

**PATIENT**

Sophie Gramann
166639

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Spayed Female

AGE

11 Years 2 Months

WEIGHT

5 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

WVRC - Dr. Sevide

INVOICE

37845

DATE

5/20/22

PRESENTING CLINICAL SIGNS

Patient presented for reported low protein on pDVM bloodwork. Previously presented for GI signs in August 2019. Panhypoproteinemia was found at that time and patient was diagnosed with presumptive protein losing enteropathy.

Abnormal PE/Chem/CBC/UA Results: TP 2.8, Alb 1.2, Glob 1.6, AST 68, Cholesterol 70

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 (4.43 cm). Overall echogenicity is normal with mildly reduced 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 (4.5 cm). Overall echogenicity is slightly hyperechoic with mildly reduced 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 0.50 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 0.44 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 is a very small, focal hyperechoic lesions measuring approximately 0.27 cm in diameter within the splenic parenchyma.

Liver

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

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is

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adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Duodenum wall measured 0.35 cm. Jejunum wall measured 0.31 cm. There is moderate mucosal speckling and fogging visualized within the duodenum and jejunum. 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 formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding 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 anechoic free fluid. No lymphadenopathy. The omentum appears generally mildly hyperechoic.

ULTRASONOGRAPHIC FINDINGS

- Mildly thickened small intestine with mucosal fogging and speckling – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease). Bright mucosal speckling has been proposed to represent dilated lacteals or focal accumulation of mucus, cellular debris etc.. in the mucosal crypts of the small intestine.
- Small, hyperechoic focus visualized within the splenic parenchyma – This lesion has a somewhat benign appearance and could be consistent with benign myelolipoma. Recommend continued monitoring with ultrasound.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Scant anechoic free fluid – This is likely secondary to the hypoalbuminemia reported.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient is hypoalbuminemic and has chronic gastrointestinal signs. These changes are most consistent with a protein losing enteropathy. No focal lesions are visualized associated with the bowel, but there is some generalized thickening and mucosal fogging that would be concerning for possible IBD, lymphangiectasia, or less likely intestinal neoplasia. Considering the breed, IBD or lymphangiectasia would be most likely, and would need to be confirmed by obtaining endoscopic GI biopsies.

In some circumstances, I will still recommend obtaining a liver function test to rule out concurrent liver dysfunction in these breeds (can be predisposed to liver shunts, etc.), and a urinalysis and UPC to rule out the possibility of concurrent urine protein loss.

