



PATIENT

JJ Byers

SPECIES

Canine

BREED

Maltese

SEX

Male Neutered

AGE

7.5 years

WEIGHT

5.4lbs

INTERPRETED BY

Maggie Machen Lamy,
 DVM DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Crystall Hill, RVT

HOSPITAL NAME

Hillview VC

REFERRING VET

Dr. Stevenson

INVOICE

47398

DATE

4/1/26

PRESENTING CLINICAL SIGNS

History: Recheck echo. Progressive cough since last week. Inappetence. Grade 3/6 heart murmur. On Doxycycline and Aventi Omega 3 supplement. Cough improved temporarily. CXR showed VHS 11.63 and VLAS 3.39, trachea normal, normal lungs, mild congestion near base of heart, 2 stones in bladder. Assess prior to anesthesia.

-Pertinent previous echo findings (10/2025 MML): CVD B1. Cough noted at that time. Moderate MR, mild LAE. LA: 1.5, LV: 2.1.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mild LV dilation with hyperdynamic myocardial function. The tricuspid valve appears normal with trace tricuspid regurgitation. Velocity consistent with early pulmonary hypertension. Normal right atrial and ventricular diameter and morphology. 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	4.7	2.9	NM	1.8	52	90	NM
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	200	1.1	1.1	2.4	1.8	2.5	1.2
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with evidence of progression. Moderate MR is similar to previous; however, the LA and LV dimensions are now dilated. A small tricuspid leak is now present as well with evidence of early pulmonary hypertension. Moderate left atrial enlargement



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indicates there is relatively low risk for imminent complication; however, risk for progression to spontaneous congestive heart failure in the future is now elevated. No additional issues are seen.

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 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.

Based upon these findings and the results of the EPIC trial, recommend institution of Pimobendan 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.

Once on the medication for 3-5 days, 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 every 6 months. Institute Pimobendan 0.25-0.3mg/kg PO q12h. Consider hydrocodone and/or further cough evaluation as indicated.

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

IMAGES



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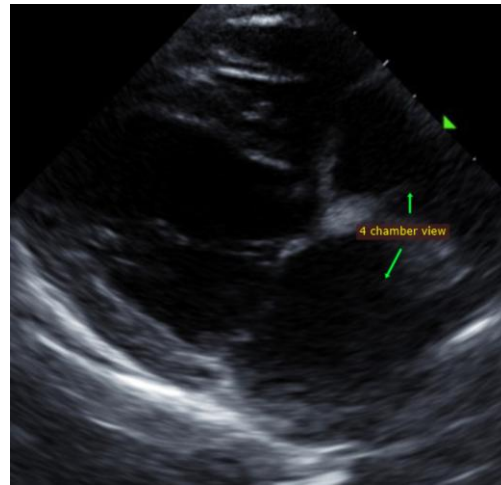
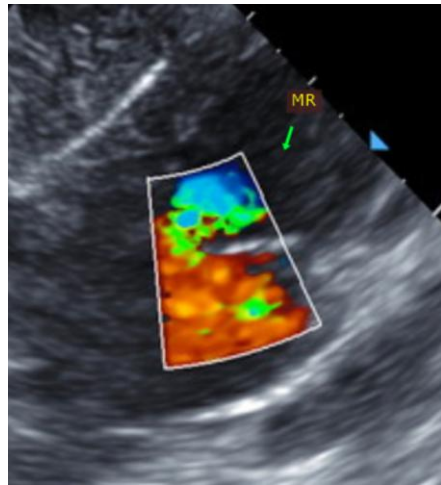
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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