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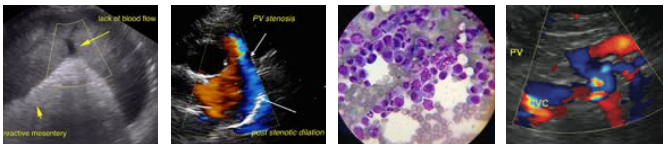

PATIENT

Katy Carls

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed Female

AGE

19 years

WEIGHT

4.4 kg

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Callihan Pacific Crest Mobile

HOSPITAL NAME

Pacific Crest Mobile Vet

REFERRING VET

Dr. Sandors, Skagit AC

INVOICE

30023

DATE

4/29/22

PRESENTING CLINICAL SIGNS

Elevated liver enzymes, inappetent; has been tx with IV fluids, Clavacillin, mirtazapine, Cerenia, Vit B injection, Denamarin (which seems to make her vomit; owner unable to give) . Symptoms started early April with decrease appetite,
Abnormal PE/Chem/CBC/UA Results: CBC normal Chems: elev ALT 592, ALKP 324, TBil 1.0, Chol 251, BUN low 9, else normal including Spec fPL. Pretty unremarkable PE; Mild elev temp, soft parasternal systolic murmur

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is 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 4.19 cm (3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic and a mild to moderate loss of the normal definition of the cortico-medullary junction is present. There is no evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is observed. The surrounding mesentery is mildly hyperechoic.

The **right** kidney is mildly decreased in size, measuring 3.59 cm (3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic and a mild to moderate loss of the normal definition of the cortico-medullary junction is present. Very mild mineralization of the diverticulae and pelvis are present, without signs of nephroliths or pyelectasia. An accumulation of intrapelvic fat is observed. The surrounding mesentery is mildly hyperechoic. The latter finding may be a sign of pyelonephritis.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.30 cm in diameter and 0.94 cm in length. 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 0.39 cm at the cranial pole, 0.32 cm at the caudal pole and 1.11 cm in length. 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 7.8 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.

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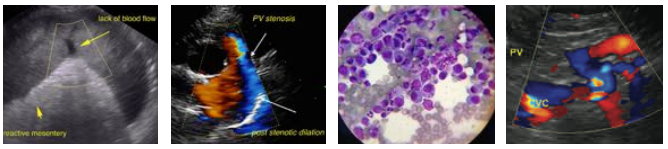

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Liver

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. A diffuse, mildly coarse or granular echotexture is observed. The liver is also diffusely hyperechoic. Focal lesions are not evident. No abnormalities are observed with the hepatic vessels visualized.

The gallbladder wall is within normal limits in thickness and echogenicity. There is no evidence of echogenic material within the GB or edema surrounding it. Portions of the cystic duct is very mildly tortuous in certain regions, but not dilated (0.33 cm (WNL)). There is no evidence 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.

The duodenum is within normal limits in thickness and definition of the wall layers is preserved.

Although definition of the wall layers of the small intestines is within normal limits, the mucosa is more prominent than usual and the muscularis is thicker than normal. They measure within the normal reference range to mildly thicker than normal (0.27 cm). Subjectively, mucosal fogging is also present. A moderate amount of ingesta and fluid are present in the small intestines.

Architecture of the ileo-cecal-colic junction is within normal limits, however, it is thicker than normal at 0.34 cm. 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 left limb has a mildly coarse echotexture with hyperechoic areas dispersed haphazardly throughout its parenchyma. Differential diagnoses include fibrosis due to previous episodes of pancreatitis, ischemia and/or amyloid deposition. Signs of active pancreatitis or neoplasia are not appreciated.

A small portion of the right limb is visualized. Similar findings are noted compared to the left limb.

Other

Lymph nodes

No abnormalities are observed.

Abdominal effusion is not visualized.

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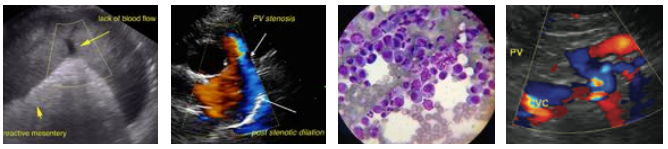

