

**DATE PRESENTING CLINICAL SIGNS**

9/29/21

History: Has a history of increasing liver enzymes over the last 9 months

**PATIENT**

Annie Bush

Current Medications: Denamarin, Cosequin.

Lab Results: ALP 872, ALT 398.

Radiographs: Not provided by the veterinarian.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

**SPECIES**

Canine

Sedation: Sedation not required for scan.

Stat Report: STAT report not requested by the veterinarian.

**BREED**

Labrador Retriever

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Spayed Female

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth.

A moderate amount of mostly gravity dependent echogenic debris is observed within the lumen. 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.

**AGE**

9/7/2010

The left kidney presented normal size (7.17 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.

**WEIGHT**

93.6 Pounds

The right kidney is normal in size (7.62 cm in length); with a slightly irregular shape. 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. A 0.63 cm x 0.58 cm cortical cyst is observed at the caudal medial aspect.

**INTERPRETED BY**Andrea Nicastro, DMV,  
Diplomate DACVIM  
(Small Animal  
Internal Medicine)**Adrenal Glands**

The right adrenal gland is enlarged (1.09 cm at cranial pole) (1.04 cm at caudal pole) (3.28 cm in length); with an irregular shape. A hyperechoic to heterogeneous nodule (3.13 cm x 1.30 cm) is occupying the majority of the gland. There is loss of glandular detail. There is no obvious evidence of vascular invasion.

**HOSPITAL NAME**

Paradise AH

The left adrenal gland is enlarged (3.12 cm at cranial pole) (1.55 cm at caudal pole) (6.46 cm in length); with an irregular shape and a mass effect throughout the gland (more pronounced at the cranial pole). The parenchyma is heterogeneous in appearance with loss of glandular detail. There is no obvious evidence of vascular invasion.

**REFERRING VET**

Dr. Pearson

**Spleen**

The spleen is normal in size with a normal capsular contour. The parenchyma is slightly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal. The spleen measured 2.10 cm.

**INVOICE**

13363

**Liver**

The liver is normal to slightly small in size with subtly irregular peripheral contours. The parenchyma is hypoechoic relative to the spleen and somewhat mottled in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.

### ***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 small intestinal lumen is not dilated. The small intestinal wall thickness is normal (xxx cm) with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative 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 abdominal lymph nodes are normal/not visible. The peritoneal cavity is normal. There is no evidence of inflammation or effusion.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Non-specific diffuse hepatopathy, differentials include inflammatory/immune mediated disease, hepatotoxicosis (i.e., copper, fibrosis, infiltrative neoplasia (less likely) +/- concurrent age-related remodeling, vacuolar hepatopathy and/or regenerative nodular hyperplasia
- Gallbladder debris- incidental
- Bilateral adrenomegaly with a mass effect in the left adrenal and a nodule in the right adrenal. Differentials include bilateral nodular hyperplasia more pronounced on the left side, bilateral tumors, a unilateral tumor on the left with nodular hyperplasia on the right

