IMAGING PERFORMED BY

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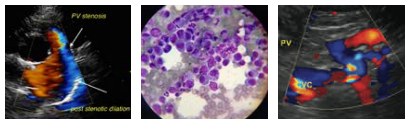

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE
2/8/22

PATIENT
Hank Reynolds

SPECIES
Canine

BREED
Bernese Mountain Dog

SEX
Neutered male

AGE
4/21/18

WEIGHT
73.5 lbs

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

HOSPITAL NAME
Festival VC

REFERRING VET
Dr. Beron

INVOICE
95879

PRESENTING CLINICAL SIGNS

History: was recently at ER for acute GI issues with elevated liver enzymes; symptoms have since improved other than persistent diarrhea is e/d, only a single episode of vomiting earlier in the week. significant weight loss; possibly explained by recent GI episode, but need to make sure weight loss does not continue.
Current Medications: Completed course of Metronidazole on 1/28/2021.
Lab Results: significantly elevated ALT, Alk Phos. Attached separately.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: IV Butorphanol 10mg/ml 0.4cc IV, Midazolam 1.4cc IV and dexdomitor added.
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 (3.7 x 6.2 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 (6.96 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 (6.27 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 in size measuring 0.54 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 0.6 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. No focal parenchymal abnormalities are visualized.

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. No focal nodules or cystic lesions are observed. The gallbladder lumen is

moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed. There is some discrete shadowing material visualized consistent with possible foreign debris, but an obstructive pattern is not noted.

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 prominent and mottled compared to the surrounding isoechoic 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 are occasional prominent mesenteric lymph nodes visualized and measured 0.75 cm and 0.88 cm. The omentum is of normal uniform echogenicity.

Other

The left and right testicles are imaged and appear to be within normal limits.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Large, hyperechoic prostate. Prostatic changes are most consistent with benign prostatic hyperplasia. Other differentials include bacterial prostatitis and prostatic neoplasia. However, given the lack of lower urinary tract symptoms, these differentials are considered less likely in this patient.

- Hypoechoic heterogenous 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 nature of this lesion supports an inflammatory or infiltrative process.

- Prominent, mottled pancreas. The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Shadowing material visualized in the gastric lumen. The significance of this is unknown. There is no evidence of an obstructive process. This should be correlated with abdominal radiographs.

- Mild mesenteric lymphadenopathy. The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

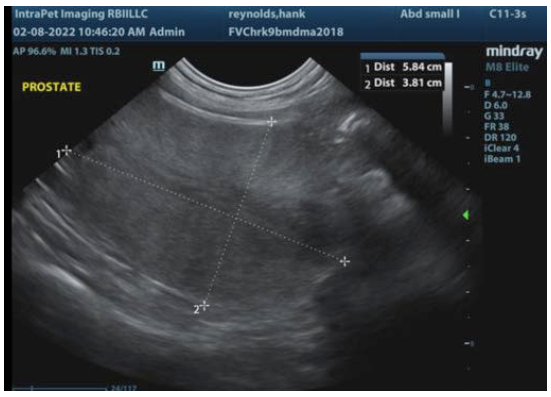
Minimal focal lesions are visualized associated with the liver to explain the elevation in liver enzymes reported. The gallbladder appears relatively normal and the liver appears somewhat heterogenous and hypoechoic.

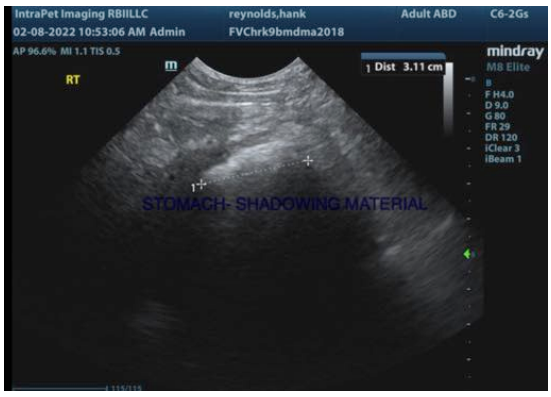
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate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

