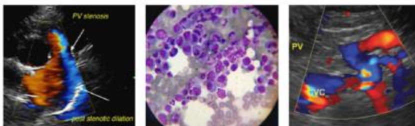


PATIENT

Sophie Visser

SPECIES

Canine

BREED

Dogue de Bordeaux

SEX

Spayed Female

AGE

7 Years

WEIGHT

105 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging MI

REFERRING VET

Union Lake Vet Hospital

INVOICE

37262

DATE

4/28/22

PRESENTING CLINICAL SIGNS

Chronic diarrhea and hypoalbuminemia (also has elevated UPC- but not enough to explain low protein). Tried Telmisartan and went into kidney failure. Also has wt loss. Was worked up at Blue Pearl 2/2021 and nothing significant found at the time.
Abnormal PE/Chem/CBC/UA Results: Labs pending but 2 mo ago Albumin was 2.1 GI panel pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (7.19 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.29 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.72 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.69 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are two ill-defined, hypoechoc nodules seen within the parenchyma, one measuring 0.57 cm and one measuring 0.84 cm.

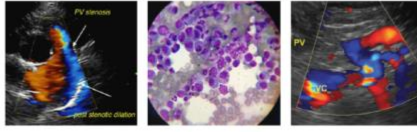
Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is mildly dilated with fluid and irregular shadowing material, most consistent with normal ingesta and gas. It largely measures at a normal thickness of <0.7cm with some variability due to the



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presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. In some views, the gastric wall does appear thickened and irregular. I suspect much of this is artifact due to tangential images of the wall, but some degree of wall thickening is possible/likely. No definitive mass lesions are observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Duodenum wall measured 0.55 cm. Jejunum wall measured 0.44 cm. There are areas of significant mucosal striations and fogging. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with nonformed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is scant free abdominal fluid. No lymphadenopathy. The omentum is generally of normal echogenicity.

PRIMARY FINDINGS

- Two hypoechoic nodules visualized in the splenic parenchyma – There are non-cavitated, hypoechoic splenic nodules visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

- Questionable gastric wall thickening and irregularity – The stomach wall thickening could be consistent with inflammation, edema, infiltrative neoplasia, imaging artifact due to rugal folds, other.

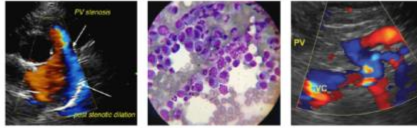
- Thickened small intestine with mucosal striations and fogging – The bowel wall thickening could be consistent with inflammation, edema, or infiltrative neoplasia.

SECONDARY FINDINGS

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Based on the ultrasonographic findings and the historical information provided, findings are most consistent with protein losing enteropathy. Consider a liver function test to rule out a concurrent hepatopathy, and a GI panel (already submitted, which is excellent) should help to provide supportive evidence for gastrointestinal. The most common causes for GI protein loss are inflammation (IBD, etc.),



