

**DATE PRESENTING CLINICAL SIGNS**

3/15/23 Presented for geriatric onset seizure with 12 hr. post ictal period. Cranial organomegaly palpated; rad shows presumptive liver mass. Fast scan--no obvious bleed/cavitated mass. Cranial nerves normal. 2-V chest films no obvious mets.

PATIENT

Akela Boyd

Current Medications: Started extended release levetiracetam.
Lab Results: ALT diluted 2911. Unable to dilute (1:10) ALP--is >2000.
in 2/2022: ALT ~400, ALP~4000.

SPECIES

Canine

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

BREED

Mixed

Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Intact Female

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.

AGE

12/5/10

The right kidney is normal in size (7.5 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

58.7 Pounds

The left kidney is normal in size (7.02 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.

INTERPRETED BYBeth Johnson, DVM
DACVIM**Adrenal Glands**

The right adrenal gland is normal in size (2.63 cm long x 0.91 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

Paradise AH

The left adrenal gland is normal in size (2.68 cm long x 0.75 cm at the cranial pole and 0.77 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

REFERRING VET

Dr. Riehl

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.

INVOICE

45926

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. A large 10+ cm x 7.5+ cm heterogeneous, partially cavitated mass is noted involving the left caudal liver. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild 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 (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

A small amount of anechoic free fluid as well as enhanced hyperechoic mesenteric fat surrounding the liver mass is noted.

There is no apparent lymphadenopathy noted in these images.

The reproductive tract is visualized without evident pathology.

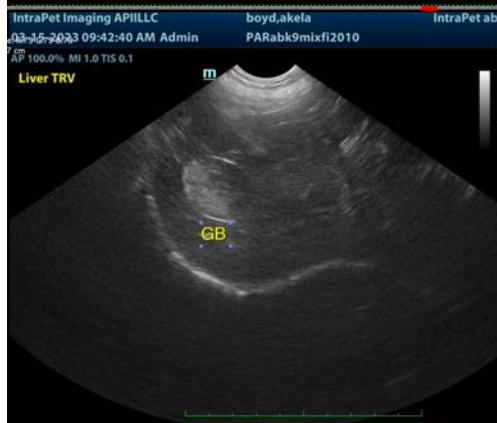
ULTRASONOGRAPHIC FINDINGS

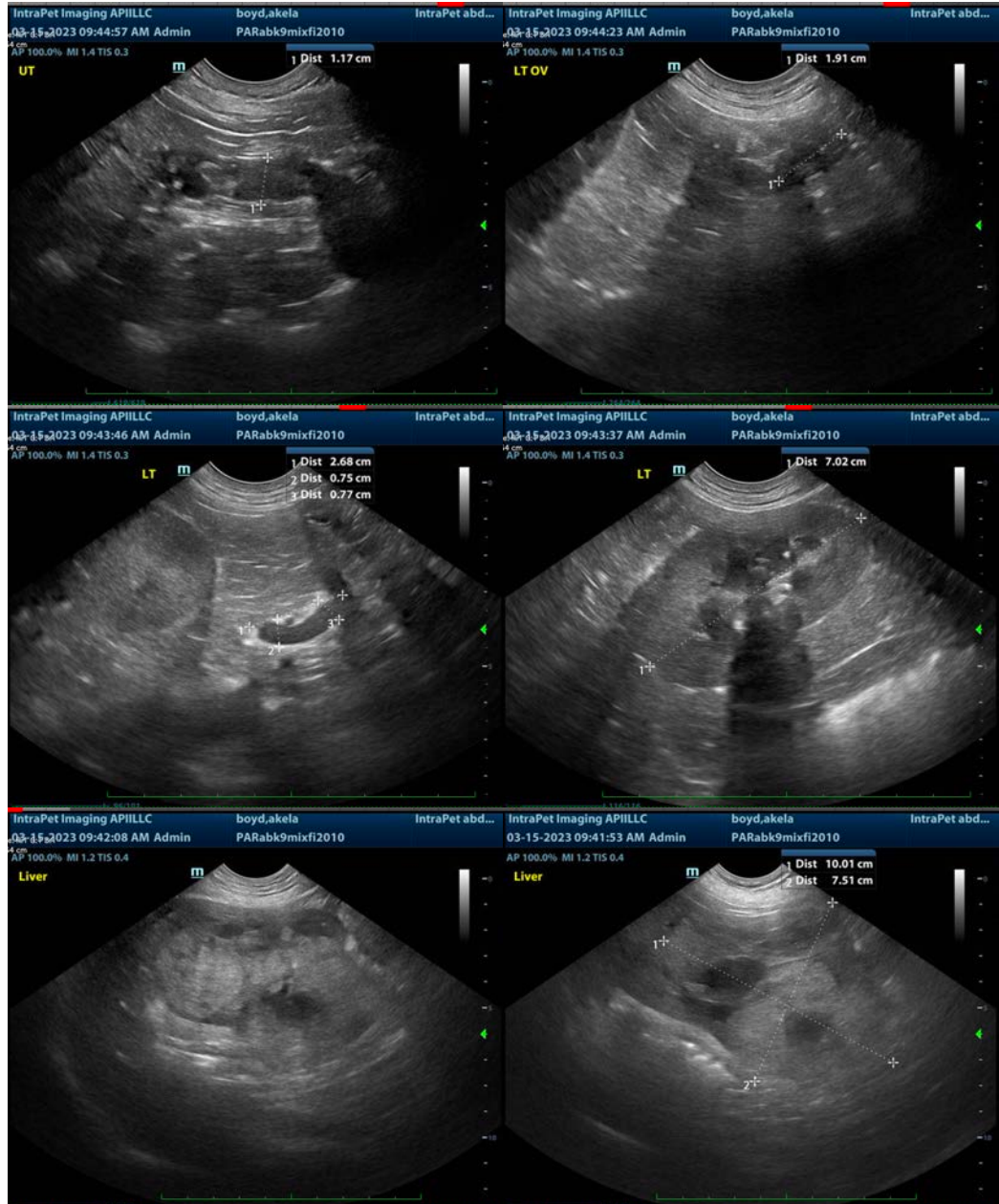
- **Heterogeneous, cavitated liver mass** – most concerning for infiltrative neoplasia such as sarcoma versus hepatocellular carcinoma versus round cell neoplasia versus other. A benign hematoma, nodular hyperplasia, etc. is possible but considered much less likely, especially given the concurrent free fluid.
- **Mild 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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.

A fine needle aspirate of the liver mass could be considered if patient's coagulation status is appropriate. However, given the risk of hemorrhage with even a benign cavitated liver mass, alternatively an exploratory laparotomy for planned liver lobectomy, mass removal, and histopath may be considered. While ultrasound cannot definitively determine resectability, given the caudal location of this mass, resectability appears likely probable. Given the recent onset of seizures, however, further workup for possible metastatic disease involving the central nervous system should be considered prior to an aggressive intervention such as surgery.





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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