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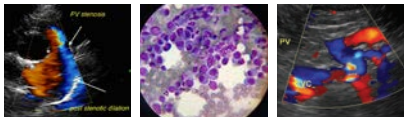

SonoPath
Clinical Sonography & Telecytology
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DATE

9/7/22

PATIENT

Miggy Hammett

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

5/12/05

WEIGHT

7.69 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

Westminster VH

REFERRING VET

Dr. Hall

INVOICE

41125

PRESENTING CLINICAL SIGNS

Anorexic on 8/29/22. Owner reports they went out of town from 8/13-8/20. Sitter noticed dec app and when owner back pet is not eating at all for the previous few days. Owner reported that pet was still using the litterbox normally. On PE pet was QAR and approximately 5-8% dehydrated. Pet was underweight with weight loss since the previous visit one month prior of 0.75lbs. Pet had a positive skin tent and mm were pale pink and slightly tacky. Grade 3/6 systolic murmur historic. Pet was started on supportive care (SQ fluids and Cerenia and
Miratraz). Continued decreased appetite but he is eating, just not normally. Radiographs showed suspicion for small intestinal wall thickening and abnormal area in the left cranial abdomen and so abdominal US was recommended.

Current Medications: None.
Lab Results: 8/29/22: CBC: non regenerative anemia; Chemistry: SDMA 17ug/dL (0-14); ALT: 20U/L (27-158); UA: USG: 1.014; pH: 5.5; RBCs: 10-15/HPF; Bacteria Moderate rods and cocci present—culture PENDING.
Radiographs: Unremarkable thorax. Apparent small intestinal wall thickening may be an artifact secondary to silhouetting of fluid with
the lumen. True thickening, such as with inflammatory bowel disease or round cell neoplasia, is also possible. Heterogeneous soft tissue and gas opacity in the left cranial abdomen may represent a redundant portion of the colon. An abnormally dilated segment of small intestine with food/foreign material, or an abscess arising from the pancreas, intestine, or mesentery, is not ruled out.
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

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with incidental suspended lipid in a cat, possibly combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of mineral or infarcts observed. The left kidney measures 3.67 cm with mild pyelectasia noted. The right kidney measures 3.66 cm.

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 (0.52 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver
Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. Mildly tortuous common bile duct noted, which is a likely normal anatomic age variant without pathologic dilation.

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, with early emerging/fuzzy loss of layering suspected.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas
Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

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.

In the left cranial abdomen, there is an approximately 1.0 cm in diameter cystic structure that may be associated with the pancreas and be a pancreatic cyst, or could be a cystic lymph node.

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.

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

- **Hyperechoic hepatomegaly** – This appearance is most consistent with benign hepatic lipidosis. Infiltrative disease such as amyloidosis or round cell neoplasia, such as mast cell tumor or less likely, lymphoma, is also possible.

- **Chronic active pancreatitis suspected**

- **Cystic structure in the left cranial abdomen** – This may be associated with the pancreas or may be a cystic lymph node. Definitive origin cannot be determined.

SECONDARY FINDINGS

- Urinary bladder debris
- Age related kidney changes with mild pyelectasia in the left

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

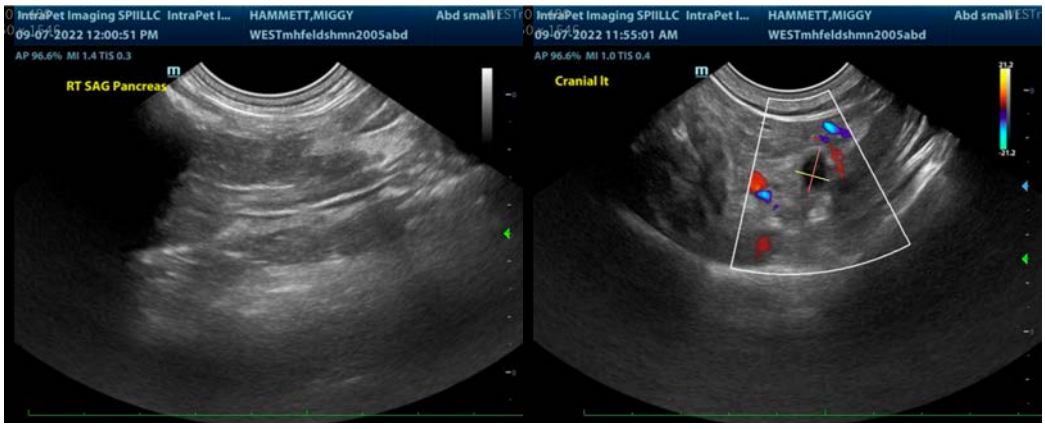
Given this patient's urinary changes, the reportedly already pending urine culture is recommended.

