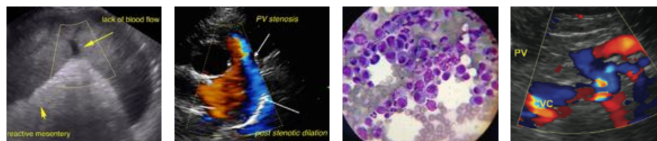
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Shadow Ratkowski

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed female

AGE

18 years

WEIGHT

8 lbs

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

Dr. Petrone

INVOICE

31789

DATE

7/19/22

PRESENTING CLINICAL SIGNS

History: History of weight loss and vomiting. Still eating well. History CKD creatinine 1.9 and USG: 1.018, elevated ALP

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 2.82 cm (3.80-4.40 cm), decreased in size. The capsule is smooth. The cortex is mildly hyperechoic and a very mild loss of the normal definition of the cortico-medullary junction is present. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is moderately hyperechoic, however, it appears to be associated with the left limb of the pancreas, rather than the kidney.

The **right** kidney measures 2.92 cm (3.80-4.40 cm), decreased in size. 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 and small nephroliths are observed along the diverticulae and in the pelvis. There is no evidence of pyelectasia. The surrounding mesentery is not hyperechoic.

Adrenal Glands

The adrenal glands are not visualized, however, obvious abnormalities are not observed in the surrounding regions.

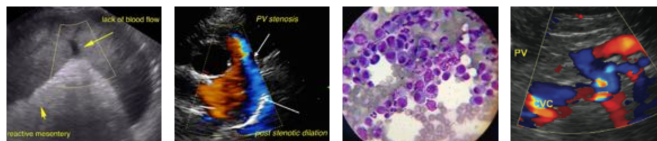
Spleen

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

Mild hepatomegaly is suspected, however, this is better characterized at the time of the ultrasound or radiographically. The liver's borders are smooth, but mildly rounded. It is diffusely hyperechoic and has a mildly coarse or granular echotexture. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels.

The **gallbladder** (GB) 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.



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

PATIENT
Shadow Ratkowski

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed female

AGE
18 years

WEIGHT
8 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Dr. Petrone

HOSPITAL NAME
Long Branch AH

REFERRING VET
Dr. Petrone

INVOICE
31789

DATE
7/19/22

Gastrointestinal

A small amount of gas is present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined, however, the fogging of the mucosa is present. No obvious abnormalities are observed with its peristalsis. An obvious mass is not visualized.

Duodenum: The duodenum is thickened (0.39 cm). Fogging of the mucosa and muscularis is present, with areas of decreased preservation of wall layering.

Jejunum: Some segments are corrugated and within normal limits in thickness, while others are mildly to severely thickened, measuring between 0.29 -0.40 cm. The muscularis is thickened with minimal to severe fogging. Some segments have severe fogging of the mucosa. The definition of the individual wall layers is not always well preserved, i.e. a segment may have well defined regions, and a focal area of "haziness", followed by conservation of wall architecture.

The ileo-cecal-colic junction (ICCJ) is thickened at 0.41 cm. Ingesta and gas are present within the colon at the level of the ICCJ. Although the architecture of the wall layers is conserved, the submucosa of the colon is thicker than usual and the surrounding mesentery is mildly hyperechoic.

The colonic wall varies between the high end of the normal reference range and mildly thickened. Fogging of the mucosal layer is observed.

Pancreas

The pancreas has a mildly coarse echotexture, which is considered secondary to age related changes, however, previous episodes of pancreatitis cannot be excluded. The mesentery surrounding the left limb is moderately hyperechoic. Signs of active pancreatitis cannot be excluded, however, overt signs of neoplasia are not noted.

Other

Lymph nodes No obvious abnormalities are observed

Abdominal effusion is not visualized.

