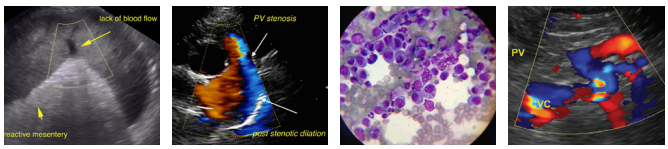
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Oliver Christopher

SPECIES
Feline

BREED
DSH

SEX
Neutered Male

AGE
15 Years

WEIGHT
10.9 Pounds

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Dr. Tam Mengine

HOSPITAL NAME
Stoney Creek VH

REFERRING VET
Dr. Tam Mengine

INVOICE
37191

DATE
4/26/22

PRESENTING CLINICAL SIGNS

Patient presented in 10/20 for facial pruritus, vomiting and weight loss. CBC / Chem / T4 and a GI panel were normal - patient started on z/d diet and signs resolved. Client then switched to an OTC diet. Next exam was 7/21, doing well, gained weight back, still on OTC diet. Client requested a dental in 4/22, on pre-op CBC /mini-chem BUN 38, Creat 2.1, SDMA 20 - client then noted patient is again vomiting multiple times / week, and has lost 1.3 pounds. Full CBC / Chem / T4 / U/A pending. Sys BP 180-190mmHg

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately/well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 3.60 cm (3.80-4.40 cm). The capsule is bossilated; a large indentation is noted at the anti-mesenteric border, likely due to a previous infarct and secondary fibrosis. A small indentation is noted along the mesenteric border where a hyperechoic region of 9.8 mm in length is observed. The latter is consistent with an infarct. Another hyperechoic region, measuring 5.1 mm, is also visualized at the caudal pole, which is suggestive of an infarct. The cortex is mildly hyperechoic and a mild to moderate loss of the normal definition of the cortico-medullary junction is present. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 3.54 cm (3.80-4.40 cm). The capsule is smooth. The cortex is hyperechoic and a mild to moderate loss of the normal definition of the cortico-medullary junction is present. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.31 cm at the cranial pole and 0.43 cm at the caudal pole. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

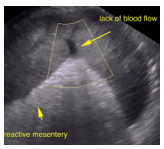
The **right** adrenal gland measures 0.41 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

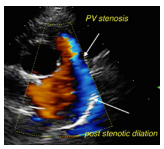
Spleen

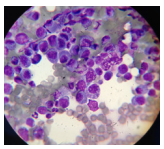
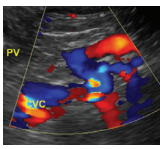
The spleen is within normal limits in size 9.0 mm (normal = 10 mm), echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous, however, it is mildly hyperechoic, i.e. it is isoechoic to the falciform fat. No abnormalities are observed with the hepatic vessels visualized.





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The gallbladder wall is within normal limits in thickness and echogenicity. A trivial amount of echogenic material is noted within the GB. The portion of the cystic duct observed is not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

A number of loops of jejunum are within the normal reference range, however, a few loops of jejunum are mildly to moderately thickened, measuring between 0.28 cm to 0.34 cm. The definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

There are no obvious signs of a mass, foreign body or an obstruction in the gastrointestinal tract.

Pancreas

The pancreas has a mildly coarse echotexture. These changes are most likely due to nodular hyperplasia and areas of fibrosis, fat, mineralization and possibly amyloid deposition. Signs of active pancreatitis or neoplasia are not appreciated.

Other

Lymph nodes

Mesenteric lymph nodes are "plump", hypoechoic, and very mildly enlarged, measuring 0.62 cm in diameter x 2.43 cm in length. No other lymph nodes are considered abnormal.

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- A component of the liver's hyperechogenicity may be due to subclinical hepatic lipidosis, however, cholangitis/cholangiohepatitis cannot be excluded. Signs of cholecystitis are not appreciated.
- The renal changes are suggestive of age related degeneration, as well as signs of previous ischemic episodes and infarcts. Chronic renal disease cannot be excluded based on the history of systemic hypertension. Pyelonephritis cannot be excluded despite the absence of classical sonographic signs.
- The gastrointestinal changes may be due to inflammation resulting from chronic vomiting, however, inflammation secondary to inflammatory bowel disease is likely contributing to the thickening of the jejunum. Early infiltrative disease, such as lymphoma or other round cell tumour, remains possible, but is considered less likely as definition of the individual wall layer is preserved.
- The very mild lymphadenomegaly of the mesenteric lymph node may be due to reactive hyperplasia, however, infiltration with neoplastic cells cannot be excluded.
- The pancreatic changes are likely age related. Differential diagnoses include fibrosis due to previous episodes of pancreatitis, ischemia or amyloid deposition.
- Note, Oliver may have suffered and may suffer from intermittent episodes of "triaditis".

