



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT**  
Max Abreu

**SPECIES**  
Canine

**BREED**  
German Shepherd

**SEX**  
Male, neutered

**AGE**  
6 Yrs.

**WEIGHT**  
82.6 lbs.

**INTERPRETED BY**  
Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**  
Dr. Ferrer

**HOSPITAL NAME**  
Paseos VC

**REFERRING VET**  
Dr. Martes

**INVOICE**  
14791

**DATE**  
4/10/23

**History:** The patient presented as a referral for an abdominal ultrasound. The patient was presented on April 8th for evaluation of an acute history of vomiting. Has been vomiting since 6 in the morning today. Has vomited at least 11 times. Vomit is mainly food but has also vomited saliva. He had 1 episode of vomiting on Thursday. Has not had diarrhea. His energy is normal but yesterday, he did not want to play. Yesterday, he ate by rounds. He is on Prednisone. The patient came in today April 10th, because he isn't doing better. Medications: Omeprazole 40mg BID Prednisone 20mg (Tapering)  
**Abnormal PE/Chem/CBC/UA Results:** CBC (April 8th)- leukocytosis 18.21, neutrophilia 16.66, lymphopenia 0.91, eosinopenia 0.02, thrombocytopenia 115k Chem (April 8th)- hypokalemia 3.4 radiographs (April 8th)- remodeling of ribs, spondylosis at thoracolumbar and coccygeal vertebra; small radiopaque/mineralized opacity (suspect at small intestine - no obstructive pattern)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (1.62 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (7.84 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (7.94 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

**Adrenal Glands**

The left adrenal gland is normal size (0.59 cm at cranial pole) (0.44 cm at caudal pole) (3.39 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.85 cm at cranial pole) (0.42 cm at caudal pole) (2.72 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is normal in size (2.14 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of



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congestion. No pathological hepatic lymphadenopathy observed. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of mostly gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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**Gastrointestinal**

The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. 1-2 cm of proximal duodenum is borderline thickened (up to 0.61 cm) with retention of the normal layering pattern. The remaining small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. The small intestinal lumen is not dilated. The ileocecolic junction and colonic wall are normal. No obstructive disease is noted.

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**Pancreas**

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

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**Free Abdomen**

Trace ascites is suspected adjacent to the spleen. A few prominent mesenteric lymph nodes are visualized, the largest measuring 2.90 cm in length. Surrounding mesentery is slightly hyperechoic. A 0.59 cm gastric lymph node is also seen.

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

- The borderline thickening of the proximal duodenal wall may be a normal variant for this patient or may represent a mild inflammatory process with a lower possibility of emerging neoplasia or hypertrophy.

**Secondary Findings:**

- The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.
- Questionable trace ascites.

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\*An obvious cause for the patient's clinical signs is not identified in this study. Differentials include microscopic gastrointestinal disease (i.e., esophageal disease, food allergy/intolerance, infectious/parasitic disease, inflammatory bowel disease), underlying metabolic issue, other.

**REFERRING VET**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- A fecal evaluation for ova and Giardia is recommended, if not already performed.
- A GI panel including serum cobalamin, folate, TLI and PLI is also recommended.
- Consider a resting cortisol level once the patient has been off of corticosteroids for several weeks.

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- A 2–4-week limited antigen or hydrolyzed protein diet trial is also recommended to assess for food allergies.

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- Consider three-view thoracic radiographs to assess for occult esophageal disease.
- Depending on the results of the above diagnostics, endoscopic or surgical GI biopsies may be necessary to get a definitive diagnosis.

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- While awaiting test results, consider initiation of a probiotic (i.e., Provable or Visbiome).
- Given the thrombocytopenia, a recheck CBC +/- comprehensive tick panel should be considered.

