SonoPath
Clinical Sonography & Telecytology
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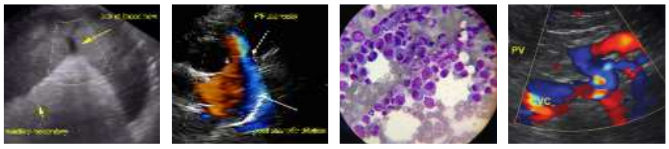


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Tillie Lewis

SPECIES

Feline

BREED

DSH

SEX

SF

AGE

9 years

WEIGHT

11.3 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jasmine Palacios
SDEP Attendee

HOSPITAL NAME

Rivers Edge PMC

REFERRING VET

Dr. Jason Christensen

INVOICE

13067

DATE

1/13/22

PRESENTING CLINICAL SIGNS

Had pre-op panel with elevated liver values in November, went on Denamarin, then rechecked this month and values have increased. Abdominal ultrasound recommended to assess the liver. Possible weight loss.
Abnormal PE/Chem/CBC/UA Results: BW: Increased ALT, ALKP and MCHC

ALT 1022, ALP 104

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Moderate, nondependent, particulate sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were 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 and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 3.6 cm in length. The right kidney measured 4.0 cm in length.

Adrenal Glands

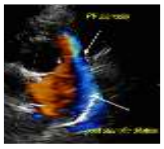
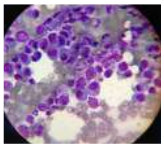
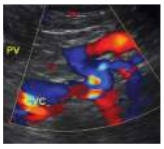
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.33 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.40 cm width.

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. The spleen measured 1.0 cm width at the level of the hilus.

Liver/ Gallbladder

The liver exhibited subjective mild generalized enlargement with normal structure and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder exhibited subtle distention containing anechoic content. No evidence of inflammatory wall changes, as well as no evidence of peripheral gallbladder inflammation. The cystic and common bile ducts were normal. No evidence of post hepatic stasis, obstruction or calculi was noted to the level of the duodenal papilla, which was sonographically unremarkable.

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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 gastric body wall width measured 0.25 cm.

The small intestine exhibited primarily intact wall layering with a maintained 1:3 muscularis/mucosa ratio. A segment of subjective midabdominal jejunum exhibited mild prominent to indistinct wall layering and decreased mural echogenicity, measuring approximately 2.0-3.0 cm In length with wall width up to 0.26 cm. By comparison, normal-appearing duodenum and jejunum measured 0.22 cm wall width. No overt intestinal masses were noted.

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

Intermittent, jejunocolic lymph nodes were present. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. An example of lymph node size was 0.60 cm diameter. No effusion was noted.

ULTRASONOGRAPHIC FINDINGS

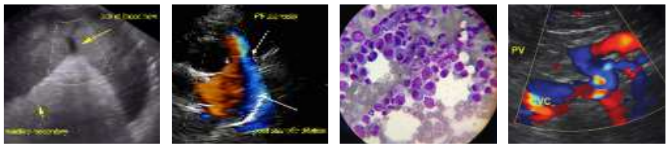
Primary Findings

- Moderate urinary bladder sediment
- Hepatopathy - subjectively benign
- Overtly normal gallbladder / common bile duct - no evidence of post hepatic obstruction
- Segmental jejunitis pattern exhibiting mildly prominent to Indistinct wall layering
- Intermittent jejunal lymphadenopathy - lymphoid hyperplasia or suspected secondary reactive lymphadenitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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

Given the predominant and significant ALT elevation, cholangiohepatitis (infectious, Immune-mediated, or other), suspected with potential concurrent or primary vacuolar hepatic changes and nonclinical cholestasis. Occult hepatic neoplasia is considered a less likely differential diagnosis. Assuming normal