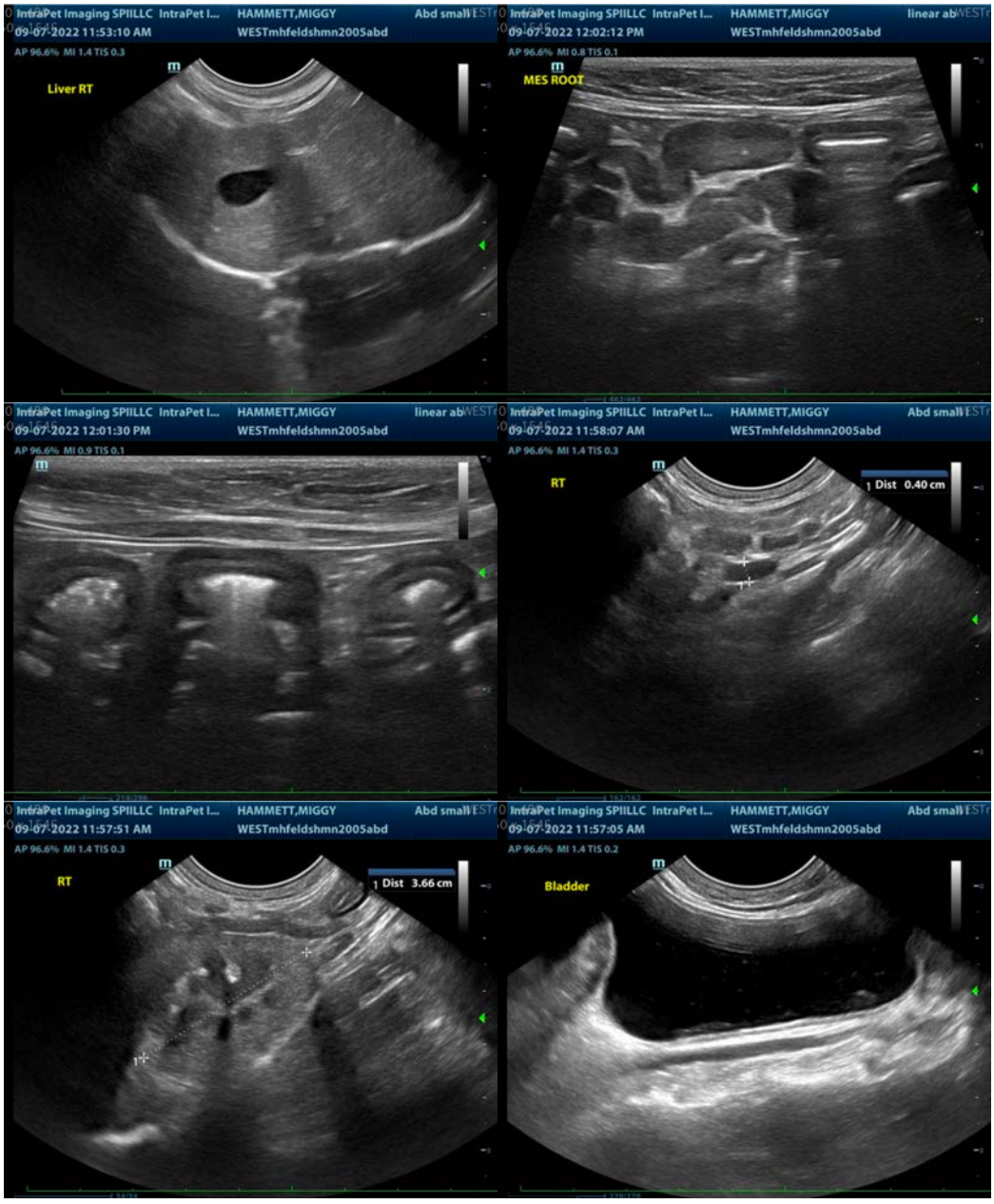
A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Tissue sampling is recommended to rule in/out infiltrative round cell neoplasia such as lymphoma. The less invasive way to do this is with a fine needle aspirate of the mesenteric lymph nodes if patient's coagulation status is appropriate, or, if cytology is not diagnostic, biopsies of the GI tract are recommended to definitively diagnose the infiltrative bowel disease.

