


**PATIENT**

Abby Burrows

**SPECIES**

Feline

**BREED**

DSH

**SEX**

FS

**AGE**

17.5 years

**WEIGHT**

5.4 lbs.

**INTERPRETED BY**

 R. McKenzie Daniel,  
 DVM, DABVP

**IMAGING  
 PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Halton Peel AH

**REFERRING VET**

Dr. Walters

**INVOICE**

13305

**DATE**

2/11/22

**PRESENTING CLINICAL SIGNS**

lethargy, vomiting, anorexia

Abnormal PE/Chem/CBC/UA Results: ALT 295(37-158), AP 61 (12-59), spec fPL 4.9 (0-3.5), total T4 214.8 (10-60)

**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		213	0.5	1.2	0.52	51.5	86.2
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	1.22	1.31	1.2		1.0	1.5	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 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. 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. 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** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.



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***Urinary System***

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The urinary bladder, trigone, and cystourethral junction 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.

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The area of the aortic trifurcation was free of pathology.

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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 to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.3 cm in length. The right kidney measured 3.6 cm in length.

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***Adrenal Glands***

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The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.29 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.26 cm width.

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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***

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PERFORMED BY**

Kelly Reschny

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was mildly distended in size yet not consistent with post hepatic obstruction, containing anechoic content. This may be owing to decreased food intake and fasting. The cystic and common bile ducts were normal.

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***Gastrointestinal***

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The stomach presented intact wall layering with a normal wall layer ratio. Minor retained anechoic fluid was present. The gastric body wall width measured 0.26 cm.

**INVOICE**

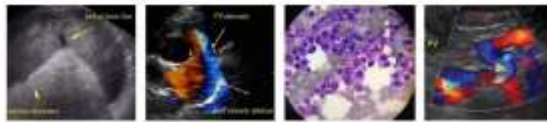
13305

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. The jejunum wall width measured 0.2 cm.

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

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***Pancreas***

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The pancreas was mildly prominent in size with mildly asymmetrical contour exhibiting nonhomogeneous parenchyma with moderate generalized pancreatic duct dilation.

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***Free Abdomen***

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No omental masses, lymphadenopathy or peritoneal effusion were present.

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**ULTRASONOGRAPHIC FINDINGS**

- Overtly normal cardiac structure and function - no evidence of hypertrophic LV changes
- Hepatopathy with minor parenchymal remodeling - subjective benign
- Chronic pancreatitis pattern
- Bilateral chronic renal changes
- Suspect mild gastric hypomotility

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The appearance of the liver is suggestive of chronic hepatopathy with considerations including primary hepatopathy such as nonspecific hepatitis / cholangiohepatitis, or secondary hepatopathy potentially owing to uncontrolled hyperthyroidism. No overt evidence of hepatic or hepatobiliary neoplastic criteria was noted.

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Although no evidence of gastrointestinal mural changes or pathology, possible low-grade Triaditis may be a potential consideration in this patient if ongoing gastrointestinal signs or evidence of weight loss. Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate.

**IMAGING PERFORMED BY**

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Empirically, therapy for hyperthyroidism with as-needed hepato-gastrointestinal support and conservative therapy for chronic pancreatitis is recommended.

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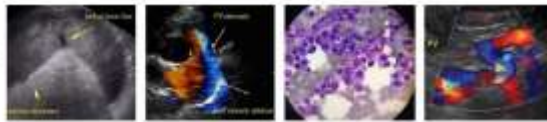
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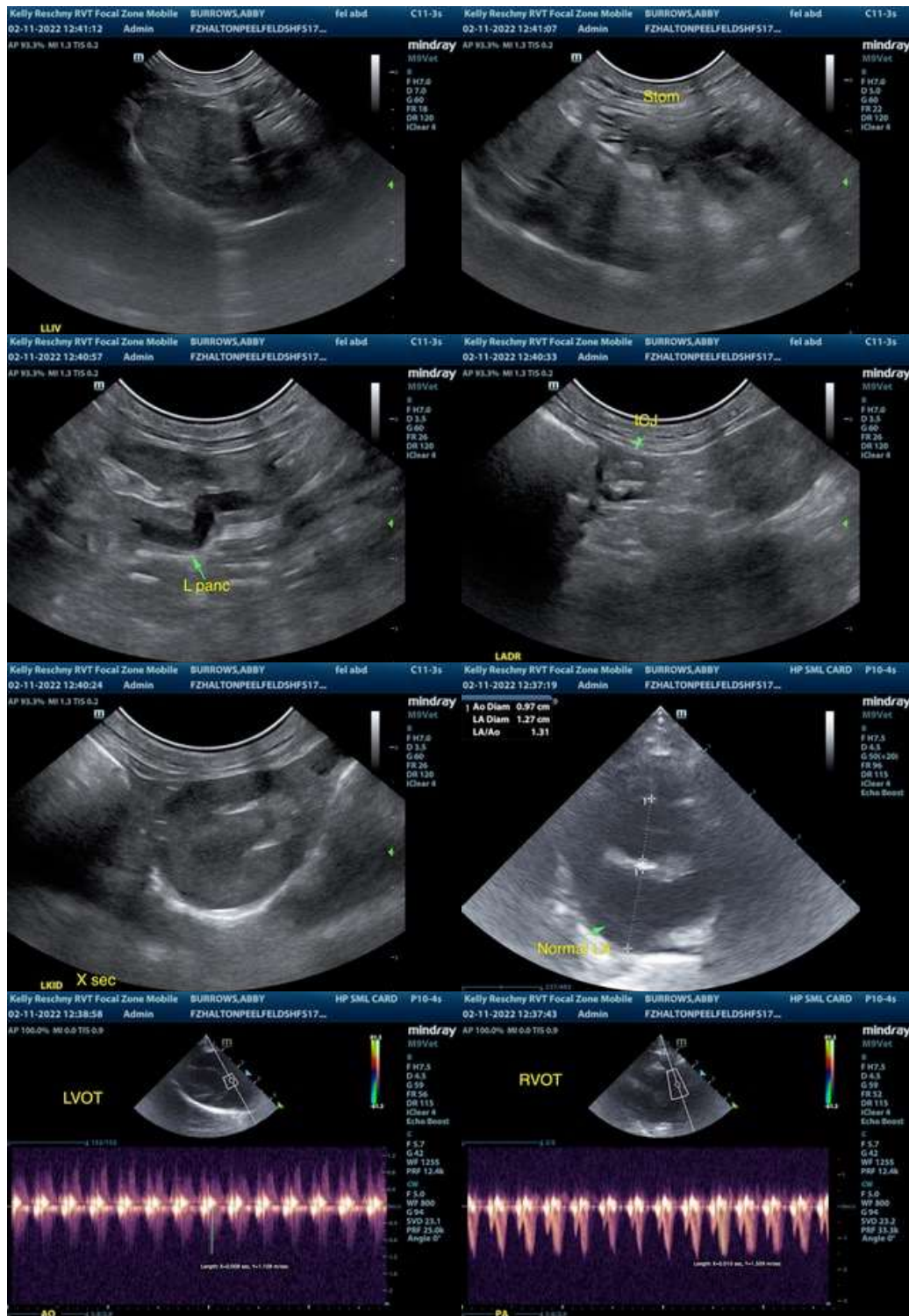
Dr. Walters

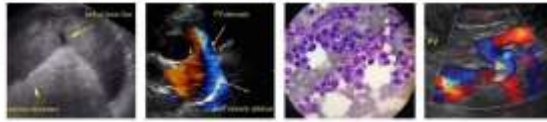
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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.

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**info@SonoPath.com**

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