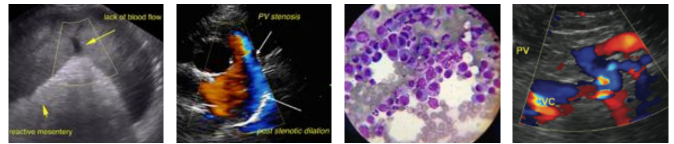
ULTRASONOGRAPHIC FINDINGS

- **Gastrointestinal (GI) tract**: Severe inflammation of the GI tract is possible, however, a few loops of bowel show mild, but focal loss of definition of wall layering. Although the latter may occur with inflammation associated with a chronic enteropathy (e.g., inflammatory bowel disease), neoplasia, such as lymphoma (or other round cell tumour), cannot be excluded. Furthermore, both diseases may be present concurrently in some patients.

- **Pancreas**: Mild pancreatitis may be present. Overt signs of neoplasia are not appreciated.

- **Liver**: Hepatic lipidosis is suspected. A reactive hepatopathy may also be present (mildly coarse/granular echotexture). Cholestasis, and cholangitis/cholangiohepatitis are considered less likely, but cannot be excluded.

- **Gallbladder**: Small amount of gallbladder **sludge**, which is most likely clinically insignificant. However, gastroesophageal reflux disease (GERD), can occur in some patients. Although sonographic signs of cholecystitis are not appreciated, *suppurative cholecystitis* may occur due



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

PATIENT
Shadow Ratkowski

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed female

AGE
18 years

WEIGHT
8 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Dr. Petrone

HOSPITAL NAME
Long Branch AH

REFERRING VET
Dr. Petrone

INVOICE
31789

DATE
7/19/22

to ascending bacterial infections from the GI tract. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or proton pump inhibitor may be required.

- Note, *underlying triaditis* cannot be excluded.
- **Kidneys**: Subtle age-related changes are present. There are no obvious signs of pyelonephritis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, it is not possible to differentiate chronic enteropathy (e.g., IBD/steroid responsive disease) from lymphoma based on Shadow's ultrasound.

Analgesia (buprenorphine (0.005-0.01 mg/kg, sublingually, every 8-12 hours) with or without gabapentin. Continue for 3-4 weeks, or longer, as needed.

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

Diet trial (veterinary prescription brand hypoallergenic, i.e., hydrolyzed preferable compared to novel protein). Ensure appetizing to prevent hepatic lipidosis, sarcopenia and cachexia.

Small, frequent meals

Ideally, endoscopy and biopsies of the stomach, and both the small and large intestines, even if no history of diarrhea, would be ideal. However, assuming general anesthesia would like to be avoided, the following are suggested/may be pursued.

Serum cobalamin and folate, TLI, +/- Spec fPL, to assess for underlying maldigestion and malabsorption disease and dysbiosis and confirm pancreatitis. Note, for the TLI, a false negative may occur if pancreatitis is present.

Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or proton pump inhibitor may be required (e.g. 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO **q12h**)

Possible triaditis, cholestasis, and cholangitis/cholangiohepatitis cannot be excluded, including and secondary ascending bacterial infections. Although indiscriminate use of antibiotics is not normally recommended, one could begin treatment with a broad-spectrum antibiotic and assess clinical response. *If a response is observed, continue antibiotics for a total of 4 to 6 weeks.

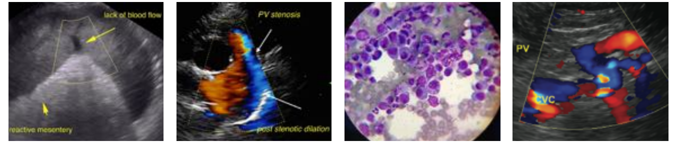
If further diagnostics are not pursued: Although not ideal, empirical therapy with prednisolone at 1 mg/kg/day for 14 days, then tapered to the minimum effective dose).

