

## PATIENT

Athena Bain

## SPECIES

Feline

## BREED

DLH

## SEX

Spayed Female

## AGE

15

## WEIGHT

9

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jenn

## HOSPITAL NAME

Rockaway Animal  
Hospital

## REFERRING VET

Dr. Harrs

## INVOICE

14100

## DATE

03/06/26

## PRESENTING CLINICAL SIGNS

- Grade 4/6 parasternal murmur abnormal ProBnp Hx of CKD Stage 2

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT	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	NM	0.66	1.24	0.55	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	--	1.36	1.5		NM	1.8	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 possible indistinct eccentric MR on Doppler. The **left ventricle** presented mild to variably increased free wall and septal thicknesses. The **myocardium** presented with increased echogenicity which may suggest mild fibrosis and ventricular remodeling. **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 to dynamic outflow pattern. 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. 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. Borderline increased RVOT 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.

## ULTRASONOGRAPHIC FINDINGS

- Mildly thickened LV with myocardial remodeling.
- Normal LA.
- Mild dynamic LV outflow pattern and suspect mild eccentric MR.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS



**PATIENT**

Athena Bain

**SPECIES**

Feline

**BREED**

DLH

**SEX**

Spayed Female

**AGE**

15

**WEIGHT**

9

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway Animal Hospital

**REFERRING VET**

Dr. Harrs

**INVOICE**

14100

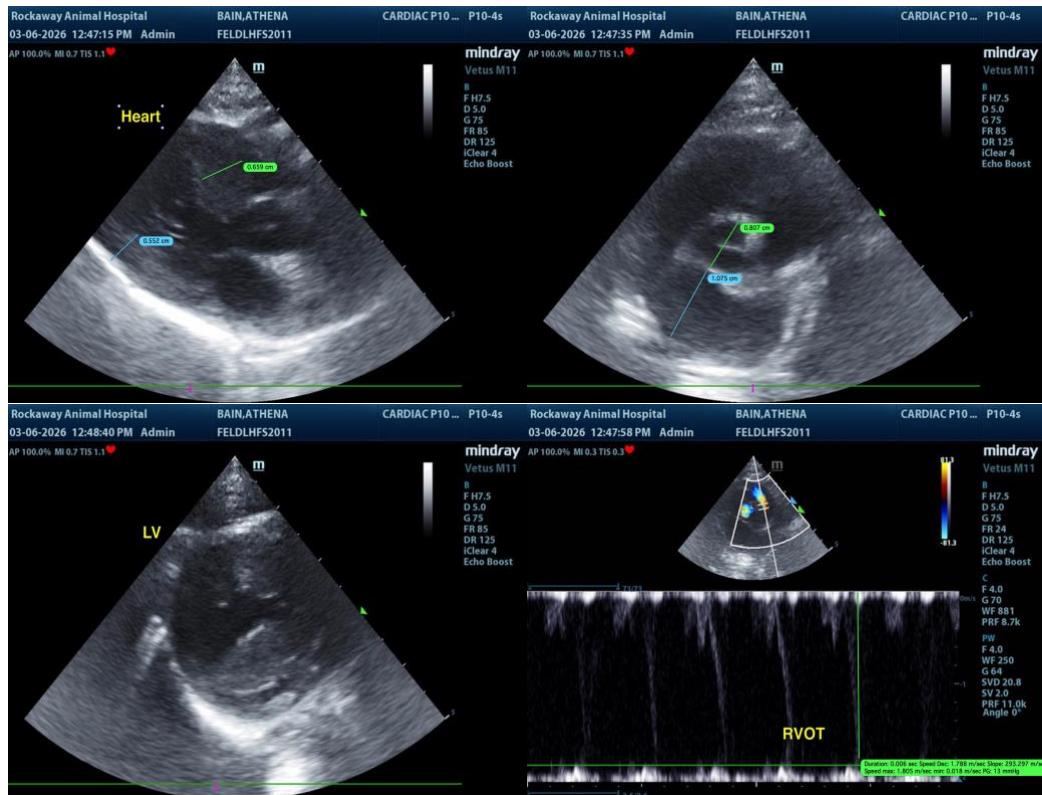
**DATE**

03/06/26

The heart is most suggestive of HCM phenotype with murmur secondary to possible non-obvious dynamic LV outflow obstruction (SAM) or indistinct MR. A contributing factor to the murmur i.e. flow murmur such as dynamic right ventricular outflow tract obstruction or additional non-visualized flow abnormality could also be possible. Regardless of classification, the overall heart and hemodynamic effects of the murmur indicate low potential for complication given no evidence of left or right heart chamber enlargement.

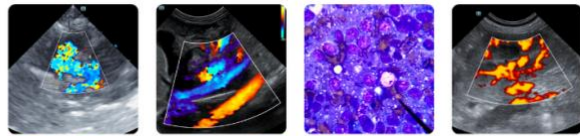
Assessment of T4 level and systemic BP given CKD to rule out hypertension as a contributing factor is recommended. No indication for cardiac medication at the stage, however, prognosis is variable and sonographic monitoring is advised. Recheck echo is suggested in six months, sooner if increase in murmur intensity or if clinical signs arise.

Current cardiac anesthetic risk considered mild to moderate. If required, the following protocol is recommended with judicious IV fluid administration and clinical monitoring. 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.



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



## PATIENT

Athena Bain

## SPECIES

Feline

## BREED

DLH

## SEX

Spayed Female

## AGE

15

## WEIGHT

9

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jenn

## HOSPITAL NAME

Rockaway Animal  
Hospital

## REFERRING VET

Dr. Harrs

## INVOICE

14100

## DATE

03/06/26

can be of any further assistance, please contact me.

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

[info@SonoPath.com](mailto:info@SonoPath.com)