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ULTRASONOGRAPHIC FINDINGS

- The mildly coarse or granular echotexture may be due to a reactive hepatopathy. The mild, but diffuse hyperechogenicity of the liver may occur secondary to cholestasis, cholangitis/cholangiohepatitis, and cholecystitis, despite the absence of overt sonographic abnormalities. Hepatic lipidosis due to hyporexia may be contributing to the hyperechogenicity. Thre are no obvious signs of neoplasia.
- Gastrointestinal inflammation, due to inflammatory bowel disease, including food intolerance, may be the cause of Katy's clinical signs. However, early infiltrative disease, such as lymphoma or other round cell tumour, cannot be excluded. Biopsies, and possibly immunohistochemistry and PARR, would be required to exclude neoplasia with certainty.
- Although active signs of pancreatitis are not evident, the pancreatic changes are suggestive of age-related changes, including fibrosis due to previous episodes of pancreatitis, ischemia and possibly amyloid deposition. Intermittent episodes of pancreatitis may occur. Furthermore, Katy may be suffering from "triaditis".
- Although indicated, some cats may vomit with the administration of hepatoprotectants, such as SAM-e/silybin and certain antibiotics, which may be contributing to her hyporexia and weight loss.
- Mild to moderate renal changes are present, which are suggestive of age related degeneration. Pyelonephritis cannot be excluded, despite the absence of classical sonographic abnormalities.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A urinalysis and urine culture and sensitivity are suggested to exclude possible pyelonephritis. Note, the administration of amoxicillin-clavulanic acid may yield a false negative result.

Analgesia for visceral pain, such as buprenorphine, is suggested, as well as supportive care, such as maropitant once a day for a few days, subcutaneous fluids (administered at home, if possible).

A TLI, serum cobalamin, and folate are strongly recommended to assess for underlying maldigestion and malabsorption disease, as many cats with IBD may also suffer from exocrine pancreatic insufficiency. If the test is cost prohibitive, supplementation with vitamin B12 is suggested.

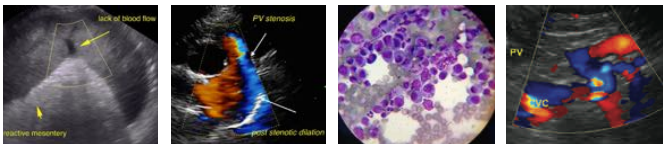
Deworming with a broad spectrum dewormer, such as fenbendazole, is suggested if Katy goes outdoors or if she lives with other pets that go outdoors.

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.

Small, frequent meals are recommended.

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

Cholestasis, cholangitis/cholangiohepatitis and cholecystitis cannot be excluded, and secondary ascending bacterial infections are common. Although indiscriminate use of antibiotics is not normally recommended, one could start treatment with a broad-spectrum antibiotic. Katy may not be tolerant of amoxicillin-clavulanic acid, therefore, treatment with enrofloxacin may be considered.



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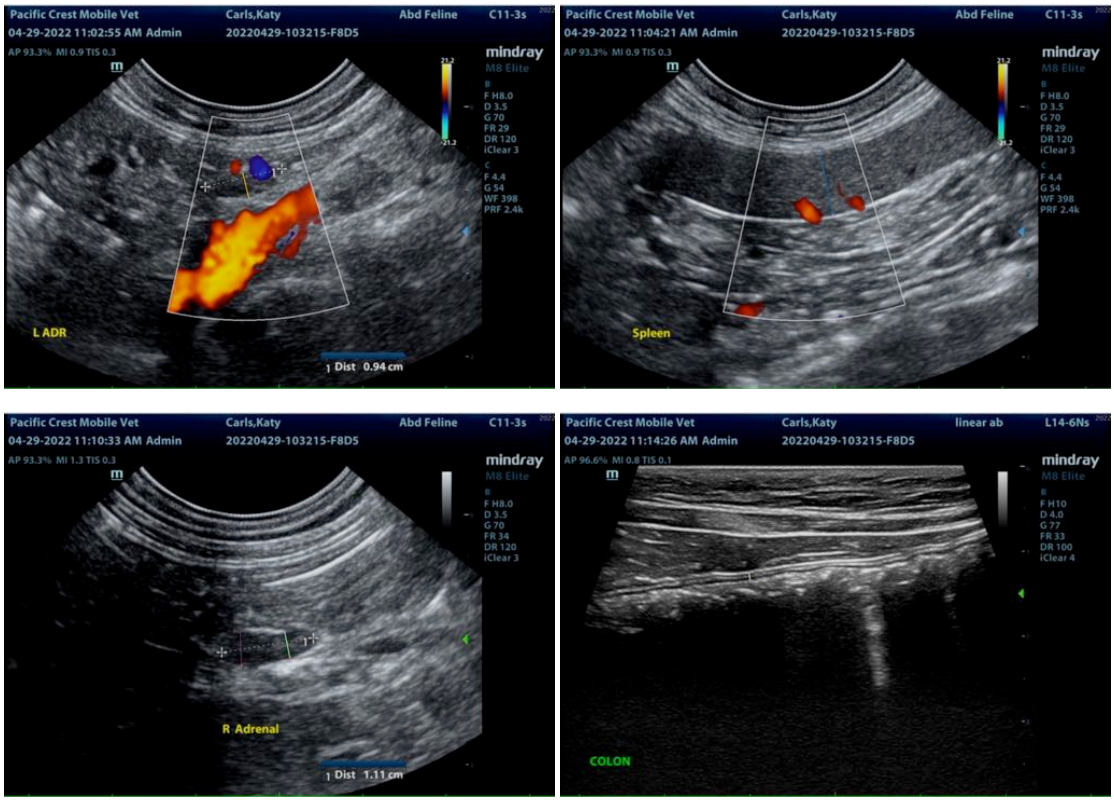
Although not ideal, an injection of cefovecin (Convenia) may be tried, i.e., it avoids the GI tract. Discussion with the client that this is not necessarily an ideal drug is suggested, however. If an improvement is observed, at least 2 additional doses are recommended 10-12 days apart.

