



PATIENT

Emma Venkiteswaran

SPECIES

Canine

BREED

Cocker Spaniel

SEX

Spayed Female

AGE

11 years

WEIGHT

11.9 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Buck AH

REFERRING VET

Dr. Sommers

INVOICE

10846

DATE

5/4/22

PRESENTING CLINICAL SIGNS

History: had lump removal surgery in April, elevated liver enzymes noted on BW meds: aventi liver complete, buprenorphine, cefaseptin, tobramycin

Abnormal PE/Chem/CBC/UA Results: please see attached BW. CBC unremarkable. ALT 305. ALP 318. GGT 42. tBili upper limits of normal.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The left kidney is normal size (5.22 cm in length); normal shape and architecture with smooth peripheral margins. 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 hydroureter. Renal vasculature is normal.

The right kidney is normal size (4.89 cm in length); normal shape and architecture with smooth peripheral margins. 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 hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.54 cm at cranial pole) (0.43 cm at caudal pole) (1.92 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (1.70 cm at cranial pole) (0.55 cm at caudal pole) (1.91 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.52 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.

Liver

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is slightly mottled in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is mildly to moderately fluid-distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract appears to be patent. The small



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intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal.

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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.

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Free Abdomen

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

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- 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.

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Secondary Findings

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- Bilateral, chronic age-related renal changes
- The gastric fluid-distention could be consistent with recent water ingestion or possibly, focal ileus. Correlation with the patient's clinical history is recommended.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider pre-and postprandial serum bile acids and Leptospirosis testing (i.e., blood and urine PCR, serology).
- Ultimately, hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) may be necessary to get a definitive diagnosis. Surgical biopsies are preferred in that they are more likely to represent global organ pathology. If surgery is pursued, additional hepatic tissue samples should be obtained for potential copper quantitation, as well as aerobic and anaerobic bile cultures. Given the patient's age, thoracic radiographs are recommended prior to anesthesia to assess cardiopulmonary status.
- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, +/-metronidazole, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.

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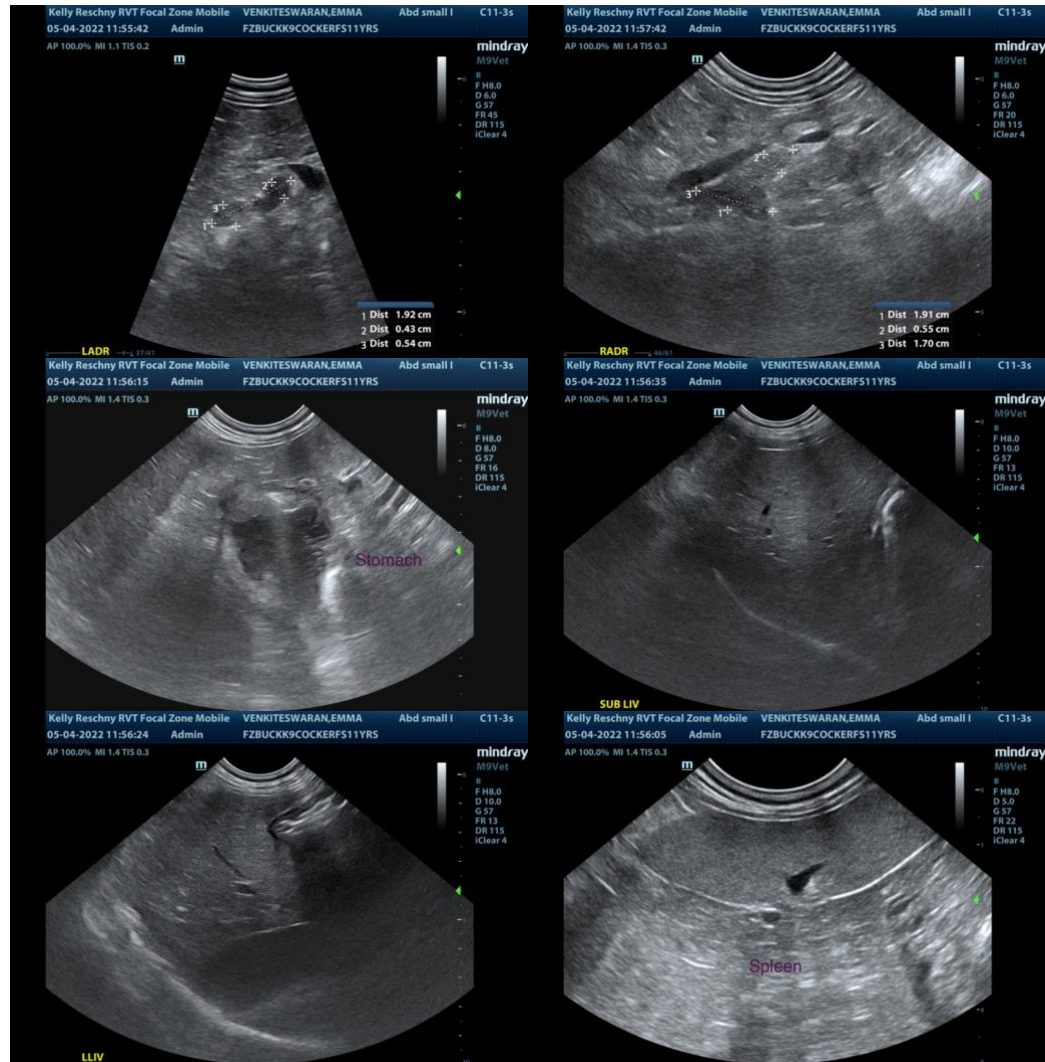
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com