



**PATIENT**

Roxie Tabor

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Female Spayed

**AGE**

10.12.12

**WEIGHT**

10.3lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Eastern Animal  
Hospital

**REFERRING VET**

Dr. Kaufman

**INVOICE**

32020

**DATE**

7.31.23

**PRESENTING CLINICAL SIGNS**

History: Recheck echo.

-Pertinent abnormal PE/Chem/CBC/UA Results: Last cbc/chem (4/29/2020): Normal renal values.

-Current medications: Pimobendan 1.25mg- 1 po BID, Tussigon 5mg - 1/2 PO BID as needed for cough  
Fluoxetine 10mg-1/2 PO SID, Sentinel, Bravecto.

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results (9/2022 MML): Moderate MR, mild LAE, borderline LV, mild TR, moderate PAH: 3.6m/s. LA: 1.4, LV; 2.0.

-STAT: Not requested

-Imaging performed by: Stephanie Warga RDCS, RVT.

**ELECTROCARDIOGRAPHIC FINDINGS**

A six lead ECG is available at both 25 and 50mm/s; 2mm/mV. The average heart rate is 120bpm (range 75-158bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.

ECG diagnosis: Normal sinus rhythm with profound respiratory variation.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>>posterior) with minimal prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Borderline LV with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened with septal prolapse and mild to moderate tricuspid regurgitation. Velocity consistent with moderate pulmonary hypertension. Mild right atrial and ventricular prominence. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic outflow velocities. Normal aortic outflow velocities. No pulmonic or aortic insufficiency. No pericardial or pleural effusion noted. No 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	5.9	3.3	NM	1.5	43	77	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	80	1.5	0.95	4.7	1.5	2.2	1.3
*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

Persistently stable disease is identified in this exam. Moderate MR is noted with stable left heart enlargement. Moderate pulmonary hypertension is unchanged despite a slightly increased TR quantity. No additional issues have developed, and the ECG is unremarkable.

Given these findings, reasonable to continue Pimobendan going forward. No symptoms are mentioned; however, continued cough control is recommended. Monitor for signs of clinical PAH, including exertional syncope or dyspnea.

Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol induction, etc.) are recommended. Pre-oxygenate for 5 minutes prior to induction and recover in O<sub>2</sub> if possible. 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.

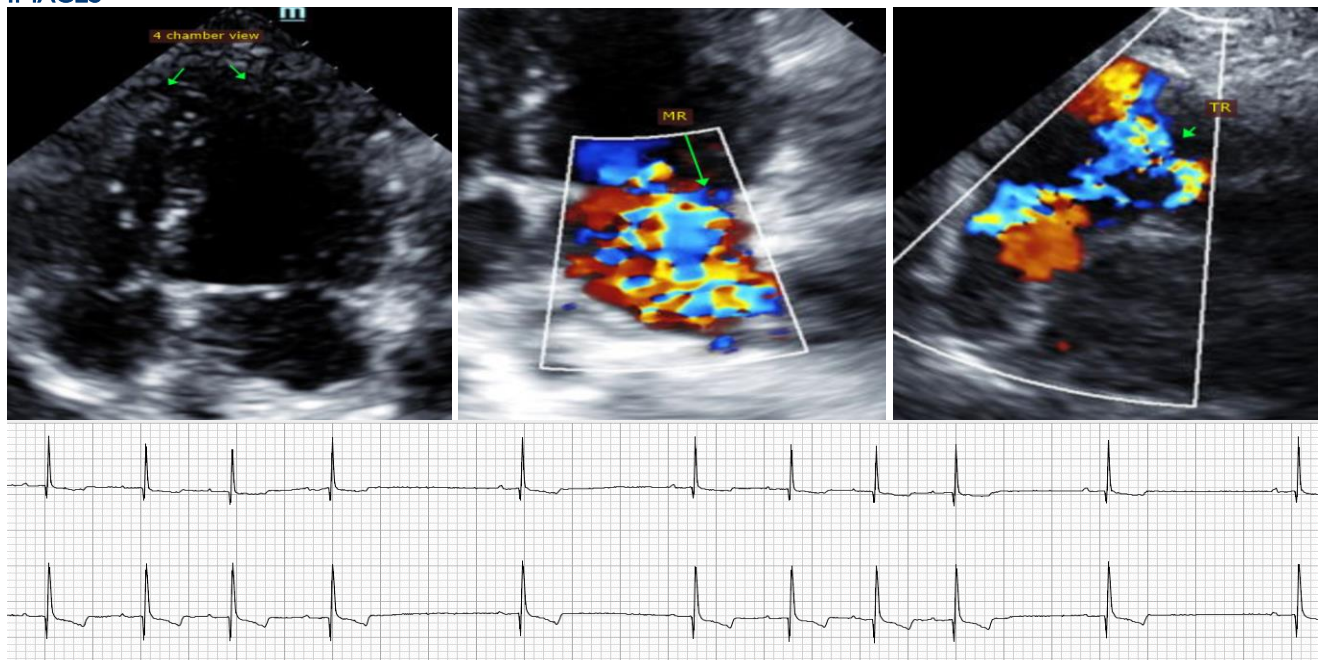
Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

## PLAN

Continue Pimobendan, 0.3mg/kg PO BID. Consider cough suppression/therapy as mentioned above depending on severity of symptom.

Recommend monitor for progression with a recheck echocardiogram in 6-12 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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