



PATIENT PRESENTING CLINICAL SIGNS

Stash Antonucci

History: Weight loss, inappetence, lethargy x 1 week. Pleural + peritoneal effusion on rads, +/- thoracic mass. No current meds.

SPECIES

Abnormal PE/Chem/CBC/UA Results: neu 14.37, lymp 0.78, BUN 55.1, phos 9.1, Ca 8.4, glu 237

Feline

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

DSH

SEX

Neutered Male

AGE

9 Years

WEIGHT

8.8 Pounds

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	0.49	1.8	0.5	22.2	44
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	2.7	3.0	2.4	--	0.5	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							

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Barron

INVOICE

18880

DATE

11/30/22

Cardiac Presentation

The left ventricular wall exhibited normal thickness with minor regions of myocardial asymmetry and mild diffuse hyperechoic endocardium, which may indicate some degree of LV fibrosis. LV systolic dysfunction is decreased as evidenced by the fractional shortening measurement below. LV and RV are both mildly dilated. The left atrium is severely dilated and bulbous in appearance. Potential for indistinct spontaneous contrast within the left atrial lumen. The right atrium exhibited concurrent severe dilation and bulbous appearance without evidence of overt spontaneous contrast. The mitral valve was overtly normal with trace mild eccentric MR. Concurrent mild TR was noted. No overt evidence of cardiac tumors. No overt pericardial effusion. Moderate volume pleural effusion was present.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted. Aortic trifurcation was normal.

Normal size and margination were 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. The left kidney measured 3.8 cm in length. The right kidney measured 4.3 cm in length.

Adrenal Glands



PATIENT	Both adrenal glands were mildly prominent in size yet without evidence of neoplastic criteria. This is likely patient variant or potential stress hyperplasia. The left adrenal gland measured 0.5 cm. The right adrenal gland measured 0.45 cm.
Stash Antonucci	
SPECIES	Spleen
Feline	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. The spleen measured 0.6 cm in width at the level of the hilus.
BREED	
DSH	
SEX	Liver
Neutered Male	The liver presented enlarged in size with symmetrical yet swollen contour. The parenchyma exhibited conserved uniform parenchyma with normal echogenicity isoechoic to the spleen and falciform fat. Mildly dilated caudal vena cava at the level of the liver and diaphragm, measuring 0.58 cm in diameter. No evidence of caudal vena cava thrombus.
AGE	
9 Years	The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
WEIGHT	Gastrointestinal
8.8 Pounds	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.
INTERPRETED BY	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.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Normal visible colon wall layers were present with apparent formed feces in lumen.
IMAGING PERFORMED BY	Pancreas
Jessica Miller	The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.
HOSPITAL NAME	Free Abdomen
Newton VH	Moderate volume pleural effusion was noted. Generalized mild hyperechoic mesentery was noted. No evidence of lymphadenopathy or omental masses.
REFERRING VET	ULTRASONOGRAPHIC FINDINGS
Dr. Barron	<ul style="list-style-type: none"> • Severe cardiomyopathy- consistent with unclassified cardiomyopathy, given the severe biatrial enlargement, with normal LV wall thickness.
INVOICE	<ul style="list-style-type: none"> • Mild MR/TR • Congestive hepatomegaly • Peritoneal/pleural effusion
18880	
DATE	<u>INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS</u>
11/30/22	



PATIENT

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Potential for burn out or end stage HCM or potential infiltrative cardiac neoplasia can also present in this manner. Regardless of categorical classification, the degree of biatrial dilation in conjunction with congestive hepatomegaly and bicavitary effusion confirms the likely diagnosis of congestive heart failure. Long term prognosis is likely unfavorable, as this patient will be at continued significant risk for recurrent congestive heart failure, development of malignant arrhythmias, thromboembolic event, and/or sudden death.

SPECIES

Feline

Hospitalization with as needed respiratory support, O2 therapy and injectable Lasix until patient is stabilized +/- thoracocentesis if possible is recommended. Long term Lasix at 1-2 mg/kg PO BID, Clopidogrel 75mg tab, ¼ mg tab, PO SID, and Pimobendan at 0.25 mg/kg PO BID is recommended. Ideally, monitoring of renal values, systemic BP and ECG are advised. Recheck echocardiogram is recommended in 4-6 weeks or sooner if clinically indicated.

