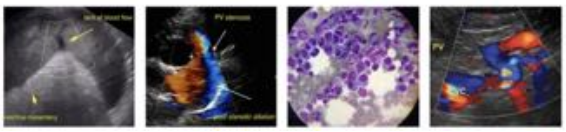


PATIENT

Zeus Cipriani

SPECIES

Canine

BREED

Sheltie Mix

SEX

Neutered Male

AGE

01/19/2016

WEIGHT

43.4 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

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

HOSPITAL NAME

Southside AH

REFERRING VET

Michael Forcier

INVOICE

13984

DATE

8.7.23

PRESENTING CLINICAL SIGNS

Clinical Exam Findings: Presented for annual 07/02/2023- No abnormal findings- routine senior BW performed. Alt elevated @ 309; AST elevated @ 58; Chol elevated @ 371; Crea Kinase elevated @ 313. Placed on Denamarin for 30 days. Bw rechecked 08/03/2023: ALT elevated @ 456; AST elevated @ 61; Bili elevated @ 0.2; Chol elevated @ 450. All else WNL

Abnormal lab-work values: (See above)
Current Medications: Apoquel

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are mostly anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, appear normal.

The prostate is normal in size (0.79 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (6.49 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 hydroureter. Renal vasculature appears normal.

The right kidney is normal in size (6.81 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 hydroureter. Renal vasculature appears normal.

Adrenal Glands

The left adrenal gland is normal in size (0.54 cm at cranial pole) (0.65 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 appear normal.

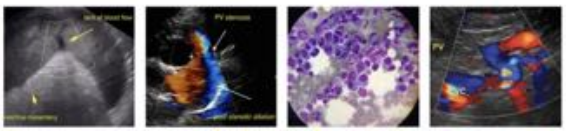
The right adrenal gland is in normal size (1.39 cm at cranial pole) (0.63 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

Spleen

The spleen is normal in size (1.75 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 appears normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.



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The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of echogenic debris/sludge is observed within the lumen (some of which is gravity-dependent and some of which is partially dependent). The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. 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 ileocecocolic junction and colonic wall are 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

Primary Findings

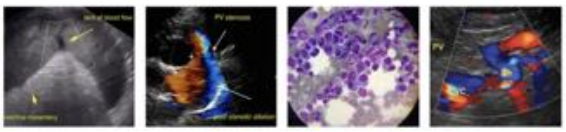
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) cannot be excluded.
- The gallbladder debris/sludge could be consistent with cholestasis, fasting or less likely, an emerging mucocele.

Secondary Findings

- Mild bilateral chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider pre-and postprandial serum bile acids to assess hepatic function.
- Leptospirosis testing can also be considered. However, given the chronicity of the liver enzyme elevations and the asymptomatic status of the patient, this differential is considered less likely.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis with amoxicillin-clavulanic acid along with hepatic antioxidants. If liver values do not begin to improve within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If values do improve, a 4–6-week course of treatment is recommended.



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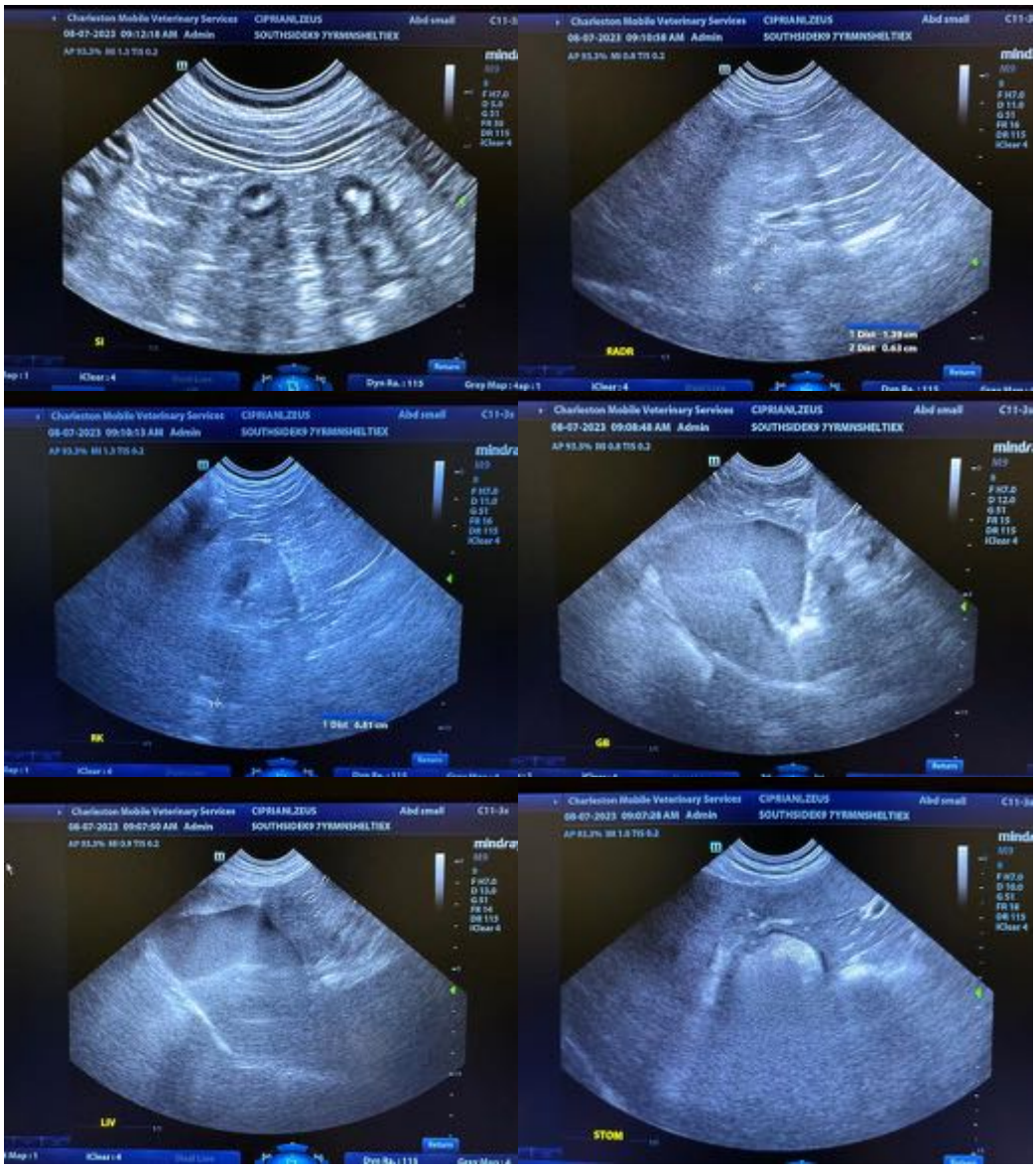
- If a more aggressive approach is desired, consider hepatic biopsies (i.e., laparoscopic, or surgical) with aerobic and anaerobic bile cultures, as well as hepatic copper quantitation. Clotting times and three-view thoracic radiographs should be performed prior to anesthesia/surgery.
- Fine-needle aspirates of the liver can be considered (if clotting status is appropriate). However, aspirates are insufficient for obtaining a diagnosis of chronic hepatitis or copper hepatopathy.



