

**DATE PRESENTING CLINICAL SIGNS**

8/15/23 Hx of pancreatitis. Normal BM's, no vomiting/diarrhea. On i/d low fat. Liver changes noted on pre-op bw for dental. Weight Gain. Not PU/PD. Nice coat. Large abdomen. Liver feels large.

PATIENT

Nessa McPherson

Current Medications: Denamarin sm/med 1 PO SID started 7/5/23, Thyrotabs 0.5mg 1/2 PO BID started 7/5/23

SPECIES

Canine

Lab Results: 8/8/23 UA sg 1.018, +2 protein. rest WNL. Liver chem: AST 76, ALT 417, ALK PHOS 187, GGTP 41, Bili 0.1. 6/26/23: BUN 42, Creat 0.7, SDMA 15.3, Cholesterol 428, Platelets 563

Date of Previous IntraPet Ultrasound: 12/4/2019. See attached.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

BREED

Jack Russell

Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

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.

AGE

8/30/12

The left kidney has a normal shape and size (5.84 cm). Overall echogenicity is slightly hyperechoic with poor 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.

WEIGHT

26.4 Pounds

The right kidney has a normal shape and size (6.13 cm). Overall echogenicity is slightly hyperechoic with poor 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.

INTERPRETED BY

Kathleen Sennello DVM,
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(Small Animal Internal
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Adrenal Glands

The left adrenal gland is normal/borderline large in size measuring 0.89 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

Jacksonville VH

The right adrenal gland is normal/borderline large in size measuring 0.73 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. Larsson

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.

INVOICE

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Liver

The liver is large with rounded margins. The parenchyma is homogenous echotexture. 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 gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. 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. Duodenum wall measures 0.49 cm. Jejunum wall measures 0.32 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 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, 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.

ULTRASONOGRAPHIC FINDINGS

- Borderline large adrenal glands – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.
- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large, rounded liver – The parenchyma appears relatively normal with no focal lesions.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver appears slightly large and rounded with relatively normal appearing parenchyma and no focal lesions. This is a non-specific finding. Given the ALT elevation, consider the following:

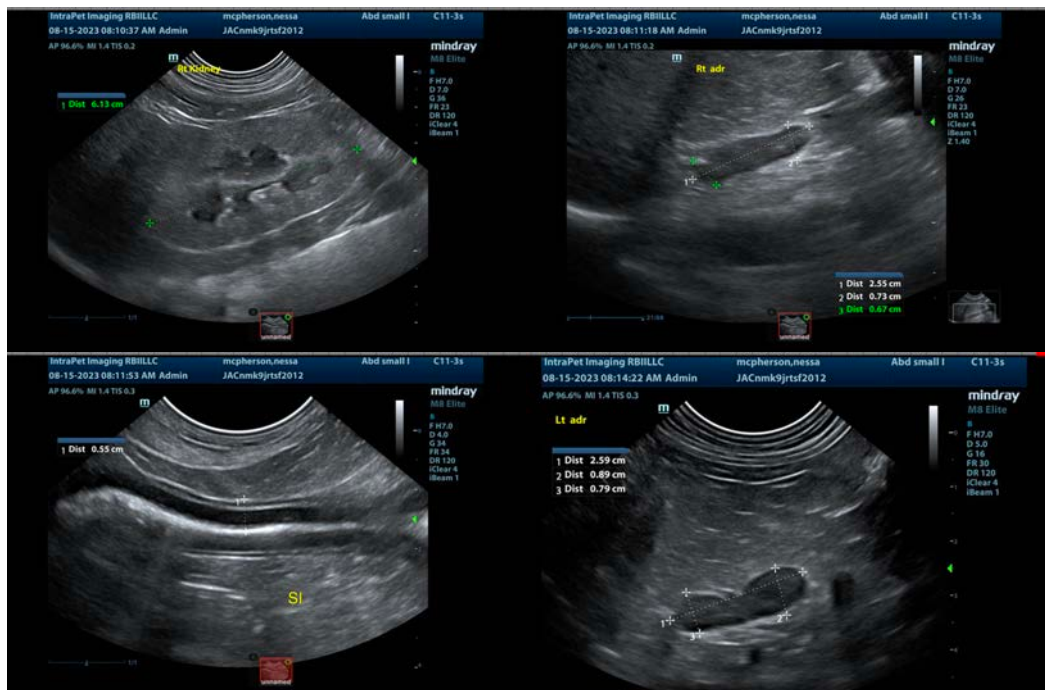
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...

