

**DATE PRESENTING CLINICAL SIGNS**

10/5/2021

History: Recently adopted from ASPCA. PE: numerous fractured teeth, no other significant findings.

Current Medications: Denamarin daily, Prescription kidney diet.

Lab Results: 7/26/21: ALT 179 BUN 37 CREA 2.4.

9/16/21 ALT 725 BUN 18 CREA 1.6.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not needed.

Stat Report: Not requested.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

**SEX**

Female, spayed

The left kidney is normal size (5.48 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 hydronephrosis. Renal vasculature is normal.

**AGE**

2012

The right kidney is normal size (5.72 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction.

There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

39.8 lbs.

**Adrenal Glands**

The left adrenal gland is normal size (0.51 cm at cranial pole) (0.57 cm at caudal pole) (2.66 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 (0.86 cm at cranial pole) (0.39 cm at caudal pole) (2.39 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.

**INTERPRETED BY**

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Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**HOSPITAL NAME**

Banfield Towson

**Spleen**

The spleen is normal in size (2.52 cm in width at the level of the hilus) with a normal capsular contour. A light micronodular pattern is present throughout the parenchyma. No focal lesions are observed. Splenic vasculature is normal.

**REFERRING VET**

Dr. Lewis

**Liver**

The liver is subjectively normal in size with normal contours and structure. The parenchyma is hypoechoic relative to the spleen and subtly 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. A small to moderate amount of mostly gravity-dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**INVOICE**

12288

**Gastrointestinal**

The gastric lumen is moderately distended with soft shadowing ingesta. The gastric wall and pylorus are 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. There is slight

disruption in the normal 1:3 muscularis: mucosal ratio in some segments. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

### ***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:**

- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune mediated disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis, leptospirosis), hepatotoxicosis (i.e., copper), reactive hepatopathy, infiltrative neoplasia, other.
- Non-specific bilateral nephropathy.

### **Secondary Findings:**

- The splenic parenchyma changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis or splenitis with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).
- Bowel pattern consistent with inflammatory bowel disease with potential for emerging lymphoma. However, correlation with clinical findings is recommended.
- The gastric luminal contents may represent normal food and/or foreign material (i.e., grass).

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended.
- Given the azotemia, a urine culture and sensitivity, UPC (if proteinuria is present) and baseline blood pressure measurement are recommended along with a prescription renal diet.
- Given the hepatopathy, consider a fine needle aspirate of the liver (if clotting status is appropriate). A 25-gauge needle should be used. If cytologic evaluation is inconclusive, a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation can be considered. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin Advanced). 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.
- Three-view thoracic radiographs are recommended to assess cardiopulmonary status.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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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