IMAGING PERFORMED BY

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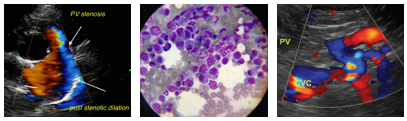


SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

DATE

7/8/22

PATIENT

Zoey Fiore

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

7/5/15

WEIGHT

8 Pounds

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Homeward Bound VS

REFERRING VET

Dr. Vance

INVOICE

39355

PRESENTING CLINICAL SIGNS

Presents for not eating since Thurs. Is chewing funny and holding mouth weirdly.

Current Medications: None listed.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

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 3.30 cm (3.80-4.40 cm). The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. The arcuate arteries and one of the calyces at the anti-mesenteric border are mildly hyperechoic, without evidence of acoustic shadowing. Fat, early mineralization and/or mild ischemia are possible causes. However, blood flow is considered within normal limits. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 3.99 cm (3.80-4.40 cm). The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.51 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 0.58 cm in diameter. Subjectively, it is mildly enlarged in size and "plump". It is 0.47 cm at the cranial pole, 0.45 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 and mesentery are unremarkable.

Spleen

The spleen is within normal limits in size, echotexture, and echogenicity. The capsule is smooth. No obvious 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. A diffuse, mildly coarse or granular echotexture is observed, in addition to diffuse hyperechogenicity (when compared to the spleen). Focal lesions are not observed and no abnormalities are observed with the hepatic vessels.

The **gallbladder** (GB) is severely dilated. A moderate to large amount of free floating and gravity dependent echogenic material (sludge) is present. The GB wall is mildly thickened (1.4 mm) and hyperechoic. There is no evidence of edema surrounding the GB. The cystic duct is severely dilated and tortuous. The parenchyma is

hyperechoic along the trajectory of the cystic duct. It is difficult to measure the duodenal papilla, i.e. the round, papilla is enlarged and measures 0.94 cm in diameter x 1.37 cm in length, however, echogenic material appears to extend from the papilla along the CBD into the duodenum and pancreatic duct. Differential diagnoses for the echogenic material include debris (sludge), a soft tissue structure, such as a mass or severe inflammation. The latter is suspected as the soft tissue is not vascularized. The common bile duct is moderately to severely dilated (0.53 cm – 0.96 cm), and tortuous, depending on location.

Gastrointestinal

Ingesta and gas are 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 proximal duodenum is dilated, corrugated and filled with stagnant ingesta. Fogging of the duodenal mucosa is present.

Jejunum: The small intestinal wall thickness varies between the normal reference range to mildly thickened (0.28 – 0.31 cm). The submucosa and muscularis layers are more prominent than what is considered normal. Although the definition of the wall layers is preserved, mild to moderate fogging of the mucosa is also present. The jejuni are filled with granular, echogenic ingesta, gas and fluid in the caudal abdomen. Peristalsis is decreased in the same area and the jejunal lymph nodes are more prominent than usual. No abnormalities are observed with the ileocecal colic junction.

Gas and ingesta are present within the transverse colon.

The colonic wall is not thickened and mural detail is considered normal. Formed stools are present within the colon.

Pancreas

The pancreas has a mildly coarse echotexture. It is mildly hypoechoic. The contours are mildly irregular. The surrounding mesentery is mildly hyperechoic. The pancreatico-duodenal duct is prominent, but within normal limits (1.45 mm). Signs of mild active pancreatitis are present.

Other

Lymph nodes

Jejunal LNs: A few are hypoechoic and moderately prominent. One is mildly enlarged, and more plump, measuring, 0.54 cm in diameter x 1.33 cm in length. The mesentery surrounding the lymph nodes is moderately hyperechoic.

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- **Gallbladder and Liver:** Partial extrahepatic bile duct obstruction is present. Inflammation of the duodenal papilla is suspected. The two most likely differential diagnoses for the echogenic material within the CBD include a soft tissue structure, such as a mass or severe inflammation. The latter is considered more likely due to a lack of vascularization, however, neoplasia cannot be excluded with certainty. Signs of cholecystitis are also present, which is often suppurative, due to ascending bacterial infections from the gastrointestinal tract. Cholestasis and (suppurative) cholangitis/cholangiohepatitis are also likely, in addition to hepatic lipidosis.

