


**PATIENT**

Pixie Zambrano

**PRESENTING CLINICAL SIGNS**

Heart murmur systolic 3-4/6, chronic cough at nighttime. Meds: Occasional Temaril-P, small dose.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: CBC/Chem: WNL.

**BREED**

Chihuahua

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**
**SEX**

FS

**AGE**

12yr

**WEIGHT**

7.4lb

<b>CANINE CARDIAC PARAMETERS</b>	<b>MR VMAX</b> (m/s)	<b>TR VMAX</b> (m/s)	<b>LA/AO</b> (Boon method)	<b>LA/AO</b> (Heart Base; Swe)	<b>FS</b> (%)	<b>EF</b> (%)	<b>EPSS</b> (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>	5.4	3.6		1.35	51.6	85.2	0.1
<b>CANINE CARDIAC PARAMETERS</b>	<b>HR</b> (BPM)	<b>AV VMAX</b> (m/s)	<b>PV MAX</b> (m/s)	<b>BODY WEIGHT</b> (kg)	<b>LA</b> 2D short axis Base view (cm)	<b>LVIDd</b> Avg; 2D and m-mode short axis (cm)	<b>LVIDs</b> Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	101	1.3	0.71		2.4	2.0	

**INTERPRETED BY**

 R. McKenzie Daniel,  
 DVM, DABVP  
 (Canine and Feline)

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal left atrial size based on 3 different LA measurement methods. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis with minor prolapse of the septal leaflet. Doppler indicated measurable eccentric insufficiency. The left ventricle presented thicknesses with linear contour and was not dilated nor restricted. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. Normal LVOT velocity was present. The right atrium and auricle revealed borderline to mild increases size with normal structure and content. No evidence of masses was noted. Tricuspid valvular assessment demonstrated concurrent thickening with mild TR exhibiting mild increased TR velocity. The right ventricle exhibited borderline to mild increased size with normal chordae structure, myocardial echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Normal to possibly depressed RVOT velocity was present. No visible pericardial or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

 North Jersey Animal  
 Hospital

**REFERRING VET**

Dr. Riedel

**INVOICE**

11558ag

**ULTRASONOGRAPHIC FINDINGS**
**Primary**

- Compensated chronic mitral valve disease (ACVIM B1) with minor septal leaflet prolapse

**DATE**

09/08/2022



**PATIENT**

Pixie Zambrano

- Borderline mild to prominent RA/RV with mild TR -est. pulmonary pressure gradient ~ 50 mmHg suggestive of mild to moderate pulmonary hypertension

**SPECIES**

Canine

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The lack of LA enlargement or increased LV volume indicates that the risk of complication secondary to mitral valve insufficiency is relatively low. The borderline to mild RA/RV enlargement in combination with mild to moderate pulmonary hypertension is suggestive of mild cor pulmonale. In cases other than confirmed heartworm disease, underlying etiology of pulmonary hypertension is often not definitively evident. In this case given the patient's chronic cough some degree of chronic lower airway disease may be suspected.

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No overt indication for medical therapy in regard to the mitral valve insufficiency is indicated at this time. Depending on degree of cough or lower airway signs, as needed respiratory therapy as well as sildenafil trial initially at 0.5 mg/kg PO BID and assessment of clinical response with potential titration up to 1-2 mg/kg PO BID given evidence of pulmonary hypertension.

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Prognosis at this stage is highly variable and serial sonographic monitoring is required for further assessment. Exercise restriction is advised. A recheck echocardiogram is recommended in 6 months, sooner if evidence of left sided congestion or progressive signs of pulmonary hypertension are noted.

