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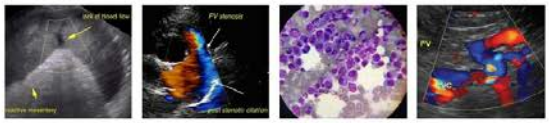

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Abby2 Scott

SPECIES

Canine

BREED

Schipperke

SEX

Spayed Female

AGE

12.5 Years

WEIGHT

13.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

Truckee Meadows VH

REFERRING VET

Dr. Rachel Kuester

INVOICE

26102

DATE

10/5/21

PRESENTING CLINICAL SIGNS

Elevated liver values & proteniuria- 1/6 systolic heart murmur- 9/27/21- presented for collapse, lethargy and decreased appetite for about 1 week. Owner gave 1/4 tab ibuprofen 62.5mg) on 2 occasions because she thought might be in pain after having played with other dogs. Started Hepaticlear pro supplement. metronidazole, amoxi drops
Abnormal PE/Chem/CBC/UA Results: TP 7.3, GLOB 4.0, ALT 151, AST 204, ALP 484, CHOL 375, CK 4261, T4 2 CBC unremarkable- US USG 1024, protein 300

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall and ureteral papilla appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi. The trigone/cystourethral junction appears slightly irregular in some views with some projecting tissue in the ventral aspect measuring approximately 0.44 cm x 0.29 cm. This tissue appears smooth and may be a norma anatomic variant. In some views it does not appear significant. Recommend free catch urinalysis to evaluate for blood/inflammation. Consider culture of a clean catch sample and reevaluation with ultrasound in 3-4 weeks.

The left kidney has a normal shape and size (4.0 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (4.53 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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/borderline large in size measuring 0.56 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/borderline large measuring 0.48 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, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a 0.31 cm hyperechoic nodule, which most likely is a benign lesion, but should continue to be monitored.

Liver

The liver is subjectively normal in size and slightly irregular. The parenchyma is severely 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.

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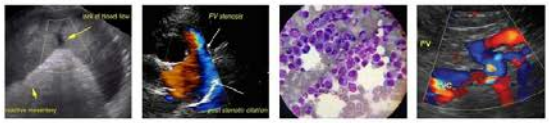

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The gall bladder lumen is moderately distended. The wall of the gall bladder has irregular polypoid projections and there is a moderate amount of non-organized echogenic debris. The proximal bile duct is dilated, measuring 0.42 cm, and gradually tapers off. At the level of the duodenal papilla it is 0.34 cm.

Gastrointestinal

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.

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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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.

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.

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.

Other

A brief view of the heart was submitted. No significant pericardial effusion was seen.

PRIMARY FINDINGS

- Severely heterogeneous liver – 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.

- Gallbladder polyps with a dilated 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). No obstruction noted.

- Borderline bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.

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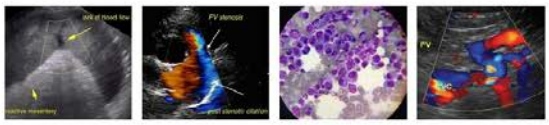

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SECONDARY FINDINGS

- Small hyperechoic nodule in the spleen – This most likely represents a benign lesion. Recommend continued monitoring.
- Irregular tissue in trigone of urinary bladder – I suspect this is an anatomic bulge rather than irregular tissue, but recommend recheck ultrasound in 4 weeks, as this is a predilection site for transitional cell carcinoma. Additionally, recommend rectal exam to digitally palpate the urethra for thickening and monitoring of the urinalysis for blood in the urine.

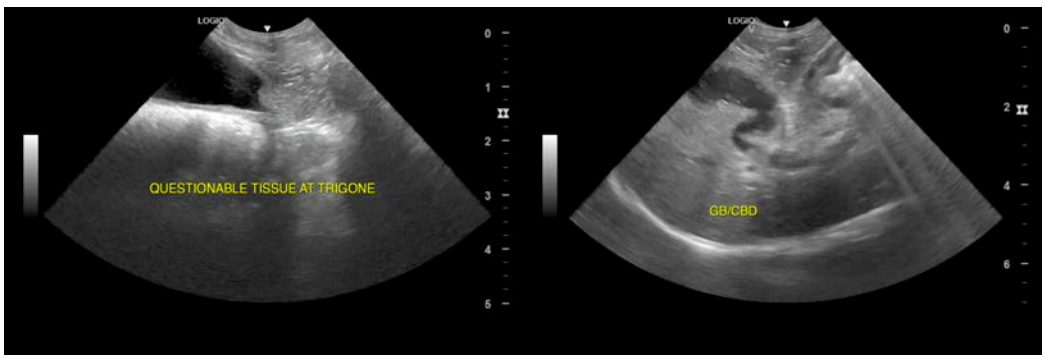
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes in the liver are non-specific and can be benign, degenerative type changes, or something more concerning such as neoplastic change. This can also be consistent with a vacuolar hepatopathy. In this situation, I would recommend:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc.
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with cushings are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- Recommend 3-view thoracic radiographs
- If no response to supportive care (denamarin, antibiotics,+/- ursodiol etc…) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

