



PATIENT PRESENTING CLINICAL SIGNS

Frankie Gluzerman

Chronic malodorous liquid diarrhea on and off. V 6 X overnight then 2 X this morning. Pis not eating last 2 days. Still urinating but not drinking water. Per O his normal weight is ~12 lbs. No known dietary indiscretion. Was seen for inappropriate defecation 1.5 years ago. Lethargic

SPECIES

Feline

Abnormal PE/Chem/CBC/UA Results: Thin body condition Dehydration ~5-8 % Heart murmur III-IV/VI Periodontal disease Thyroid slip Leukocytosis with neutrophilia Mild hyperglycemia-suspected stress related Very mild hypokalemia Significant proteinuria Doppler BP- 110 Normal T4 @1.9

BREED

Siamese

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

SEX

Neutered Male

AGE

12 Years

WEIGHT

7.8 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

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		220	0.53	1.0	0.53	55	
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	1.08	1.3	1.2		1.35	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

IMAGING PERFORMED BY

Dr. Danielle Kitz

HOSPITAL NAME

Woodlands AH

REFERRING VET

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INVOICE

43424

DATE

6/23/23

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. Tachycardia noted in this patient.



PATIENT

Urinary System

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The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

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The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 4.0 cm. The right kidney measured 4.0 cm.

SEX

Neutered Male

Adrenal Glands

AGE

12 Years

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.43 cm. The right adrenal gland measured 0.51 cm.

WEIGHT

7.8 Pounds

Spleen

The **spleen** was mildly enlarged at 1.0 cm with slight scalloping contour and uniform parenchyma, consistent with reactive spleen.

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Liver

Eric Lindquist, DMV

DABVP, Cert. IVUSS

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder was overdistended with mildly thickened wall and suspended debris. Tortuous cystic duct noted. The common bile duct was dilated up to 0.53 cm (normal being up to 0.40 cm). Mild thickening of the CBD noted as well. Mild increased portal markings noted in the liver. The duodenal papilla was mildly thickened, yet not obstructed. Hepatic lymph nodes were mildly enlarged and slightly rounded. Pericapsular inflammation noted.

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Gastrointestinal

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The **gastrointestinal tract** revealed minor variable thickening and echogenic submucosal changes most consistent with low grade end result of chronic GI disease such as IBD and may be related to malassimilation of nutrients if any weight loss is present. No obvious neoplastic patterns were noted and luminal content as unremarkable. The colon revealed mild increased submucosa thickening with wall thickness of 4.0 mm. No loss of mural detail.

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Pancreas

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The **pancreas** was slightly heterogeneous and hypoechoic with pericapsular inflammatory pattern.

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ULTRASONOGRAPHIC FINDINGS

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- Normal echocardiogram with tachycardia, no evidence of disease
- Chronic cholangitis/pancreatitis/inflammatory bowel presentation/Triaditis



