



**PATIENT**

Fuzzy Dimmick

**SPECIES**

Feline

**BREED**

DLH

**SEX**

Male Neutered

**AGE**

9.4.11

**WEIGHT**

8.4lbs

**PRESENTING CLINICAL SIGNS**

History: Diagnosed with hyperthyroidism April 2022. Treated with 4 mg methimazole daily.

Recent exam revealed new heart murmur. Also, one pound weight loss since April 2022.

-Pertinent abnormal PE/Chem/CBC/UA Results: T4 at 6.5 on 4 mg methimazole daily. As of Dec 19th 2022, we increased the dose to 6 mg methimazole daily. ProBNP at 221 (high end of normal 100) while T4 at 6.5. First time testing ProBNP.

-Current medications: 6 mg methimazole SID

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results: No previous.

-STAT: Not requested

-Imaging performed by: Stephanie Warga RDCS, RVT.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a diffusely 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 mildly elevated in velocity based upon Doppler and color flow, likely secondary to tachycardia creating a benign outflow tract obstruction. No evidence of cardiac tumors or metastatic lesions on this scan.

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Harborside Mobile  
Veterinary Clinic

**REFERRING VET**

Dr. Hawkins

**INVOICE**

28898

**DATE**

2.9.23

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LVWd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.8		0.45	1.3	0.43	53	88
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 (m/s)	RVOT VEL (m/s)	E max (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	NM	1.1	1.0		1.5	1.9	NM

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

The only cause of a murmur identified is a heart rate dependent flow obstruction through the right ventricle (DRVOTO), which is a physiologic finding (ie benign and of little clinical significance). This type of flow murmur will wax and wane secondary to tachycardia and volume changes. LV remodeling and fibrosis is noted, which is likely a normal age-related variant. Monitoring for progression is advised. Regardless, the left atrial dimension is normal, and there is minimal risk for complication at this time. Serial echocardiography will be necessary to determine progression and clinical relevance of the findings in the future. No evidence of thyrotoxic cardiomyopathy at this time; however, continued management of the thyroid is certainly recommended.

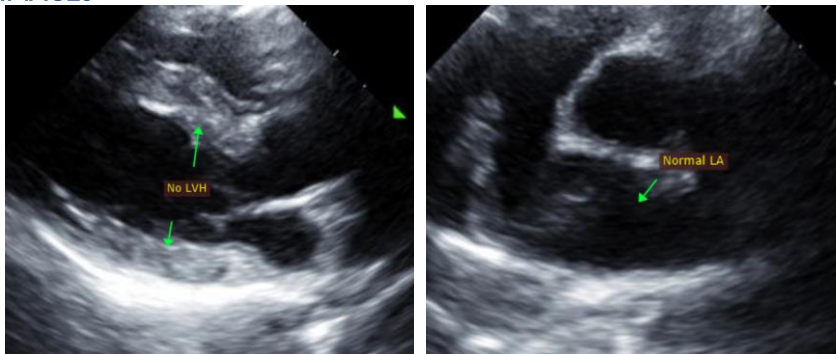
Given these findings, no medications are indicated at this time.

If needed, the risk for general anesthesia is low. That being said, even without significant pathology with this degree of remodeling and diastolic stiffening 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 cat prior to general anesthesia.

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.

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

## 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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