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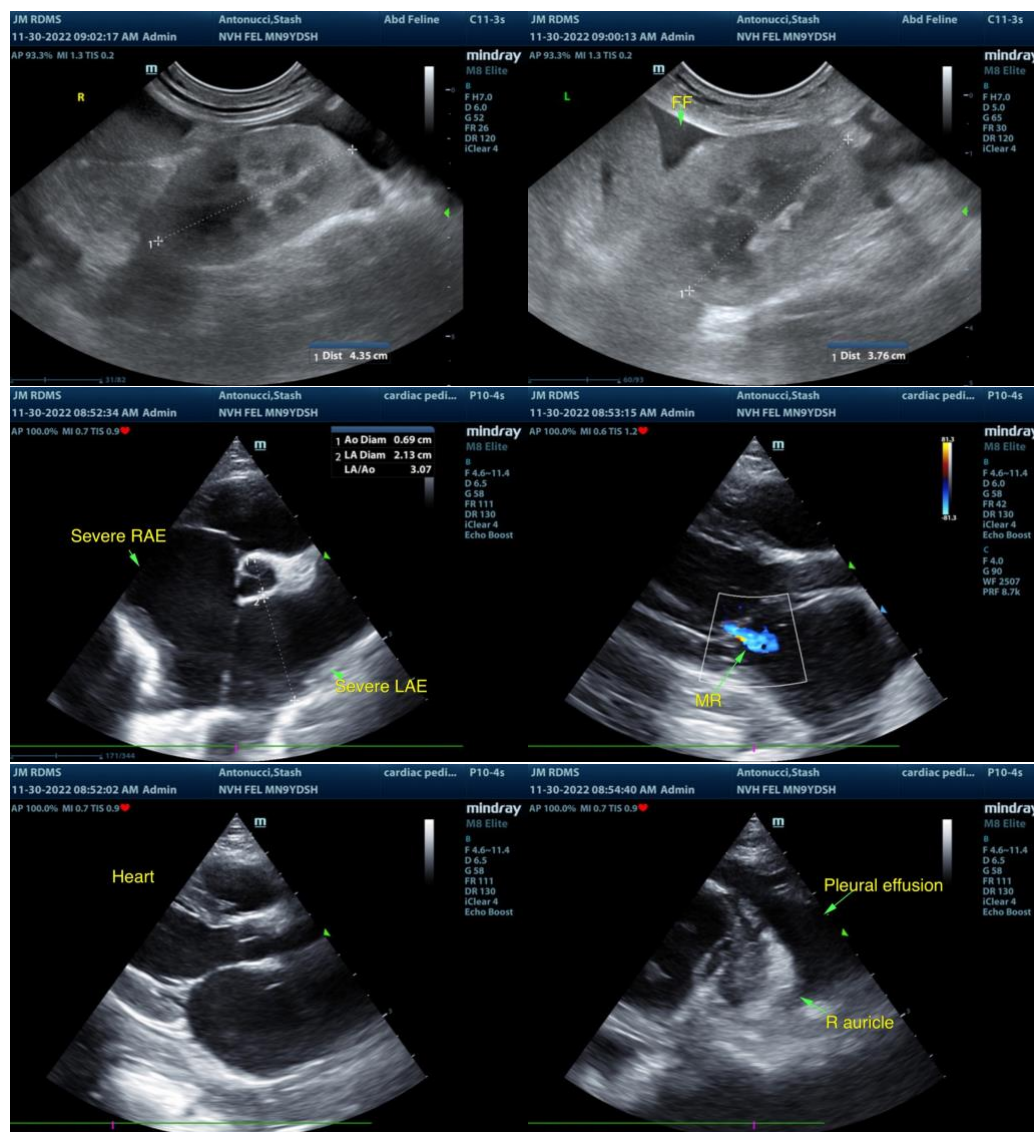
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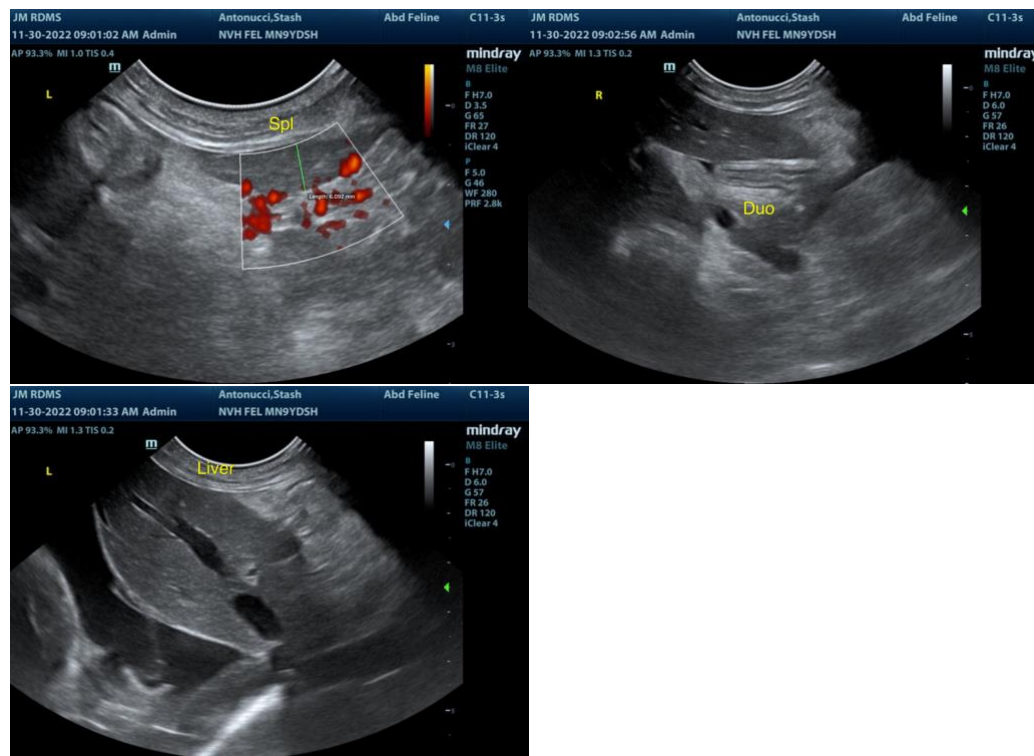
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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