



**PATIENT PRESENTING CLINICAL SIGNS**

**Mako Kohler**  
 History: Hypothyroid. Chronic diarrhea not responsive to diet or antibiotics. Frequently eats grubs from garden, but all behaviors normal. Did improve on amoxicillin and probiotic, but still not normal. ALP 439; rest WNL

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results:

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

**Urinary System**

Husky

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

**SEX**

FS

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Pinpoint to focal areas of medullary mineral were present. No evidence of pelvic dilation was present. The left kidney measured 7.4 cm in length. The right kidney measured 7.5 cm in length.

**AGE**

15 years

The area of the aortic trifurcation was free of pathology.

**WEIGHT**

49 pounds

**Adrenal Glands**

The left adrenal gland was mildly enlarged with areas of capsule asymmetry and non-homogeneous to nodular parenchyma without evidence of mineralization or overt vascular invasion. uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.3 cm width at the caudal pole and 1.6 cm width at the cranial pole and 3.7 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.81 cm width at the caudal pole and 3.0 cm length.

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**Spleen**

A mildly expansive nonhomogeneous non cavitated mass in the caudal spleen measuring 2.7 cm in diameter was present. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis.

**HOSPITAL NAME**

Wood River Animal Hospital

**Liver**

The liver parenchyma exhibited generalized parenchyma heterogeneity with symmetrical capsule contour. The hepatic and portal vasculature were normal in appearance without signs of congestion.

**REFERRING VET**

Dr. Leah Fischer

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with multiple areas of hyperechoic debris to mineral along the luminal surface. The cystic and common bile ducts were normal.

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**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild to moderate retained anechoic gastric fluid with no signs of obstruction or foreign material. The gastric body wall measured 0.30 cm in width.

**DATE**

04/29/2022

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio with segmental propensity for prominent to echogenic jejunal submucosa layer. Mild generalized duodenal ileus was



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present. Mildly prominent yet intact ileal walls at the level of the ileocolic junction were present. The lumen of the small intestine was empty with no signs of obstruction or foreign material. The duodenum wall measured 0.40 cm in width. The jejunum wall measured 0.32 cm in width.

**SPECIES**

Canine

The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. Semi formed fecal matter was present in the colon lumen with lumen dilation. The colon wall measured 0.26 cm in width.

**Pancreas**

**BREED**

Husky

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

**Free Abdomen**

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FS

Focally enlarged mesenteric lymph nodes were present. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. An example of lymph node size was 0.39 cm width.

**AGE**

15 years

No peritoneal free fluid was noted.

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

49 pounds

- Vacuolar hepatopathy pattern with parenchymal remodeling
- Mild hyperechoic to mineralized gallbladder debris
- Small nonhomogeneous non cavitated splenic mass-hyperplasia, hematopoiesis, granuloma, splenitis or neoplasia possible
- Hypomotile stomach
- Enterocolitis-suspect IBD
- Associated benign/reactive mesenteric lymph nodes
- Irregular to nodular left adrenal gland-adenoma, hyperplasia, potential for neoplasia i.e. pheochromocytoma, adenocarcinoma or other

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The small intestine exhibited segmental to generalized mural changes suggestive of inflammatory criteria-IBD, dietary intolerance, dysbiosis, parasitism, low grade to chronic pancreatitis which may present sonographically normal or less likely emerging intestinal neoplasia may also be possible. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. A limited antigen or hydrolyzed diet trial may prove beneficial. Screening BP to assess for evidence of hypertension which may allude to a left pheochromocytoma is recommended. Assuming no evidence of thoracic pathology on three view chest radiographs, splenectomy, GI biopsies +/- left adrenalectomy could be considered. Sonographic monitoring of the splenic mass and left adrenal gland for progressive changes would be a more conservative approach.

