

**DATE PRESENTING CLINICAL SIGNS**

11/1/22 Patient has history of severe asthma changes, chronically receives theophylline and prednisone to control respiratory inflammation. Tonight, noticed patient was breathing heavily and it did not improve; he was acting ADR and felt hot.

PATIENT

Duke Myers Current Medications: Cefazolin.
Lab Results: See attached.

SPECIES

Canine

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

BREED

Mixed

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**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.

SEX

Neutered Male

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

AGE

6/12/16

The right kidney is normal in size (7.1 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

57.6 Pounds

The left kidney is normal in size (7.87 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 BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

Adrenal glands are small (flattened contour). Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The right adrenal gland measured 2.7 cm long x 0.55 cm at the cranial pole and 0.55 cm at the caudal pole. The left adrenal gland measured 2.76 cm long x 0.60 cm at the cranial pole and 0.61 cm at the caudal pole.

IMAGING PERFORMED BY

Rachel Brillhart RDMS

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.

HOSPITAL NAME

Animal Emergency
Hospital

Liver

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

REFERRING VET

Dr. Goessling

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.

INVOICE

42455

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

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

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

- **Hypoechoic hepatomegaly** – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- Chronic active pancreatitis with possible acute on chronic smoldering flare up currently

SECONDARY FINDINGS

- **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.
- **Flat adrenal glands** – Consistent with chronic steroid administration.

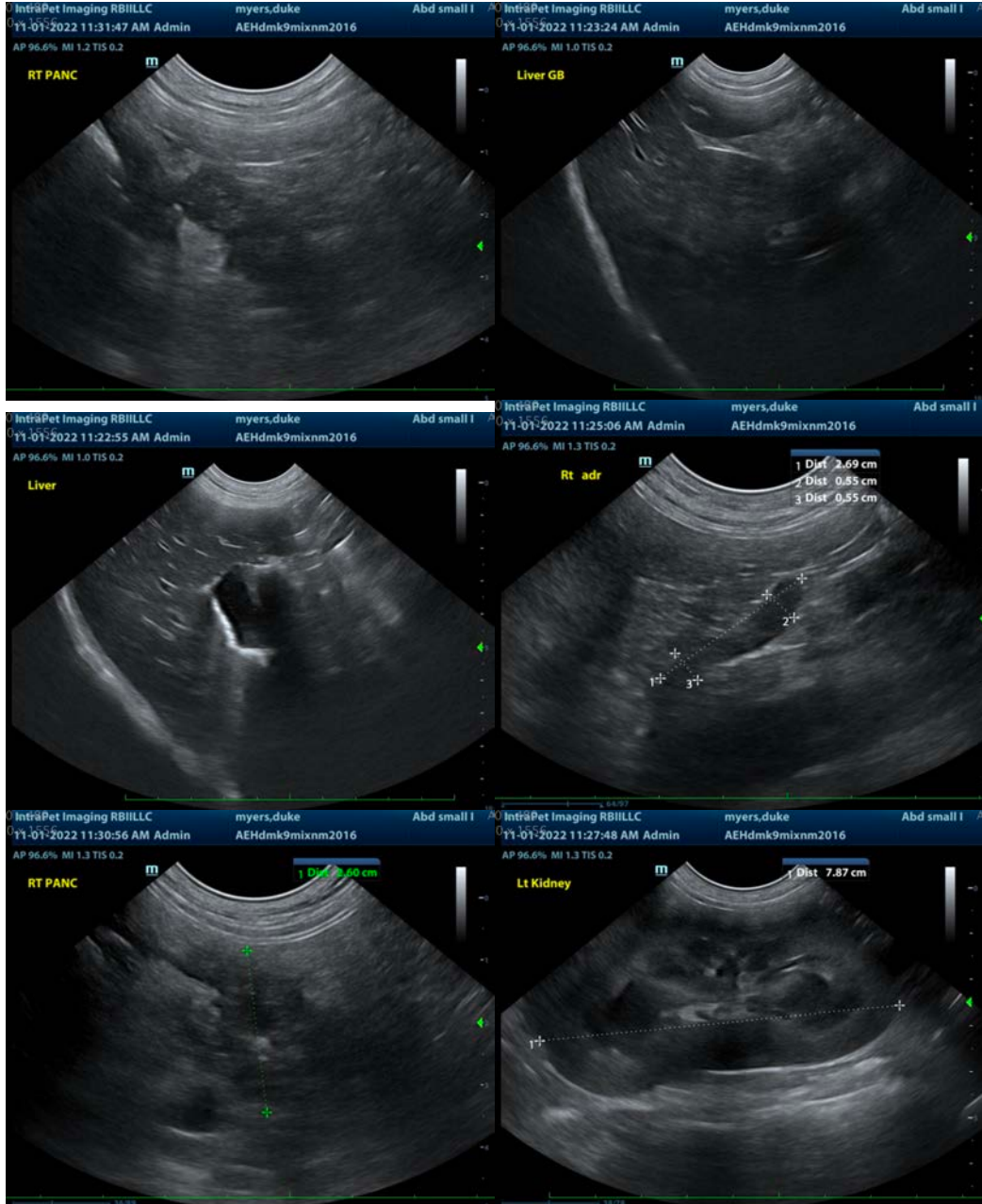
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

