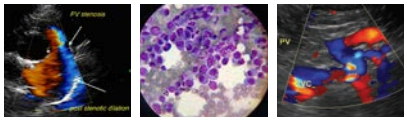
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

8/16/22

PATIENT

Sascha Donofrio

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

3/20/10

WEIGHT

12 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Stephanie Warga
RDCS, RVT

HOSPITAL NAME

Harborside Mobile VC

REFERRING VET

Dr. Hawkins

INVOICE

40520

PRESENTING CLINICAL SIGNS

History of diabetes for past 6 years. In/out of remission. Lantus insulin given. Complaint: Diarrhea. PE: NSF.

Current Medications: 1 unit Lantus BID if diabetic. Pet very difficult to medicate so Metronidazole did not go well at all.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Dexdomitor.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (3.99 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (4.05 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is normal in size (0.40 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.37 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Two discrete nodules are noted, one measuring 1.0 cm in diameter and the other measuring 0.50 cm in diameter. Neither nodule causes capsular disruption. However, both nodular are hyperechoic with hypoechoic rims, consistent with target lesions. Splenic vasculature appears normal.

Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. A cystic hyperechoic lesion is noted in the deep right liver that measures approximately 1.0 cm in diameter, and a hypoechoic nodule is noted in the mid left caudal liver measuring 1.0 cmx 1.3 cm. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The change is most prominent in the ileum. The lumen is empty with no evidence of obstruction or foreign material.

The colon is diffusely mildly thick (upper limit of normal thickness) with a subjectively prominent submucosal layer relative to other layers.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

Mesenteric lymph nodes are enlarged with swollen irregular capsular contour and loss of normal length to width ratio (rounded in shape). Nodes are hypoechoic with loss of normal parenchymal detail. A 2.0 cm x 3.0 cm hypoechoic mass is noted at the root of the mesentery, consistent with an enlarged mesenteric lymph nodes. The lymph nodes are surrounded by enhanced hyperechoic fat.

Multiple ringdowns are noted, suggestive of pulmonary pathology.

PRIMARY FINDINGS

- **Gastrointestinal lymphoma (suspect) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. Given the concurrent pathology noted, infiltrative neoplasia is considered more likely, but benign IBD cannot be ruled out without tissue sampling.

  The subjectively prominent/thick submucosal layer in the colon can be associated with parasitic disease. However, given the concurrent pathology, infiltrative neoplasia affecting all of the bowel is considered the top differential.

- **Aggressive mesenteric lymph nodes –** most consistent with infiltrative round cell or metastatic neoplasia. A benign aggressive inflammatory response cannot be ruled out without tissue sampling +/- culture.

- **Hypo to anechoic splenic nodules** – These can represent benign lesions such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however, considering the concurrent pathology in this patient combined with the target like appearance, infiltrative neoplasia is a possibility as well.

- The cystic hyperechoic nodule in the liver is consistent in appearance with a benign biliary cystadenoma. Malignancy cannot be ruled out, but is considered less likely. However, the hypoechoic nodule is more concerning for an infiltrative neoplastic disease such as round cell neoplasia or potential metastatic neoplasia. Benign disease for the hypoechoic nodule as well cannot be ruled out, but is considered less likely.

- Ringdowns – Suggestive of concurrent pulmonary pathology.

SECONDARY FINDINGS

- **Gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness, however, it can also be associated with hepatobiliary disease in cats and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The top differential to explain all of the pathology in this patient's abdomen is infiltrative neoplasia with round cell neoplasia such as lymphoma being a top differential. Therefore, recommendations include trying to obtain a diagnosis cytologically, beginning with a fine needle aspirate of the mesenteric mass/enlarged lymph node if patient's coagulation status is appropriate. Fine needle aspirate of the liver and splenic nodules may be more difficult to obtain, but could also be considered.

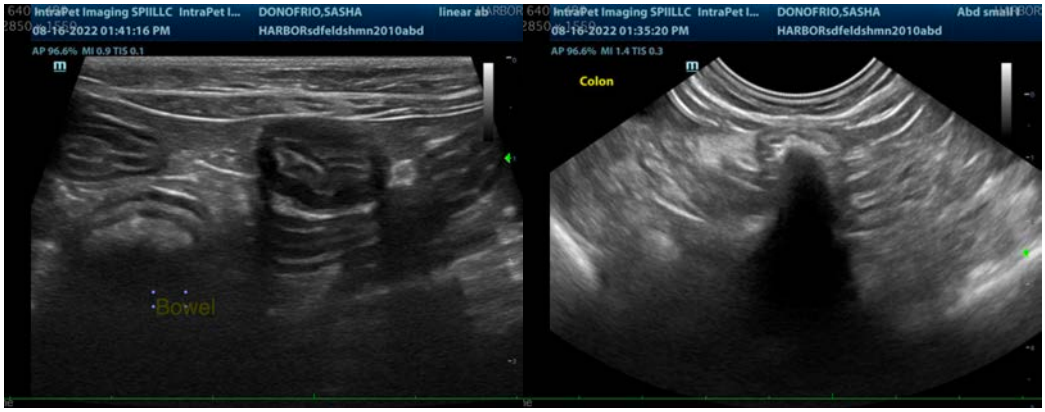
Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

