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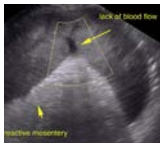
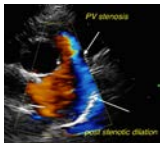
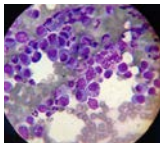
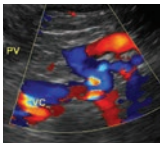

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Chance Whitmore

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
12 Years

WEIGHT
10 Pounds

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Kelly Vazquez

HOSPITAL NAME
Ringwood AH

REFERRING VET
Dr. Wilkes

INVOICE
38650

DATE
6/10/22

PRESENTING CLINICAL SIGNS

Not eating, hyperthyroid on blood work with underlying kidney disease (newly diagnosed), vomiting. Current meds: elura, cerenia, transdermal methimazole to start in the future.
Abnormal PE/Chem/CBC/UA Results: SDMA 19, ALT 296, AST 83, ALP 110, T4 9.3. U/A: 1+ protein, 3+ blood, 30-50 RBCs (urine obtained via cysto), USG 1.014.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately 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 3.50 cm (3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic. A very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations and a nephrolith (5.1 mm) are present along the diverticulae. There are no signs of pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 3.77 cm (3.80-4.40 cm). The capsule is very mildly irregular. The cortex is mildly hyperechoic. A very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations are present along the diverticulae and pelvis. There are no signs of pyelectasia. Subjectively, blood flow is within normal limits to mildly increased. The surrounding mesentery is hyperechoic, but appears to be associated with the pancreas.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.42 cm at the cranial pole, 0.42 cm at the caudal pole and 1.19 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 was not visualized due to gas in the surrounding GI tract.

Spleen

The spleen is within normal limits in size 6.3 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. It is diffusely hyperechoic, i.e., it is isoechoic to the falciform fat. An anechoic nodule, consistent with a cyst, measuring 3.8 mm in diameter x 4.1 mm in length, is noted subcapsularly. It does not disrupt the integrity of the capsule. No obvious abnormalities are noted with the hepatic vessels.

The gallbladder (GB) is mildly to moderately dilated (consistent with a fasted individual). The GB wall is within normal limits in thickness and echogenicity. The majority of the contents are anechoic, however a very small amount of echogenic material is observed at its neck where it curves into the cystic duct. The cystic duct is not dilated or tortuous (2.8 mm). There are no signs of an obstruction.

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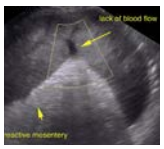
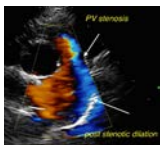
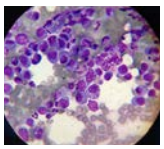
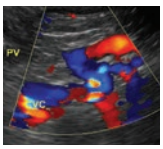

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Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined, however, the muscularis layer is more prominent than usual. No obvious abnormalities are observed with its peristalsis.

The duodenum is corrugated and contains ingesta and shows decreased peristalsis. The mucosa and submucosa are prominent, and fogging of the mucosa is present, however, wall thickness of the duodenum and remaining small intestines is within normal limits and definition of wall layering is preserved. The mesentery surrounding the ileocecal colic junction is hyperechoic and the associated lymph nodes are slightly prominent and hypoechoic.

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

Pancreas

The right limb is heterogeneous, with hypoechoic areas, but is primarily moderately hyperechoic. The omentum surrounding the limb and right cranial quadrant is hyperechoic with acoustic enhancement, suggestive of active inflammation. The inflammation extends along the entire right abdomen.

The left limb is hypoechoic and the surrounding omentum is mildly to moderately hyperechoic.

Other

Lymph nodes

The mesenteric LNs in the ileo-cecal-colic junction are slightly prominent and hypoechoic, but remain within normal limits in size. The mesentery is hyperechoic.

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- **Pancreas**: Signs of *active pancreatitis* are observed, despite the absence of signs of discomfort during the ultrasound (as per the sonographer).
- **Gastrointestinal tract and lymph nodes**: Changes, suggestive of *inflammation*, are noted with the duodenum and surrounding ileo-cecal-colic junction. Inflammatory bowel disease is suspected. Although there are no obvious signs of neoplasia, and it is considered less likely, biopsies are required to exclude the it with certainty. *Reactive lymphadenomegaly* is the likely based on the appearance of the lymph nodes.
- **Liver**: Cholestasis, cholangitis/cholangiohepatitis, including a suppurative component, hepatic lipidosis and hyperthyroidism are possible causes for the diffuse hyperechogenicity. Obvious signs of cholecystitis are not appreciated, however, it remains a differential diagnosis. The anechoic nodule is suggestive of a benign cyst.
- Underlying *"triaditis"* is suspected.
- **Kidneys**: Age-related degenerative changes are noted, in addition to mineralization and a nephrolith (left kidney), without signs of an obstruction. Pyelonephritis cannot be excluded despite the absence of classical sonographic changes, particularly in older cats.
- **Mesentery**: The hyperechoic mesentery is likely due to smoldering inflammation, for example, IBD and/or pancreatitis.

