

**DATE PRESENTING CLINICAL SIGNS**

1/21/22 History: Presented 12/27/2021 for limping, pre-NSAID panel showed elevated ALT. Patient placed on Galliprant and Gabapentin. Recheck 1/15/2022 limping improved, ALT still elevated, 1 lb weight loss. Patient started on Denamarin and only Gabapentin refilled. Liver chemistries also AST elevated.

PATIENT

Coal Reyes Current Medications: Gabapentin 50 mg BID 3 weeks. Denamarin advanced 1 week.
Lab Results: 12/27 ALT 736 U/L, 1/15 in house ALT 753 U/L, Idexx 561, AST 93. Bile acids pending.

SPECIES

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Canine

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

BREED

Mixed

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.

SEX

Neutered Male

The prostate is normal in size (0.78 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.

AGE

8/29/06

WEIGHT

12.5 Pounds

The left kidney has a normal shape and size (4.31 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.

INTERPRETED BY

Kathleen Sennello DVM,
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The right kidney has a normal shape and size (3.83 cm) with mild pyelectasia at 0.21 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

IMAGING PERFORMED BY

Stephanie Pearce
RDMS, RVT

Adrenal Glands

The left adrenal gland is normal in size measuring 0.45 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.

HOSPITAL NAME

Hickory Vet Hospital

The right adrenal gland is normal in size 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.

REFERRING VET

Dr. Lyle

Spleen

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas, but an underlying neoplastic lesion cannot be 100% ruled out. The blood flow through the hilus and splenic parenchyma appears normal.

INVOICE

34998

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly 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 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.

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. Duodenum wall measured 0.42 cm. Jejunum wall measured 0.24 cm. 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

- Mildly 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.
- Mild gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Mild right renal pyelectasia – Pyelectasia of the right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Shadowing material in the gastric lumen-correlate with feeding history and abdominal radiographs. If this patient was adequately fasted consider such differentials as delayed gastric emptying, ingested foreign material or a partial outflow tract obstruction (none observed.)

SECONDARY FINDINGS

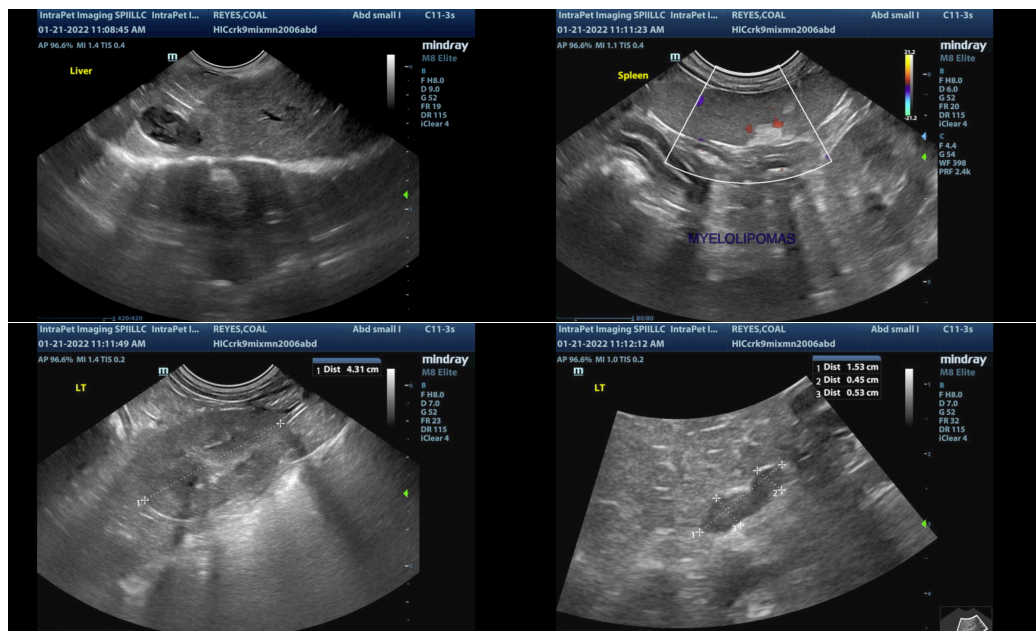
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Hyperechoic foci visualized within the spleen – These lesions are most consistent with benign myelolipomas, but an underlying neoplastic process cannot be 100% excluded as a possibility.