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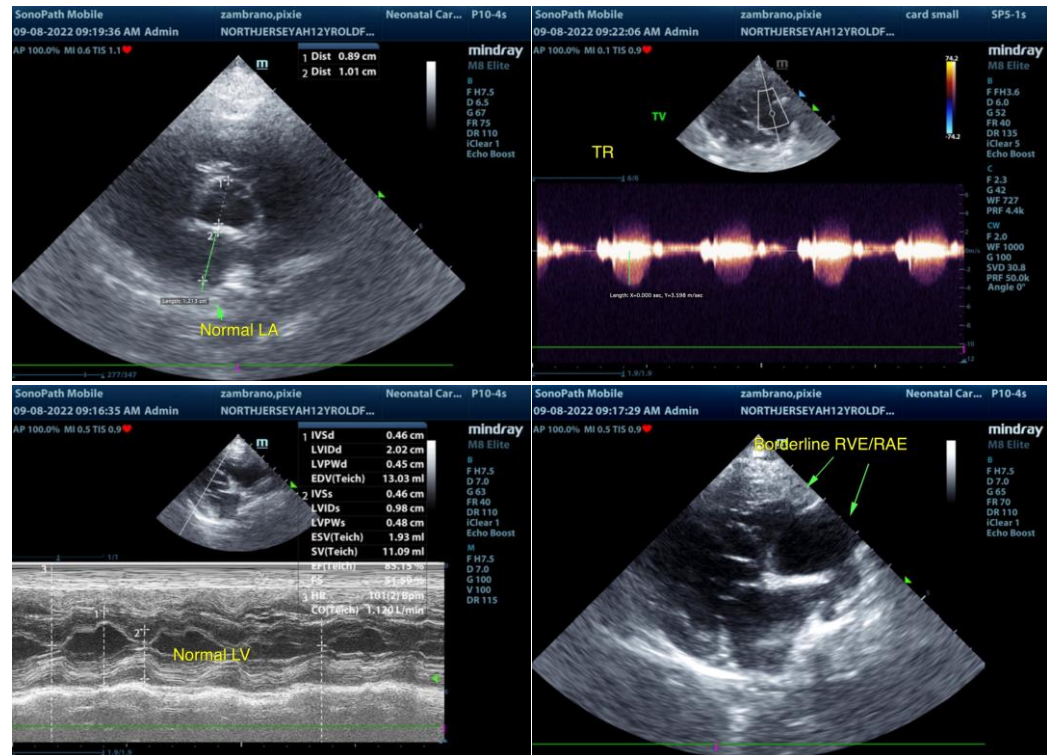
Dr. Riedel

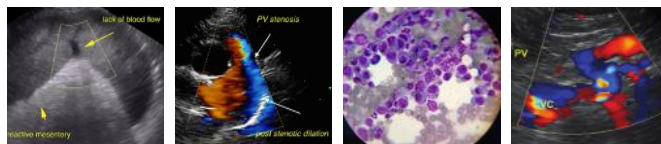
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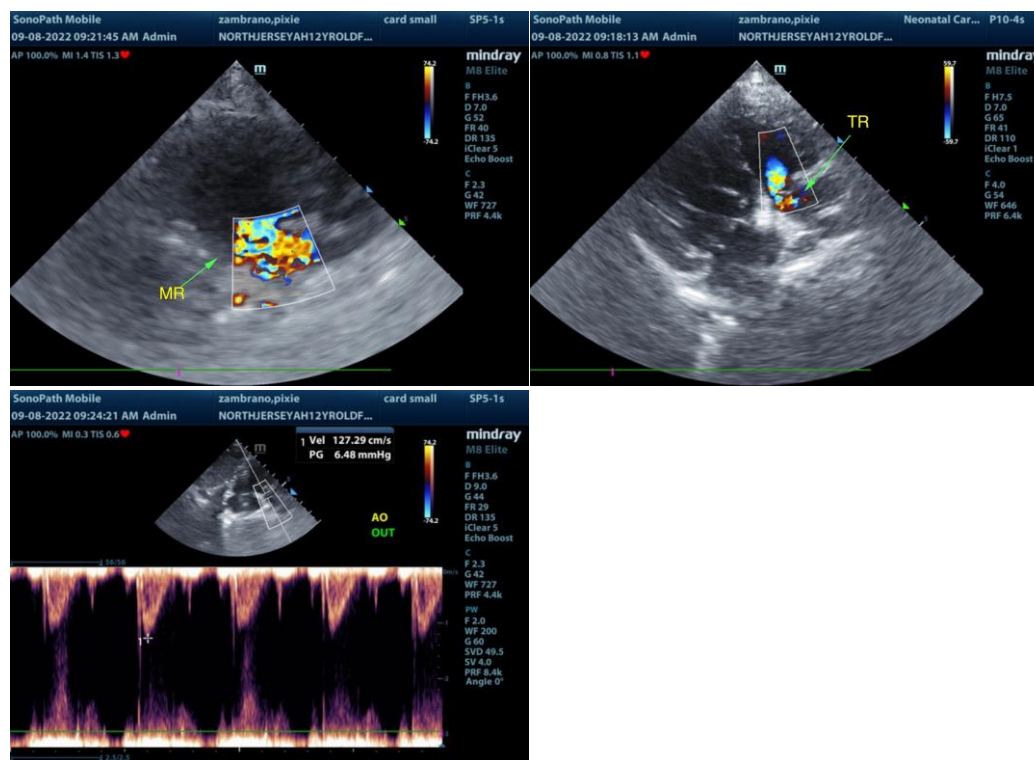
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com