



## PATIENT

Beans Greene

## SPECIES

Feline

## BREED

DSH

## SEX

MN

## AGE

11 years

## WEIGHT

8 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Marsh AH

## REFERRING VET

Dr. Milwicki

## INVOICE

12894

## DATE

12/28/21

## PRESENTING CLINICAL SIGNS

Weight loss, chronic vomiting Current meds: Cerenia

## 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		170	0.55	1.13	0.50	53.5	87.9
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	1.1	1.2	1.0	0.8	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.

### Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild, particulate, non-dependent sediment was present without evidence of calculus formation. The sediment is likely indicative of minor cellular or crystalline debris or potential mucus. The ureteral papillae were



<b>PATIENT</b>	normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.
Beans Greene	
<b>SPECIES</b>	The area of the aortic trifurcation was free of pathology.
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 3.9 cm in length. The right kidney measured 3.7 cm in length.
<b>BREED</b>	
DSH	
<b>SEX</b>	<b><i>Adrenal Glands</i></b>
MN	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.32 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.39 cm width.
<b>AGE</b>	<b><i>Spleen</i></b>
11 years	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 0.9 cm in width.
<b>WEIGHT</b>	<b><i>Liver/ Gallbladder</i></b>
8 lbs.	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. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The proximal common bile duct was dilated and tortuous without overt post hepatic obstruction. The common bile duct measured 0.29 cm width.
<b>INTERPRETED BY</b>	<b><i>Gastrointestinal</i></b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The stomach exhibited regional moderate to marked mural hypertrophy with indistinct to loss of discernable wall layering primarily in the area of the gastric body. The dorsal gastric body wall width measured up to 1.7 cm width. Mild retained anechoic fluid was present in the gastric lumen without evidence of retained ingesta or foreign material.
<b>IMAGING PERFORMED BY</b>	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 0.27 cm.
Jessica Miller	Normal visible colon wall layers were present with apparent formed feces in lumen.
<b>HOSPITAL NAME</b>	<b><i>Pancreas</i></b>
Marsh AH	The pancreas was normal in size and contour with heterogeneous to mildly hypoechoic parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. Mild pancreatic duct dilation was present.
<b>REFERRING VET</b>	
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**Free Abdomen**

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Several gastric lymph nodes were present adjacent to the pylorus. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. A small amount of scant perigastric free fluid was present. An example of a gastric lymph node size was 0.57 cm width.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Normal echocardiogram
- Regional moderate to marked gastric mural hypertrophy exhibiting indistinct to loss of discernable wall layering
- Associated gastric lymphadenopathy and regional perigastric reactive mesentery and scant free fluid
- Possible concurrent low-grade to chronic pancreatitis

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the vomiting is most compatible with gastric mural pathology. Considerations may include inflammatory, infectious, granulomatous or neoplastic etiologies with neoplastic etiologies i.e., lymphoma, carcinoma, or other favored.

Ultrasound-guided FNA of the thickened gastric wall was obtained for screening cytology without complication. Biopsy may be required for a definitive diagnosis.

A GI panel to include PLI/TLI/Cobalamin/Folate for further assessment of the pancreas as well as assess for structurally insignificant concurrent intestinal disease, given the patient's weight loss, could be considered. Empirically, continued GI support +/- helicobacter protocol may be considered. Three view chest radiographs are recommended.

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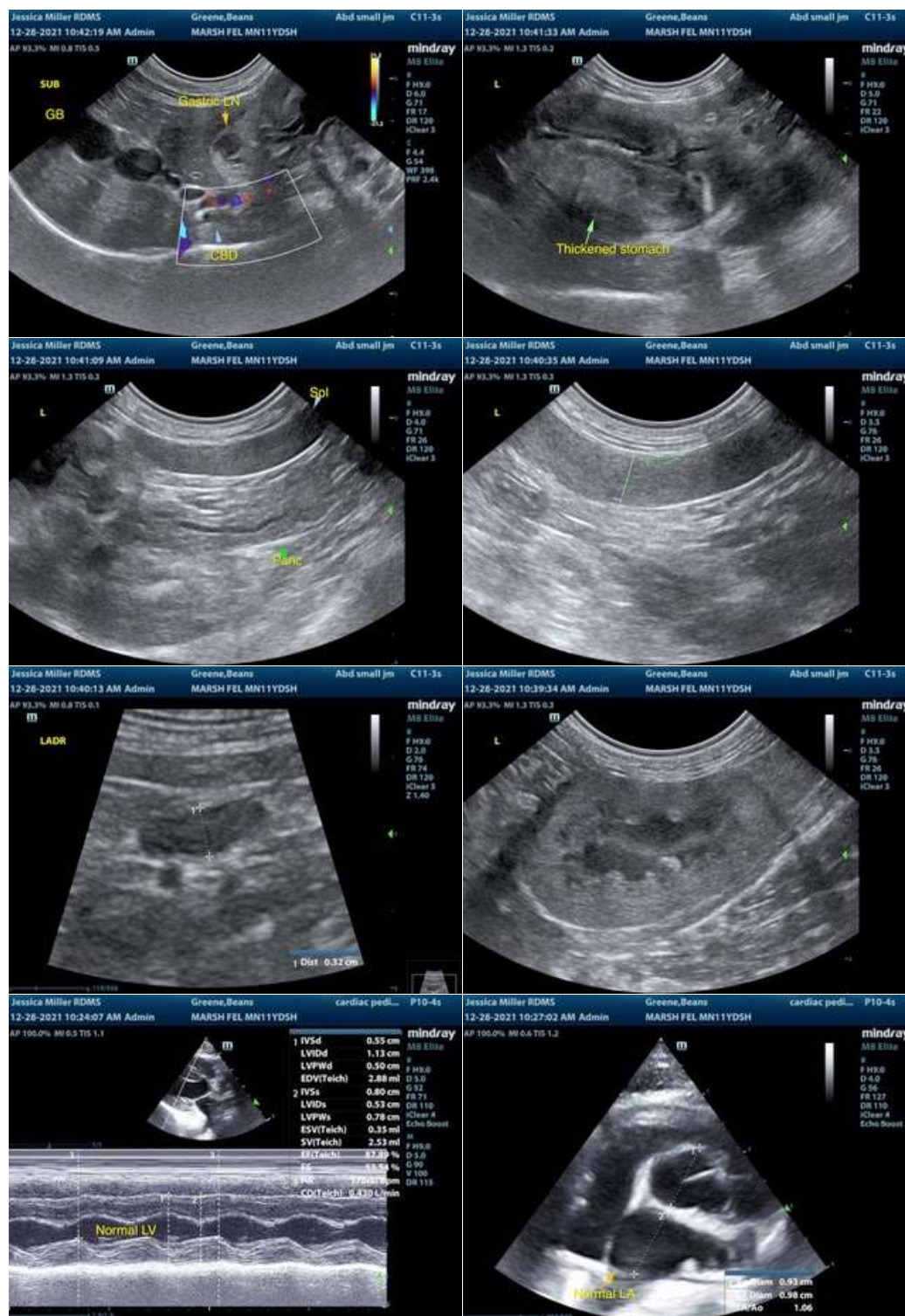
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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Beans Greene

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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