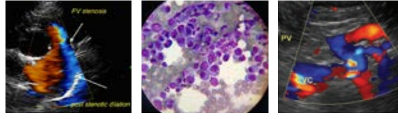


DATE

12/22/22

PATIENT

Rufus Shrum

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

7/16/06

WEIGHT

13.3 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Andi Parkinson RDMS

HOSPITAL NAME

PetVet of Clarksville

REFERRING VET

Dr. Martof

INVOICE

43689

PRESENTING CLINICAL SIGNS

Pet threw up multiple times yesterday- first time was food, after that was foam (5x total) peed outside of litter box yesterday on cat bed (very unusual for p) not interested in food, last night or this morning; nothing that p could have gotten into, no new plants, no stressful activity in the house. P seems tired today, p did use the litter box today (pooped 2x, peed) still not interested in food.

Current Medications: Mirataz transdermal- Apply once daily as per instructions on box.
Lab Results: ALT- around 900, Tbili- 2.2, Neutrophils- Mildy elevated
abnormal snap feline cpl
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
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.

The right kidney is normal in size (3.89 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.

The left kidney is normal in size (3.51 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.

Adrenal Glands
The right adrenal gland is normal in size (0.49 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The area of the left adrenal gland is examined without evident pathology.

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
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.

Gallbladder is moderately distended with anechoic bile as well as moderate 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 diffusely normal in thickness and layering. However, focally in the body of the stomach there is a 1.0 cm x 0.50 cm hypoechoic focus that appears to be intramural, such as a nodule or cyst. Ingesta or foreign material can’t be ruled out but are considered less likely. The stomach is moderately

distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. However, given the reported history of fasting, delayed gastric emptying could be considered. Soft (cloth) fluid absorbing foreign material is considered less likely but cannot be definitively ruled out. If clinical signs are consistent (vomiting, etc.), recommendations include supportive medical care, 24 hours fasting and re-image.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.

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.

ULTRASONOGRAPHIC FINDINGS

- **Hypoechoic hepatomegaly –** This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.

- **Moderate gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness, however, it can also be associated with hepatobiliary disease in cats 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.

- The hypoechoic nodule described in the stomach appears to be an intramural lesion such as a nodule, cyst, infiltrative neoplasia, etc. Atypical appearing ingesta or even foreign material can't be ruled out but are considered less likely.

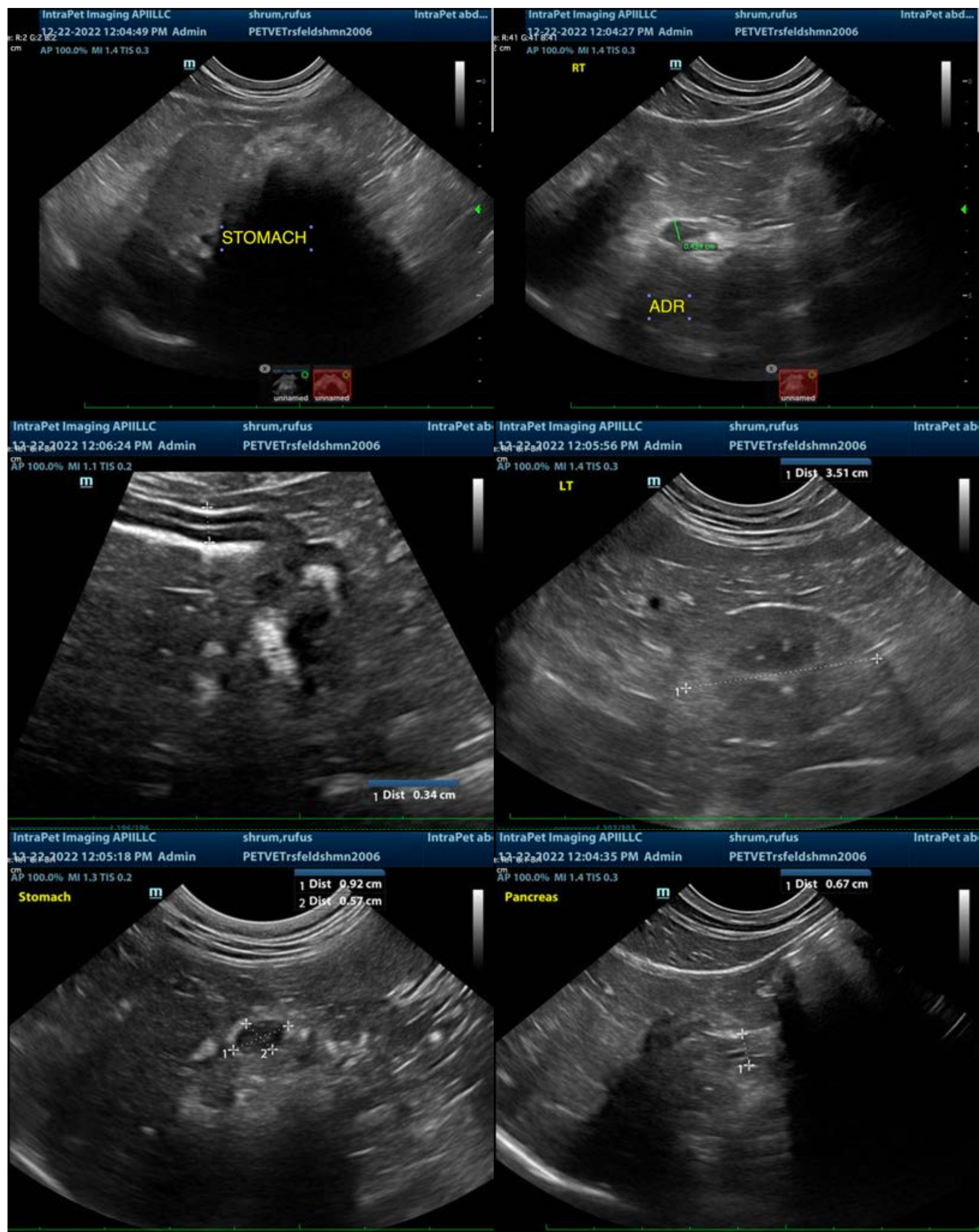
- **Inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.