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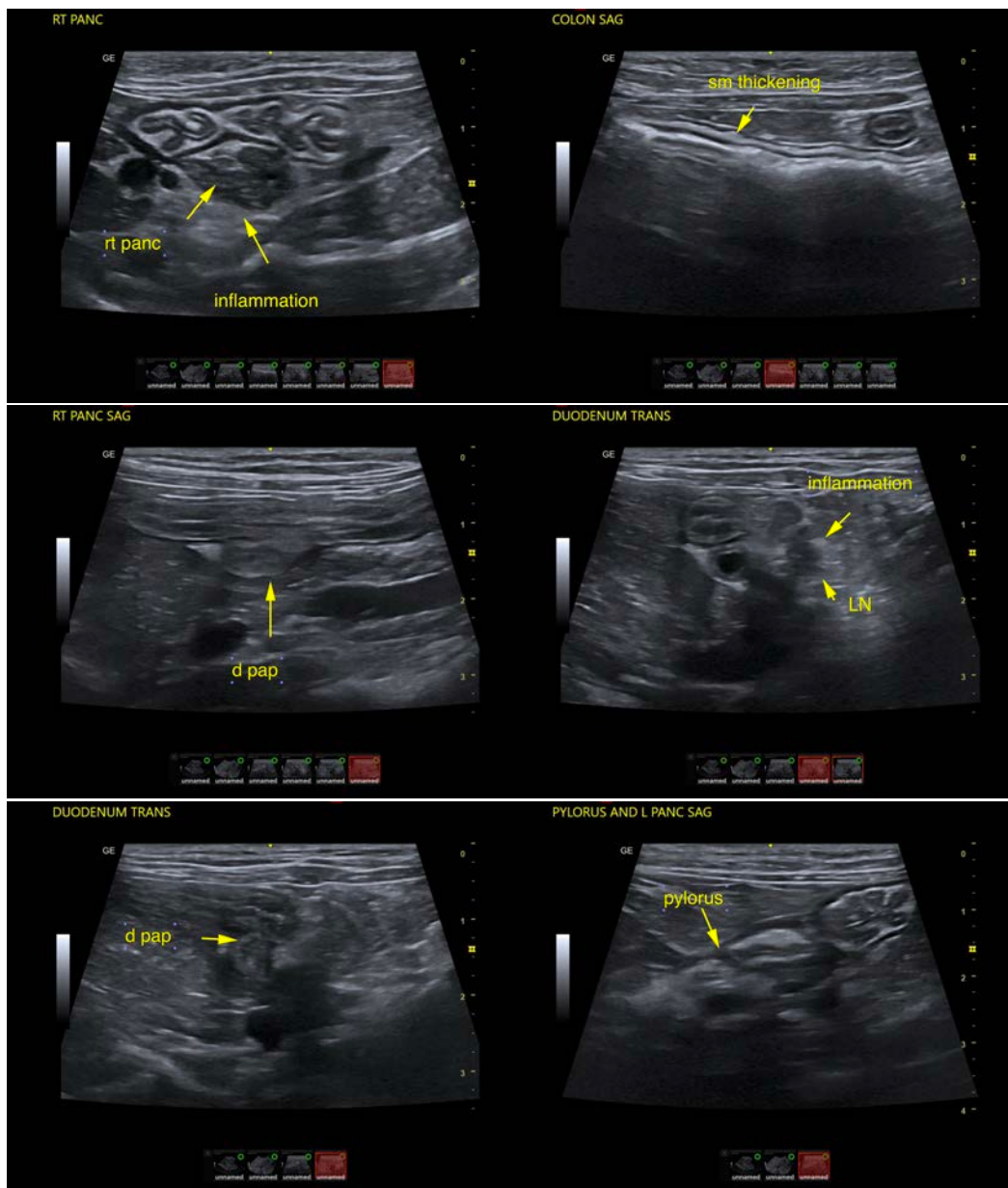
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

EKG warranted to ensure sinus tachycardia. Fecal test warranted. Differentials for diarrhea include occult parasitism. Dietary indiscretion, dietary intolerance, antibiotic responsive colitis, intestinal dysbiosis and occult Addison's should all be considered as causes of diarrhea in this patient. A hydrolyzed diet trial may be in this patient's best interest +/- probiotics. 24-hour NPO and reintroduction of bland diet indicated. I recommend a baseline cortisol or ACTH stimulation test, a fresh fecal smear and fecal floatation analysis if not already performed. If liver enzymes are elevated, ultrasound guided cholecystocentesis and culture could be considered. Empirical trial of Enrofloxacin/Clindamycin combination to treat for infectious could also be considered. Hydrolyzed diet, IV fluid support also indicated. Chronic triad issue likely the cause, however underlying infectious agents are a strong potential. No neoplastic criteria present.





