PATIENT

Blake Wolfson

SPECIES

Canine

BREED

Mix

SEX

Male Neutered

AGE

16.6 years

WEIGHT

14.4lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Kerri Becker

HOSPITAL NAME

Marsh Animal Hospital

REFERRING VET

Dr. Armani

INVOICE

46083

DATE

12/8/25

PRESENTING CLINICAL SIGNS

History: Recheck echo. Heart murmur. Cough. Falling over episodes; syncope versus seizure.
-Current medications: Vetmedin, Gabapentin, Librela.
-Pertinent previous echo findings (7/2025 MML): CVD B1. Moderate MR, mild LAE, no LVE, mild TR. LA: 2.3, LV: 3.0. No medications recommended at that time.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with mild to moderate left atrial dilation. Normal MR velocity. Mild LV dilation with hyperdynamic myocardial function. The tricuspid valve appears thickened with mild tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	6.0	2.7	1.4	1.6	47	79	0.07
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LA** 2D short axis Base view (cm)	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	1.2	0.8	6.6	2.5	3.5	1.6
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
**Note: All measurements based upon multi-modal images and methods. An average value is reported.*				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with evidence of progression. Mild disease is now moderate, with increasing MR quantity and increasing left heart dimensions. The tricuspid leak is stable, without obvious additional issues such as pulmonary hypertension. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication; however, risk for progression to spontaneous congestive heart failure in the future is now elevated.

While mainstem bronchi compression may certainly be contributing to an increase in coughing, other primary airway contributions should also be considered (tracheal collapse, COPD/chronic

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bronchitis, etc.). Consider hydrocodone for any mechanical component due to cardiomegaly. If the cough is poorly controlled and/or progresses long term, pulmonary hypertension (PAH) can develop secondarily. Signs of clinically relevant PAH include exertional dyspnea or exertional syncope. It is important to note that PAH does not cause the cough; rather, the cough leads to PAH.

Syncope is also likely multifactorial. If always cough related, vasovagal events are suspected. Further workup may be necessary, such as an ECG/holter monitor, etc.

Given these findings, continued Pimobendan is recommended. as below. Additionally, a baseline BP is recommended. Continued assessment of progression is recommended, with a guarded prognosis once in stage B2. Fifty percent of stage B2 patients typically develop CHF within 2-2.5 years of diagnosis. The median time to development of CHF in B2 cases treated with pimobendan is 3.5 years.
Patient may be at risk for development of CHF, arrhythmias, and/or sudden death going forward.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

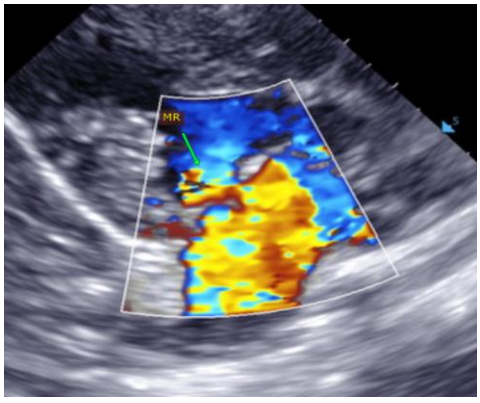
Anesthetic risk remains mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

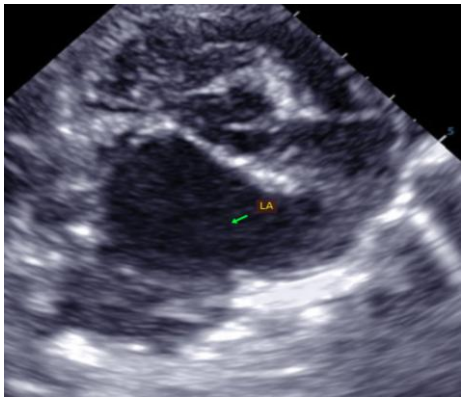
PLAN

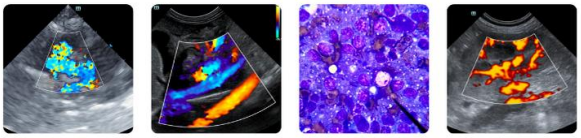
Baseline BP recommended. Continue Pimobendan 0.25-0.3mg/kg PO q12h. Consider further workup for cough/syncope as discussed.

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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.

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.

Maggie Machen Lamy, DVM
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