

DATE PRESENTING CLINICAL SIGNS

4/7/22 History of elevated ALP and Precision PSL. ALP increase despite being on Ursodiol. No clinical signs of hepatic disease or pancreatitis. Has protein losing nephropathy.

PATIENT

Zoey Mathis Current Medications: Ursodiol 250mg ½ BID, Enalapril 10mg SID, Hill's I/D low fat.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Cavalier King Charles

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.

SEX

Spayed Female

The left kidney has a normal shape and size (5.81 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.

AGE

10/10/11

The right kidney has a normal shape and size (5.52 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.

WEIGHT

35.2 Pounds

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
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Adrenal Glands

The left adrenal gland is normal in size measuring 0.69 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.

IMAGING PERFORMED BY

The right adrenal gland is normal in size measuring 0.67 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.

Andi Parkinson RDMS

HOSPITAL NAME

Abbey AH

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 small hypoechoic nodule visualized measuring 0.96 cm x 0.79 cm within the splenic parenchyma. There is a larger, more hypoechoic and defined nodule/mass lesion on the periphery of the spleen, which deforms the splenic capsule, measuring 1.5 cm x 1.02 cm.

REFERRING VET

Dr. Kluttz

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. There is an ill-defined, hypoechoic nodule visualized measuring 1.01 cm x 1.0 cm within the hepatic parenchyma.

INVOICE

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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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

- One hypoechoic splenic nodule and a larger hypoechoic splenic nodule/mass that deforms the splenic capsule – There is a small mass visualized within the spleen, distorting the splenic capsule. Differentials for the mass include neoplasia (hemangiosarcoma, hemangioma, hematoma, abscess, hyperplasia, regenerative nodule, other).
- Heterogeneous liver with hypoechoic nodule – 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 nodule is ill-defined and most consistent with a benign lesion. A neoplastic lesion cannot be excluded.

SECONDARY FINDINGS

- Mild gallbladder debris – There is a minimal amount of gallbladder debris present with a normal gallbladder wall and no surrounding inflammation. This is likely an incidental finding.

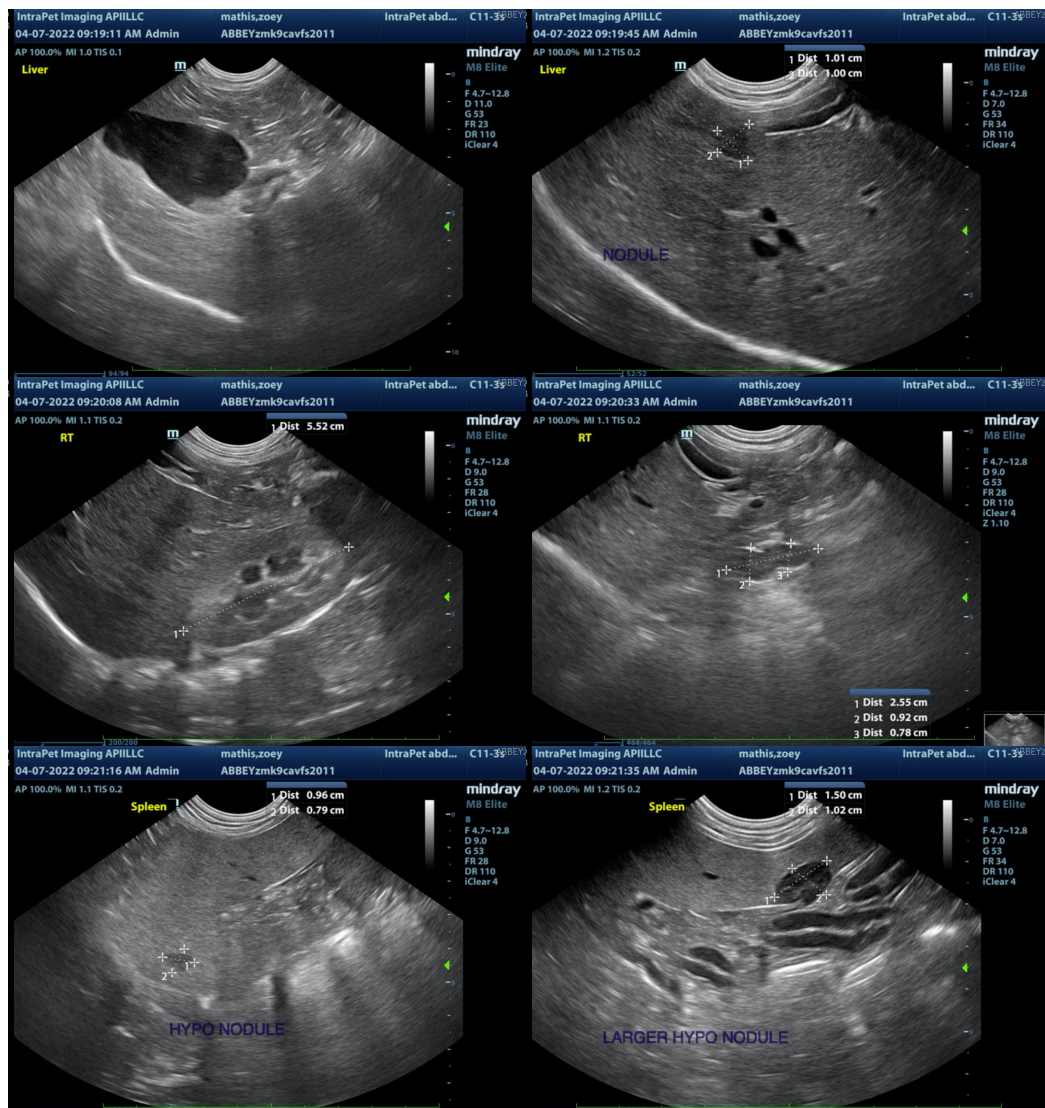
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

