



**PATIENT PRESENTING CLINICAL SIGNS**

Laney Johnson History: increased thirst, elevated liver values ALB, ALT, ALP

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Canine Urinary System**

The urinary bladder wall is 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. The region of the trigone is normal.

**BREED**

Collie The left kidney is normal in size (6.50 cm in length) with a normal shape, architecture and 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 hydroureter. Renal vasculature is normal.

**SEX**

Spayed Female The right kidney is normal in size (6.24 cm in length) with a normal shape, architecture and 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 hydroureter. Renal vasculature is normal.

**AGE**

9 years **Adrenal Glands**  
The left adrenal gland is normal in size (0.69 cm at cranial pole) (0.64 cm at caudal pole) (1.89 cm in length) 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 are normal.

**WEIGHT**

74 lbs The right adrenal gland is in normal size (1.38 cm at cranial pole) (1.69 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 are normal.

**INTERPRETED BY**

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

**Spleen**

The spleen is normal in size (1.64 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.

**IMAGING PERFORMED BY**

Jenn

**Liver**

The liver is prominent in size with normal curvilinear peripheral contours. The parenchyma is hyperechoic 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.

**HOSPITAL NAME**

Rockaway AH

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of echogenic-to-mineralized, gravity dependent, debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**REFERRING VET**

Dr Maniar

**Gastrointestinal**

The 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.

**INVOICE**

12426

**DATE**

3.16.23

### **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.

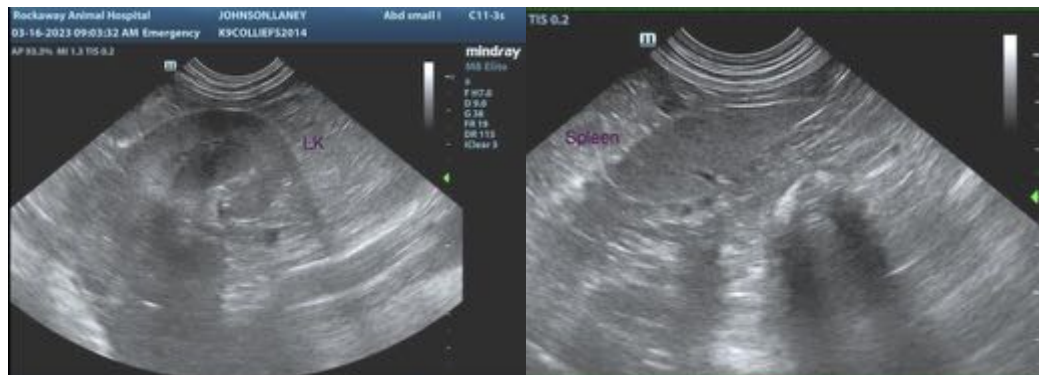
## **ULTRASONOGRAPHIC FINDINGS**

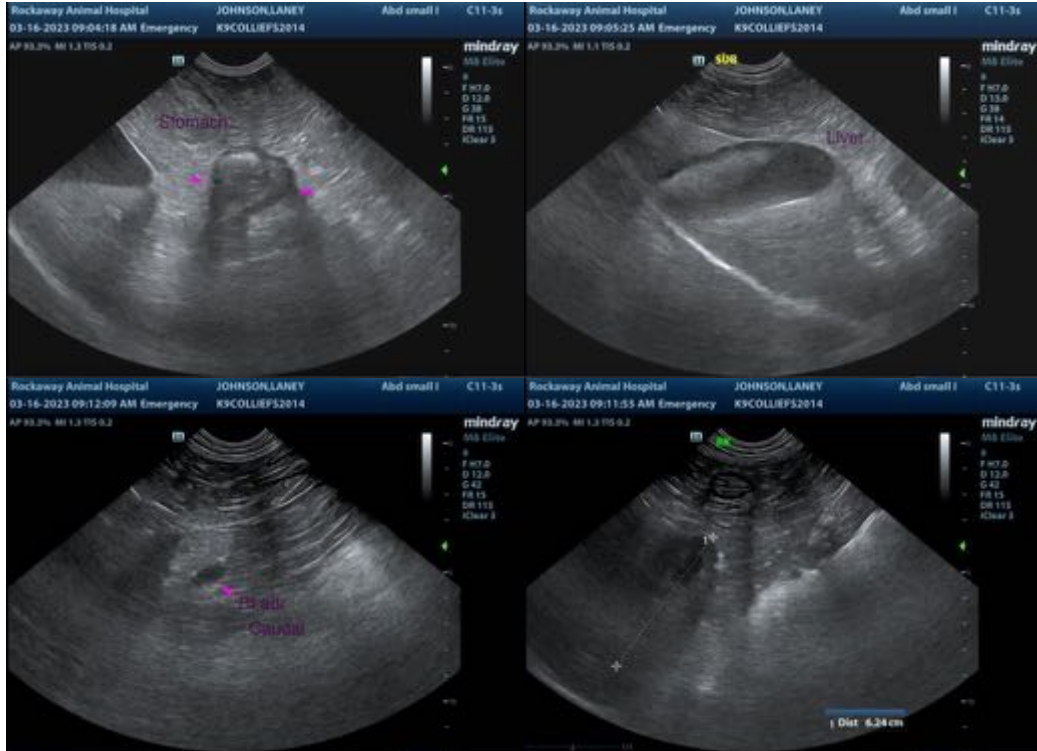
### **Findings**

- The hepatic parenchyma changes are nonspecific and could be associated with vacuolar hepatopathy (i.e., idiopathic/endocrine) inflammatory disease, hepatotoxicity (i.e., copper), infiltrative neoplasia (less likely), or other hepatopathy. If the ALT is substantially elevated, inflammatory disease and hepatotoxicity, and other more concerning for a pathology should be considered. If the ALP is disproportionately elevated relative to the ALT, vacuolar hepatopathy would be more likely.
- Gall bladder debris/sand – incidental

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

- If the ALT is substantially elevated, consider the following:
  1. Pre-and postprandial serum bile acids
  2. Leptospirosis testing (i.e., blood and urine PCR, serology)
  3. +/- hepatic tissue sampling (i.e., fine-needle aspirates or biopsies (i.e., laparoscopic, or surgical)). If biopsies are pursued, hepatic copper quantitation should be performed, and aerobic and anaerobic bile cultures obtained.
- If the ALP is disproportionately elevated relative to the ALT, consider further testing for Cushing's Disease, which could include the following:
  1. Urinalysis – to assess for isosthenuria
  2. Urine: cortisol: creatinine ratio
  3. Low-dose dexamethasone suppression test of ACTH stimulation test
- Given the polydipsia, a urine culture and sensitivity should also be considered.





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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