The riegon of the urinary bladder appears slightly abnormal with a bulge of tissue that could be consistent with a normal anatomic variant or a very early mass effect. Options moving forward include:

- Free catch urinalysis
- Urine BRAF test – If this test is positive, I would be much more concerned about the possibility of a neoplastic process. If it is negative, it is a non-diagnostic test, and further testing would have to be considered.
- Recheck ultrasound in 3-4 weeks to look for any changes and continue to monitor the urine for any evidence of blood.



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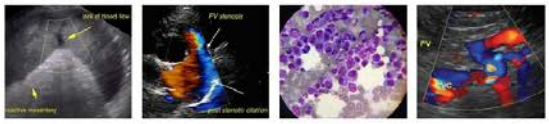

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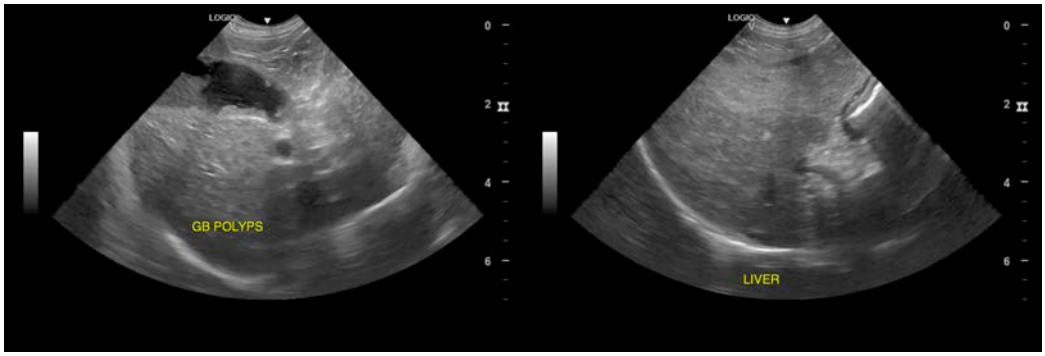