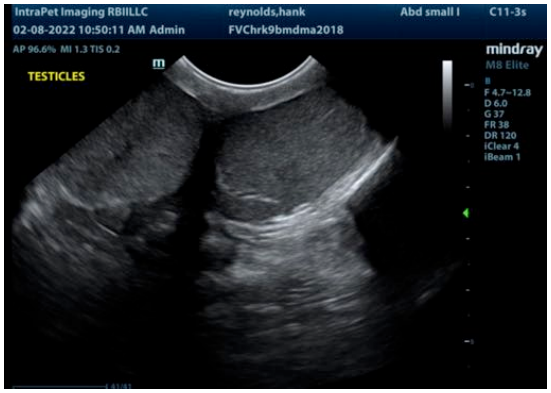
Minimal lesions were visualized associated with the gastrointestinal tract to explain the diarrhea and acute GI signs reported. There is some shadowing material within the gastric lumen. The significance of this is unclear. Correlate with abdominal radiographs. There is no evidence of a pyloric outflow obstruction. If this patient has been on broad spectrum antibiotics this could be associated with dysbiosis, stress colitis, etc. or could be secondary to a hepatopathy.

- Consider a GI panel to Texas A&M for qualitative PLI, TLI, cobalamin and folate to look for evidence of dysbiosis and resolving pancreatitis.
- Consider a novel protein/hydrolyzed protein prescription diet.
- Recommend chronic probiotic therapy.
- If symptoms are persistent and weight loss continues you can consider obtaining GI biopsies and/or a fecal transplant.

The findings associated with the prostate are most consistent with benign prostatic hypertrophy, but prostatitis is possible. Consider urinalysis and culture and continued monitoring +/- neutering.



