IMAGING PERFORMED BY

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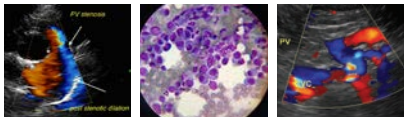

SonoPath
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DATE

6/15/23

PATIENT

Grady Williams

SPECIES

Canine

BREED

Saint Bernard

SEX

Intact Male

AGE

4/7/17

WEIGHT

103 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Abbey Animal Hospital

REFERRING VET

Dr. Kluttz

INVOICE

43209

PRESENTING CLINICAL SIGNS

Progressive anorexia started 2 weeks ago. P will only eat table food and drink from garden hose. Lost 10% BWT. Poor/temporary response to treatment. Bloodwork found mild/moderate hyperbilirubinemia and increased SDMA. Fecal all negative.

Current Medications: P received Vitamin b12 injection, Famotidine 20mg 2 PO BID, Metronidazole 500mg 1 PO BID, Clavamox 375mg 2 PO BID, Cerenia 60mg 2 PO SID
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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 large in size (2.96 cm) but has a regular shape with smooth external margins. The parenchyma is heterogenous but no discrete focal lesions are present. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (7.61 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 (6.42 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.83 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 0.63 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 large. The spleen echotexture is heterogenous and severely mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a diffuse reticulated pattern associated with the spleen, and a focal hypoechoic mass effect measuring 2.69 cm x 2.09 cm.

Liver
The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is hypoechoic and 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 gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate 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 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.

Free Abdomen
Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a significant lymphadenopathy with large hypoechoic lymph nodes. One such lymph node is visualized in the cranial abdomen measuring 1.5 cm x 2.58 cm. Additionally lymph nodes at the root of the mesentery measure 1.37 cm x 7.0 cm and 1.11 cm x 3.97 cm. The omentum is hyperechoic around the enlarged lymph nodes.

Other
Ringdown artifact is visualized at the level of the diaphragm. This could be associated with pulmonary parenchymal disease.

The right auricle and pericardium were visualized and were unremarkable. No obvious pathology is visualized. If cardiac function evaluation is desired a full echocardiogram is warranted.

There is no evidence of pleural effusion and no thoracic mass lesions observed.

ULTRASONOGRAPHIC FINDINGS

- Large, reticulated spleen with a focal hypoechoic mass effect – The diffusely nodular/reticulated pattern is highly suspicious for round cell neoplasia. Recommend a fine needle aspirate of the parenchyma and the hypoechoic mass effect.

- Large, heterogeneous prostate – Findings are most consistent with benign prostatic hypertrophy in an intact male dog.

- Heterogeneous, hypoechoic 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.

- Moderate lymphadenopathy – The moderate mesenteric lymphadenopathy could be concerning for 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.

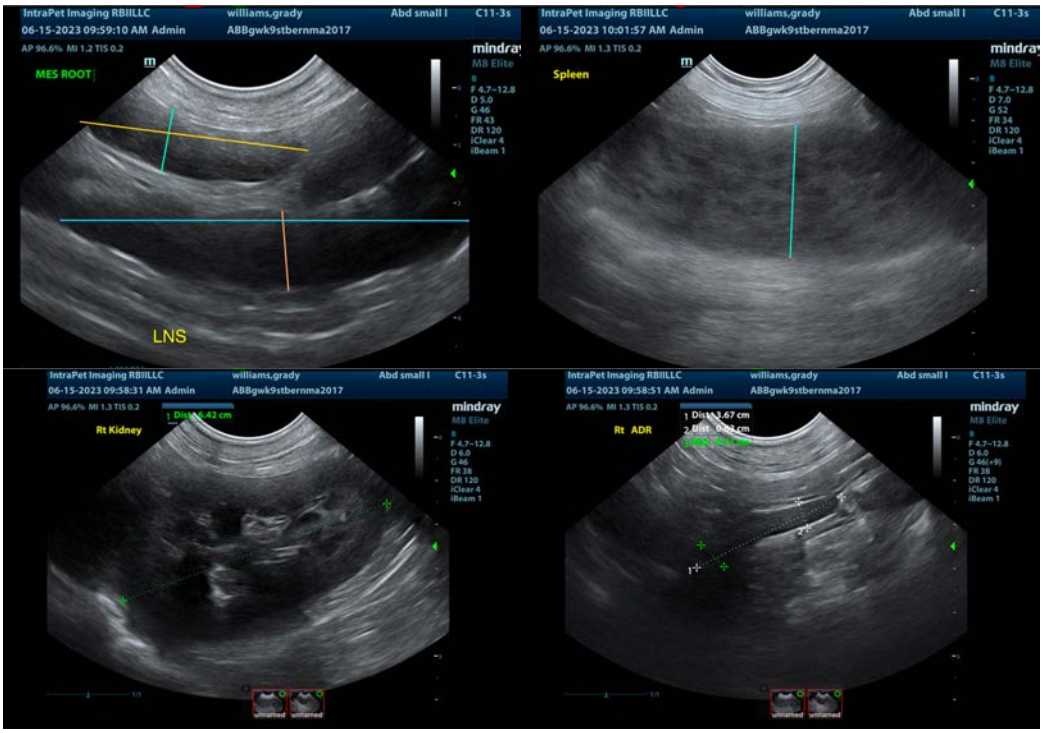
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

