

**DATE PRESENTING CLINICAL SIGNS**

2/8/23

Doing well at home. Moderate dental calculus and mild resistance to hip extension bilaterally. Liver enzyme elevation noted on routine screening bloodwork. ALT 497, AST 82, GGT 23, ALP 145 (high normal)

**PATIENT**

Sheila Brookman

Current Medications: Denamarin Advanced beginning 1/31/23

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**SPECIES**

Canine

Imaging Performed By: Rachel Brillhart, RDMS.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****BREED**

Labrador X

**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**SEX**

Spayed Female

The right kidney is normal in size (6.61 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**AGE**

8/24/14

The left kidney is normal in size (6.9 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**WEIGHT**

51.6 Pounds

**Adrenal Glands**

The right adrenal gland is normal in size (3.35 cm long x 0.81 cm at the cranial pole and 0.76 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

The left adrenal gland is normal in size (3.69 cm long x 0.70 cm at the cranial pole and 0.82 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Paradise AH

**Spleen**

Spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

**REFERRING VET**

Dr. Pound

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. The largest most discrete nodule measures 2.9 cm x 1.4 cm in size in the left liver. Visible vasculature and biliary tree appear normal without distension or congestion.

**INVOICE**

44966

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**Gastrointestinal**

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

### ***Other***

No evidence of pericardial or heart base pathology noted in these images.

