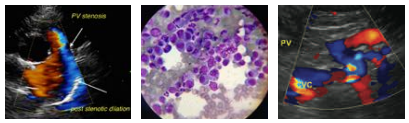
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

DATE
6/13/22

PATIENT
Bailey Zirlina

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed Female

AGE
6/4/08

WEIGHT
15.5 lbs

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

HOSPITAL NAME
Glen Burnie AH

REFERRING VET
Dr. Shah

INVOICE
30973

PRESENTING CLINICAL SIGNS

Anorexia, weight loss.
Current Medications: Convenia injection.
Lab Results: Attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Pearce RDCS, RVT.

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 small amount of sediment is present, however, there is no evidence of cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 3.15 cm (3.80-4.40 cm), decreased in size. The capsule is smooth. A mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations and small nephroliths (acoustic shadowing depending on angle) of the diverticulae are present, as well as pelvic mineralizations, without evidence of pyelectasia. Blood flow is within normal limits. The surrounding mesentery is very mildly hyperechoic, but is diffusely hyperechoic in the left cranial quadrant.

The **right** kidney measures 3.37 cm (3.80-4.40 cm). Findings are similar to the left kidney, in addition to mild acoustic shadowing of pelvis.

Adrenal Glands

The **left** adrenal gland measures 0.29 cm. 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 0.29 cm 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 6.6 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. The liver's borders are smooth and sharp. It is homogeneous and within normal limits in echogenicity. No focal lesions are visualized. The walls of the portal veins are slightly more prominent than usual. The hepatic veins are within normal limits.

The gallbladder (GB) wall is within normal limits in thickness and echogenicity. A moderate amount of inspissated and free floating 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.

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 small intestinal wall thickness and definition of the wall layers is preserved, however, stippling and fogging of the mucosa is observed, and the submucosa is thicker than normal. Subjectively, the submucosa appears slightly *hypo*echoic. A small amount of ingesta and gas are present in a large number of the small intestines.

No abnormalities are observed with the ileo-cecal colic junction. However, the cranial segment of the colon is thicker than usual, measuring 0.26 cm. Wall definition is within normal limits.

The descending colonic wall is significantly thickened, focally (0.6 cm) for approximately 6 cm ventral to the urinary bladder. Mural detail is maintained for the most part, with severe fogging of the mucosa and muscularis, which is more prominent. However, a complete loss of wall definition is observed in one view.

The descending colon distal to the urinary bladder is within normal limits in thickness and wall definition. Gas and a small amount of fecal matter are present in the colon

Pancreas

The left limb has a mildly coarse echotexture, which is considered secondary to age related changes, however, previous episodes of pancreatitis cannot be excluded. The surrounding mesentery is mildly hyperechoic, as is the rest of the mesentery in the left cranial quadrant. Obvious signs of active pancreatitis or neoplasia or not observed.

A small portion of the right limb is observed. Findings are similar to the left limb.

Other

Lymph nodes

No abnormalities are observed.

Abdominal effusion is not visualized.

Mesentery

The mesentery is diffusely hyperechoic, but appears more prominent in the left cranial quadrant.

ULTRASONOGRAPHIC FINDINGS

- **Gastrointestinal (GI) tract and hyperechoic mesentery**: The changes noted with the small intestines are suggestive of inflammatory bowel disease. Emerging lymphoma could be the cause of these changes. Neoplasia, such as lymphoma, may be the cause of the focal colonic thickening and loss of wall detail. However, other differentials include focal neoplasms, such as adenocarcinoma, leiomyosarcoma, or benign leiomyoma. Lymphadenomegaly is not appreciated. The diffuse hyperechoic mesentery throughout the abdomen is consistent with smoldering inflammation, due to IBD, or other ongoing diffuse inflammatory process. Neoplasia cannot be excluded. Note, although much less likely, a foreign body that remained "stuck" at the specific area of the colon for a short period can cause irritation and inflammation, which could theoretically cause the colonic changes. However, a foreign body should not cause complete loss of wall definition.

- *Dysbiosis* is possible, as is *hypocobalminemia*.

- **Gallbladder**: Gallbladder **sludge** is often clinically insignificant, however, gastroesophageal reflux disease (GERD), can occur in some patients. Furthermore, *suppurative cholecystitis* cannot be excluded despite the absence of sonographic abnormalities. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor or ursodeoxycholic acid may be required.

- **Pancreas**: *Age related changes* are observed, however, previous episodes of pancreatitis cannot be excluded. Although the surrounding mesentery is hyperechoic, it is more likely due to GI inflammation based on the appearance of the pancreas, however, a *smoldering pancreatitis or intermittent bouts of pancreatitis* should not be excluded.

