



## PATIENT

Regina Lawrence

## PRESENTING CLINICAL SIGNS

Heart murmur detected on annual exam. No current meds.

## SPECIES

Feline

## BREED

DMH

## SEX

FS

## AGE

2.5yr

## WEIGHT

8lb

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Shari Reffi CVT

## HOSPITAL NAME

Fredon AH

## REFERRING VET

Dr. Grau

## INVOICE

13399ag

## DATE

04/04/2023

## 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		217	0.53	1.36	0.58	49	84
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	1.3	1.3	1.2	2.0	0.81		
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 based on 3 separate LA measurements. The cranial and caudal mitral valve leaflets presented normal linear structure and kinetics. Suspicion of mild SAM was visible on several videos. No overt MR on Doppler. The left ventricle presented normal thicknesses with linear contour and was not dilated nor restricted. Mildly prominent papillary muscle was present. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. The 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 outflow with normal structural integrity. Normal AV valve was present. 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. No overt TR present on Doppler. 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). Normal measured RVOT was present. 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.

## ULTRASONOGRAPHIC FINDINGS

- Mild dynamic to turbulent LV outflow with high normal LVOT velocity.
- Suspect mild SAM.
- Normal LA.



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SPECIES**

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The only cause of the murmur is mild dynamic to turbulent LV outflow and high normal measured LV outflow velocity. This is essentially a flow murmur with suspect mild SAM. Potentially this may indicate very early hypertrophic obstructive cardiomyopathy. The lack of left/right chamber enlargement indicates that the overall cardiac structure and function is normal. No indication for cardiac medications.

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DMH

Prognosis is highly variable and conservative serial sonographic monitoring is required for further assessment. Recheck echocardiogram recommended in 6 months, sooner if clinically indicated.

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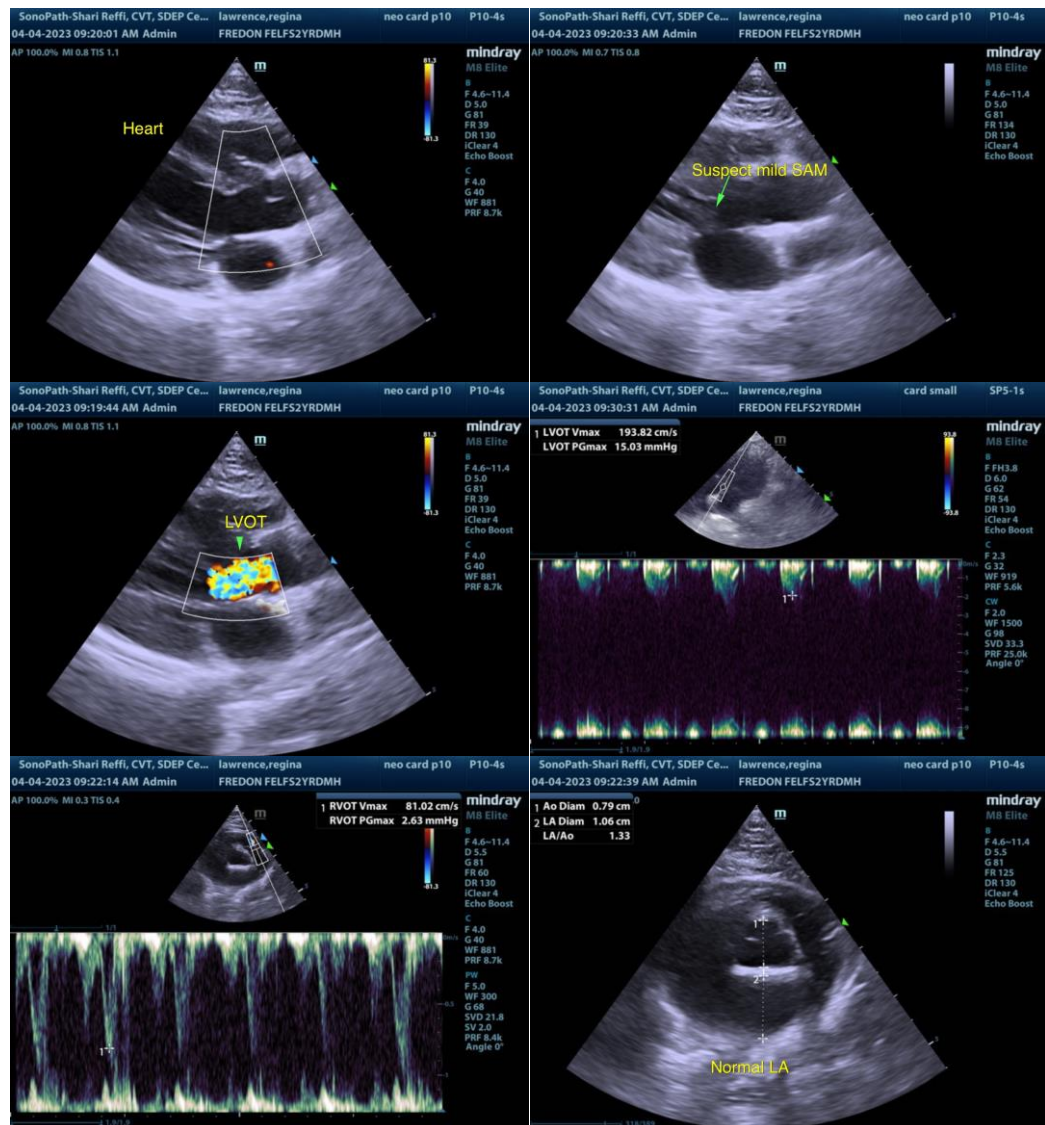
Dr. Grau

**INVOICE**

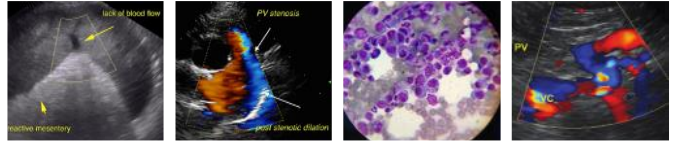
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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.

**SPECIES**

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