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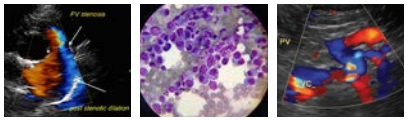

SonoPath
Clinical Sonography & Telecytology
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DATE

3/22/23

PATIENT

Mr. Gray Klein

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

12/5/08

WEIGHT

15.69 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Westminster VH

REFERRING VET

Dr. Hall

INVOICE

46084

PRESENTING CLINICAL SIGNS

Pet presented for routine senior exam in January. At that visit, owner had mentioned that he was seeing frank blood in pet's stool and the stool was a little soft. Otherwise pet was doing well. Bloodwork revealed elevated amylase and fecal sample was Giardia positive. Pet was dewormed with a 5 day course of Panacur, and recheck fecal sample revealed no giardia cysts. Pet's hematochezia continued so he was given a probiotic trial and eventually a trial of metronidazole with no improvement. Pet presented on 3/14/23 for continued hematochezia but had started with a decreased appetite for 2 weeks duration. On PE pet was QAR, hydrated, heart and lungs auscultated normally. Pet was a little tense upon abdominal palpation but allowed for deep palpation. 1.5lbs of weight loss appreciated since January as well. Bloodwork revealed continued elevated amylase with a decreased total protein as well. Radiographs were obtained--see report below.

Current Medications: None.
Lab Results: 1/17/23: CBC: MCV: 37fL (39-56); MCH: 12.4pg (12.6-16.5); retic hgb: 14.3pg (15.3-22.9); Amylase: 2,891U/L (623-2239); USG: 1.019; Protein: trace. 1/19/23: Giardia cysts present on fecal sample. 2/17/23: Recheck fecal sample NEGATIVE. 3/14/23: snap fPL NORMAL. 3/14/23: CBC: MCV: 37fL (39-56); reticulocyte HGB: 13.7pg (15.3-22.9); Total Protein: 6.2g/dL (6.3-8.8); ALT: 20U/L (27-158); ALP: 11U/L (12-59); Amylase: 2,814U/L (623-2239)
Radiographs: 3/14/23- The moderate diffuse bronchial pattern is likely associated with allergic or inflammatory airway disease, such as feline asthma. Viral or bacterial lower airway infection could also potentially contribute to this pattern. Heartworm associated respiratory disease or parasitic pneumonitis are given much lesser consideration, but cannot be entirely excluded. The appearance to the colonic luminal content is consistent with the clinical history of diarrhea. No current radiographic evidence of small intestinal obstruction is identified. Preferential consideration is given to non-specific gastroenteritis, colitis, and/or pancreatitis.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (4.37 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is large and irregular in shape, measuring 4.96 cm in length. There is an irregular hyperechoic region of the caudal pole measuring approximately 2.45 cm x 1.73 cm, and a small area of perinephric effusion at the caudal pole. Additionally, the cranial pole appears enlarged by comparison, and somewhat rounded, measuring 3.05 cm in diameter with a hypoechoic region within measuring 2.02 cm in diameter, creating somewhat of a mass effect in the cranial pole. There is no evidence of pyelectasia, nephroliths or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.45 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

Spleen

The spleen is large (1.2 cm in width at the level of the hilus). The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.28 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

There is a large amount of inflammation surrounding the colon, with prominent hypoechoic lymph nodes. Several sections of the colon appear focally thickened, creating multiple mass like lesions. One such region measures 4.08 cm x 2.39 cm. Additionally, there is a section of colon that is at least 4.8 cm in length with a diameter of 1.84 cm and has a wall thickness of 0.90 cm with complete loss of layering. There is another region of colon with asymmetrical wall thickening creating a mass effect measuring 2.7 cm x 1.74 cm. The bowel in that region has a diameter of 2.54 cm.

Pancreas

The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is extensive inflammation and prominent lymph nodes surrounding the colon. One particularly prominent lymph node measures 0.53 cm.

PRIMARY FINDINGS

- Multiple areas of colonic wall that appear severely irregular, thickened, and have complete loss of layering, creating multiple mass effects – Findings are most concerning for metastatic neoplasia (round cell neoplasia or carcinoma most likely), although other differentials such as FIP, granulomatous, colitis, etc. exist but are less likely.

