



**PATIENT**

Hera Morales

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Female Spayed

**AGE**

10 years

**WEIGHT**

14.8lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

G. Ferrer, DVM

**HOSPITAL NAME**

Pulse: Pet Ultrasound  
Services

**REFERRING VET**

Dr. Lopez

**INVOICE**

47763

**DATE**

5/5/26

**PRESENTING CLINICAL SIGNS**

History: Suspected abdominal mass seen on AUS. CXR 1/2026 showed cardiomegaly, ascites, and a suspected mass effect. Is QAR, PU/PD, shows labored breathing, a severely distended abdomen, and has episodes of urinary incontinence. Adopted 3 years ago and was on Enalapril 5mg; continued this medication. BP: 109mmHg. Removed 1,400mls of modified transudate fluid with abdominocentesis.

**ECHOCARDIOGRAM FINDINGS**

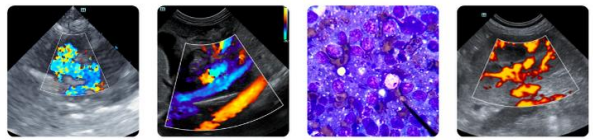
2D, m-mode, color flow and doppler imaging is available. The mitral valve is mildly thickened with no prolapse into the left atrial lumen. Mild mitral regurgitation present. Mild left atrial enlargement. Small left ventricular diameter. Septal flattening is systole. Left ventricular systolic function is adequate. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is dilated. Severe right atrial and ventricular enlargement. The tricuspid valve is thickened with moderate tricuspid regurgitation. Velocity consistent with severe pulmonary hypertension. Mild pulmonic and no aortic insufficiency. Scant pericardial effusion. No pleural effusion. No cardiac masses are seen.

**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>	5.2	4.7	NM	1.4	70	95	0.12
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	0.9	0.9	6.7	1.4	1.8	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**

Severe pulmonary hypertension is present. This is based upon an elevated TR velocity and the appearance of the right heart, which puts the patient at risk for right-sided congestion and/or syncope. Moderate TR is the result with secondary right heart enlargement. The left heart is normal with evidence of volume depletion and a small mitral regurgitation. No additional issues are seen.



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Given these findings, the abdominal effusion is certainly cardiogenic in origin and warrants full lifelong cardiac supportive medications including diuretics as below.

The underlying genesis of PAH is poorly understood in cases other than heartworm infestation, though it occurs with increased frequency in a variety of forms of chronic lung disease and in patients with idiopathic pulmonary fibrosis. Without a chronic respiratory issue, the cause remains open. A compressive mass can also have this appearance, and a Radiologist review of the films may be warranted.

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 worsening collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for progression to CHF at home.

Unfortunately, there is high risk for spontaneous CHF, worsening cough and/or malignant arrhythmias and sudden death in the future. The prognosis with this degree of disease is poor, with most dogs able to maintain a good QOL on medications for an average of 8-12 months.

Elective anesthesia is not advised.

## PLAN

Consider hospitalization, abdominocentesis, etc. as needed for stabilization. Institute Spironolactone 1-2mg/kg PO q12h. Institute Sildenafil 1-2mg/kg PO 8h. Institute Lasix 1-2mg/kg PO q8-12h. Institute Pimobendan 0.25-0.3mg/kg PO q12h. Continue ACE-I 0.5mg/kg PO q12h.

Recheck renal values and BP in 1-2 weeks, then every 3-4 months on diuretic therapy.

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

## 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.



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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)**

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