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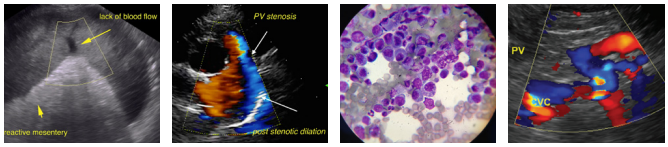

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A urine culture is suggested to exclude pyelonephritis. If negative, a urine protein: creatinine ratio is suggested as cats with chronic renal disease may require telmisartan to treat proteinuria. The latter also helps treat hypertension.

Deworming with a broad spectrum dewormer, such as fenbendazole, is suggested if Oliver goes outdoors or if he lives with other pets that go outdoors.

A veterinary prescription brand hypoallergenic diet, whether hydrolyzed or novel protein, may be tried. Multiple diets may be required, including only canned food, as some individuals cannot digest dry. The kibble may be soaked if an all canned diet is cost prohibitive.

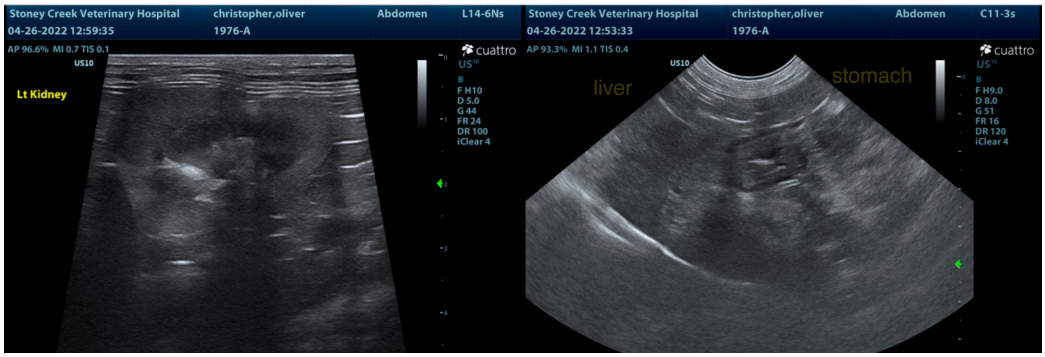
A 10-14 day trial with famotidine or omeprazole may be considered.

A TLI, vitamin B12, and folate may be performed as cats suffering from IBD and pancreatitis may suffer from cobalamin deficiencies. Older cats may also suffer from exocrine pancreatic insufficiency. If the test is cost prohibitive, supplementation with vitamin B12 is suggested.

Cholestasis, cholangitis/cholangiohepatitis cannot be excluded. Secondary ascending bacterial infections may also occur. Although indiscriminate use of antibiotics is not normally recommended, one could start treatment with a broad-spectrum antibiotic

If there is no response to the above, endoscopy and biopsies of the upper and lower GI tract may be performed.

If further diagnostics are not pursued, although not ideal, empirical treatment for inflammatory bowel disease with a dewormer (even if he does not go outdoors), followed by prednisolone may be administered (1 mg/kg/day), and then tapered to the minimum effective dose for 1-2 months. The latter is performed in addition to a hypoallergenic diet, that is easily digestible, but appetizing to prevent catabolism and sarcopenia.



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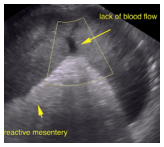

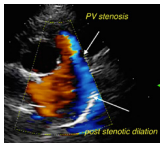

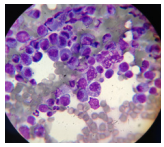
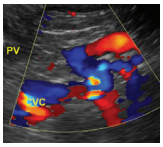

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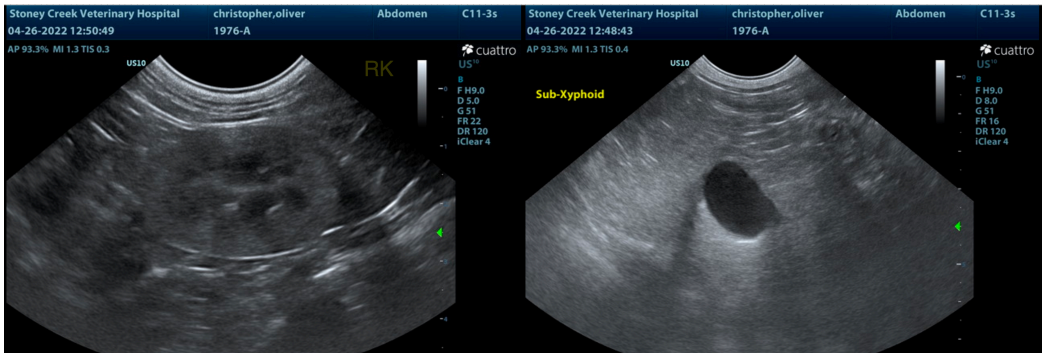

