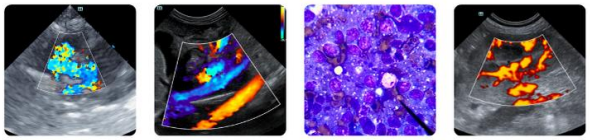

PATIENT

Ricky Wade

SPECIES

Canine

BREED

Chihuahua

SEX

Male Neutered

AGE

12.4 years

WEIGHT

8.3lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Greg Kuhlman, DVM

HOSPITAL NAME

Red River Animal Emergency Hospital & Referral Center

REFERRING VET

Dr. Kuhlman

INVOICE

47106

DATE

3/5/26

PRESENTING CLINICAL SIGNS

History: Recheck echo. Presented 2/6/24 for an echocardiogram with our specialist and was diagnosed with stage B2 myxomatous mitral valve disease characterized by severe mitral regurgitation and moderate left ventricular (LV) and left atrial (LA) enlargement, with mild tricuspid regurgitation and no other right-sided abnormalities noted. He was started on pimobendan 1.25mg BID at that time. Returned 8/12/25 for a recheck echocardiogram, which showed progression of stage B2 myxomatous mitral valve disease with mild progression of LV and LA enlargement, though there was no evidence of CHF based on echo and CXR. Was continued on Pimobendan 1.25mg BID, and Spironolactone 6.25mg BID was initiated. On 9/10/25, butorphanol suspension 1.5mg BID was started for coughing, and Hydrochlorothiazide 6.25mg BID was added.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with severe left atrial dilation. LV dilation with hyperdynamic myocardial function. The tricuspid valve is not adequately assessed. Right heart is mildly dilated. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac tumors observed.

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	NM	NM	NM	2.2	52	80	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	NM	0.8	0.7	3.8	2.1	3.0	1.5
*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 RECOMMENDATION

Chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Significant left atrial and ventricular enlargement indicate the risk for spontaneous congestive

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heart failure is elevated. Mild pulmonary hypertension is suspected, which is likely secondary to a reported cough and elevated LA pressure. No obvious additional issues are noted. Compared to what is available from the prior report, findings appear relatively similar overall.
Given these findings, continuing Pimobendan and Spironolactone is recommended going forward. Hydrochlorothiazide is potent diuretic that is not indicated prior to CHF. An ACE-I would, however, be reasonable. In addition, cough suppression as needed for QOL. **Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.**

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a worsening cough, labored breathing, exercise intolerance or collapse episodes. Long term prognosis is guarded to poor with stage (late) B2 disease, with risk for CHF in the near future. Once diagnosed, the average survival time for canine patients is 8-9 months on medications; however, most are able to maintain a good quality of life for that period. Patient will always be at risk for progression to CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

Elective anesthesia is not advised, as there is high risk for complication.

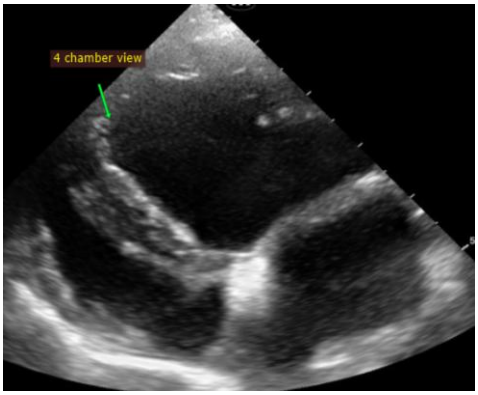
PLAN

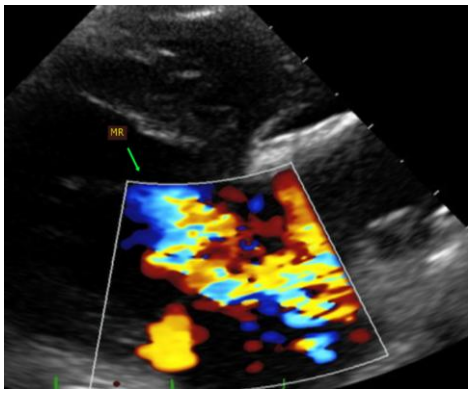
Continue Pimobendan 0.3mg/kg PO q12h. Continue Spironolactone 1-2mg/kg PO q12h. Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. No indication for HCTZ prior to CHF. CXR should be obtained in any coughing patient. Consider Hydrocodone with homatropine for QOL (0.2-0.4mg/kg PO up to q4-6 hours PRN for cough; available in 5/1.5mg tabs and 5mg/5ml liquid suspension).

A renal panel and BP every 3-4 months lifelong to ensure tolerance of medications.

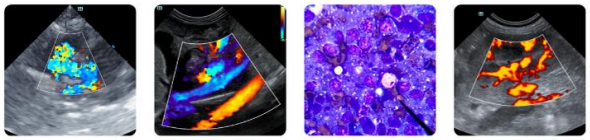
A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise in the interim.

IMAGES





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



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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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com