

PATIENT PRESENTING CLINICAL SIGNS

Luke Wright Decreased appetite. Drinking more water. Elevated liver enzymes. ALT 398. ALP 507. Hypokalemic. USG 1.038. 3+ proteinuria. CBC has a mild leukocytosis with a neutrophilia.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine **Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is distended. A small amount of suspended echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

BREED

Beagle Mix

The prostate is normal in size (0.77 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

SEX

Neutered Male

The left kidney is normal in size (6.40 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

AGE

10 years

The right kidney is normal in size (5.63 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

WEIGHT

16 kg

Adrenal Glands

The left adrenal gland is borderline enlarged (0.75 cm at cranial pole) (0.72 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM (*Small Animal Internal Medicine*)

The right adrenal gland is in normal size (0.84 cm at cranial pole) (0.59 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

IMAGING PERFORMED BY

Andrea Nicastro, DVM,
Diplomate ACVIM (*Small Animal Internal Medicine*)

Spleen

The spleen is normal in size (1.27 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

HOSPITAL NAME

Blue Pearl Summerville

Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The portal vein to caudal vena cava ratio is approximately 1: 1.

REFERRING VET

Esther Schow

INVOICE

12736

DATE

4.13.23

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Findings

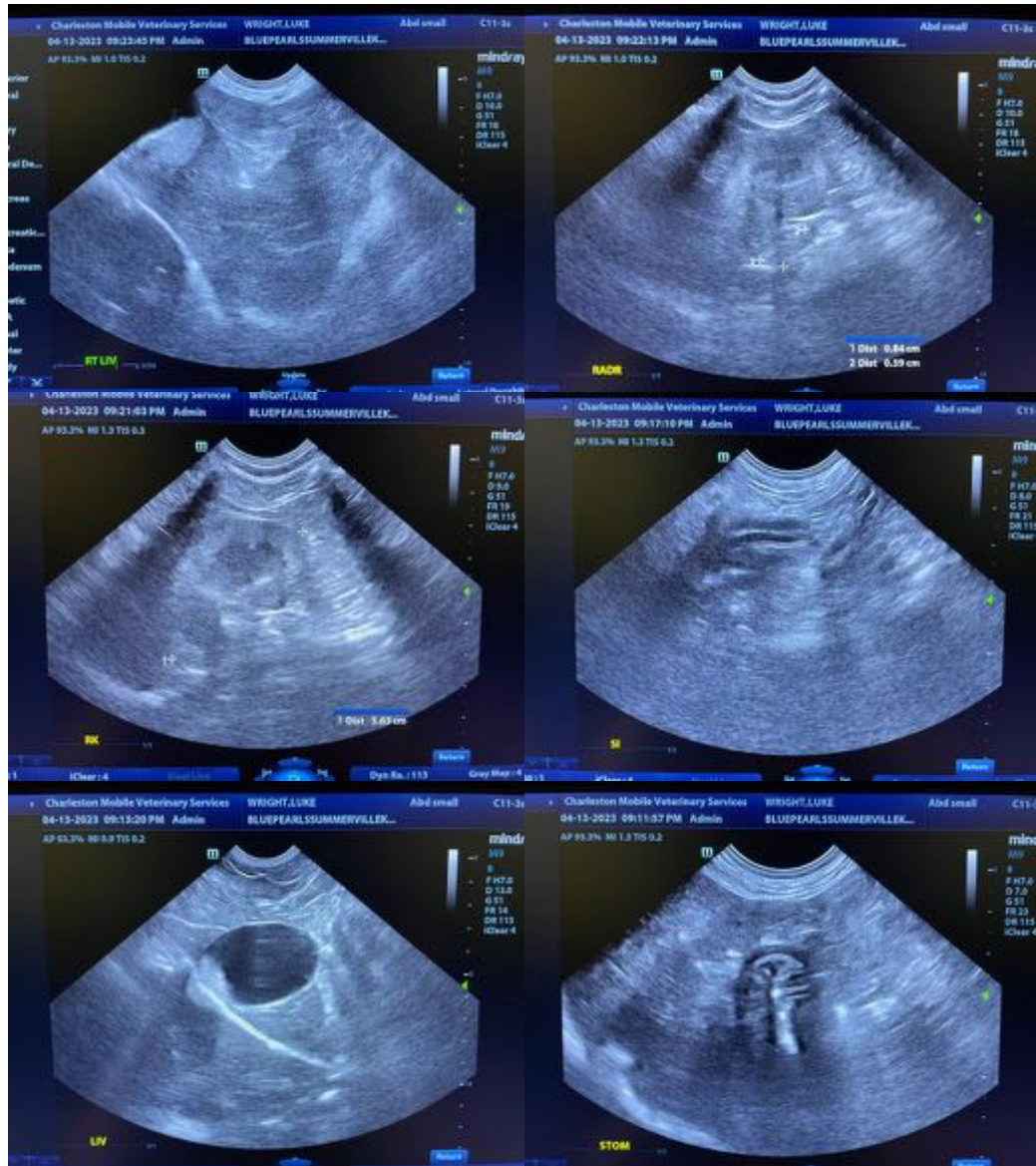
- Gall bladder sludge, non-mucocele
- Bilateral chronic age-related renal changes
- Borderline left adrenomegaly
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) cannot be excluded.

