

**PATIENT**

Kitty Kitty Denmire

SPECIES

Feline

BREED

DLH

SEX

Spayed Female

AGE

12 Years

WEIGHT

8.6 lbs

INTERPRETED BYKathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)**IMAGING
PERFORMED BY**

Julia Bakker, DVM

HOSPITAL NAMEOrange Blossom
Veterinary Imaging**REFERRING VET**Bruce McLaughlin,
DVM**INVOICE**

75696

DATE

6/4/26

PRESENTING CLINICAL SIGNS

P has elevated liver function test. P symptoms have been going on for 3 years, bloodwork done every year and every time liver functions elevated slightly but no diagnosis has been made.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The left kidney has a normal shape and size (3.55 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is a thin hyperechoic line separating the cortex and medulla, most consistent with medullary rim sign. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.06 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is a thin hyperechoic line separating the cortex and medulla, most consistent with medullary rim sign. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.38 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.29 cm at the cranial pole and 0.33 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size (1.06 cm), echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Wall measures 0.10 cm. There is a moderate amount of non-organized



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echogenic debris. The debris appears somewhat mineralized with a 0.68 cm cholelith present. The bile duct is not clearly visualized.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.20 cm. Visualized peristalsis appears appropriate. There are some segmental areas of small intestine that have a more prominent muscularis layer. An example measures 0.27 cm.

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is prominent and slightly hypoechoic as compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

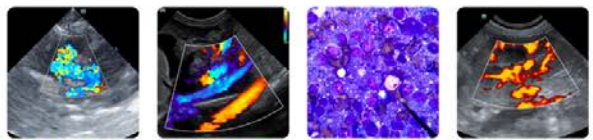
Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is no evidence of a significant lymphadenopathy. Occasional prominent mesenteric lymph nodes are visualized. Examples measure 0.22 cm and 0.38 cm. The omentum is of normal echogenicity.

PRIMARY FINDINGS

- Hypoechoic pancreas in both limbs – Findings could be consistent with chronic pancreatic remodeling +/- chronic pancreatitis.
- Heterogeneous liver – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.
- Moderate gallbladder debris with a cholelith and a prominent wall – The significance of this is uncertain. This could be consistent with mild cholecystitis.
- Segmental areas of small intestine with prominent muscularis layer – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.

SECONDARY FINDINGS

- Mild suspended echogenic debris in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.



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- Medullary rim sign visualized associated with both kidneys – Clinical significance uncertain, can be seen in normal patients and in cases of ethylene glycol toxicity, FIP, chronic interstitial nephritis, and leptospirosis.

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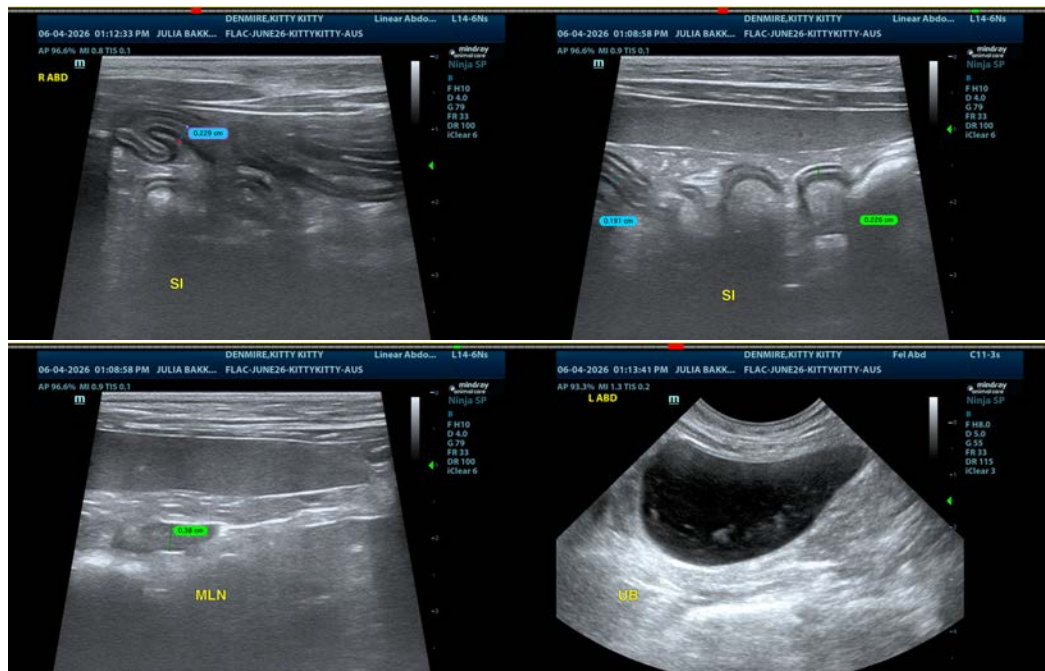
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is heterogeneous. This is a non-specific finding. Recommend a fine needle aspirate of the liver (provided coagulation parameters are normal). Additionally, the gallbladder has some moderate debris and a cholelith with a prominent (but not overtly thickened) wall. The bile duct is not clearly visualized. Findings could be consistent with cholecystitis/cholangiohepatitis. Consider empirical treatment with Ursodiol, Denamarin and antibiotics (after the fine needle aspirate has been collected). For further assessment, if possible, sampling of bile for cytology and cultures could also be considered.

