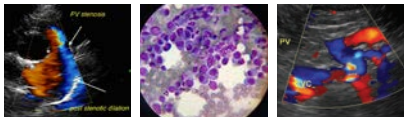
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

8/11/22

PATIENT

Karamel Sellars

SPECIES

Canine

BREED

Labrador

SEX

Spayed Female

AGE

6/4/10

WEIGHT

75 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Banfield White Marsh

REFERRING VET

Dr. Racz

INVOICE

40377

PRESENTING CLINICAL SIGNS

Elevated liver values since January 2021.

Current Medications: Doxycycline 100mg 2 BID for 10 days- dispensed 8/5/22, Proin 25mg BID #180, 5 refills.

Lab Results: ALKP elevations: 8/5/22- 710, 6/12/22- 674, 12/14/21- 319, 11/14/21- 489, 6/22/21- 320, 1/14/22- 283.

Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.70 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

The right kidney is normal in size (7.04 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 or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

The left kidney is normal in size (5.79 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 or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

Adrenal Glands

The right adrenal gland is normal in size (2.25 cm long x 0.71 cm at the cranial pole and 0.72 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (2.7 cm long x 0.69 cm at the cranial pole and 0.80 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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.

Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Caudal to the gallbladder, normal isoechoic, homogeneous liver tissue appears slightly rounded in appearance, so an early emerging mass cannot be ruled out. This appearance at this time trends towards the benign. Visible vasculature and biliary tree appear normal without distension or congestion.

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 stomach wall is normal in thickness and layering. Within the lumen of the stomach, there is a hyperechoic curvilinear structure with a strong acoustic shadow. Normal gas is possible. However, a non-obstructive gastric foreign body creating the shadow cannot be ruled out. Complete visualization of the far wall is partially inhibited by the shadow.

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.

PRIMARY FINDINGS

- The mid caudal aspect of the liver appears slightly rounded in appearance, concerning for a possible early or emerging mass-like lesion. At this time, the appearance trends toward the benign. However, close monitoring is recommended.

- **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.

- A curvilinear echogenic structure with strong acoustic shadow within the stomach could represent a non-obstructive gastric foreign body. However, normal gas pattern within the stomach cannot be ruled out, and this finding should be interpreted in combination with clinical signs as well as follow up repeat imaging, etc., if indicated.

SECONDARY FINDINGS

- Bilateral non-obstructive dystrophic mineralization in the kidneys with several small chronic infarcts in the left kidney.

- **Chronic Cystitis -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

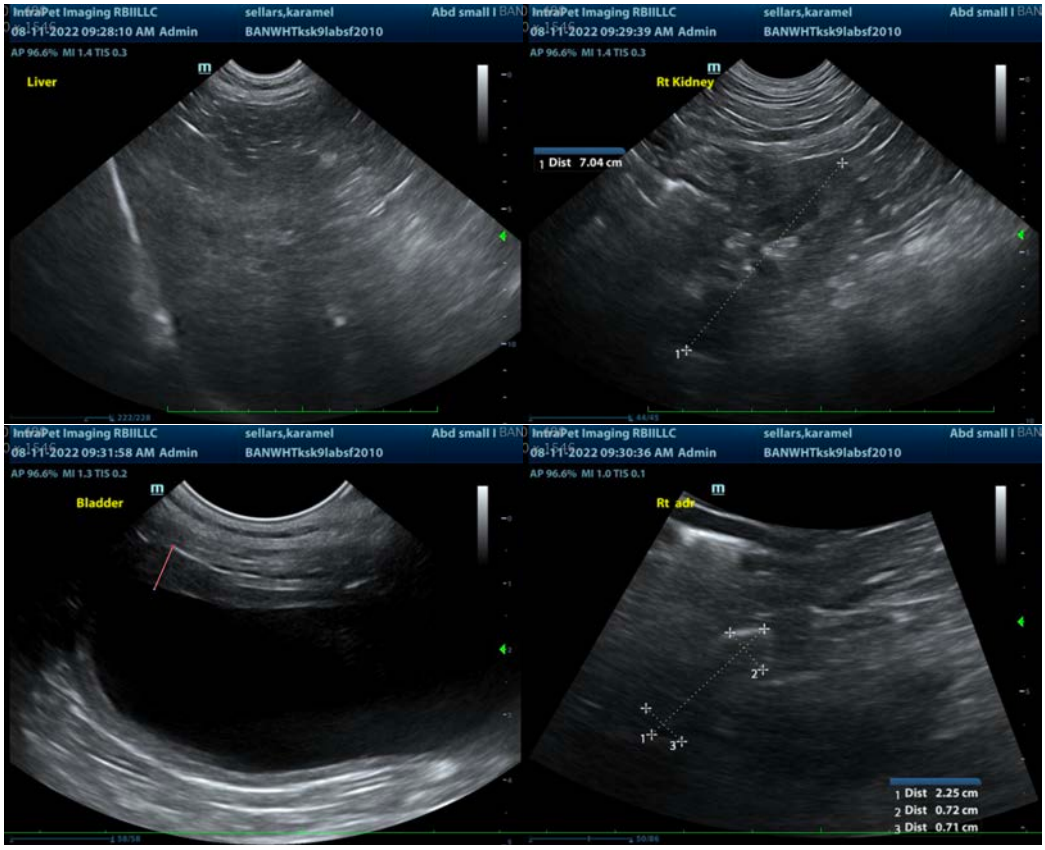
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

