



PATIENT

Kasper Duffy

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

17 years

WEIGHT

N/A

INTERPRETED BY

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

IMAGING PERFORMED BY

Diane McFadden

HOSPITAL NAME

Martinsville VH

REFERRING VET

Dr. Shendell

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DATE

8/1/23

PRESENTING CLINICAL SIGNS

weight loss despite increased appetite; elevated proBNP

Abnormal PE/Chem/CBC/UA Results: pro BNP 1500, Alb 2.4, ALKP 153, ALT 231, AST 56

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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		181	0.60	1.79	0.57	30	60
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		1.8	2.3		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							

Cardiac Presentation

The left ventricular wall exhibited borderline increase in dimension exhibiting subtly hyperechoic endocardium, suggestive of fibrosis. Decreased LV contractility was noted. Mildly prominent to remodeled papillary muscles were noted. Mild myocardial remodeling was present. The left atrium was moderately dilated in size with mild bulbous appearance. There was no overt evidence of LA spontaneous contrast. The right atrium was mildly enlarged in size without evidence of spontaneous contrast. The right ventricle appeared normal. The mitral valve was overtly normal in structure and mobility. Normal measured RVOT velocity was present. Mild TR was present on Doppler. Possible scant pericardial effusion was present with subjective moderate volume pleural effusion. There was no evidence of cardiac tumors or overt arrhythmia noted.

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 was noted.

No evidence of pathology in the area of the aortic trifurcation.

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



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of pelvic dilation was present. The left kidney measured 3.8 cm in length. The right kidney measured 3.6 cm in length.

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Adrenal Glands

The left adrenal gland was normal in size and contour. Pinpoint areas of mineralization were present without capsular distortion or overt tumors. This is an age-related finding and not pathological. The left adrenal gland measured 0.43 width. The right adrenal gland was not definitively visualized.

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Spleen

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.

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Liver/ Gallbladder

The liver was mildly enlarged in size with symmetrical contour and mild nonhomogeneous parenchyma. Subtle evidence of increased prominence of hepatic vasculature was present most notable at the level of the hepatic vein caudal vena cava junction. There were no visualized hepatic masses or nodules.

WEIGHT

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The gallbladder was non-distended in size exhibiting mildly prominent to hyperechoic walls and primarily anechoic content with mild echogenic gallbladder sediment. The cystic and common bile ducts were normal.

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Gastrointestinal

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.

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The small intestine presented generalized intact variably prominent to mildly thickened wall layering. The duodenum wall measured 0.33 cm width. The jejunum wall measured 0.28 cm width.

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Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas exhibited mild to variably prominent size with capsule asymmetry and nonhomogeneous, mildly hypoechoic parenchyma with mild pancreatic duct dilation.

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Free Abdomen

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No visualized omental lymphadenopathy was present. There was no overt significant peritoneal effusion noted.

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ULTRASONOGRAPHIC FINDINGS

- Biatrial enlargement
- Borderline thickened LV with decreased LV function
- Mild TR - no overt clinical pulmonary hypertension



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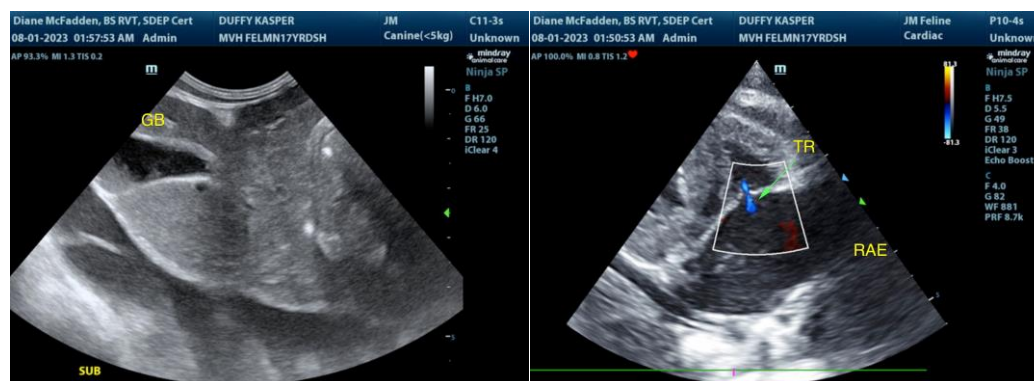
- Hepatopathy exhibiting potential subtly congestive criteria - subjectively benign, potential for concurrent inflammatory hepatopathy i.e., cholangiohepatitis
- Mild gallbladder sediment
- Chronic to chronic active pancreatitis pattern
- Intact borderline prominent to thickened small bowel walls
- Mild chronic renal changes
- Pleural effusion

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac presentation may suggest unclassified cardiomyopathy with potential for burnout or end-stage HCM, which may be a rule-out diagnosis once the patient is deemed euthyroid and normotensive. Moderate biatrial enlargement indicates that the risk of congestive heart failure and/or blood clots going forward is increased. Given this presentation, a diagnosis of congestive heart failure is likely.

Correlation with potential thoracocentesis for effusion analysis, cytology +/- C/S, if evidence of inflammatory cells, may be considered. Lasix 1.0-2.0 mg/kg PO BID, Pimobendan 1.25 mg PO BID, and Plavix 75 mg (1/4 tab) PO SID is recommended. Sonographic monitoring is recommended for further prognosis. Recheck echocardiogram is recommended in 4-6 months, sooner if continued episodes of CHF or development of malignant arrhythmia.

Monitoring of renal parameters going forward is advised. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.





