



**PATIENT**

Hestia Hoppes

**SPECIES**

Feline

**BREED**

American Shorthair

**SEX**

Spayed Female

**AGE**

9 years

**WEIGHT**

10.5 lbs

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING PERFORMED BY**

Dr. Rupley

**HOSPITAL NAME**

All Pets Medical Center

**REFERRING VET**

Dr. Rupley

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30272

**DATE**

5/11/22

**PRESENTING CLINICAL SIGNS**

**PRESENTED FOR:** for lethargy and decreased appetite for the last 3 days **REPORTED SYMPTOMS:** Not eating as much over last week last Saturday. Less active **VITALS:** 10.5 pounds Temperature: 104.9 (normal range is 100.0 F- 102.5 F) Heart Rate: 240 bpm (normal is 145-200) nervous Respiratory Rate: 100 bpm (normal is 15-25) Mucous Membrane Color: pink Capillary Refill Time: <2 **CURRENT MEDICATIONS:** Revolution **EXAM FINDINGS:** Pain on cranial abdominal palpation. Mild dental disease. **LAB RESULTS:** The fPLI is questionable. CBC results reveal an increase in band neutrophils. Chemistry panel reveal slightly low potassium with elevated total solids. Urinalysis results reveal uro 4, protein 15, with a pH of 6.5 and Specific Gravity: 1.032. The T4 and cholesterol are normal. **GLOBAL ultrasound revealed thickened muscularis of some walls of the small intestine. ASSESSMENT AND PLAN:** IV catheter was placed and IV fluids begun. Convenia and buprenorphine sustained release injections were administered.

**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 present with the trigone or proximal urethra. A moderate amount of free floating sediment is present, however, there is no evidence of cystoliths, polyps or a mass.

**Kidneys**

The **left** kidney measures 4.45 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. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. The surrounding mesentery is mildly hyperechoic.

The **right** kidney measures 4.65 cm (3.80-4.40 cm). The capsule is smooth, however the shape is mildly to moderately rounded. The cortex is mildly hyperechoic and a mild to moderate loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. The surrounding mesentery is mildly hyperechoic.

**Aortic bifurcation/trifurcation**

No abnormalities observed.

**Adrenal Glands**

The **left** adrenal gland measures 0.46 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.

The **right** adrenal gland measures 0.56 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.



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**Spleen**

Hestia Hoppes

The spleen is within normal limits in size 9.44 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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**Liver**

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There are no obvious signs of hepatomegaly. The liver's borders are smooth and sharp. A diffuse, mildly to moderately coarse or granular echotexture is observed, which may be due to a reactive hepatopathy. Increased portal markings are noted, which may occur due to inflammation, fat, mineralization, and/or fibrosis. No obvious abnormalities are noted with the hepatic vessels.

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The gallbladder wall is within normal limits in thickness and echogenicity. A small amount of echogenic material is present within the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

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**Gastrointestinal**

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A moderate amount of ingesta is present within the lumen of the stomach. 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 mesentery medial to the stomach is hyperechoic.

The small intestinal wall thickness are at the high end of the normal reference range. Although the definition of the wall layers is preserved, the muscularis and submucosa of the small intestines are thicker than normal. The surrounding mesentery is hyperechoic, which is suggestive of inflammation.

The wall layers of the jejunum are at the high end of the normal reference range (0.28 cm). The mucosa, submucosa and muscularis are thicker than normal.

Abnormally dilated loops of bowel are not observed.

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

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**Pancreas**

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The pancreas is mildly hypoechoic. The surrounding mesentery is markedly hyperechoic, suggestive of saponification. These findings are suggestive of pancreatitis. Overt signs of neoplasia are not appreciated.

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**Other**

**Lymph nodes** No abnormalities are observed

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**Abdominal effusion** Possible scant amount of anechoic fluid visualized

Very severe diffuse hyperechoic mesentery throughout the abdomen.

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*Heart*

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A brief video clip of the heart was submitted. No pericardial or pleural effusion is identified. Pulmonary edema is not noted. The left atrium to aortic ratio is within normal limits at 1.03.

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**ULTRASONOGRAPHIC FINDINGS**

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- The primary abnormalities observed involve the gastrointestinal tract. Differential diagnoses include inflammation secondary to very severe inflammatory bowel disease. However, infiltrative disease, such as lymphoma or other round cell tumour, cannot be excluded. Secondary pancreatitis is also possible.

