

**DATE PRESENTING CLINICAL SIGNS**

10/11/21

History: Pet had liver values at ALT 176, ALKP 498 in July. Did 1 month of Denamarin. Liver values continued to elevate. In August-alt 201, Alkp 654. Owners opt to do u/s first.

**PATIENT**

Mocha Joe Brown

Current Medications: Denamarin 425mg - daily x 3 months

Lab Results: No current USG. at ALT 176, ALKP 498 in July. Did 1 month of Denamarin. Liver values continued to elevate. In August-alt 201, Alkp 654. CBC normal.

Radiographs: Not provided by the veterinarian.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

**SPECIES**

Canine

Sedation: IV utilized for AUS

Stat Report: not requested

**BREED**

Labrador retriever

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

The urinary bladder is mildly to moderately distended with anechoic urine. The wall is diffusely thickened (up to 0.47 cm) and slightly irregular. No cystic calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

**SEX**

Female, spayed

The left kidney is normal size (7.37 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**AGE**

1/21/2012

The right kidney is normal size (5.75 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. A small cortical cyst is present. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

87 lbs.

**Adrenal Glands**

The left adrenal gland is normal size (0.66 cm at cranial pole) (0.64 cm at caudal pole) (2.34 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 (0.76 cm at cranial pole) (0.64 cm at caudal pole) (2.89 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**

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

**HOSPITAL NAME**

Everhart WellPet Center

**Spleen**

The spleen is normal in size (1.76 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. Key

**Liver**

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and slightly heterogeneous 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 amount of echogenic debris is observed within the lumen, most of which is gravity dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

**INVOICE**

12330

**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 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. A 4.12 x 2.94 cm hypoechoic lymph node is observed in the right cranial quadrant. In addition, a 3.25 cm cystic lymph node is observed just cranial to the larger node.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings:**

- Non-specific diffuse hepatopathy. Differentials include regenerative nodular hyperplasia, vacuolar hepatopathy, inflammatory/immune mediated disease, emerging neoplasia, hepatotoxicosis (i.e., copper) or some combination thereof.
- The enlarged lymph nodes in the right cranial quadrant could be consistent with infiltrative neoplasia, lymphoid hyperplasia or reactive lymphadenitis.

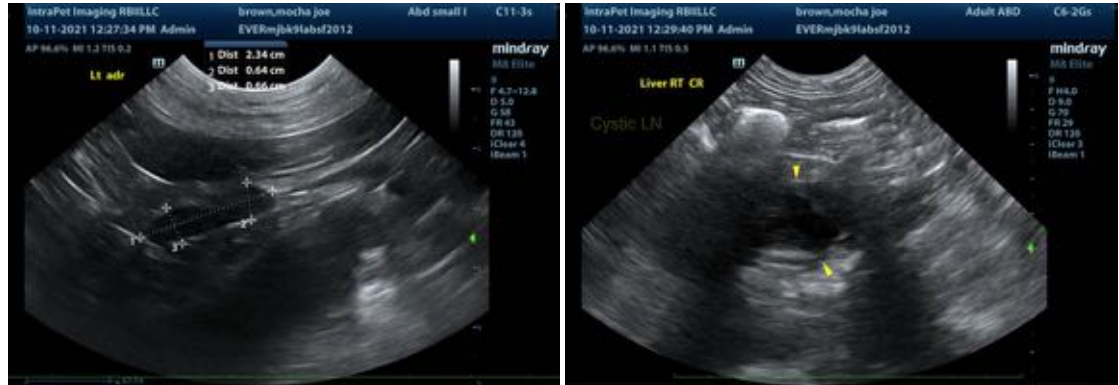
### **Secondary Findings:**

- 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).
- The bladder wall changes are most consistent with cystitis.

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

- Consider fine needle aspirates of the liver and enlarged lymph nodes (if accessible). 25-gauge needles should be used for aspiration and clotting times should be assessed prior to the procedure.
- Also consider Leptospirosis testing (i.e., blood and urine PCR. Serology).
- Depending on the results of the above diagnostics, surgical liver and abdominal lymph node biopsies may be necessary to get a definitive diagnosis. If surgery is pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue sample for copper quantitation is recommended. Three-view thoracic radiographs should be performed prior to anesthesia.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.





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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