

PATIENT PRESENTING CLINICAL SIGNS

Tosha Mitchell Weight loss, elevated bile acids-doubled in one month, hypoproteinemia, treated for poss PS shunt
meds: ursodiol, aventi liver, zentonil

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine

Urinary System

BREED

Yorkie

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.

SEX

Spayed Female

The left kidney has a normal shape and size (3.03 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.

AGE

10 Years

The right kidney has a normal shape and size (2.85 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.

WEIGHT

2.16 kg

Adrenal Glands

The left adrenal gland is normal in size measuring 0.46 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.

INTERPRETED BY

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

The right adrenal gland is normal in size measuring 0.70 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.

IMAGING PERFORMED BY

Kelly Reschny

Spleen

The spleen is subjectively normal in size, 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.

HOSPITAL NAME

Hartzel AH

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is severely heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are too numerous to count, relatively distinct, irregular, hypoechoic nodules visualized throughout the hepatic parenchyma, varying in size from 0.50-1.0 cm.

REFERRING VET

Dr. Mitchell

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 ducts are normal/not visible.

INVOICE

43958

Gastrointestinal

DATE

1/5/23

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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.



PATIENT

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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.30 cm. Jejunum wall measures 0.23 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

SPECIES

Canine

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.

BREED

Yorkie

Pancreas

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.

SEX

Spayed Female

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

AGE

10 Years

ULTRASONOGRAPHIC FINDINGS

- Large, heterogeneous liver with hypoechoic nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The nodules observed generally trend toward a more benign process but some of them due appear to interfere with the normal hepatic architecture, increasing concerns for underlying neoplasia.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Based on the description and the history, there is concern that this patient is in liver failure. The changes observed in the liver today would not be typical for portosystemic shunt, as the liver appears somewhat enlarged and heterogeneous with diffuse hypoechoic nodules. Consider a fine needle aspirate of the liver/ideally the hypoechoic nodules for cytologic evaluation. If this is not significantly helpful, a liver biopsy may be necessary (provided coagulation parameters are normal). Continued supportive care with GI protectants, nausea medications, Metronidazole (if encephalopathic), etc. are warranted. This study does not definitively rule out the possibility of a portosystemic shunt, but it appears very unlikely.

