



**PATIENT PRESENTING CLINICAL SIGNS**

Edith Isaac  
History: elevated liver enzymes  
Abnormal PE/Chem/CBC/UA Results: Please see attached BW

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine

**Urinary System**

**BREED**

Pomeranian

Urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface

**SEX**

Spayed Female

Left kidney is normal is size (4.09 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed

**AGE**

7 Years

Right kidney is normal is size (4.16 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed

**Adrenal Glands**

**WEIGHT**

5.2 kg

Left adrenal gland is normal in size (1.59 cm long x 0.36 cm at cranial pole and 0.41 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (1.42 cm long x 1.0 cm at cranial pole and 0.54 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Spleen**

**IMAGING**

**PERFORMED BY**

Kelly Reschny

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**HOSPITAL NAME**

Wellington AH

**Liver**

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**REFERRING VET**

Dr. Dennis

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**INVOICE**

16656

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

**DATE**

8/2/22



**PATIENT**

Edith Isaac

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is

**SPECIES**

Canine

mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

**BREED**

Pomeranian

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

**Pancreas**

Pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**SEX**

Spayed Female

**Free Abdomen**

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

**AGE**

7 Years

**ULTRASONOGRAPHIC FINDINGS**

- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

**WEIGHT**

5.2 kg

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

An obvious cause for the reported increased liver enzymes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, infiltrative neoplasia (considered unlikely), etc. cannot be definitively ruled out.

**IMAGING PERFORMED BY**

Kelly Reschny

Therefore, recommendations include an “antigen search” for sources of reactive hepatopathy (including testing for Leptospirosis), followed by a course of empirical antibiotics and hepatic nutraceuticals, with monitoring of ALT for improvement. If improvement is not noted and/or enzyme increase progresses, a liver biopsy may be warranted. If improvement occurs on antibiotics, antibiotics should be continued until enzymes either normalize and/or plateau.

**HOSPITAL NAME**

Wellington AH

**REFERRING VET**

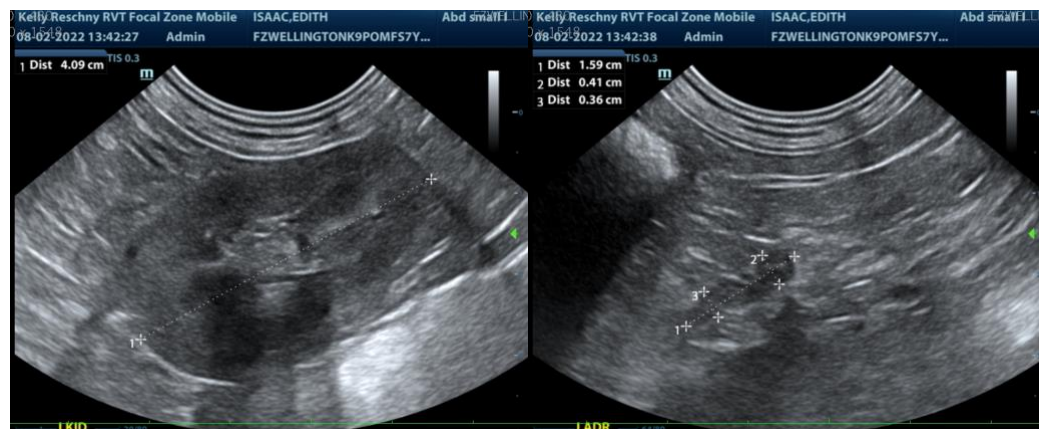
Dr. Dennis

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**PATIENT**

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**SPECIES**

Canine

**BREED**

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**SEX**

Spayed Female

**AGE**

7 Years

**WEIGHT**

5.2 kg

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**IMAGING  
PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Wellington AH

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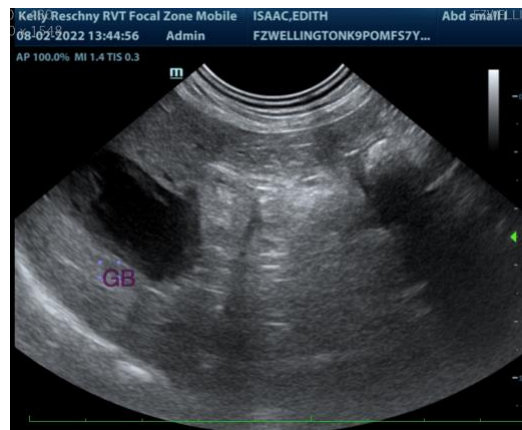
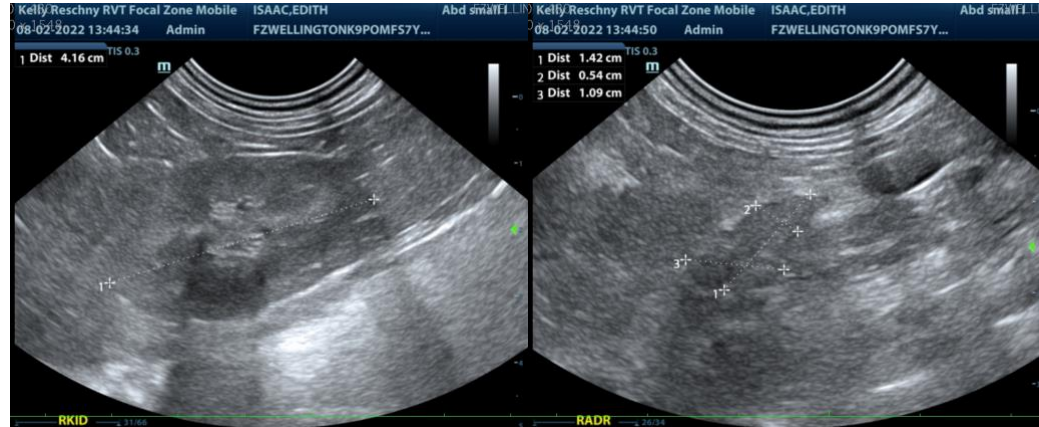
Dr. Dennis

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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.

**Beth Johnson, DVM DACVIM**

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