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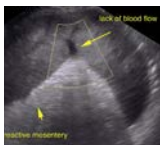
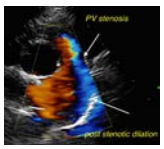
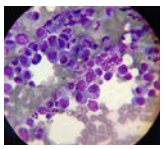
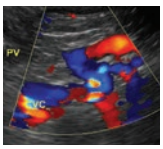

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended

Urine culture and sensitivity to exclude pyelonephritis

Analgesia trial for visceral pain, such as buprenorphine (0.005-0.01 mg/kg sublingually every 8-12 hours) for 7-10 days. Continue for 3-4 weeks if an improvement is noted; the dose and frequency may be weaned during that time to the minimum effective dose. +/- gabapentin

If signs of gastroesophageal reflux disease (GERD), 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO q12h)

TLI, serum cobalamin, and folate to exclude cobalamin deficiencies and exocrine pancreatic insufficiency (EPI) and secondary dysbiosis. Note, TLI may be falsely increased at the moment if pancreatitis is present. Therefore, serum cobalamin concentrations may be performed now and TLI evaluation performed in a few weeks following initiation of methimazole and resolution of current clinical signs.

Methimazole at 1.25 mg PO every 12 hours.

Re-evaluation of renal parameters, including SDMA, in 3-4 weeks.

Subcutaneous fluids at home, if possible, a few days a week due to renal disease

Cholangitis/cholangiohepatitis and cholecystitis, including a secondary ascending bacterial infection, cannot be excluded. Although indiscriminate use of antibiotics is not normally recommended, one could start treatment with a broad-spectrum antibiotic if an improvement is not observed with the above therapies within 48 hours.
A consultation with an internist may be considered in the future due to Oreo's complicated medical history and co-morbidities.

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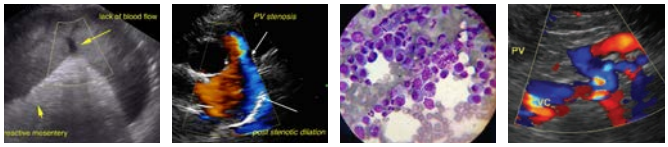