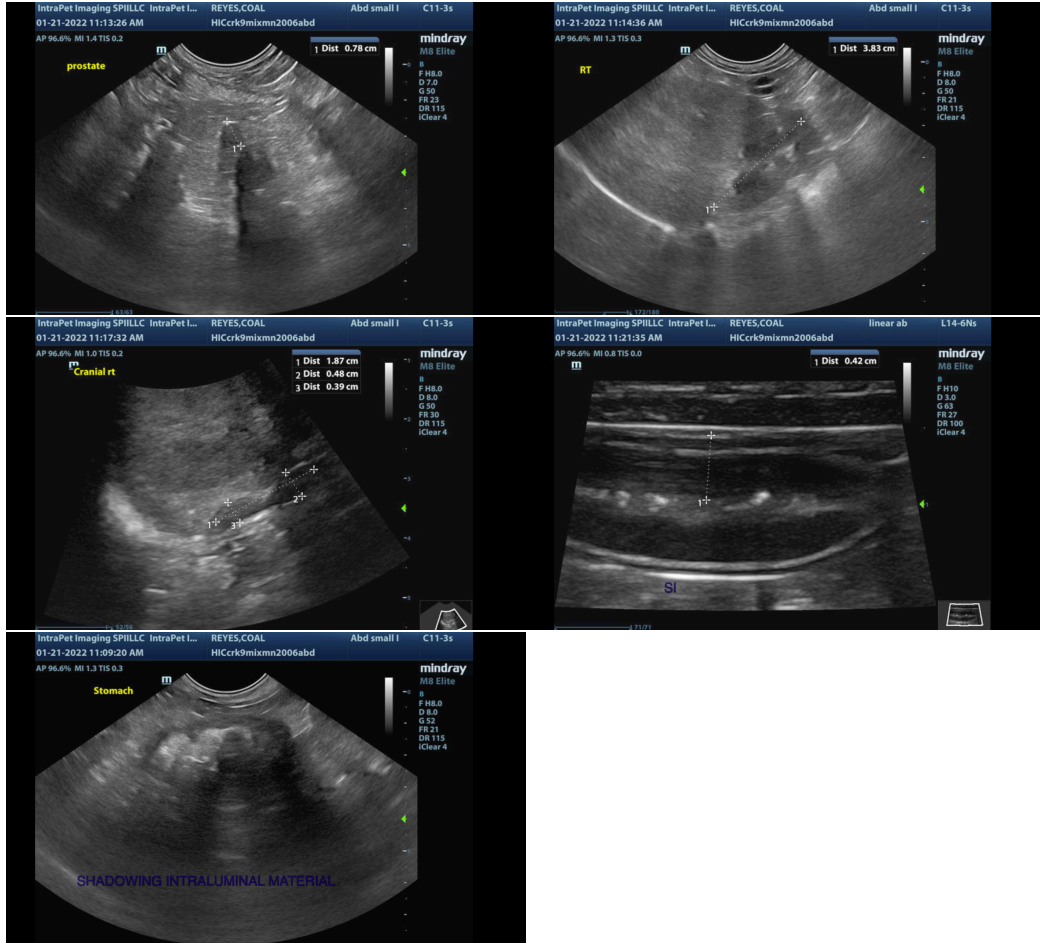
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No focal lesions were observed in the liver, and the changes were relatively mild. Unfortunately, the ultrasonographic lesions do not always correlate with the clinical lab findings. The scan today supports a primary hepatopathy, as no severe biliary changes were observed.

- 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 (pending per the history).
- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If no response to medical care (denamarin, +/- antibiotics, +/- ursodiol etc...) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

Additionally, there is very mild right-sided pyelectasia of the right kidney. Consider urinalysis and culture to rule out a urinary tract infection.





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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