



**PATIENT**

Daisy Levy

**SPECIES**

Canine

**BREED**

Havanese

**SEX**

Spayed Female

**AGE**

16 Years 2 Months

**WEIGHT**

9.1

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Gillian Striano-  
Kaplan

**HOSPITAL NAME**

Ramsey Vet Hospital

**REFERRING VET**

Dr. Gillian Striano-  
Kaplan

**INVOICE**

45806

**DATE**

3/9/23

**PRESENTING CLINICAL SIGNS**

History of immune mediated bone marrow disorder - on Cyclosporine Weight loss Decreased appetite Regurgitation KCS, corneal ulcer

Abnormal PE/Chem/CBC/UA Results: RBC 4.6 HCT 33.4 Hg 11 Mono 1232 PLT 556 slight anisocytosis ALB 2.4 UPC 0.3

**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 (3.8 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 (4.13 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

**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. No focal parenchymal abnormalities are visualized.

**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 is severely distended with a small amount of fluid and a large amount of air. 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 adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.



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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 measures 0.48 cm. Jejunum wall measures 0.35 cm. Mucosal speckling was observed. 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 area of 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**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

**ULTRASONOGRAPHIC FINDINGS**

- 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 debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.
- Significant air/gas distention of the stomach and small bowel – Gas shadowing interferes with full evaluation of the GI tract. Suspect generalized ileus.
- Diffusely thickened small intestine with mucosal speckling – Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc.. in the mucosal crypts.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The GI tract and some of the abdomen is difficult to evaluate due to a large amount of diffuse intraluminal air in the GI tract. This could be due to aerophagia or secondary to diffuse ileus. Additionally, the small intestine appears diffusely thickened with some moderate mucosal speckling visualized. These findings are concerning for primary gastrointestinal disease, possibly a protein losing enteropathy provided a urine protein to creatinine ratio is normal and a liver function test is normal. Most likely causes for GI protein loss would be severe IBD, lymphangiectasia, or neoplasia. A biopsy would be necessary to differentiate. Consider the following:

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend chronic pre- and probiotic therapy.
- If symptoms persist, consider obtaining endoscopic GI biopsies.



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Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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The changes observed in the kidneys are consistent with chronic age related renal disease. Recommend a blood pressure, urinalysis and culture as a baseline.

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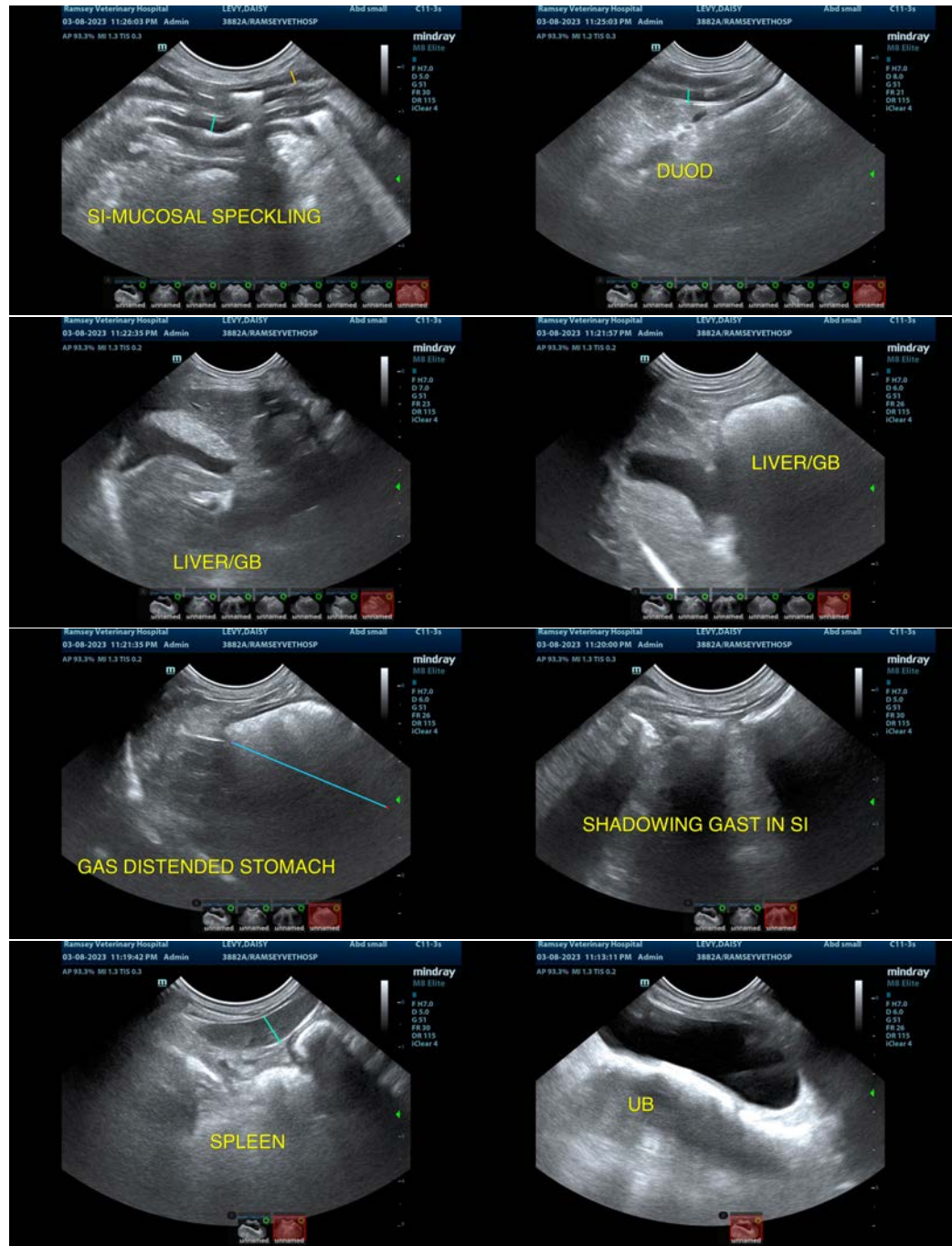
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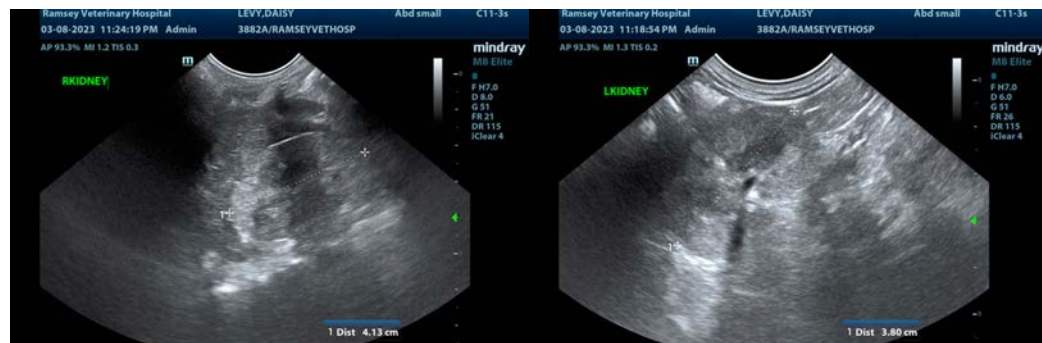
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com