



PATIENT

Janie Huddleston

SPECIES

Canine

BREED

Golden Retriever

SEX

FS

AGE

6 years

WEIGHT

72.8 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

VCA Westmoreland
Animal Hospital

REFERRING VET

Dr. Sullivan

INVOICE

16024

DATE

1/31/23

PRESENTING CLINICAL SIGNS

Nausea with no vomiting - Retching/coughing - intermit Diarrhea or hard dark stool -Mild Lethargy - Ptyalism Heart Rate and Respiratory Rates HR - 128 RR- 60 Blood Pressure Measurements Systolic blood pressure - 140, 160, 146 Primary Question/Differential to Be Answered in This Exam Is there anything found on US to explain these symptoms?

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT				1.2	36	72	0.3
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m- mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	99	1.1	0.6		3.6	3.8	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. Minor clinically insignificant MR was present on Doppler. 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 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. The cranial **mediastinum** and



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pericardial and extra-cardiac regions were free of overt masses or other pathology in the visible window with subjective normal aerated lung.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4.0 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.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 7.2 cm in length. The right kidney measured 7.5 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.7 cm length x 0.52 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 3.0 cm length x 0.46 cm width at the caudal pole.

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.

Liver/ Gallbladder

The liver exhibited potential mild subnormal size with normal 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 containing primarily anechoic content with mild gallbladder debris. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact mildly prominent wall layering. The lumen of the stomach was empty without evidence of gastric distention secondary to retained significant ingesta, fluid, or foreign material. The ventral body wall width measured 0.58 cm. The pylorus wall width measured 0.58 cm. No evidence of mechanical pyloric outflow obstruction was noted.



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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.

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

Pancreas

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.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

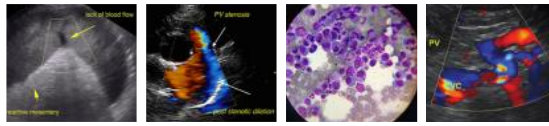
ULTRASONOGRAPHIC FINDINGS

- Normal Echocardiogram
- Minor MR - not clinically significant
- possible borderline subnormal liver - nonspecific, suspect patient variant
- Mild gastritis pattern, sonographically unremarkable small bowel

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No sonographic evidence of structural / functional cardiomyopathy, overt intrathoracic or cranial mediastinal pathology, or significant abdominal visceral pathology was visualized. Sonographically, the appearance of the stomach may suggest mild gastritis without evidence of infiltrative gastric or gastrointestinal criteria, mechanical obstruction, or gastrointestinal foreign body. Potential for low-grade / chronic pancreatitis may present as sonographically normal and could be a contributing factor if cranial abdominal or subxiphoid discomfort on palpation or if elevated Spec cPL.

Three-view chest radiographs, if not done, are recommended for further assessment of possible non-visualized intrathoracic or esophageal pathology, possibly obscured by aerated lung. A resting cortisol level to assess for occult Addison's Disease is recommended. Empirically, gastroprotectant protocol and empirical therapy for gastritis / esophagitis +/- coverage for helicobacter and assessment of clinical response would be reasonable.