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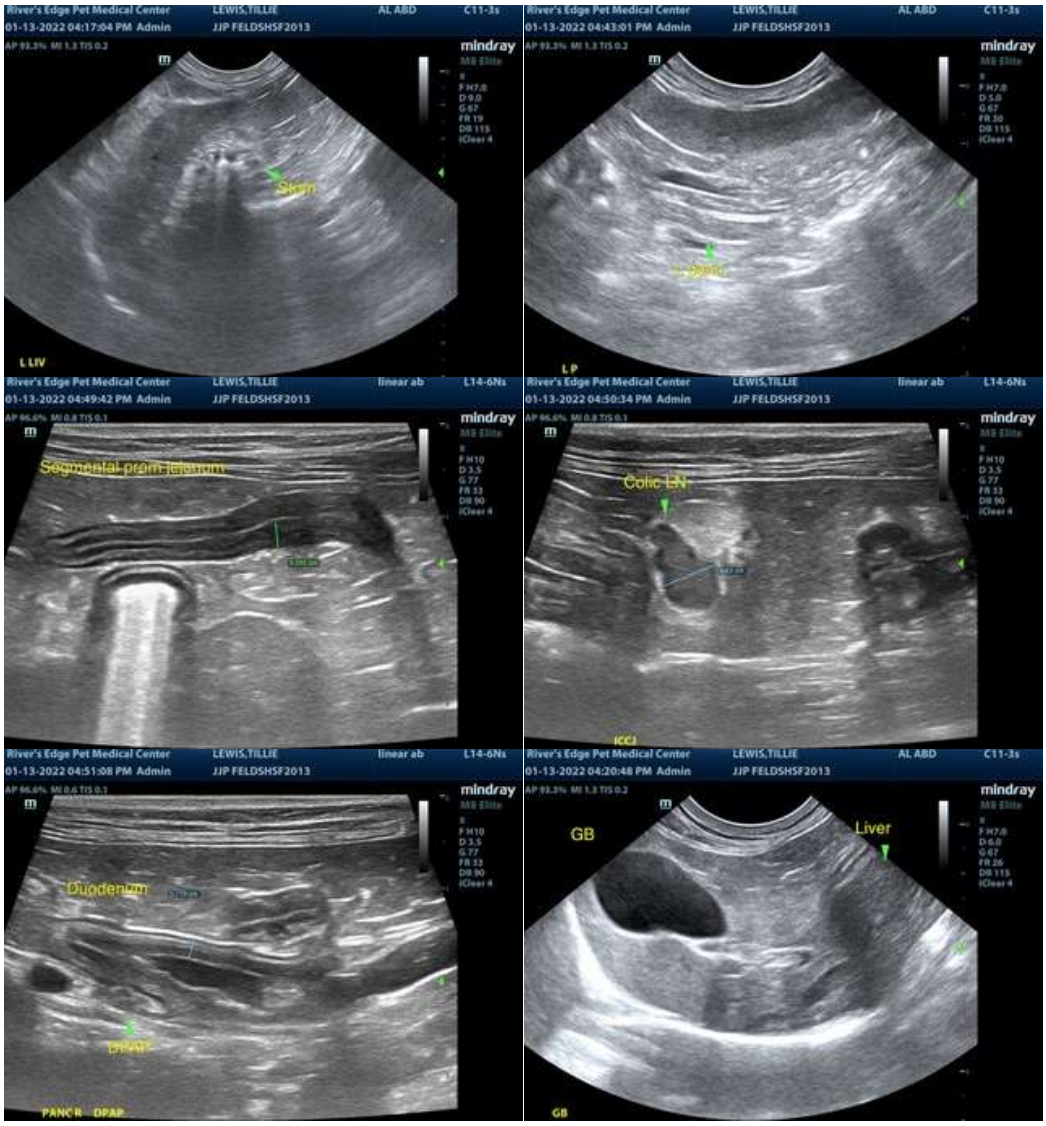
clotting status, hepatic FNA using a 25-gauge needle is warranted for screening cytology and potential identification of Inflammatory cell type.

Although no sonographic evidence of active pancreatitis, potential for Triad Disease may be considered in this patient. Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate. The possibility of emerging segmental neoplastic Infiltrative enteropathy and emerging neoplastic lymphadenopathy is considered less likely yet cannot be definitively excluded. Full-thickness intestinal biopsies and lymphatic sampling would be required for a definitive diagnosis.

Empirically, cholangiohepatitis therapy protocol with as-needed gastrointestinal support, assessment of clinical response, +/- sonographic monitoring of the liver and segmental intestine is recommended.



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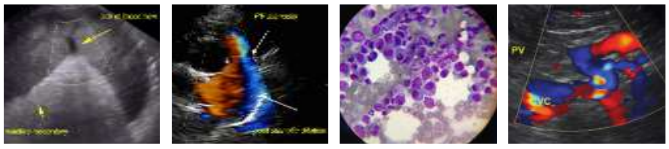

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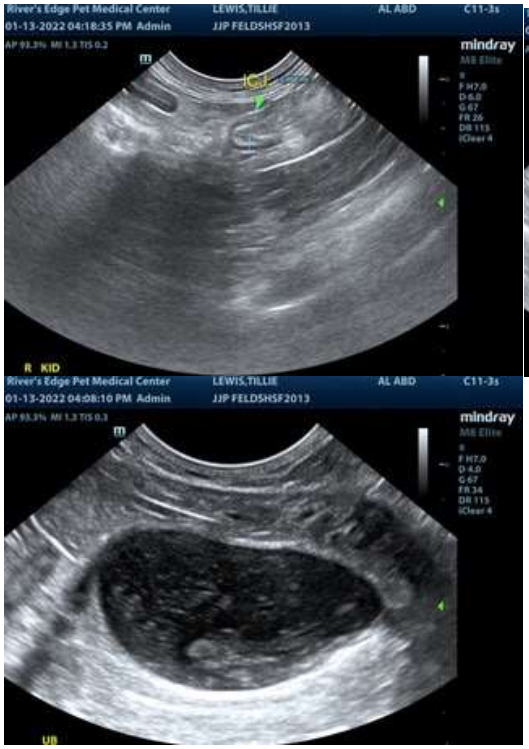

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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