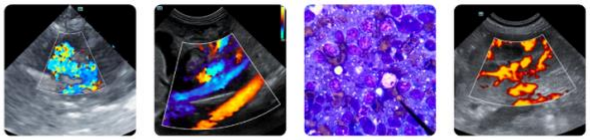


PATIENT

Hannibal Carlisle

SPECIES

Feline

BREED

DMH

SEX

Neutered Male

AGE

13 Years

WEIGHT

10.3 pounds

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP

IMAGING PERFORMED BY

Dr. Ryan Leal

HOSPITAL NAME

Wellesley Animal Hospital

REFERRING VET

Dr. Ryan Leal

INVOICE

12983

DATE

01/05/2026

PRESENTING CLINICAL SIGNS

Pt presents for echocardiogram following yearly wellness exam - heart murmur ausculted, ProBNP elevated. Pt also was noted to have an elevation in his liver values. He is otherwise healthy and stable at home. Blood pressure was normal. Medications: Clopidigrel 18.25mg PO SID, Gabapentin 100mg PO PRN Problem List: Heart murmur with elevated ProBNP Liver enzyme elevation

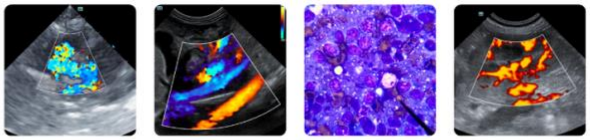
PE: BCS 5/9, 4/6 parasternal systolic murmur, mild gingivitis CBC: NSF Chem: ALT 366, ALP 82, AST 70, Creat 1.5, BUN 21, SDMA 14 ProBNP: 1472 UA: USG 1.033, 1+ protein, T4: 2.4 HWT: negative BP: 130 (doppler)

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	--	NM	0.69	1.45	0.69	45	78
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	NM	1.15	1.2		1.1	1.5	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							

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size and structure with no evidence of “smoke” or thrombi. The cranial and caudal **mitral** valve leaflets appeared mildly thickened with mild eccentric insufficiency noted on doppler. No overt systolic anterior motion (SAM). The **left ventricle** presented mild excessive free wall and septal thicknesses with mild myocardial remodeling. The **myocardium** presented mild increased echogenicity which may suggest some degree of fibrosis. **Contractility** of the ventricular walls was considered excessive for this patient evidenced by the elevated fractional shortening measurement. The **left ventricular outflow** tract demonstrated turbulent laminar flow. Normal measured LVOT velocity. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated linear morphology. No overt significant TR on doppler. The **right ventricle** was of normal size with normal chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter. Normal to borderline increased measured RV outflow velocity. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The **mediastinum** was free of masses in the visible window.