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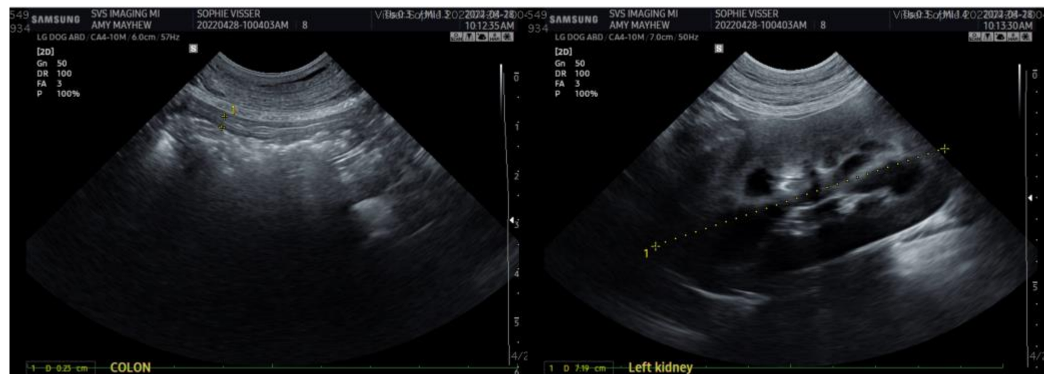
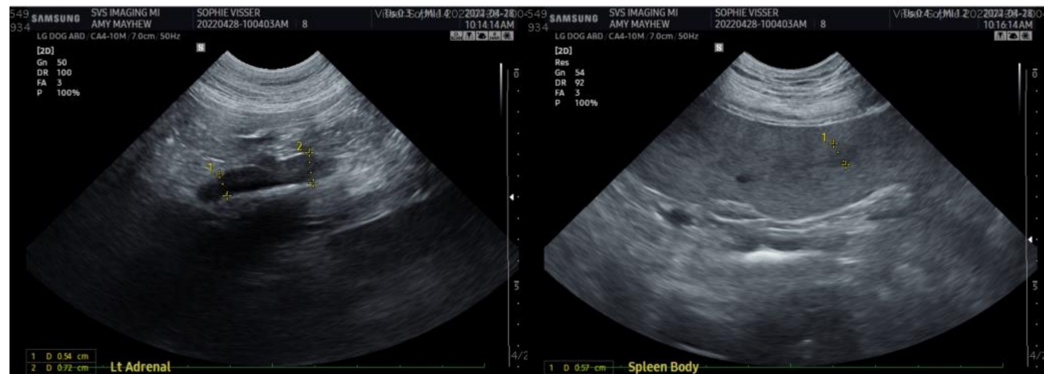
lymphangiectasia, or GI neoplasia. Other differentials are possible, and GI biopsies are necessary to differentiate between these disease processes. It is ideal to obtain a diagnosis, as the prognosis varies dramatically, and treatment recommendations differ between disease processes.

- Consider an ultra low-fat diet (in the case of lymphangiectasia) or a novel protein/hydrolyzed protein prescription diet (in the case of IBD).
- Recommend chronic probiotic therapy.
- Recommend the aforementioned GI panel.
- Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.
- Confirm negative parasite screening and empirical treatment.
- If possible, consider obtaining GI biopsies. I typically recommend endoscopic biopsies due to low albumin levels (and the stomach wall could be evaluated) but in a dog this big it may be difficult to obtain small intestinal biopsies, so your options would be surgical biopsies, which carry a risk, endoscopic evaluation of the very proximal GI tract combined with a lower endo to biopsy ileum or empirical treatment for IBD, which has its own inherent risks as well. My recommendation would be an upper and lower GI endscopy.





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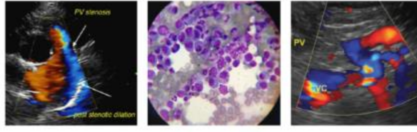

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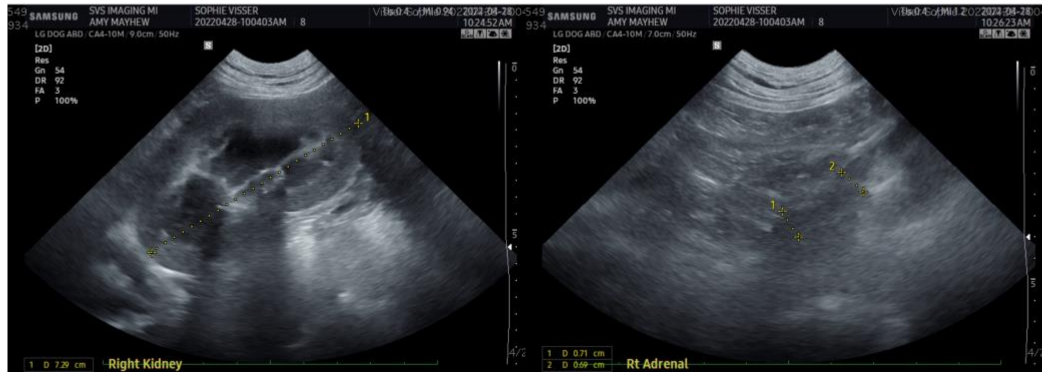