- **Gastrointestinal tract**: A mild ileus of the duodenum and jejunum are present. The duodenal ileus is most likely due to the extrahepatic bile duct obstruction. However, mild signs of inflammation are present throughout the small intestines, therefore, an underlying chronic enteropathy, such as inflammatory bowel disease, food intolerance, etc. is possible.

- **Pancreas**: Mild, active pancreatitis is suspected. This is attributed to inflammation as a result of the extrahepatic bile duct obstruction.

- **Lymph nodes**: Very mild lymphadenomegaly, which is attributed to reactive hyperplasia.

- *Note, underlying "triaditis" cannot be excluded.*

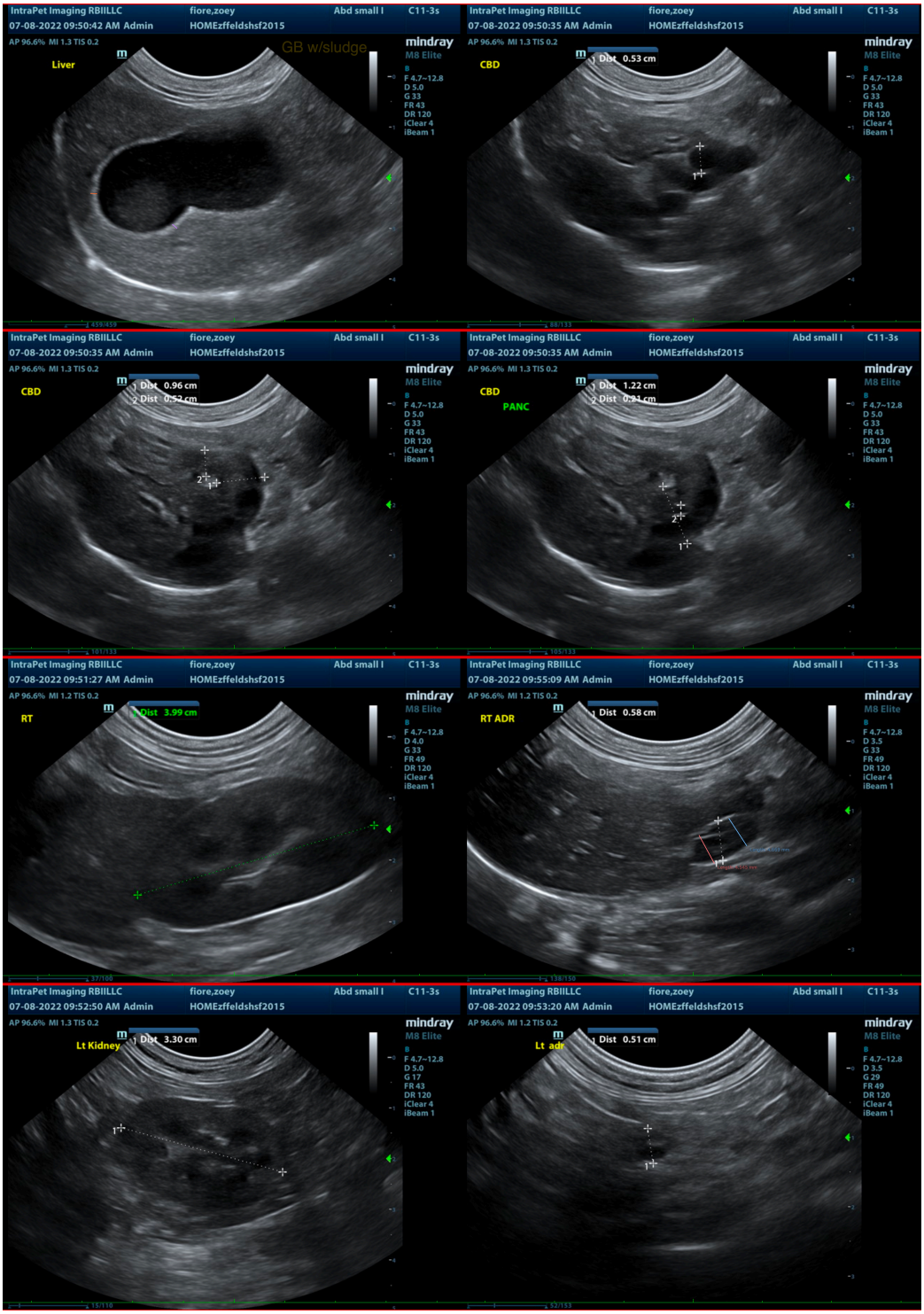
- **Adrenal glands**: The adrenal glands are considered mildly enlarged for a cat. This is most likely due to hyperplasia secondary to stress and illness.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The following are suggested/recommended
Depending on Zoey's condition this morning, medical management may be attempted, vs. an exploratory laparotomy.

