



PATIENT

Delilah Patton

SPECIES

Feline

BREED

DSH

SEX

FS

AGE

12 years

WEIGHT

8.1 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Sorbo

HOSPITAL NAME

Mill Brook AC - VBF

REFERRING VET

Dr. Sorbo

INVOICE

17195

DATE

6/29/23

PRESENTING CLINICAL SIGNS

Murmur identified on admission for dental surgery.

Abnormal PE/Chem/CBC/UA Results: Grade IV/VI LHB systolic murmur, II-III/VI RHB systolic murmur. On 0.3mg/kg butorphanol and 27mg/kg gabapentin for blood pressure and echo. BP 200mmHg systolic doppler (avg).

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		NM	0.47	1.65	0.49	50	82
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT		1.36	1.3	1.3	1.0	NM	
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. Minor MR was present on Doppler. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Normal measured LVOT velocity was noted. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. No overt TR was noted on Doppler. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Normal measured RVOT velocity was present. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window. No arrhythmia was noted.



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ULTRASONOGRAPHIC FINDINGS

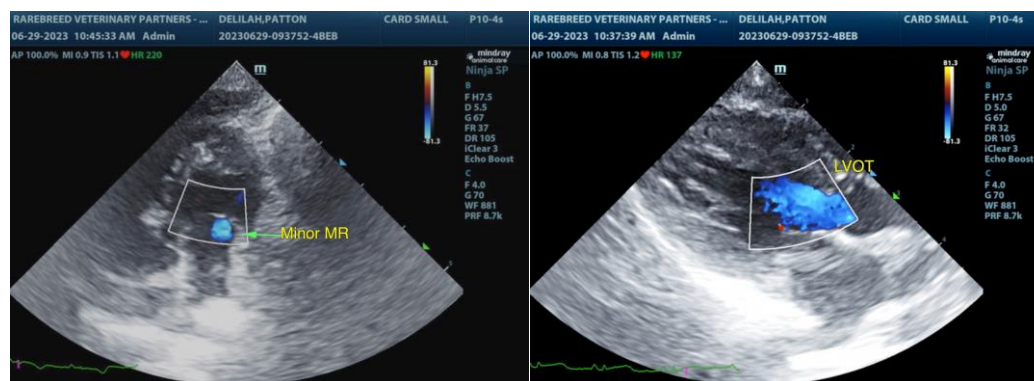
- Overtly normal cardiac structure and function with mild LV myocardial remodeling
- Minor MR

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no sonographic evidence of significant cardiomyopathy, including no evidence of HCM criteria, left or right heart chamber enlargement, LV systolic dysfunction, or clinical pulmonary hypertension. The audibility of the MR is questionable, given minor MR on Doppler. No other evidence of significant valvular insufficiencies or stenotic disease. No evidence of systolic anterior motion of the mitral valve. A benign physiologic / flow murmur is suspected, although potentially a non-visualized flow abnormality cannot be definitively excluded. Regardless, the hemodynamic effects of the murmur appear to be minimal, given the lack of left or right heart chamber enlargement.

Conservative monitoring of the murmur at this stage would be reasonable. There is no overt indication for cardiac medications. Sonographic monitoring for further prognosis is advised. Recheck echocardiogram is recommended in 6 months, sooner if clinical signs arise or if murmur intensity increases. There are no overt anesthetic contraindications, assuming systemic hypertension if confirmed, is controlled. The following anesthetic protocol is suggested.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.





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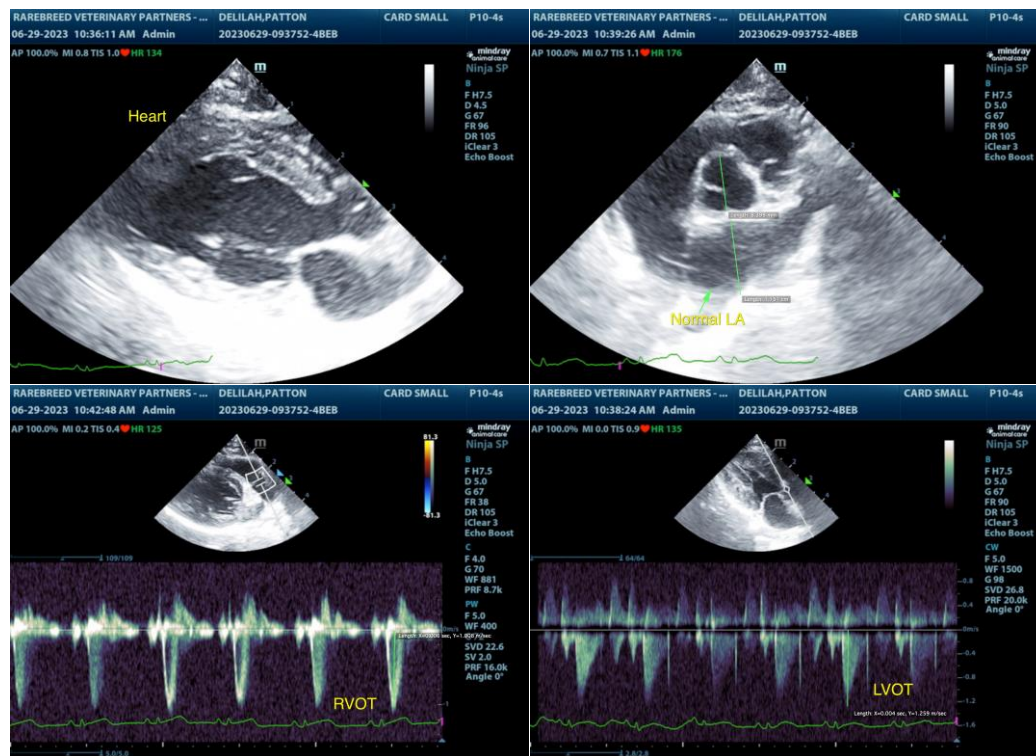
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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