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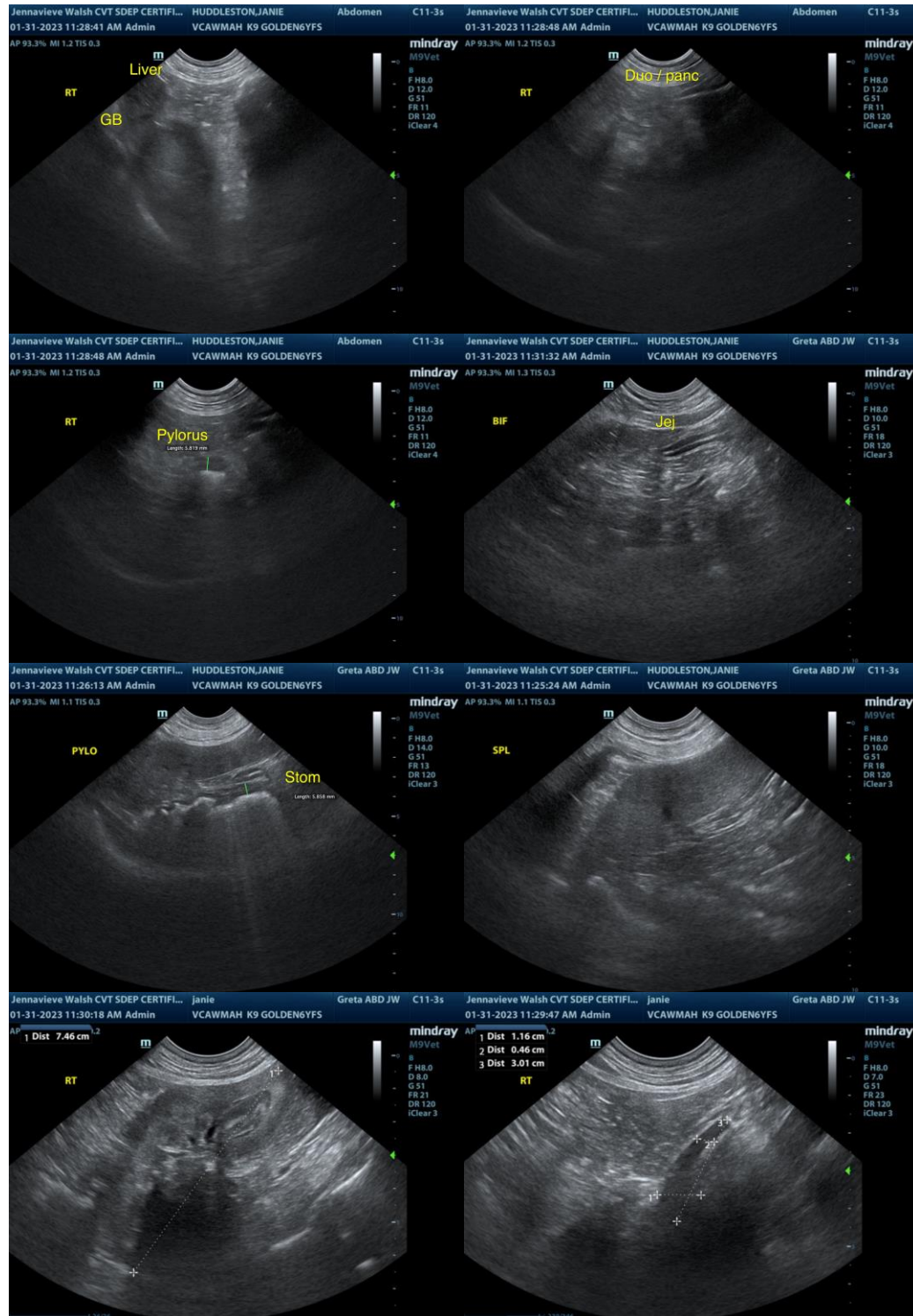
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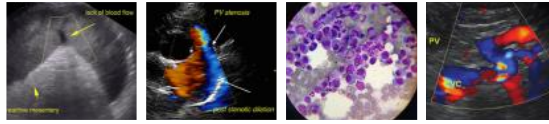
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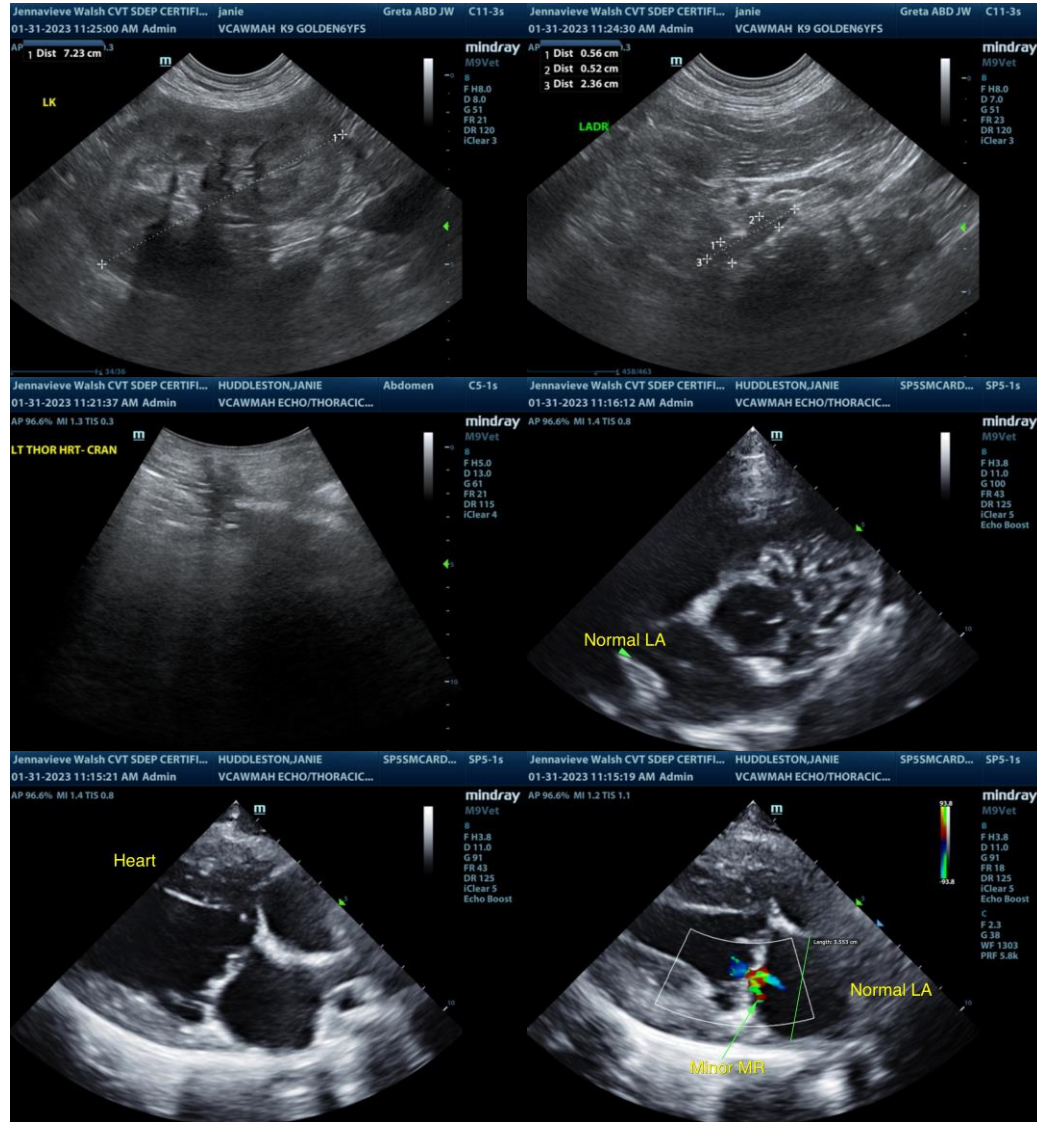
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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