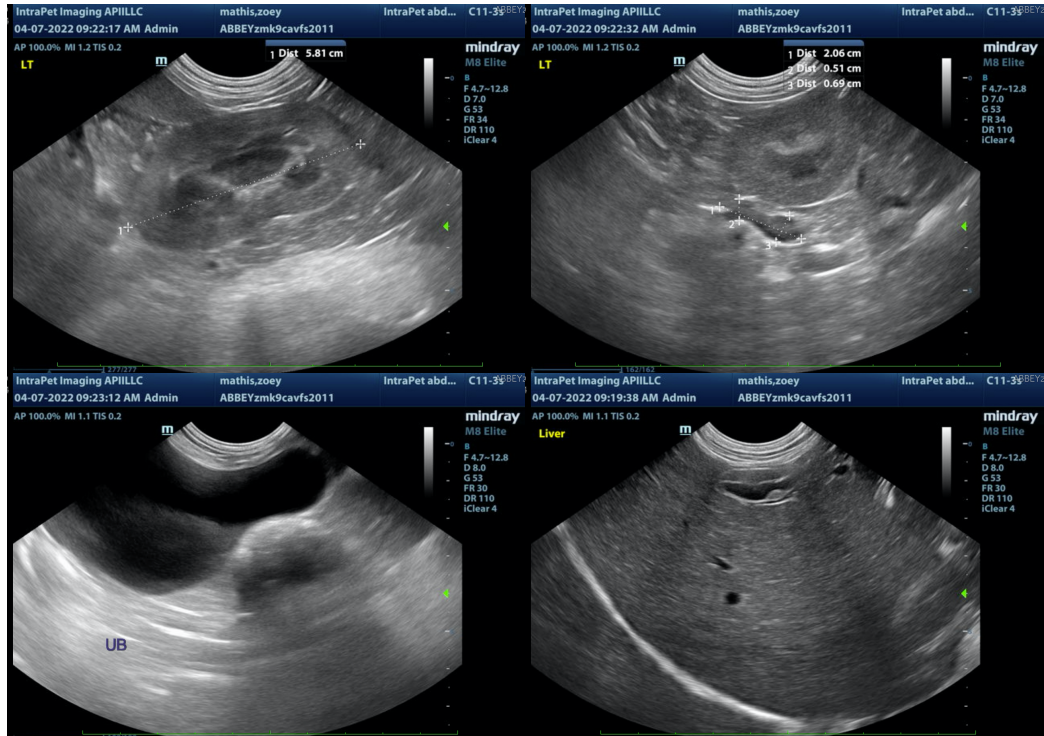
There are two lesions visualized within the spleen. They are both relatively small, but one of the lesions does deform the splenic capsule and appears more hypoechoic and possibly thin walled. Based on the appearance of this lesion, I would be most inclined to consider a splenectomy for both diagnostic and therapeutic purposes. A biopsy of the liver could be considered at the same time to help determine the nature of the ALP elevation.

No significant focal lesions were visualized in the liver. It is heterogeneous, and there are some ill-defined, hypoechoic nodules that are most likely benign, but sampling would be ideal. The adrenal glands appear relatively normal in size, but that does not exclude the possibility of underlying Cushing's disease, an a primary vacuolar hepatopathy is possible.

The changes associated with the gallbladder are relatively mild, and likely contributing minimally.

Consider 3-view thoracic radiographs and a splenectomy with liver biopsy. If this too aggressive of a route, then consider a fine needle aspirate of both areas, a liver function test, adrenal function testing if signs of Cushing's are present, etc. Recommended blood pressure evaluation prior to surgery if this has not already been done.





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.

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