


**PATIENT**

Thor Mood

**PRESENTING CLINICAL SIGNS**

3lb weight loss since April with normal bloodwork, decreased appetite. Convenia given 9/22/22.

**SPECIES**

Feline

Abnormal PE/Chem/CBC/UA Results: UA: 2+ protein, 3+ occult blood, &gt;50 RBC, Urine/Protein Creatinine Ratio 0.5

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART**
**BREED**

DLH

**SEX**

MN

**AGE**

10yr

**WEIGHT**

11.6lb

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		210	0.38	1.5	0.36	40	75
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	1.1	1.2	1.2	1.0	1.0		

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

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

AH of Roxbury

**REFERRING VET**

Dr. Hickenbottom

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal left atrial size based on 3 separate LA measurements. The cranial and caudal mitral valve leaflets presented normal linear structure and kinetics. The left ventricle presented normal thicknesses with linear contour and was not dilated nor restricted. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions and angles of the myocardium. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. Normal LVOT velocity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated adequate linear morphology and kinetics. Minor TR present on Doppler. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible pericardial fluid was present. Mild to moderate volume free pleural fluid was present with unspecified areas of consolidated to nodular lynch and concurrent lung comet tail artifact. No cardiac tumors were present.

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with moderate dependent to nondependent particulate sediment. The sediment may indicate cellular debris / protein, crystalline debris, lipid, or mucus. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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<b>PATIENT</b>	Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Discrete intermittent hyperechoic corticomedullary band consistent with discrete medullary rim sign was present bilaterally. This is a nonspecific finding seen in both normal and abnormal kidneys. It may be associated interstitial renal disease, hypercalcemia, tubular necrosis, lymphoma, and FIP. However, it is a nonspecific finding.
Thor Mood	
<b>SPECIES</b>	
Feline	
<b>BREED</b>	The left kidney measured 3.7 cm in length. The right kidney measured 4.4 cm in length.
DLH	The area of the aortic trifurcation was free of pathology.
<b>SEX</b>	<b>Adrenal Glands</b>
MN	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.39 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.43 cm width.
<b>AGE</b>	<b>Spleen</b>
10yr	The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.
<b>WEIGHT</b>	
11.6lb	The spleen measured 0.58 cm in width at the level of the hilus.
<b>INTERPRETED BY</b>	<b>Liver</b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.
<b>IMAGING PERFORMED BY</b>	The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with mild luminal debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.
Jessica Miller	<b>Gastrointestinal</b>
<b>HOSPITAL NAME</b>	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained minor retained pyloric fluid with no signs of ileus, obstruction or foreign material.
AH of Roxbury	The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.
<b>REFERRING VET</b>	Normal visible colon wall layers were present with apparent formed feces in lumen.
Dr. Hickenbottom	<b>Pancreas</b>
<b>INVOICE</b>	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
11883ag	<b>Free Abdomen</b>
<b>DATE</b>	No omental masses, overt lymphadenopathy or peritoneal effusion was present.
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**ULTRASONOGRAPHIC FINDINGS**

- Overtly normal cardiac structure and function with minor TV insufficiency
- Mild to moderate volume pleural effusion
- Unspecified areas of consolidated to nodular lung
- Mild chronic renal changes exhibiting discrete medullary rim sign and minor medullary mineral
- Moderate urinary bladder sediment
- Unremarkable GI tract/pancreas

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

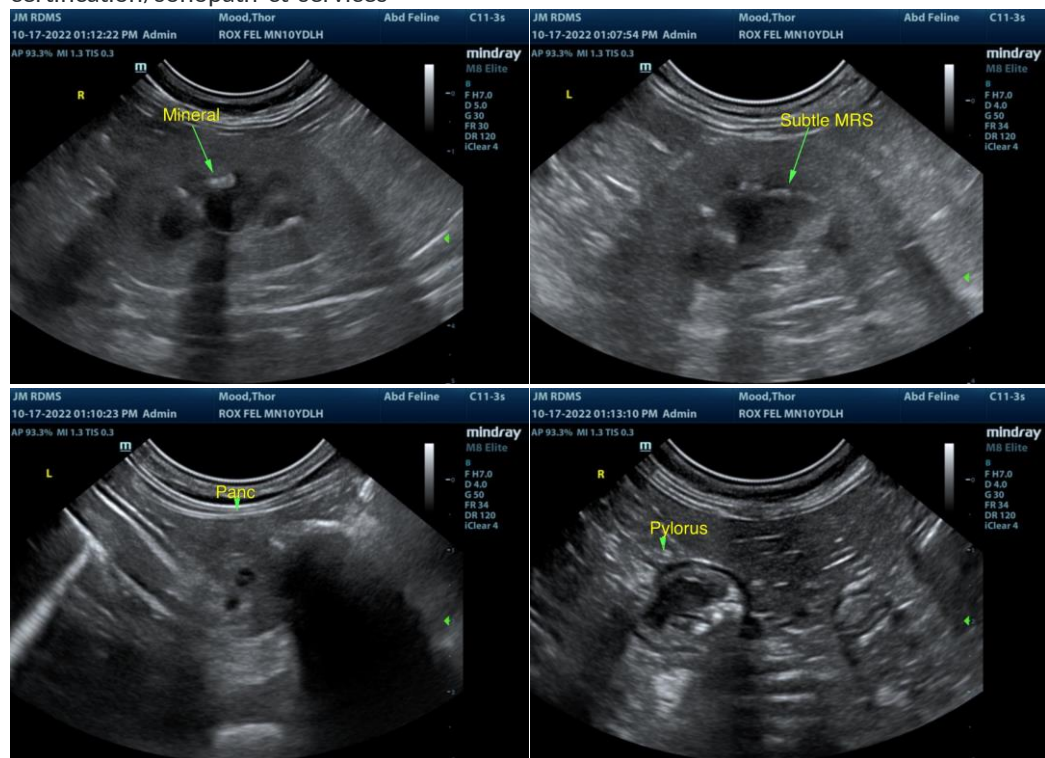
The lack of structural or functional cardiomyopathy indicates that the pleural effusion is non cardiogenic in origin. Considerations may include inflammation/infections, primary pulmonary disease, neoplasia, technically FIP is a possibility although thought less likely given patient age. Thoracocentesis for effusion analysis cytology +/- C/S is warranted for further clarification.

