



**PATIENT**

Lego Fionto

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

13 Pounds

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Diane McFadden

**HOSPITAL NAME**

Newton Vet Hospital

**REFERRING VET**

Dr. Kim

**INVOICE**

45534

**DATE**

2/27/23

**PRESENTING CLINICAL SIGNS**

Pleural effusion, trouble breathing, lethargy, hiding. Given lasix 2mg/kg  
Abnormal PE/Chem/CBC/UA Results: glucose 379, serum ketones neg; UA: glucos2+, blood + (cysto), leukocytosis 3+, USPGH 1.050

**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		138	0.66	1.5	0.57	58	86
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	--	1.6	2.0	1.0	0.62	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 left ventricular wall exhibited borderline thickening with remodeling in regions of mild asymmetry. Generalized mild non-uniform to variably hyperechoic endocardium noted, which may suggest fibrosis. Concurrent mildly remodeled to prominent papillary muscles noted. LV systolic function is adequate. Overtly normal LV and RV volume. The left atrium was mildly dilated and slightly bulbous in appearance. No evidence of LA spontaneous contrast, or smoke, the right atrium exhibited mild dilation without evidence of RA spontaneous contrast, or smoke. The mitral valve exhibited mild thickening with possible (although not definitive) indistinct systolic anterior motion of the mitral valve and mild eccentric MR. No obvious TR. Blood flow through both the LVOT and RVOT was normal in measured velocity. Scant pericardial effusion was present. Definitive concurrent pleural effusion was not noted, with mild pericardial comet tail artifact. No obvious cardiac tumors. No arrhythmia.

**ULTRASONOGRAPHIC FINDINGS**

- Borderline thickened LV with myocardial remodeling, normal LV function
- LA/RA enlargement
- MR, possible mild to indistinct SAM
- Mild volume pericardial effusion
- Pericardial comet tail artifact



