

PATIENT

Bella Keizer

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

13 Years

WEIGHT

4.65 kg

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Dr. Trudeau

HOSPITAL NAME

Petworks VH

REFERRING VET

Dr. Trudeau

INVOICE

44859

DATE

8/23/23

PRESENTING CLINICAL SIGNS

Senior cat with elevated liver enzymes - No clinical signs; no weight loss, no inappetence, no GI signs.

Abnormal PE/Chem/CBC/UA Results: CBC - mild decreased platelets otherwise NSF Chem - increased ALT 203 u/L ; ALP 395 u/L, TBili 13 umol/L and amylase 1598 u/l

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. 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 cystic calculi.

The left kidney has a normal shape and size (3.64 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. 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 (3.61 cm) with mild pyelectasia at 0.37 cm. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.39 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

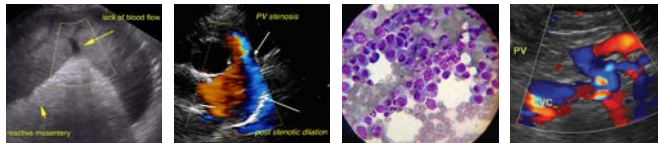
Spleen

The spleen is large (1.9 cm in width at the level of the hilus) with irregular scalloped margins. The spleen echotexture is heterogenous and mottled. 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 gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile duct appear somewhat dilated and tortuous, measuring approximately 0.36 cm. The bile duct appears to taper distally and is lost to visualization.



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Gastrointestinal

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The stomach contains minimal luminal contents. It measures at a normal thickness of 0.30 cm 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.

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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 0.24 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. 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.

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Pancreas

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are occasional prominent mesenteric lymph nodes, examples measure 0.39, 0.34, and 0.35 cm. The omentum is of normal echogenicity.

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ULTRASONOGRAPHIC FINDINGS

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- Large, irregular, mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Heterogeneous liver – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.
- Mildly to moderately dilated cystic and common bile duct – Dilation of the common bile duct could be consistent with a functional obstruction (i.e. primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (ie. choledocholith, bile duct tumor, pancreatic disease, other).
- Prominent muscularis layer of the small intestine – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.
- Prominent mesenteric lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

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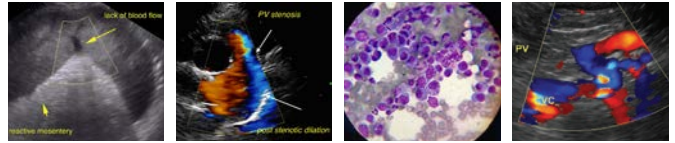
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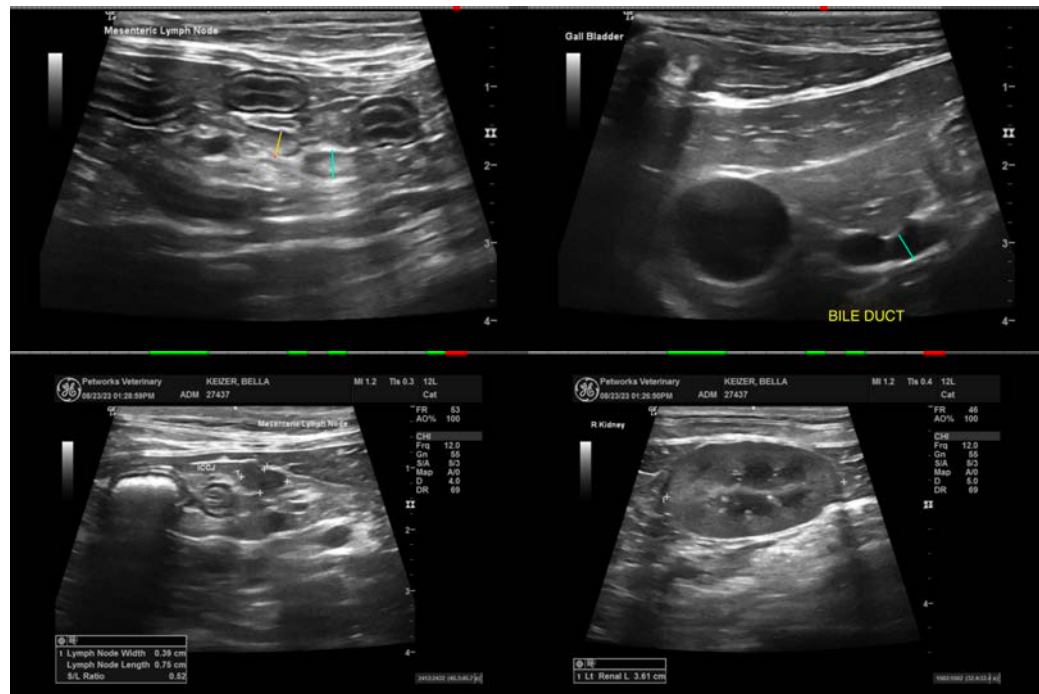
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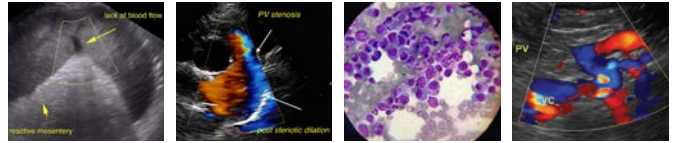
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions are visualized associated with the liver to explain the elevation in liver enzymes reported, but the bile duct does appear slightly distended. No evidence of an overt obstruction, but hepatobiliary disease could be present. Additionally, the spleen is very large, mottled and irregular, which is concerning for possible infiltrative disease, although congestion, hyperplasia, etc. are possible. Recommend a fine needle aspirate of the spleen and the liver (provided coagulation parameters are normal). If cytology is not diagnostic, you could consider screening for toxoplasmosis and potentially serial imaging of the gallbladder to look for progressive distention, although some degree of bile duct dilation can be seen in older cats.

