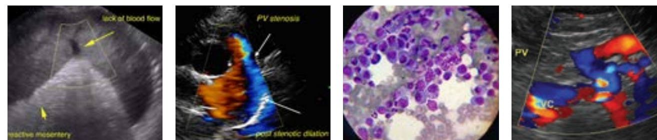


SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Catfish Thernell

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
12 Years 6 Months

WEIGHT
9.0 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Dr. Sarah Green

HOSPITAL NAME
Healing Spirit

REFERRING VET
Dr. Sarah Green

INVOICE
39800

DATE
7/22/22

PRESENTING CLINICAL SIGNS

Anorexia 5 days duration, no recent vomiting, not significantly improved with fluid support and Cerenia.
Abnormal PE/Chem/CBC/UA Results: amylase=2457 (300-1100) U/L, P=3.1 (3.4-8.5) mg/dL, fPL=15.3 (≥5.4 is consistent with pancreatitis) ng/mL

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is well distended. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra. A moderate amount of free floating and aggregated sediment is present, however, there is no evidence of cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 4.07 cm (3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic and a mild 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 hyperechoic.

The **right** kidney measures 3.73 cm(3.80-4.40 cm). The capsule is smooth. The cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, with a small nephroliths. Pyelectasia is not evident. An accumulation of intrapelvic fat is noted. The surrounding mesentery is hyperechoic

Aortic bifurcation/trifurcation No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.30 cm at the cranial pole, 0.30 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 are unremarkable.

The **right** adrenal gland measures 0.34 cm. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature are unremarkable.

Spleen

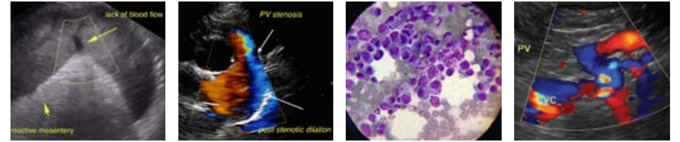
Splenomegaly 12.3 mm (normal = 10 mm). It is within normal limits in echogenicity, however, a mild miliary echotexture is present. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

There are no obvious signs of hepatomegaly. The liver's borders are smooth and vary between sharp to very mildly rounded. The liver has a mildly coarse or granular echotexture. It is mildly hyperechoic. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels. The walls of the portal veins are hyperechoic and more prominent, possibly due to inflammation.

The **gallbladder** (GB) wall is within normal limits in thickness, but mildly hyperechoic. A small amount of echogenic material (sludge), both free floating and gravity dependent, is present within the GB. The portion of the cystic duct visualized is not dilated or tortuous. The common bile duct is not visualized. There are no signs of an obstruction.

Gastrointestinal



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

PATIENT

Catfish Thernell

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

12 Years 6 Months

WEIGHT

9.0 Pounds

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Sarah Green

HOSPITAL NAME

Healing Spirit

REFERRING VET

Dr. Sarah Green

INVOICE

39800

DATE

7/22/22

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

Jejunum: A few segments are mildly thickened (0.27 cm - 0.32 cm). Multiple loops of bowel have a prominent mucosa, submucosa, and muscularis, as well as fogging of both the mucosa and muscularis. No abnormalities observed with the ileo-cecal-colic junction.

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

Pancreas

Mild hypoechogenicity of the pancreas is noted, in addition to decreased contrast ("hazy"). Obvious nodules, suggestive of infiltrative disease, are not visualized. Severe acoustic enhancement of the surrounding mesentery is present, however, it is difficult to determine the influence of the ascites.

Other

Lymph nodes No abnormalities are observed

Abdominal effusion

A small amount of anechoic of ascites is visualized surrounding the urinary bladder and the liver. A small to moderate amount is noted surrounding the kidneys.

Mesentery

The mesentery is diffusely hyperechoic, which is due, in part to the ascites.

ULTRASONOGRAPHIC FINDINGS

- **Pancreas**: Pancreatitis with edema are possible differential diagnoses for the sonographic changes observed. Although obvious nodules are not visualized, infiltrative disease cannot be excluded with certainty. Obvious signs of carcinomatosis are not noted.

