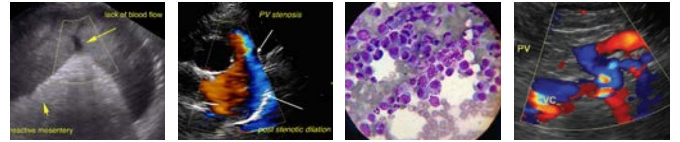
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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1-800-838-4268 info@sonopath.com

PATIENT
Blackie Morse

SPECIES
Feline

BREED
DMH

SEX
Spayed Female

AGE
8 Years

WEIGHT
12.06 Pounds

INTERPRETED BY
Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY
Dr. Lucas Budden

HOSPITAL NAME
Frontier VH

REFERRING VET
Dr. Lucas Budden

INVOICE
40291

DATE
8/10/22

PRESENTING CLINICAL SIGNS

Presented 8/6/2022 for weight loss and anorexia. Started a couple days before presentation. Indoor only. Owners have multiple cats. Found multiple piles of bile at home prior to presentation. No known ingestion of FB, toxin, medication. See BW results from visit below. Treated with SC fluids, mirtazapine, and Cerenia. Represented 8/9/2022 because of continued inappetence. Had not been drinking either. Treated again with SC fluids, mirtazapine, and Cerenia. Presented today for an ultrasound to assess for a cause of inappetence. Did not want to eat at all last night.
Abnormal PE/Chem/CBC/UA Results: PE today: severe dental calculus, BCS 9/9, well hydrated, no abdominal pain, MM pink/<2sec CBC/Chem 8/6/2022 Lymphocytes low 0.35 ALP high 206 ALT high 137 T bili 0.8 remainder wnl UA/T4/fT4 8/6/2022 fT4 pending USG 1.065 Protein 2+ Bilirubin 1+ Quiet sediment otherwise CBC/Chem today pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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.

The right kidney is normal in size (3.97 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 (3.62 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 (0.46 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.44 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

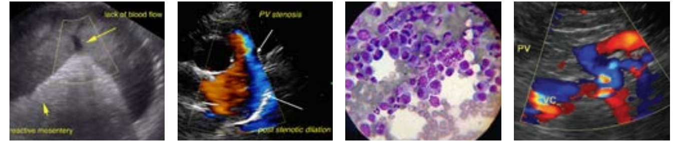
Spleen

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

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. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.



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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.

Most of the visible small intestine demonstrate areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). A focal jejunal mass is noted in the caudal abdomen that is characterized by a 3.0 cm long loss of normal bowel layering that measures 0.40 cm thick and is hypoechoic in appearance. 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.

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

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. The concurrent focal loss of layering/bowel mass in the jejunum increases the suspicion for infiltrative neoplasia such as lymphoma versus other.

- **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.

- **Reactive mesenteric lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.

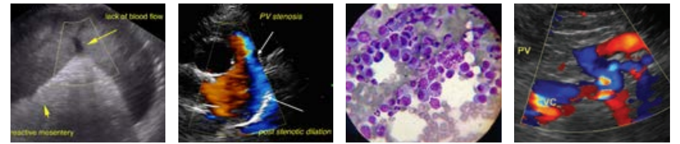
SECONDARY FINDINGS

- Urinary bladder debris

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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.

A fine needle aspirate of the liver as well as the focal bowel mass could be considered if patient's coagulation status is appropriate. If a cytologic diagnosis of lymphoma cannot be made this way, then ideally biopsies of the GI tract, being sure to include ileum, if possible, are recommended to definitively



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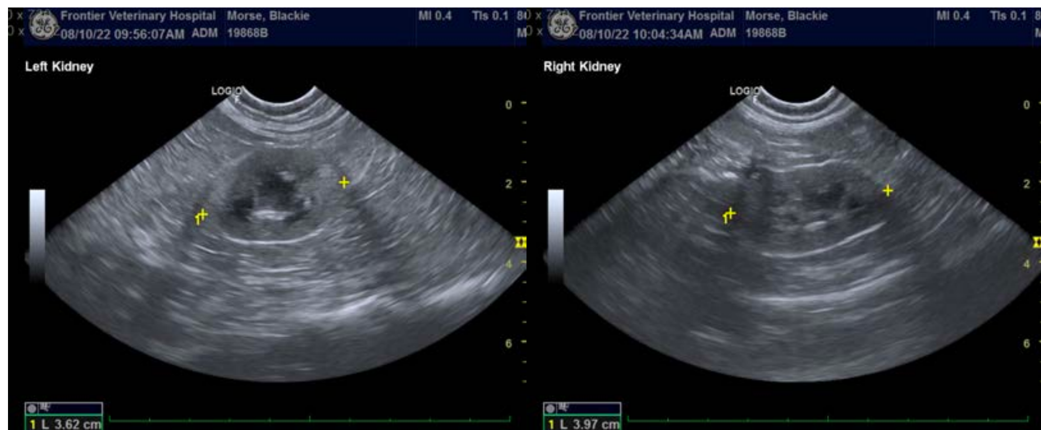
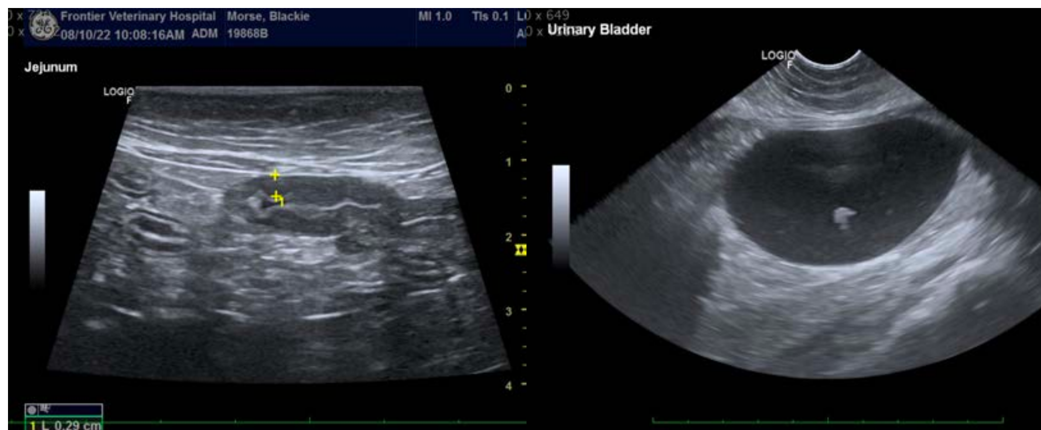
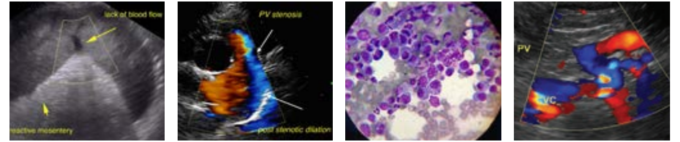
diagnose and therefore manage the infiltrative process. If biopsies are elected, surgical versus endoscopic biopsies are recommended so that the bowel mass can be resected. In the meantime, medical supportive/symptomatic care of this patient's gastrointestinal signs including inappetence is recommended in the form of antiemetics, gastroprotectants, appetite stimulants, and even a feeding tube placement, if necessary, to manage and prevent progression of suspected concurrent hepatic lipidosis.

