

**DATE PRESENTING CLINICAL SIGNS**

6/30/23 ALT very high.

PATIENT Current Medications: None listed.

Bailey Hoofnagle

Lab Results: See attached.

Date of Previous IntraPet Ultrasound: No previous

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

SPECIES

Canine

Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED**

Jack Russell

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

SEX

Spayed Female

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 5.08 cm. The right kidney measured 5.3 cm.

AGE

9/3/13

WEIGHT

26 Pounds

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.33 cm x 0.79 cm at the caudal pole and 0.61 cm at the cranial pole. The right adrenal gland measured 2.15 cm x 0.73 cm at the cranial pole and 0.58 cm at the caudal pole.

INTERPRETED BYEric Lindquist, DMV
DABVP, Cert. IVUSS**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

HOSPITAL NAME

Animal Medical Center

Liver

The **liver** presented uniform mild enlargement with slight coarse architecture. Coalesced gallbladder debris/precursor to calculus noted measuring 1.5 cm.

REFERRING VET

Dr. Chaudhry

INVOICE

43671

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. The colon was empty with normal wall structure. No associated abnormal lymphatic activity was noted.

Pancreas

The **pancreas** presented minor irregular contour with coarse architecture. Right limb measured 1.1 cm. Left limb measured up to 1.5 cm. Presentation consistent with remodeling.