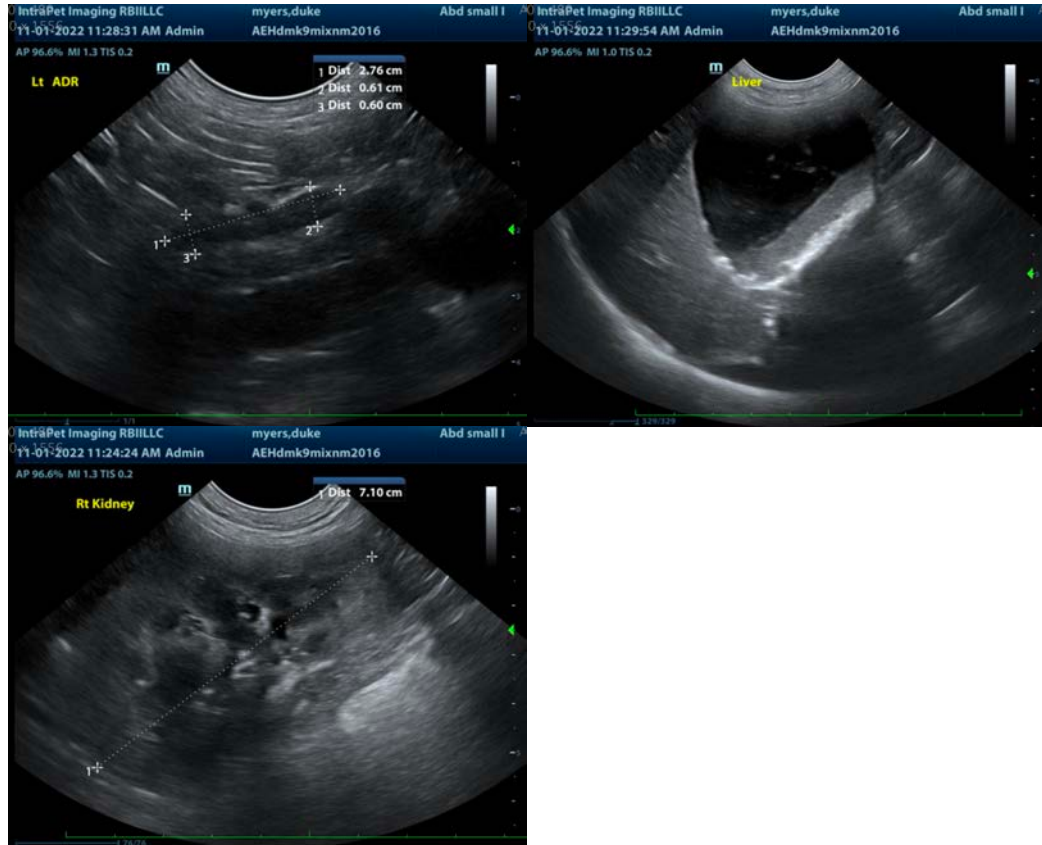
This patient's acute clinical signs could be secondary to the reported asthma flare up, or potentially secondary to a mild acute on chronic pancreatitis flare up. Recommendations include:

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function. If not a full GI panel, then a quantitative PLI would be recommended.

This patient's increased liver enzymes are likely at least in part related to the steroid use. However, given the appearance of the liver, an ongoing inflammatory hepatopathy also cannot be ruled out. Therefore, testing for Leptospirosis could be considered as well as a fine needle aspirate of the liver is patient's coagulation status is appropriately.

Alternatively, or additionally, recommendations are to try to taper the Prednisone to the lowest tolerated dose and/or transition to inhaled Prednisone to try to minimize systemic effects and monitor the effect on the liver. In the meantime, an addition of a hepatic nutraceutical such as Denamarin could be considered.





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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