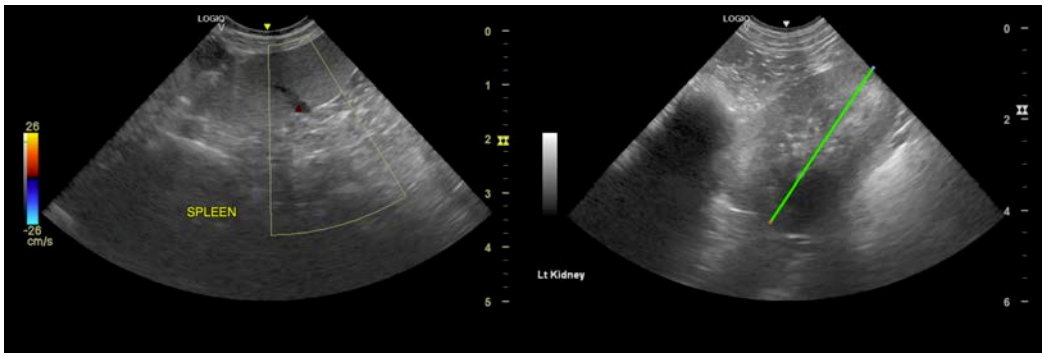

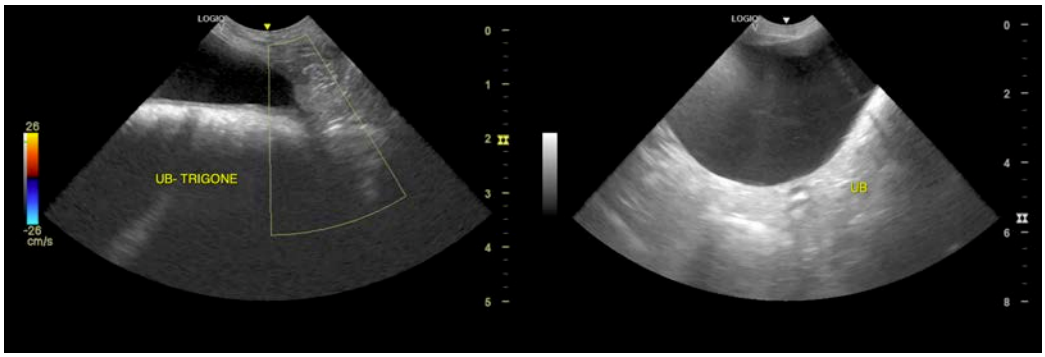

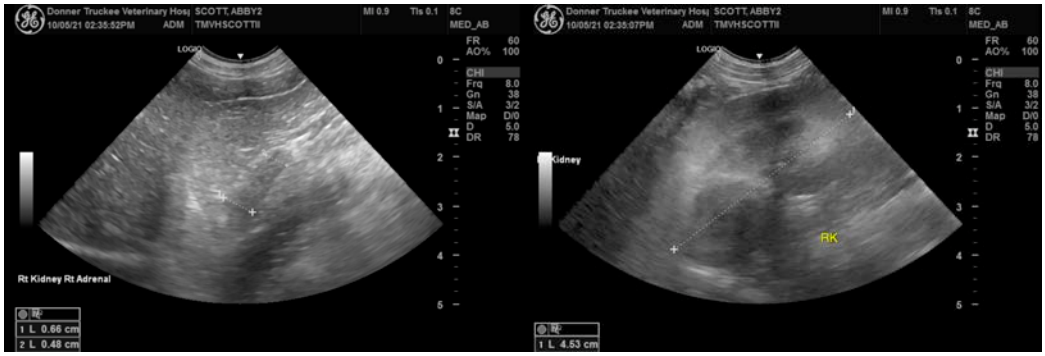

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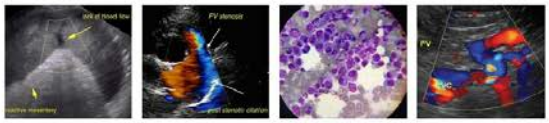

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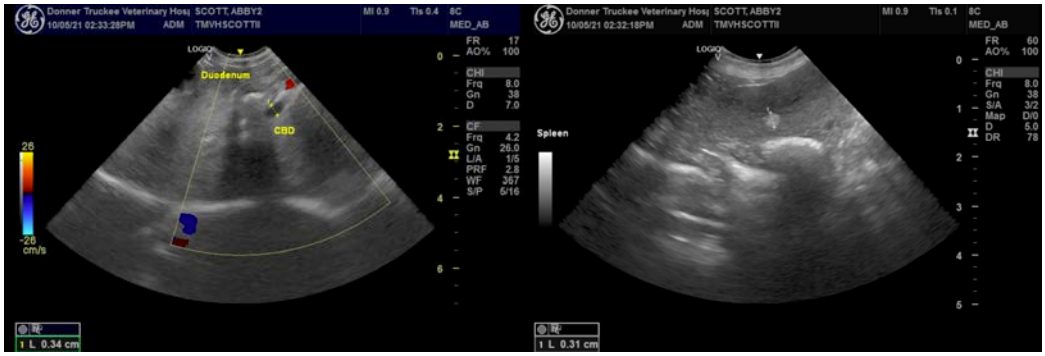

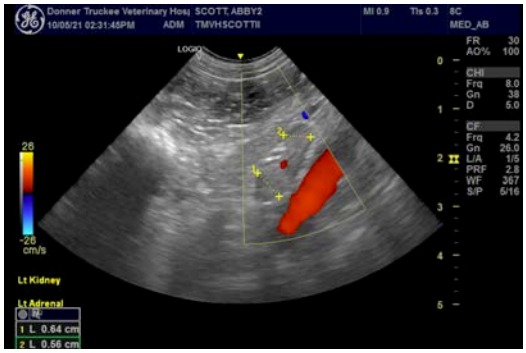

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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