The muscularis layer of the small intestine is slightly prominent. This can be a normal finding in some older cats but could also be a component of Triaditis. If PLI levels are elevated and symptoms are persistent, you could consider obtaining biopsies of the liver, GI tract and pancreas for further evaluation.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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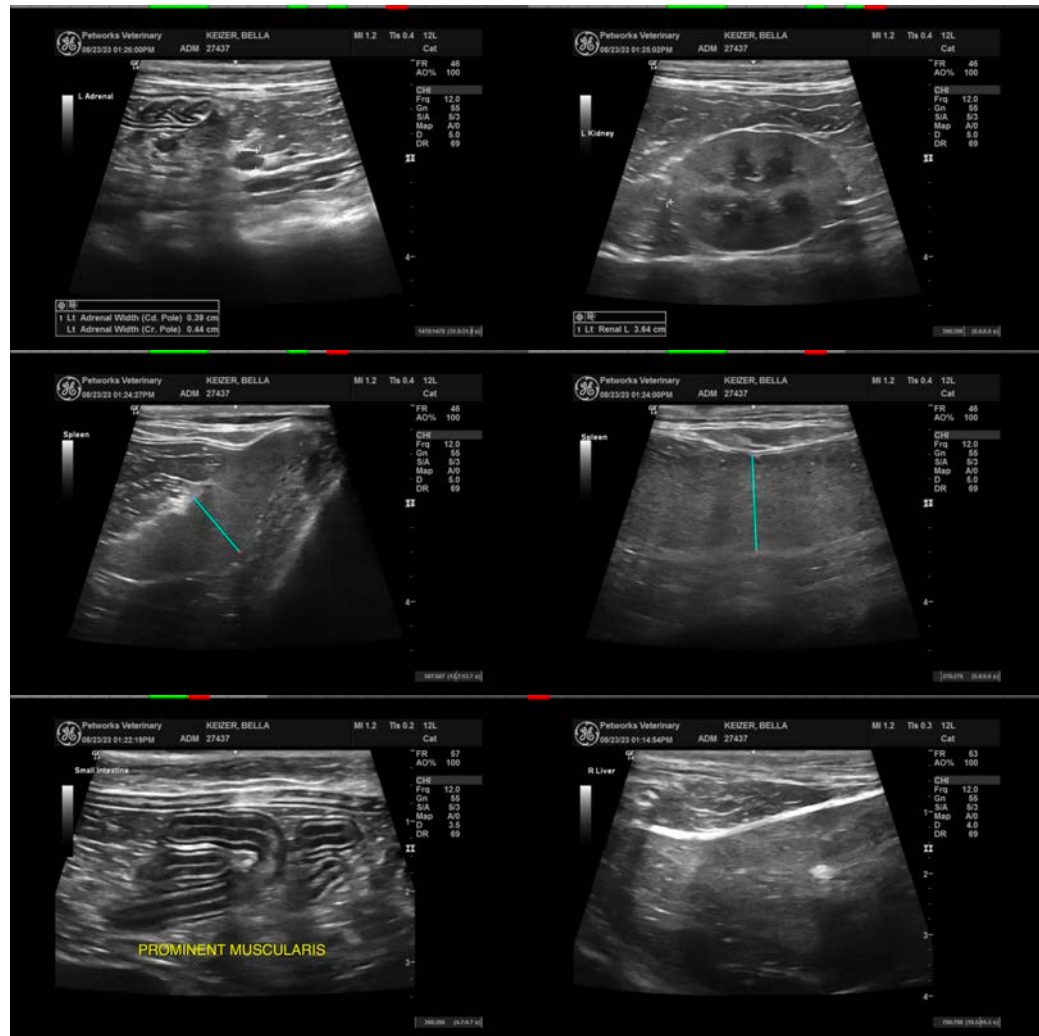
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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