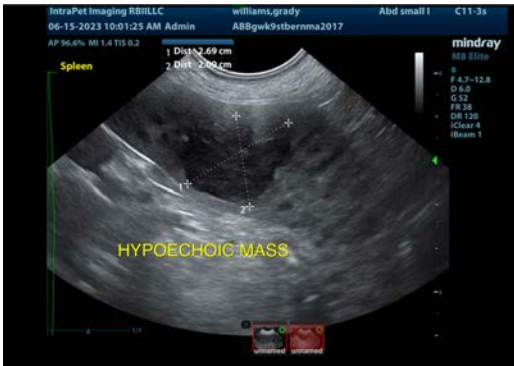
The spleen is large and diffusely nodular with a reticulated pattern. This pattern is highly suggestive of underlying round cell neoplasia. Additionally, there is a larger hypoechoic mass effect visualized, and a diffuse lymphadenopathy. Recommend fine needle aspirate of the spleen and possibly a mesenteric lymph node. If cytologic diagnosis cannot be obtained, consider a fine needle aspirate of the liver.

The calcium reported is concerning for a possible hypercalcemia of malignancy. Recommend 3-view thoracic radiographs. You could consider evaluation of an ionized calcium, PTH, and PTHrP level.

I suspect the elevation in bilirubin is secondary to hepatic involvement.

If a cytologic diagnosis of neoplasia is obtained, recommend consultation with a veterinary oncologist regarding treatment options and prognosis. Other differentials such as tick borne disease and some atypical bacterial or fungal disease could have a similar presentation.

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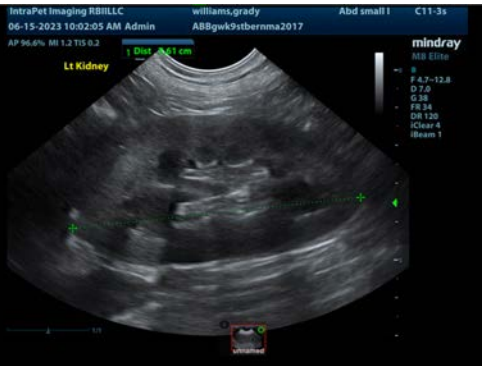
Spleen
HYPOECHOIC MASS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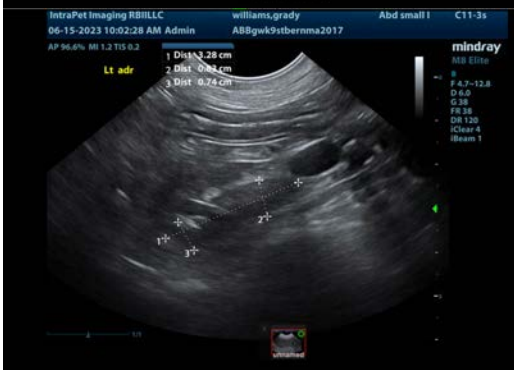
Lt Kidney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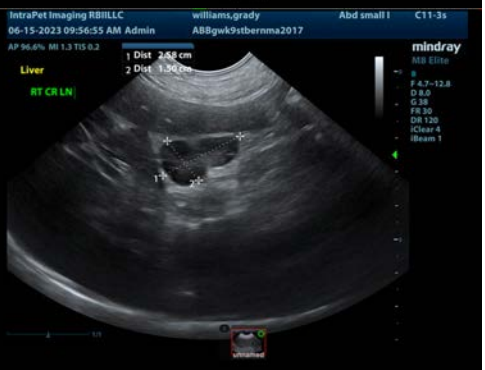
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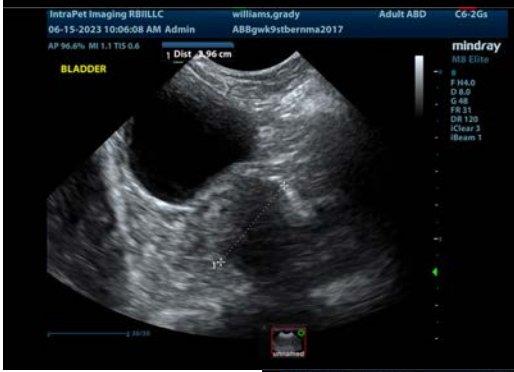
Liver
RT CR LN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Adult ABD
C6-2Gs
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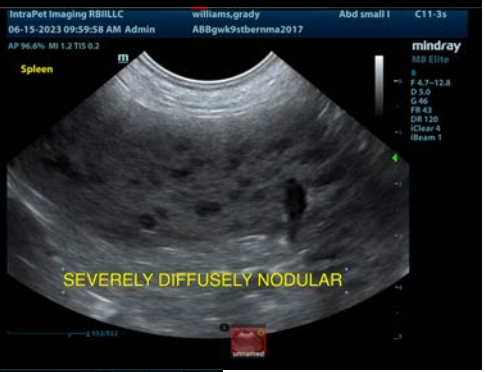
BLADDER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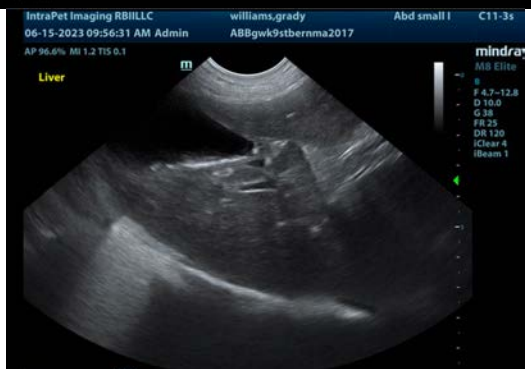
Spleen
SEVERELY DIFFUSELY NODULAR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Liver

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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