoor ball play, prolonged play at the dog park, etc.) should be avoided, especially during periods of high heat (> 80 F) and humidity. Dogs with heart disease tend to tolerate cool and cold temperatures much better than high temperatures. Avoid sudden increases in activity (e.g. 2 block walks during the week but 2 mile walks followed by 30 minutes at the dog park on the weekends) as this may be difficult for the cardiovascular system to deal with.



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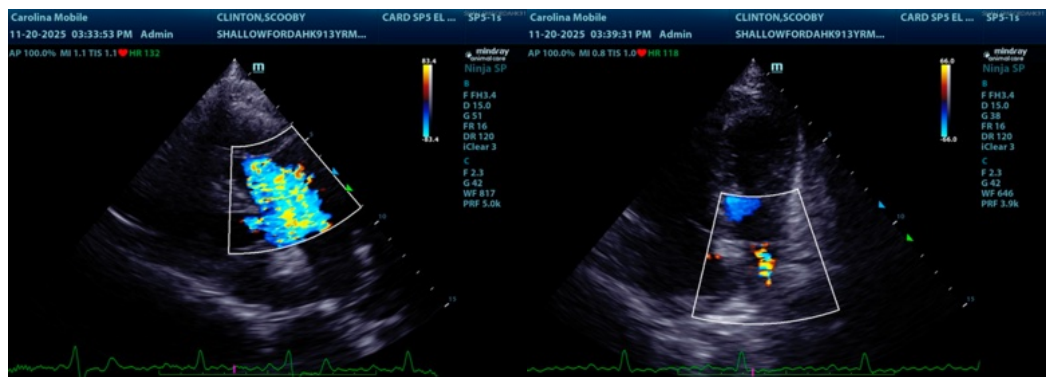
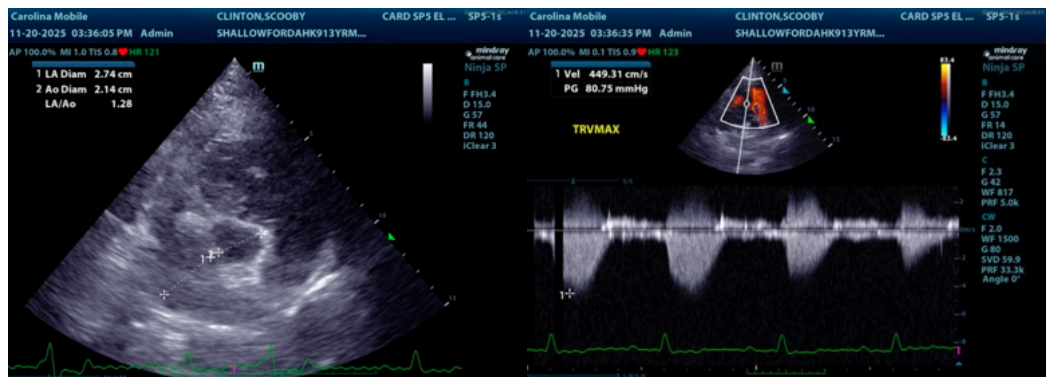
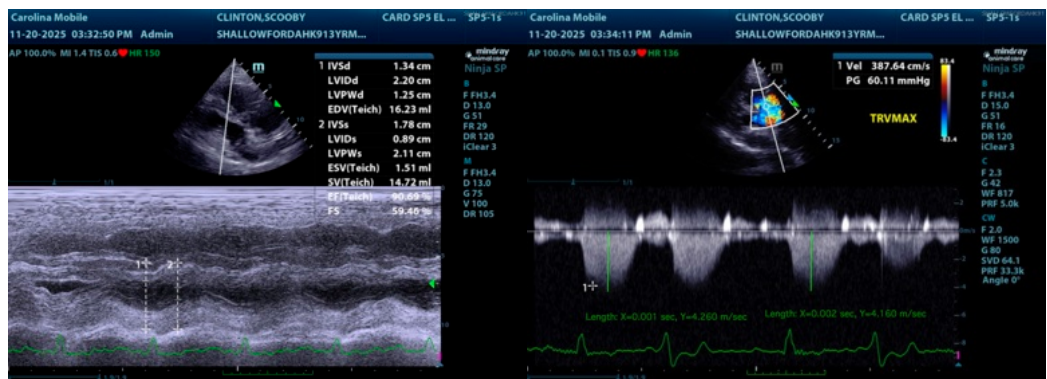
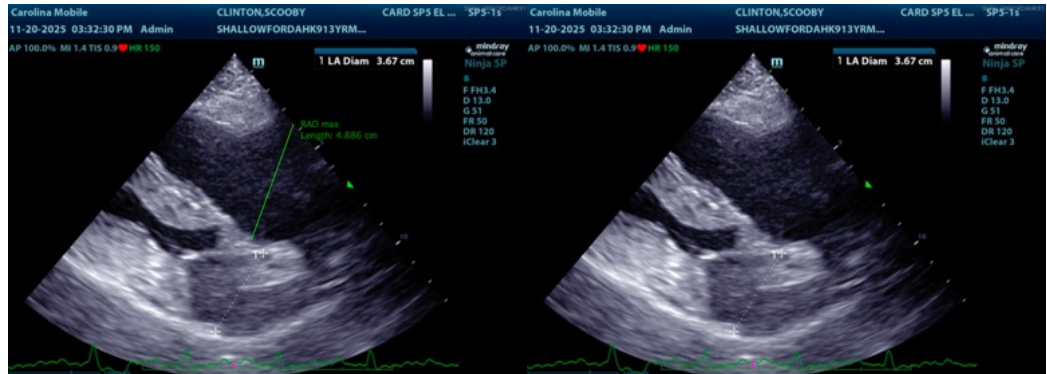
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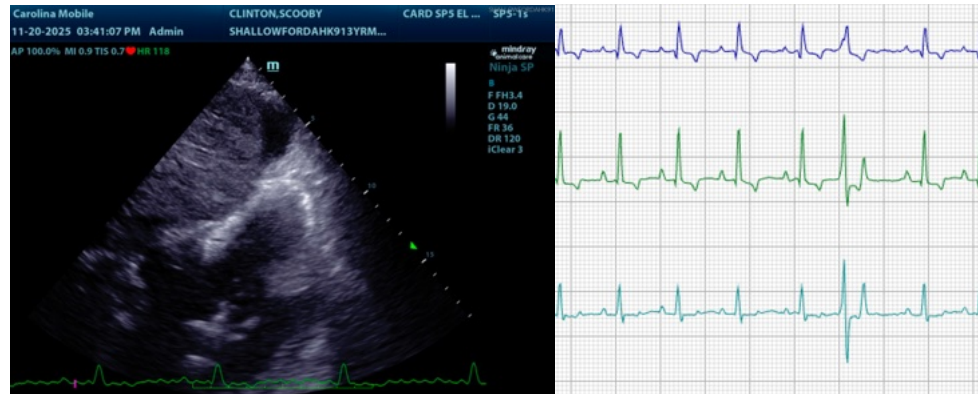
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

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