



**PATIENT**

Edison Instani

**SPECIES**

Canine

**BREED**

Border Collie X

**SEX**

MN

**AGE**

3 years

**WEIGHT**

Not Provided

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**HOSPITAL NAME**

Albany AH

**REFERRING VET**

Dr. Spangler/ Dr.  
Flanagan

**INVOICE**

14318

**DATE**

7/20/22

**PRESENTING CLINICAL SIGNS**

Vomiting Anorexia Lethargy Current Medications Cerenia, amoxicillin, metronidazole, Denamarin advanced Radiographic Findings No abnormalities appreciated on abdominal rads Primary Question/Differential to Be Answered in This Exam Etiology of elevated liver values - ddx: cholangiohepatitis, cholecystitis, infectious, cooper storage hepatopathy, open Abnormal PE/Chem/CBC/UA Results: ALT 1811 ALP 1288 GGT 21 TBIL 7.1

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Moderate, dependent sediment with areas of mild congealed to nondependent accumulated sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No overt evidence of urinary bladder inflammatory or neoplastic criteria was noted. The urethra was overtly normal in structure and tone to a depth of 2.0 cm.

The residual prostate was free of pathology.

The area of the aortic trifurcation was free of pathology.

The bilateral kidneys were overtly normal in size with subjective mild nonuniform increased cortex echogenicity and mild loss of corticomedullary border distinction. No evidence of pyelectasia was noted. Mild volume anechoic free fluid was noted primarily around the left and right kidney extending caudally towards the urinary bladder. The left kidney measured 6.7 cm in length. The right kidney measured 6.7 cm in length.

**Adrenal Glands**

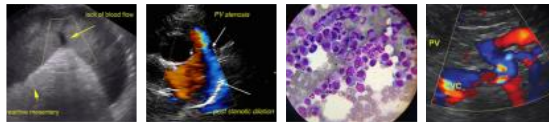
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.1 cm length x 0.70 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.4 cm length x 0.59 cm width at the caudal pole.

**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 presented normal in size. The hepatic parenchyma revealed diffuse reduced echogenicity compared to the spleen and renal cortical parenchyma with a mild coarse echotexture. Increased



**PATIENT**

Edison Instani

**SPECIES**

Canine

**BREED**

Border Collie X

**SEX**

MN

**AGE**

3 years

**WEIGHT**

Not Provided

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**HOSPITAL NAME**

Albany AH

**REFERRING VET**

Dr. Spangler/ Dr.  
Flanagan

**INVOICE**

14318

**DATE**

7/20/22

portal vein prominence was evident. The capsule of the liver was normal in margination. Distinct masses or nodules were not evident. The hepatic and portal vasculature were normal in appearance. The gallbladder was non-distended in size with anechoic content. The primarily dorsal gallbladder wall was regional to mildly thickened in appearance consisting of an echogenic double rim corresponding to the inner and outer portions of the wall. The dorsal gallbladder wall width measured 0.31 cm. This is consistent with gallbladder wall edema. Possible causes may include acute inflammation, edema, and anaphylaxis. The common bile duct was sonographically unremarkable without evidence of post hepatic stasis or obstructive pattern.

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

**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.

**Free Abdomen**

No overt lymphadenopathy was present. The omentum was of uniform echogenicity.

**ULTRASONOGRAPHIC FINDINGS**

- Acute hepatopathy
- Mild gallbladder wall edema - no evidence of post hepatic obstructive criteria
- Nonspecific bilateral mild increased renal cortex echogenicity with mild loss of corticomedullary border distinction, mild retroperitoneal free fluid
- Moderate urinary bladder sediment

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Although not definitive, the most likely etiology for the liver and gallbladder wall edema would include acute hepatitis (viral, bacterial, Leptospirosis, toxin, etc.,) with additional differential diagnoses including potential anaphylactic reaction or occult neoplasia. Assuming normal clotting status, FNA cytology of the liver, as well as Leptospirosis titer/PCT are warranted.

