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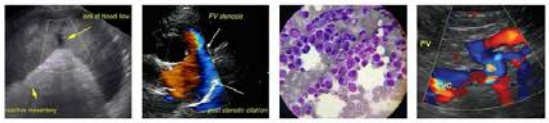

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Ruby Kellermeyer

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

8 Years 11 Months

WEIGHT

5.7 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

MountainView AH

REFERRING VET

Dr. Bridget Landon

INVOICE

33686

DATE

12/22/21

PRESENTING CLINICAL SIGNS

Vital Sign MM1 Weight 5.8 pounds BodyScor e9 4 - Ideal - 4 Temp 100 Pulse 120 Resp pant CRT <2 sec Dental 3 - Moderate Pain 1 - No Visible Pain Alert BAR Muc Memb Pink/Healthy PAWS Request Form: Chief Concern / Provisional Diagnosis: ~ chronically elevated alt~ Relevant Medical History and Physical Exam findings: ~ weight has been stable~ concern for hepatopathy vs. enteropathy Recent Diagnostics: Relevant Labratory Results / Abnormalities: ~ alt 501, was at 722 11/20 last year seemed to be managed w/ denamarin, had decreased to 200. cholesterol low (44) platelets elevated hw test 4dx neg Current medications (include full name, dosage and frequency): ~ denamarin weight related dose daily~ nexgard monthly Relevant Radiograph Findings(email radiographs if available): ~none~

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 (3.06 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 (3.1 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 region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.35 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. No focal parenchymal abnormalities are visualized.

Liver

The liver is borderline small in size, and normal in 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 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.

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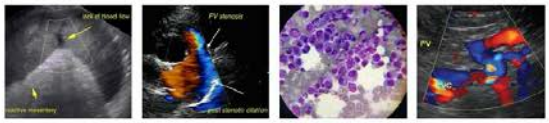

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Gastrointestinal

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 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 0.4 cm. Jejunum wall measured 0.17, 0.21, 0.32 cm. There is mucosal speckling visualized. 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 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

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

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

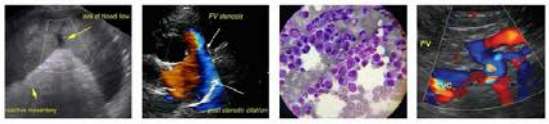
- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

- Subjectively thickened small intestine with mucosal speckling visualized – The 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver subjectively seems small and mildly heterogeneous. No focal lesions are visualized, and the biliary tract appears relatively normal. No obvious shunt was visualized and that would be atypical for a dog this age, but cannot definitively ruled out.

- Recommend pre- and post-prandial bile acids
- If significantly elevated, consider a liver biopsy +/- contrast CT scan to look for any evidence of congenital or acquired liver shunting.



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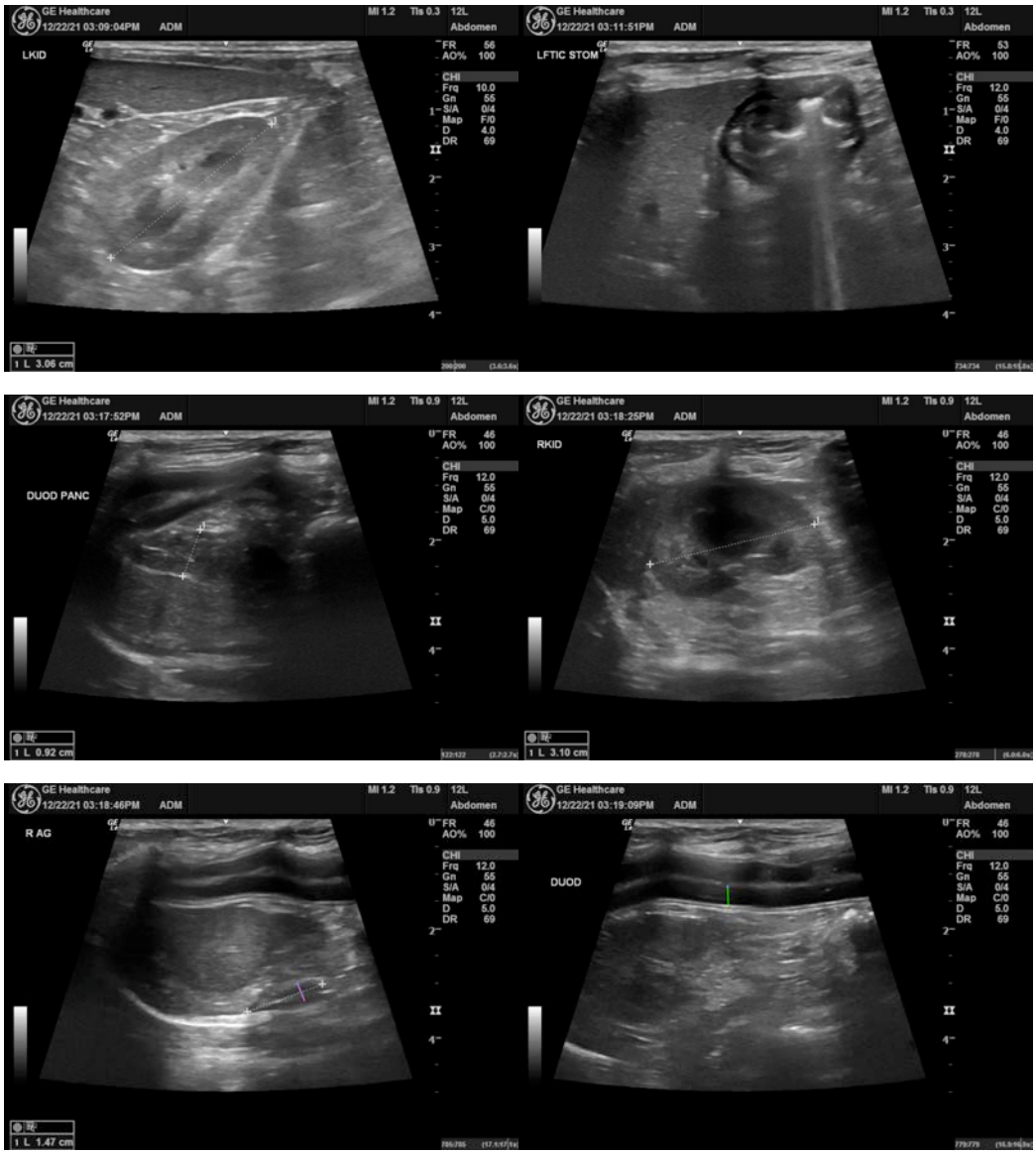
Additionally, some areas of the small intestine are thickened and have prominent mucosal speckling. This is a non-specific finding, but there is concern for underlying inflammatory disease, food allergy, less likely neoplasia, etc.