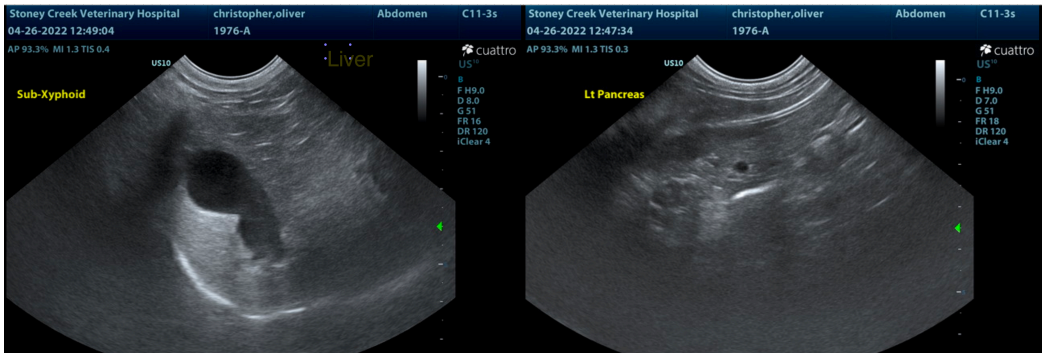

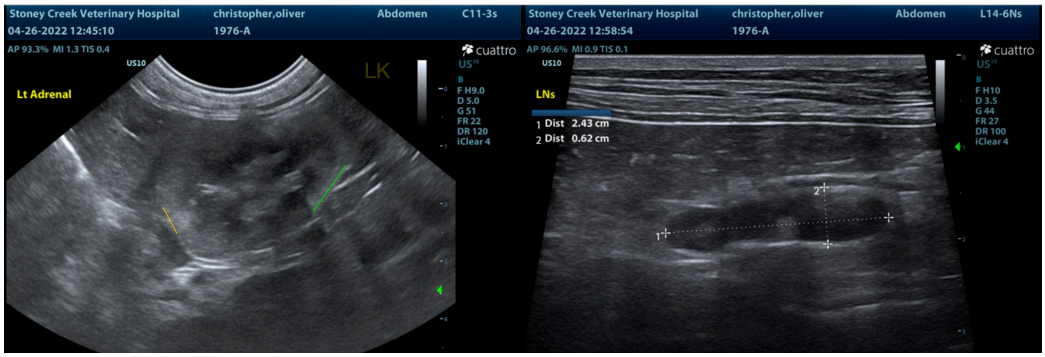

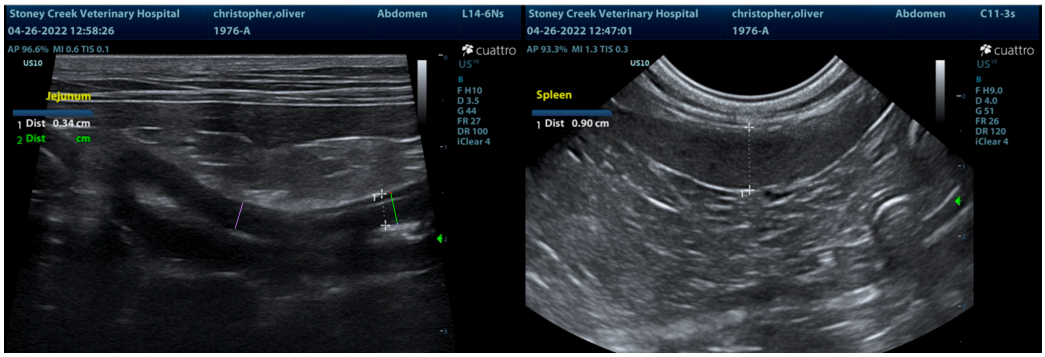

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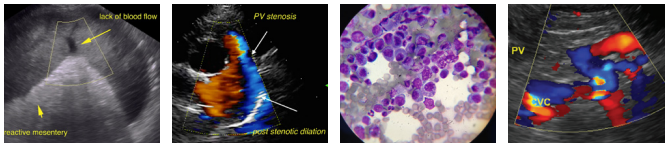

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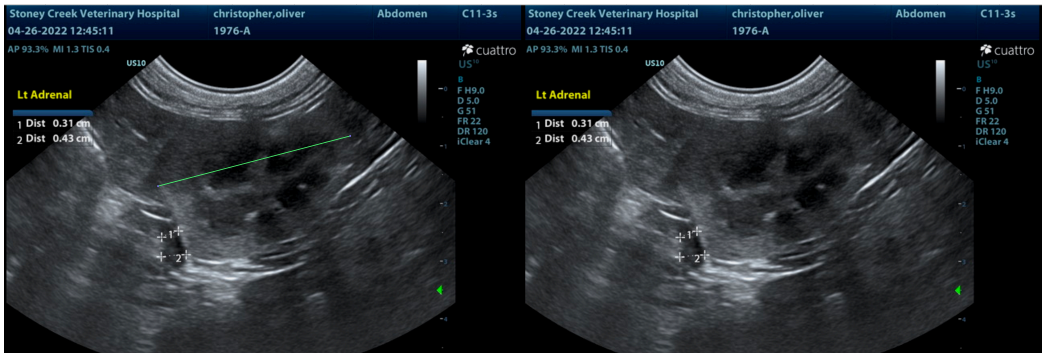

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com