



**PATIENT**

Mazie Biondello

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Male Neutered

**AGE**

6 years

**WEIGHT**

17.4lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

West Eugene Animal  
Hospital

**REFERRING VET**

Dr. Powers

**INVOICE**

30724

**DATE**

5/10/23

**PRESENTING CLINICAL SIGNS**

History: Erratic breathing pattern, tachypnea and lethargy since 5/6/23. Grade 4/6 heart murmur noted in 11/2022.

**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; 50mm/s, 20mm/mV. The average heart rate is 230bpm with a regular rhythm. 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**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is largely normal in dimension with regions of irregularity. There is a mildly hyperechoic endocardium consistent with fibrosis and remodeling. The endocardium also appears remodeled. The MV appears normal. An intermittent LVOT obstruction is suspected on color flow and 2 D imaging (not captured on Spectral doppler). Mild to moderate eccentric MR. The left atrium is normal in size. The right atrium is normal. 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) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 <small>(mean 1.5)</small>	3.5-0.55	35-67	80-100
PATIENT	7.9	NM	0.52	1.6	0.46	58	92
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>		LVOT VEL <small>(m/s)</small>	RVOT VEL <small>(m/s)</small>	E max <small>(m/s)</small>
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	NM	1.3	1.3		1.0	0.8	NM

*\*Note: All measurements based upon multi-modal images and methods. An average value is reported.  
 Adapted from June Boon, Veterinary Echocardiography, 1998  
 Abbott J & 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.*

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overtly normal cardiac structure and function. The murmur is likely due to an intermittent LVOT obstruction, secondary to abnormal valve movement at elevated heart rates. There are also irregular 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. No additional issues are identified and the ECG is unremarkable with a normal sinus tachycardia.



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These findings would suggest the respiratory changes are certainly noncardiac in origin. Further respiratory workup/treatment should be dictated CXR results.

**SPECIES**

Feline

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.

**BREED**

DSH

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.

**SEX**

Male Neutered

A recheck echocardiogram is recommended in 1 year, sooner if any clinical signs arise.

**AGE**

6 years

**IMAGES**

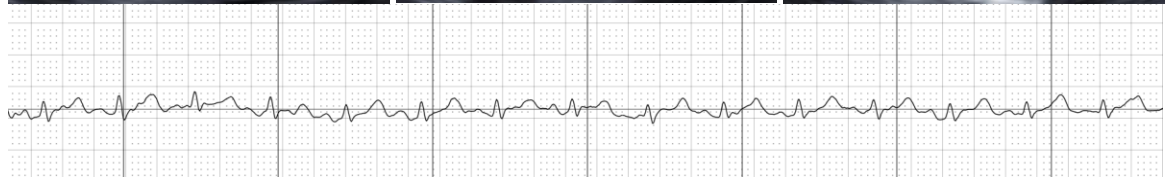


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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**HOSPITAL NAME**

West Eugene Animal Hospital

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.

**REFERRING VET**

Dr. Powers

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