

IMAGING PERFORMED BY

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**PATIENT**

Ryan Butler

**SPECIES**

Feline

**BREED**

NP

**SEX**

Male Neutered

**AGE**

9 years

**WEIGHT**

14.9lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Stephanie Pearce,  
RDCS, RVT

**HOSPITAL NAME**

Chadwell Animal  
Hospital

**REFERRING VET**

Dr. Oliveri

**INVOICE**

22326

**DATE**

12/7/21

**PRESENTING CLINICAL SIGNS**

History: Grade III murmur. Assess prior to dental.

-Current medications: Fluoxetine 10mg 1/2 QD.

-Blood pressure: 140mmHg.

-Sedation used: Not required for a full diagnostic ultrasound.

-Pertinent previous ultrasound results: 10-25-2016 per veterinarian but no record.

-STAT: Not requested.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is moderately hypertrophied with regions of irregularity and a discrete septal bulge. Regions of thinning. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Severe papillary muscle hypertrophy. LV function is mildly depressed. Severe LA dilation. The right ventricle is subjectively normal in size and morphology. No right atrial enlargement present. Normal RVOT velocity. There is severe systolic anterior motion (SAM) of the mitral valve present, with an elevated LVOT velocity (3.5m/s). There is moderate eccentric mitral regurgitation present secondary to SAM; vel normal. No other obvious valvular regurgitation is present. There is no pericardial effusion noted. No pleural effusion appreciated.

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LWWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	6.8	160	0.73	1.5	0.72	33	60
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	NM	2.3	2.0		3.1	1.0	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 diagnosis is hypertrophic obstructive cardiomyopathy. This indicates LV thickening (moderate/irregular in this case), with a dynamic LVOT obstruction (SAM). There is severe left atrial dilation present, which unfortunately carries a high risk going forward for spontaneous CHF, blood clot events and/or sudden death at home.

Even with left atrial enlargement, utilization of medications in subclinical feline cardiomyopathy cases is of debatable benefit. Given the degree of disease however, I would consider use of Benazepril (for both vasodilatory and anti-fibrotic benefits), spironolactone (for anti-aldosterone benefits) and Plavix as an anti-coagulant if the patient is able to be medicated. Atenolol is typically indicated to help decrease the obstructive portion of disease; however, this patient has mild LV dysfunction, and I would not utilize this at this time. Lasix is not clearly indicated prior to clinical signs; however, close monitoring of sleeping breathing rates is recommended going forward.

Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.).

Anesthetic risk is significantly elevated, with high risk for fluid overload, spontaneous CHF, hypotension, etc. Medications should be initiated for at least 2-3 days prior. Referral to a specialty hospital with an Anesthesiologist may be beneficial. Judicious IV fluid rates are advised to avoid fluid overload. Drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid ketamine, telazol, acepromazine and Dexdomitor.

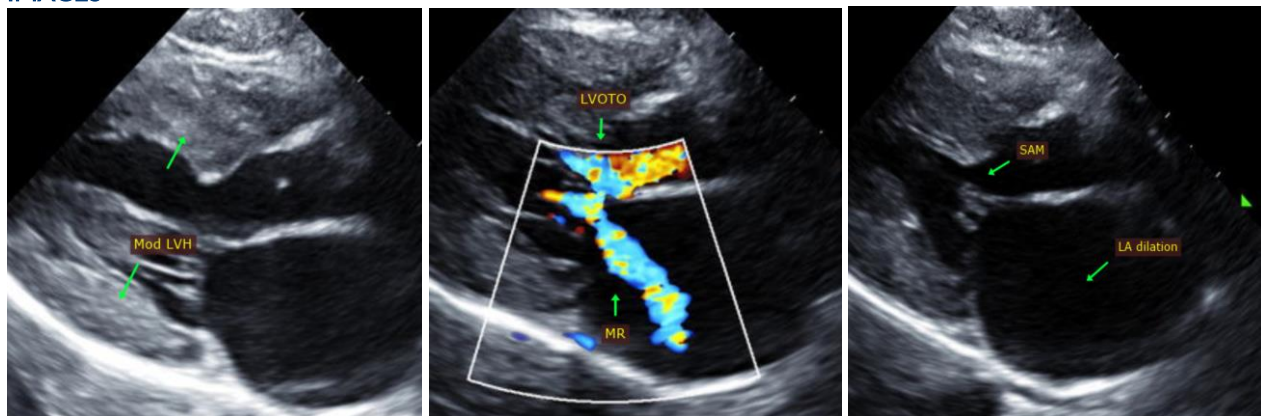
## PLAN

Institute spironolactone 6.25mg PO q12h. Institute ACEI 0.5mg/kg PO q12h. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges).

Screening blood pressure and T4 are recommended every 6 months.

Recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical issues 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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