

**DATE PRESENTING CLINICAL SIGNS**

8/17/22 Gradual weight loss, increase in vomiting, inappropriate urination.

PATIENT

Bruce Cunniff

Current Medications: Metronidazole 100mg PO q12h for 2 weeks in July then restarted on 8/12, Fortiflora 1 month

Lab Results: labs from 4/2022 unremarkable.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

SPECIES

Feline

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED**

DSH

SEX

Neutered Male

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 incidental suspended lipid in a cat, possibly combined 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 cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

1/29/08

The right kidney is normal in size (4.99 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

12.3 Pounds

The left kidney is normal in size (4.6 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 areas of mineralization/nephroliths are noted.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

The right adrenal gland is normal in size (0.43 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

IMAGING PERFORMED BY

Rachel Brillhart RDMS

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

HOSPITAL NAME

Frederick Road VH

Spleen

Spleen is subjectively large in size with a mildly swollen but smooth capsule. Parenchyma is normal and homogenous in echogenicity and echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

REFERRING VET

Dr. Cannon

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. A 3.0 cm x 4.0 cm cystic lesion is noted with septations and no appreciated vascularity in the deep left liver. Visible vasculature and biliary tree appear normal without distension or congestion.

INVOICE

40549

Gallbladder is mildly overdistended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. A mildly tortuous, mildly but not pathologically dilated cystic and common bile duct are noted all the way to the level of the duodenal papillae. 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 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

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

Mesenteric lymphadenopathy and sublumbar lymphadenopathy are both appreciated.

PRIMARY FINDINGS

- **Gastrointestinal lymphoma (suspect) pattern** – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. Given the concurrent pathology noted, infiltrative neoplasia is considered more likely, but benign IBD cannot be ruled out without tissue sampling.
- **Concurrent mesenteric and sublumbar lymphadenopathy** - Concerning for infiltrative neoplasia such as lymphoma. However, benign inflammatory bowel disease combined with reactive lymphadenopathy cannot be ruled out without tissue sampling.
- **Hypersplenism** – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, amyloidosis as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.
- **Hyperechoic hepatomegaly** – This appearance is most consistent with benign hepatic lipidosis. Infiltrative disease such as amyloidosis or round cell neoplasia, such as mast cell tumor or less likely, lymphoma, is also possible.

SECONDARY FINDINGS

- Chronic active pancreatitis suspected
- Urinary bladder debris
- Non-obstructive nephrolith in the left kidney

- Septated cystic lesion in the liver – Differentials include a cyst, possibly a complicated or even infected cyst. Abscess can't be ruled out. Feline biliary cystadenoma is also considered possible.
- **Mildly overdistended gallbladder and common and cystic bile duct** – Differentials include normal patient variant versus evidence of chronic but resolved cholangitis or cholangiohepatitis. However, active or chronic smoldering cholangitis can't be ruled out, and this finding should be interpreted in combination with clinical signs and/or laboratory changes to suggest such.

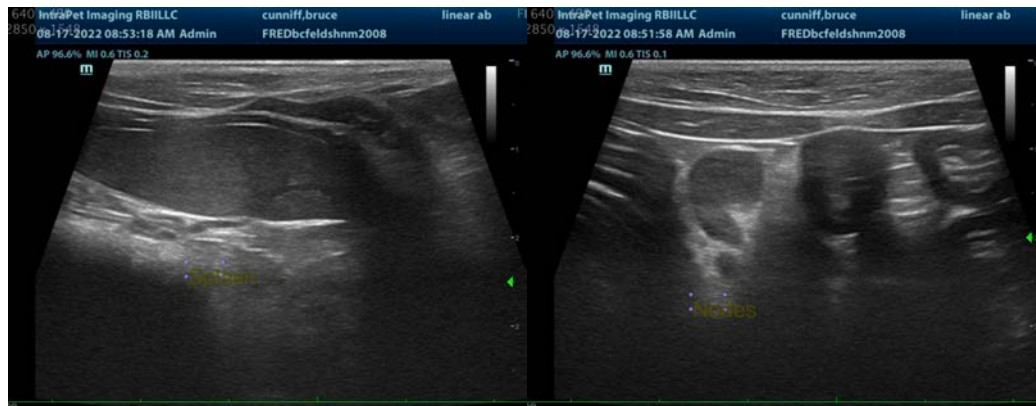
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