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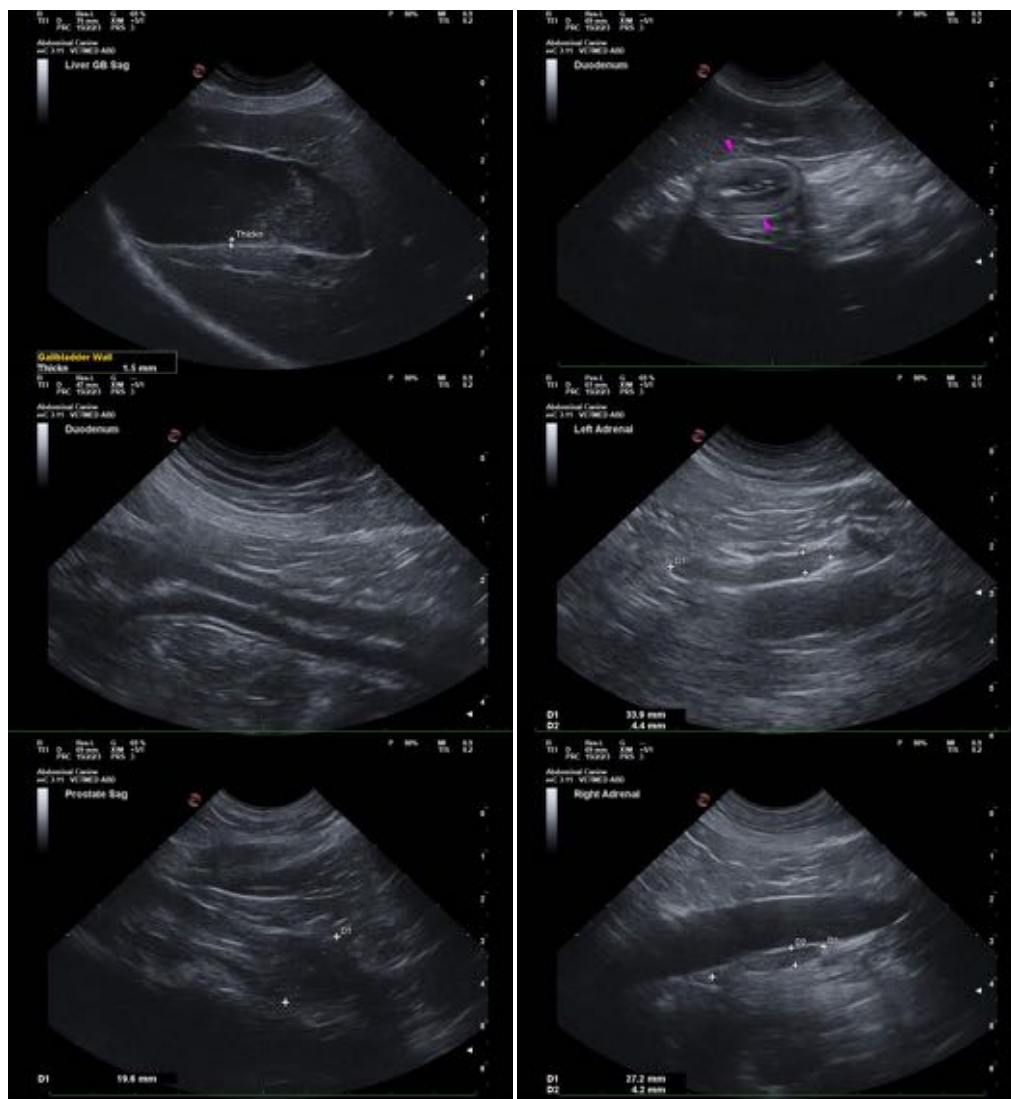
Dr. Martes

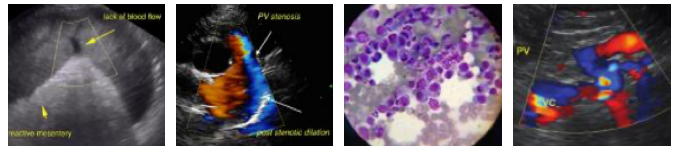
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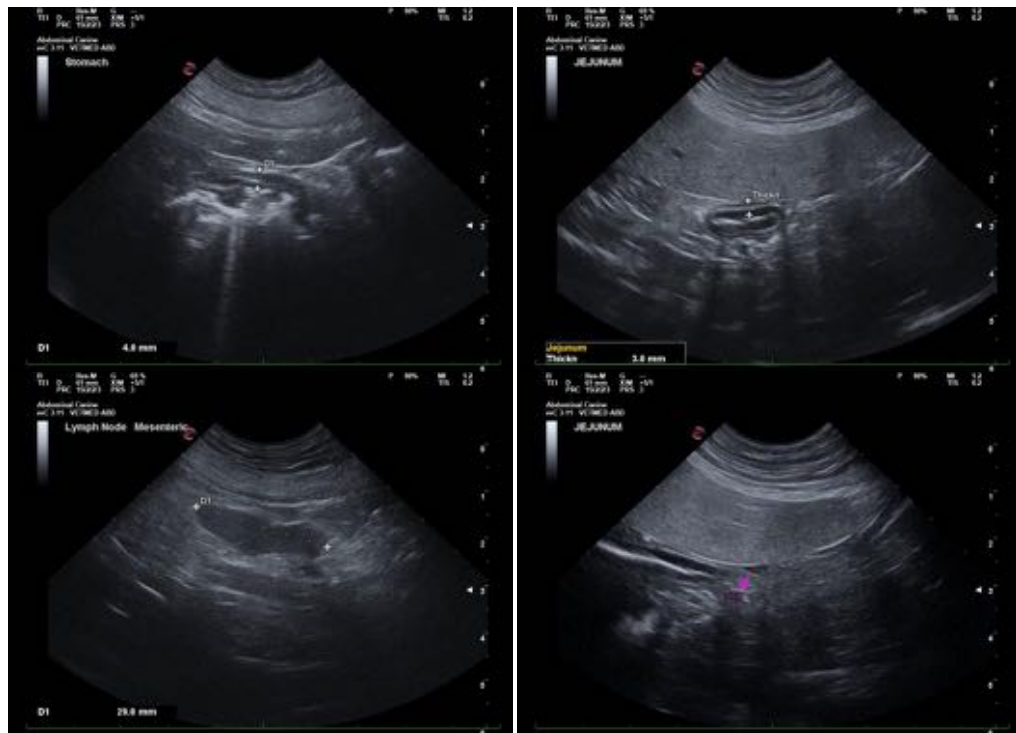
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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