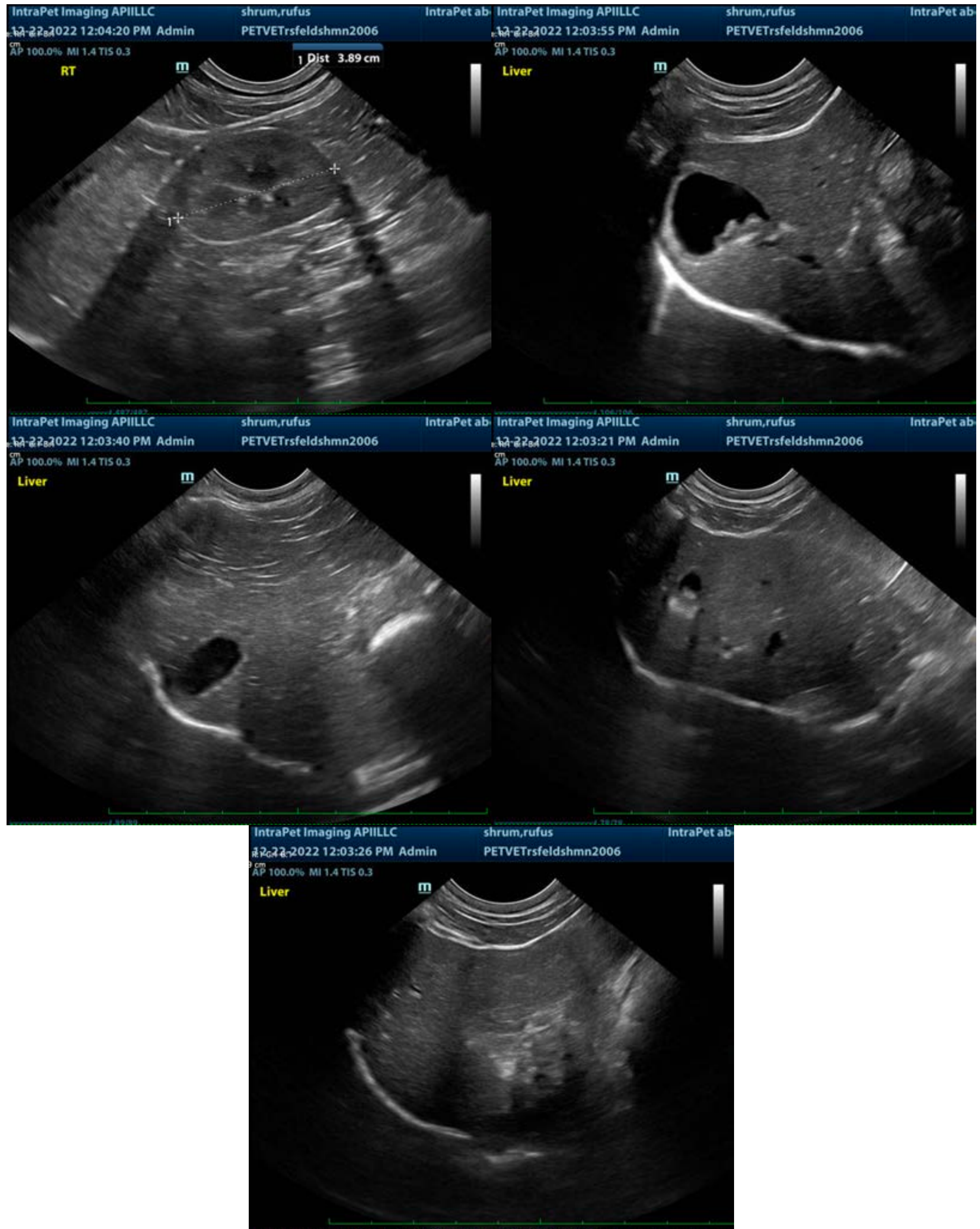
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's marked increase in ALT, next recommended step is a fine needle aspirate of the liver if patient's coagulation status is appropriate. Additionally, given the bowel changes, 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.

The gastric nodule is likely too small to effectively aspirate. However, a fine needle aspirate could be beneficial if it is possible and if patient's coagulation status is appropriate. Alternatively, the area could be monitored with recheck ultrasound in 4-6 weeks and/or upper GI gastroscopy/endoscopy could be considered, if a cytologic diagnosis is not obtained from the liver aspirate and clinical signs persist.

In the meantime, in addition to supportive/symptomatic care, hepatic nutraceuticals and empirical antibiotics are recommended with monitoring of ALT for improvement.





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

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