



**PATIENT**

Piper Dienfenbach

**SPECIES**

Canine

**BREED**

Papillon x

**SEX**

Spayed Female

**AGE**

11 Years 8 Months

**WEIGHT**

13.5 lbs

**INTERPRETED BY**

Eric Lindquist, DMV,  
DABVP (CFM), Cert.  
IVUSS

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Warren Animal  
Hospital

**REFERRING VET**

Dr. Nicole

**INVOICE**

72041

**DATE**

11/21/25

**PRESENTING CLINICAL SIGNS**

Heart murmur 2/6. Receiving Spironolactone 5mg; Vit B12; Hydrocodone; Pimobendan 5mg; Enalapril 2.5mg.

**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	5.8	3.8	2.08	2.4	--	--	0.3
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (lbs)	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	--	1.02	0.9	13.5	5.0	--	--

E-wave velocity = 1.2

**Cardiac Presentation**

The cardiac presentation revealed prolapse of the anterior mitral valve leaflet and progressive chronic left atrial enlargement. Significant aortic septal deviation into the region of the right atrium noted. Mitral and tricuspid insufficiency noted with velocities consistent with moderate pulmonary hypertension. Contractility appeared adequately compensatory. Mild volume overload noted in the left ventricle. No pericardial or pleural effusion noted. Hepatic veins were slightly dilated without evident of ascites. The vena cava was dilated at 0.90 cm.

**ULTRASONOGRAPHIC FINDINGS**

- Progressive left atrial enlargement.
- Mild passive congestion liver secondary to potential emerging right-sided heart failure.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Recommend continuation of the Spironolactone, Pimobendan, and Enalapril in this patient. Pimobendan and Enalapril should be maintained at BID dosing. Recommend adding Lasix at 2-3 mg/kg BID, monitoring blood pressure, BUN and creatinine. Given the volume overload I'm concerned for emerging left-sided failure. If exercise intolerance is an issue, then Sildenafil could be considered at 1 mg/kg BID, given hepatic vein dilation and velocities of the tricuspid insufficiency indicative of increasing pulmonary hypertension. Recheck echo in 3 months, earlier if clinical signs initiate. Note that the level atrial size has increased significantly compared to prior sonogram.



