


**PATIENT PRESENTING CLINICAL SIGNS**

Buddy Varrone History: Grade III/VI systolic murmur

**SPECIES**

Feline

Abnormal PE/Chem/CBC/UA Results: Bun 69, Creat 3.6, Amyl 1654, Presc. PSL 86, RBC 4.9, Hgb 7.5, Hct 23, Lymphs 16, Eos 14, Abs. lymphs 1120

**BREED**

DSH

**SEX**

MN

**AGE**

16 years

**WEIGHT**

11.56 lb

**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		163	0.44	1.95	0.45	55.6	88.4
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	1.7	1.6	1.6	1.1	0.72	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							

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Shari Reffi CVT

**HOSPITAL NAME**

ACC Flanders

**REFERRING VET**

Dr. Hallihan

**INVOICE**

10564ag

**DATE**

05/10/2022

**Cardiac Presentation**

The echocardiogram in this patient demonstrated borderline increased left atrial size based on 3 separate LA measurements. No evidence of spontaneous contrast or smoke. The cranial and caudal mitral valve leaflets presented minor subjective thickening with normal kinetics. Minor MR present on Doppler. The left ventricle presented normal thicknesses with areas of mild asymmetry and subjective mild increased LV volume. The myocardium presented increased echogenicity suggestive of fibrosis and evidence of myocardial remodeling. Mildly prominent to remodeled papillary muscles were present. 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 and angles of the myocardium. The left ventricular outflow tract demonstrated mild dynamic to turbulent systolic flow yet normal subjective structural integrity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology and kinetics. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic 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 or extra cardiac pathology in the visible planes. The cranial mediastinum and pericardial regions were free of masses in the visible window.



## PATIENT ULTRASONOGRAPHIC FINDINGS

Buddy Varrone

- LV myocardial remodeling with mild increased LV volume
- Borderline LA enlargement
- Subjective mild turbulent to dynamic LV outflow, no overt systolic anterior motion (SAM) of the mitral valve

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## BREED

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Overall, the heart appears to be compensated given the borderline LA enlargement and without additional clinical issues such as LV systolic dysfunction or significant valvular insufficiencies. Primarily age related myocardial remodeling with probable physiologic or flow murmur potentially associated with mild dynamic to turbulent LV outflow is suspected. No overt indication for cardiac medications given this presentation. Conservative monitoring at this stage would be appropriate however serial sonographic monitoring is required for further assessment and prognosis. Recheck echocardiogram suggested in 6 months sooner if murmur intensity progresses or if clinical signs of heart disease arise.

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## REFERRING VET

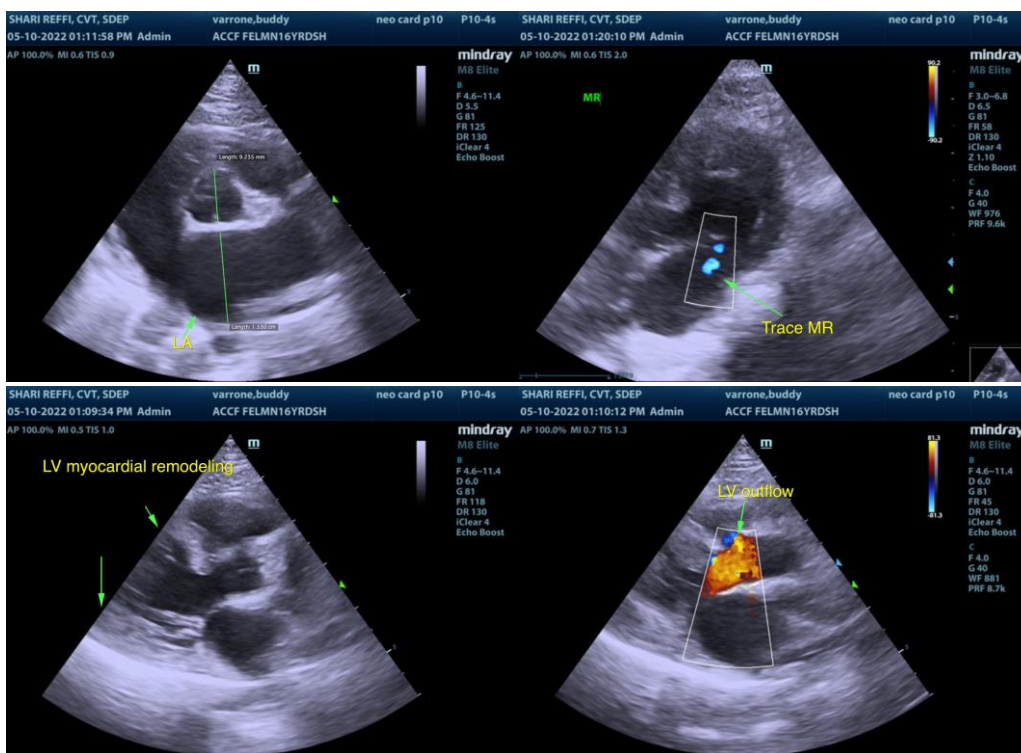
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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