



**PATIENT**

Meiko Wada

**SPECIES**

Canine

**BREED**

Spaniel mix

**SEX**

Male, neutered

**AGE**

9 Yrs.

**WEIGHT**

15 lbs.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(*Small Animal Internal  
Medicine*)

**IMAGING  
PERFORMED BY**

Amanda Crook

**HOSPITAL NAME**

River's Edge Pet  
Medical Center

**REFERRING VET**

Dr. Travis Gibson

**INVOICE**

12386

**DATE**

10/19/21

**PRESENTING CLINICAL SIGNS**

**History:** History of elevated liver enzymes and getting first evaluation. Pet is recently battling with diarrhea 2 weeks. 1x of vomiting. Lethargic/mild to moderate anorexia for last week or so. Current medications: Metronidazole 100mg- 0.7ml po bid

**Abnormal PE/Chem/CBC/UA Results:** CBC normal - elevated ALT 470, rest of liver enzymes WNL  
No radiographs at this point

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.85 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (4.20 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (4.35 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

*Adrenal Glands*

The left adrenal gland is mildly enlarged (0.47 cm at cranial pole) (0.63 cm at caudal pole) (1.80 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.84 cm at cranial pole) (0.51 cm at caudal pole) (2.00 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

*Spleen*

The spleen is normal in size (1.33 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

*Liver*

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat. A 1.22 x 0.88 cm ill-defined hypoechoic nodule/area is observed adjacent to the diaphragm. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to



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moderate amount of echogenic debris is observed within the lumen, most of which is gravity-dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

**Gastrointestinal**

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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. The colonic lumen contains shadowing fecal material. No obstructive disease is noted.

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**Pancreas**

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The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

**Free Abdomen**

**AGE**

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The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

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**ULTRASONOGRAPHIC FINDINGS**

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- The hypoechoic hepatic nodule trends toward the benign (i.e., a focus of nodular hyperplasia, inflammation, other). Emerging neoplasia cannot be completely excluded but is considered less likely.
- Mild left adrenomegaly.

\*An obvious cause for the patient's clinical signs is not identified in this study. Considerations include underlying hepatopathy (i.e., inflammatory/immune mediated disease, hepatotoxicosis), primary gastrointestinal disease (i.e., food allergy, inflammatory bowel disease) with reactive hepatopathy, low-grade pancreatitis, other underlying metabolic issue.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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- Given the GI signs, consider the following:
  1. A fecal evaluation for ova/Giardia.
  2. Malabsorption panel including serum, cobalamin, folate, TLI and PLI.
  3. Also consider prophylactic deworming with Fenbendazole and supplementation with a probiotic with a high colony count (i.e., Provable Forte or Visbiome).
- Given the elevated ALT, a fine needle aspirate of the liver can be considered (if clotting status is appropriate). A 25-gauge needle should be used. Alternatively, empirical treatment for bacterial cholangiohepatitis (i.e., amoxicillin clavulanic acid, Denamarin) can also be considered. Also consider testing for Leptospirosis (i.e., blood and urine PCR, serology). If clinical signs persist, gastrointestinal and hepatic biopsies may be warranted. Three-view thoracic radiographs should be performed prior to anesthesia.

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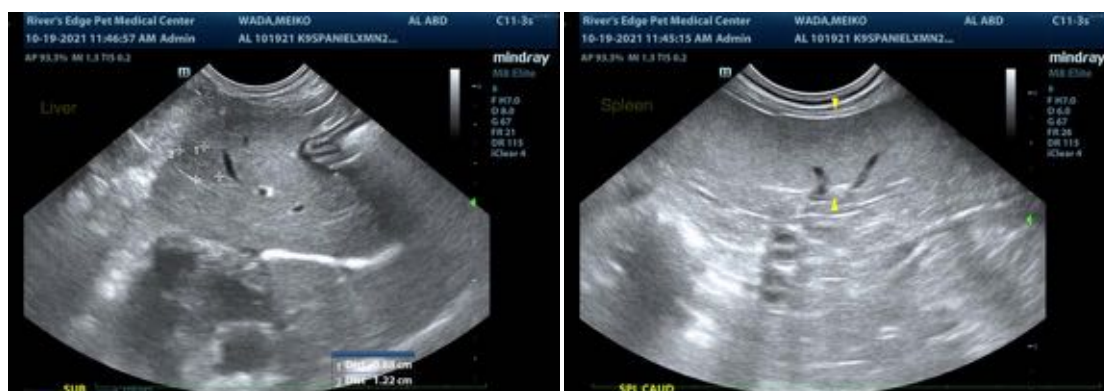
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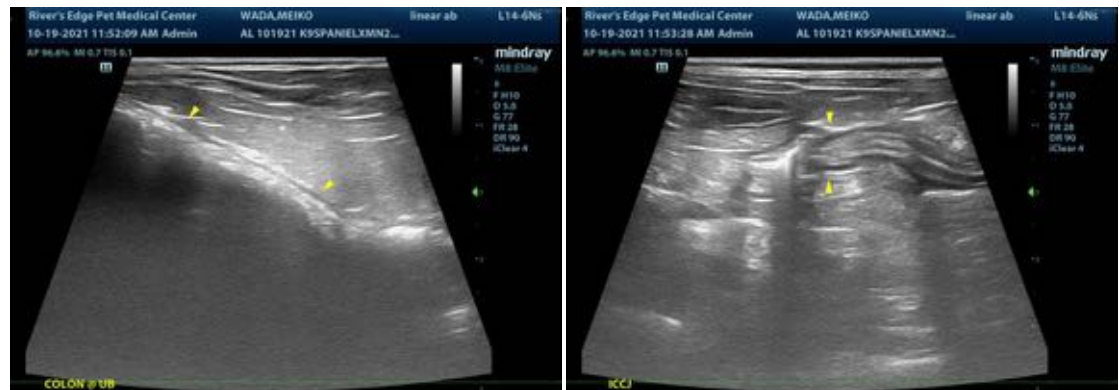
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

Andrea.nicastro@sonopath.com