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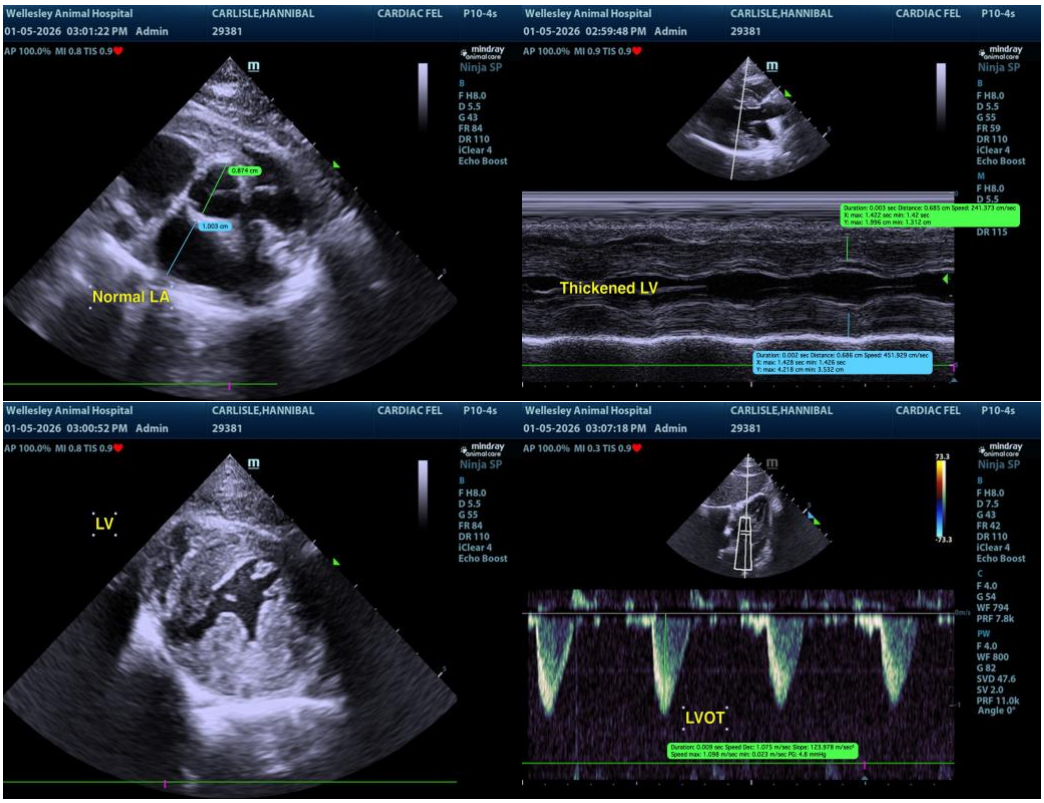
ULTRASONOGRAPHIC FINDINGS

- Hypertrophic cardiomyopathy phenotype with LV remodeling and possible fibrosis.
- Normal LA.
- Mild eccentric MR.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

HCM is a rule out diagnosis once the patient is deemed euthyroid and normotensive. Given normal reported T4 level, monitoring of systemic BP for evidence of hypertension is suggested. The lack of LA enlargement indicates the current and future risk of complication i.e. congestive heart failure or thrombotic event at this stage is low. Likewise, the hemodynamic effects of the murmur, potentially associated with borderline increased RV outflow velocity are low. No overt indication for cardiac or antithrombotic medication. Prognosis is considered variable and sonographic monitoring is indicated. Recheck echo is suggested in six months or sooner if clinically indicated. Current cardiac anesthetic risk is mild. If required, the following protocol is suggested with appropriate to judicious IV fluid administration. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



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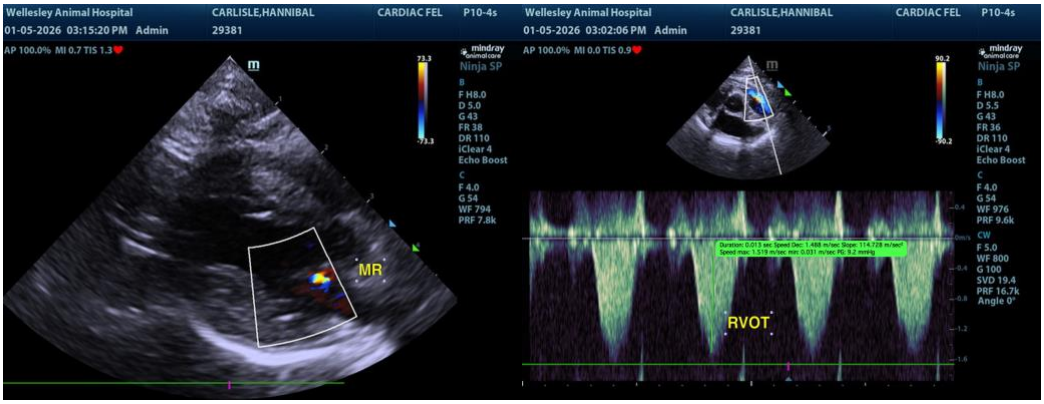

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com