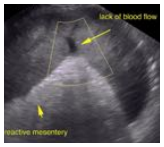
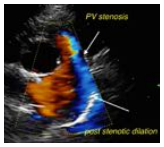
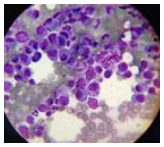
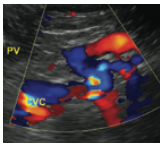
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**
Sampson Vaccaro

**SPECIES**
Canine

**BREED**
Great Dane

**SEX**
Neutered male

**AGE**
8 years

**WEIGHT**
146.5 lbs

**INTERPRETED BY**
Dr Brittany Sinclair, BVSc(hons), DACVECC

**IMAGING PERFORMED BY**
Shari Reffi, CVT

**HOSPITAL NAME**
Animal Care Center fo Flanders

**REFERRING VET**
Dr. Hallihan

**INVOICE**
76067

**DATE**
7/11/23

## PRESENTING CLINICAL SIGNS

History: Vomiting w/ "air" licking. Current Meds: Apoquel 16mg 2 sid; Dexdom/Torb for u/s. Abnormal PE/Chem/CBC/UA Results: Pending

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The kidneys were both normal size and structure, with smooth capsule and normal corticomedullary definition and ratio (cortex 1/3 of medulla). Medullary structure differed distinctly from that of the cortex. No evidence of pelvic dilation was present. The right kidney measured 7.56 cm. The left kidney measured 7.97 cm.

### *Adrenal Glands*

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 2.94 cm in length and 0.56 cm at the cranial pole and 0.54 cm at the caudal pole. The right adrenal gland measured 3.75 cm in length and 1.04 cm at the cranial pole and 0.82 cm at the caudal pole.

### *Spleen*

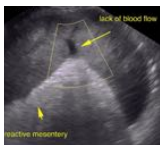
The spleen was normal with a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma and smooth capsule, with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

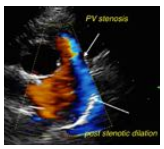
### *Liver*

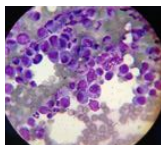
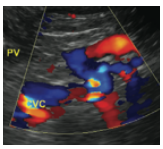
The liver is subjectively normal in size with normal contours and structure. The parenchyma is slightly heterogenous with a coarse appearance. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. Gallbladder is moderately distended with normal wall thickness and anechoic contents. Common bile duct is non-distended and tapers normally

### *Gastrointestinal*

The stomach contains a small volume of fluid. It appears diffusely mild to moderately thickened measuring 0.8-0.9cm with a thickened mucosal and muscularis layers. The distinction of the gastric wall layers is generally adequate.



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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with focal areas of small volumes of luminal fluid. Proximal duodenum contains a small volume of fluid but tapers normally. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. There were no focal lesions consistent with obstruction or a mass effect observed.

Colon is generally empty until distal colon which contains hyperechoic fluid contents consistent with diarrhea distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### *Pancreas*

The base and limbs of the pancreas were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour and parenchyma were normal. No overt evidence of active inflammatory or neoplastic disease was noted.

### *Lymph Nodes*

No clinically significant lymphadenopathy or abnormalities noted.

### *Free Abdomen*

No masses or free fluid were noted.

## ULTRASONOGRAPHIC FINDINGS

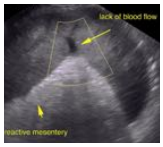
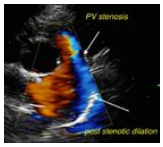
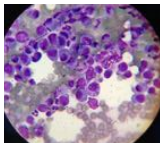
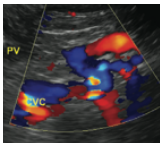
### Primary Findings

