

**PATIENT**

Pooh Bear Rogers

**SPECIES**

Canine

**BREED**

Toy Poodle

**SEX**

Male Neutered

**AGE**

6.1.09

**WEIGHT**

10lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

White Marsh Animal  
Hospital

**REFERRING VET**

Dr. Brennan

**INVOICE**

28376

**DATE**

1.17.23

**PRESENTING CLINICAL SIGNS**

History: Recheck echo, Heart murmur, grade 4. Recent diagnosis of perineal hernia.  
-Current medications: MiraLAX ¼ tsp BID, Vetmedin, Lasix, Lomotil, Benazepril, Hycodan (unsure of doses as owner sees another vet).  
-Sedation used: Not required to complete full diagnostic ultrasound.  
-Pertinent previous ultrasound results (3/2022 MML): mod MR, mod LAE, mild LVE, mild TR, mild PAH, 3m/s, LA 1.8, LV 3.1/1.3  
-STAT: Not requested.  
-Imaging performed by: Stephanie Warga RDCS, RVT.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. 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 mildly thickened with mild 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	6.0	3.0	NM	1.8	67	94	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	170	1.4	1.11	4.5	2.1	3.1	1.0
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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 stability. Moderate mitral and trace tricuspid regurgitation are unchanged, without progressive left heart enlargement. Persistently 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 elevated. Pulmonary pressures appear stable, and no additional issues are identified.

Reasonable to continue Pimobendan lifelong as prescribed with no obvious indication for additional medications. Lasix and Benazepril remain debatable; however, if the patient is doing well it is reasonable to continue. Continued assessment of progression is recommended, with a guarded prognosis (stage B2/C). Patient may be at risk for development of CHF, arrhythmias, and/or sudden death going forward.

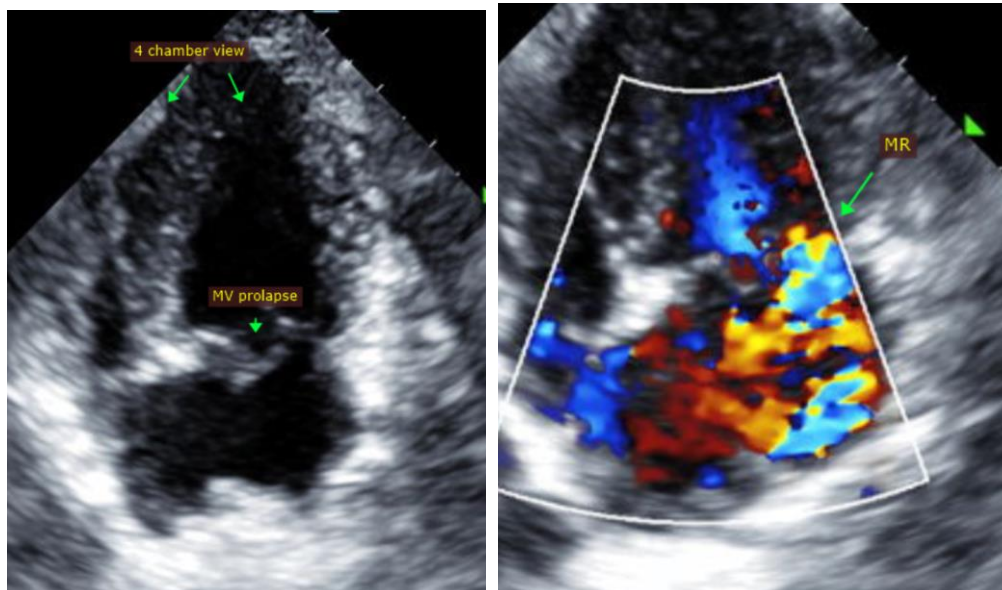
Omega fatty acid supplementation and mild salt restriction may also be of some long term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

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 every 6 months. Continue Pimobendan 0.25-0.3mg/kg PO q12h. Continue Lasix/ACEI as previously discussed.

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

## 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 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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