

**DATE PRESENTING CLINICAL SIGNS**

2/27/23

History: Historical liver and pancreas value elevation. Most recent AUS was performed in November 2022 (see attached report):

PATIENT

Freckles Senior Dog
Sanctuary

Current Medications: Denamarin 35lb+ PO SID, Omeprazole 20mg PO BID, Gabapentin 100mg 2 capsules PO BID, Proin 25mg 1 tablet PO BID, SubQ Fluids Mon, Wed, Friday 500mL, Benazepril 10mg 2 tabs PO SID, Ursodiol 150mg 1 tab PO BID, Thyro-tabs 0.3mg 1 tab PO BID, Amantadine 100mg PO BID, Dasuquin and Omega 3 oils.

SPECIES

Canine

Lab Results: See attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

BREED

Mixed Breed

Stat Report: Not requested.

Imaging Performed By: Stephanie Warga RDCS, RVT.

SEX

Spayed Female

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**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 calculi are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

6/28/09

WEIGHT

51 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 mineral or infarcts observed. The left kidney measures 6.26 cm. Pyelectasia is noted in the left kidney, measuring 0.44 cm in the transverse view. The right kidney measures 6.53 cm. Pyelectasia is noted in the right kidney, measuring 0.38 cm in the transverse view. Small cortical cysts were noted bilaterally.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

Adrenal glands are largely normal in size, shape and contour. Some parenchymal heterogeneity is present without concerning capsular distortion. These changes are likely normal for this age but should be monitored if there is any suspicion of adrenal disease. The left adrenal gland measures 2.55 cm long x 0.85 cm at cranial pole and 0.88 cm at caudal pole. The right adrenal gland measures 2.6 cm long x 0.67 cm at cranial pole and 0.72 cm at caudal pole. Dystrophic mineralization is noted in the left adrenal gland.

HOSPITAL NAME

North Laurel AH

REFERRING VET

Dr. Steere

Spleen

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.

INVOICE

21313

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is diffusely heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. More focally in the deep right liver, there is an approximately 7.0 cm x 9.0 cm anechoic walled off structure consistent with a cyst. Additionally, in the mid caudal liver, there is a slightly more heterogenous, primarily isoechoic solid 5.8 cm x 3.8 cm mass. Visible vasculature and biliary tree appear normal without distension or congestion.

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 visible stomach wall is normal in thickness 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. 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 and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary 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. Also, a likely incidental hepatic cyst that appears unchanged from the previous ultrasound was noted, as well as a more solid appearing mass that also appears unchanged and trends in appearance towards benign, such as a hepatocellular adenoma vs nodular hyperplasia, etc., however, infiltrative neoplasia, including hepatocellular adenocarcinoma, round cell neoplasia, etc., can't be ruled out without tissue sampling.
- Age-related kidney changes with bilateral cortical cysts and moderate bilateral pyelectasia. Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.

Secondary Findings

- Age-related adrenal gland changes with dystrophic mineralization in the left adrenal gland
- Urinary bladder debris

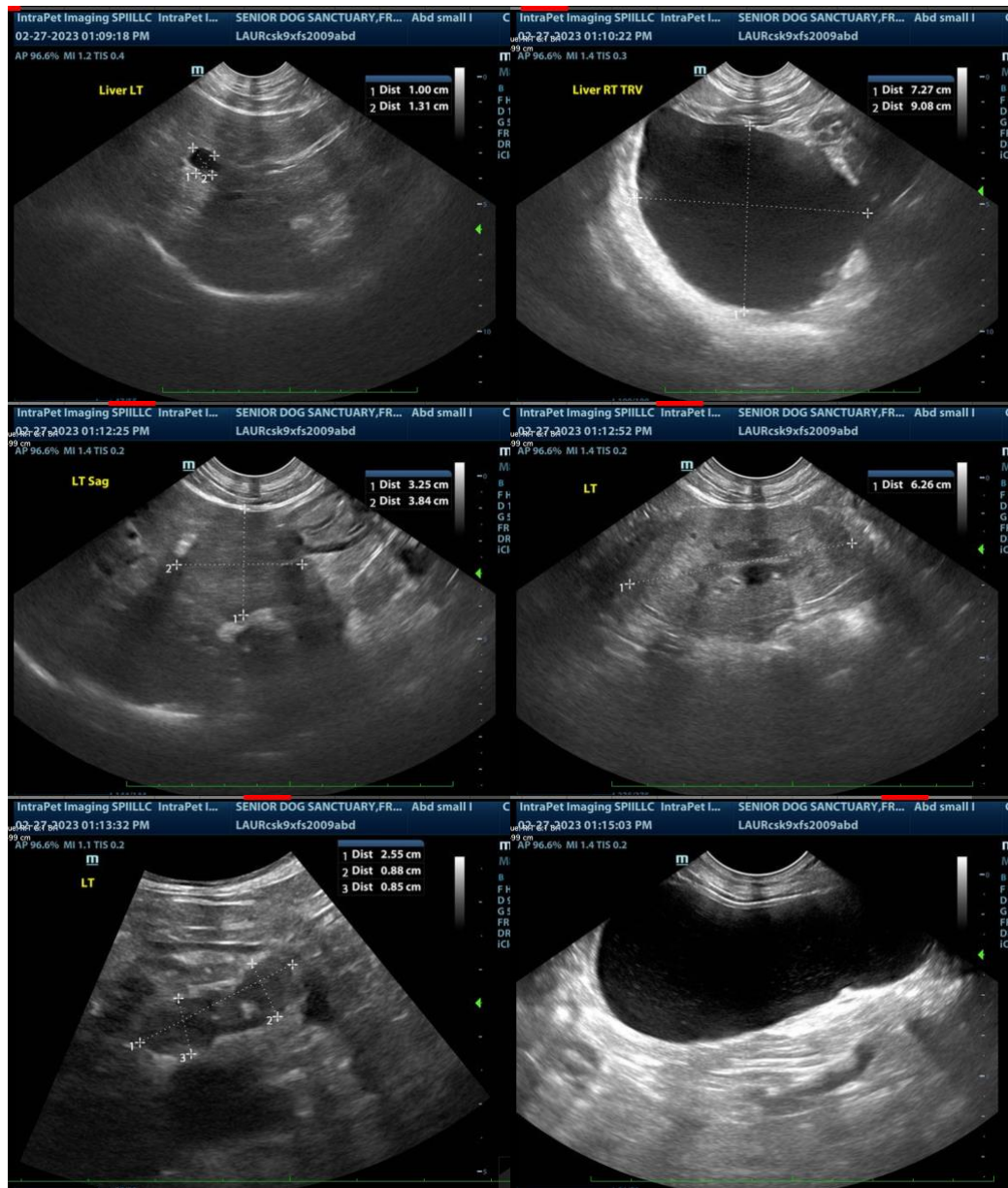
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

