



**PATIENT**

Sneezy Wolf

**SPECIES**

Feline

**BREED**

DMH

**SEX**

Female Spayed

**AGE**

15 years

**WEIGHT**

11.6lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Fred Gromalak, DVM

**HOSPITAL NAME**

SVS Imaging

**REFERRING VET**

Dr. Bloss

**INVOICE**

20839

**DATE**

9/1/21

**PRESENTING CLINICAL SIGNS**

History: 1 year history grade 1/6 SYS murmur, now 3/6. diet K/D. Assess prior to dental.  
BP 137 SYS

-Abnormal lab results: T4 4.73 (0.8-4.7), BUN 35.4, Creat 2.3, remainder of CBC/profile normal.

**RADIOGRAPHIC FINDINGS** \*NOTE: Images submitted for supplemental cardiac information only.  
Normal cardiac silhouette. No obvious evidence of CHF.

**ELECTROCARDIOGRAPHIC FINDINGS** \*Note: Single lead ECGs are evaluated as a rhythm strip.  
Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; unlabeled; 50mm/s is assumed. The reported HR is 200bpm which appears accurate (mm marks cannot be visualized). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed.

ECG diagnosis: Normal sinus tachycardia

**ECHOCARDIOGRAM FINDINGS** \*Limited Images available.

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is borderline normal in dimension. There is a diffusely hyperechoic endocardium consistent with fibrosis and remodeling. The endocardium also appears remodeled. The MV appears normal. An obstruction is not captured on 2D or doppler; however, color flow suggests an LVOTO with mild eccentric MR. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. Blood flow through the RVOT is normal in velocity. No obvious TR. There is no pleural or pericardial effusion seen. There are no obvious cardiac tumors.

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
<b>NORMAL PARAMETER</b>	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
<b>PATIENT</b>	5.0	250	0.55	1.14	0.55	46	82
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) (Abbott)	LA 2D short axis Base view (cm) (Abbott)		LVOT VEL (m/s)	RVOT VEL (m/s)	E max (m/s)
<b>NORMAL</b>	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
<b>PATIENT</b>	NM	1.3	1.2		1.56	0.9	NM
<p>*Note: All measurements based upon multi-modal images and methods. An average value is reported. Adapted from June Boon, Veterinary Echocardiography, 1998 Abbott J &amp; MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.</p>							



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

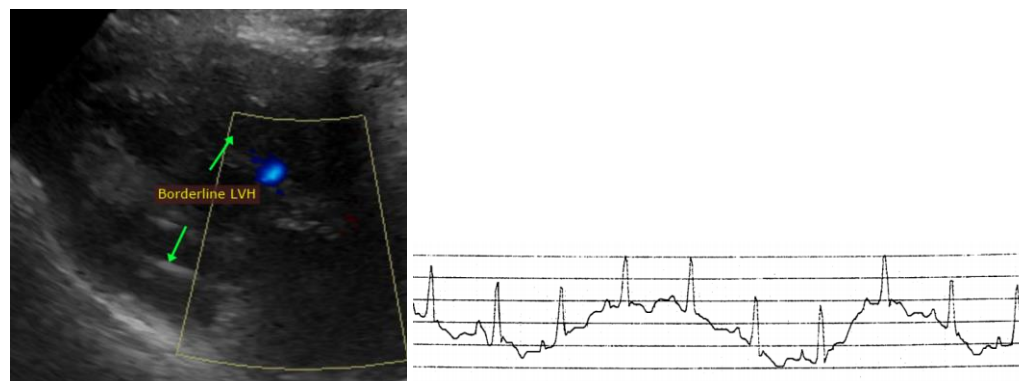
Overtly normal cardiac structure and function. The murmur is likely due to a dynamic LVOT obstruction and mitral regurgitation secondary to abnormal valve movement and elevated heart rates. This is presumptive as Doppler flows were not confirmed. There is also borderline LV wall dimensions, in addition to mild remodeling and fibrosis of the left ventricular wall. These changes may be indicative of early cardiac disease (HOCM) or may simply represent a normal variant. Serial echocardiography will be necessary to determine progression and clinical relevance of both findings. A screening BP and T4 are recommended. The ECG is limited, yet what can be seen appears normal without obvious dysrhythmias.

In patients with persistent LVOT obstruction and an elevated pressure gradient, a beta blocker is often prescribed to lower heart rate and decrease the gradient. In this patient with a mild obstruction and borderline normal LA/LV dimensions, no medications are clearly indicated.

From a structural standpoint, anesthetic risk is currently low. Avoid heart rate stimulating drugs (atropine, glycopyrrolate) unless clinically necessary. Avoid vasodilators such as acepromazine as this can worsen obstruction. Judicious IV fluid rates are recommended to avoid fluid overload in this patient with diastolic dysfunction.

A recheck echocardiogram is recommended in 6-12 months, sooner if any clinical signs arise.

**IMAGES**



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

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**Maggie Machen Lamy, DVM**  
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