- Ideally, urinalysis to complete minimum data base and evaluate for bilirubinuria
- Hospitalization with intravenous fluids
- Intravenous antibiotics, enrofloxacin and ampicillin IV slowly
- Analgesia, buprenorphine, or may require a CRI of fentanyl, +/- CRI of ketamine and lidocaine
- Other supportive care: Anti-emetics (maropitant), famotidine or preferably, pantoprazole IV
- Coagulation profile and consider blood typing in case of surgery
- Vitamin K injection 0.5 mg/kg SQ every 8 hours for 2-3 doses (treatment of cholestasis).
- Arterial blood pressure
- +/- One dose of dexamethasone IV or SQ at 0.05-0.1 mg/kg to decrease inflammation at duodenal papilla. However, if neoplasia is present (e.g., lymphoma), and surgery is required, the administration of steroids may eliminate the ability to obtain a definitive diagnosis (biopsy).

Depending on response to the above, an exploratory laparotomy may be required, however, a sonographic re-evaluation of Zoey's hepatobiliary system and GI tract is recommended prior to pursuing surgery.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Liver
GB w/sludge
mindray
M8 Elite
IntraPet Imaging RBIILLC
fiore,zoey
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CBD
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mindray
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fiore,zoey
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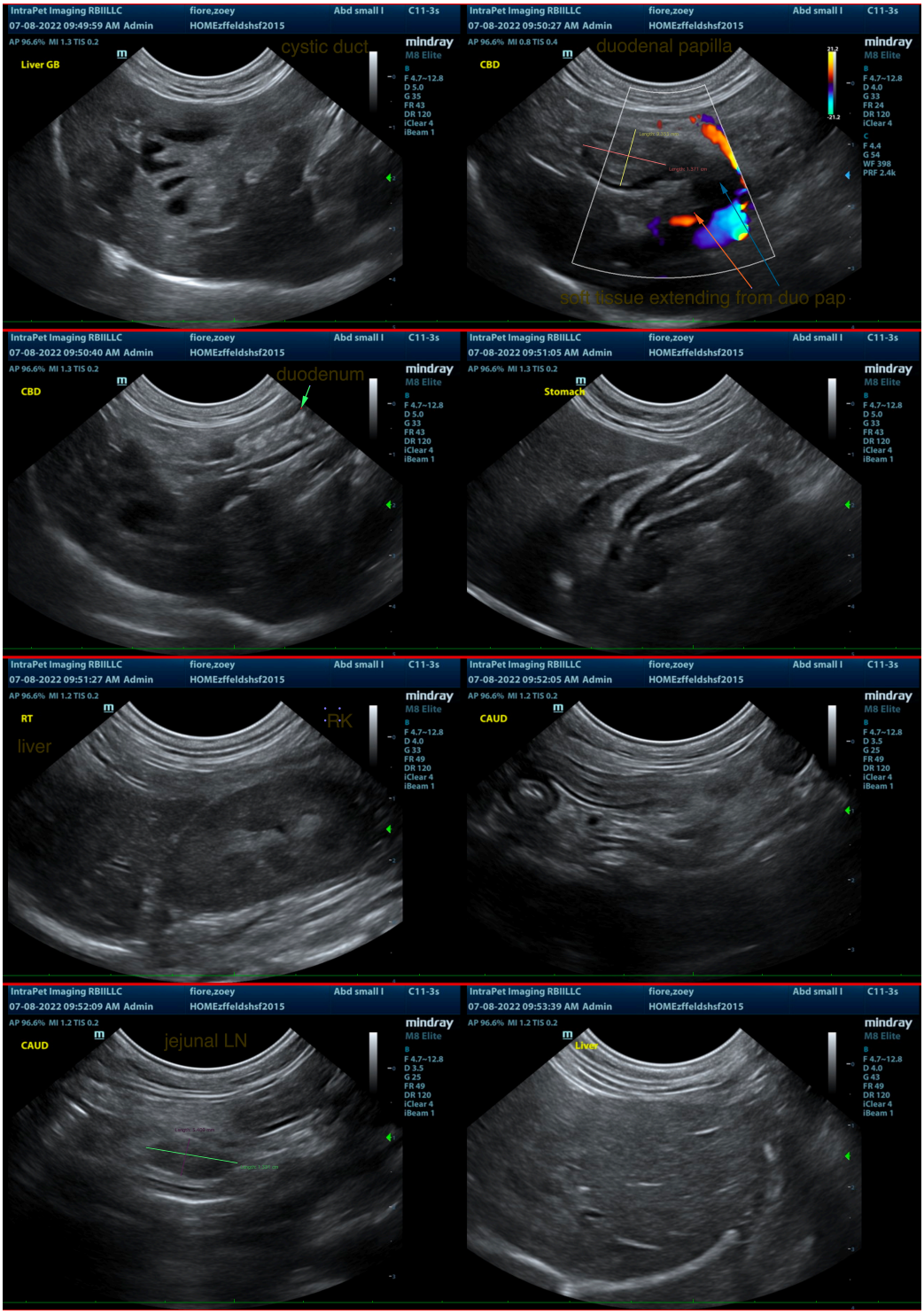
mindray
M8 Elite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Liver GB
cystic duct
mindray
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fiore,zoey
Abd small I
C11-3s
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CBD
duodenal papilla
soft tissue extending from duo pap
mindray
M8 Elite
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fiore,zoey
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AP 96.6% MI 1.3 TIS 0.2
CBD
duodenum
mindray
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Stomach
mindray
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fiore,zoey
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RT
liver
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fiore,zoey
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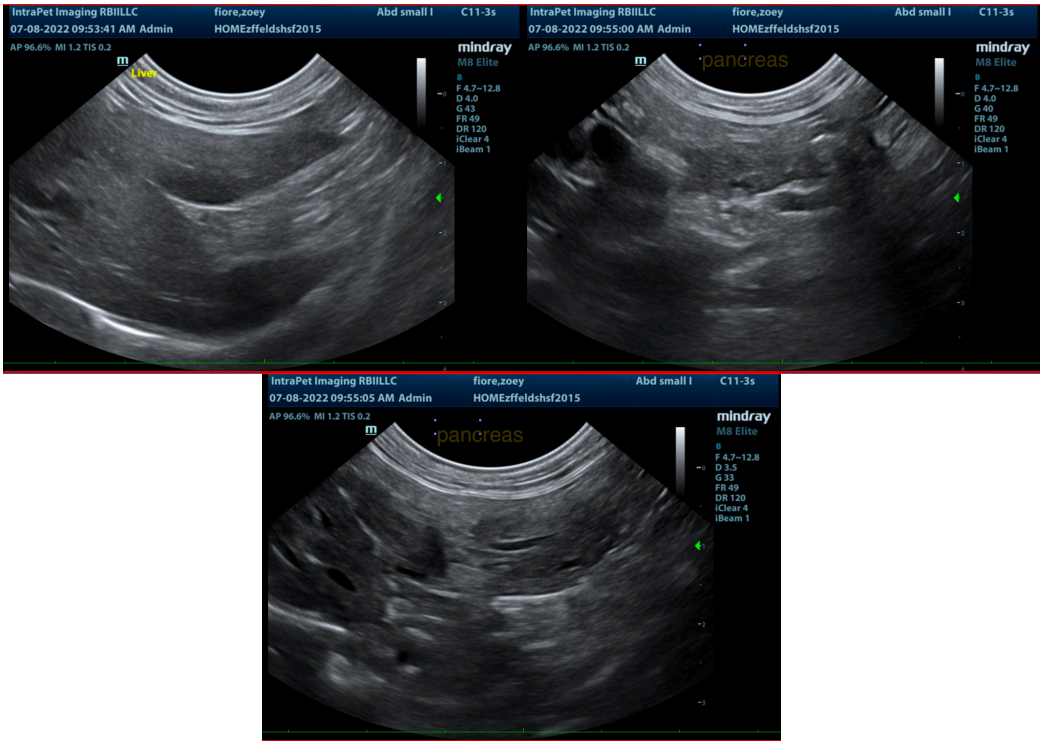
M8 Elite



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 AVIM

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