



## PATIENT

Weazer Portela

## SPECIES

Feline

## BREED

DSH

## SEX

MN

## AGE

11 years

## WEIGHT

10.2 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Whippany VH

## REFERRING VET

Dr. Enoch

## INVOICE

16220

## DATE

2/21/23

## PRESENTING CLINICAL SIGNS

Severe dyspnea, increased respiratory effort w/ abd. push, mass- L cranial mid abd, severe pleural effusion, poor serosal detail. Current meds: Lasix 20mg 1 tab PO SID, mirtazipine 7.5mg 1/4 tab every 48hrs.

Abnormal PE/Chem/CBC/UA Results: Elevated WBC, lymph, lipase

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
<b>NORMAL PARAMETER</b>	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
<b>PATIENT</b>		NM	0.37	1.93	0.34	26.3	52
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/)	
<b>NORMAL PARAMETER</b>	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
<b>PATIENT</b>		2.7	2.0	1.0	0.6	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 normal septal and free wall thickness with minor regions of myocardial asymmetry. Overtly normal endocardial echogenicity was present. LV volume was increased with decreased LV systolic function. Concurrent dilated RV was noted. The left atrium was significantly dilated and bulbous in appearance. No overt spontaneous contrast or formed LA thrombus was noted. Concurrent moderate right atrium dilation without evidence of right atrial spontaneous contrast was noted. The mitral valve was overtly normal with trace MR. The tricuspid valve was overtly normal with trace TR. Blood flow through the LVOT was normal in measured velocity. Mild depressed RVOT measured velocity was noted. Scant pericardial effusion was present with concurrent mild to moderate volume pleural effusion. No obvious cardiac tumors were visualized. Subjective tachycardia / tachyarrhythmia 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 was noted.



**PATIENT**

The area of the aortic trifurcation was free of pathology.

Weazer Portela

**SPECIES**

Feline

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 4.7 cm in length. The right kidney measured 4.1 cm in length.

**BREED**

DSH

**Adrenal Glands**

**SEX**

MN

The bilateral adrenal glands were overtly normal in size, position, and shape. The left adrenal gland measured 0.44 cm width. The right adrenal gland measured 0.42 cm width.

**AGE**

11 years

**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.

**WEIGHT**

10.2 lbs.

**Liver/ Gallbladder**

The liver was mildly enlarged in size with evidence of mild congestive criteria. Nondisruptive, well-demarcated, primarily uniform hyperechoic, intraparenchymal nodule measuring 1.5 cm in diameter was present in the caudal liver along with intermittent, variably sized, thinly walled, intraparenchymal cysts containing anechoic fluid. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**INTERPRETED BY**

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

**Gastrointestinal**

**IMAGING PERFORMED BY**

Jessica Miller

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.

**HOSPITAL NAME**

Whippany VH

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.

**REFERRING VET**

Dr. Enoch

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

**Pancreas**

**INVOICE**

16220

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 were evident.

**DATE**

2/21/23

**Free Abdomen**

Mild volume peritoneal effusion was present. No omental masses or evidence of lymphadenopathy was noted. Uniform omental echogenicity was present.



## PATIENT

Weazer Portela

## SPECIES

Feline

## BREED

DSH

## SEX

MN

## AGE

11 years

## WEIGHT

10.2 lbs.

## ULTRASONOGRAPHIC FINDINGS

- Subjective mild hepatic congestion with nonspecific yet subjective benign nondisruptive intraparenchymal nodules / cysts
- Mild chronic renal changes
- Unclassified cardiomyopathy with LV systolic dysfunction and subjective tachycardia / tachyarrhythmia
- Mild to moderate volume pleural effusion with concurrent scant to mild volume pericardial / peritoneal effusion

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac presentation is most consistent with unclassified cardiomyopathy, given biatrial enlargement in the face of normal LV wall thickness, although burn-out or end-stage HCM can also have this appearance. Evidence of LV systolic dysfunction with potential diastolic dysfunction, as well as tachyarrhythmia was present. The left-sided enlargement may predispose to left-sided congestion, while the tachyarrhythmia may predispose to right-sided congestion. Regardless of classification, the degree of atrial enlargement and potential tachyarrhythmia confirms the diagnosis of congestive heart failure. The long-term prognosis is likely poor.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jessica Miller

Hospitalization with injectable Lasix and O<sub>2</sub> therapy is recommended until the patient is stabilized. Lasix 1.0-2.0 mg/kg PO BID, Clopidogrel 75 mg tab (1/4 tab) PO SID as this patient is at significantly increased risk for thrombus formation, as well as off-label Pimobendan 1.25 mg PO BID are recommended. Monitoring of renal parameters, systemic BP, and ideally ECG with potential rate control therapy if clinically indicated is warranted. As-needed echocardiographic monitoring is recommended. However, this patient is at significantly increased risk for recurrent episodes of congestive heart failure, development of malignant arrhythmias, thrombus formation, and/or potential sudden death.

