

**DATE PRESENTING CLINICAL SIGNS**

8/11/22

Seen on 8/5/22 for coughing, but O also mentioned that P had been urinating in the house. UA is suspicious for a UTI, however BW run shows an extremely high ALP. ALT mildly elevated as well, concerned P may have cushing's, but looking to R/O other potential liver/biliary changes.

**PATIENT**

Petey Talbert

Current Medications: Simplicef 200mg - 1 tab SID x 10d, Tramadol 50mg - 2 q 12 - 24h PRN for cough, Hydroxyzine 50mg tabs - 1 q 8h x 7d, then 1 q 2-12h PRN for coughing. All meds started 8/5

**SPECIES**

Canine

Lab Results: ALT 125 (12-118), ALP 2453 (5-131), K+ 5.7 (3.6-5.5). UA shows 51-100 rods/HPF and 4-10 WBC/HPF, but USG = 1.033.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Torbugesic IV.

Stat Report: Not requested.

**BREED**

American Bulldog

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

Neutered Male

**Urinary System**

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**AGE**

12/16/10

Prostate is normal in size, echotexture and echogenicity for a neutered male.

**WEIGHT**

74.9 Pounds

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 8.03 cm. The right kidney measures 7.8 cm. Cortical cysts are noted bilaterally with the largest measuring 1.3 cm in diameter in the right kidney.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM**Adrenal Glands**

The right adrenal gland is normal in size (3.7 cm long x 0.65 cm at the cranial pole and 0.66 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**IMAGING PERFORMED BY**Stephanie Warga  
RDCS, RVT

The left adrenal gland is normal in size (0.82 cm at the cranial pole and 0.88 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Healing Paws VWC

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**REFERRING VET**

Dr. Preston

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. A 7-8 cm homogeneous, hypoechoic, vascular mass is noted in the deep right liver, between the vena cava and the gallbladder. Visible vasculature and biliary tree appear normal without distension or congestion.

**INVOICE**

40374

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

### ***Gastrointestinal***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is 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.

Mesenteric lymphadenopathy is noted. The mesenteric lymph nodes are round, hypoechoic, and partially cystic.

## **PRIMARY FINDINGS**

- **Homogeneous, hypoechoic, right liver mass** – Differentials include benign liver tumor such as a hepatoma or adenoma versus a neoplastic/malignant hepatocellular carcinoma, infiltrative round cell neoplasia, other, as well as benign lesions such as nodular hyperplasia, granuloma, etc., which can mimic benign lesions. This mass trends towards the benign in appearance, but differentiation from malignant disease cannot be ruled out without tissue sampling.
- **Gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Mesenteric lymphadenopathy** – Differentials include both reactive lymphadenopathy as well as infiltrative neoplasia.

