



## PATIENT

Sgt. Pepper Renaud

## SPECIES

Canine

## BREED

Chihuahua

## SEX

Neutered Male

## AGE

11 Years

## WEIGHT

10.2 Pounds

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Jessica Bailes

## HOSPITAL NAME

All Creatures Great &  
Small, VC, Corvallis, OR

## REFERRING VET

Dr. Beth Marszewski

## INVOICE

20406

## DATE

1/5/23

## PRESENTING CLINICAL SIGNS

History: chronic hx of stable stage B1 valvular disease - currently on enalapril 2.5mg PO in AM, 1.25mg in PM and Vetmedin 1.25mg PO BID. Chronic hx of coughing but more recently cough has gotten worse.

Abnormal PE/Chem/CBC/UA Results: grade 3-4/6 systolic murmur, overweight, otherwise NSF on PE Thoracic rads taken 12/5/22: cardiomegaly w/ LA enlargement. Trachea deviated dorsally. Pulmonary vessels WNL; lungs clear BW: WNL BP today: 110 systolic on average.

## 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	6.0	3.10	1.6	1.8	57	89	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	--	1.37	.69	--	3.0	2.33	--

## Cardiac Presentation

Left atrial size is slightly enlarged in the LA/AO heart base presentation and upper limits of normal to slightly enlarged in the LA max. Mitral insufficiency was noted with complete filling of the left atrium. 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. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** insufficiency was noted with moderate filling of the right atrium. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

## ULTRASONOGRAPHIC FINDINGS

- Compensated mitral insufficiency



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- Tricuspid insufficiency
- Stage B-2 valvular disease

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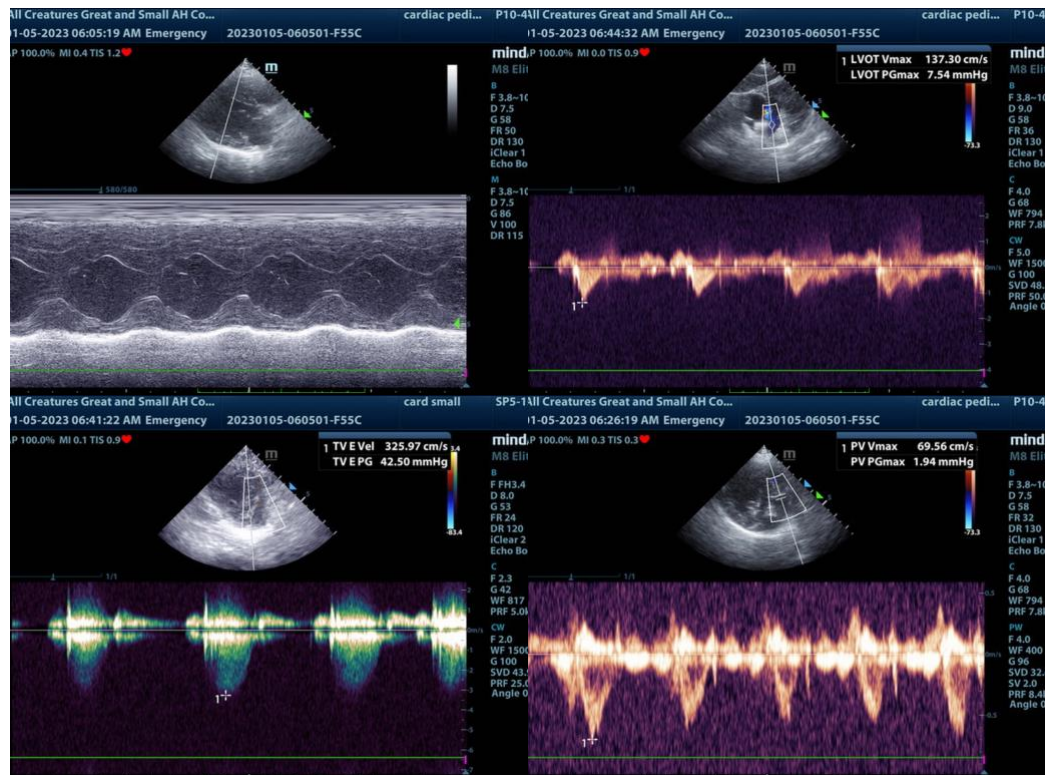
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Left atrial size is slightly enlarged in the LA/AO heart base presentation, upper limits of normal to slightly enlarged in the LA max presentation, and the thoracic radiographs suggest left atrial enlargement. It is debatable on whether additional treatment would be recommended at this point. Low dose Lasix trial (1-2 mg/kg BID) and reassessment of the coughing is warranted, however, primary respiratory cough is likely playing a role in this patient, as the left atrial size presents only minor enlargement in 2 out of 3 measurements.

