

**PATIENT**

Mika Figueroa

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Spayed Female

**AGE**

14 Years

**WEIGHT**

8.4 Pounds

**INTERPRETED BY**

Sara Brethel DVM,  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Dr. Gabriel Ferrer, DVM

**HOSPITAL NAME**

Pulse Pet Ultrasound  
Services

**REFERRING VET**

Dra. Franchesca  
Caballero

**INVOICE**

35162

**DATE**

12/31/25

**PRESENTING CLINICAL SIGNS**

History: Presented as an urgent echocardiogram to evaluate increased respiratory rate and heart murmur. Pt presented to the EC 3 days ago for Tachypnea and extending the neck to breath. Medication was started Pimobendan and Furosemide and helped, but still having increase respiratory rate. Pt does NOT have a history of coughing or syncopes.

Abnormal PE/Chem/CBC/UA Results: PE: Grade 4-5/6 systolic HM Radiographs and Bloodwork attached as supporting documents.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	Underest	4.43	NM	1.1	45.29	--	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	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				
PATIENT	--	0.53	0.88	3.8	2.3	1.7	0.93

**Cardiac Presentation**

The mitral valve leaflets are mildly thickened with mild mitral regurgitation posteriorly directed. There is no prolapse of the mitral valve leaflet. The left atrial size is normal. There is evidence of left ventricular underloading. There is normal right atrial size and there is moderate to severe tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and severe evidence of pulmonary hypertension based upon tricuspid regurgitant velocities. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonic valves have normal morphology and the corresponding outflow velocities are within normal limits. There is trace aortic insufficiency. There is moderate pulmonic insufficiency. Pulmonic and diastolic insufficiencies suggest severe pulmonary hypertension. The aorta appears normal. The pulmonary artery and associated branches are dilated. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

**ULTRASONOGRAPHIC FINDINGS**

- Severe pulmonary hypertension



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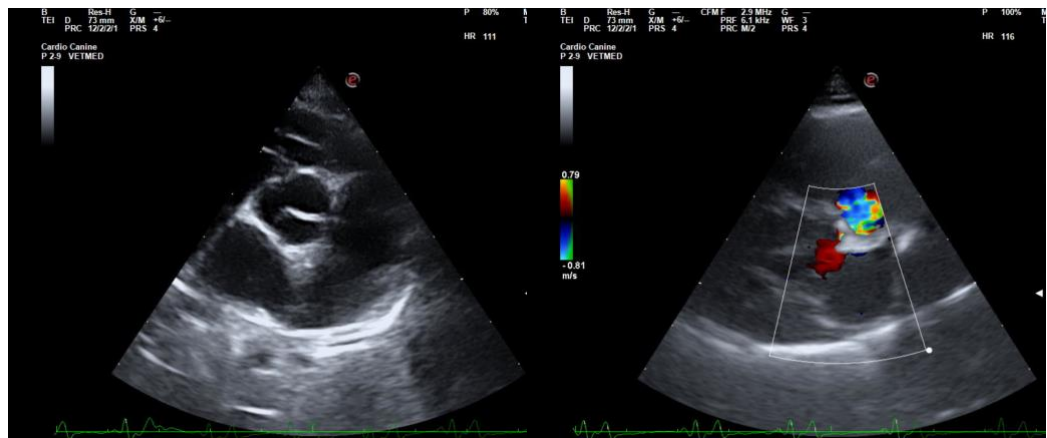
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- Dilated pulmonary artery
- Degenerative valve disease, B-1 of the mitral valve

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient has evidence of severe pulmonary hypertension, likely driving the respiratory signs. Recommend stopping diuretic therapy, as there is no evidence of cardiogenic pulmonary edema, as long as the patient doesn't have any ascites present. Can continue pimobendan at a dose of 0.27 – 0.32 mg/kg. Recommend starting sildenafil at a dose of 1–2.5 mg/kg every 8 hours. The cause of the patient's pulmonary hypertension is unknown. Can consider referral to internal medicine for a thorough airway work up and also considering an abdominal ultrasound just looking for underlying disease processes. The reported 4dx snap shows that the patient is heartworm negative, and no heartworms are identified on the images provided. If the patient is still clinical, oxygen therapy and hospitalization at a referral center may be needed. There is a small subset of patients that do not respond to sildenafil therapy. Close monitoring of breathing rates is recommended moving forward. The client should start monitoring respiratory rate and effort at home if not already doing so. The resting respiratory rate should be < 35–40 breathes/minute when the patient is resting or sleeping. If the breathing rates are increasing, then chest radiographs are recommended. Median survival times with severe pulmonary hypertension tend to be about 9–12 months, unfortunately. Dose escalations will be needed in the future, as patients tend to develop a tolerance to sildenafil doses over time. Unfortunately, this patient is at risk of passing away suddenly.



**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.

Sara Brethel DVM, DACVIM (Cardiology)



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[info@SonoPath.com](mailto:info@SonoPath.com)

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