If this does not result in improvement and cytology is not helpful, then ultimately biopsies of the liver with samples for histopathology, culture and copper levels may be warranted as well as bile cultures.

The pancreas is visible/mildly hypoechoic. Some areas of the GI tract appear slightly “ropy”. The significance of this is uncertain, but the combination of pancreatic, GI and liver issues could be consistent with a mild Triaditis-like process.





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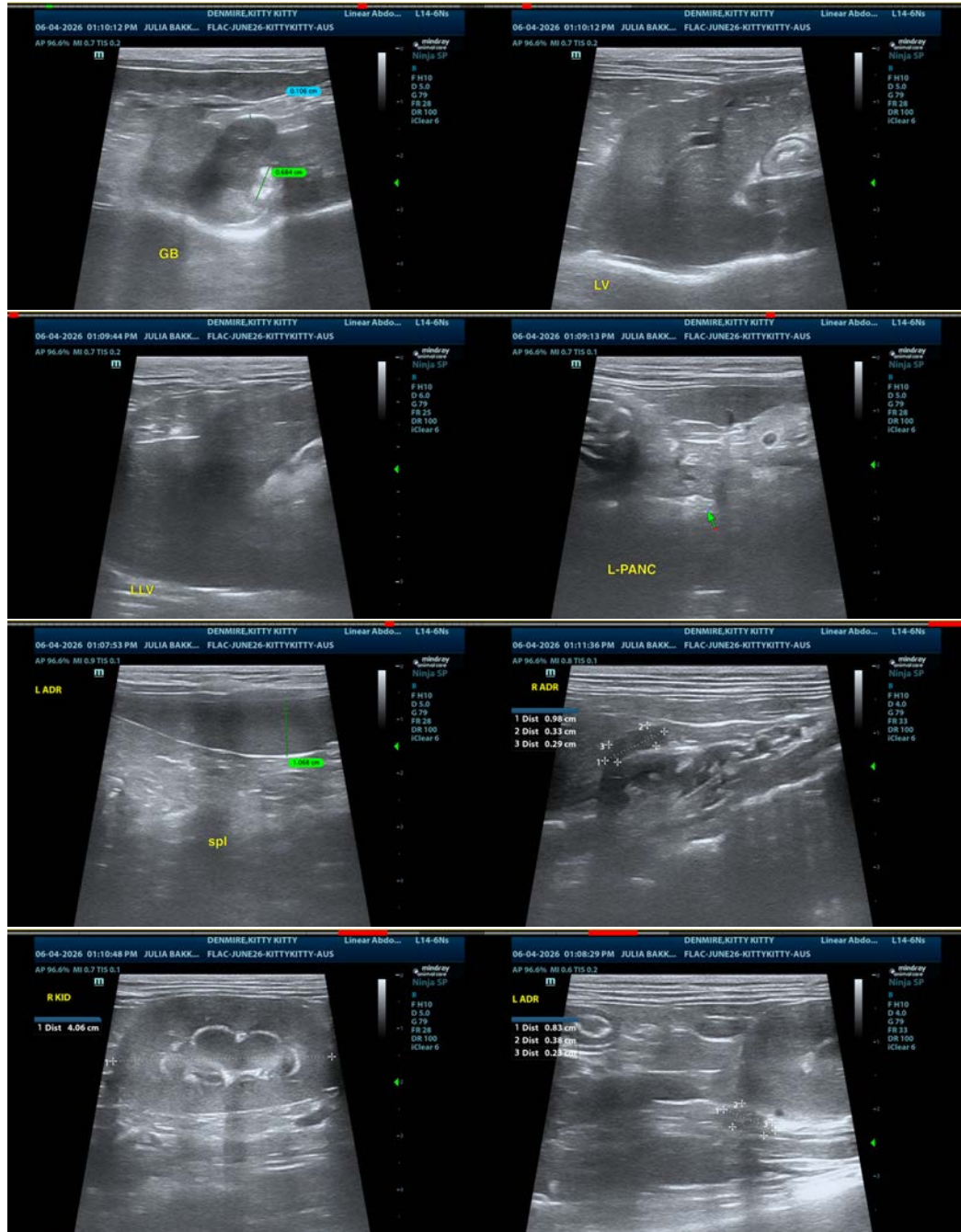
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

info@sonopath.com