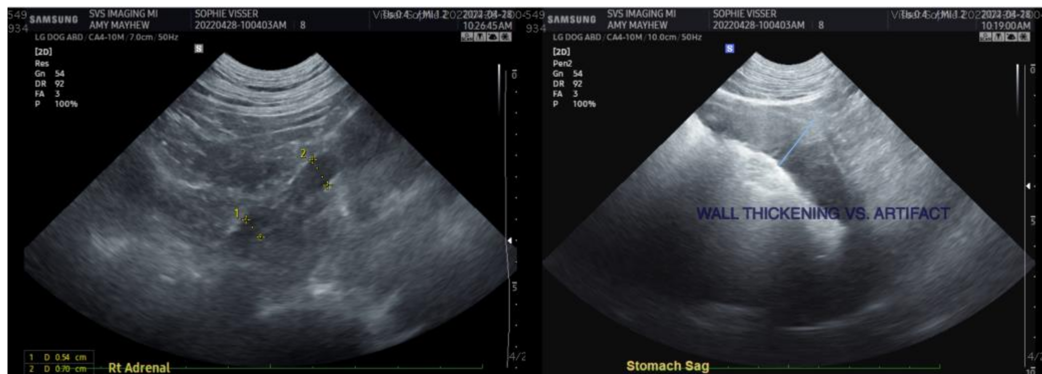

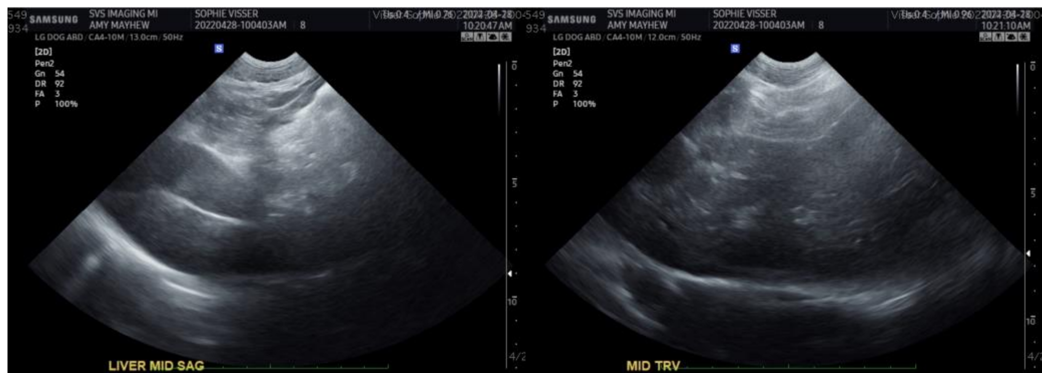

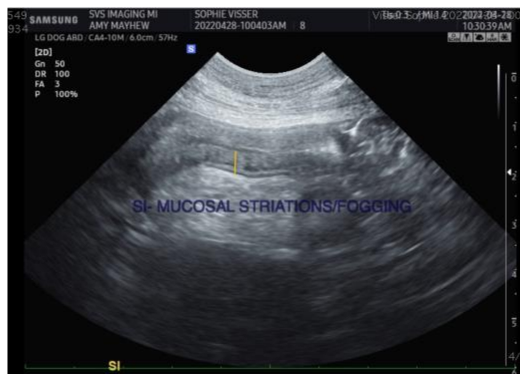

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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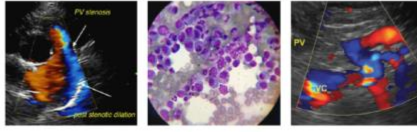

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Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com