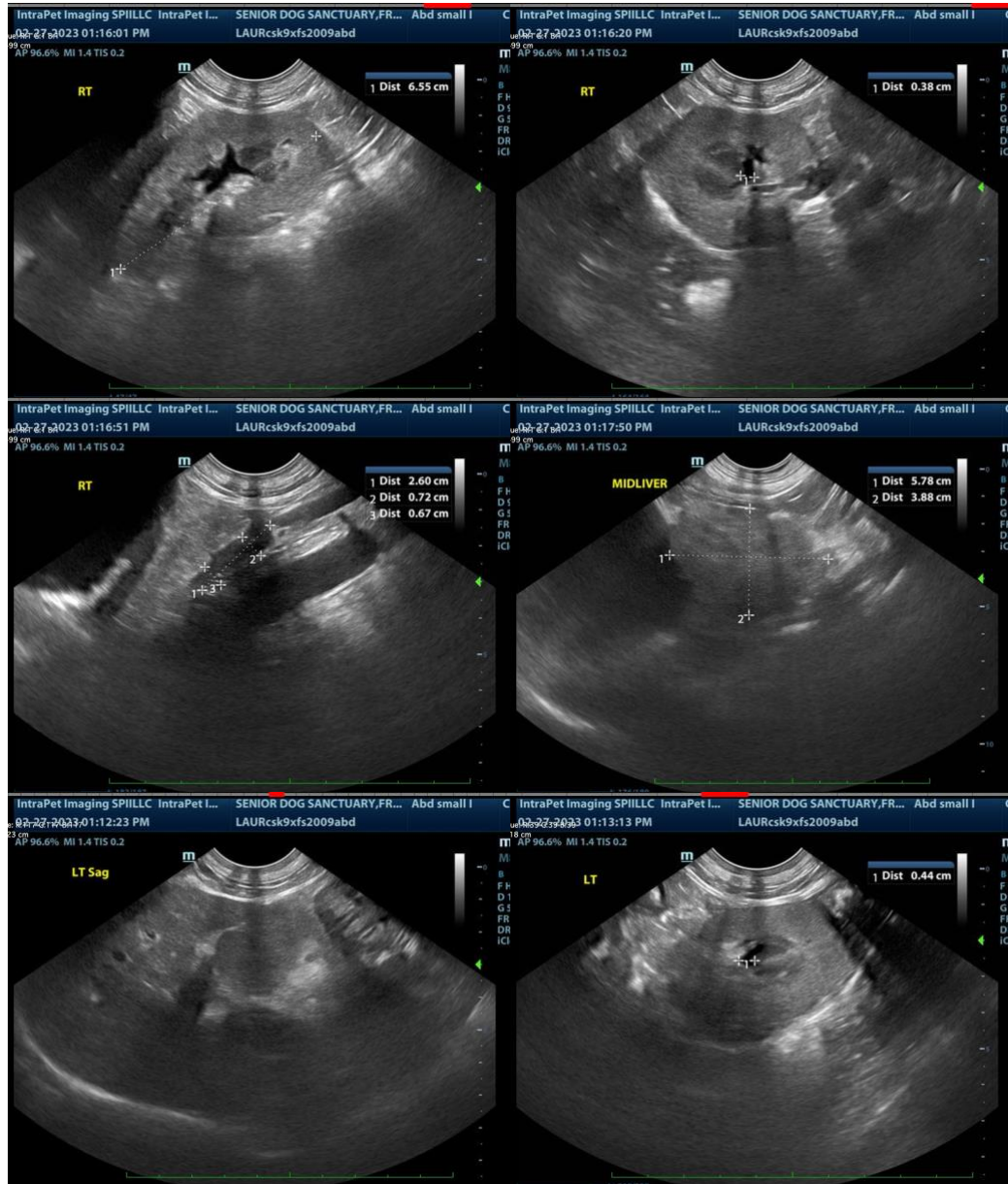
The appearance of this patient's liver pathology is relatively unchanged from the previous ultrasound report provided with the majority of the lesions trending in appearance toward benign. Having said that, tissue sampling, beginning with a fine needle aspirate of the liver, if patient's coagulation status is appropriate, is

recommended with attention paid to the mid caudal liver mass, if possible.

Additionally, 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.

Additionally, if not recently evaluated a urine culture could be considered given the bilateral pyelectasia.





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.

Beth Johnson, DVM DACVIM
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