



**PATIENT**

Izzy Highsmith

**SPECIES**

Canine

**BREED**

Dachshund

**SEX**

Spayed Female

**AGE**

13 years

**WEIGHT**

9.2

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Neuhaus

**HOSPITAL NAME**

Willamette  
Veterinary Hospital

**REFERRING VET**

Dr. Maggiulli

**INVOICE**

15600

**DATE**

12/3/22

**PRESENTING CLINICAL SIGNS**

Three view rads: gas and feces in colon, moderate gas distension in SI, mixed gas pattern in some portions of bowel, serosal detail wnl, rounded liver FAST Scan: no obvious masses, no free fluid, Brief History: Presented 11/30 for intermittent vomiting over 2 weeks, 2d lethargy and anorexia. Hx epilepsy

Abnormal PE/Chem/CBC/UA Results: CBC: Neu 2.67, eos 0.01, pdw 8.3 Chem 17: ALP 953, GGT 12, amyl 494, lipa 115 EPOC: pco2 26.9, pO2 57.2, BE-6.9, sO2 90.5, cPL: <50 ug/dl (not consistent with panc)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and cystourethral junction 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 was noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were 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 to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Bilateral kidney small cortical cysts were present. The left kidney measured 4.5 cm in length. The right kidney measured 5.0 cm in length.

**Adrenal Glands**

Bilateral symmetrical adrenal gland enlargement with uniformly hypoechoic parenchyma was present. The left adrenal gland measured 2.0 cm length x 0.75 cm width at the caudal pole. The right adrenal gland measured 2.0 cm length x 0.69 cm width at the caudal pole. No evidence of adrenal neoplasia was noted.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver/ Gallbladder**

The liver exhibited potential for borderline to mild enlargement. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. A solitary nondisruptive isoechoic nodule was noted in the cranioventral liver measuring 2.0 cm in diameter. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size containing primarily anechoic content with mild, echogenic, nonorganized, gallbladder debris. No evidence of gallbladder distention or inflammatory criteria. The cystic and common bile ducts were normal.



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***Gastrointestinal***

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The stomach presented mild wall thickening secondary to mild echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The stomach contained a mild amount of retained anechoic fluid and mild echogenic chyme, along with luminal gas.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Segmental subjective mild increased intestinal gas pattern and non-shadowing chyme were present. No evidence of mechanical / metabolic ileus.

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Dachshund

The colon walls presented intact yet mildly prominent wall layering with mildly thickened to echogenic submucosa. The colon was primarily empty.

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***Pancreas***

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

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***Free Abdomen***

No omental masses, overt lymphadenopathy, or peritoneal effusion was noted.

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**ULTRASONOGRAPHIC FINDINGS**

- Gastroenterocolitis pattern - subjectively mild, potential for mild inflammatory bowel
- Hepatopathy with nonspecific yet subjectively benign isoechoic intraparenchymal nodule - sonographically suggestive of reactive or vacuolar hepatopathy with suspect hyperplasia, hematopoiesis, or small granuloma, no evidence of hepatic neoplastic criteria
- Mild gallbladder debris (non-mucocele)
- Bilateral chronic renal changes
- Mildly enlarged bilateral adrenal glands - nonspecific

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The bilateral mildly enlarged adrenal glands are of unclear clinical significance, given the patient's current clinical signs. This may indicate a patient variant, stress hyperplasia, or mild nonfunctional adenomatous change, without evidence of adrenal neoplastic criteria. Adrenal workup could be considered if clinical signs consistent with Cushing's Syndrome arise.

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Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial. Assessment for evidence of cranial abdominal or subxiphoid discomfort on palpation in the area of the pancreas, which may indicate low-grade pancreatitis which may present as sonographically normal, is suggested. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

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Empirically, as-needed GI support and empirical therapy for inflammatory gastroenterocolonopathy, +/- low-grade pancreatitis would be reasonable.