+/- chlorambucil depending on response to prednisolone therapy

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com

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

PATIENT

Shadow Ratkowski

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed female

AGE

18 years

WEIGHT

8 lbs

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

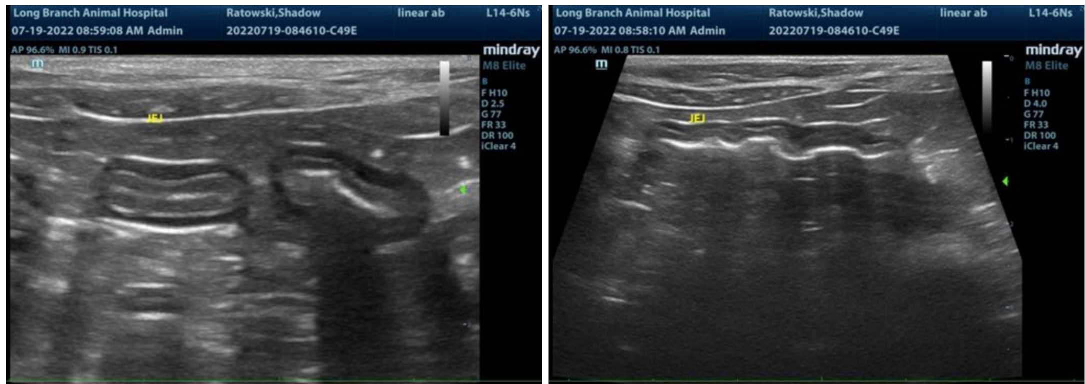
Dr. Petrone

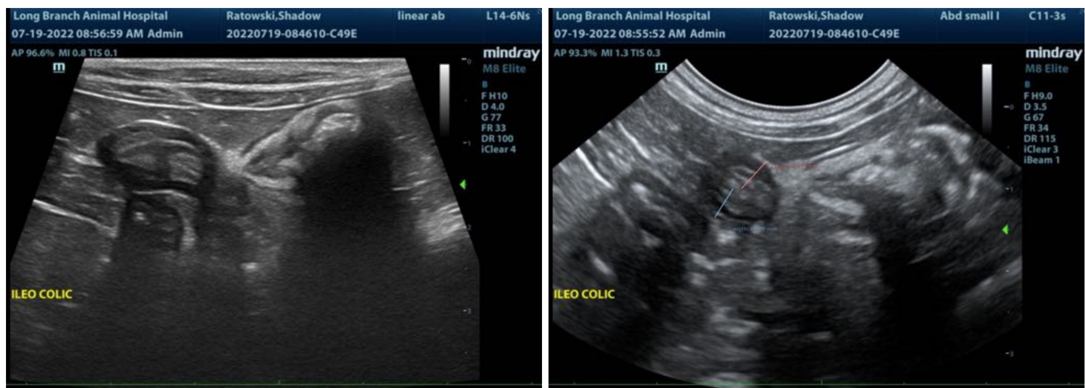
INVOICE

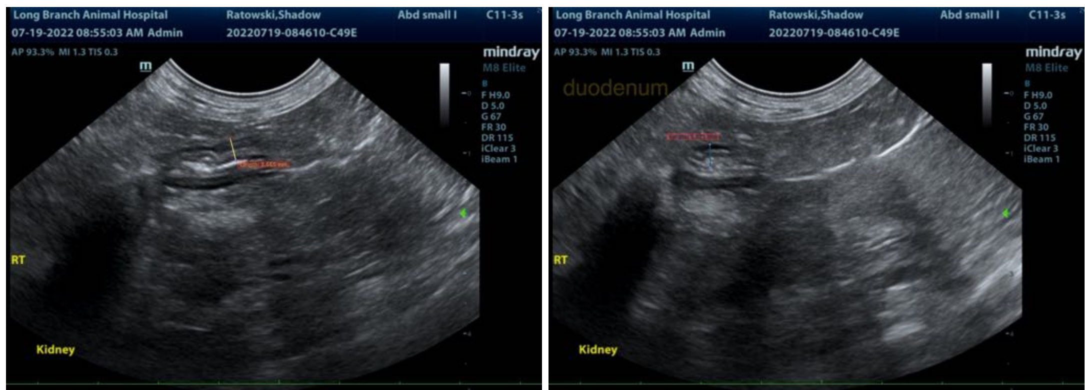
31789

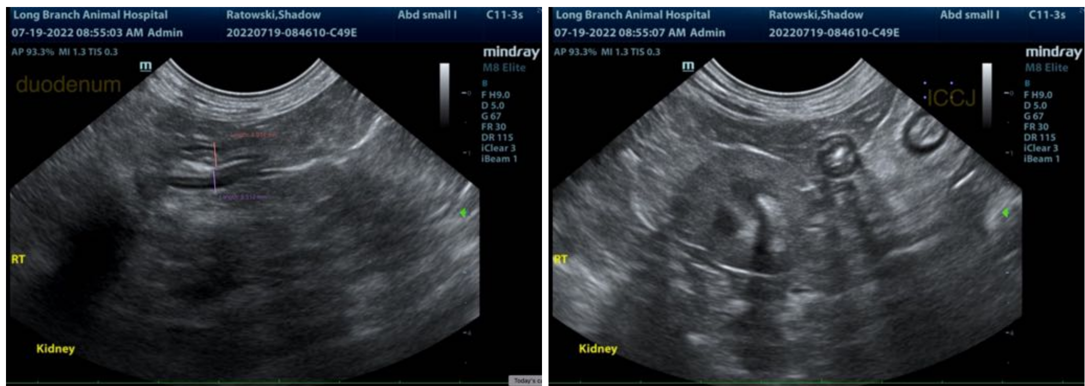
DATE

7/19/22