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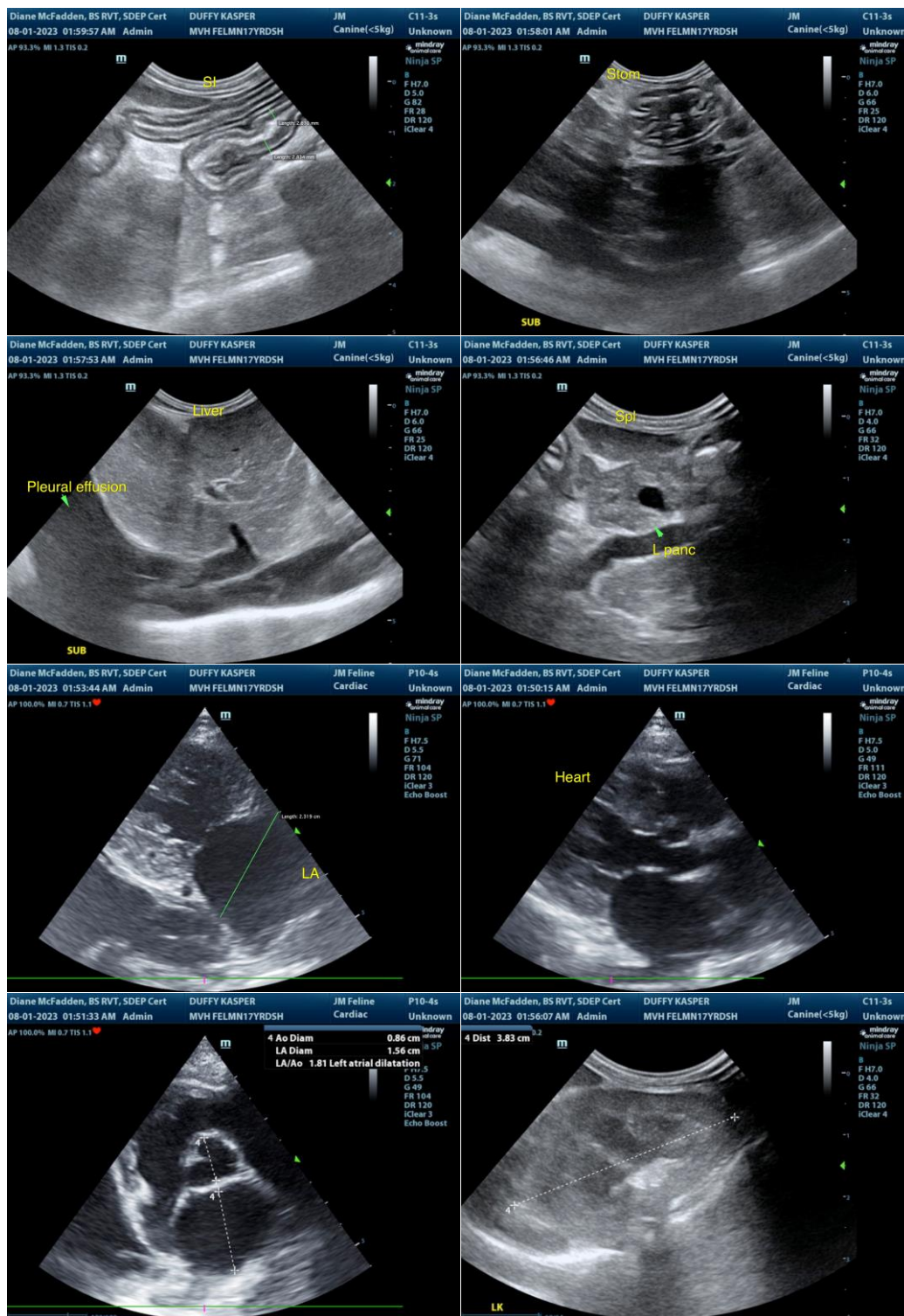
Dr. Shendell

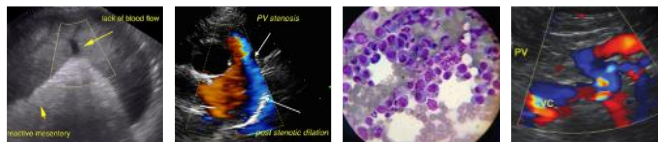
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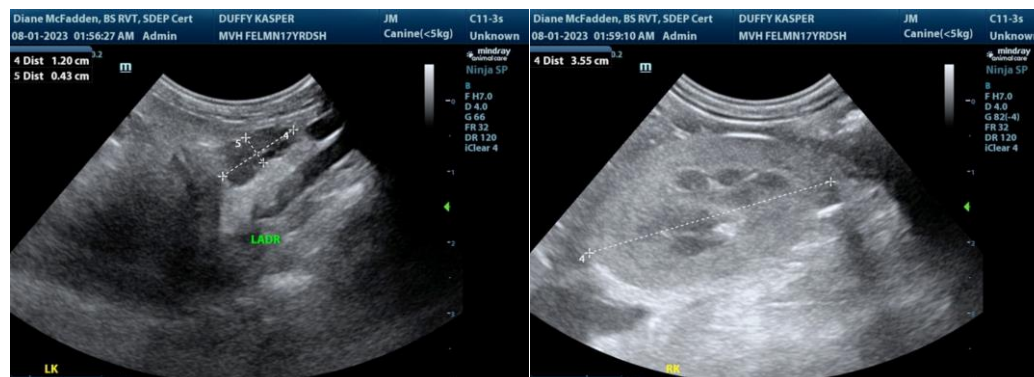
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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