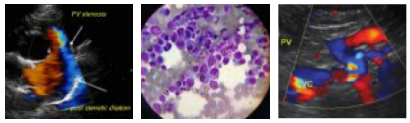
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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**DATE**

8.1.2022

**PATIENT**

Lacey Maust

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Spayed Female

**AGE**

7/31/2010

**WEIGHT**

7.6 lbs

**INTERPRETED BY**

Andrea Nicastro, DMV, Diplomate DACVIM (Small Animal Internal Medicine)

**HOSPITAL NAME**

Animal Emergency Hospital

**REFERRING VET**

Dr. Thompson

**INVOICE**

11300

## PRESENTING CLINICAL SIGNS

Lacey is a 12yo FS yorkie who presents for anorexia - elevated liver enzymes Wednesday & started her on hepatic food. That evening she started throwing up. Ever since she is eating very little. she is drinking water. she is still peeing occasionally. She won't eat at all now. She trembles often. - at RDVM on Wednesday had elevated LE - did eat a small amount of plain chicken - extremely lethargic - may be drinking and urination more - no diarrhea, no C/S - no known FB or toxin ingestion

Urinalysis shows inactive sediment, trace proteinuria. On 7/31: ALT 871. ALP 1584. Creatinine 2.0. Bun 75. Globulin 5.7. Normal PCV. tBili 0.8.

Current Medications: Protonix, Cerenia, Buprenorphine.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The **urinary bladder** is contracted. The wall is of appropriate thickness for the level of repletion. No cystic calculi are observed. A Foley catheter is observed within the lumen.

The **left kidney** is normal size (3.64 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The **right kidney** is normal size (3.46 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

### *Adrenal Glands*

The **left adrenal gland** is mildly enlarged (0.61 cm at cranial pole) (0.63 cm at caudal pole) (1.46 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 upper limits of normal size (0.44 cm at cranial pole) (0.54 cm at caudal pole) (1.41 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 (1.05 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 to enlarged with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and mildly heterogenous in appearance with ill-defined hypoechoic areas

throughout the organ. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The **gall bladder** lumen is moderately distended. The wall is thin and smooth. A small amount of aggregated, echogenic, partially dependent sludge is observed within the lumen. 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 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 thickness is normal 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.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- The hepatic parenchymal changes are nonspecific and could be secondary to an inflammatory hepatopathy (i.e., chronic active hepatitis, bacterial cholangiohepatitis), hepatotoxicosis, infiltrative neoplasia (unlikely), other hepatopathy, +/- concurrent benign age-related change (i.e., regenerative nodular hyperplasia).

- Gall bladder sludge - incidental

### Secondary Findings

- Borderline bilateral adrenomegaly. This may be a normal variant for this patient or may be secondary to early hyperplastic change.

- Bilateral, minor, chronic age-related renal changes

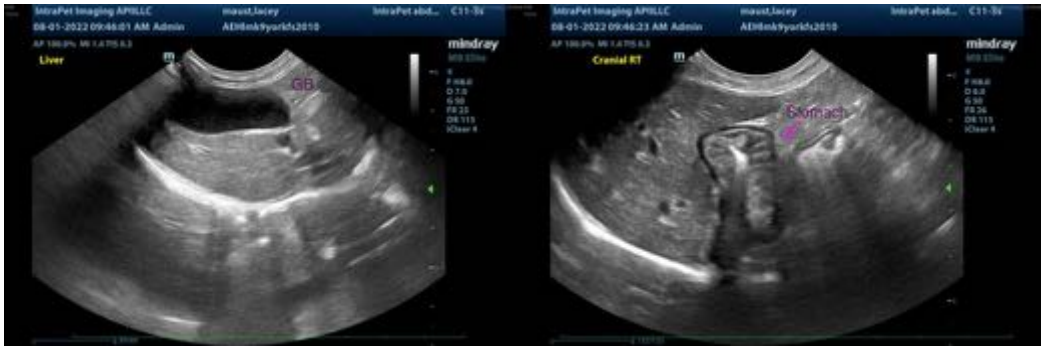
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended, particularly if the liver enzyme elevations are acute in nature.

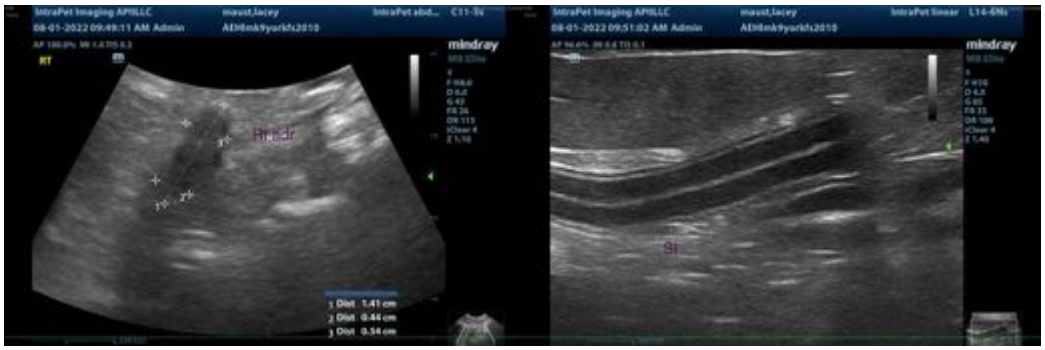
Also, consider pre-and postprandial serum bile acids to assess hepatic function.

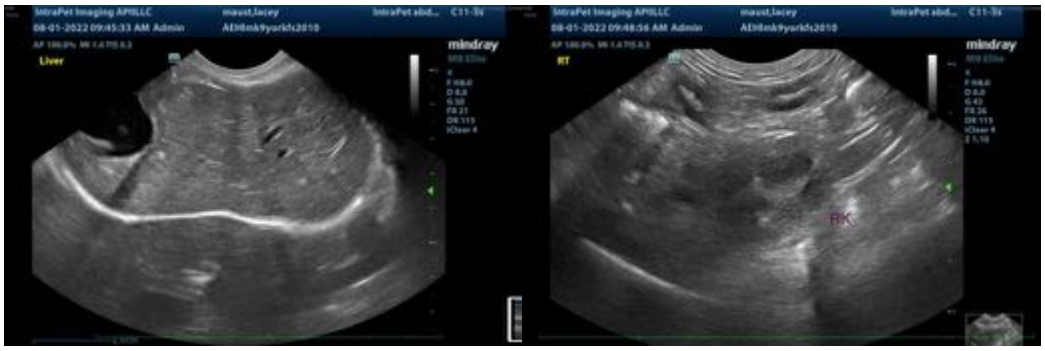
Ultimately, hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) may be necessary to get a definitive diagnosis. Surgical biopsies are preferred in that they are more likely to be representative of global organ pathology. If pursued, aerobic and anaerobic bile cultures as well as acquisition of additional hepatic tissue samples for potential copper quantitation are recommended. Given the patient's age, three-view thoracic radiographs are recommended prior to any anesthesia. Clotting times should be performed prior to hepatic tissue sampling.

While awaiting test results, supportive care and empirical treatment for bacterial cholangiohepatitis/Leptospirosis are recommended, including broad-spectrum antibiotic therapy, hepatic antioxidants (i.e., Denamarin, Ursodiol), fluid therapy, and gastric protectants.







**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