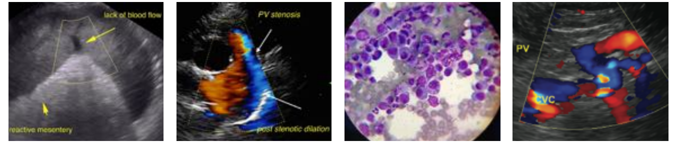




SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com

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

PATIENT

Shadow Ratkowski

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed female

AGE

18 years

WEIGHT

8 lbs

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

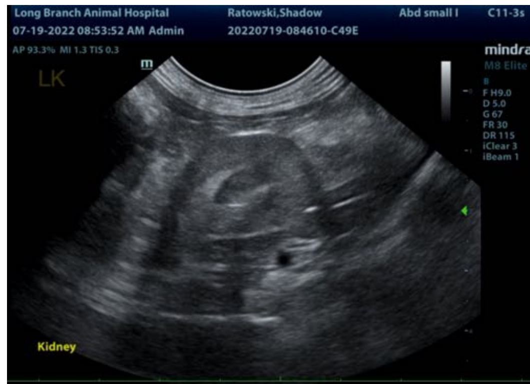
Dr. Petrone

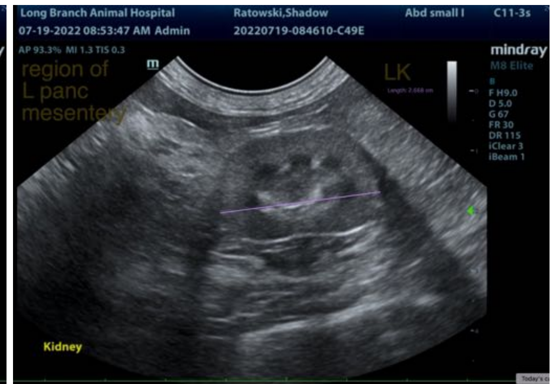
INVOICE

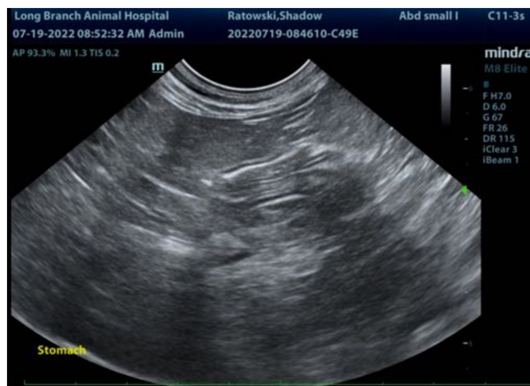
31789

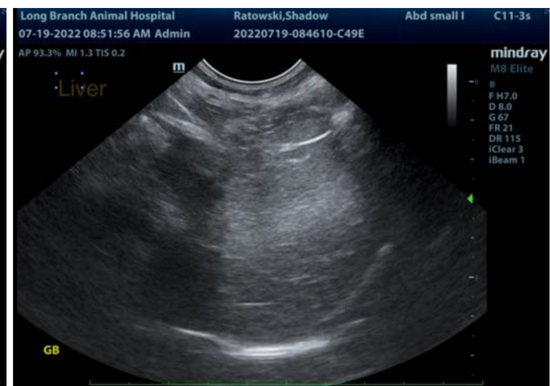
DATE

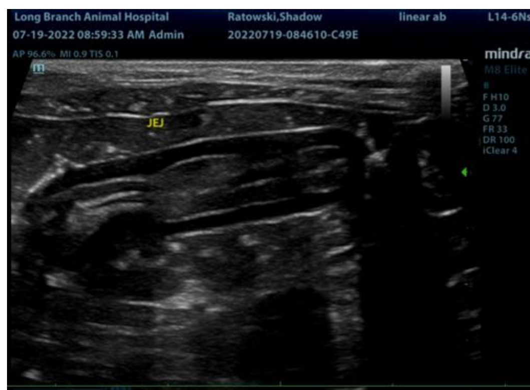