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- The hepatic changes are suggestive of a reactive hepatopathy. The increased portal markings may be suggestive of inflammation, deposition of fat, mineralization, and/or fibrosis. cholangitis/cholangiohepatitis and cholecystitis cannot be excluded based on these findings.

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- Based on the above findings, "triaditis" must be considered.
- Mild to moderate renal changes are present, which are suggestive of degeneration. Glomerulonephritis cannot be excluded.

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- The free floating sediment within the lumen of the urinary bladder is most likely composed of mucus, crystalline material and exfoliated cells. The debris is likely clinically insignificant given the lack of inflammatory changes to the bladder wall, however, findings should be correlated with clinical signs and a urinalysis.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Treatment for visceral pain is recommended, including analgesics, such as buprenorphine, as well as supportive care, such as IV or subcutaneous. Depending on Hestie's hydration status, as well as maropitant, and possibly mirtazapine.

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Once her appetite has returned, deworming with a broad spectrum dewormer, such as fenbendazole, is suggested even if Hestia does not go outdoors.

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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.

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A TLI, vitamin B12, and folate may be performed as cats suffering from IBD and pancreatitis may suffer from cobalamin deficiencies and exocrine pancreatic insufficiency (EPI). If the test is cost prohibitive, supplementation with vitamin B12 is suggested. However, EPI will not be addressed with supplementation of vitamin B 12 alone.

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If an improvement is not observed with the above treatment, the following may be considered, i.e., cholestasis, cholangitis/cholangiohepatitis and cholecystitis cannot be excluded and secondary ascending bacterial infections may occur. Although indiscriminate use of antibiotics is not normally recommended, one could begin treatment with a broad-spectrum antibiotic and assess Hestie's clinical response.

