



**PATIENT**

Lily Petolino

**SPECIES**

Canine

**BREED**

Pitbull mix

**SEX**

FS

**AGE**

8 years

**WEIGHT**

69 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Legacy AH

**REFERRING VET**

Dr. Kristin

**INVOICE**

16759

**DATE**

5/4/23

**PRESENTING CLINICAL SIGNS**

Patient presents for heart murmur, hypertension - on Benazpril.

Current meds: Denamarin, PMG, Benazapril, Thyro-tab 0.3.

Abnormal PE/Chem/CBC/UA Results: ALP 250. UPC: 0.7, USG 1.050.

**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	<1.6	28-40	40-100	<0.6
PATIENT			1.4	1.3	38	74	0.25
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	BELOW	BELOW	BELOW	BELOW
PATIENT	105	1.4	1.0		3.8	3.6	

**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. Mild centralized to mildly eccentric MR was present on Doppler. 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. No arrhythmia was noted.



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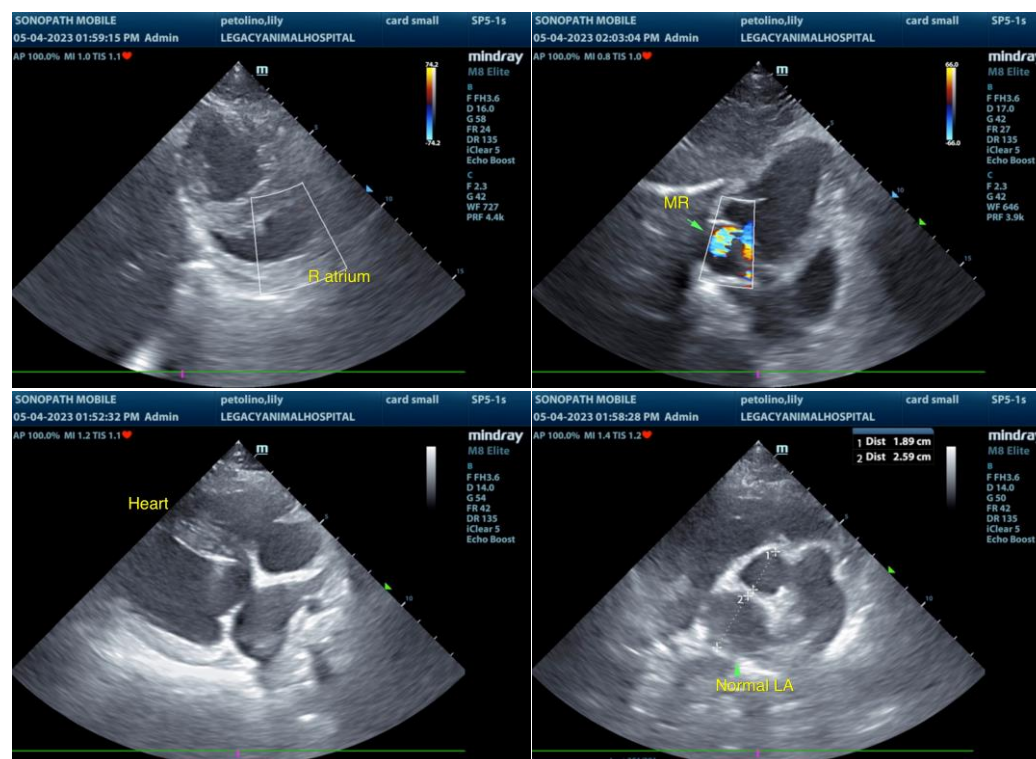
## ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Minor MR

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No was no evidence of structural or functional cardiomyopathy with mild MR present on Doppler. The hemodynamic effects of the MR are minimal, given lack of left atrium enlargement.

There is no indication for cardiac medications. A definitive cardiac tumor or pericardial pulmonary nodule was not overtly visualized. The possibility of a small pericardial pulmonary nodule surrounded by air, which would preclude sonographic assessment, cannot be definitively excluded. If clinical concern for a non-visualized nodule in conjunction with radiographs, thoracic CT would likely be ideal. Conservative monitoring of the murmur at this stage is recommended echocardiogram is suggested in 8-12 months, sooner if clinical signs consistent with cardiac 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.



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

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