## HOSPITAL NAME

Whippany VH

## REFERRING VET

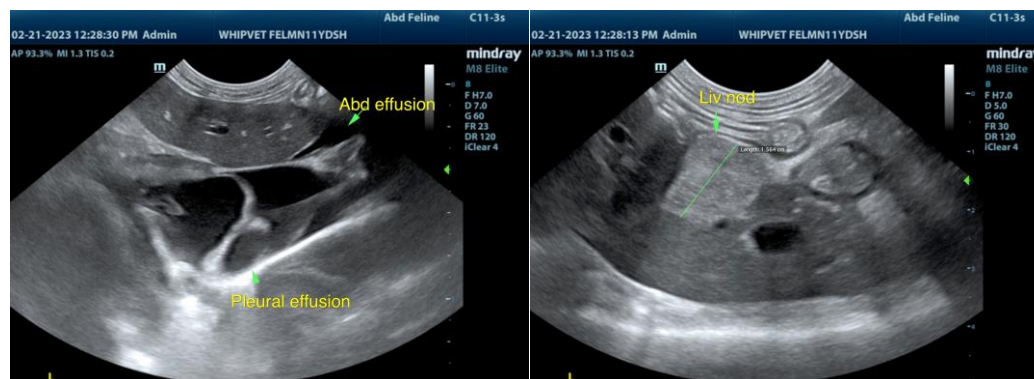
Dr. Enoch

## INVOICE

16220

## DATE

2/21/23





**PATIENT**

Weazer Portela

**SPECIES**

Feline

**BREED**

DSH

**SEX**

MN

**AGE**

11 years

**WEIGHT**

10.2 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Whippany VH

**REFERRING VET**

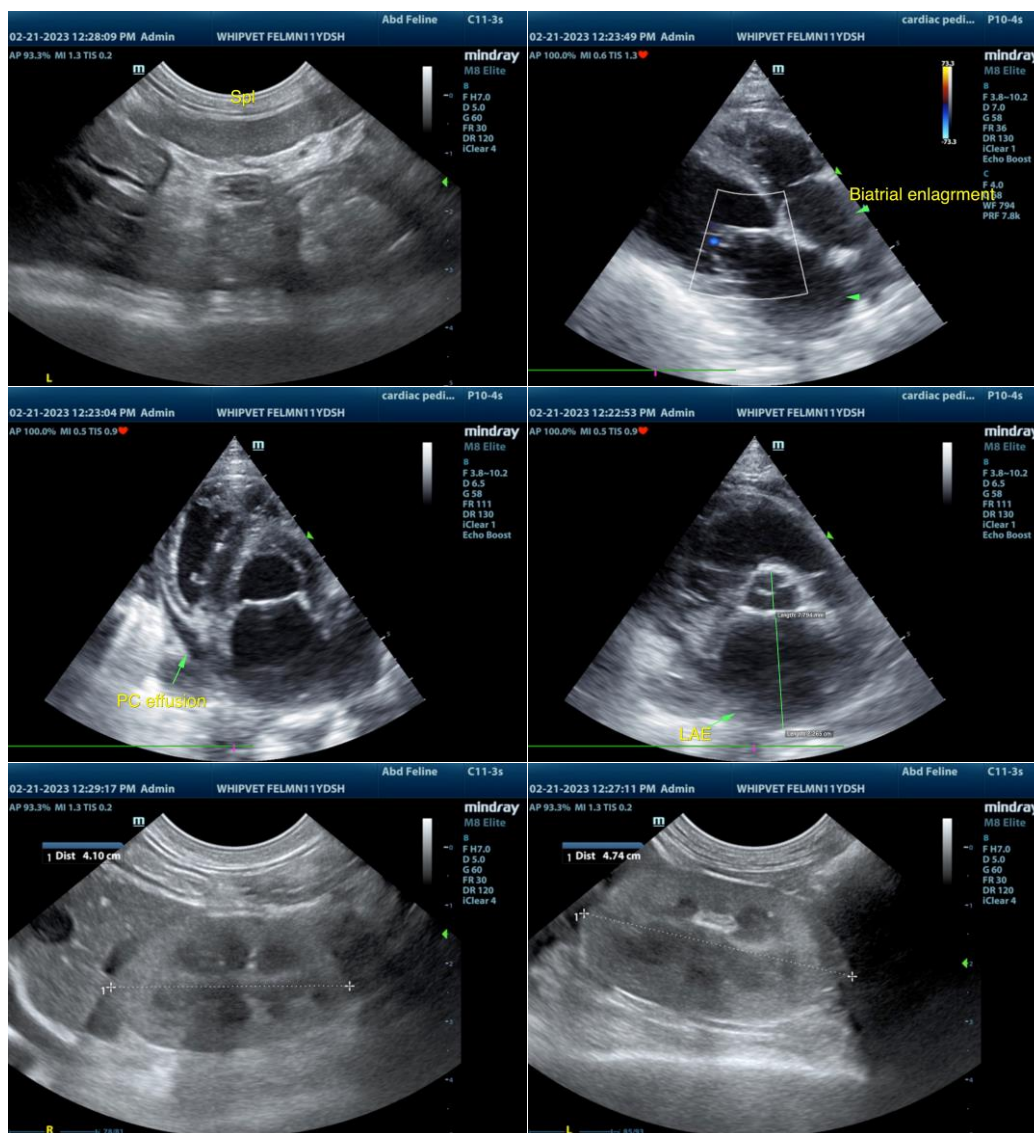
Dr. Enoch

**INVOICE**

16220

**DATE**

2/21/23



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