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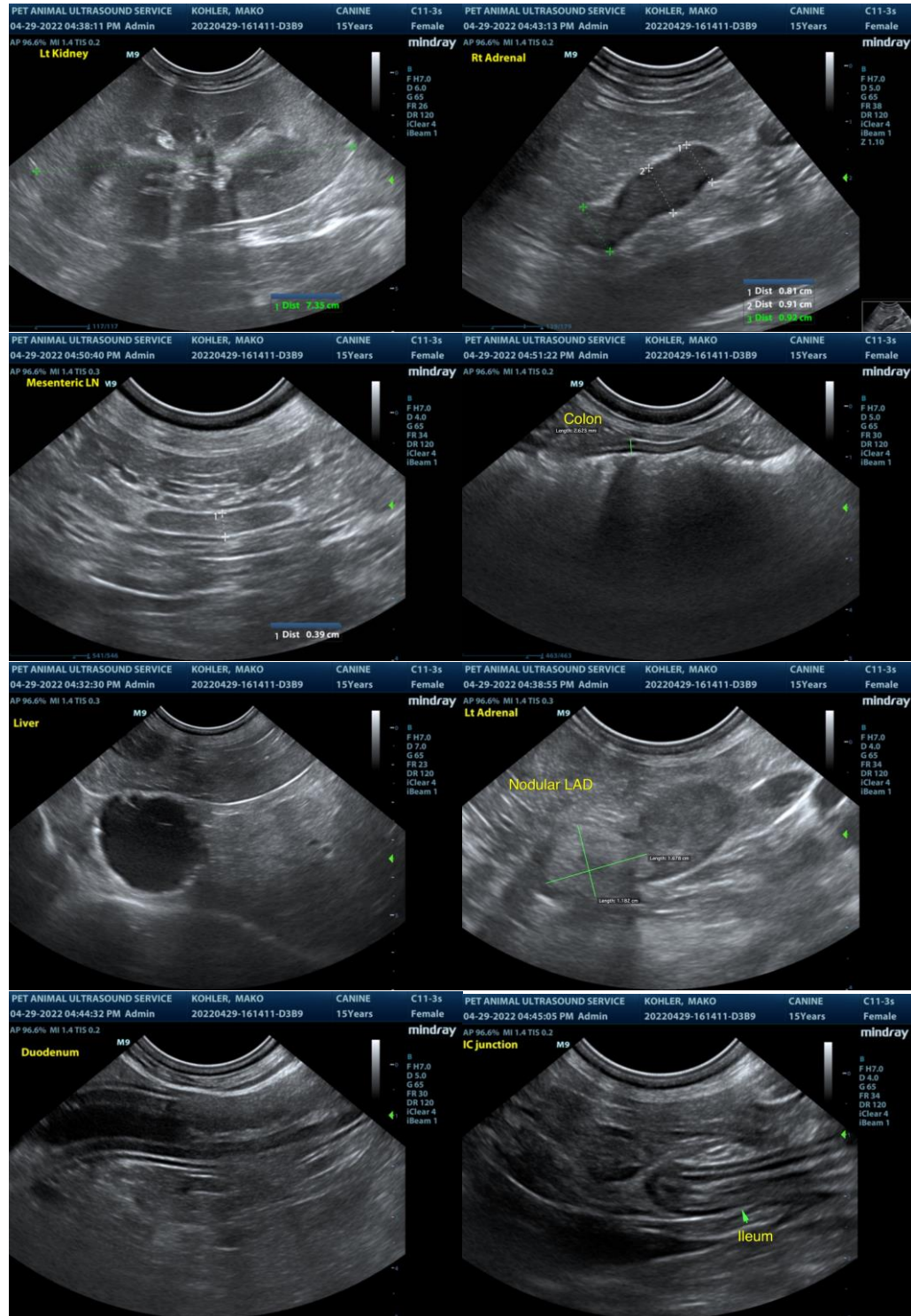
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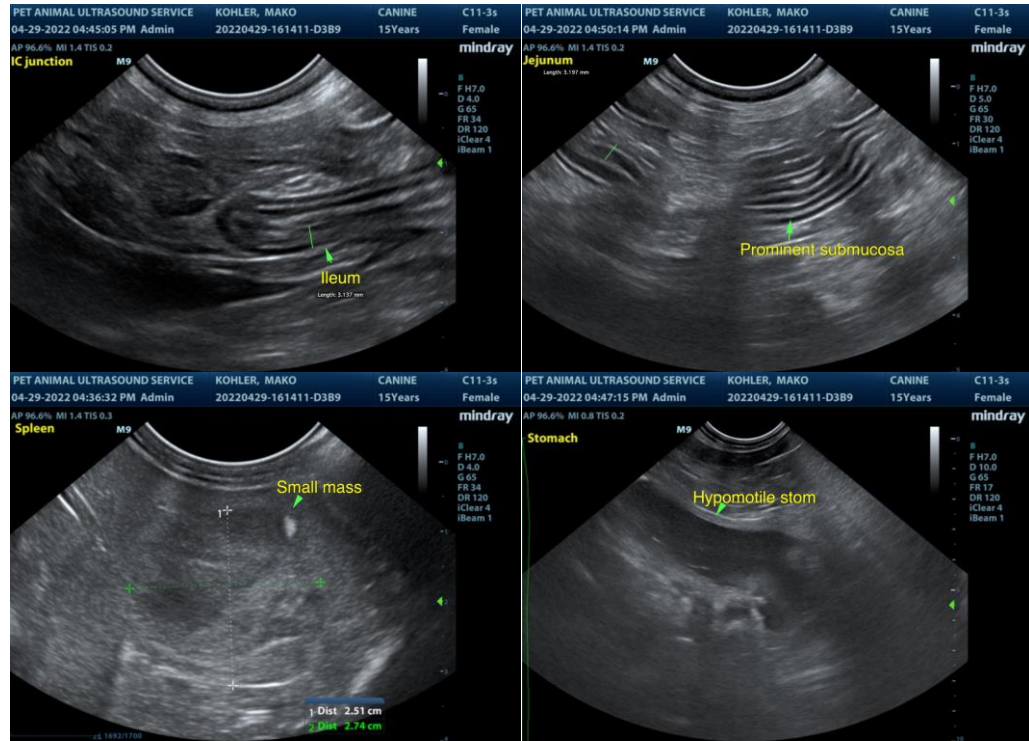
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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