



PATIENT

Joey Knittle

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

12 years

WEIGHT

11.5lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Melissa Weisman,
DVM

HOSPITAL NAME

Minnesota Veterinary
Ultrasound

REFERRING VET

Dr. Weisman

INVOICE

47246

DATE

3/22/26

PRESENTING CLINICAL SIGNS

History: Progressive, now grade 4/6 heart murmur. Weight loss. Indoor/outdoor cat with no history of vaccination or parasite protection. Sedated with Torb, Midazolam and Alfaxalone. No medications. -AUS (12/12025): showed bilobed gallbladder w/hyperechoic walls (especially dorsal walls), mildly distended but not overt duct enlargement; mottled and slightly hyperechoic liver texture; plump spleen w/scalloping and slightly hyperechoic margins; unable to identify pancreas due to gas; entire GI tract (stomach all the way to descending colon) moderate to marked gas and distended formed fecal material within rectum. -Abnormal PE/Chem/CBC/UA Results (12/3/25): ALT= 212, AST= 71, ALP= 91, RETIC HGB= 13.5, elevated BNP= 219

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly hypertrophied with an irregular appearance. There is a mildly hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle hypertrophy. The right ventricle is subjectively normal in size and morphology. There is mild left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. There is systolic anterior motion (SAM) of the mitral valve present. The LVOT velocity is normal; however, an obstruction is seen on multimodal imaging. There is mild eccentric mitral regurgitation present secondary to SAM. No other obvious valvular regurgitation is present. There is no pericardial effusion noted.

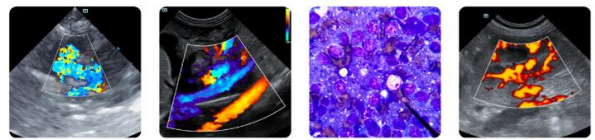
CARDIAC CHART

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	5.2	160	0.67	1.4	0.68	61	93
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	1.5	1.5		1.0	0.6	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

The diagnosis is hypertrophic obstructive cardiomyopathy (HOCM). This indicates LV hypertrophy (mild in this case) with a dynamic LVOT obstruction (SAM) and secondary MR. There is mild left atrial dilation, indicating the risk of spontaneous CHF and/or a thrombotic event, while currently low, may be elevated in the future. A screening BP and T4 are recommended every 6 months, as both can exacerbate disease. No additional issues are seen.



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Relatively mild structural disease is unlikely to explain weight loss and further systemic workup is recommended.

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. Given the degree of hypertrophy and mild LA dilation, consider initiate at this time as below. If there is difficulty medicating at home, an alternative approach would be closely monitoring for progression in the next 6 months. Discussion with the owner is advised. *Regarding the newly available drug Felycin:* This medication has not been tested in cats with a significant obstruction (i.e. HOCM) and is not recommended in this case.

Long term prognosis is guarded for subclinical HOCM, with a great deal of variability in rate of progression. The REVEAL study showed that approximately 7% of asymptomatic cats with HOCM will develop CHF or a cardiogenic thrombus within 1 year, 20% within 5 years, and ~30% within 10 years. Close monitoring for progressive LA dilation going forward will help better predict long term outcome.

Anesthetic risk is considered mildly elevated; however, judicious fluid administration is advised if needed with careful monitoring to screen for fluid overload. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Avoid ketamine, telazol, acepromazine and Dexdomitor. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine).

Risk for complication with steroid or fluid use typically follows LA dilation, which in this case is mildly elevated. If needed, monitoring of RR/RE is advised particularly in the initiation phase.

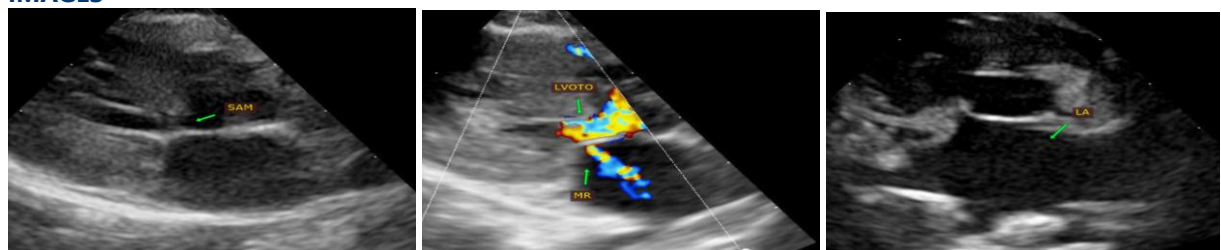
Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.) in the future.

PLAN

Screening BP/T4 every 6 months. 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. Further systemic evaluation as dictated by the clinical picture.

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

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.

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

Diplomate of the American College of Veterinary Internal Medicine (Cardiology)

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