



**PATIENT**

Remy Lillo

**SPECIES**

Canine

**BREED**

Mixed

**SEX**

M/N

**AGE**

2.5 years

**WEIGHT**

71.8

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Tracy Nyberg

**HOSPITAL NAME**

Stuga North VC

**REFERRING VET**

Dr. Tracy Nyberg

**INVOICE**

14227

**DATE**

7/6/22

**PRESENTING CLINICAL SIGNS**

Murmur noted first late May--left sided heart murmur (~grade II). Asymptomatic  
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)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>			1.22	1.2	36	69	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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	1.0	0.9		4.0	4.2	

**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.

**ULTRASONOGRAPHIC FINDINGS**

- Normal echocardiogram



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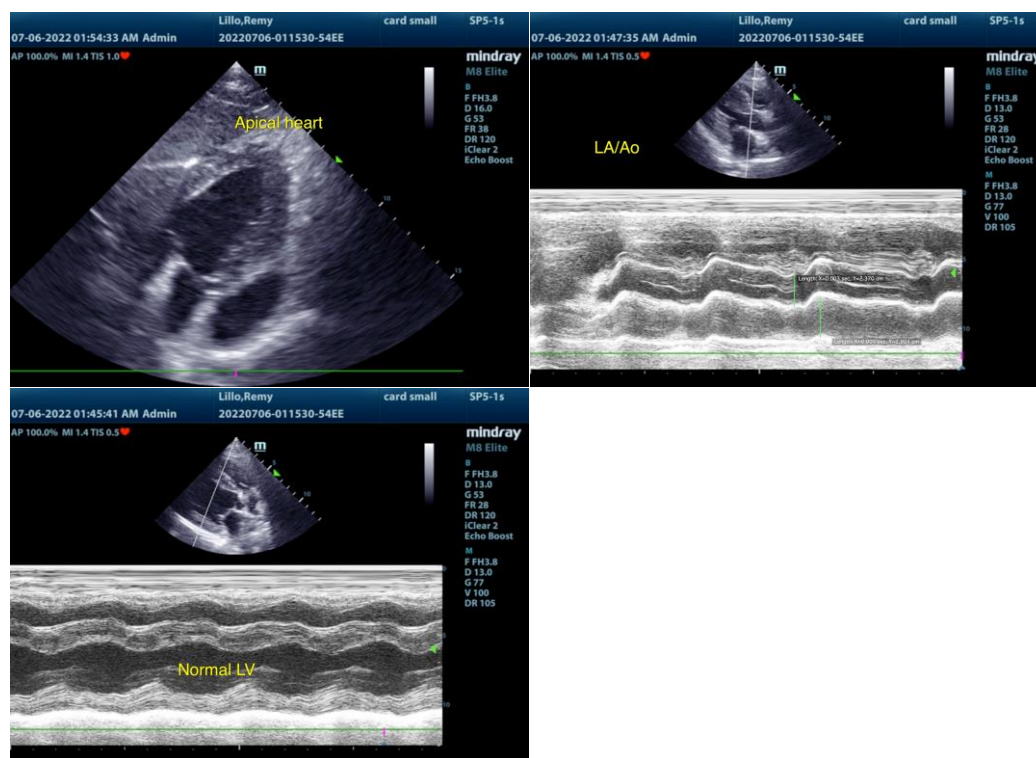
7/6/22

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overtly normal cardiac structure and function without evidence of clinical issues such as LV systolic dysfunction or left or right heart chamber enlargement. No overt evidence of significant valvular disease i.e., insufficiency or stenosis as an obvious cause of the murmur.

Assuming no evidence of volume changes such as dehydration or evidence of anemia, a benign physiologic flow murmur or small flow abnormality not visualized could be possible. Regardless, the hemodynamic effects of the low-grade murmur appear to be minimal to low, given the lack of left or right heart chamber enlargement.

Conservative monitoring of the murmur for evidence of progression is recommended. No indication for cardiac medications. Recheck echocardiogram is suggested in 6-12 months, sooner if the murmur is progressive or if clinical signs consistent with heart disease arise.



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.