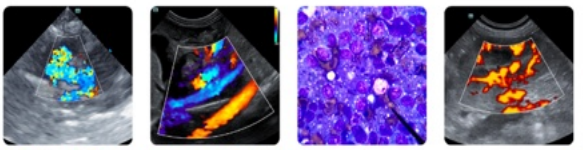


PATIENT

Zack Stewart

SPECIES

Feline

BREED

Maine Coon

SEX

Neutered male

AGE

15 years

WEIGHT

6.9 kg

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Amanda Stewart

HOSPITAL NAME

Graham AH

REFERRING VET

Dr. McQueen

INVOICE

77683

DATE

5/19/26

PRESENTING CLINICAL SIGNS

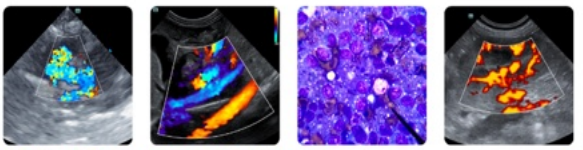
History: Cardiovascular: A grade 3-4/6 paraxial systolic heart murmur was auscultated. Strong synchronous pulses.
Current Medications Homeopet Digestive Upsets drops, administered as needed for diarrhea. Taurine supplement, 500 mg daily. The owner has a rescue inhaler for his asthma but has never had to use it. The owner is planning to start a homeopathic joint supplement.
Abnormal PE/Chem/CBC/UA Results: Bloodwork: - CBC: normal - Chem: mildly elevated urea (17.4 mmol/L), mild hyperglobulinemia (52 g/L) and mild hypocholesterolemia (1.46 mmol/L) - TT4: wnl
Radiographic Findings Thoracic radiographs - Right lateral: increased cardiac sternal contact, heart appears wide at just over 3 intercostal spaces. Lungs nsf. No dorsal deviation of trachea/carina or indentation of caudodorsal margin of cardiac silhouette. - VD: mild left ventricular enlargement, otherwise nsf. Primary Question to Be Answered in This Exam Evidence of heart disease with progressive murmur?

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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 focal regions of both septum and free wall that are equivocally thick. Left ventricular systolic function is normal, with adequate contractility. The right atrium and ventricle are subjectively normal in dimension and systolic function. There is no evidence of systolic anterior motion of the mitral valve or other valve abnormalities with no mitral regurgitation. The tricuspid valve leaflets presented normal linear structure, extension in systole, and union in diastole with trace regurgitation. The left ventricular outflow tract demonstrated normal laminar 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.

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	6.9 kg	170	0.4	1.51	0.41	36	69
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	1.49	1.52	1.66		1.1	1.1	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



SonoPath www.thefocalzone.com info@thefocalzone.com 289.808.2608

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ECG:
There is a six-lead ECG available for review. The underlying rhythm is regular at an average rate of 170bpm. A left axis shift is documented. The rhythm appears to be sinus in origin with narrow QRS complexes. There is no atrial or ventricular ectopy and no conduction delay or block identified. This is most consistent with a normal sinus rhythm with a left axis deviation. Given the absence of overt left ventricular hypertrophy this is most likely a variation of normal for this patient, however early LVH cannot be completely excluded.

ULTRASONOGRAPHIC FINDINGS

These findings are consistent with an essentially normal echocardiogram. The borderline/equivocal left ventricular wall measurements may represent an early manifestation of hypertrophic cardiomyopathy; however, may also represent a variation of normal for this patient. It is unlikely that any of the clinical/radiographic signs are related to underlying heart disease at this time.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the absence of any underlying heart disease, no cardiac therapy will be recommended. In addition, there are no cardiac objections to fluid therapy or steroid use. Owing to the presence of a equivocal wall thickness, a follow up echo is recommended in another 6-12 months to make sure no progression has occurred.

Anesthesia considerations:
If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. Fluid therapy during anesthesia should be considered at a reduced 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, alfaxalone can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

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

Activity:
No special considerations are necessary.

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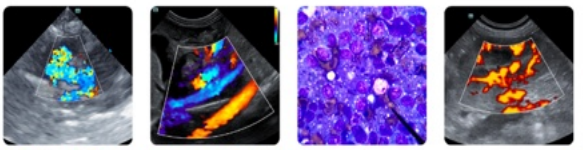

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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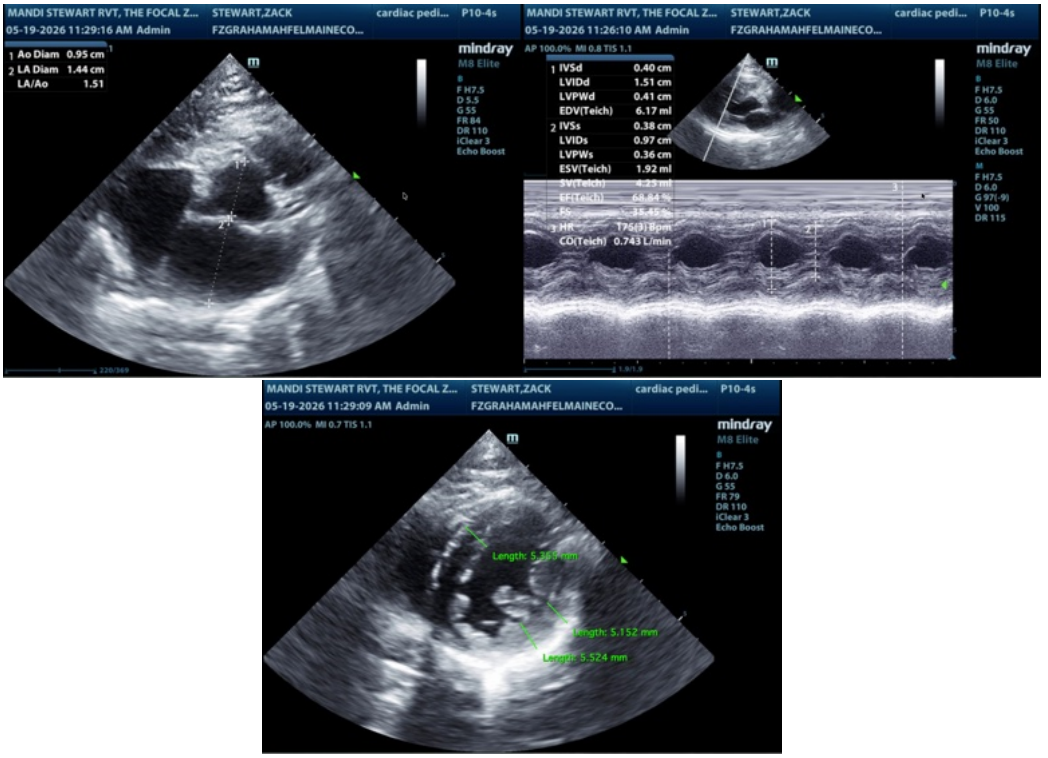

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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