1. Thickened gastric wall
2. Fluid in SI loops
3. Diarrhea
4. Coarse liver

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

GI changes are most consistent with nonobstructive gastroenteritis. While the pancreas appeared sonographically normal, pancreatitis cannot be definitively ruled out. Gastric wall thickening may be secondary to inflammation from repeated vomiting, or may represent inflammatory or infiltrative disease and be the underlying cause of gastroenteritis. No focal lesions were visualized to suggest a growth or focal ulcer, though this cannot be definitively ruled out. Ideally endoscopy and biopsy should be considered. Alternatively abdominal exploratory surgery for full thickness biopsy as endoscopic biopsy can only diagnosis mucosal disease and has the potential to miss deeper lesions. Empiric treatment with antinausea (cerenia, ondansetron) and anti-acid medications (omeprazole 0.5mg BID +/- suclralfate) could be tried. Serial monitoring for resolution is recommended if a conservative approach is tried.

Treatment for generalized gastroenteritis supportive and involves fluid support, GI support (anti-nausea, appetite stimulant), analgesia and enteral nutrition as needed. Antibiotics are generally not warranted. Serial imaging is indicated if clinical signs are not resolving. Current chem/lytes/CBC, GI

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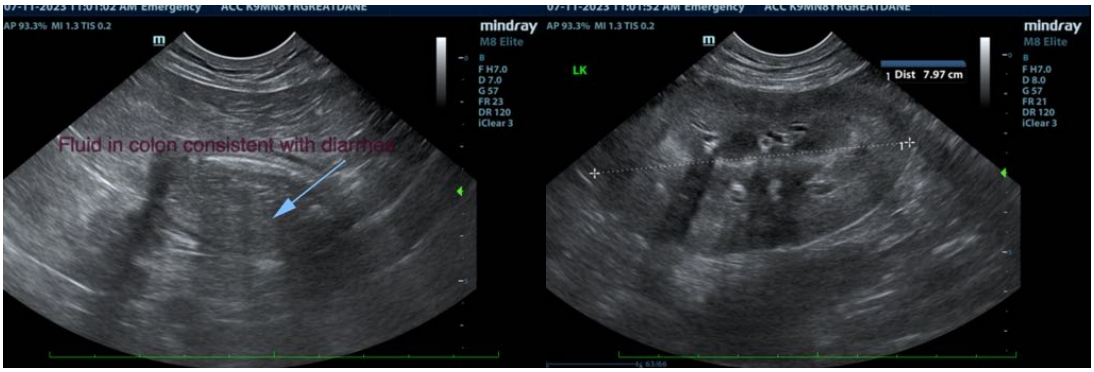
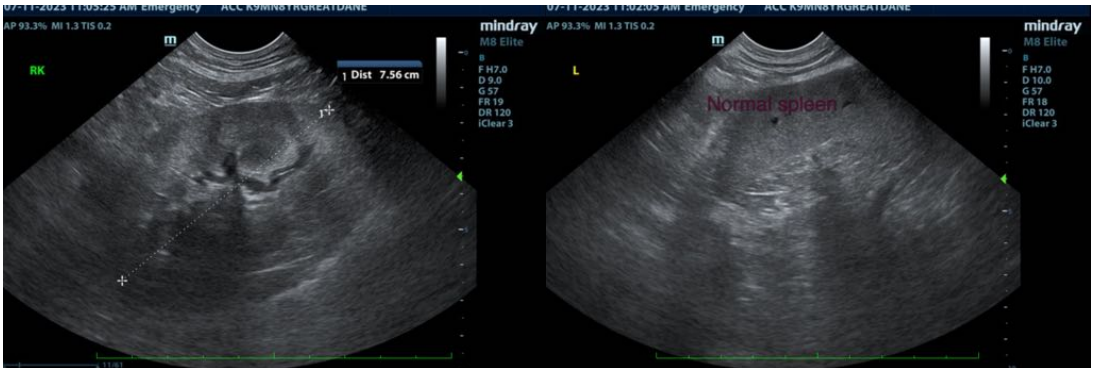
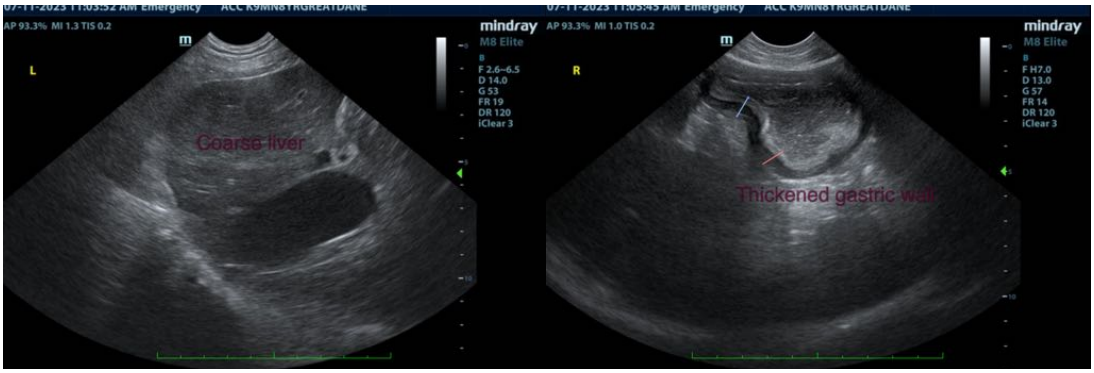
panel (TLI/PL/cobalamin/folate), baseline cortisol +/- ACTH stimulation test, fecal pathogen PCR, and empiric broad spectrum deworming and treatment with probiotics should be considered as clinically warranted. Ultimately GI biopsy may be required for more definitive diagnosis if clinical signs are persistent or recurrent. Colonoscopy may reveal colonic luminal changes not identifiable on ultrasound.