If there is no response to the above, endoscopy and biopsies of the upper and lower GI tract are suggested.

If further diagnostics are not pursued, although not ideal, empirical treatment is suggested. For example, prednisolone may be administered (1 mg/kg/day), in addition to a hypoallergenic diet, that is easily digestible, but appetizing to prevent further catabolism and sarcopenia. A tapering dose is pursued after two weeks of administration at the above dose.

Please note, due to the heart murmur, dexamethasone may be preferable to prednisolone as it has less mineralocorticoid effects and causes less fluid retention. An initial dose of dexamethasone at 0.03-0.05 mg/kg PO once a day may be used, although the dose may be increased to 0.10 mg/kg/day, if necessary.



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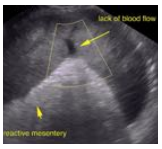
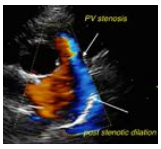
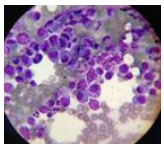
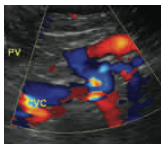

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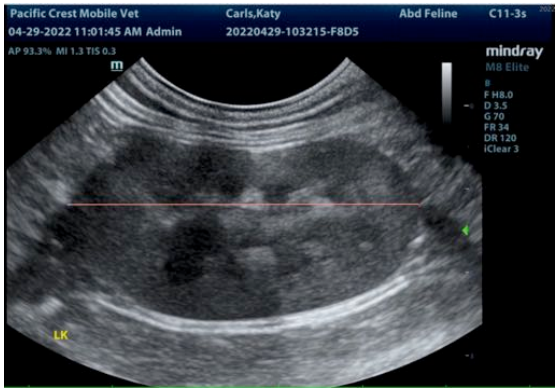

