



## PATIENT

Snape Mastel

## SPECIES

Feline

## BREED

DSH

## SEX

Male Neutered

## AGE

2 years

## WEIGHT

13.7lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

Greg Kuhlman, DVM

## HOSPITAL NAME

Red River Animal  
Emergency Hospital &  
Referral Center

## REFERRING VET

Dr. Kuhlman

## INVOICE

45712

## DATE

11/12/25

## PRESENTING CLINICAL SIGNS

History: New grade 5/6 heart murmur. Asymptomatic. BNP: 1222, T4: 2.2. BP: 102mmHg. CXR: normal. Sedated with Torb, Gabapentin and Trazadone.  
-ECG (Idexx): Sinus tachycardia with APCs and an LAFB.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular with mild hypertrophy overall. There is a mildly hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscle hypertrophy. The right ventricle is subjectively normal in size and morphology. There is no left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. The mitral valve appears elongated and thickened. There is systolic anterior motion (SAM) of the mitral valve present, with a severely elevated LVOT velocity (dynamic profile). There is moderate mitral regurgitation present secondary to SAM. 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)	LVWd (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	6.2	NM	0.63	1.2	0.67	58	90
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	1.2	1.1		1.1	4.5	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>							

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The diagnosis is hypertrophic obstructive cardiomyopathy. This indicates LV hypertrophy (mild in this case) with a dynamic LVOT obstruction (SAM) and secondary MR. A component of mitral valve dysplasia is also suspected, given the appearance of the valve and the young age of the patient. Regardless, there is no left atrial dilation, indicating the risk of spontaneous CHF and/or a thrombotic event, while currently low. A screening BP and T4 are recommended every 6 months, as both can exacerbate disease. That being said, in a young cat primary disease is suspected.

While no medications have been shown to definitively alter long term outcome at this stage of disease, atenolol is often initiated to decrease the outflow obstruction (particularly in light of tachycardia). Given the degree of hypertrophy and a severe obstruction, recommend initiate at this time as below. This may also be beneficial for reported APCs. If there is difficulty medicating at home, an alternative approach would be closely monitoring for progression in the next 6 months.



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Anesthetic risk is considered moderate, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance.

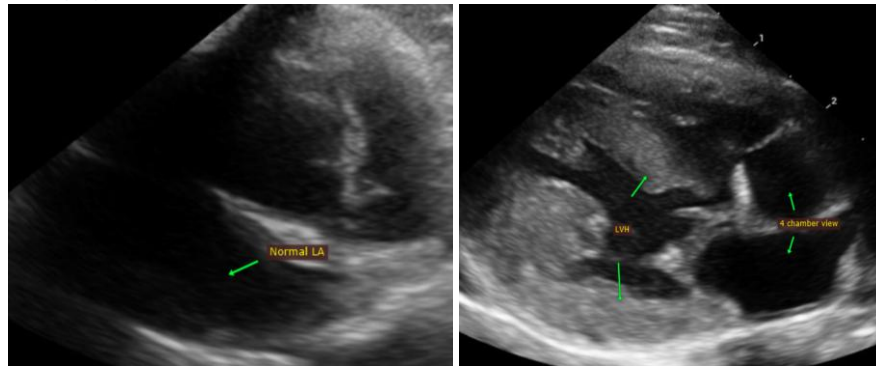
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

## PLAN

Screening BP/T4. Administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.

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.

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