



**PATIENT PRESENTING CLINICAL SIGNS**

Charlie Rivera History: Grade II/VI heart murmur. Hx of grain free diet. No current meds

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

BREED

Shih Tzu

SEX

Neutered male

AGE

5 years

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. Mild **tricuspid** insufficiency was noted. 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.

WEIGHT

12 lbs

INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Warren AH

REFERRING VET

Dr. Nicole

INVOICE

43827

DATE

4/12/23

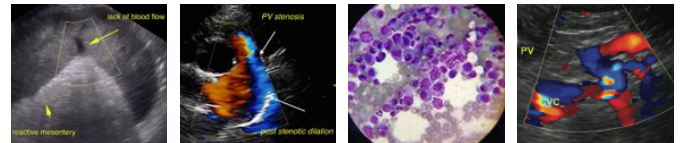
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT		1.93	1.2	1.4	40	73	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	LA (2D short axis Base view)	LVIDd (Avg; 2D and m-mode short axis)	LVIDs (Avg; 2D and m-mode short axis)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT		1.0	0.57	12 lbs	2.3	2.52	

**ULTRASONOGRAPHIC FINDINGS**

Structurally normal echocardiogram with trivial tricuspid insufficiency.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There was no evidence of significant disease. This is essentially a flow murmur even though the mitral valve is slightly thickened. There was no significant insufficiency. No treatment is recommended. If murmur is persistent in a year and/or increasing in grade then a recheck echocardiogram is



**PATIENT** recommended at that time.

Charlie Rivera

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Neutered male

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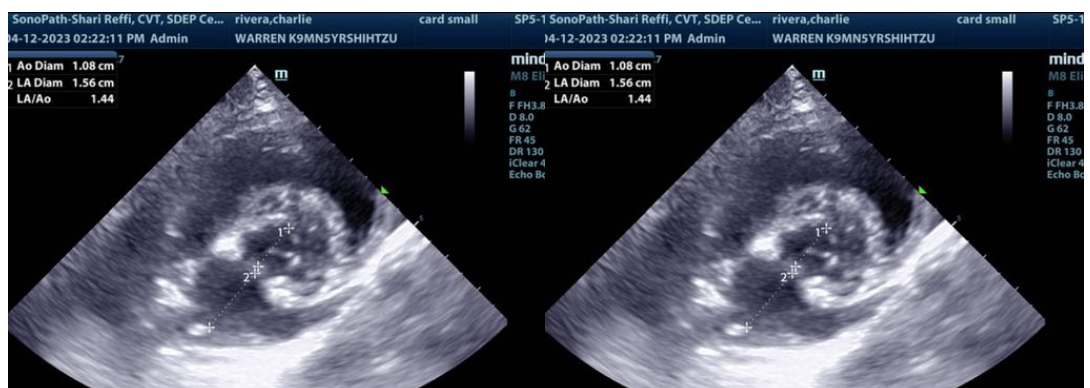
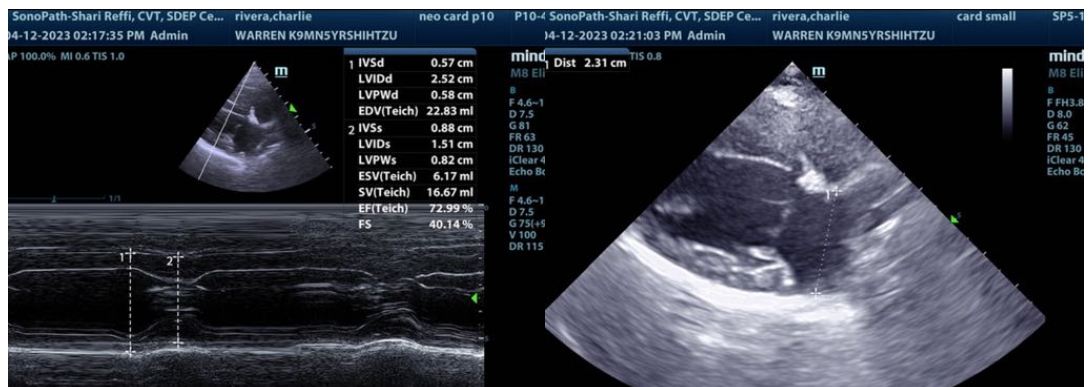
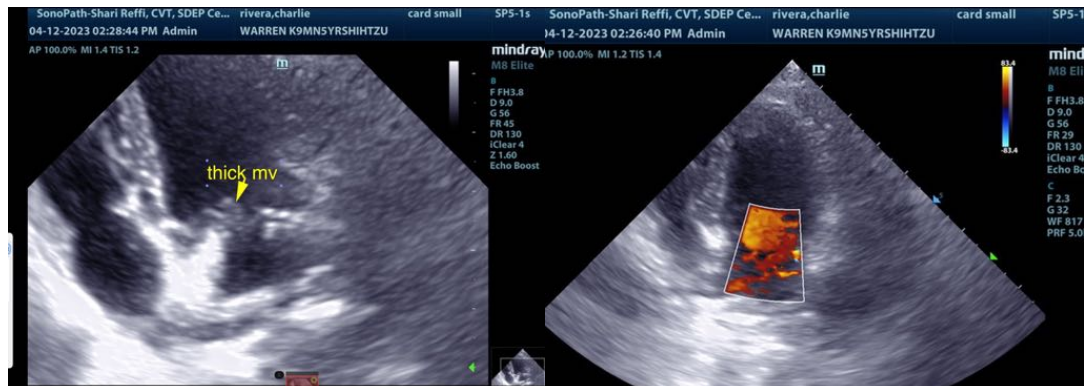
Dr. Nicole

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**PATIENT**

Charlie Rivera

**SPECIES**

Canine

**BREED**

Shih Tzu



**SEX**

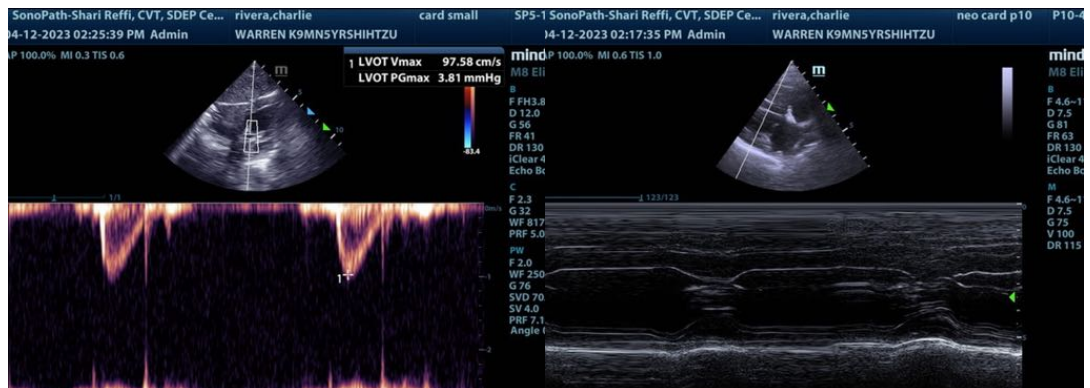
Neutered male

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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, Cert. IVUSS, CEO of SonoPath.com**  
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