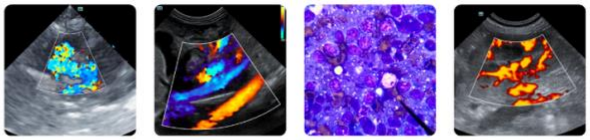


PATIENT

Bentley Haller

SPECIES

Canine

BREED

Maltese

SEX

Neutered Male

AGE

8 Years 10 Months

WEIGHT

8.7 Pounds

INTERPRETED BY

James Wood, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Dr. Carey Zumpano

HOSPITAL NAME

Pikesville AH

REFERRING VET

Dr. Carey Zumpano

INVOICE

37363

DATE

6/5/26

PRESENTING CLINICAL SIGNS

History: Heart murmur noted and echo performed on 12/29/25, diagnosed with late stage 2 mitral valve disease. Patient on 1 mg pimobendan q 12 hr, 1.25 mg enalapril q 12 hr, and spironolactone 6.25 mg q 12 hr. Patient also on telmisartan for historical PLN. Patient increased to 1.5 mg pimobendan q 12 hr on 4/7/26 due to increased coughing. Spironolactone discontinued on 5/13/26 due to persistent azotemia. Patient has been stable clinically since 4/7/26 dose adjustment. Echo performed to assess progression.

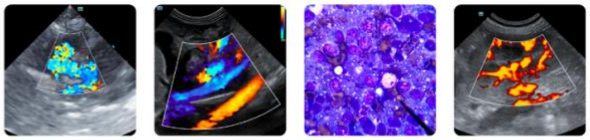
Abnormal PE/Chem/CBC/UA Results: 5/13/26 Creat 1.3, BUN 129, urine sg 1022 4/25/26 Creat 3.1, BUN >130, phos 9.8; presumed uti, treated with antibiotics Repeat bloodwork pending BP 100 mmHg systolic

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	LA long axis	LAmaxN	Ao long axis	LA/AO (Heart Base; Swe, short axis)	LA/AO long axis	LVIDd	LVIDdN
NORMAL PARAMETER		<1.57		<1.6	<2.5		<1.7
PATIENT	3.86	2.53	0.83	2.36	4.65	3.2	2.07
CARDIAC PARAMETERS	**Body Weight (kg)**	**AV VMAX (m/s)**	**PV MAX (m/s)**	**MR VMAX (m/s)**	**TR VMAX (m/s)**	**FS (%)**	**LVIDsN**
NORMAL PARAMETER		0.7-1.7	0.7-1.6			22 - 49%	<0.9
PATIENT	3.95	1.16	0.79	5.18	3.08	53.8	0.86
CARDIAC PARAMETERS	**HR (bpm)**	**MV E (m/s)**	**MV A (m/s)**	**MV E/A (m/s)**	**EF (%)**	**IVSdN**	**LVFWdN**
NORMAL PARAMETER						<0.6	<0.6
PATIENT	180	1.5	0.83	1.81	--	0.4	0.41

Radiographic Interpretation

Three view thoracic radiographs are reviewed from both December 29th, 2025, as well as June 5th, 2026. In both sets, there is evidence of moderate to severe left-sided cardiomegaly with left atrial



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enlargement and evidence of LV enlargement pattern. The left atrial enlargement appears static to mildly progressive on the radiographs dated June 5th. On both, the visible pulmonary vasculature appears within normal limits, and the pulmonary parenchyma is normal with no evidence of cardiogenic pulmonary edema.

Cardiac Presentation

The mitral valve leaflets are moderately thickened with severe central mitral valve insufficiency. There is a suspected flail segment of the anterior mitral valve leaflet. The left atrium is severely dilated. The left ventricle is severely dilated. Normal global left ventricular systolic function. There is normal right atrial size with mild tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets. The tricuspid valve insufficiency velocity suggests mild pulmonary hypertension. Clinically meaningful pulmonary hypertension is not suspected. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonary valves have normal appearance and motion, and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonary or aortic valve insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS

- MMBD-ACVIM stage B2 (severe LA and severe LV enlargement)
- Mild pulmonary hypertension (TRPG 38mmHg)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The echocardiogram showed evidence of myxomatous mitral valve disease. Based on this echocardiogram, there is severe left atrial and left ventricular enlargement. The patient would benefit from starting pimobendan (if not already started – target dose at least 0.3mg/kg q12 at this stage) to slow the progression of this disease and delay the onset of CHF.

Though the evidence for RAAS blockade prior to CHF is limited, this patient is likely to benefit based on the severe remodeling. Given that the patient is on an angiotensin receptor blocker, the concurrent use of an ACE inhibitor is not advised given the risk for azotemia and the fact that there is already a benefit of angiotensin 2 blockade with telmisartan. A blood pressure is also recommended. If the systolic BP >160mmHg after ACEi therapy, amlodipine should be considered. Elevated BP worsens the mitral regurgitant fraction and leads to faster progression. Given the lack of clinical or radiographic evidence for congestive heart failure at this time, no further medications are needed. Recheck in 4-6 months for thoracic radiographs, blood pressure, renal panel with electrolytes, or sooner if concerns arise.

Monitoring

It is very important to catch any clinical signs concerning for emerging CHF as early as possible. The client should be closely monitoring and ideally tracking the sleeping respiratory rate. The sleeping RR should be between 10-30 breaths per minute or less (ideally in the teens or low 20s). **If the resting RR is trending upward**, consistently>35/min while resting/sleeping AND/OR there is a new or

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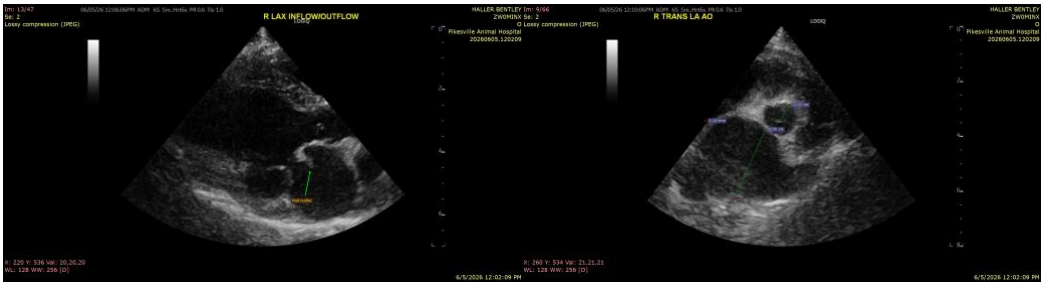
progressive cough, the patient should be seen urgent for evaluation to determine if CHF is developing. *RECHECK ASAP for thoracic radiographs if there is a new cough or increase in RR to detect early CHF and avoid ER presentation**

Sodium Restriction

Moderate sodium restriction may be beneficial in managing this stage of cardiac disease. High-salt treats or diets should be avoided. If interested, further information on moderate sodium restricted diets for dogs with advanced cardiac disease can be found at: https://heartsmart.vet.tufts.edu/nutrition/.



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.

James Wood, DVM, DACVIM (Cardiology)

info@SonoPath.com