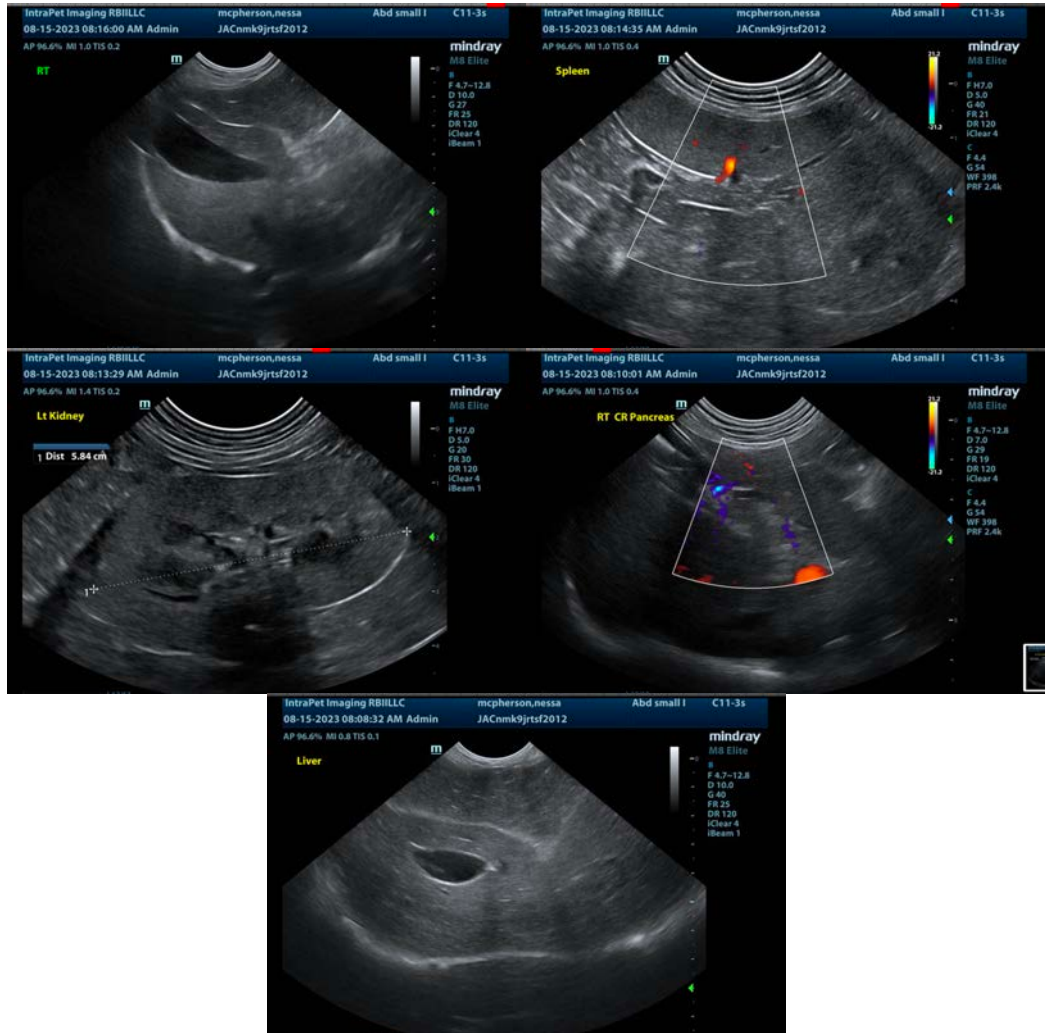
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushing's are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differential 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.

Both adrenals are somewhat plump/large for a dog of this size. Given the lack of significant clinical signs and no significant elevation in ALP, a workup for Cushing's is questionable (seems unlikely to be causing the ALT elevation) but could be considered.

The pancreas is prominent, large, irregular, and mottled with minimal surrounding reactive mesentery. This could be consistent with mild chronic pancreatic inflammation or previous episode of pancreatic inflammation.

The changes visualized associated with the kidneys are most consistent with chronic age related renal changes. Given the mild elevation in renal values noted, consider a baseline blood pressure, urinalysis and culture.





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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