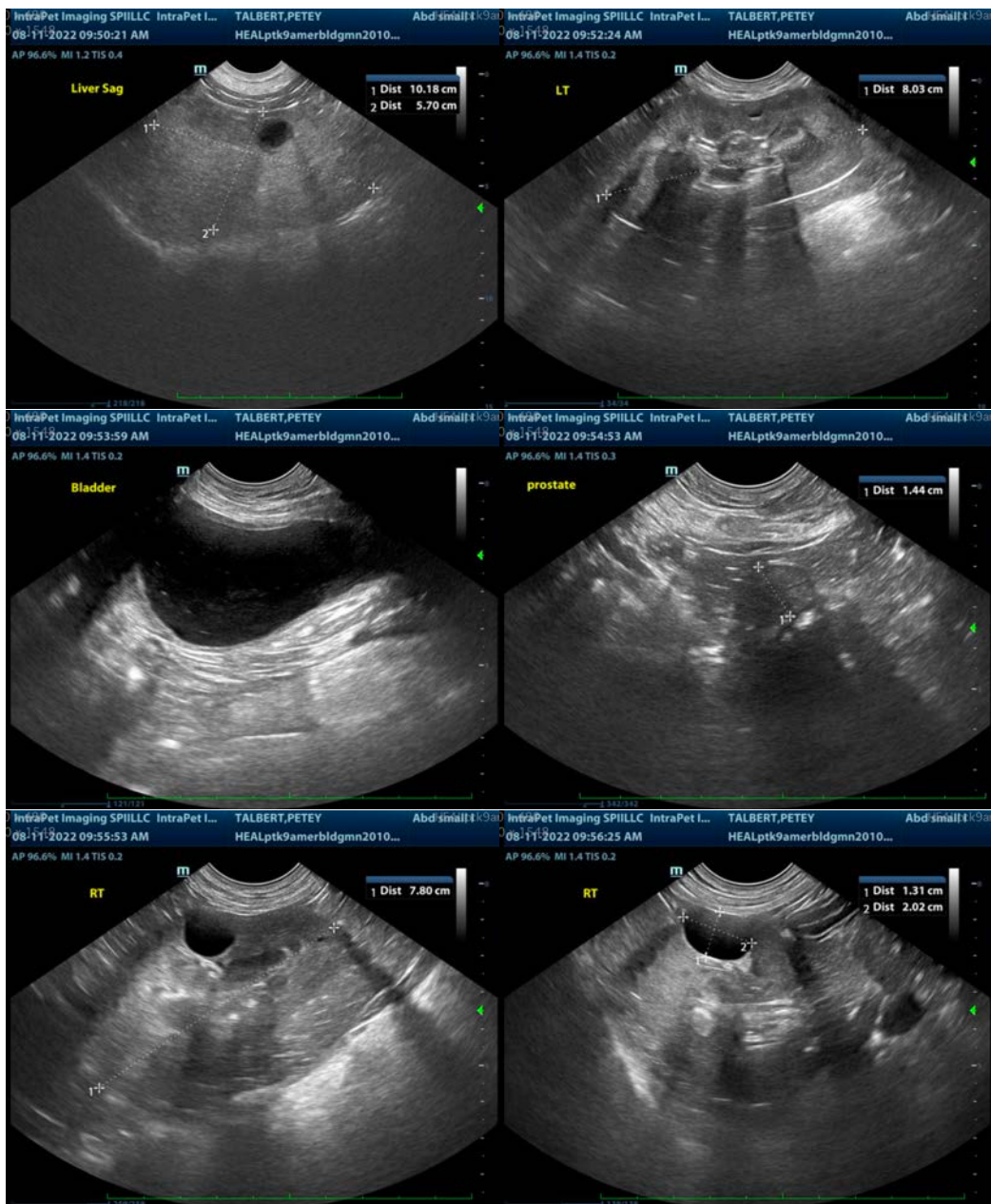
## **SECONDARY FINDINGS**

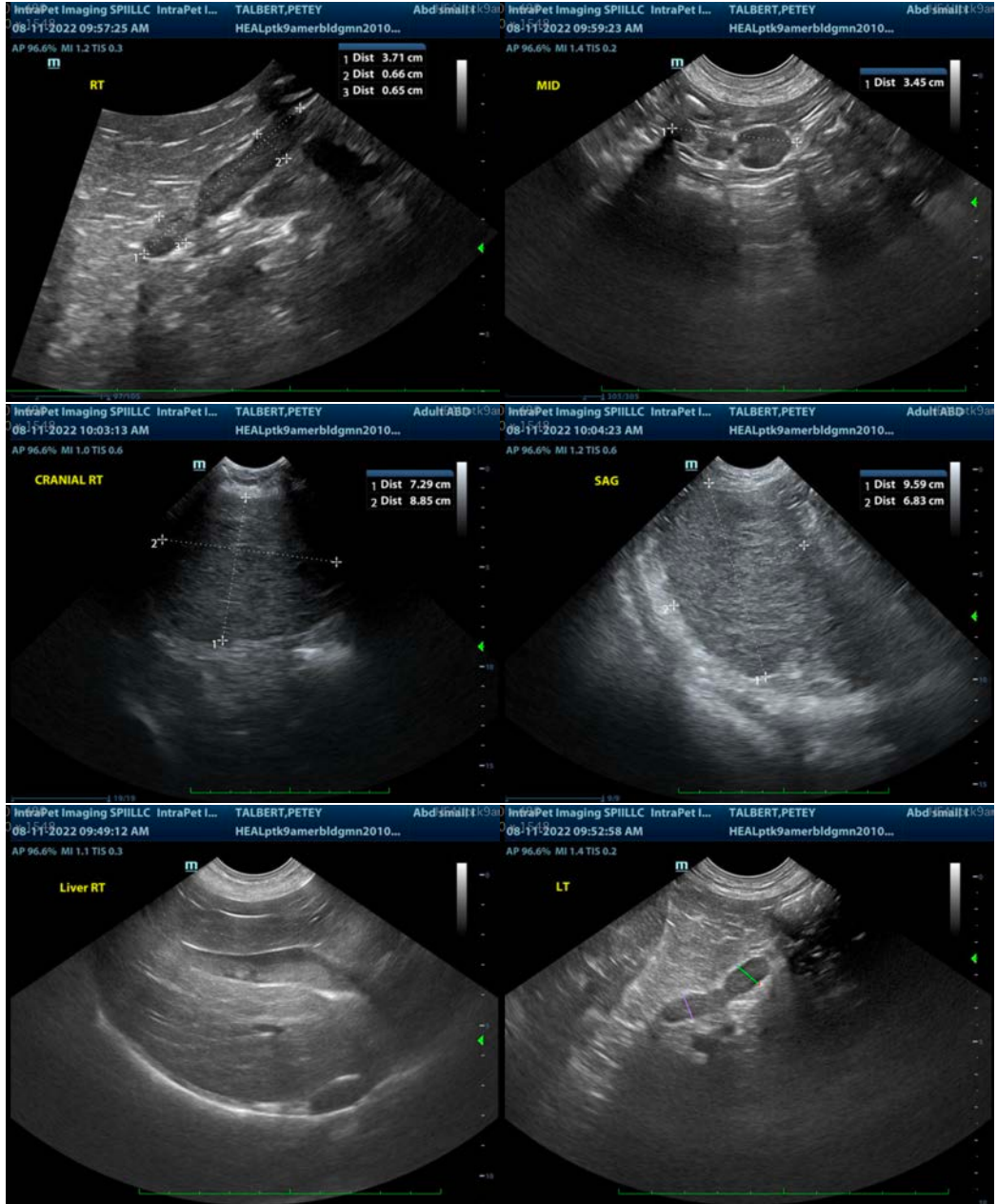
- Urinary bladder debris
- Age related kidney changes with bilateral cortical cysts

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's reported urinary tract infection and increased ALP, hyperadrenocorticism is certainly a differential and cannot be ruled out based on the appearance of normal adrenal glands on ultrasound. However, prior to further evaluating possible hyperadrenocorticism, a fine needle aspirate of the liver mass is recommended if patient's coagulation status is appropriate.

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.







**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.

**Beth Johnson, DVM, DACVIM**  
Beth.Johnson@sonopath.com