



PATIENT

Wilson Underwood

SPECIES

Canine

BREED

Jack Russell

SEX

Male, neutered

AGE

13 Yrs.

WEIGHT

19 lbs.

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Dr. Rodriguez

HOSPITAL NAME

Bethany Family Pet
Clinic

REFERRING VET

Dr. Rodriguez

INVOICE

14464

DATE

1/17/23

PRESENTING CLINICAL SIGNS

History: Upcoming dental needed blood work. This showed increasing liver values. Otherwise a generally healthy anxious older dog. Was on denamarin and recently switched to Sam-e. DOing well. We are replacing on denamarin.

Abnormal PE/Chem/CBC/UA Results: 10/29/23: alt 235, alpk 331, ggt, 19 1/6/23: alt 315, ast 91, alpk 511, ggt 47

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with mostly anechoic urine. No masses, inflammatory changes or calculi are observed. The region of the trigone is normal.

The prostate is not definitively visualized due to its pelvic location.

The left kidney is normal in size (4.94 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (4.57 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Pinpoint hyperechoic foci are observed within the cortex. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is mildly enlarged (0.59 cm at cranial pole) (0.70 cm at caudal pole)(2.44 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 region of the right adrenal gland is evaluated. No obvious pathology is observed.

Spleen

The spleen is normal in size (1.48 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 swollen, slightly irregular peripheral contours. The parenchyma is isoechoic relative to the spleen and mildly heterogeneous in appearance. The caudal aspect of the left lateral lobe is slightly swollen. There is a questionable 3.1 cm isoechoic to slightly hyperechoic swelling/mass at the caudal aspect. 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. A moderate amount of aggregated echogenic partially dependent to suspended debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal



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The gastric lumen is not distended. The gastric wall is normal in thickness with a normal layering pattern. The small 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. There is no evidence of an obstructive pattern.

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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:

- The diffuse hepatic parenchymal changes are non-specific and could be associated with an inflammatory hepatopathy (i.e., chronic hepatitis, bacterial cholangiohepatitis), hepatotoxicity (i.e., Copper), Leptospirosis +/- concurrent benign age-related changes (i.e., regenerative nodular hyperplasia and/or vacuolar hepatopathy). There is a questionable swelling/mass effect at the caudal aspect. This may represent the same process as the rest of the liver. Alternatively, an emerging tumor (i.e., adenoma, adenocarcinoma, round cell tumor) cannot be excluded.
- The gallbladder sludge may be secondary to cholestasis, fasting, or less likely, an emerging mucocele.

Secondary Findings:

- The mild left adrenomegaly may be a normal variant for this patient or may represent early hyperplastic change. The right adrenal gland is not definitively visualized.
- Bilateral chronic renal changes with dystrophic mineralization.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider obtaining additional sonographic images of the caudal aspect of the liver to further characterize the possible swelling/mass.
- Leptospirosis testing can be considered. However, given the chronicity of the liver enzyme elevations. This infection is considered less likely.
- Ultimately, hepatic tissue sampling (i.e., fine needle aspirate or biopsy) may be necessary to get a definitive diagnosis. Biopsies (i.e., laparoscopic or surgical) are preferred in that they will be more useful in diagnosing pathology such as chronic hepatitis. If biopsies are pursued, aerobic and anaerobic bile cultures are also recommended along with hepatic copper quantitation. Prior to tissue sampling, clotting times and thoracic radiographs are recommended.
- While awaiting test results, consider initiation of Ursodiol +/- Vitamin E in addition to Denamarin.

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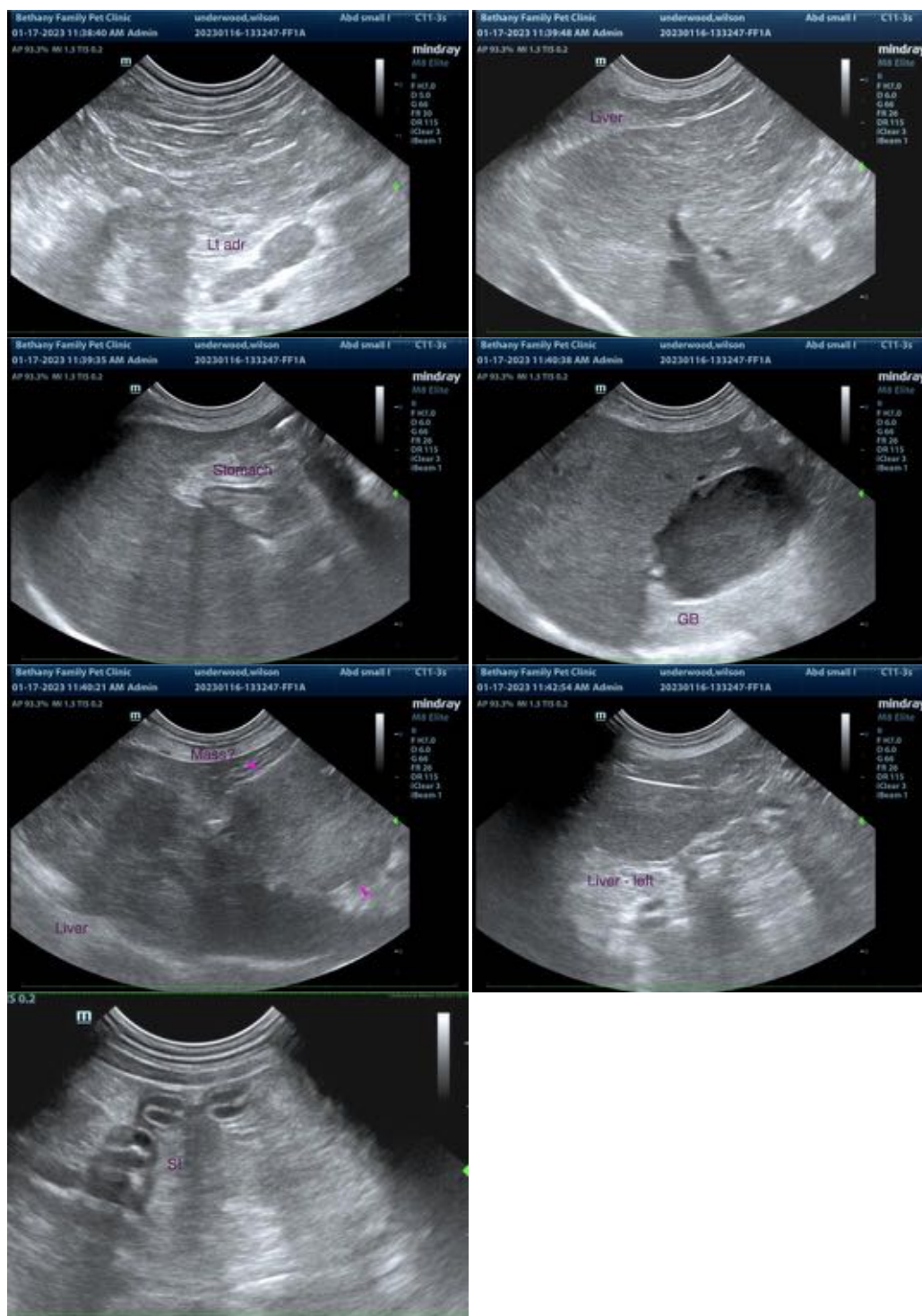
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.



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

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