IMAGING PERFORMED BY

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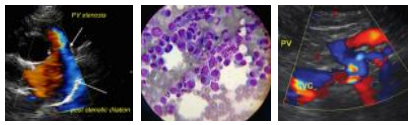

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE
6/7/22

PATIENT
Milli Holland

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
8/15/2008

WEIGHT
7.7 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

HOSPITAL NAME
Honeygo AH

REFERRING VET
Dr. Moffa

INVOICE
15925

PRESENTING CLINICAL SIGNS

History: Weight loss, diarrhea, hyporexia, thick ropey intestines.

Current Medications: Metronidazole Susecnsion 100mg/mL.
Lab Results: ALT, SAP, Total bilirubin all elevated.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

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 3.67 cm (3.80-4.40 cm). The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is very well preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is mildly hyperechoic, which is attributed to the GI tract and not the kidney.

The **right** kidney measures 3.93 cm (3.80-4.40 cm). Findings are similar to the left kidney.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland is noted in passing, but not measured. 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 is not visualized.

Spleen

The spleen is within normal limits in size 7.4 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. Its borders are smooth, but rounded. It is mildly, but diffusely hyperechoic. A subtle, coarse/granular echotexture is present. Focal lesions are not noted. No abnormalities are observed with the hepatic vessels. The mesentery medial to the liver is hyperechoic.

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.

Gastrointestinal

The gastric wall is within normal limits in thickness and the wall layers are well defined, however, the muscularis is more prominent than usual. No obvious abnormalities are observed with its peristalsis.

Multiple loops of jejunum have a markedly thickened muscularis, with mild to moderate loss of definition of normal wall layering. These loops of bowel are also thickened overall, measuring up to 0.35 cm. However, other segments show more severe loss of the normal architecture of the wall layers. The most severely affected segment of jejunum measures up to 1.25 cm with a complete loss of wall layering.

Similar abnormalities are noted with the duodenum with regard to the thickened muscularis. Wall thickness is within normal limits at 0.24 cm.

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

Pancreas

No overt abnormalities are observed with the architecture, contours, echogenicity or echotexture of the pancreas. Occasional pinpoint to punctate hyperechoic foci are scattered throughout the parenchyma. These changes are suggestive of fibrosis (i.e. age-related change, secondary to previous episodes of pancreatitis, and/or amyloid deposition). Obvious signs of active pancreatitis or neoplasia are not present.

Other

Lymph nodes

Mesenteric lymph nodes are enlarged, some in length, rather than diameter; for example, 0.53 cm in diameter x 2.80 cm in length, and are severely hypoechoic. Others are enlarged and round with smooth borders. They are all severely hypoechoic. The surrounding mesentery is moderately hyperechoic.

The gastric lymph node is enlarged at 0.62 cm in diameter x 0.52 cm in length. It is mildly to moderately hypoechoic, and the surrounding mesentery is moderately hyperechoic.

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

- **Gastrointestinal (GI) tract**: Neoplasia is suspected. Differential diagnoses include lymphoma or other round cell tumour. Adenocarcinoma is possible, but less likely as it tends to cause more focal or localized lesions. Leiomyosarcoma, although less common, must also be considered. Note, granulomatous diseases and Feline Gastrointestinal Eosinophilic Sclerosing Fibroplasia (FGESF), are possible differential diagnoses depending on whether Milli has spent time outdoors and her travel history. Feline infectious peritonitis, a form of granulomatous disease, is considered unlikely, however, it may occur if Milli spent time in a multi-cat household during her lifetime.

- **Lymph nodes:** Lymphadenomegaly and the appearance of the lymph nodes are most consistent with infiltrative disease.

- **Pancreas**: Age related changes are observed. Signs of active pancreatitis or neoplasia are not appreciated.

- **Liver and gallbladder**: A reactive hepatopathy is suspected, in addition to hepatic lipidosis. However, subclinical cholangitis/cholangiohepatitis and cholecystitis, including a suppurative

component, due to an ascending bacterial infection from the GI tract, may be present. This could explain the hyperbilirubinemia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Fine needle aspirates and cytology of the abnormal loops of jejunum and enlarged lymph nodes are recommended.

