



## PATIENT

Leah Cobell

## SPECIES

Leah Cobell

## BREED

Chihuahua

## SEX

FS

## AGE

12 years

## WEIGHT

12.2 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Diane McFadden

## HOSPITAL NAME

East Plane AH

## REFERRING VET

Dr. Rosen

## INVOICE

14569

## DATE

8/11/22

## PRESENTING CLINICAL SIGNS

coughing for 6 months; at that time did not respond to torbutrol so stopped. placed on baytril and coughing did lessen. Following rads, Placed on pimobendan and lasix Jan 2022, is still coughing. Still on pimobendan 2.5 mg bid and lasix 12.5 mg x1 am and 1/2 pm  
Abnormal PE/Chem/CBC/UA Results: ALKP 796

## 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	5.7	2.2	1.58	1.56	40	72.1	0.22
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	206	1.5	0.82		3.37	3.1	

## Cardiac Presentation

The echocardiogram in this patient demonstrated mildly enlarged **left atrial** size based on 3 different LA measurement methods. Subtle deviation of the interatrial septum towards the right atrium, which may suggest minor increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis without evidence of valvular prolapse. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with mild increased left ventricle volume. 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 or chamber overload. **Tricuspid** valvular assessment demonstrated minor subjective thickening with mild TR on doppler. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** 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. No echographically detectable evidence of infiltrative



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disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

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**ULTRASONOGRAPHIC FINDINGS**

**BREED**

Chihuahua

- Chronic mitral valve disease (ACVIM mild B2)
- Mild TR - Estimated pulmonary pressure gradient (~20 mmHg) not consistent with overt or clinical pulmonary hypertension

**SEX**

FS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**AGE**

12 years

The mild LA enlargement suggests that the risk for complication secondary to mitral valve insufficiency is mildly elevated yet overall, the heart appears to be compensated. The degree of left atrial enlargement is not overtly consistent with congestive criteria. This likely indicates that the coughing in this patient may be multifactorial in origin with suspected primary contribution owing to primary upper or lower airway disease.

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Given the minor left chamber enlargement, continued Pimobendan is warranted as this medication may help prolong cardiac changes associated with mitral valve insufficiency. Lasix is only suggested if clinical and radiographic concern for cardiogenic pulmonary edema. Baseline monitoring of resting respiration rate is suggested. Respiratory support is recommended based on the clinical impression of the patient.

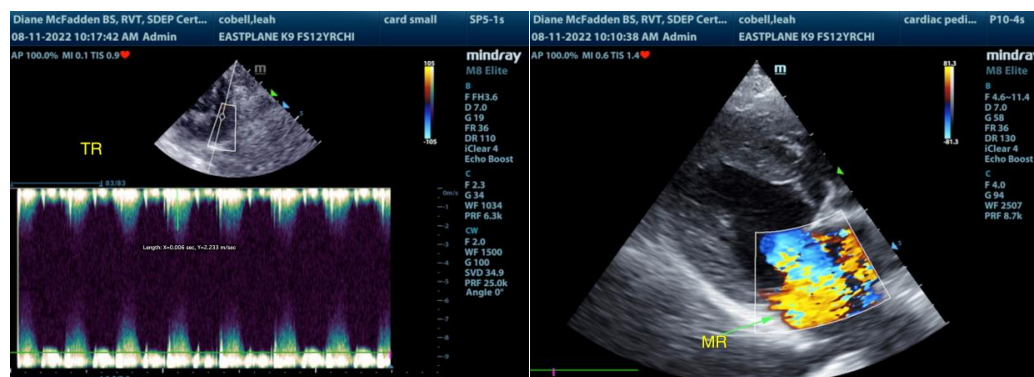
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Prognosis at this stage is highly variable and serial sonographic monitoring is recommended for further assessment. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs suggestive of left-sided heart disease arise.

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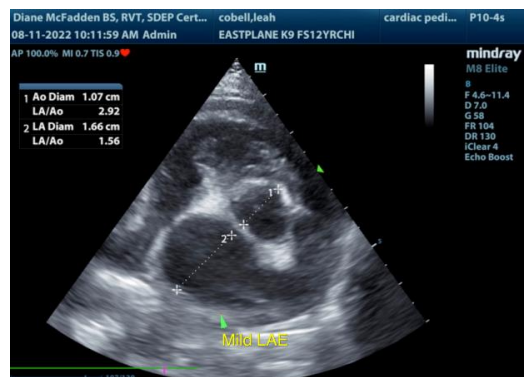
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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