Largely a mild geriatric abdomen without evidence of significant visceral abdominal pathology. A urine C/S on sterile urine sample is recommended. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended to rule out occult intestinal or pancreatic disease as a contributing factor to the patient's weight loss.

Thoracic CT may be required for further assessment.

SonoPath CT Services are offered at the Blairstown Animal Hospital. Blairstown animal hospital is just a 30-minute drive west on route 80 from the route 80/287 interchange/Parsippany, New Jersey. More information can be found at:

<https://sonopath.com/resources/sonopaths-teleconsultation-services-and-sdep-certification/sonopath-ct-services>





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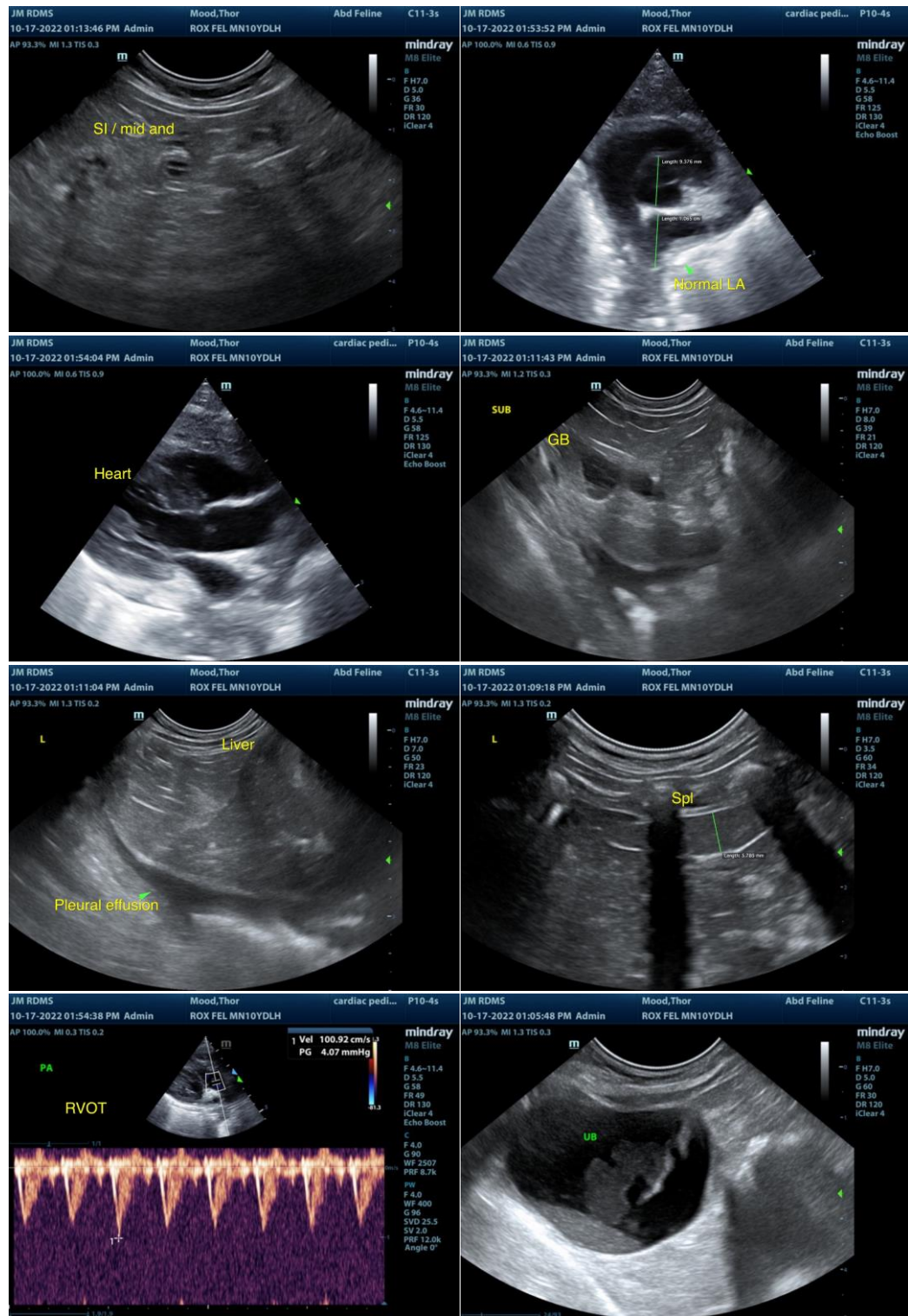
Dr. Hickenbottom

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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



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can be of any further assistance please contact me.

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

info@SonoPath.com

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