



**PATIENT**

Lily Tropiano

**SPECIES**

Canine

**BREED**

West Highland White Terrier

**SEX**

Spayed Female

**AGE**

15 Years

**WEIGHT**

24 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

A.Rodriguez

**HOSPITAL NAME**

Foxfield VS

**REFERRING VET**

A.Rodriguez

**INVOICE**

20277

**DATE**

12/30/22

**PRESENTING CLINICAL SIGNS**

History: Respiratory distress. Prev echo on 6/20/22

Abnormal PE/Chem/CBC/UA Results: SDMA: 16, BUN: 31, Ca:12.8, ALK: 464

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

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	<1.3	28-40	40-100	<0.6
PATIENT	--	Up to 4.0	1.24	1.2	45	--	0.1
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				
PATIENT	Variable Approx. 80	1.30			1.4	1.32	

**Cardiac Presentation**

The **echocardiogram** presented a prominent **right heart** with mild **right ventricular** hypertrophy, and normal **right atrial** size. Tricuspid insufficiency was noted. No evidence of neoplasia was noted in the right auricle, or elsewhere in the heart. The **pulmonary artery** was uniformly prominent with mildly depressed pulmonic velocity measured on PW Doppler. No overt heartworms were noted in the main or visible deep pulmonary arteries. Yet theoretically heartworms could be present in the deep pulmonary vasculature out of visible sonographic range. More likely, however, this prominent right heart is due to excessive intra-thoracic pressures caused by chronic respiratory disease or potentially excessive intra-thoracic fat (Pickwickian syndrome). The **left heart** demonstrated a linear **ventricular septum**. Contractility was functionally adequate demonstrated by the FS% measurement. The **mitral valve** was not significantly insufficient, and no significant **left atrial** dilation was noted. The **left ventricular outflow** demonstrated normal flow patterns and velocities through the aortic valve. No evidence of tumor, pericardial or pleural effusion was noted. Arrhythmogenic activity was noted. B-lines were noted throughout the peripheral extracardiac windows, consistent with pneumonitis, thromboembolic disease or metastatic shower. The hepatic veins were dilated.

**ULTRASONOGRAPHIC FINDINGS**

- Right heart enlargement
- Moderate pulmonary hypertension
- Dilated hepatic veins



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- Arrhythmogenic activity

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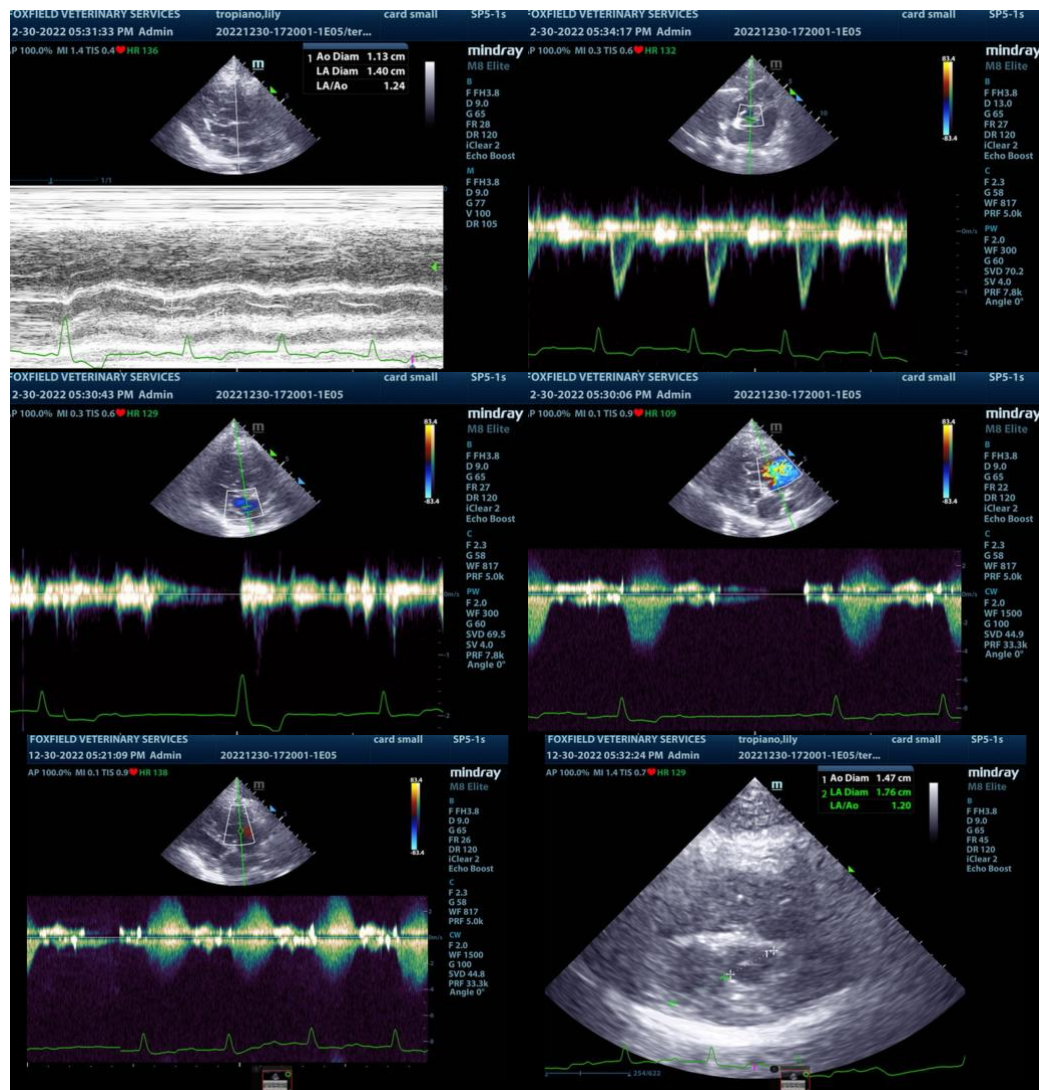
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Emerging right sided failure, yet this is likely secondary to a rapidly emerging bronchoalveolar event and increasing pulmonary hypertension. Sildenafil is indicated 1.0 mg/kg BID, as well as Spironolactone 1-2 mg/kg BID and Ace-inhibitor 0.5 mg/kg SID. Bronchodilator and investigation of the primary cause of respiratory disease would be indicated. Abdominal sonogram is warranted to assess for primary disease that may be metastatic to the chest or predisposing to thromboembolic events. Plavix therapy could also be considered to cover for potential thromboembolic events. Pneumonitis/SARDS should also be considered. Oxygen therapy is indicated. Broad spectrum antibiotics are warranted. Prognosis is significantly guarded. The heart is secondary to primary respiratory issue in this patient yet is consistent with moderate to severe pulmonary hypertension with arrhythmia. EKG is also indicated.