- Prominent, hypoechoic lymph nodes surrounding the colon – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

- Irregular right kidney with an enlarged rounded cranial pole creating a mass effect, and an irregular hyperechoic lesion in the caudal pole with some perinephric effusion – The lesion in the cranial pole is concerning for a possible mass effect. The hyperechoic caudal pole could be consistent with a mass effect, an older infarcted region, etc. The effusion could be secondary to inflammation, neoplastic change, etc.

- Large, mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis. This could be less significant in this large of a cat.

SECONDARY FINDINGS

- Prominent muscularis layer to the small intestine – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.

- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

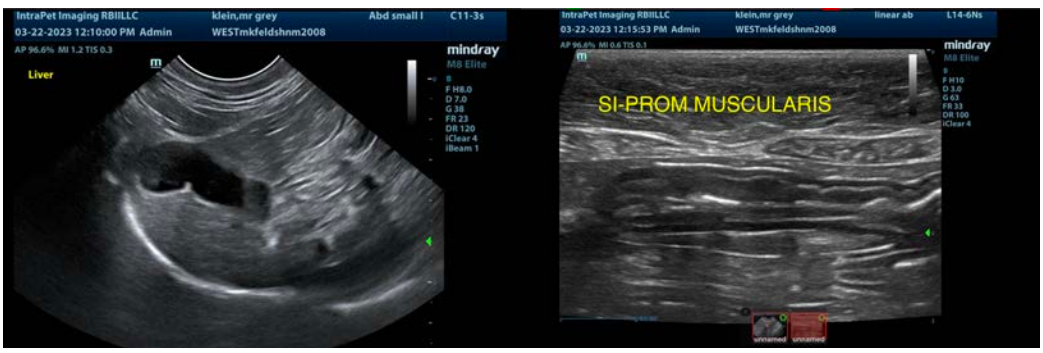
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

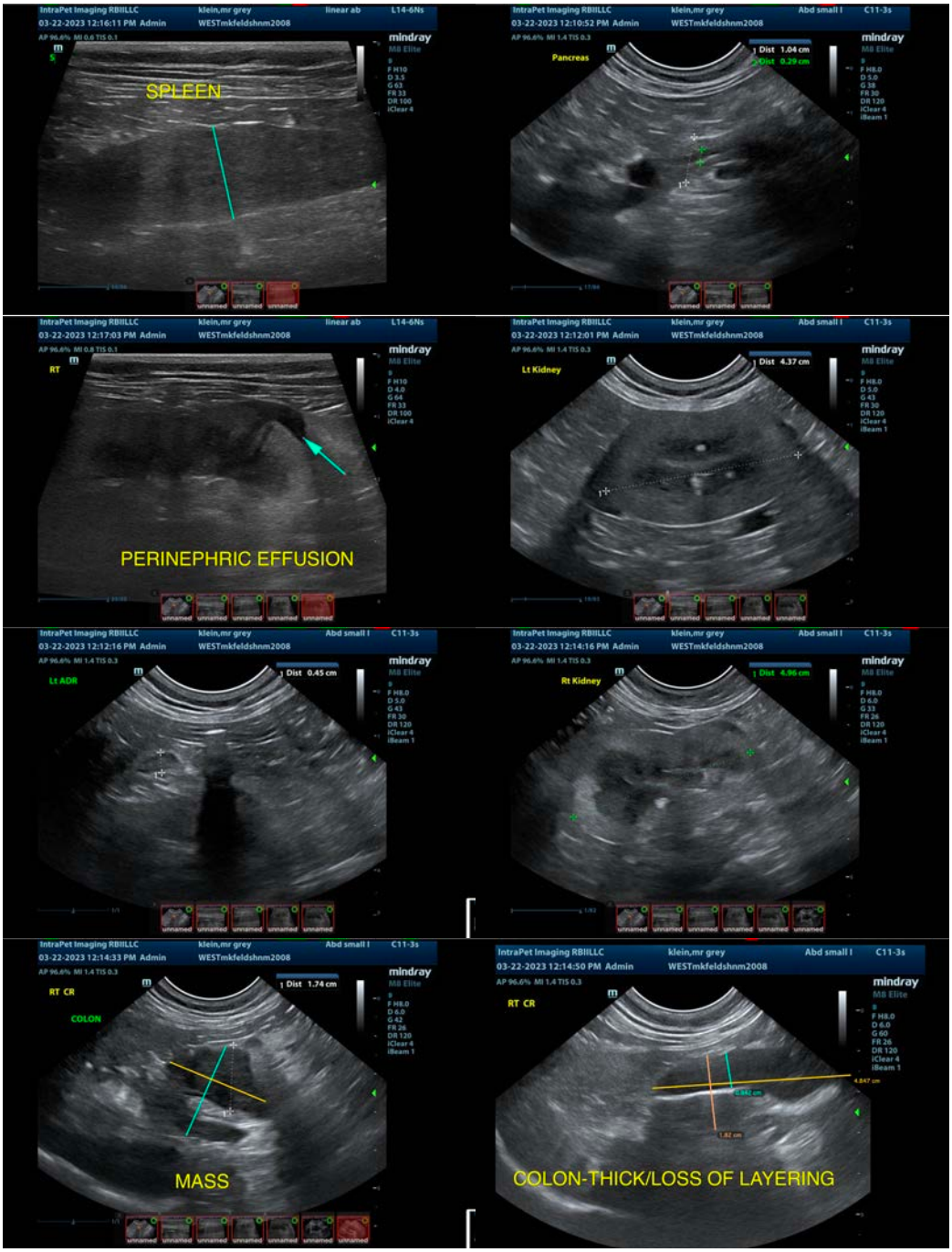
There are numerous large colonic lesions observed where the wall is irregular, severely thickened, and has a complete loss of layering. Recommend a fine needle aspirate of one of these colonic mass lesions for cytologic evaluation.