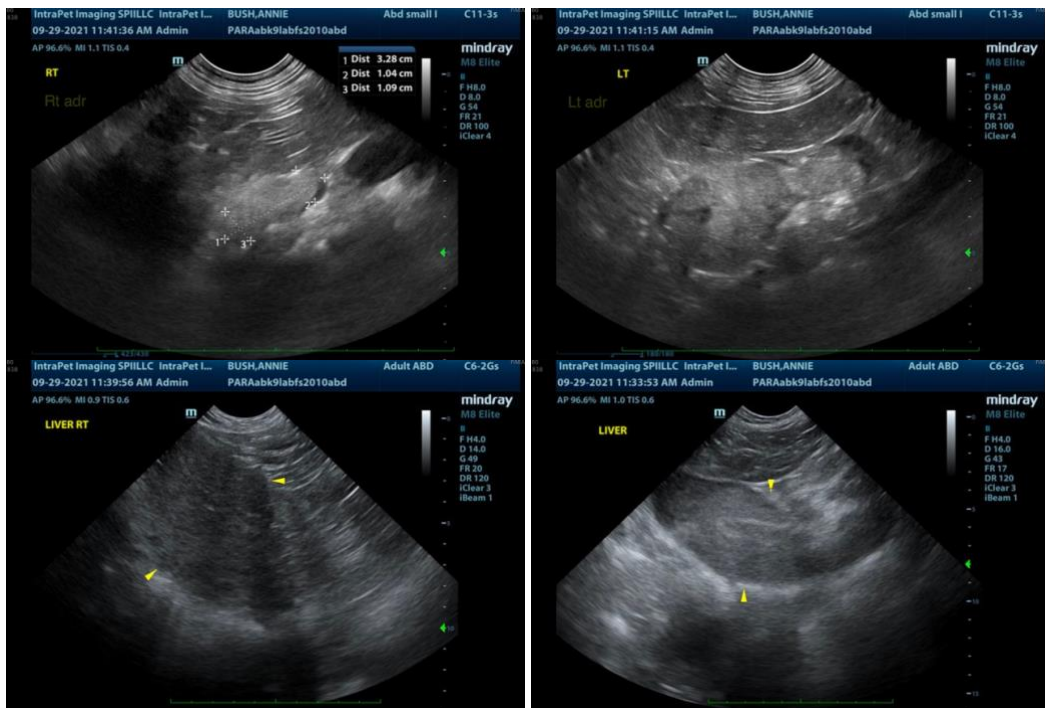
### **Secondary Findings**

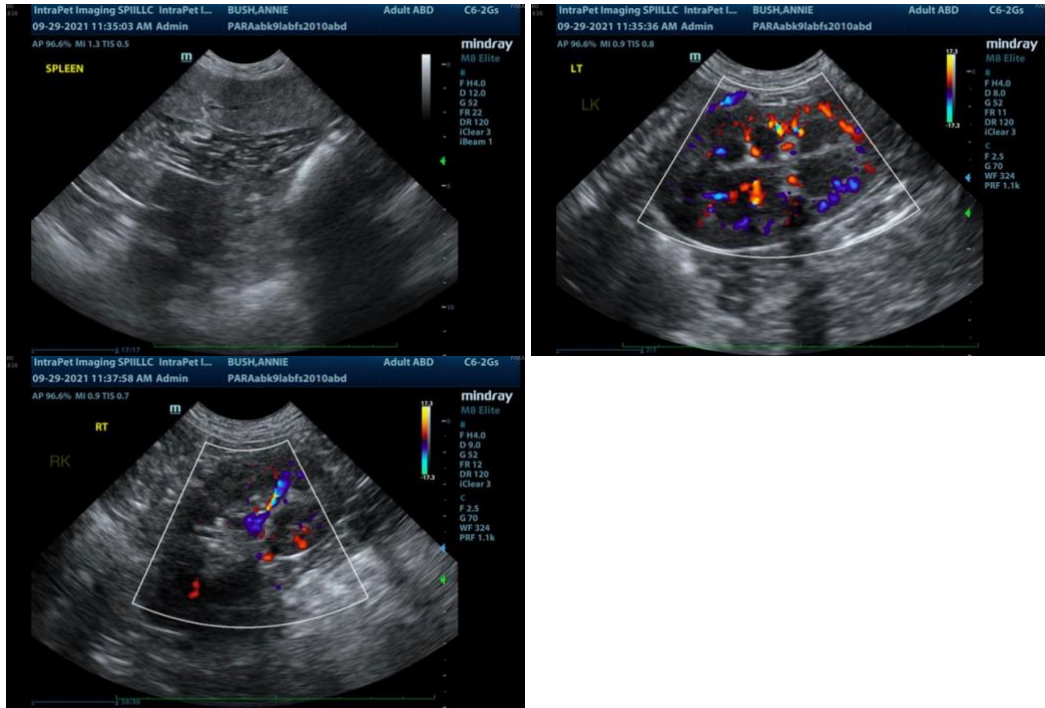
- The splenic parenchyma changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis or splenitis with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia)

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

- Given the elevated liver values, pre- and postprandial serum bile acids are recommended along with hepatic tissue sampling. Ideally, a liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation would be performed. If a more conservative approach is desired, a fine needle aspirate of the liver can be considered if clotting status is appropriate, a 25-gauge needle should be used. It should be noted, however, that hepatic cytology may be inconclusive.

- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop.
- 3-view thoracic radiographs are also recommended.





**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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