- **Kidneys**: *Age related degeneration* is suspected, however, mineralization and very small nephroliths may be acting as a nidus for infection. A component of the changes observed may be due to *pyelonephritis*.

- **Urinary bladder**: Although the bladder wall does not show inflammatory changes, pyelonephritis cannot be excluded based on the renal changes, therefore, the sediment should not be ignored. The debris is likely composed of mucus, crystalline material and exfoliated cells, however, ***subclinical bacteriuria and pyelonephritis*** cannot be excluded.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended
Ideally, endoscopy of the small and large intestines. If not possible, then the large intestines alone may be scoped and biopsied.
A urinalysis and urine culture and sensitivity to exclude pyelonephritis.

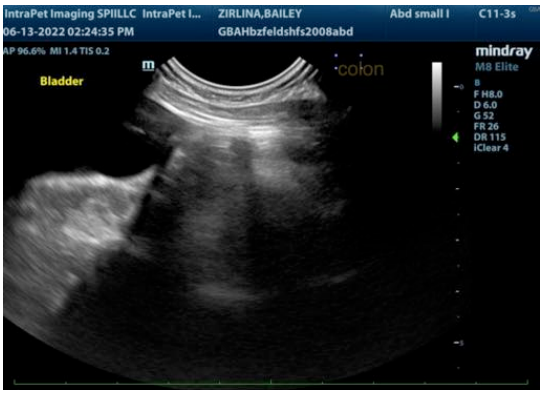
Analgesia (buprenorphine (0.005-0.01 mg/kg, sublingually, every 8-12 hours) with or without gabapentin. Continue for 3-4 weeks, or longer, as needed.
Treatment of nausea

Small, frequent meals

Supplementation with cobalamin
Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or proton pump inhibitor, and possibly ursodeoxycholic acid, may be required depending on the patient's history. *Treatment with ursodeoxycholic acid is not recommended while Bailey is hyporexic or nauseous*.

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. *The administration of cefovecin (Convenia) will likely have treated this. If an improvement is observed, administer 2-3 additional doses 10-12 days apart.