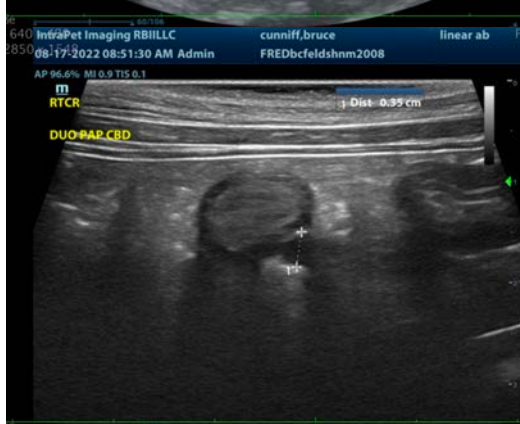
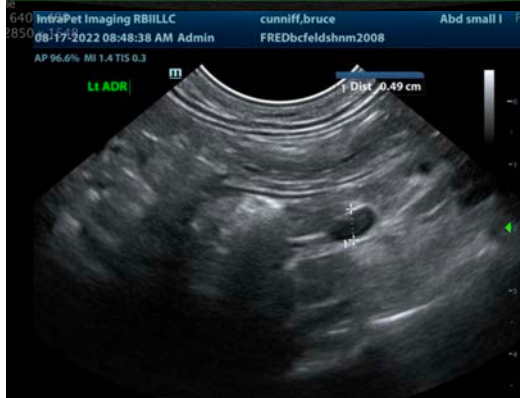
Given the patient's inappropriate urination and reported hematuria with the last urinalysis, recheck is indicated with urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

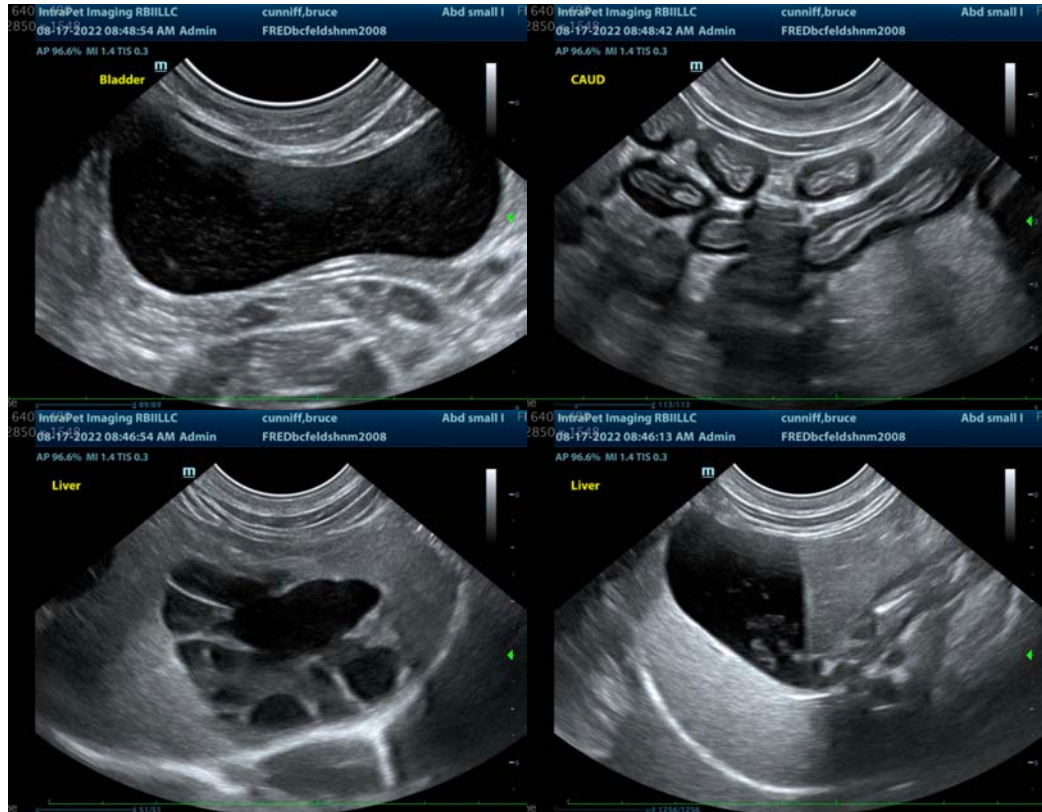
A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Ultimately, tissue sampling is recommended to rule in/out lymphoma. A fine needle aspirate of the spleen and liver could be considered if patient's coagulation status is appropriate. However, the changes in those organs is mild, and cytology considered low yield. Ultimately, biopsies of the GI tract, while more invasive, being sure to include ileum, if possible, may be necessary to definitively diagnose and therefore manage the infiltrative bowel disease. Separately, a fine needle aspirate of the cystic liver mass is recommended for both cytology as well as culture and sensitivity with potential draining of the cyst at the time of the aspirate being beneficial.

If biopsies cannot be obtained, empirical therapies could include diet change, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.).







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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