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- Consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to look for evidence of concurrent GI issues such as dysbiosis, B12 deficiency, etc.
- Consider either an ultra low-fat diet or a novel protein/hydrolyzed protein prescription diet.
- Consider chronic probiotic therapy.
- In these situations, GI biopsies are strongly recommended in order to obtain a diagnosis and optimize therapy.
- Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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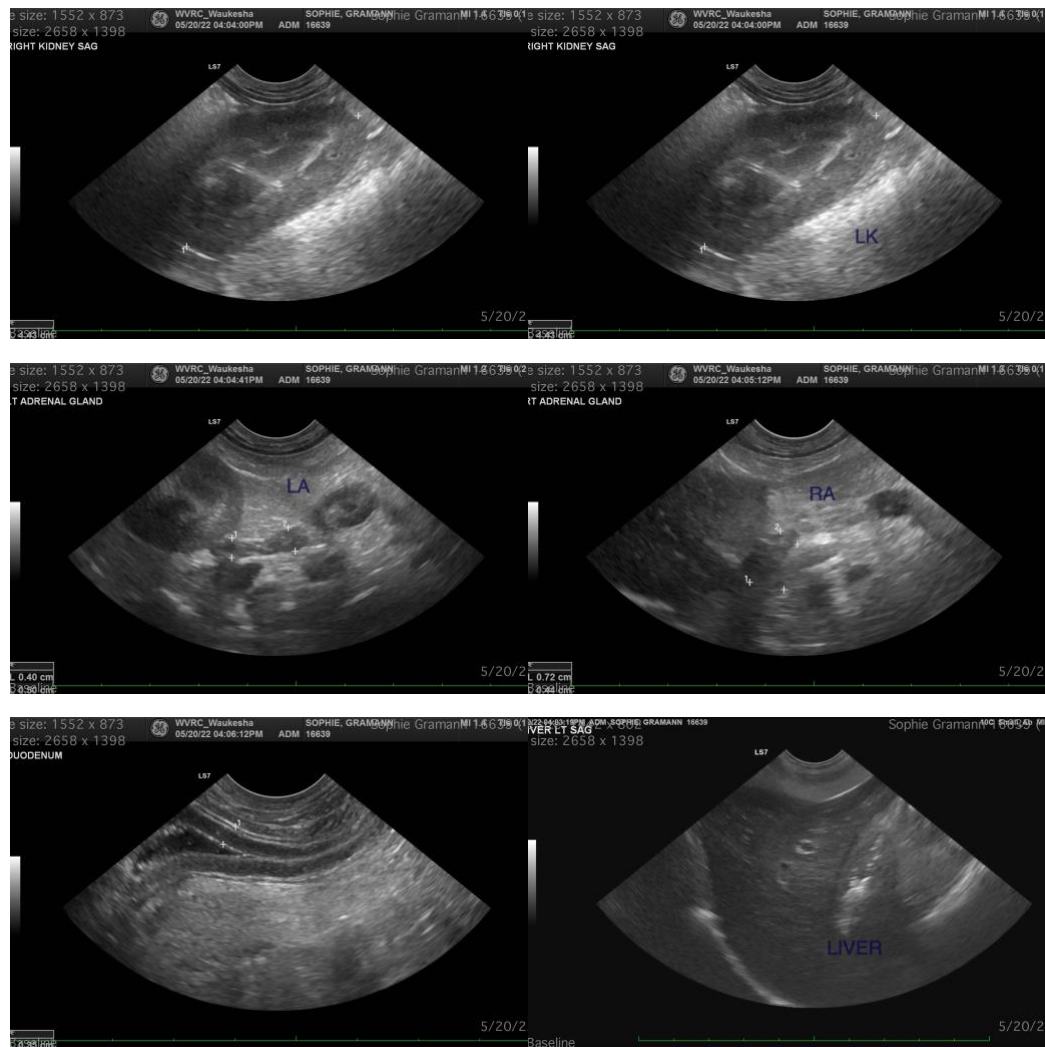
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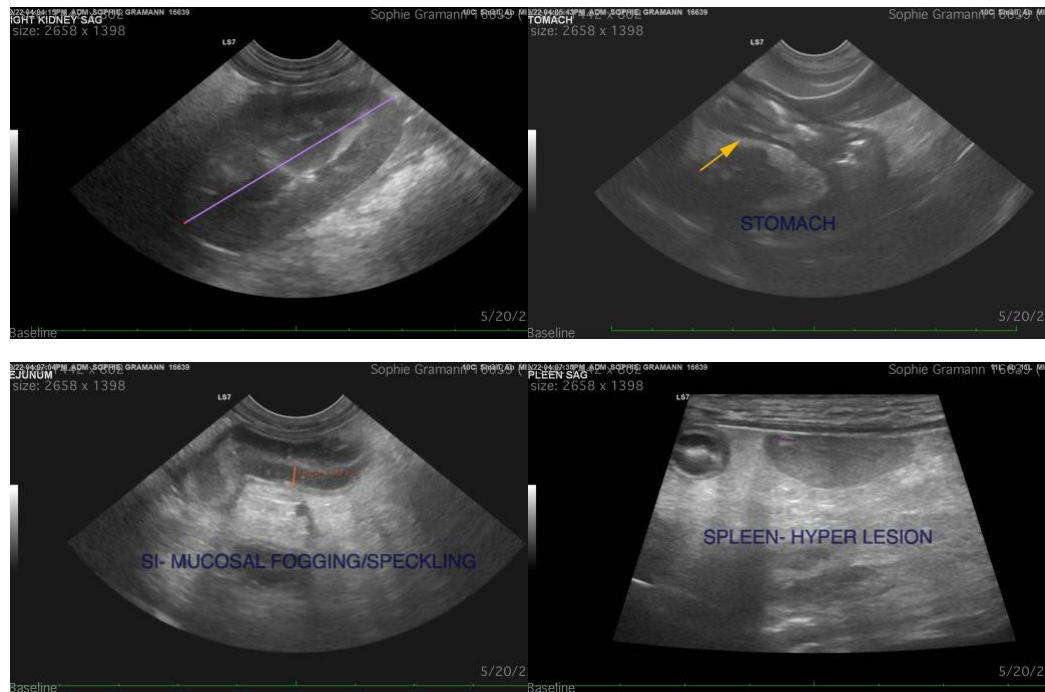
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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