7/19/22

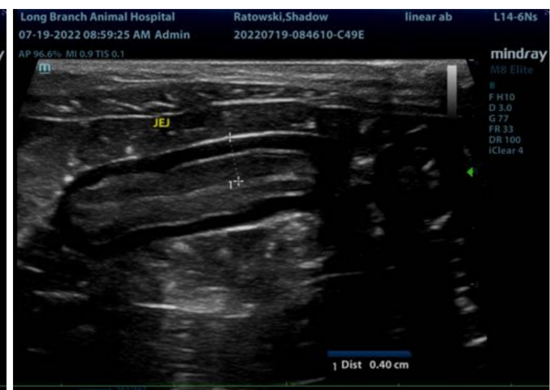


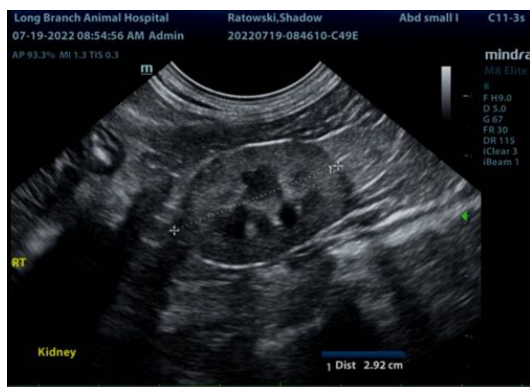


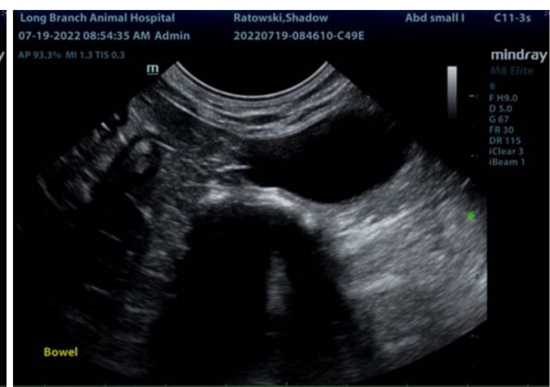


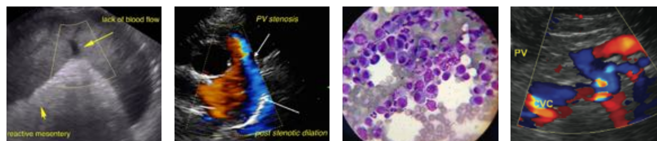












SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Shadow Ratkowski

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed female

AGE

18 years

WEIGHT

8 lbs

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

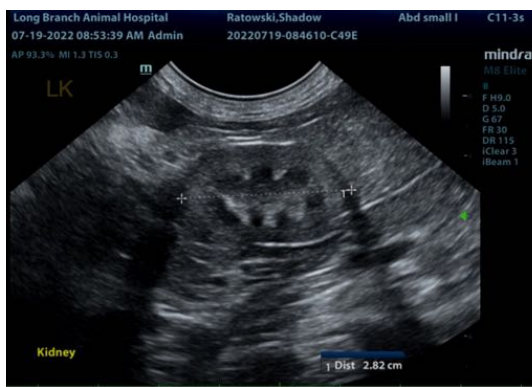
Dr. Petrone

INVOICE

31789

DATE

7/19/22



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