- Consider a hydrolyzed protein/novel protein prescription diet.
- If diarrhea is an issue, then consider probiotic therapy.
- Consider biopsies of the small intestine, particularly if this can be done at the same as obtaining liver biopsies.



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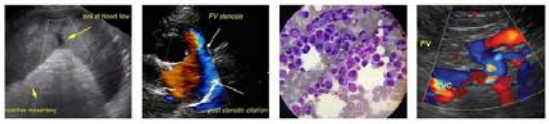

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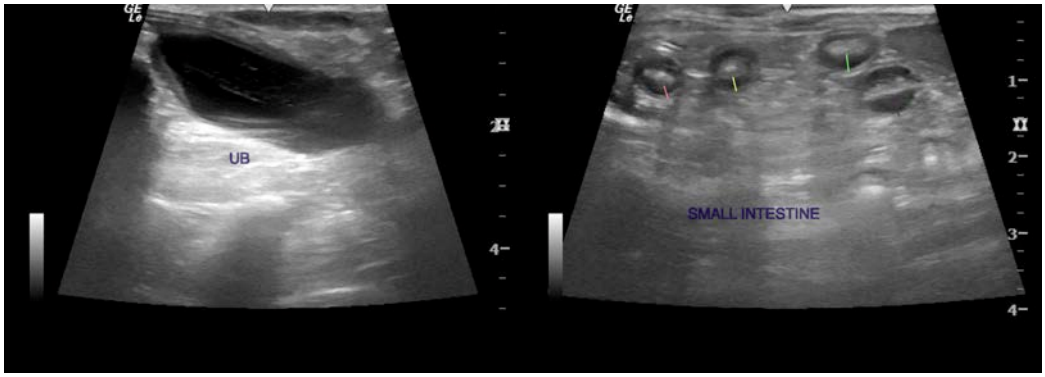

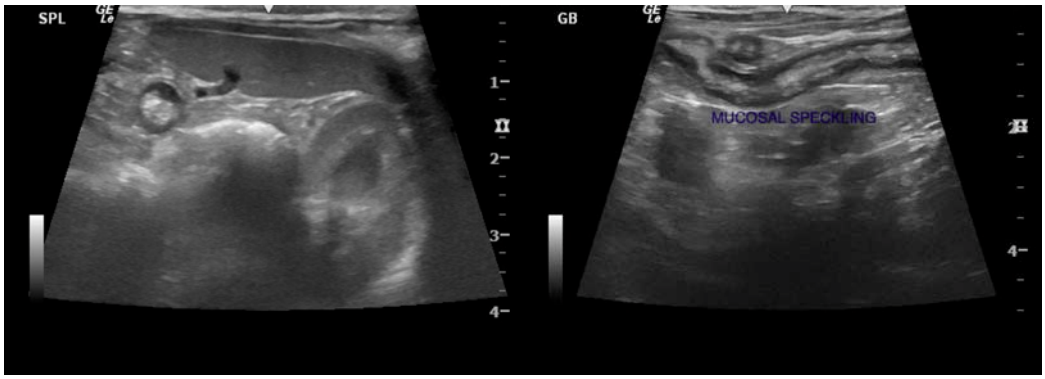

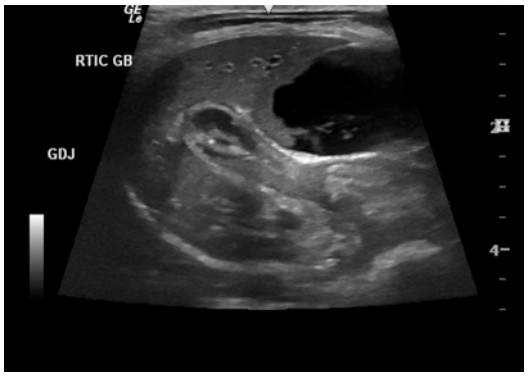

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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