



**PATIENT**

Brayden Fox

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Male Neutered

**AGE**

10 years

**WEIGHT**

29.6lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Melissa Weisman,  
DVM

**HOSPITAL NAME**

Minnesota Veterinary  
Ultrasound

**REFERRING VET**

Dr. Weisman

**INVOICE**

30407

**DATE**

4/24/23

**PRESENTING CLINICAL SIGNS**

History: Presented for wellness exam. Intermittent non-productive cough since January. Morbidly obese. Assess prior to anesthesia.  
-CXR report: Cardiomegaly. No CHF.  
BP: 193, 212, 206, 194, 191mmHg

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mild to moderately hypertrophied with an asymmetric appearance. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle hypertrophy with fibrosis (hyperechoic). The right ventricle is subjectively normal in size and morphology. There is mild to moderate left atrial enlargement present. No right atrial enlargement present. There is no obvious systolic anterior motion (SAM) of the mitral valve present, with a normal LVOT velocity. There is no mitral regurgitation present. No tricuspid regurgitation. 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)	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	13.4	NM	0.76	1.8	0.67	62	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	1.75	1.75		0.9	1.0	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**

Hypertrophic cardiomyopathy (HCM) is a rule out diagnosis once a patient is deemed normotensive and euthyroid. In this patient with elevated BP, this may or may not be related (see below). Regardless, the hypertrophy is moderate with moderate left atrial enlargement. This indicates risk for complication in the future. No additional issues are identified.

The reported BP is elevated, and must be interpreted in light of patient stress level. If the patient was relatively calm during the evaluation, and/or any predisposing causes are known such as renal disease then treatment should be considered. If there is any question, recommend reassess prior to instituting a lifelong medication.

Even with left atrial enlargement, utilization of medications in subclinical feline cardiomyopathy cases is of debatable benefit. If the patient is easily medicated, consider use of Benazepril for



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both vasodilatory and anti-fibrotic benefits as well as Plavix (Clopidogrel) to decrease the risk for blood clot events. Atenolol is not clearly indicated without a significant obstructive component of disease. No additional medications are implicated at this time.

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

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Anesthetic risk is considered moderate, and 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, and isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention.

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**PLAN**

Consider institution of Benazepril 0.5mg/kg PO q12h (pending BP >130mmHg) and Plavix (clopidogrel) 18.75mg PO q24h (NOTE: bitter on cut edges; coat in entirety) if able. Recommend reassess BP once the medications are on board for 1-2 weeks. If persistently elevated (>180mmHg) despite a relatively calm demeanor, recommend dual therapy with amlodipine and screen for underlying issues such as PLN, an adrenal tumor, etc.

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A recheck echocardiogram is recommended in 6 months to assess for progression and reevaluate murmur origin.

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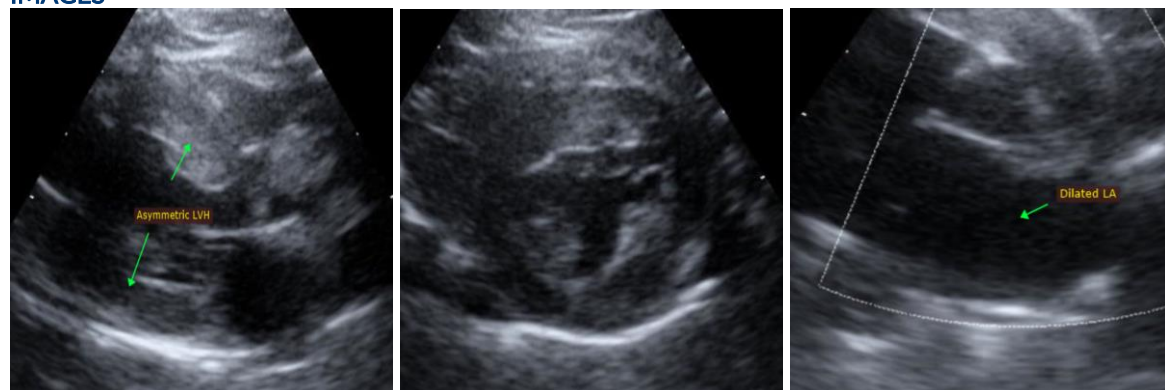
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**IMAGES**



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**  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
info@sonopath.com



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