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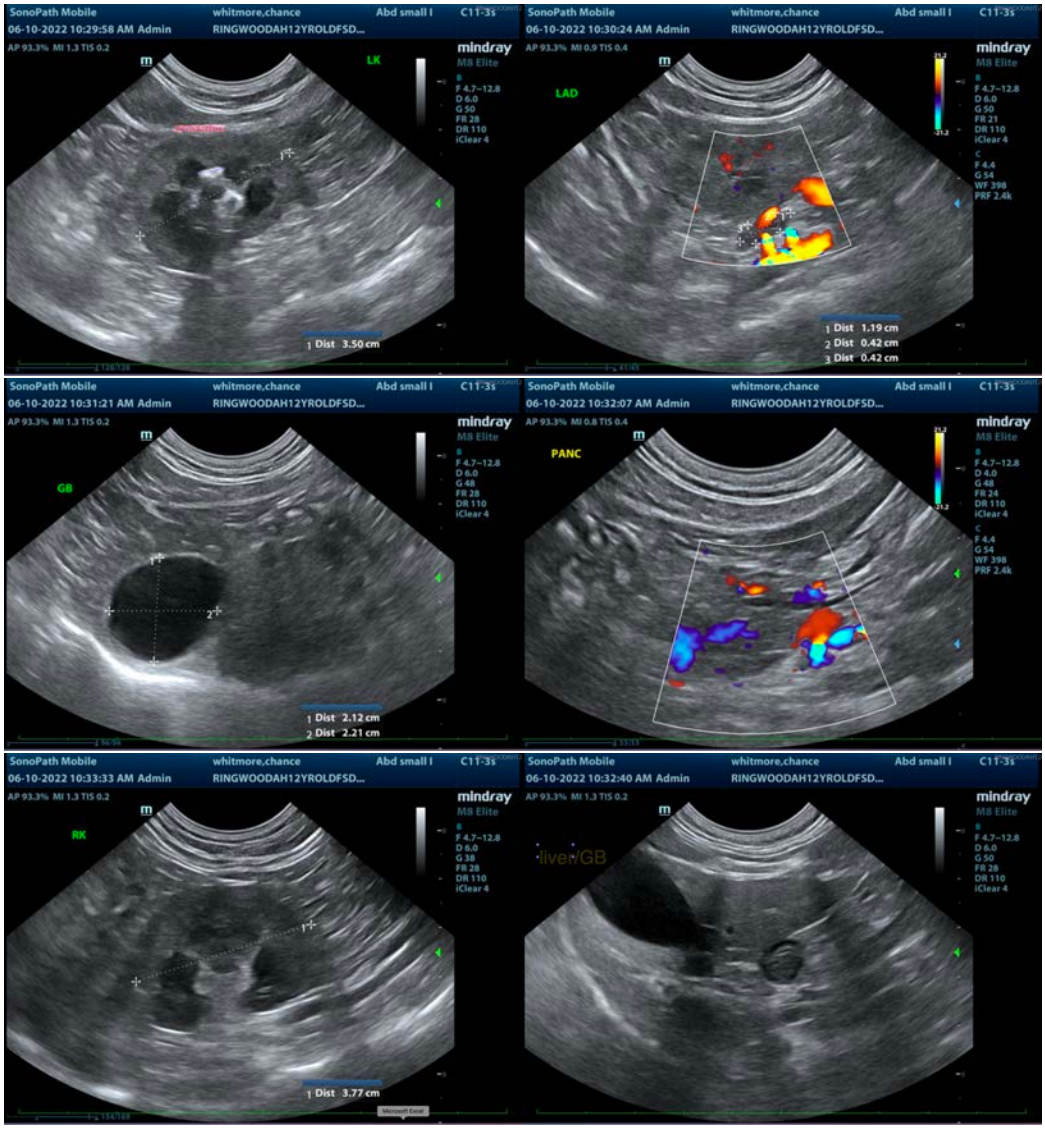

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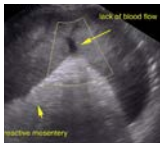
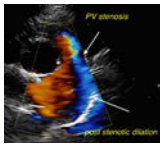
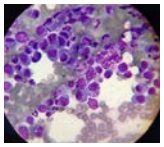
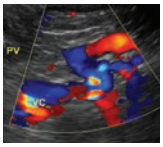

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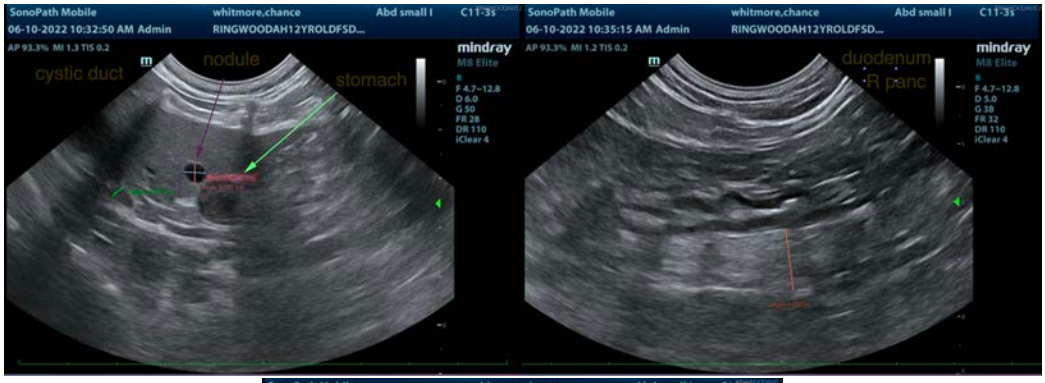

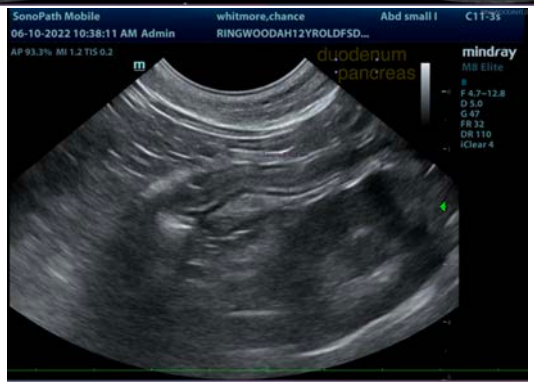

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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