

## PATIENT

Charlie Cummings

## SPECIES

Canine

## BREED

Chihuahua

## SEX

MN

## AGE

14 years

## WEIGHT

14 lbs.

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP

## IMAGING PERFORMED BY

Crystal Hill

## HOSPITAL NAME

Tansley Woods Vet  
Hospital

## REFERRING VET

Dr. Petrowski

## INVOICE

13818

## DATE

5/6/22

## PRESENTING CLINICAL SIGNS

Coughing for several months. History of Addisons disease. Well controlled. Grade 3/6 heart murmur noted. Florinef and Prednisone. Prednisone addition has helped somewhat with the cough. Abnormal PE/Chem/CBC/UA Results: Rads showed somewhat enlarged heart and some edema. K is normal at this time.

## 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			1.1	1.15	38	71	0.15
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	104	1.8	1.3		2.2	2.2	

### Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. 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** valvular assessment demonstrated adequate linear morphology and kinesis. 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.



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**ULTRASONOGRAPHIC FINDINGS**

- Normal echocardiogram

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overtly normal cardiac structure and function without evidence of cardiomyopathy. An obvious cause of the murmur was not definitively evident yet if the murmur is primarily left-sided, some degree of compensated mitral valve insufficiency could be considered, given the patient's age.

**BREED**

Chihuahua

Additional considerations may include a physiologic flow murmur if no evidence of volume changes such as dehydration or evidence of anemia, or an additional small flow abnormality not visualized. Regardless, the overall normal cardiac presentation indicates that any potential risk secondary to the murmur is low. No other clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension were noted.

**SEX**

MN

Given this presentation, the coughing in this patient is noncardiogenic in origin. No indication for cardiac medications is evident. Conservative monitoring of the murmur is recommended. Recheck echocardiogram is suggested in 6-12 months, sooner if murmur intensity increases or if clinical signs consistent with heart disease arise.

**AGE**

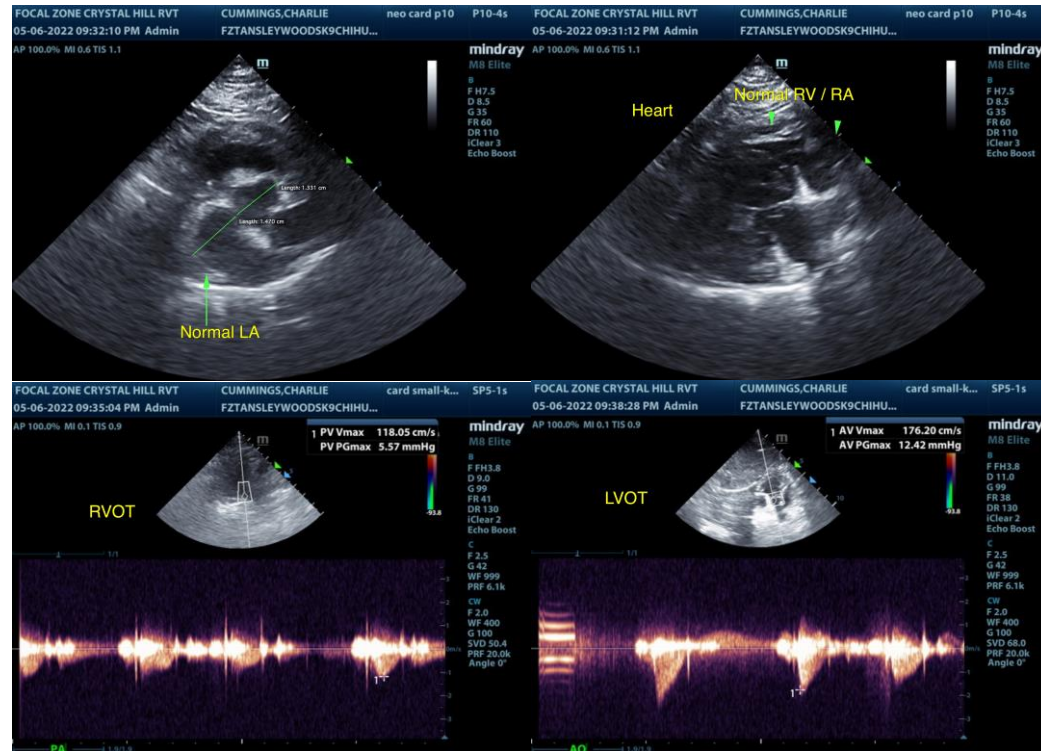
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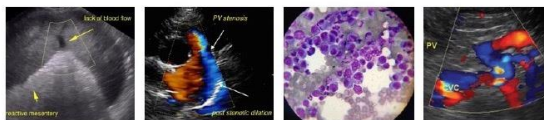
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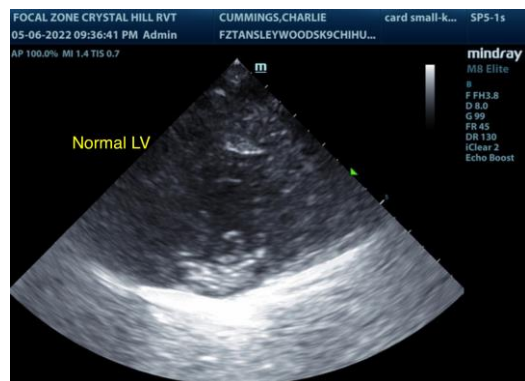
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
info@SonoPath.com

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