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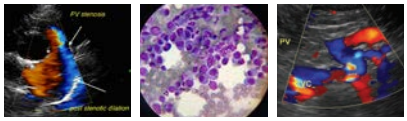

SonoPath

Clinical Sonography & Telecytology

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DATE

7/19/22

PATIENT

Stryker Eures

SPECIES

Canine

BREED

Labrador

SEX

Neutered Male

AGE

2/27/10

WEIGHT

72.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

All Creatures Veterinary Service

REFERRING VET

Dr. Meadows

INVOICE

39652

PRESENTING CLINICAL SIGNS

Decreased appetite. History of liver elevations and upper normal kidney values.

Current Medications: Hill's kidney care.
Lab Results: upper normal creatinine. Mildly elevated ALT and ALP.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

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 prostate is normal in size (1.2 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.57 cm). Overall echogenicity is slightly hyperechoic with poor 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 (5.07 cm). Overall echogenicity is slightly hyperechoic with poor 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 in size measuring 0.88 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 measuring 0.86 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 normal/borderline large in size and slightly irregular. The blood flow through the hilus and splenic parenchyma appears normal. In the mid to caudal area of the spleen, there is an isoechoic "bulge" type irregularity to the parenchyma with no significant change in the echogenicity or echotexture. This area measures 3.1 cm x 6.77 cm.

Liver

The liver is subjectively normal in size, and hypoechoic 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. Deep on the right side, there is a somewhat ill-defined, iso- to hypoechoic mass effect measuring 6.35 cm x 5.21 cm.

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 large amount of primarily non-organized echogenic debris present, but some of this appears to be forming some early mucosal strands, mild polypoid lesions, etc. Findings are consistent with early mucocele formation. There is no evidence of bile duct dilation.

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. There is a large, hypoechoic, rounded lymph node visualized at the mesenteric root, measuring approximately 3.03 cm x 1.31 cm. Additionally, the lymph nodes at the iliac trifurcation are visible with one measuring 0.77 cm x 1.58 cm. The omentum is generally of normal echogenicity.

Other

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

PRIMARY FINDINGS

- Heterogeneous, hypoechoic liver with a poorly defined hypo/isoechoic mass lesion on the right side of the 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. The hypoechoic lesion visualized cold represent a benign or cancerous lesion.

- Early gallbladder mucocele – Recommend medical management and close monitoring.

- Hypoechoic, large lymph node visualized at the mesenteric root – The moderate mesenteric lymphadenopathy could be consistent with a neoplastic process, although you can see significant lymphadenopathy in some cases of autoimmune/inflammatory disease, infectious disease(tick born disease-such as bartonella, fungal infections, FIP (cats)) etc. A fine needle aspirate with cytology is recommended for further evaluation.

- Isoechoic “bulge” visualized within the splenic parenchyma – The significance of this is unclear, as it could represent normal anatomic variation, but a subtle mass lesion is also possible. Consider a fine needle aspirate.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are numerous lesions visualized on today's scan, but many of these could be age related/chronic, progressive lesions, and it is difficult to determine if they are associated with the current decrease in appetite, etc. There is a hypo/isoechoic mass effect deep on the right side of the liver. This is most suggestive of a primary liver mass (benign or cancerous).

A fine needle aspirate could be considered. If this cannot be reached, then options would include a contrast CT scan for further evaluation and possible surgical resection. Primary liver masses can often have a very good prognosis with surgical removal, and often are somewhat "silent" until they get very large, so it is unknown if this is causing significant symptoms at this time. Based on the chronic liver enzyme elevations, I would also consider a liver function test, and biopsy of normal liver to look for a concurrent hepatopathy.

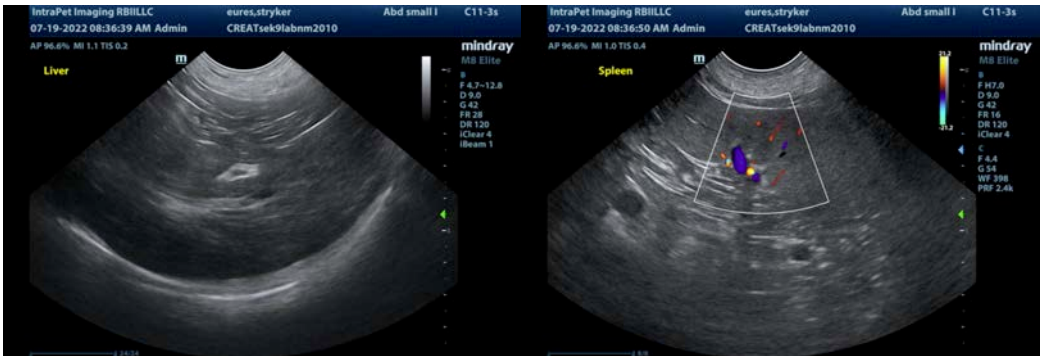
Additionally, the gallbladder has a large amount of debris and an early mucocele is forming. Recommend starting chronic Ursodiol therapy +/- antibiotics and close continued monitoring for progression of this into a surgical lesion.