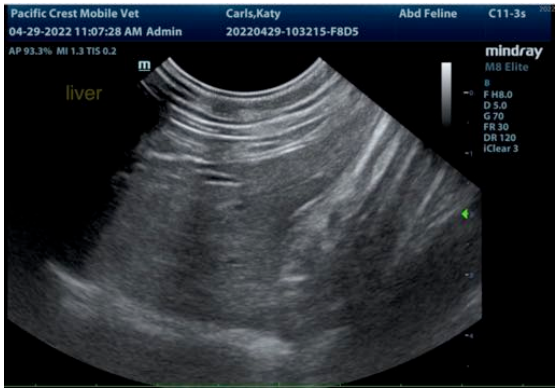

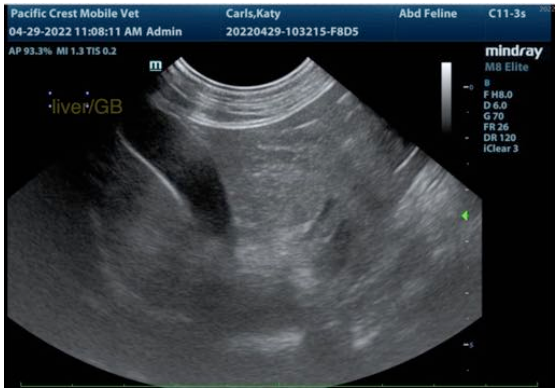

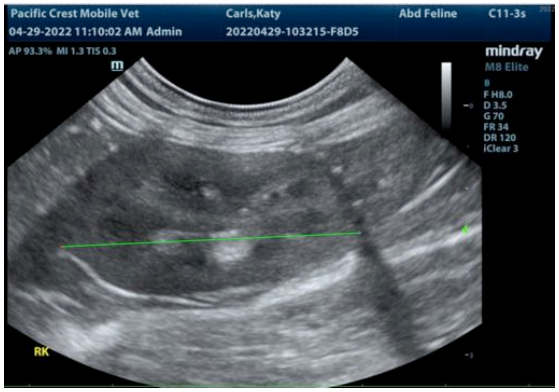

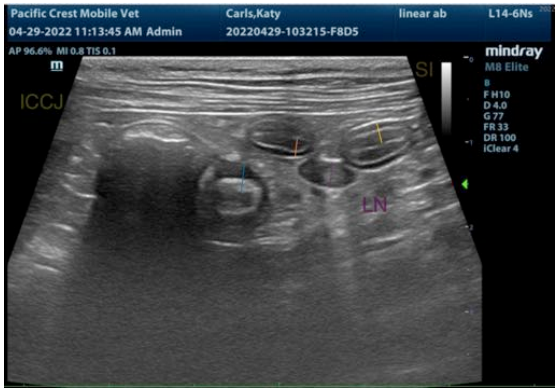

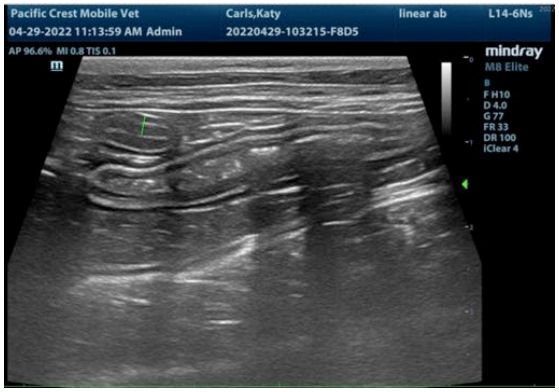

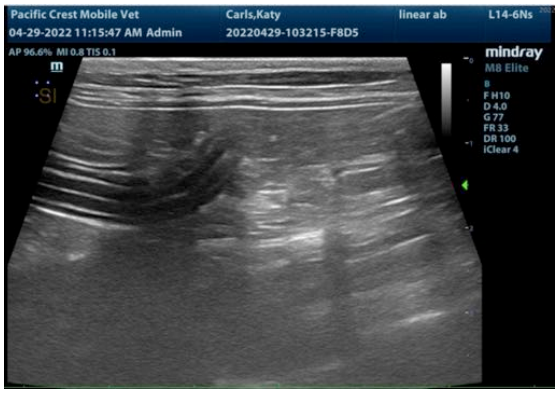

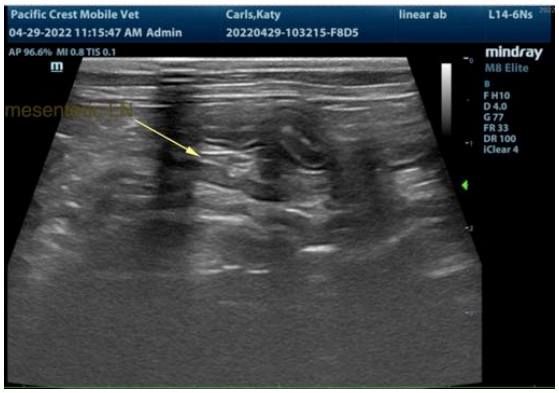

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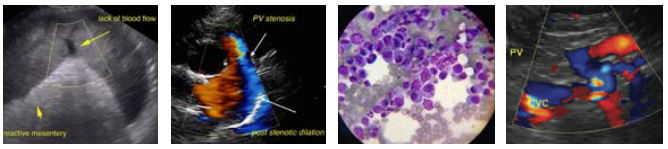

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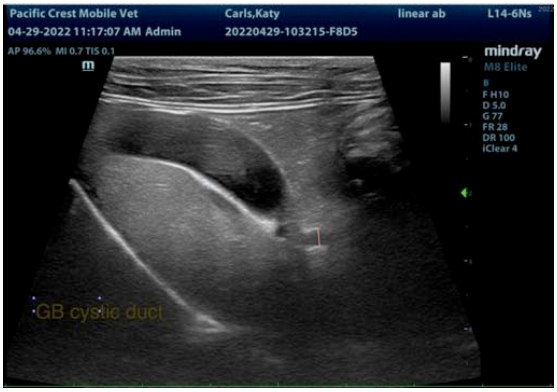

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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