In addition, a fine needle aspirate of the cystic structure in the left cranial abdomen can be considered versus a biopsy of the lesion if surgical gastrointestinal biopsies are elected, or the bowel disease could be managed and the cystic structure monitored ultrasonographically depending on the level of aggressiveness elected.

If tissue sampling is not possible, 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.).

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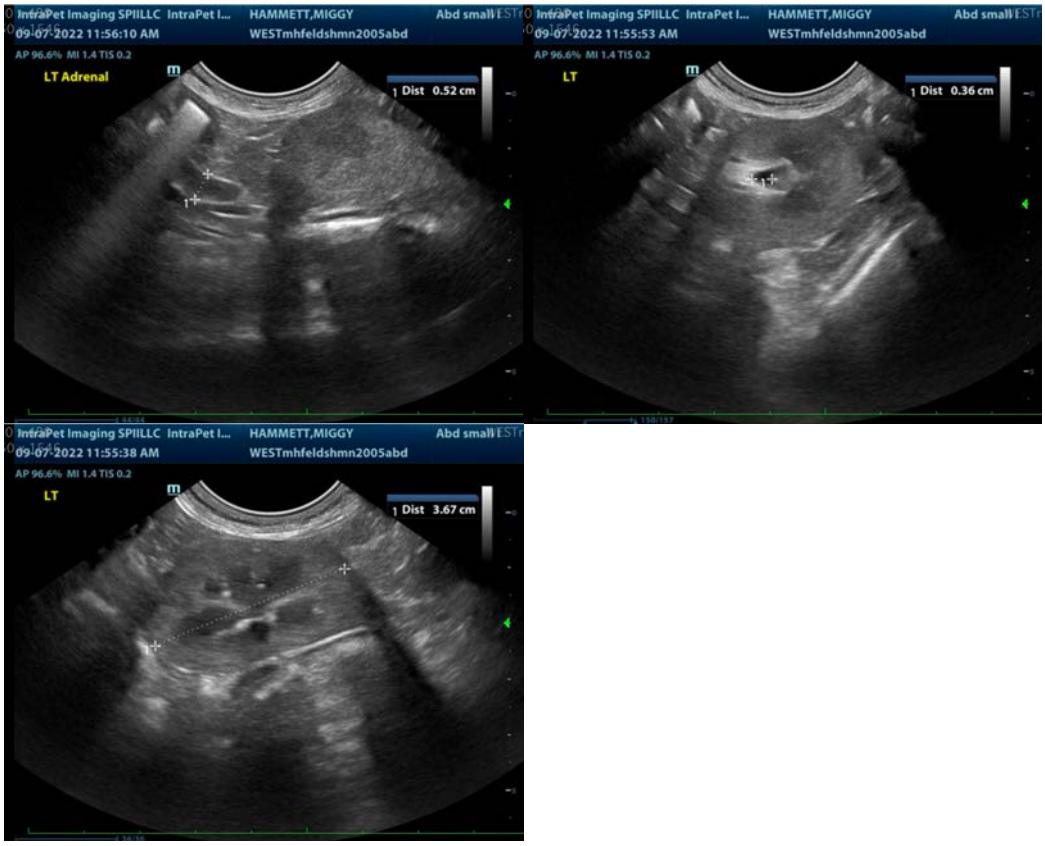
Bladder



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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