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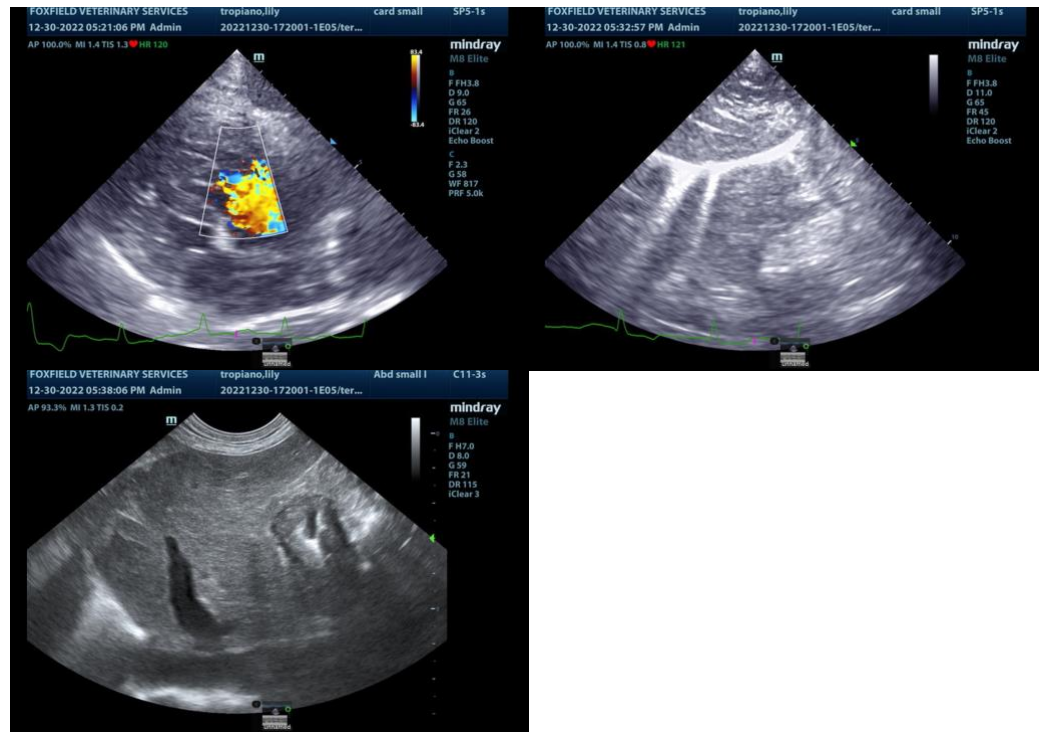
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com