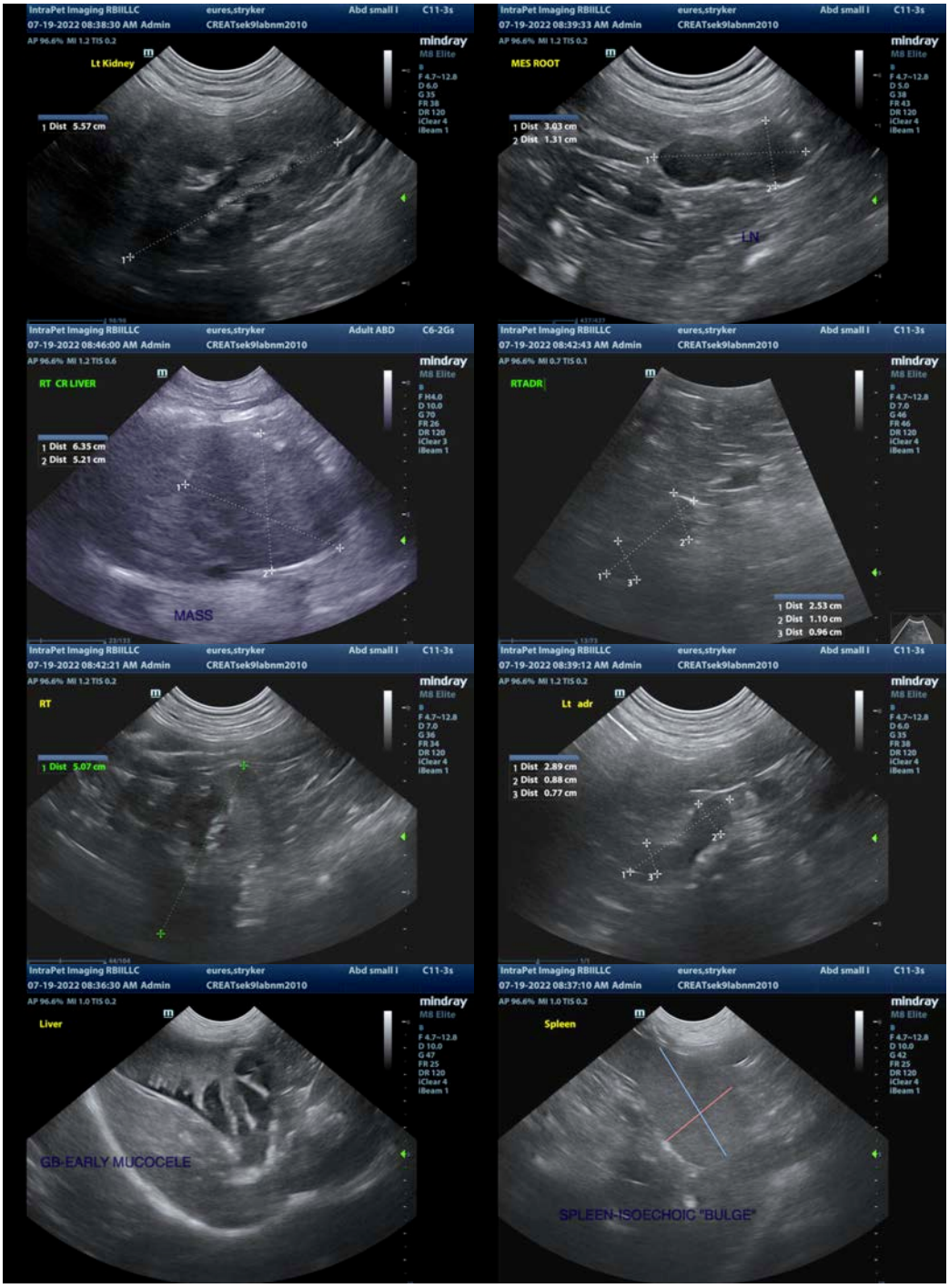
There is a hypoechoic, prominent lymph node visualized at the mesenteric root. This is the only lymph node that I see with these characteristics. Other lymph nodes are visualized, but appear less abnormal. A fine needle aspirate could be considered with care, as there are large vessels in the region.

There is a poorly defined "bulge" visualized in the mid to caudal spleen. This could be a normal anatomic variant or a subtle mass lesion. Consider a fine needle aspirate of the spleen.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

Both kidneys have reduced corticomedullary distinction with isosthenuric urine. Recommend a urinalysis, culture and blood pressure evaluation.

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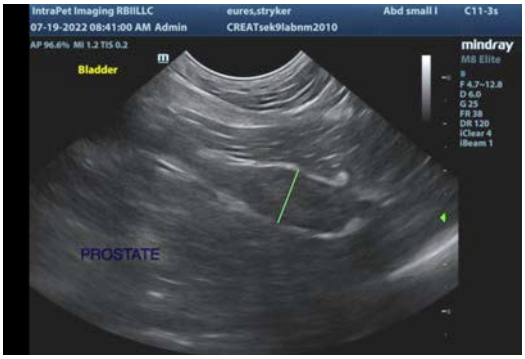
Spleen
SPLEEN-ISOECHOIC "BULGE"



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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