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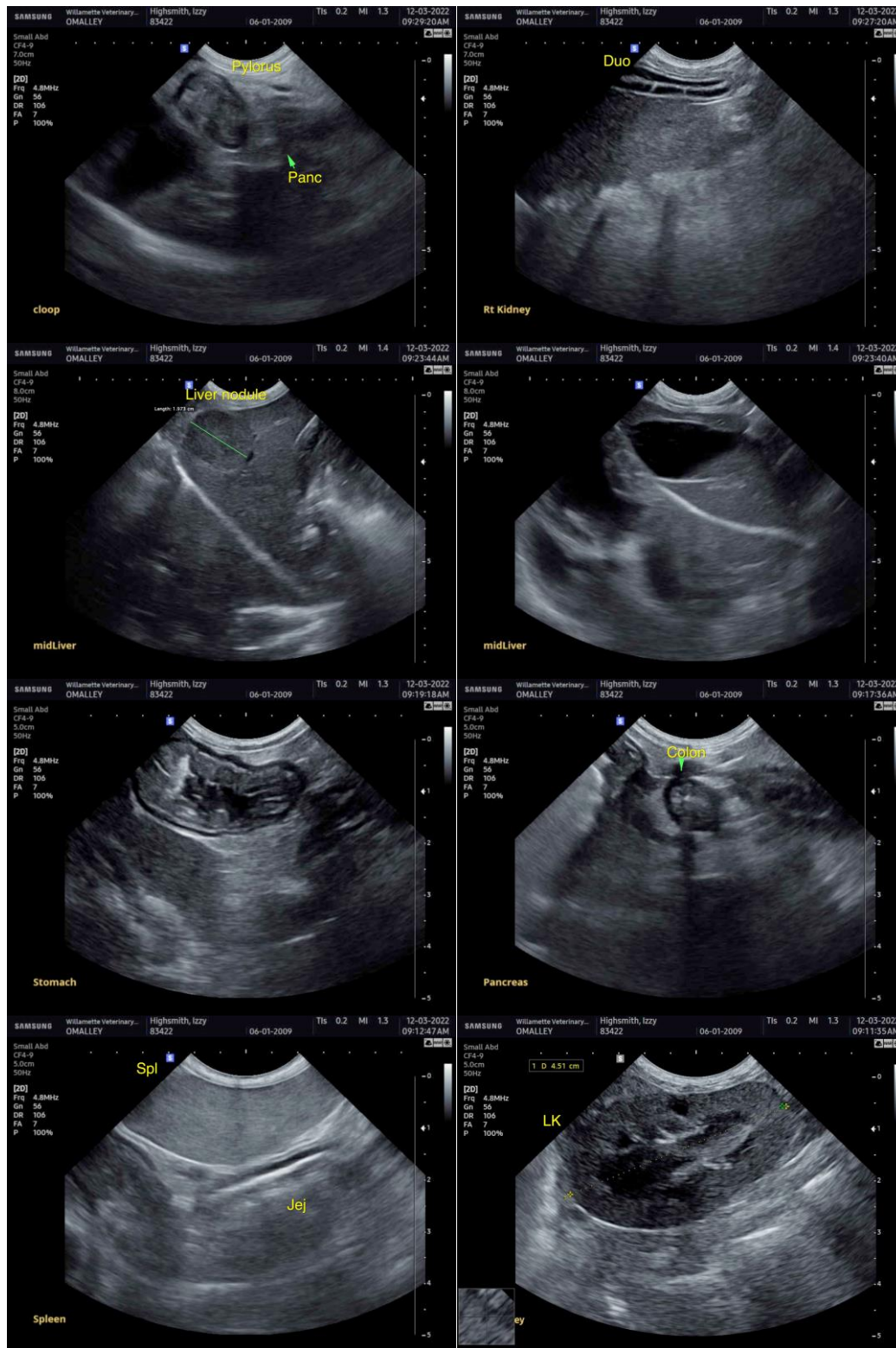
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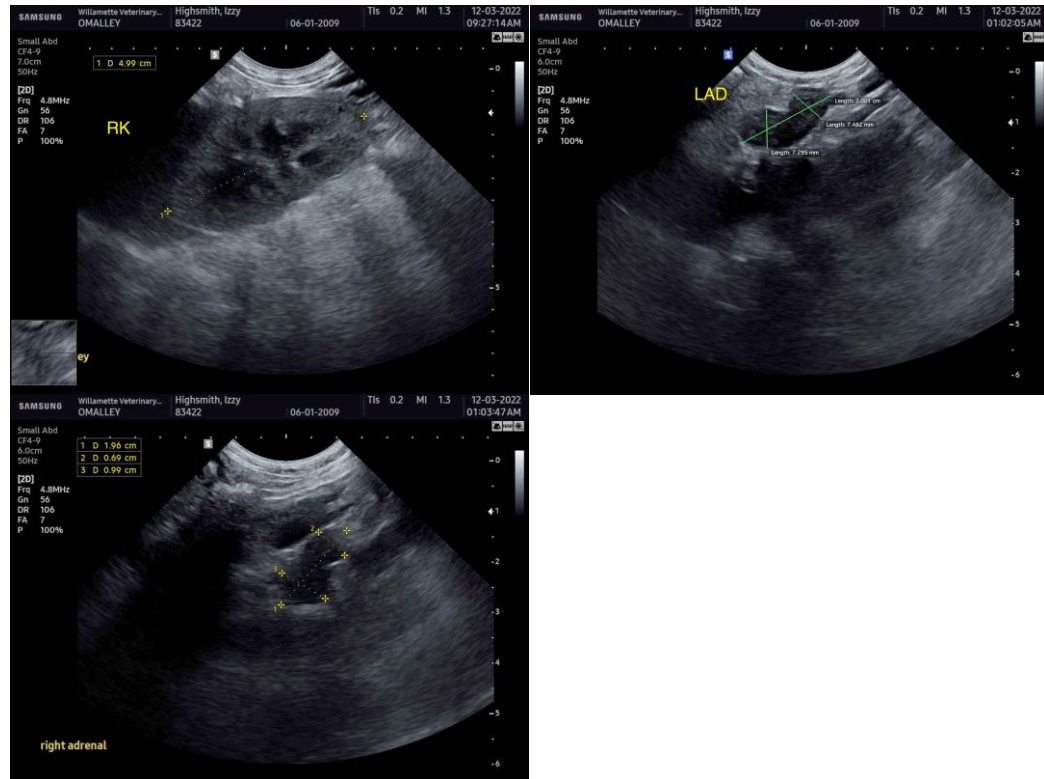
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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info@SonoPath.com