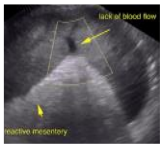
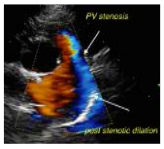
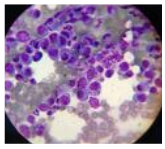
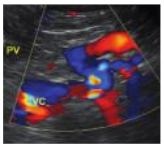
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Vinster Lee

**SPECIES**

Feline

**BREED**

DSh

**SEX**

MN

**AGE**

6 years

**WEIGHT**

11 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Warren AH

**REFERRING VET**

Dr. Nicole

**INVOICE**

13740

**DATE**

4/27/22

## PRESENTING CLINICAL SIGNS

III-IV/VI murmur, O believes has deep breathing at rest. No current meds

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

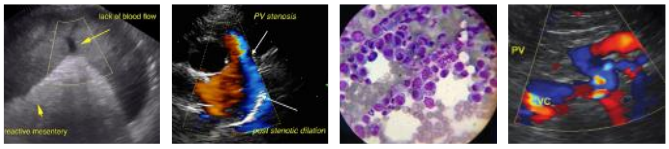
| **FELINE CARDIAC PARAMETERS** | **BODY WEIGHT** (kg) | **HR** (BPM) | **IVSd** (cm) | **LVIDd** (cm) | **LVWd** (cm) | **FS** (%) | **EF** (%) |
|---|---|---|---|---|---|---|---|
| **NORMAL PARAMETER** | ------ | 150-240 | 0.3-0.6 | 1.0-2.1 | 0.25-0.6 | 35-67 | 80-100 |
| **PATIENT** | | 207 | 0.64 | 1.38 | 0.46 | 50.9 | 85.5 |
| **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** | 1.1 | 1.1 | 1.3 | | 1.1 | 0.5 | NM |
| Adapted from June Boon,Veterinary Echocardiography,1998<br>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 overtly normal linear structure and kinetics. Minor centralized MR was present on doppler. The **left ventricle** presented borderline to mildly thickened IVS with normal LV free wall thickness, primarily maintained linear contour and was not dilated or restricted. Mildly prominent to remodeled papillary muscles were present. The **myocardium** exhibited overtly normal echogenicity without evidence of 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 and angles of the myocardium. The **left ventricular outflow** tract demonstrated mildly turbulent to dynamic systolic flow with 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.

## ULTRASONOGRAPHIC FINDINGS

- Borderline to mildly thickened IVS

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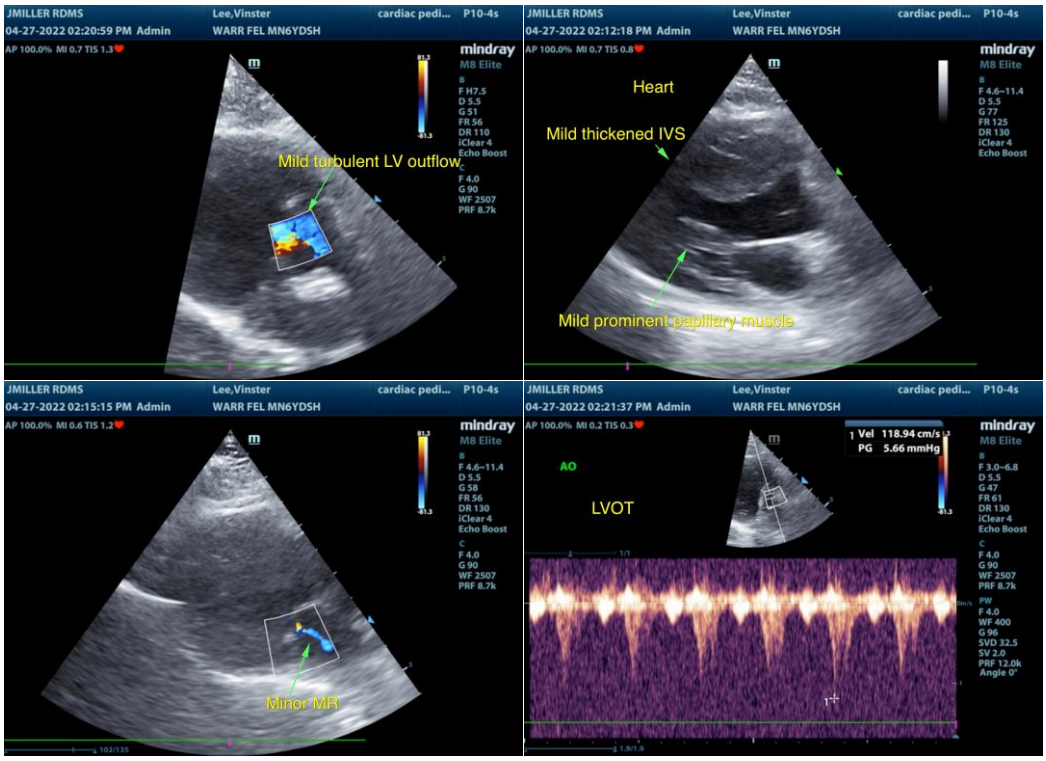
- Minor MR
- Subjective mildly turbulent to dynamic LV outflow