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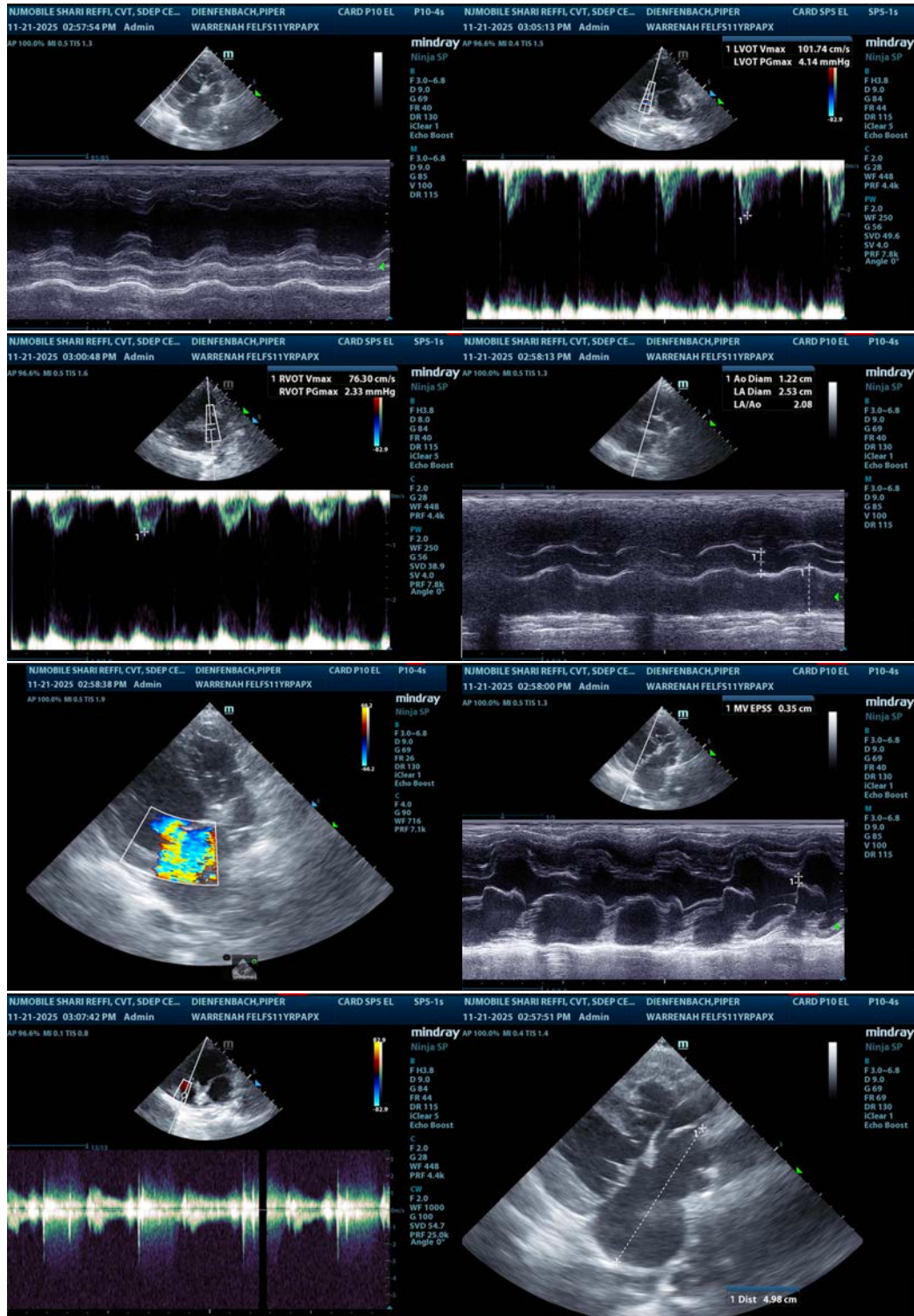
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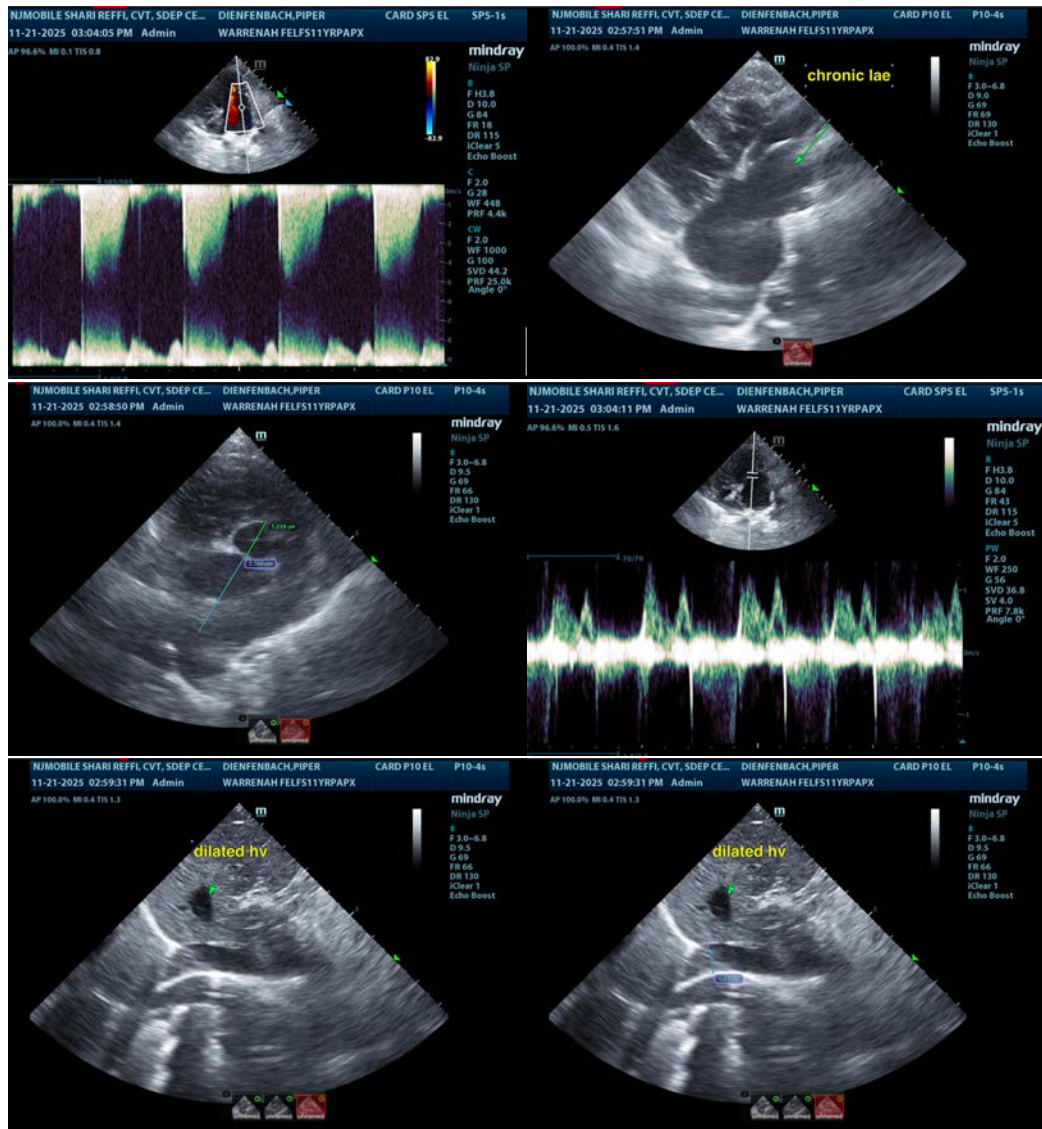
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS,**  
 CEO, Owner, Founder -- SonoPath.com  
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