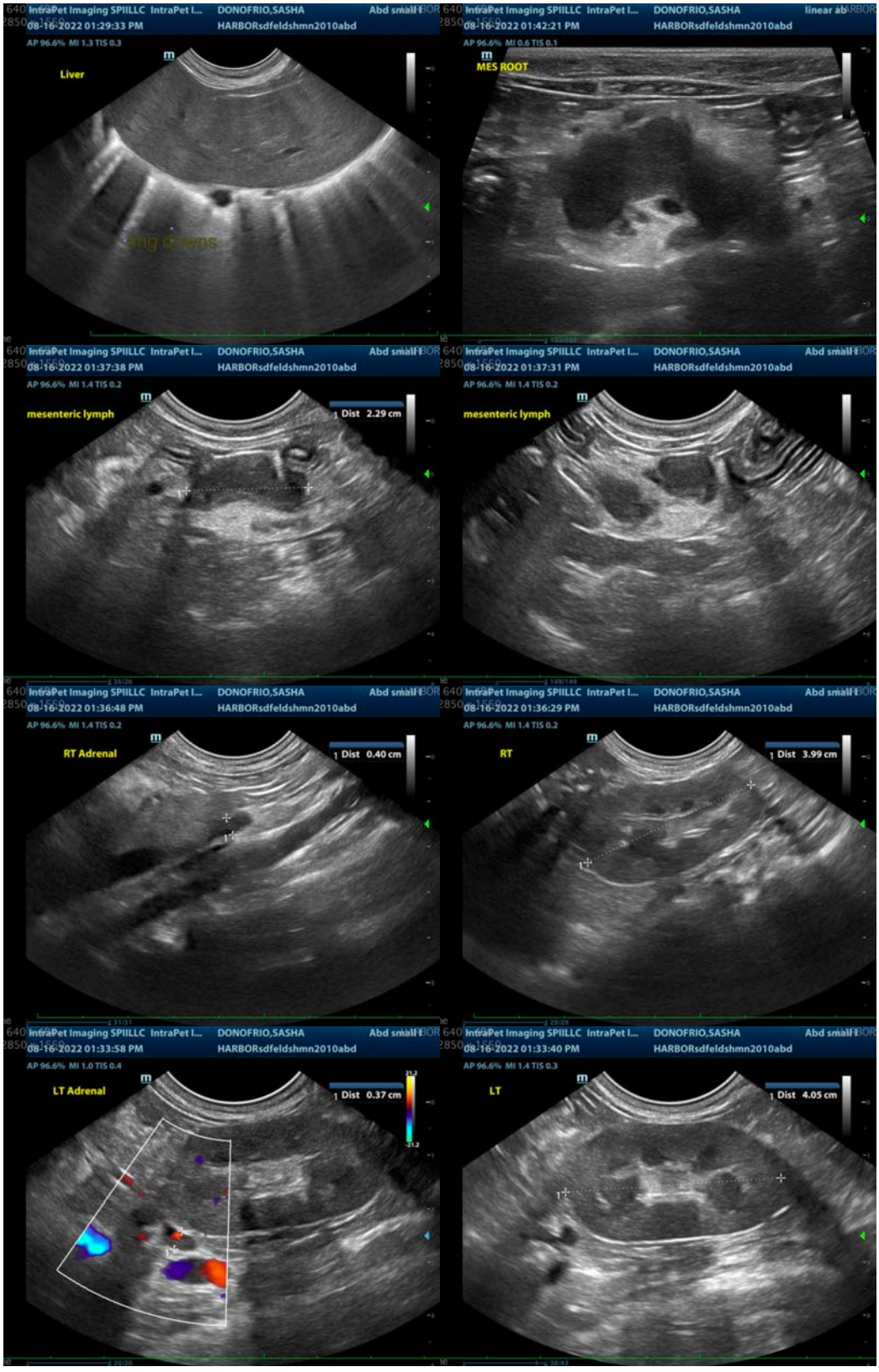
A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

If a diagnosis is not obtained cytologically, then ideally biopsies of the GI tract, being sure to include ileum and colon, if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

If biopsies cannot be obtained, empirical therapies could include diet change, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Other supportive therapeutic considerations could include fiber supplementation, especially with large bowel diarrhea and/or a probiotic.