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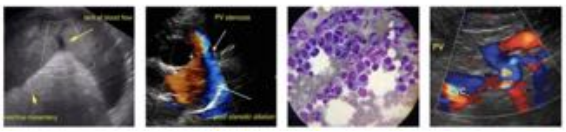

Charleston Mobile Veterinary Services
IMAGING PERFORMED BY
CharlestonMobile.Net 800.403.5408

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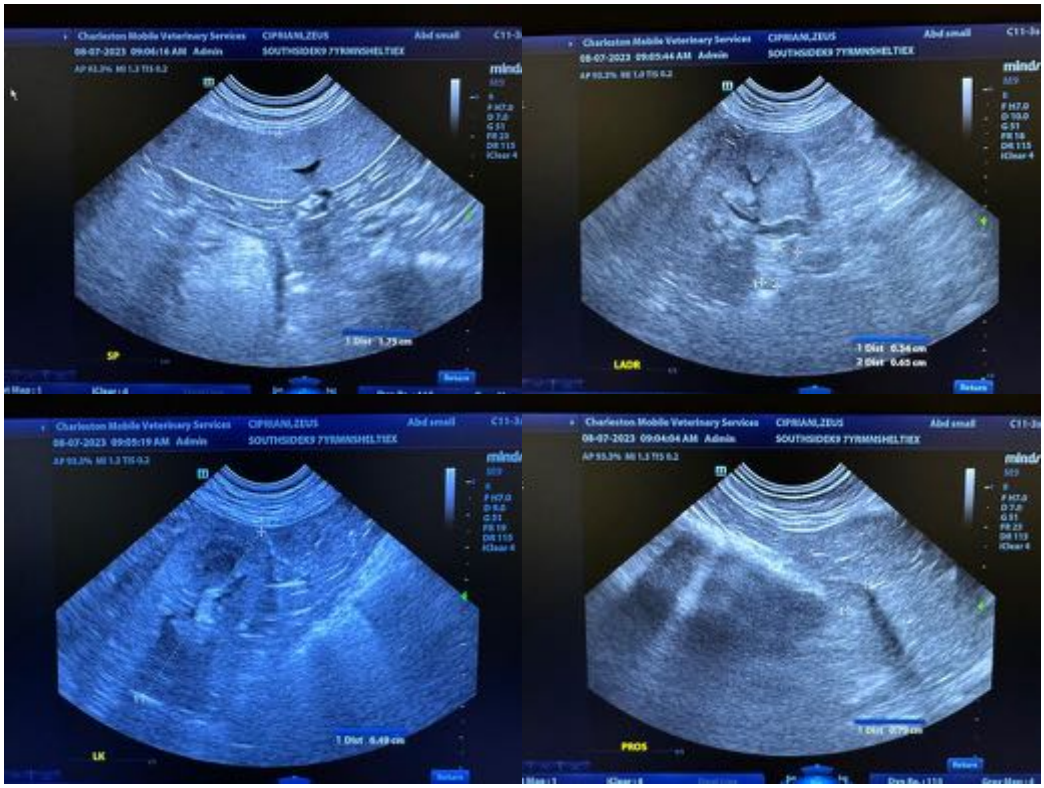

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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