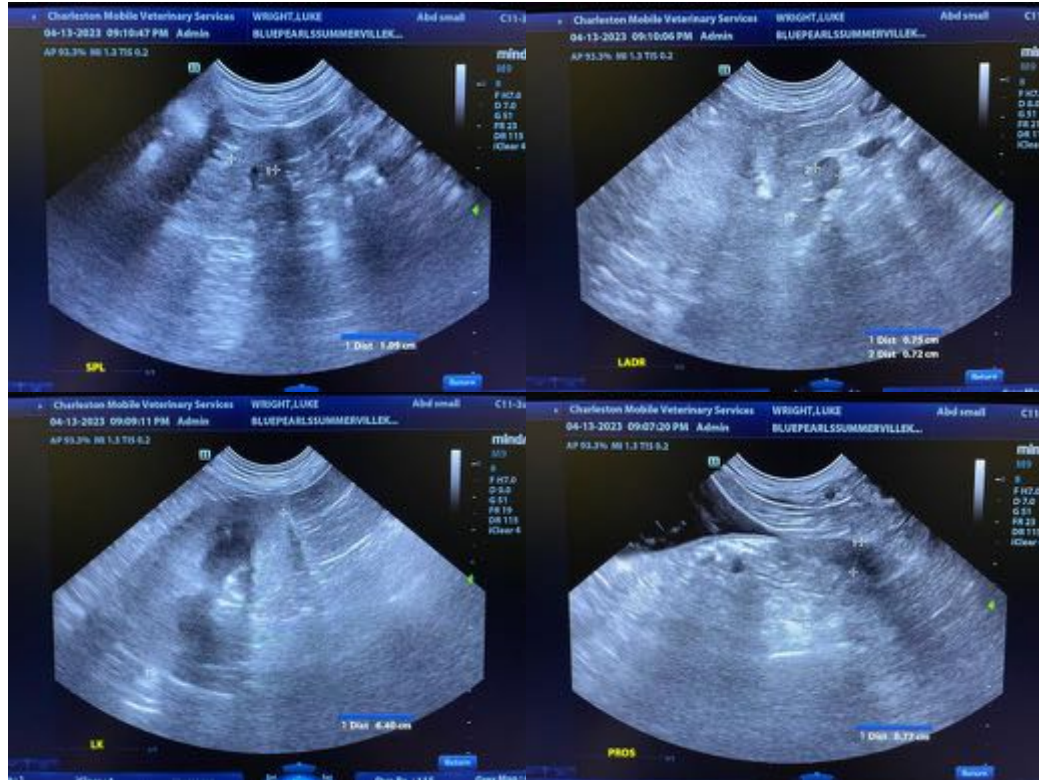
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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- Given the elevated liver values, consider the following:
 1. Pre-and postprandial serum bile acids to assess hepatic function
 2. Leptospirosis testing (i.e., blood and urine PCR, serology)
 3. Consider empirical treatment for bacterial cholangiohepatitis/Leptospirosis (i.e., broad-spectrum antibiotics, hepatic antioxidants, and other supportive measures).
 4. If the patient's liver values do not begin to improve within 5-7 days of initiating therapy, consider hepatic tissue sampling (i.e., fine-needle aspirate or biopsies). If biopsies are pursued, aerobic and anaerobic bile cultures should be obtained, along with acquisition of additional hepatic tissue sampling for potential copper quantitation. Clotting times and thoracic radiographs should be performed prior to anesthesia/ tissue sampling.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.

- Given the proteinuria, consider a urine culture and sensitivity and a UPC (if proteinuria is persistent in the absence of 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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