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

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

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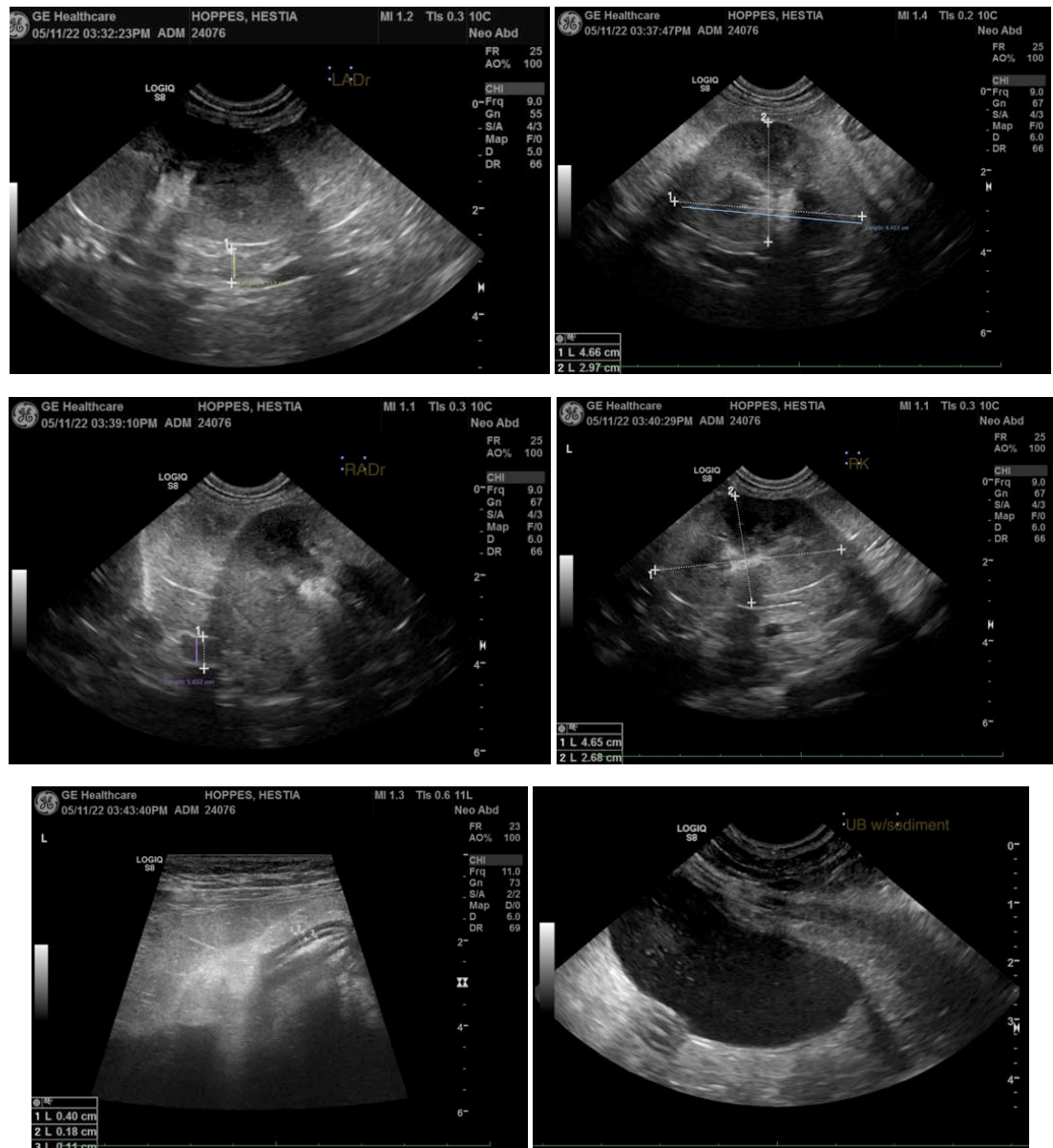
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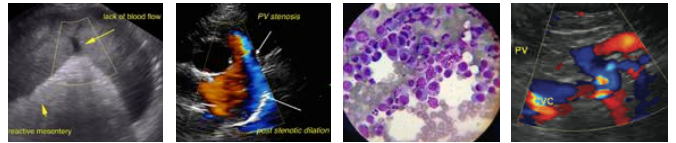
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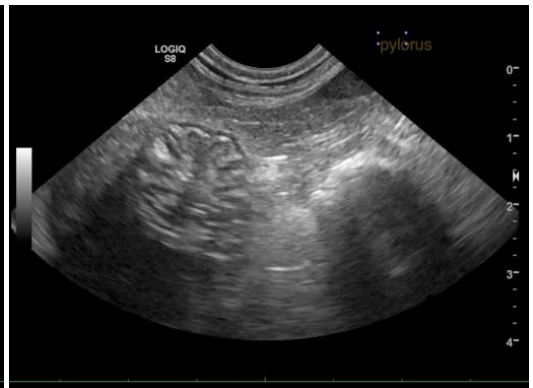
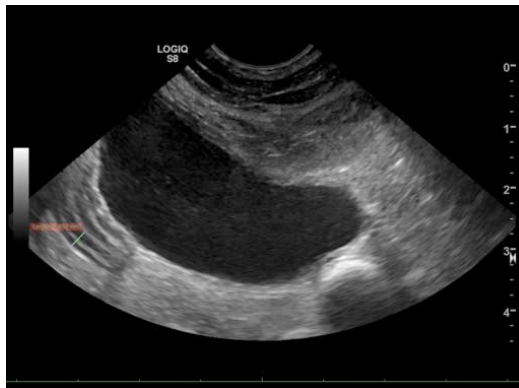
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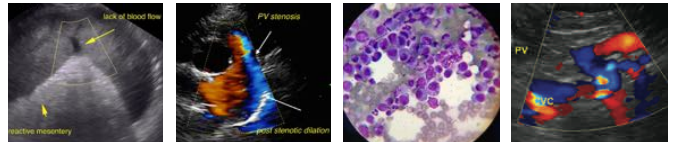
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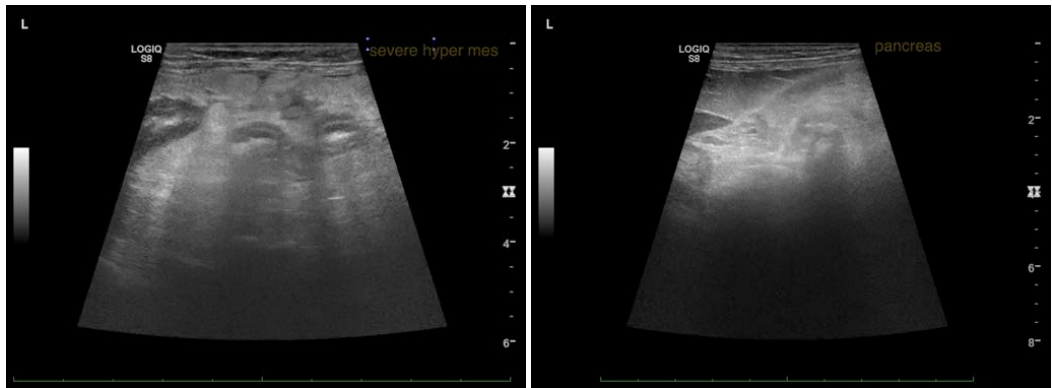
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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