



**PATIENT PRESENTING CLINICAL SIGNS**

Tink Coulson

History: Heart murmur appreciable in one recording with irregular rhythm and intermittent dropped beats noted. A second duplicate recording from the same dates showed no murmur or arrhythmia.

**SPECIES**

Feline

Peripheral pulse good, no collapse on exam. Resp - currently stable at rest with loud variable lung sounds, no crackles or wheezes at rest today but ER visit documented tachypnea and increased effort with loud upper airway sounds. Has been on Apo - Furosemide 2mg - 1 tab BID then 1/2 tab BID, Vetmedin 1.25mg BID.

**BREED**

Domestic Shorthair

Snap Pro BNP - Abnormal, POCUS at emerg revealed B-Lines, pulmonary edema pattern, scant pleural effusion, no abdominal fluid or masses noted. CBC low with slow blood draw and clumping, Glucose high 13.19(Stress). BP - 140/122 MAP 181 and BP 145/1123 MAP 129(inconsistent - interpret with caution)

**SEX**

Neutered male

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**AGE**

14 years

The left atrium is normal in dimension. There are no distinct left atrial thrombi/clots or spontaneous echo contrast appreciated. The left ventricle is normal in dimension, with moderate concentric hypertrophy, and no evidence of restriction. Left ventricular systolic function is normal, with adequate contractility based on fractional shortening and systolic left ventricular dimensions. The right atrium and ventricle are subjectively normal in dimension and systolic function. There is evidence of systolic anterior motion of the mitral valve with trace mitral regurgitation. The tricuspid valve leaflets presented normal linear structure, extension in systole, and union in diastole without regurgitation. The left ventricular outflow tract demonstrated turbulent flow and subjective structural valvular integrity. The visible aorta is unremarkable. Pulmonary outflow tract assessment revealed normal valve structure, laminar flow, and appropriate diameter and distensibility. There is no evidence of semilunar valve insufficiency or pulmonary hypertension documented. There is no visible pericardial, pleural, or free peritoneal fluid noted.

**WEIGHT**

9 kg

**INTERPRETED BY**

Bradley Harris, DVM,  
 DACVECC, DACVIM  
 (cardiology)

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Leo Vets

**REFERRING VET**

Dr. Boven

**INVOICE**

77747

**DATE**

5/20/26

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	9.0 kg	210	0.72	1.77	0.62	47	81
FELINE CARDIAC PARAMETERS	LA/AO (M-mode)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.67	1.5	1.43		1.0	1.3	NM
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

**ECG:**

There is a six-lead ECG with severe baseline artifact is available for review. The underlying rhythm is regular at an average rate of 210bpm. The rhythm appears to be sinus in origin with narrow QRS



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complexes. There is no atrial or ventricular ectopy and no conduction delay or block identified. This is most consistent with a normal sinus tachycardia.

**SPECIES**

Feline

**ULTRASONOGRAPHIC FINDINGS**

These findings identify left ventricular hypertrophy in the setting of an outflow tract obstruction and absence of any chamber dilation, consistent with occult hypertrophic obstructive cardiomyopathy (HOCM). However, the concurrent use of diuretics significantly confounds this assessment. Given the history, congestive heart failure secondary to the underlying cardiomyopathy is plausible.

**BREED**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given these findings, no changes to cardiac therapy would be recommended. The merits of further Vetmedin use in the presence of an outflow tract obstruction are up for debate, however the history of possible congestive heart failure makes its continued use reasonable. Regardless, owners should monitor resting respiratory rate at home. Values above 30 breaths/minute or an increase in respiratory rate 10% above baseline should prompt veterinary re-evaluation.

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Anesthesia considerations:

If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. If a beta-blocker (atenolol) is being given, it should not be administered on the morning of general anesthesia. Other cardiac medications should be administered per the normal dosing schedule. Fluid therapy during anesthesia should be considered at a conservative rate (e.g., 5 ml/kg/hour) if possible (i.e., if not hypotensive). A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is advised. Premedication with an opioid (i.e., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol or alfaxalone can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

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DACVECC, DACVIM  
(cardiology)

Diet:

No special considerations are necessary. Any high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina is reasonable.

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Leo Vets

Activity:

Avoid overly strenuous activity.

**REFERRING VET**

Dr. Boven

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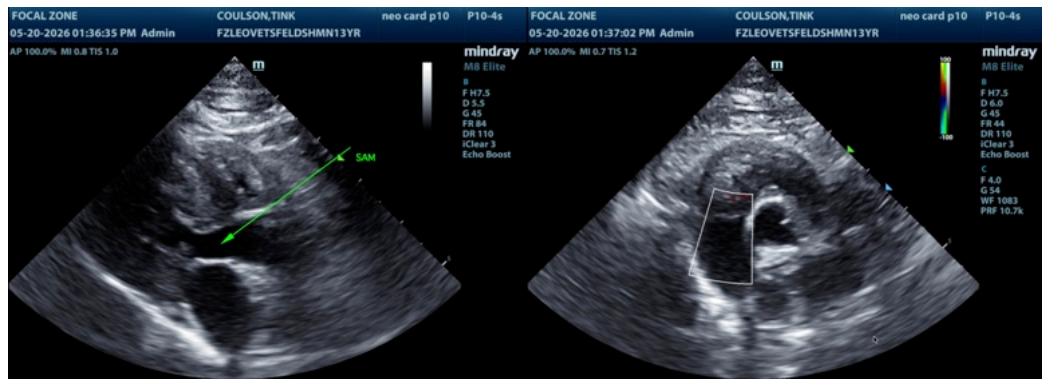
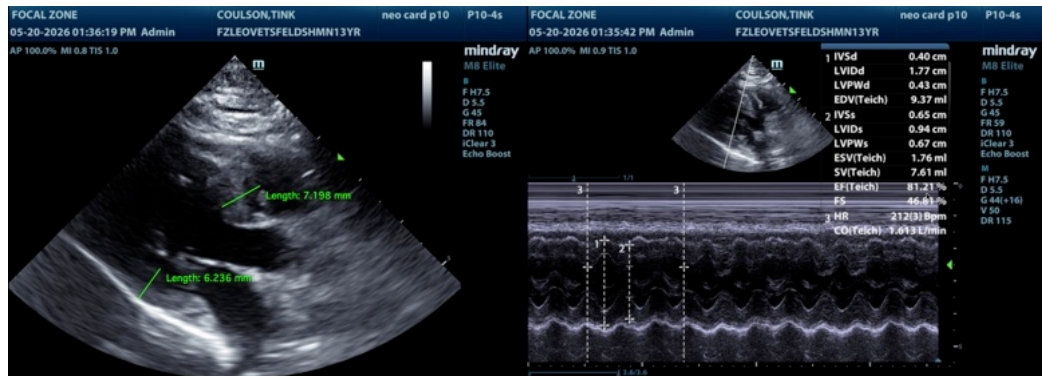
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

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