Liver changes are a common benign age related change, but infiltrative disease (lymphoma, MCT, other) cannot be definitively ruled out. No significant disruption of architecture noted to suggest significant pathology. Fine needle aspirate could be considered to further characterize parenchymal changes if clinically indicated, especially if any weight loss is noted or for baseline cytological assessment.



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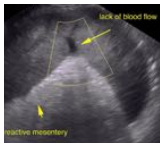
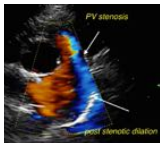
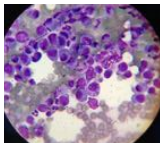
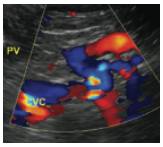

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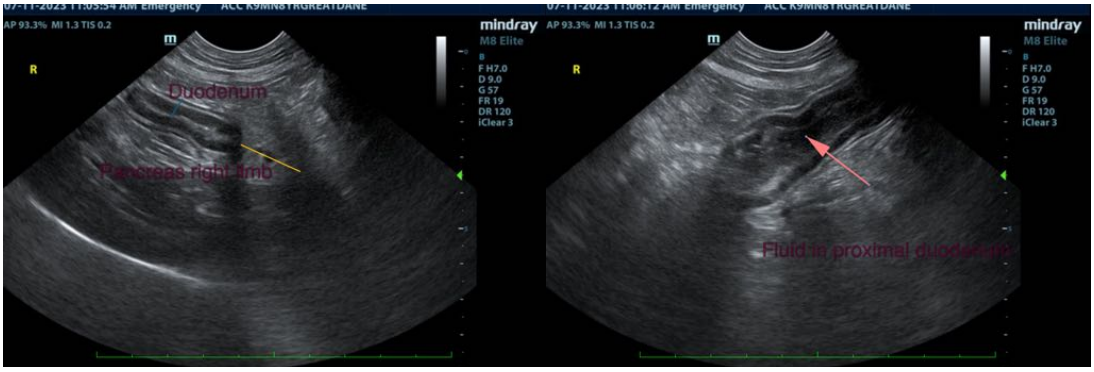



**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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