If further diagnostics cannot be obtained, empirical therapies can include 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's contraindications, comorbidities, etc.







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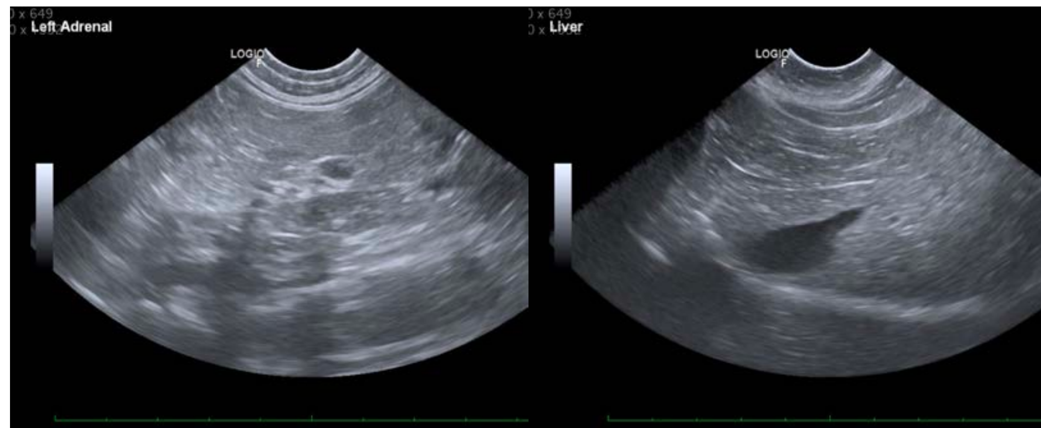

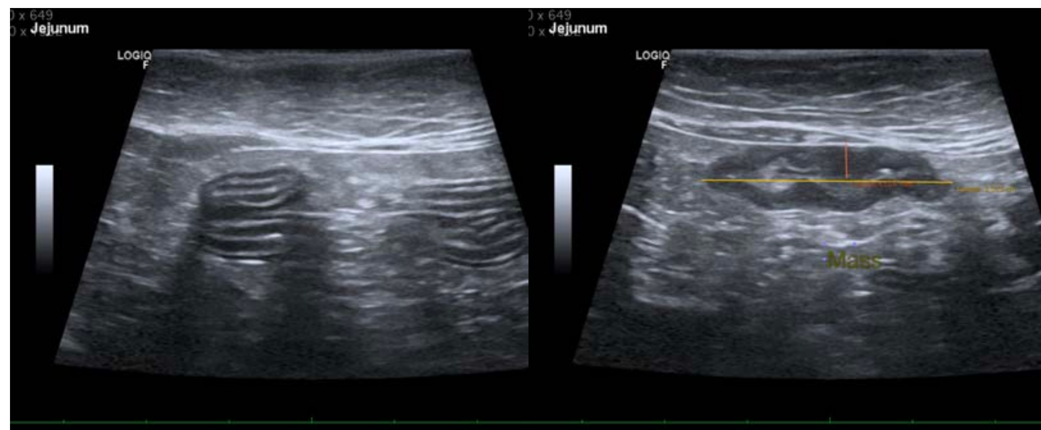

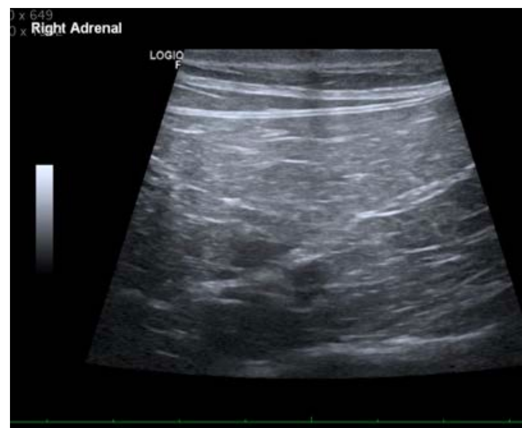

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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