



**PATIENT**

Kayla Rose

**SPECIES**

Canine

**BREED**

Labrador Retriever

**SEX**

Female Spayed

**AGE**

15 years

**WEIGHT**

59lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Norfolk County  
Veterinary Service

**REFERRING VET**

Dr. Poor

**INVOICE**

23838

**DATE**

4/22/22

**PRESENTING CLINICAL SIGNS**

History: Acute onset coughing. Grade III-IV/VI systolic murmur noted. BP 175, 180mmHg - started Enalapril 5mg BID and hydrocodone. Radiographs showed a prominent ascending aorta.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and Doppler imaging is available.

**Left ventricle:** The LV diameter is normal with adequate myocardial function. LV wall thicknesses are minimally increased.

**Left atrium:** The left atrium is mildly dilated.

**Mitral valve:** The mitral valve is diffusely thickened with minimal prolapse into the left atrial lumen. Moderate mitral regurgitation. Normal velocity.

**Aortic valve/aorta:** The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency. The ascending segment appears dilated.

**Right ventricle:** Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

**Right atrium:** Normal RA dimension.

**Tricuspid valve:** The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Normal velocity.

**Pulmonic valve/pulmonary artery:** The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

**Pericardium/other:** No pericardial or pleural effusion noted. No obvious cardiac masses.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 90bpm.

**2-Dimensional Measurements**

Ao diam (cm)	2.8
LA diam (cm)	4.0
LA:Ao (Swe)	1.4
IVS thickness (cm)	1.1
LVID diastole (cm)	4.3
PW thickness (cm)	1.1
LVID systole (cm)	2.7
FS (%)	38

**Doppler Measurements**

PV Vmax (m/s)	0.71
AoV Vmax (m/s)	1.5
MR Vmax (m/s)	4.7
TR Vmax (m/s)	2.4
TR PG (mmHg)	24

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation is identified. Lack of significant left or right atrial enlargement indicates the current risk for complication is low. Additionally, minimal LV hypertrophy is identified with a dilated ascending aorta, which warrants further evaluation as below. No additional issues are noted in this study.

Systemic hypertension is mentioned in the history which is likely the cause of early LV changes and a dilated aorta. Baseline lab work is recommended in addition to full systemic screening for causes of systemic hypertension. Given these findings, reassessing the BP is advised once Enalapril is on board, as Amlodipine tends to be a more potent vasodilator if needed. Screening for PLN, proteinuria, etc. is recommended.



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No cardiac medications are indicated. The cough is noncardiac in origin and primary respiratory disease is considered more likely in this predisposed breed. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1).

**RECOMMENDATIONS**

- Reassess BP in 1-2 weeks if persistently elevated, consider Amlodipine or additional vasodilators if indicated.
- Screen for underlying causes for SHT, including proteinuria.
- Baseline lab work is recommended.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

**PLAN**

- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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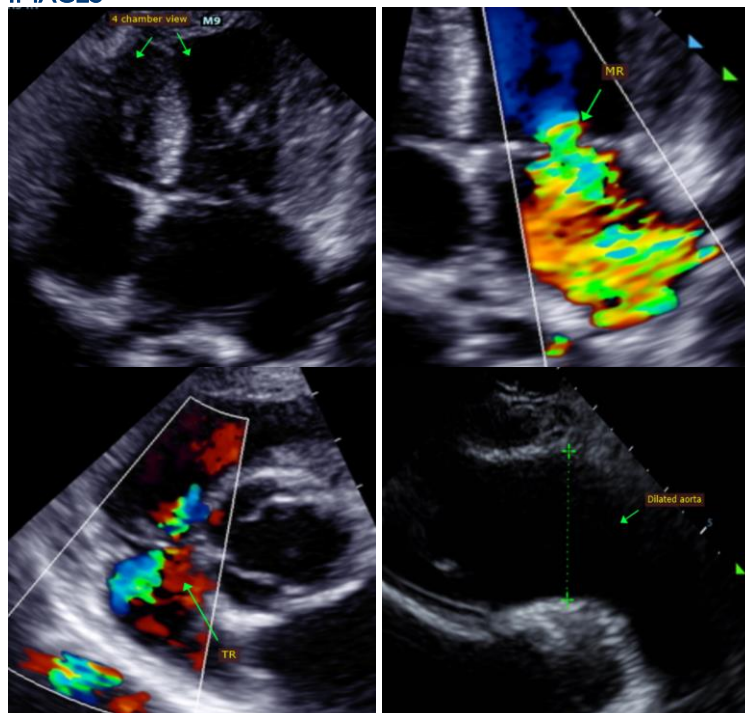
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**IMAGES**





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

**SPECIES**

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Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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Labrador Retriever

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