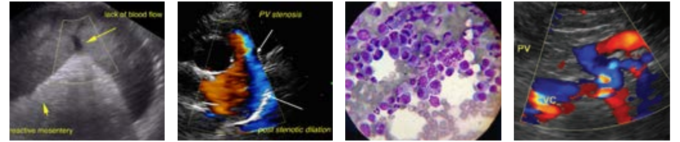
- **Spleen**: Splenomegaly with a subtle miliary echotexture. Differential diagnoses include splenitis, extramedullary hematopoiesis, hypersplenism and reactive hyperplasia. Neoplasia, such as lymphoma, or other round cell tumour, is considered less likely, but cannot be excluded. A fine needle aspirate is required to obtain a definitive diagnosis

- **Gastrointestinal (GI) tract:** Signs of diffuse gastrointestinal inflammation are observed. Differential diagnoses include a chronic enteropathy (CE), e.g., inflammatory bowel disease, food intolerance, etc. Although the definition of the wall layers is preserved, one cannot always differentiate neoplasia (lymphoma or other round cell tumour), from a CE without performing intestinal biopsies (and occasionally immunohistochemistry and PARR).

- **Liver:** A reactive hepatopathy is suspected. Cholestasis and cholangitis/cholangiohepatitis, including a suppurative component cannot be excluded. Furthermore, cholecystitis must be considered based on the gallbladder findings.

- **Gallbladder:** Cholecystitis, including a suppurative component cannot be ruled out despite the absence of classical sonographic signs, particularly due to the pancreatic changes observed. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or proton pump inhibitor may be required.

- *severe "**triaditis**" cannot be excluded.*



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

PATIENT

Catfish Thernell

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

12 Years 6 Months

WEIGHT

9.0 Pounds

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Sarah Green

HOSPITAL NAME

Healing Spirit

REFERRING VET

Dr. Sarah Green

INVOICE

39800

DATE

7/22/22

- **Kidneys:** Mild age-related degenerative changes are observed.
- **Urinary bladder**: Sediment in the lumen of the urinary bladder is most likely clinically insignificant, however, this should be correlated with urinalysis, +/- culture results.
- **Ascites**: May occur in association with vasculitis, increased permeability of the GI tract, extravasation, as well as a paraneoplastic cause.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Abdominocentesis to obtain a fluid sample, perform a cytospin and send slides for evaluation. This helps decrease risk of cellular degeneration.

Urinalysis, +/- culture results

A fine needle aspirate of the spleen could also be performed.

+/- serum cobalamin concentration (may be decreased with pancreatitis and IBD)

Treatment for pancreatitis, most importantly, analgesia, such as buprenorphine (0.005-0.01 mg/kg, sublingually, every 8-12 hours), with gabapentin. Continue for 3-4 weeks, or longer, as needed and taper the dose over a few weeks.

Supplementation with vitamin B12 if serum cobalamin concentrations not possible

If signs of gastro-esophageal reflux disease (GERD) due to IBD, pancreatitis, cholecystitis, etc., consider 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO **q12h**)

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

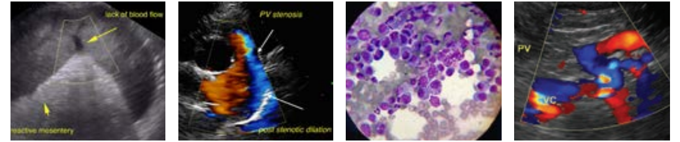
Small, frequent meals

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 within a few days of the above therapies. *If a response is observed, continue antibiotics for a total of 4 to 6 weeks.

Endoscopy and biopsies of the upper and lower GI tract would be ideal to obtain a definitive diagnosis, however, Catfish is not the ideal candidate for general anesthesia, therefore, empirical treatment with corticosteroids (for IBD, pancreatitis, triaditis, or lymphoma) may eventually be pursued depending on his response to the above treatment suggestions.

+/- Deworm depending on risk of exposure, including other pets in house that go outdoors

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Catfish Thernell

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
12 Years 6 Months

WEIGHT
9.0 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

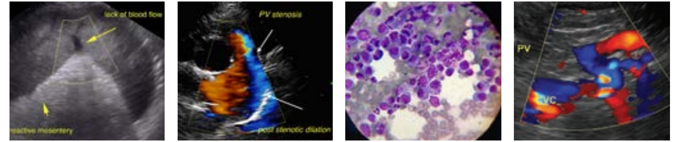
IMAGING PERFORMED BY
Dr. Sarah Green

HOSPITAL NAME
Healing Spirit

REFERRING VET
Dr. Sarah Green

INVOICE
39800

DATE
7/22/22



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

PATIENT

Catfish Thernell

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

12 Years 6 Months

WEIGHT

9.0 Pounds

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Sarah Green

HOSPITAL NAME

Healing Spirit

REFERRING VET

Dr. Sarah Green

INVOICE

39800

DATE

7/22/22

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