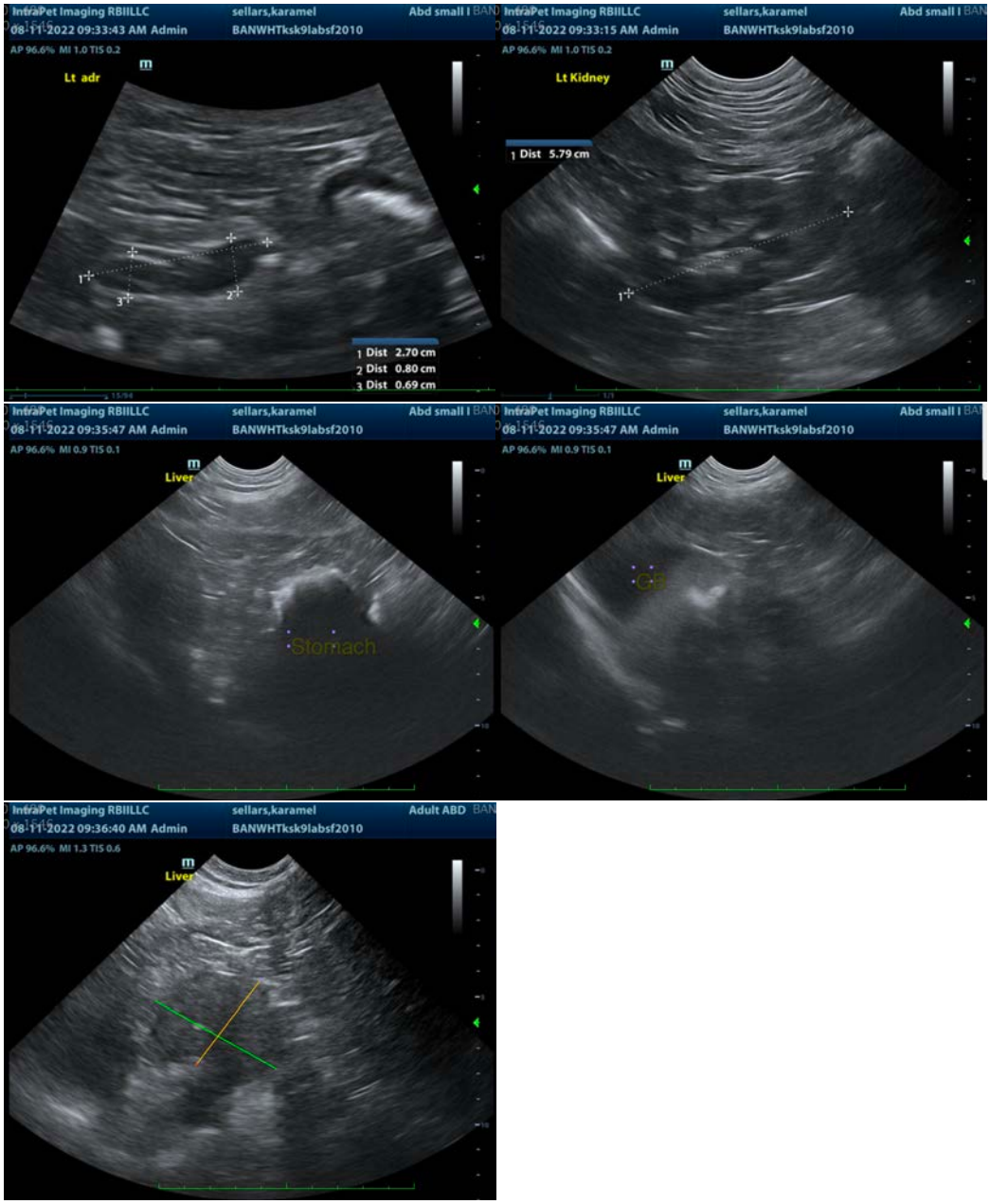
A fine needle aspirate of the caudal mid rounded liver could be considered if patient's coagulation status is appropriate. However, given the benign appearance to the lesion, monitoring of the area could be considered instead, in which case recheck ultrasound is recommended in 4-6 weeks.

Given the gallbladder debris, a course of Ursodiol combined with the Denamarin +/- broad-spectrum antibiotics could be considered with monitoring of the ALP for improvement. If the ALP improves, antibiotics should be continued until the value either plateaus or normalizes. If it does not improve, the antibiotics can be discontinued. Ursodiol is appropriate long-term.

Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

Ultimately, differentials are vast and non-specific for increased ALP with benign nodular hyperplasia being a primary contributor in most senior dogs. Therefore, other than the aforementioned recommendation, if values are not progressive, further intervention may not be necessary.





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