If further diagnostics are not pursued, although not ideal, empirical treatment for lymphoma or severe inflammatory bowel disease is suggested. For example, prednisolone (1 mg/kg/day), and then tapered to the minimum effective dose.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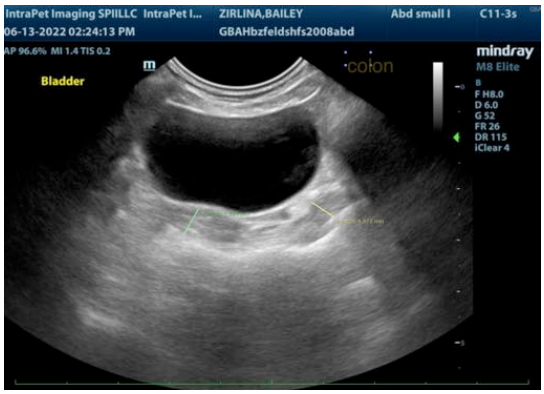
Bladder
colon
mindray
M8 Elite
B
F H8.0
D 6.0
G 52
FR 26
DR 115
iClear 4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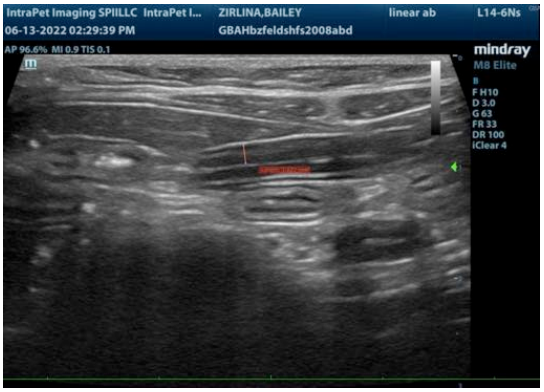
Bladder
colon
mindray
M8 Elite
B
F H8.0
D 6.0
G 52
FR 26
DR 115
iClear 4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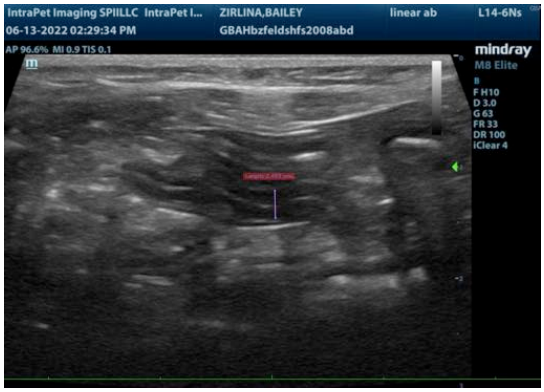
M8 Elite
B
F H10
D 3.0
G 63
FR 33
DR 100
iClear 4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M8 Elite
B
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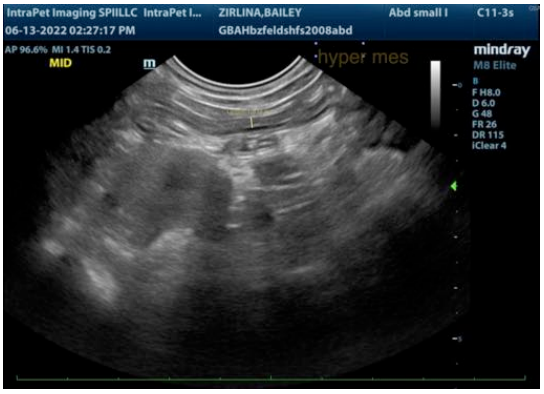
D 3.0
G 63
FR 33
DR 100
iClear 4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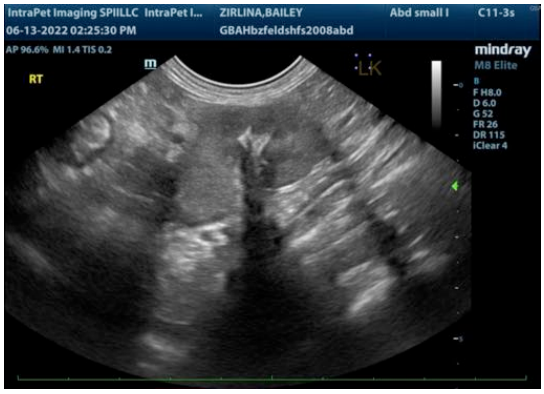
AP 96.6% MI 1.4 TIS 0.2
MID
hyper mes
mindray
M8 Elite
B
F H8.0
D 6.0
G 48
FR 26
DR 115
iClear 4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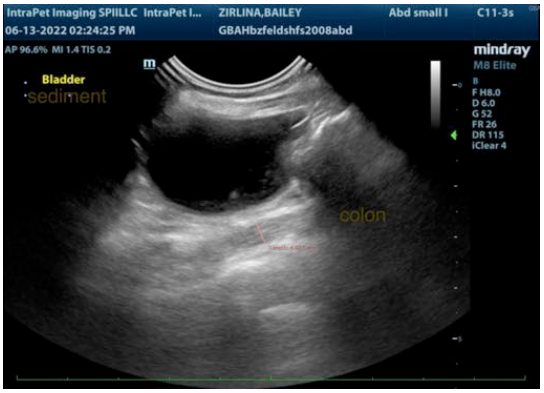