**PATIENT**

Lego Fionto

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

13 Pounds

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Diane McFadden

**HOSPITAL NAME**

Newton Vet Hospital

**REFERRING VET**

Dr. Kim

**INVOICE**

45534

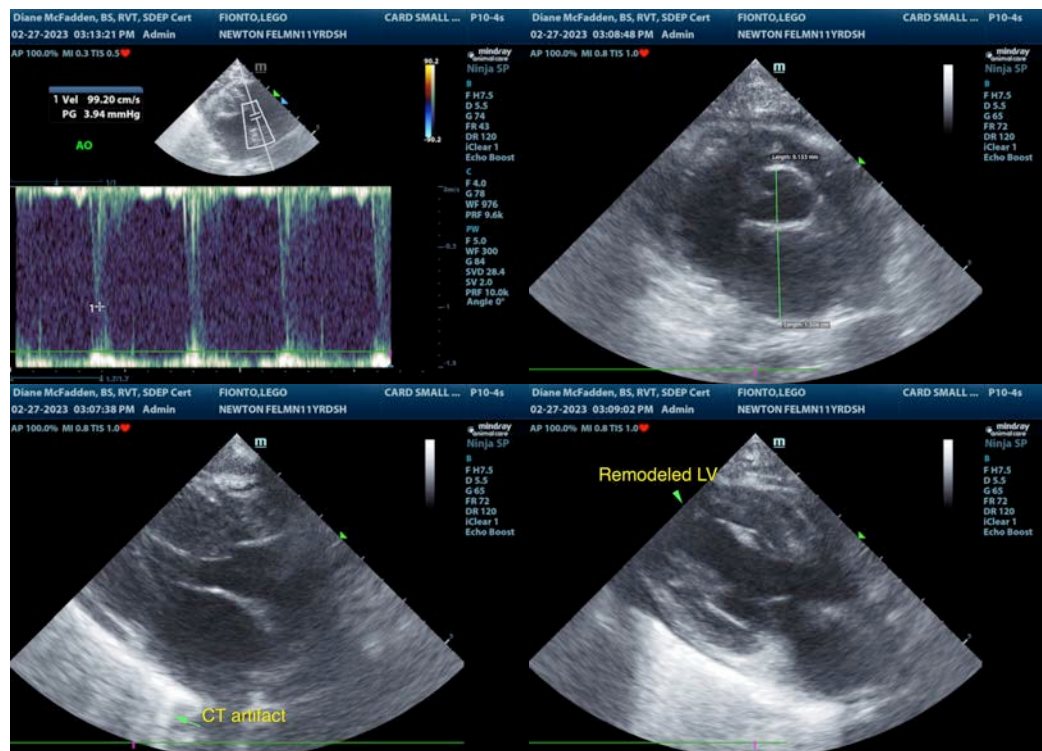
**DATE**

2/27/23

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The finding of bi-atrial enlargement may suggest unclassified cardiomyopathy, although the borderline LV wall thickness could indicate primary or concurrent mild HCM criteria, assuming the patient is euthyroid and normotensive. The degree of LA enlargement is suggestive of cardiogenic pericardial and/or pleural effusion, although the possibility of multifactorial effusion cannot be definitively excluded. Further assessment may include systemic BP assessment, T4 level (if not done), and effusion analysis cytology +/- culture and sensitivity if evidence of inflammatory cells.

From a cardiac perspective, hospitalization with as needed O<sub>2</sub> therapy and IV Lasix would be warranted until patient is stabilized. Lasix 1-2 mg/kg PO BID +/- Plavix 75 mg tab (1/4 tab PO SID) would be warranted. Monitoring of renal parameters and systemic BP going forward advised while on diuretic therapy. The measured LVOT velocity was not consistent with significant dynamic LVOT obstruction potentially owing to indistinct SAM. No other overt indication for additional cardiac medications, given normal LV systolic function. Serial sonographic monitoring of the heart is advised for further prognosis. Recheck echocardiogram suggested in 6 months, sooner if persistent or recurrent clinical signs or episodes of potential CHO.





**PATIENT**

Lego Fionto

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

13 Pounds

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Diane McFadden

**HOSPITAL NAME**

Newton Vet Hospital

**REFERRING VET**

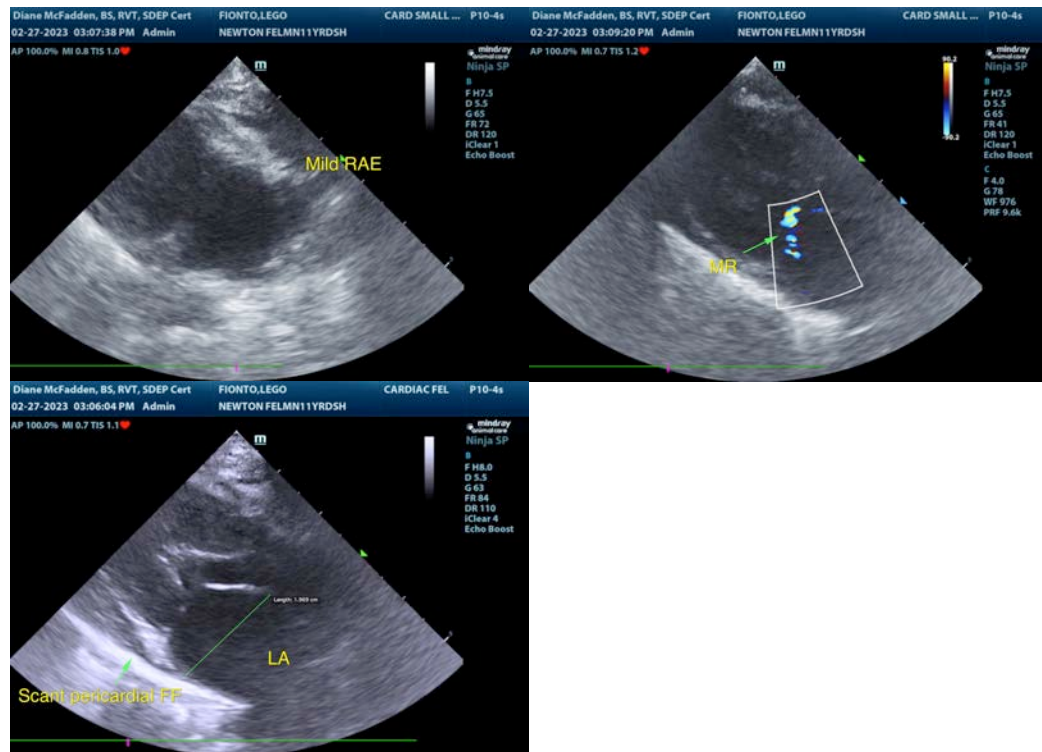
Dr. Kim

**INVOICE**

45534

**DATE**

2/27/23



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