


**PATIENT**

Zoe Chihrin

**PRESENTING CLINICAL SIGNS**

History: Grade 3/6 heart murmur.

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Female Spayed

**AGE**

11 years

**WEIGHT**

7lbs

**INTERPRETED BY**

 Maggie Machen Lamy,  
 DVM DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Kelly Reschny, RVT

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a mildly hyperechoic endocardium consistent with fibrosis. The endocardium also appears mildly remodeled. The papillary muscles appear mildly remodeled. The left atrium is normal in size. Blood flow through the LVOT appears normal with no evidence of obstruction. The right atrium is normal in size. The right ventricle appears normal. The tricuspid valve appears normal in structure and mobility. No tricuspid regurgitation. The mitral valve is normal in structure and mobility. No mitral regurgitation. Blood flow through the RVOT is borderline elevated in velocity based upon Doppler; however, a dynamic RVOT is suspected. No evidence of cardiac tumors or metastatic lesions on this scan.

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LWVd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.18	213	0.41	1.1	0.41	46	81
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)	
NORMAL	<1.5	<1.3	<1.2	<1.6	<1.3	<0.9	
PATIENT	1.1	1.0	1.0	1.1	1.4	NM	
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> 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.							

**HOSPITAL NAME**

 Simcoe Animal  
 Hospital

**REFERRING VET**

Dr. Aliaga-Leyton

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The only cause of a murmur identified is a suspect heart rate dependent flow obstruction through the right ventricle (DRVOTO), which is a physiologic finding (i.e., benign and of little clinical significance). This type of flow murmur will wax and wane secondary to tachycardia and volume changes. There is also mild remodeling and fibrosis of the LV, which is likely a normal variant. Regardless, the left atrial dimension is normal, indicating low risk for complication at this time. Serial echocardiography will be necessary to determine progression and clinical relevance of the findings in the future.

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Given these findings, no medications are indicated at this time.

If needed, the risk for general anesthesia is low, however heart rate stimulating drugs such as atropine, glycopyrrolate or ketamine should be avoided unless medically necessary.

Even without significant pathology, with this degree of remodeling and diastolic stiffening



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there is a mildly elevated risk for fluid overload in this patient. Judicious IV fluid use is recommended. Additionally, a screening blood pressure is recommended in any older cat prior to general anesthesia.

**SPECIES**

Feline

Risk for complication with steroid use typically follows LA dilation, which in this case is low. That being said, any cat can experience unexpected signs of intolerance and monitoring of RR/RE is advised particularly in the initiation phase.

**BREED**

DSH

Recommend recheck echocardiogram in 1 year to assess for progression or development of disease the pre-existing murmur may mask.

**SEX**

Female Spayed

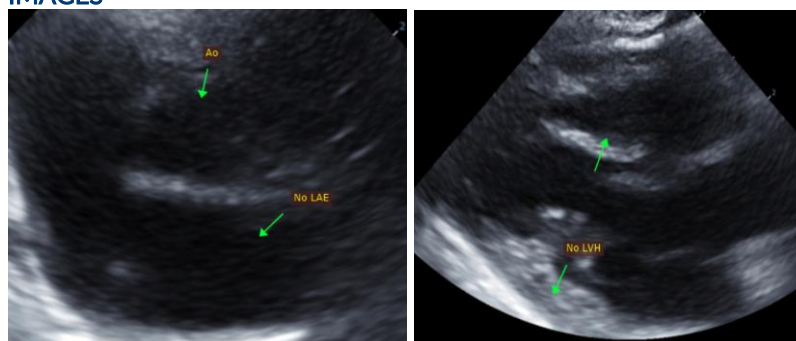
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**IMAGES**



**INTERPRETED BY**

Maggie Machen Lamy,  
DVM DACVIM  
(Cardiology)

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.

**IMAGING PERFORMED BY**

Kelly Reschny, RVT

**Maggie Machen Lamy, DVM**  
**Diplomate of the American College of Veterinary Internal Medicine (Cardiology)**  
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