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, no evidence of significant structural or functional cardiomyopathy. The only source of the murmur is suspected to be secondary to mildly dynamic to turbulent LV outflow. Without overt evidence of systolic anterior motion (SAM) of the mitral valve, the cause of the murmur essentially equates to a flow murmur. However, the possibility of mild SAM cannot be definitively excluded. The borderline to mildly thickened IVS Is nonspecific, yet may potentially indicate a mild or emerging form of HCM.

Regardless of classification, the lack of clinical issues such as LA/LV enlargement Indicates that the risk of complication is low at this stage. No indication for cardiac medications was noted. Conservative monitoring at this stage would be appropriate. Recheck echocardiogram is suggested in 6 months, sooner if murmur Intensity progresses or If clinical signs suggestive of heart disease arise. If not recently done, assessment of systemic BP, as well as T4 levels, are recommended to rule out contributing factors.



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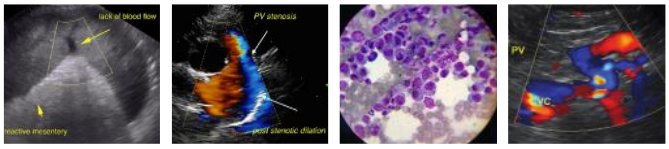


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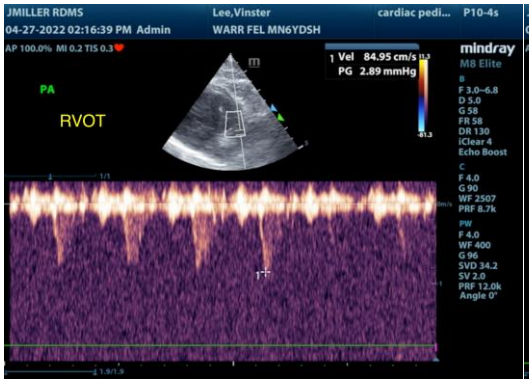


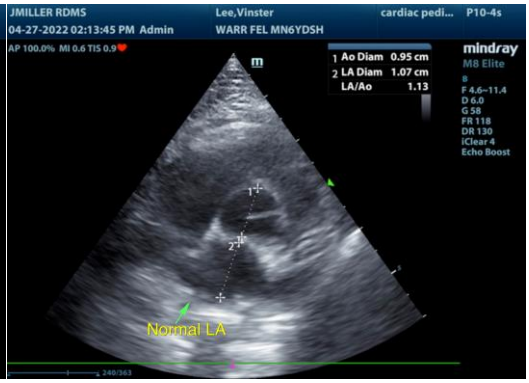


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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)**
**info@SonoPath.com**