

**PATIENT**

Shelby Garrison

**SPECIES**

Canine

**BREED**

Lab X

**SEX**

Spayed Female

**AGE**

4.5 Years

**WEIGHT**

38 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

A. Rodriguez

**HOSPITAL NAME**

Foxfield VS

**REFERRING VET**

A. Rodriguez

**INVOICE**

16031

**DATE**

6/11/22

**PRESENTING CLINICAL SIGNS**

History: Syncope vs seizure: EKG: There is a slight sinus arrhythmia to regular sinus rhythm with a mildly elevated rate throughout the strip. There appears to be a balance of sympathetic and parasympathetic tone with the higher heart rate and the variation in the R-R intervals. There are no other arrhythmia on this strip. The PR intervals are normal 110 msec. The P waves are enlarged, which may be an indication finding but may also be an indication of atrial enlargement. The rest of the QRS-T complex appears normal R/O pulmonary HT

Abnormal PE/Chem/CBC/UA Results: N/A

**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	--	--	1.0	1.48	40	90	0.2
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	--	1.60	1.00	--	2.21	2.6	--

**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**

I do not believe that there is any primary cardiac cause of the clinical signs. However, Holter monitor could be considered to assess for arrhythmogenic disease that may be inducing syncope. Otherwise, full CNS examination warranted with, ideally, CT with contrast of the skull to assess for primary CNS disease. A Holter monitor may be obtained from our office with cardiology review.

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**SonoPath CT Services** are offered at the [Blairstown Animal Hospital](#). Blairstown animal hospital is just a 30-minute drive west on route 80 from the route 80/287 interchange/Parsippany, New Jersey. More information can be found at:

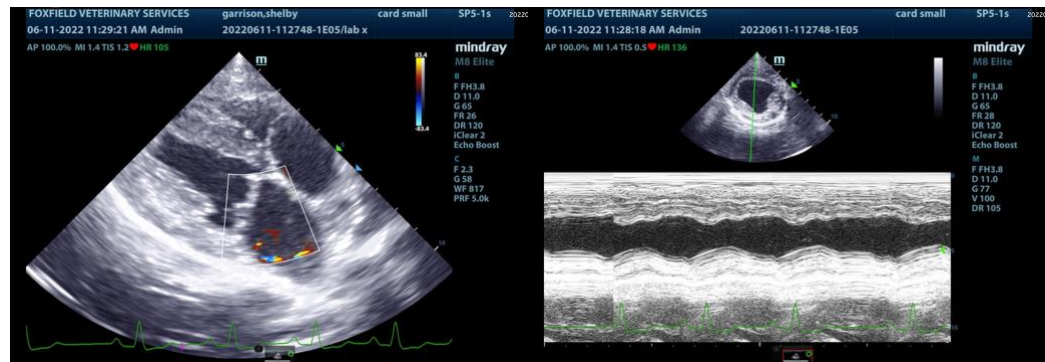
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<https://sonopath.com/resources/sonopaths-teleconsultation-services-and-sdep-certification/sonopath-ct-services>

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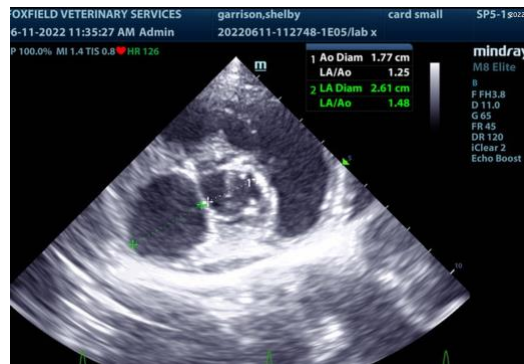
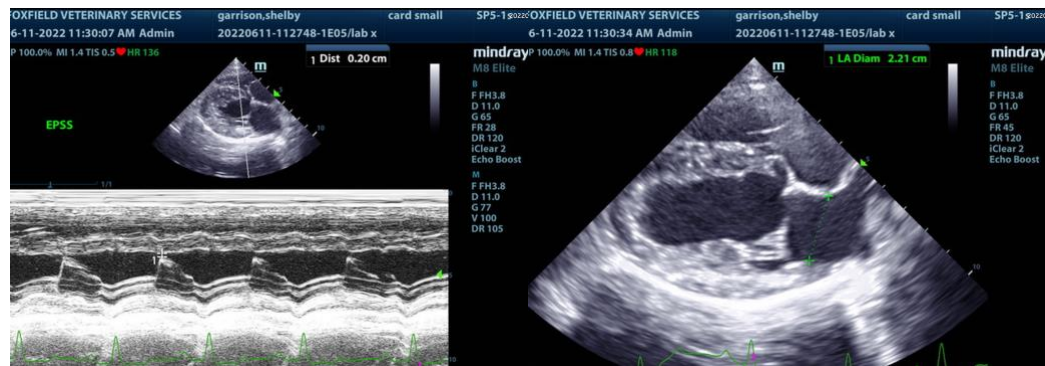
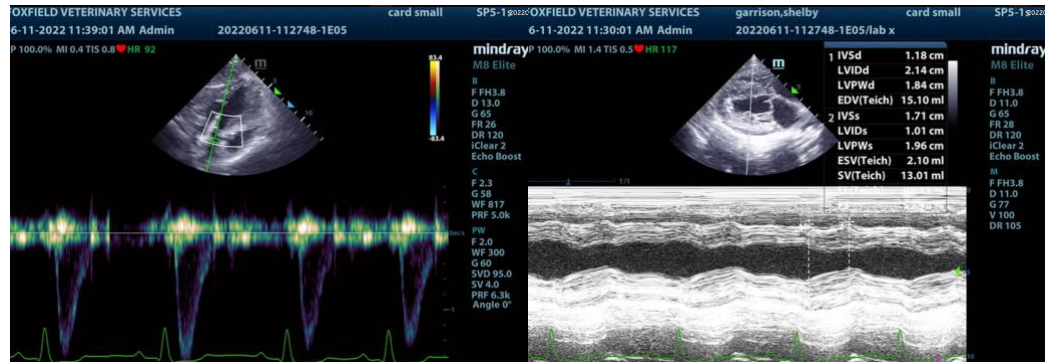
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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