Given this patient's prominent colonic submucosal layer, a fecal exam and a fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. However, again, given the concurrent pathology, infiltrative neoplasia is considered a higher differential than parasitic or infectious disease.




IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA Abd smallFBOR
08-16-2022 01:29:33 PM HARBORsdfeldshmn2010abd
AP 96.6% MI 1.3 TIS 0.3
Liver
ling downs
IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA linear abRBOR
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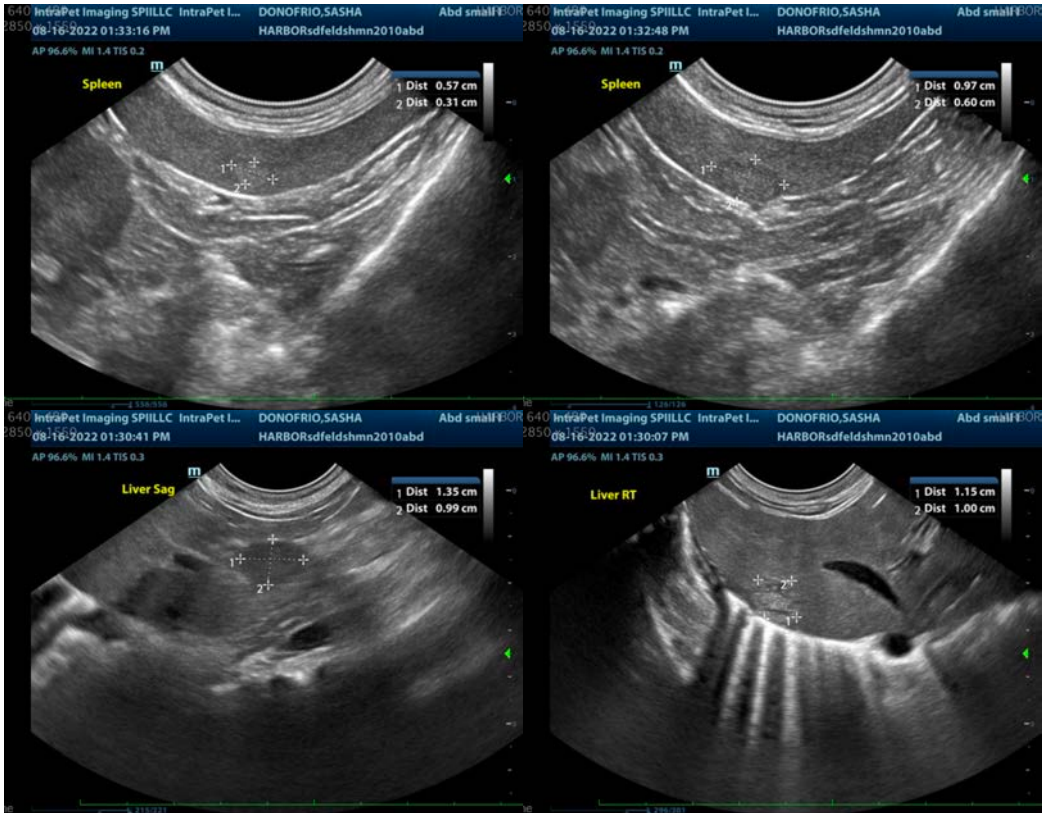
MES ROOT
IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA Abd smallFBOR
08-16-2022 01:37:38 PM HARBORsdfeldshmn2010abd
AP 96.6% MI 1.4 TIS 0.2
mesenteric lymph
Dist 2.29 cm
IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA Abd smallFBOR
08-16-2022 01:37:31 PM HARBORsdfeldshmn2010abd
AP 96.6% MI 1.4 TIS 0.2
mesenteric lymph
IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA Abd smallFBOR
08-16-2022 01:36:48 PM HARBORsdfeldshmn2010abd
AP 96.6% MI 1.4 TIS 0.2
RT Adrenal
Dist 0.40 cm
IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA Abd smallFBOR
08-16-2022 01:36:29 PM HARBORsdfeldshmn2010abd
AP 96.6% MI 1.4 TIS 0.2
RT
Dist 3.99 cm
IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA Abd smallFBOR
08-16-2022 01:33:58 PM HARBORsdfeldshmn2010abd
AP 96.6% MI 1.0 TIS 0.4
LT Adrenal
Dist 0.37 cm
IntraPet Imaging SPIILLC IntraPet I... DONOFRIO,SASHA Abd smallFBOR
08-16-2022 01:33:40 PM HARBORsdfeldshmn2010abd
AP 96.6% MI 1.4 TIS 0.3
LT
Dist 4.05 cm



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.

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