If the fine needle aspirates are inconclusive, full thickness gastrointestinal biopsies or endoscopy and biopsies of the upper and lower GI tract are likely required to obtain a definitive diagnosis. Immunohistochemistry and PARR may also be required. *However, thoracic radiographs (3 views) should be performed prior to pursuing such a procedure.

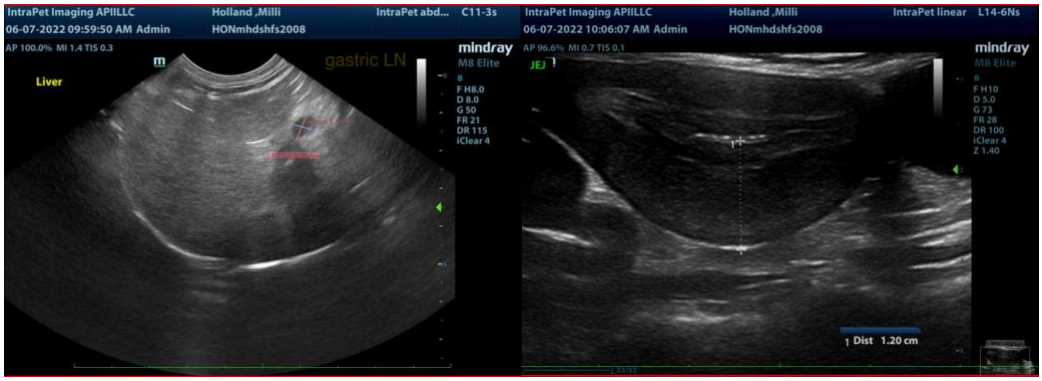
Supportive care may include the following