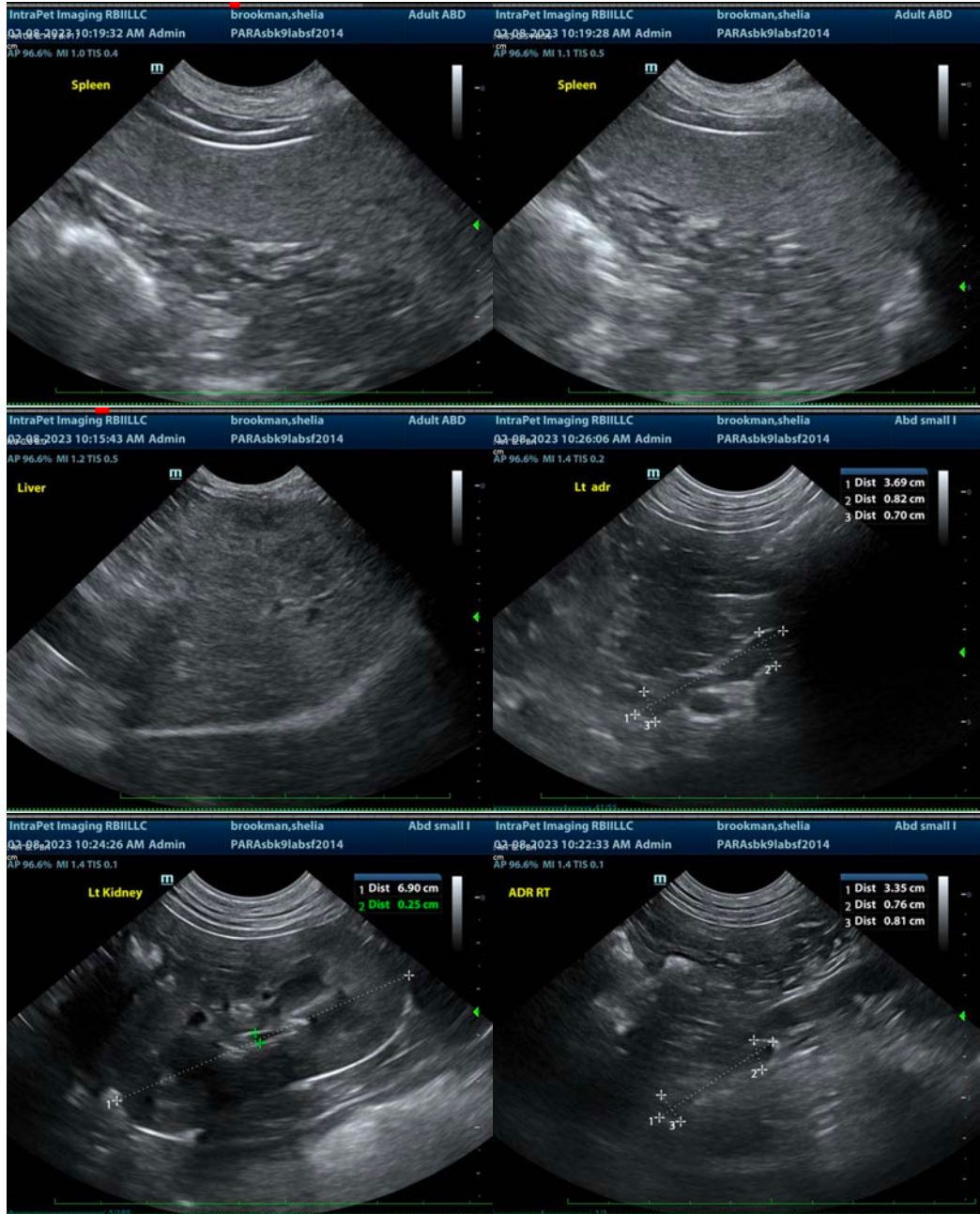
## **ULTRASONOGRAPHIC FINDINGS**

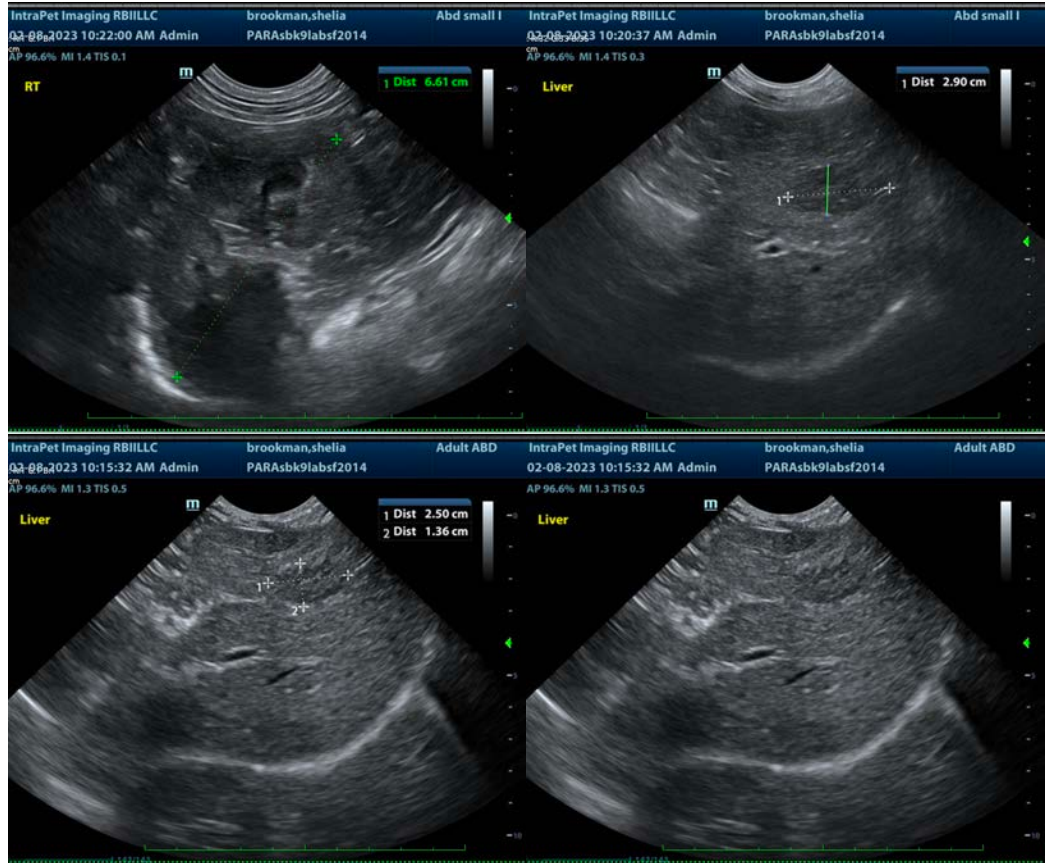
- **Heterogenous Liver** – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- **Splenic micronodular hyperplasia pattern** – This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.

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

Testing for Leptospirosis is recommended. While both the spleen and liver trend in appearance toward benign, fine needle aspirates of the spleen and liver could be considered if patient's coagulation status is appropriate, especially if Leptospirosis is not diagnosed, and liver enzyme increases persist.

In the meantime, empirical medical management with hepatic nutraceuticals +/- broad-spectrum antibiotics could be considered. If liver enzymes improve, antibiotics should be continued until they either plateau or normalize. However, if a change is not noted in liver enzyme levels, antibiotics should not be continued long-term. Recommendations are to recheck liver enzymes two weeks after starting antibiotics if that option is elected.





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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