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TESTICLES
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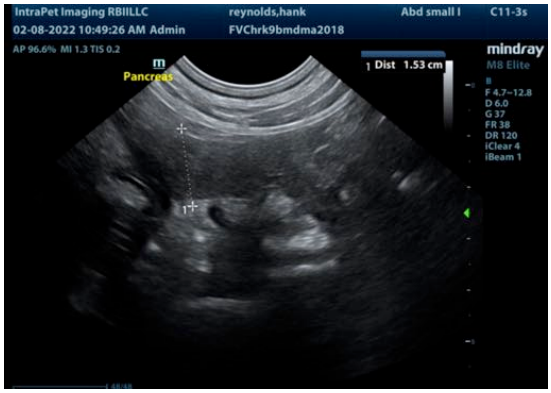
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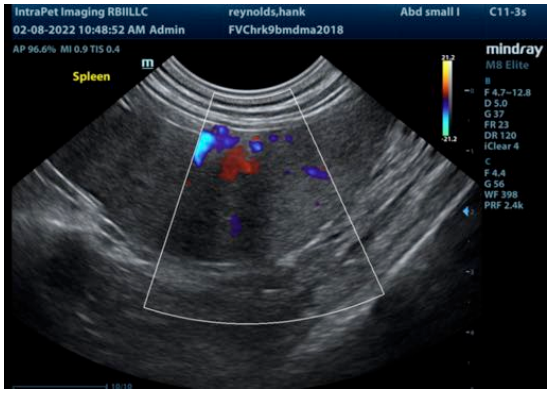
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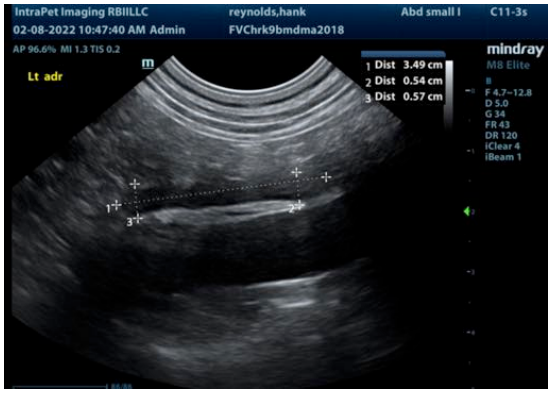
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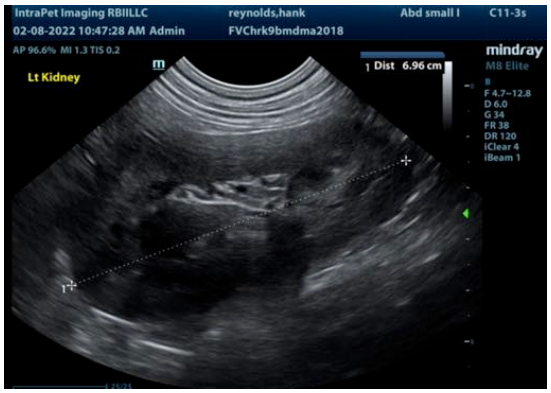
Lt adr
1 Dist 3.49 cm
2 Dist 0.54 cm
3 Dist 0.57 cm
mindray
M8 Elite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Lt Kidney
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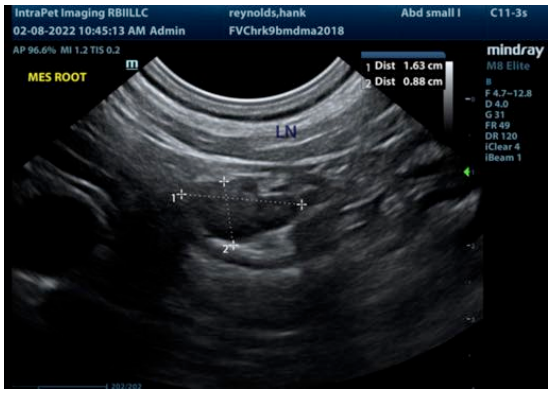
mindray
M8 Elite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reynolds,hank
Abd small I
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MES ROOT
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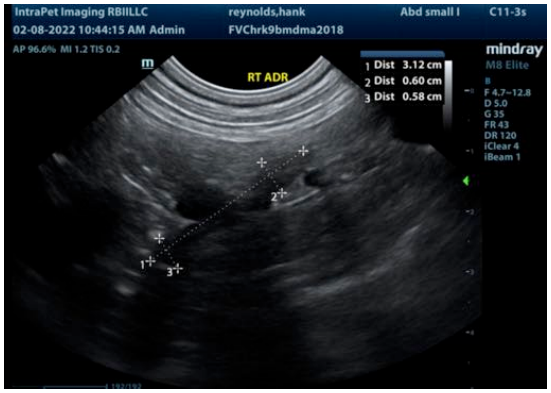
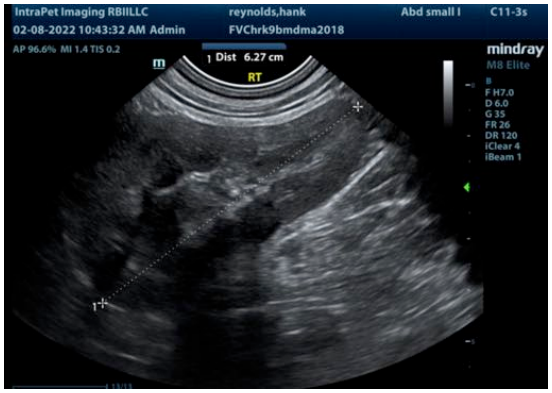
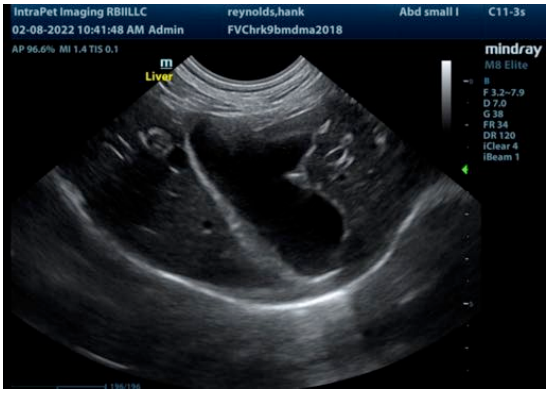
2 Dist 0.88 cm
LN
mindray
M8 Elite







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)
kathleen.sennello@sonopath.com