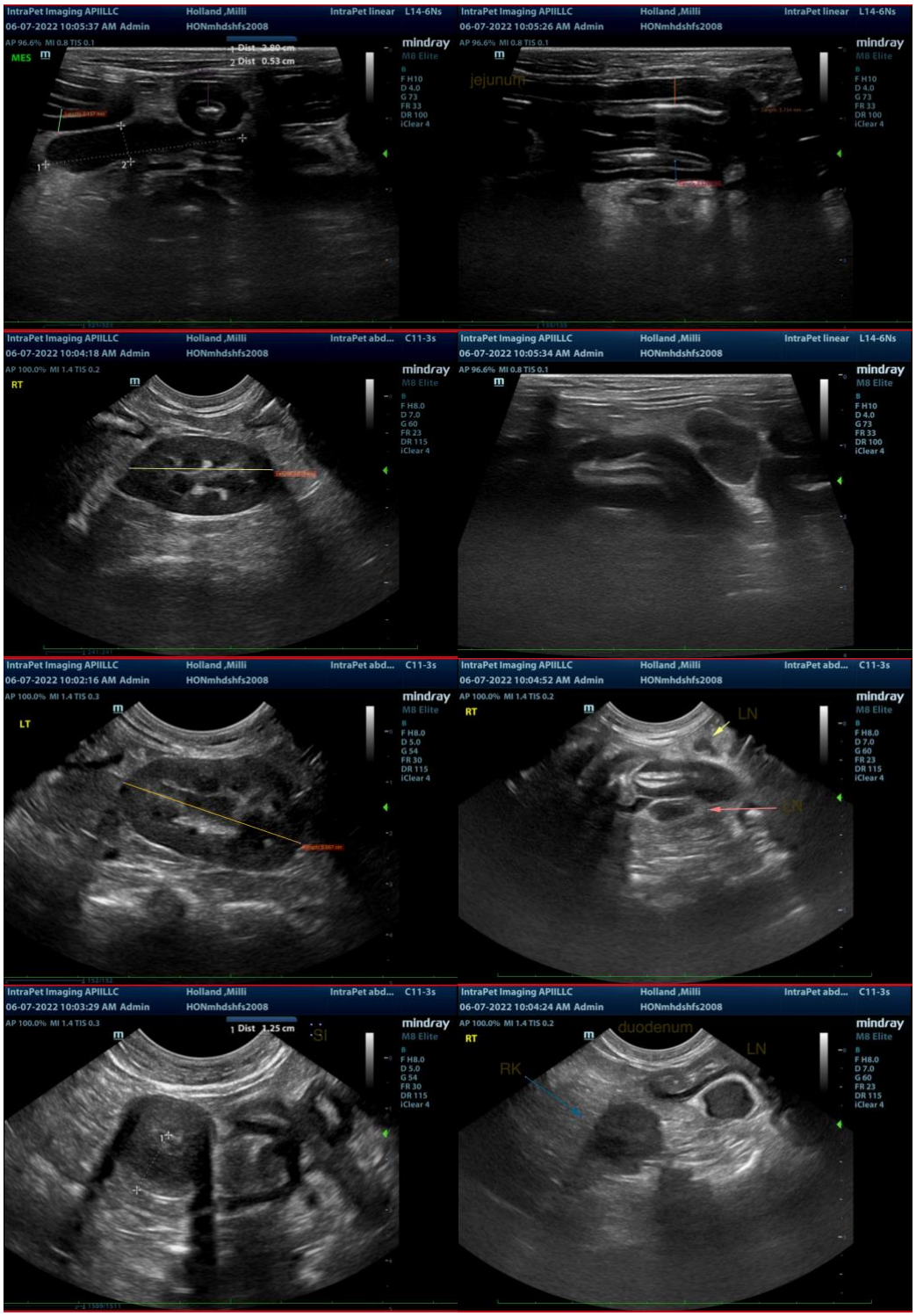
Supplementation with vitamin B12

Cholestasis, cholangitis/cholangiohepatitis cannot be excluded, despite the absence of abnormalities with liver enzyme activities on blood work. Secondary ascending bacterial infections are common. Although indiscriminate use of antibiotics is not normally recommended, one could start treatment with a broad-spectrum antibiotic.

To avoid oral antibiotics due to Milli's anorexia, an injection of cefovecin (Convenia) may be tried (not ideal, but it avoids the GI tract). Discussion with the client that this is not necessarily an ideal drug is suggested, however. If an improvement is observed, at least 2 additional doses are recommended 10-12 days apart.

If further diagnostics are not pursued, although not ideal, empirical treatment for lymphoma is suggested, including prednisolone or dexamethasone, as well as chlorambucil, appetite stimulants, anti-emetics, and most importantly, analgesics, such as buprenorphine and gabapentin. Subcutaneous fluids, and a 10-14 day trial with famotidine or omeprazole may also be considered.

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MES
1 Dist 2.80 cm
2 Dist 0.53 cm
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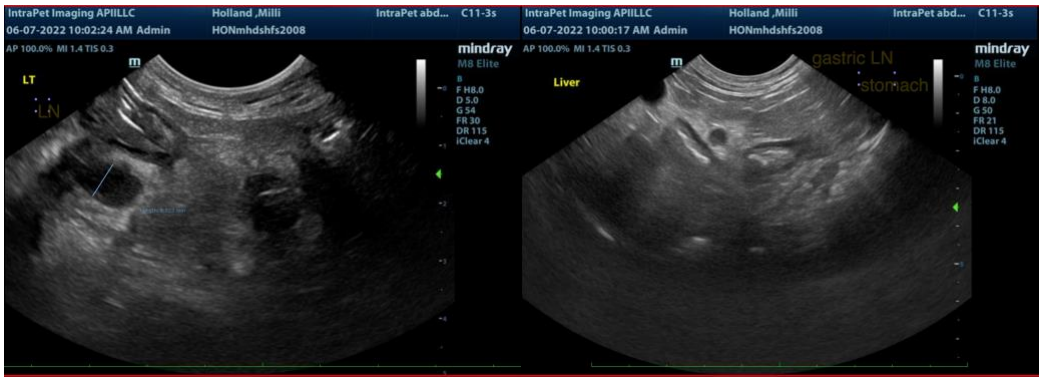

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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