The heart is in a somewhat precarious state with volume overload and a heart that is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 1 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary.



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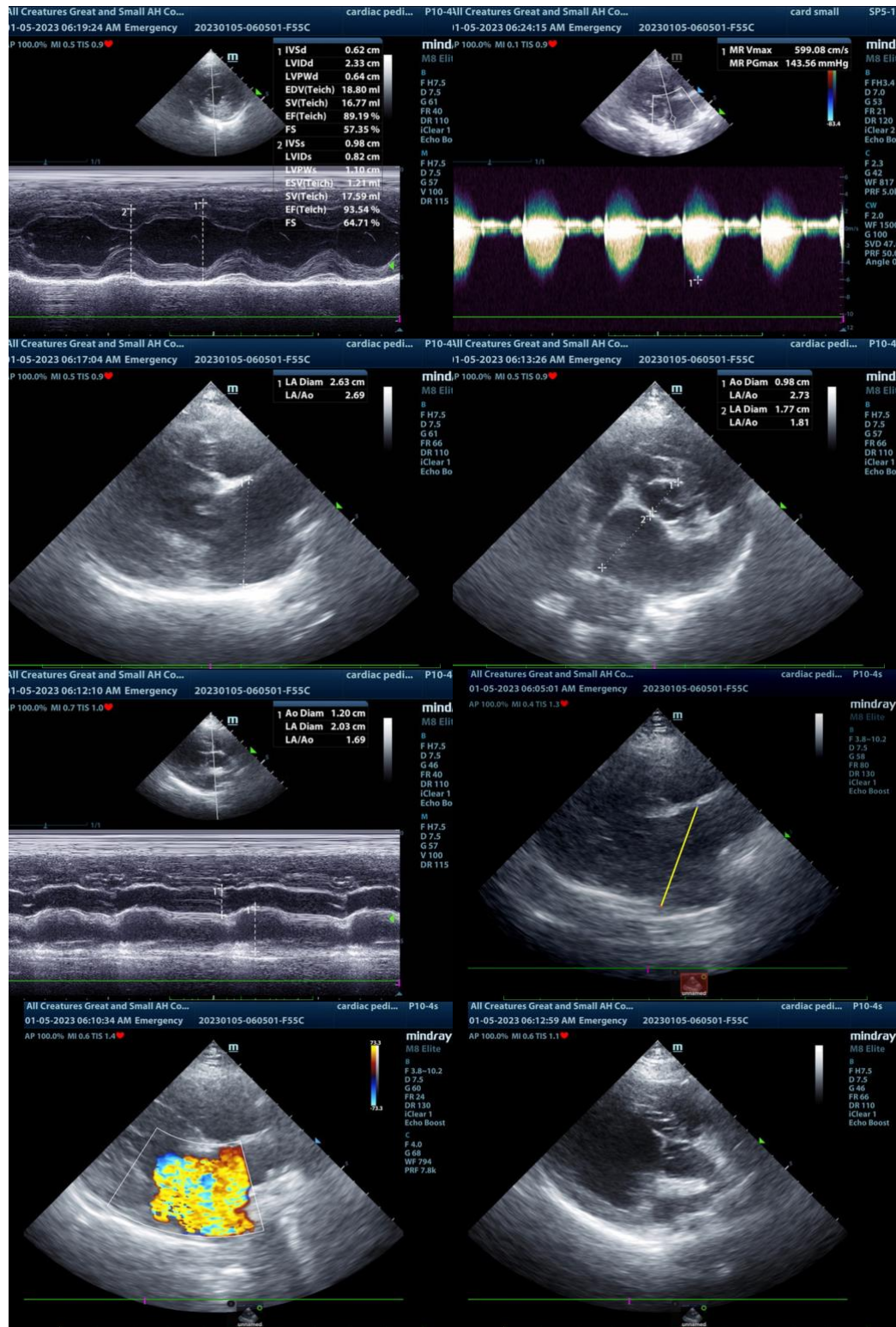
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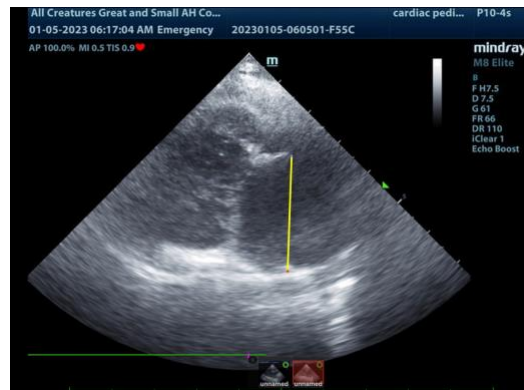
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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