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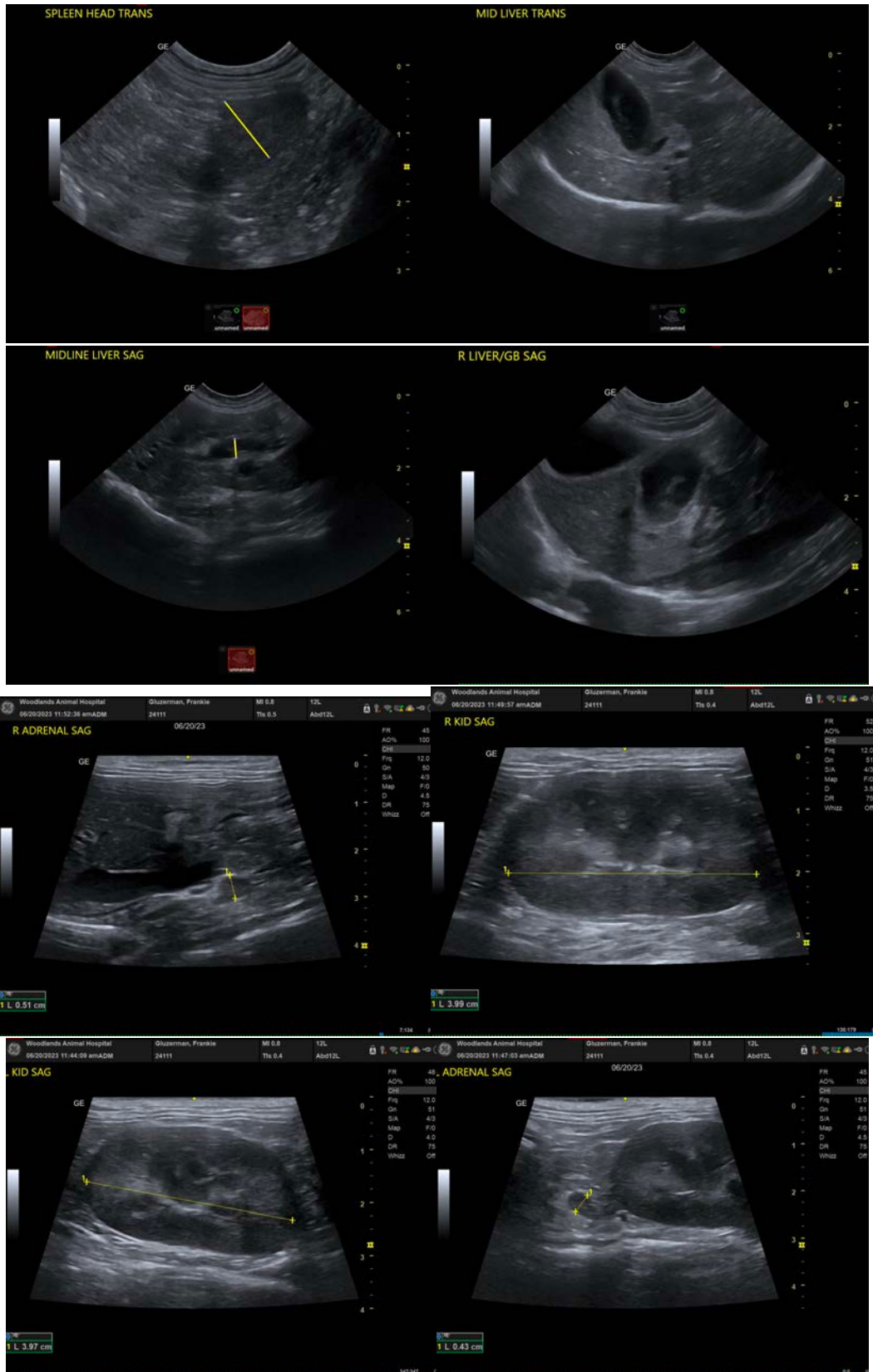
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