



**PATIENT**

July Martinez

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Female Spayed

**AGE**

16 years

**WEIGHT**

6.4lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

G. Ferrer, DVM

**HOSPITAL NAME**

Pulse: Pet Ultrasound  
Services

**REFERRING VET**

Dr. Umpierre

**INVOICE**

46844

**DATE**

2/16/26

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. Increased Hydrocodone dose due to the cough returning. Tested positive for Heartworm (antigen test) on 02/05/2026.

-Pertinent previous echo findings (8/2025 MML): CVD B1. Mild to moderate MR, mild LAE, moderate TR, mild RHE, moderate PH: 3.8m/s. LA: 1.8, LV: 1.8.

**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. Mild to moderate eccentric mitral regurgitation with mild left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with moderate to severe tricuspid regurgitation. Moderate to severe right heart enlargement. TR velocity indicative of moderate pulmonary arterial hypertension. The MPA is mildly dilated. Distal branches are not well visualized; however, no obvious adult worms are seen. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. Trace pulmonic insufficiency. No AI. 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)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	5.1	3.9	NM	1.4	68	90	0.2
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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	NM	0.7	1.0	2.9	1.8	1.7	0.5
*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)
*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**

Compared to the prior study, findings are similar. Potentially the right heart is more progressively enlarged comparatively; however, pulmonary hypertension appears largely stable. The left heart disease is mild, and no additional issues have developed.



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No obvious adult worms are visualized; however, these are easily missed in the peripheral vasculature and may still be present.

Given these findings, the cough remains noncardiogenic in origin. Respiratory disease was discussed in the prior report, which is likely being exacerbated by current heartworm status. Certainly, treatment for heartworm disease should be dictated by American Heartworm Society Website. Based upon what is seen here, continue Pimobendan, Sildenafil and ACE-I going forward. Clearly a heartworm infection in a dog with underlying pulmonary hypertension could have debilitating effects and clearing the infestation as quickly as possible is recommended.

Continued assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1/B2). Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

Anesthesia is not advised.

## PLAN

Continue workup/treatment for the cough as discussed. Continue Pimobendan 0.3mg/kg PO. Continue Sildenafil 1-2mg/kg PO q12h. Continue ACEI 0.5mg/kg PO q12h. D/C Lasix. The split protocol is recommended, as dictated by the American Heartworm Society Website.

Recommend conservative monitoring 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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**Maggie Machen Lamy, DVM**

**Diplomate of the American College of Veterinary Internal Medicine (Cardiology)**

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