IMAGING PERFORMED BY

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

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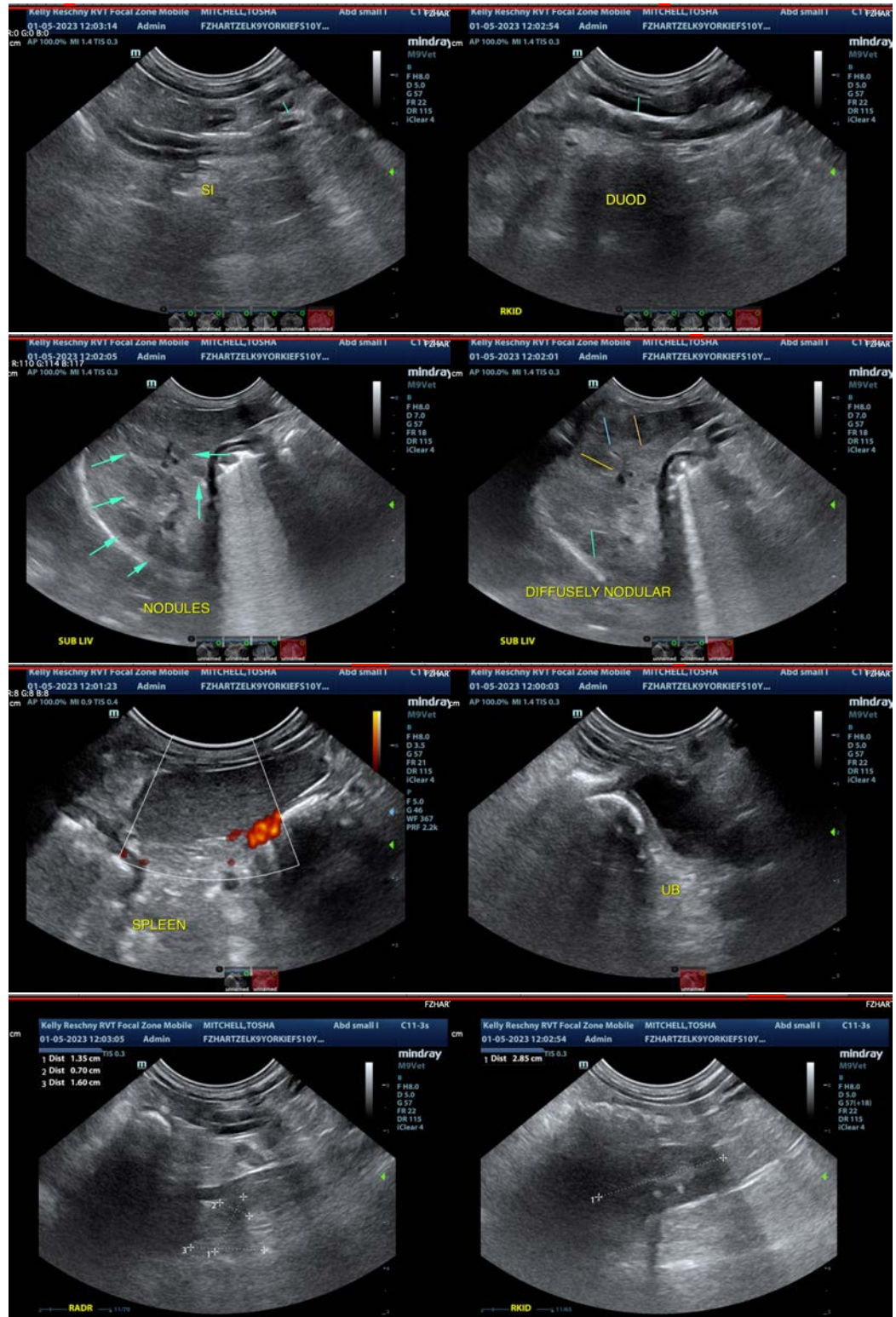
Dr. Mitchell

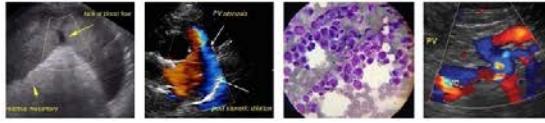
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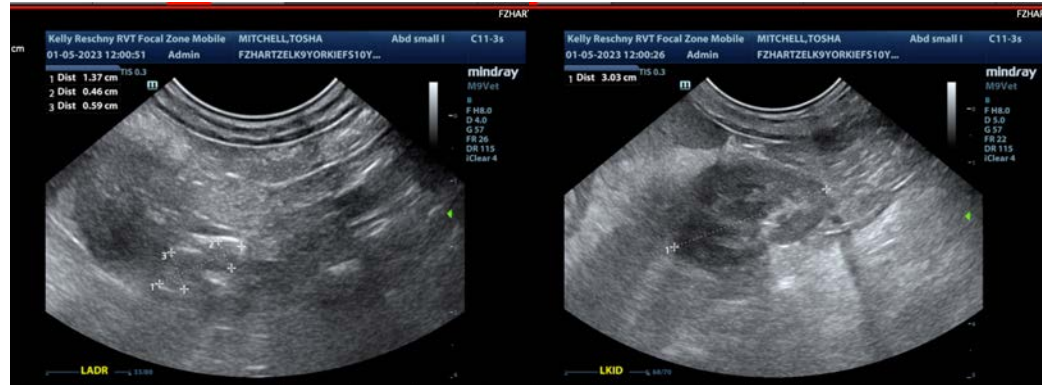
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com