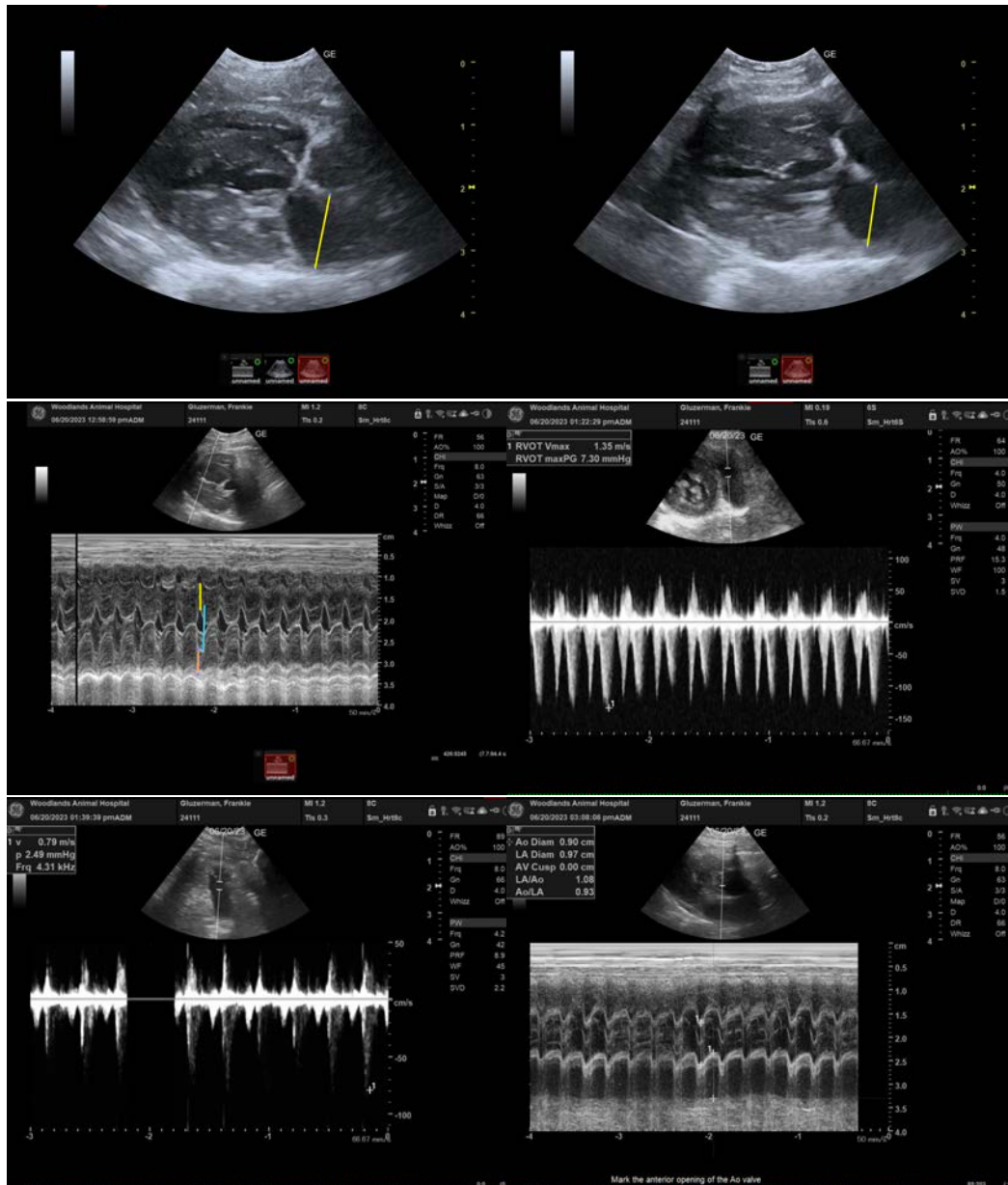
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

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