RT
LK
mindray
M8 Elite
B
F H8.0
D 6.0
G 52
FR 26
DR 115
iClear 4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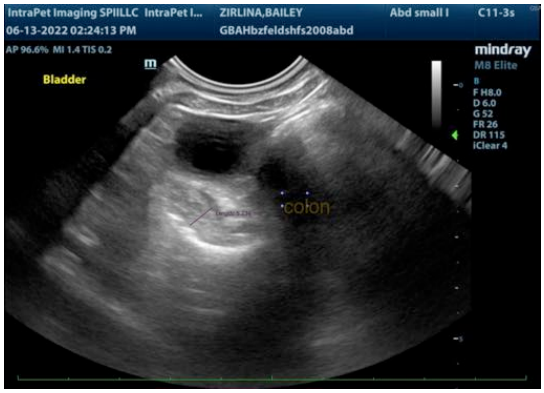
mindray
M8 Elite
Bladder
sediment
colon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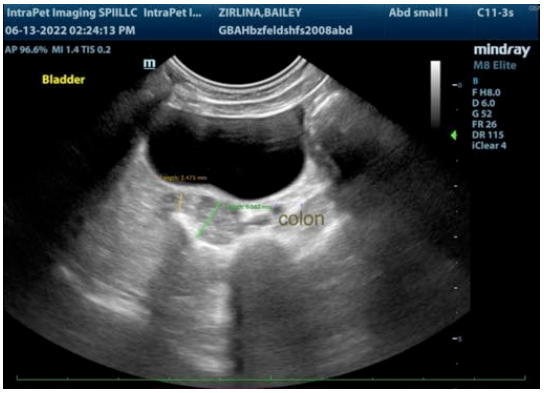
AP 96.6% MI 1.4 TIS 0.2
mindray
M8 Elite
Bladder
colon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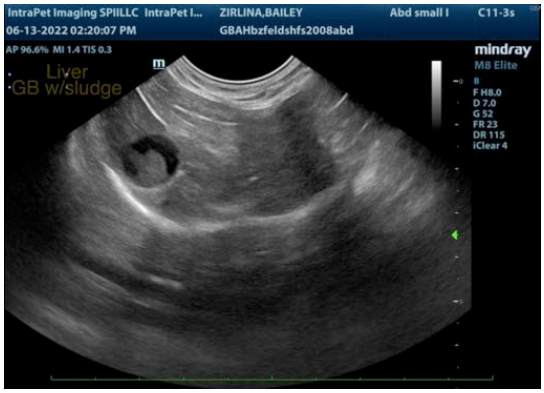
AP 96.6% MI 1.4 TIS 0.2
mindray
M8 Elite
Bladder
colon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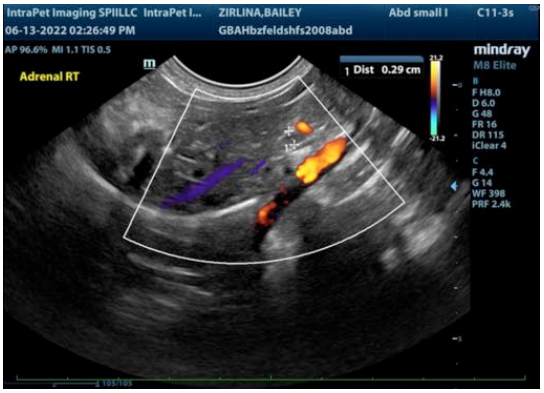
mindray
M8 Elite
Liver
GB w/sludge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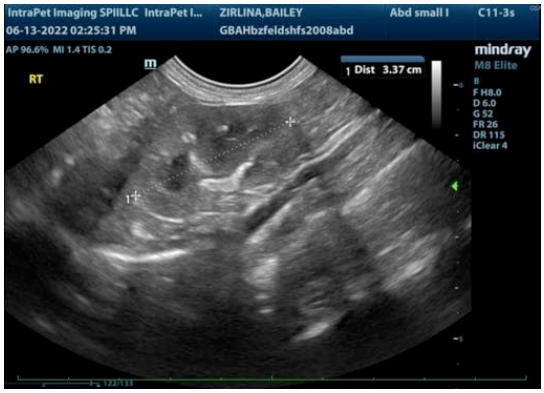
mindray
M8 Elite
Adrenal RT
1 Dist 0.29 cm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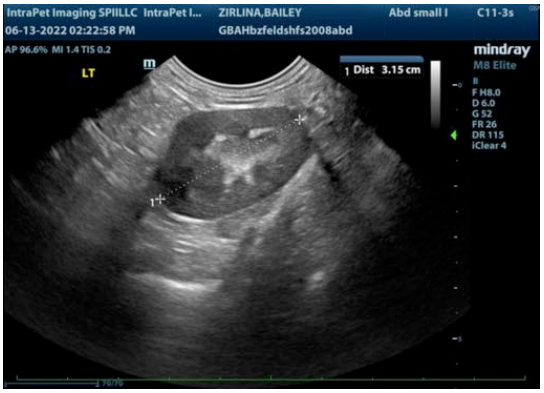
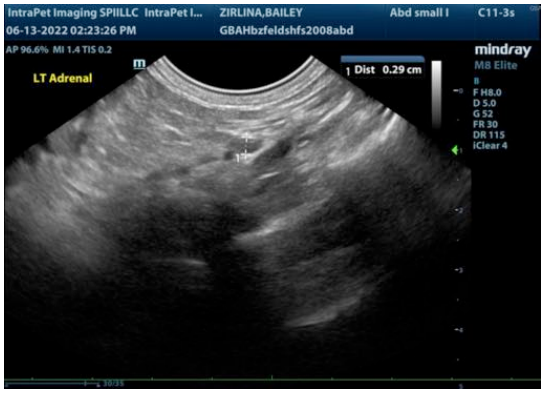
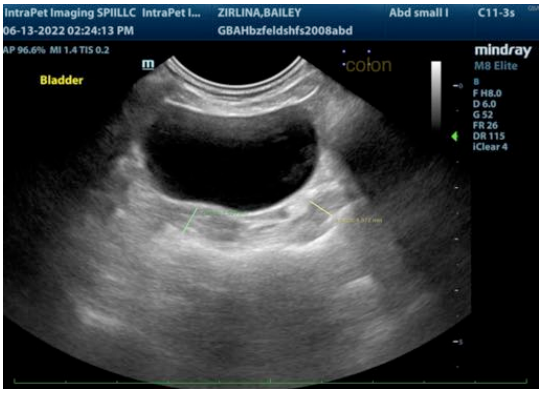
mindray
M8 Elite
RT
1 Dist 3.37 cm







The information and recommendations provided are based on the images presented by the referring veterinarian. 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