


**PATIENT PRESENTING CLINICAL SIGNS**

**Toffee Broening** History: hx of grade 1 murmur; recent onset of exercise intolerance and increased respiratory rate. On apoquel, vetprofen

**SPECIES** Abnormal PE/Chem/CBC/UA Results: n/a

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**
**BREED**

Mix

**SEX**

FS

**AGE**

6 yr

**WEIGHT**

11.4 lb

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			1.33	1.3	52.5	85.7	0.11
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	92	1.4	0.9		2.2	2.2	

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**  
Diane McFadden

**HOSPITAL NAME**

Mount Olive Veterinary  
Hospital

**REFERRING VET**

Dr. Jones

**INVOICE**

10832ag

**DATE**

06/17/2022

**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.

**ULTRASONOGRAPHIC FINDINGS**

- Normal echocardiogram



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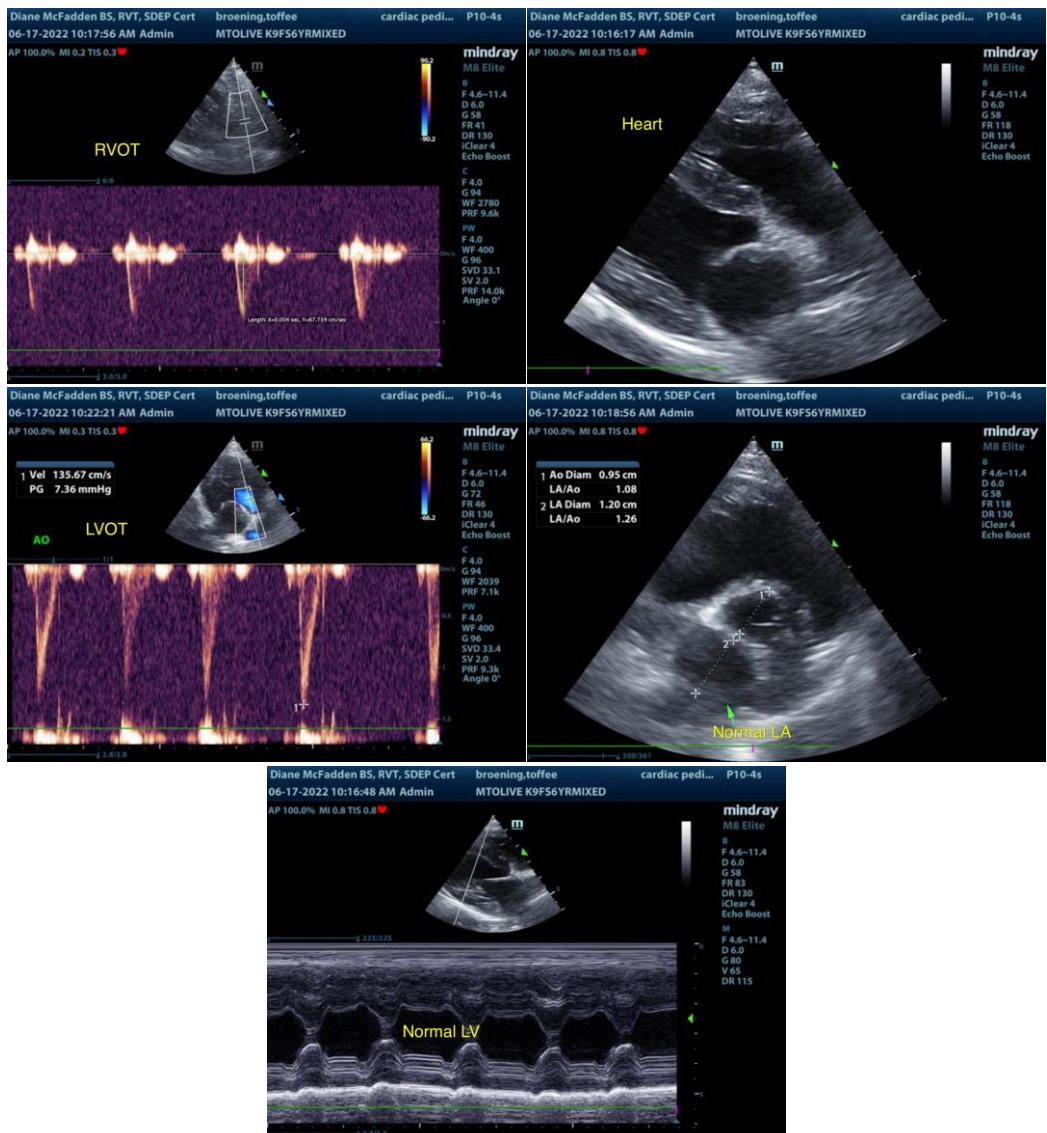
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Normal cardiac structure and function without a definitive cause of the low grade murmur was identified in today's study. If no evidence of volume changes such as dehydration or evidence of anemia, a benign physiologic or flow murmur could be present although a non-visualized small flow abnormality cannot be excluded. No clinical issues such as left or right heart chamber enlargement, LV systolic dysfunction or evidence of clinical pulmonary hypertension were noted. Given the overall normal cardiac presentation the exercise intolerance and increased respiration rate exhibited by this patient did not appear to be cardiogenic in origin. Three view chest radiographs if not done are suggested to assess for evidence of thoracic abnormalities. Conservative monitoring of the murmur is recommended with no indication for cardiac medications based on this study. A recheck echocardiogram is suggested in 6-12 months, sooner if murmur intensity increases or if clinical signs of heart disease arise.





## PATIENT

Toffee Broening

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.

## SPECIES

Canine

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.

## BREED

Mix

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com

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## AGE

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## WEIGHT

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