Given the lack of reported azotemia, the appearance of the kidneys including evidence of associated retroperitoneal free fluid is nonspecific. However, the potential for concurrent acute nephropathy or renal insult without evidence of current renal insufficiency could be present.



**PATIENT**

Edison Instani

The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.

**SPECIES**

Canine

Peritoneal effusion analysis cytology +/- C/S if evidence of inflammatory cells could be considered. Empirically, aggressive hepatic support with empirical therapy for acute hepatitis and coverage for Leptospirosis pending additional diagnostics and as-needed gastrointestinal support would be reasonable. A guarded prognosis is warranted.

**BREED**

Border Collie X

**SEX**

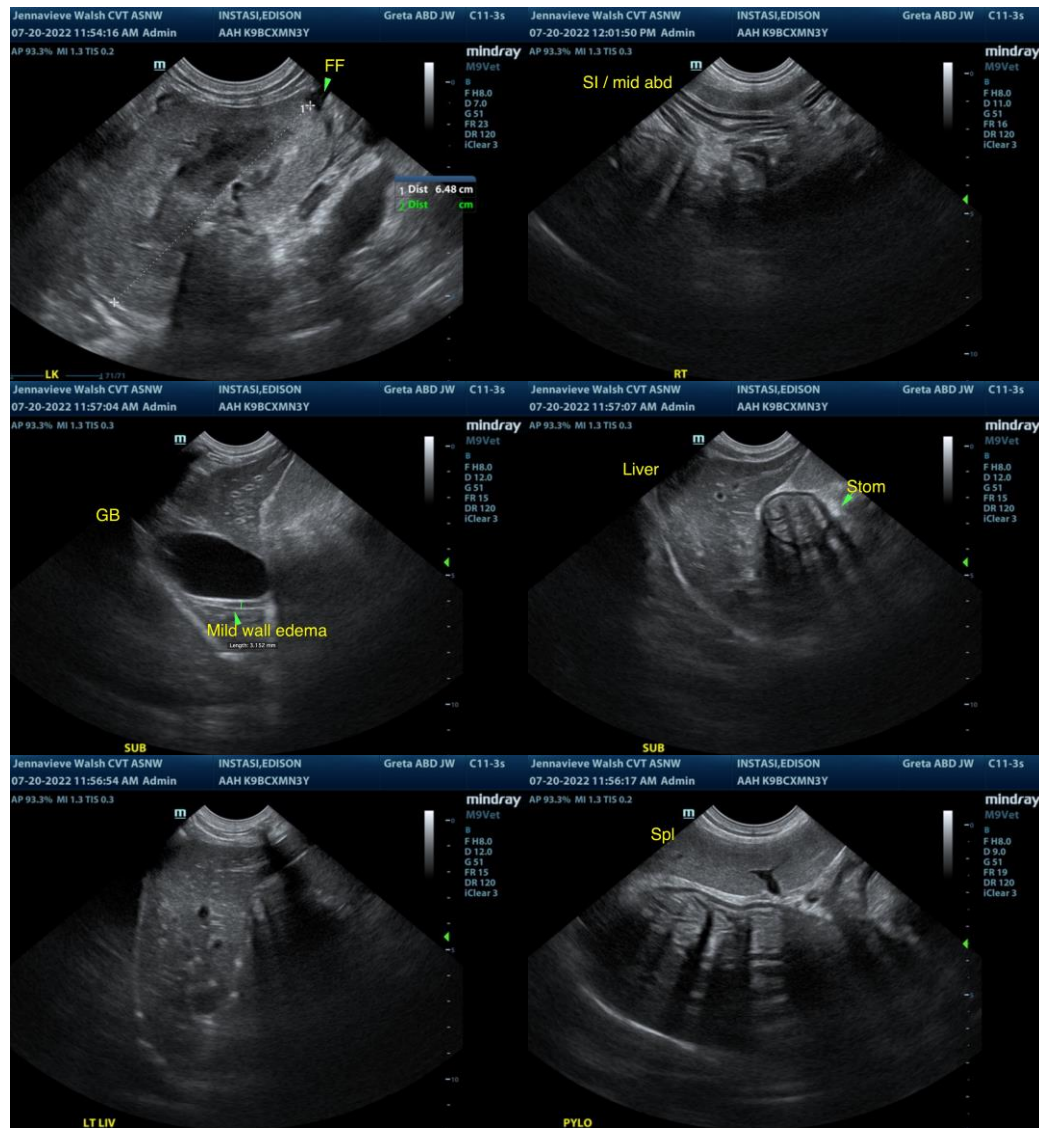
MN

**AGE**

3 years

**WEIGHT**

Not Provided



**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**HOSPITAL NAME**

Albany AH

**REFERRING VET**

Dr. Spangler/ Dr.  
Flanagan

**INVOICE**

14318

**DATE**

7/20/22



**PATIENT**

Edison Instani

**SPECIES**

Canine

**BREED**

Border Collie X

**SEX**

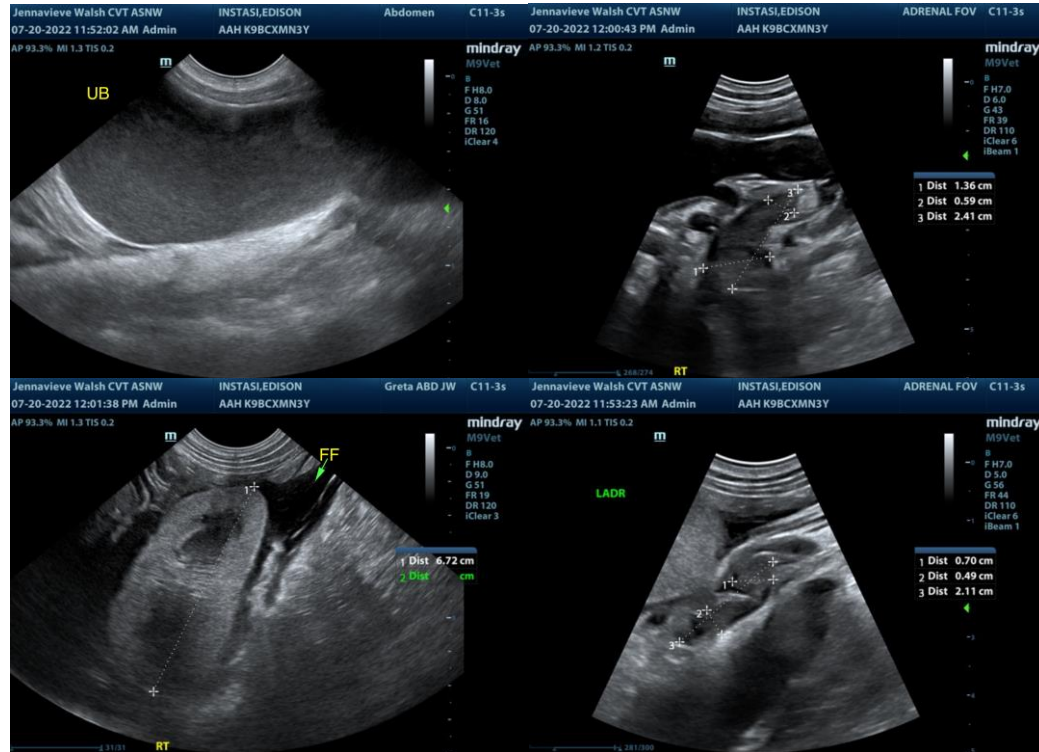
MN

**AGE**

3 years

**WEIGHT**

Not Provided



**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**HOSPITAL NAME**

Albany AH

**REFERRING VET**

Dr. Spangler/ Dr.  
Flanagan

**INVOICE**

14318

**DATE**

7/20/22

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com