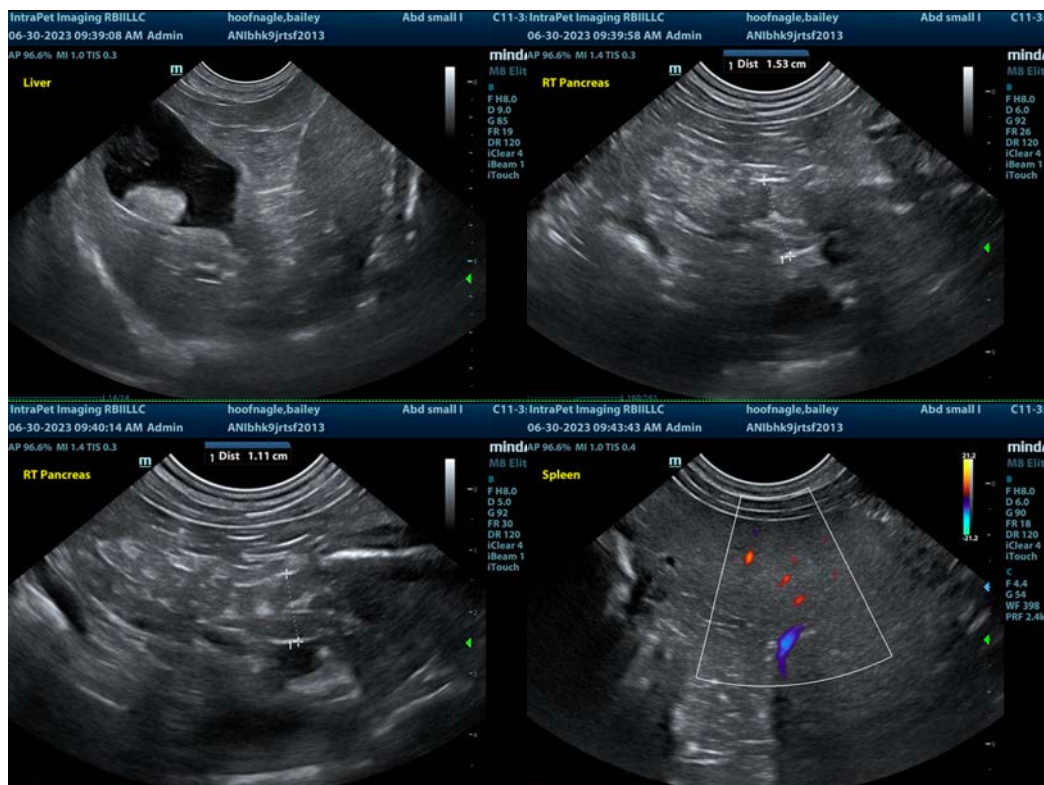
ULTRASONOGRAPHIC FINDINGS

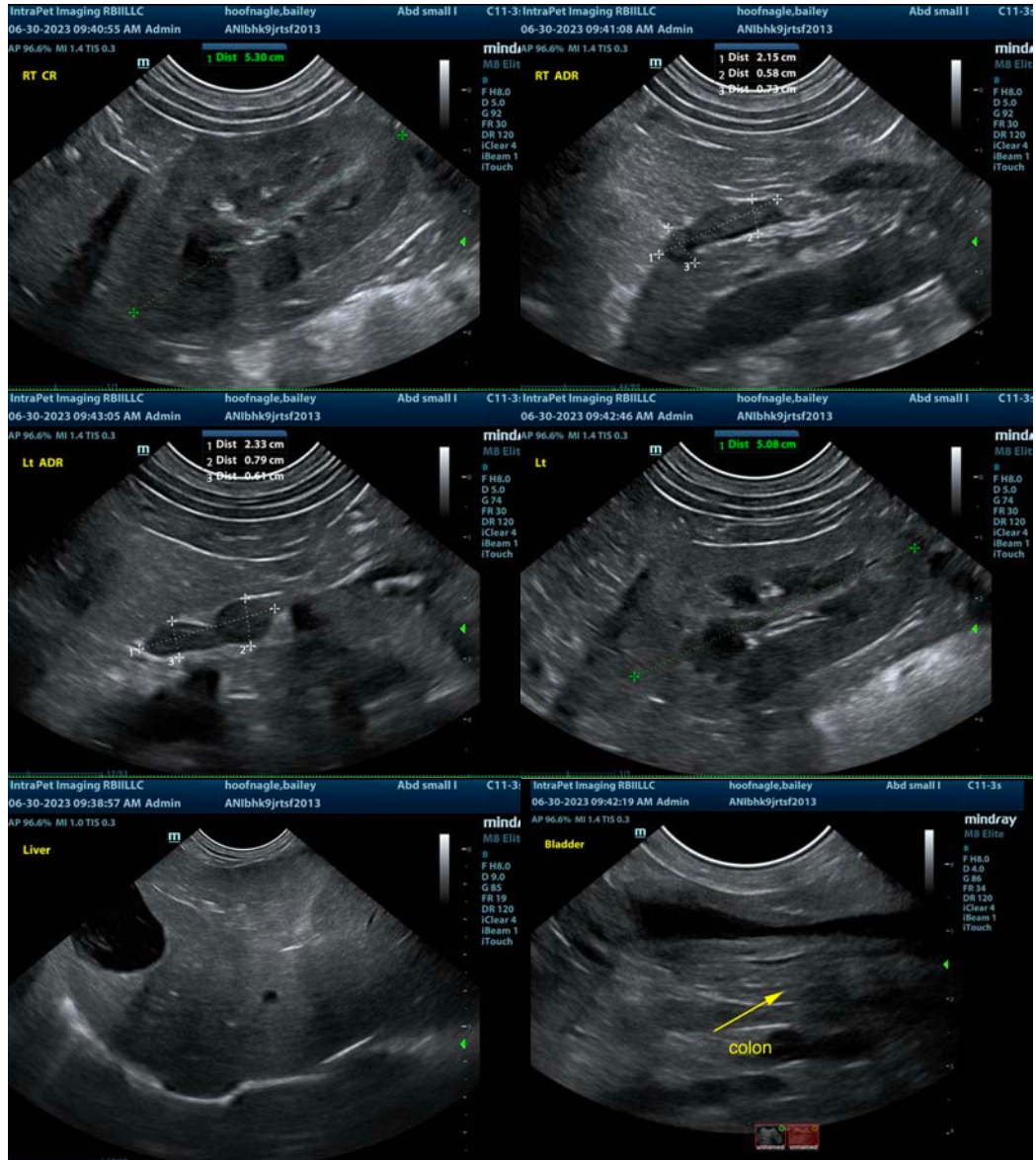
- Non-specific vacuolar hepatopathy/inflammatory hepatopathy pattern
- Mild pancreatic remodeling
- Age related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the liver warranted for further definition. Leptospirosis titers warranted, or liver biopsy could be considered. However, subjectively the presentation appears fairly benign. Possible reactive hepatopathy.

The hepatic clinical sonographic presentation is most consistent with Reactive Hepatopathy which is the most common cause of liver enzyme elevation in dogs and cats. The presumption is that gut and other organ antigen stimuli may be causing a low-grade immune response through portal system with which the liver is reacting to causing low-grade enzyme elevations. US-guided FNA could be performed to assess if low grade lymphoplasmacytic inflammation is present that would support this theory. If FNA is performed, please ask the cytologist to emphasize the primary inflammatory cell type. Empirical treatment measures to address this issue can include diet change to hydrolyzed diet, probiotics, deworming, nutraceuticals (SAME, Actigall...), dental exam and cleaning, and potentially antibiotics such as Clavamox. Metronidazole and Tylosin have traditionally been utilized for this purpose but new studies show that both these antibiotics can disrupt the normal intestinal bacterial flora (intestinal dysbiosis) for weeks and up to 4-6 months. Therefore, Metronidazole and Tylosin should be utilized as a last resort if other efforts have not been effective and sonographic organ appearance remains benign.





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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