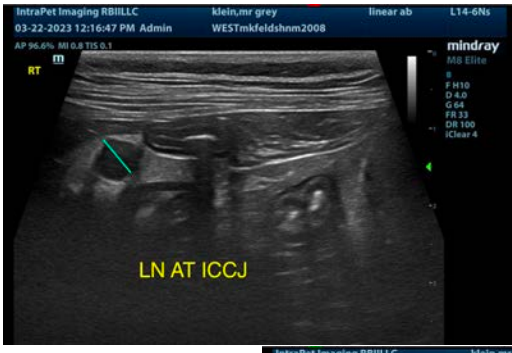
Additionally, the right kidney is irregular with a rounded cranial pole and a slightly irregular mottled caudal pole. The enlarged cranial pole creates somewhat of a mass effect, and there is a scant amount of perinephric effusion. You could consider a fine needle aspirate of the cranial pole of the right kidney, provided coagulation parameters and blood pressure is within normal limits, but I suspect sampling of the colonic lesions will suffice.

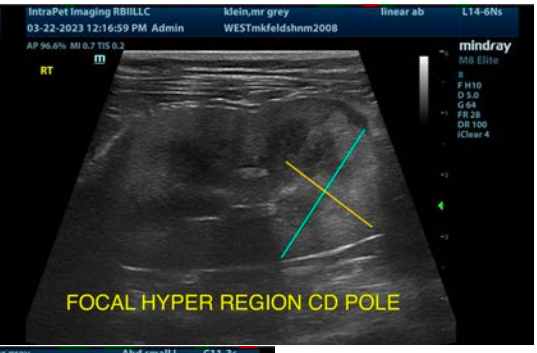
The spleen appears large and mildly mottled. This is a large cat, so this could be within normal limits, but additionally there is concern for possible infiltrative disease to the spleen.

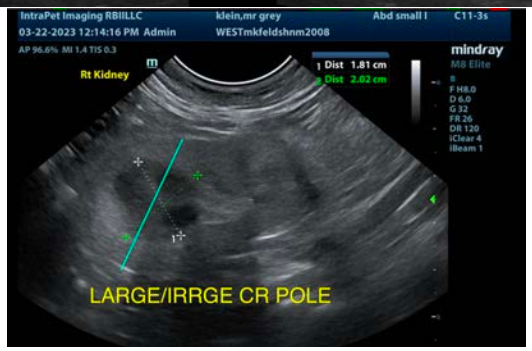
I suspect that surgical options are limited in this individual due to the extent of disease visualized. If this is round cell neoplasia, then chemotherapeutic options would exist.




SPLEEN
Pancreas
PERINEPHRIC EFFUSION
Lt Kidney
Lt ADR
Rt Kidney
RT CR
COLON
MASS
RT CR
COLON-THICK/LOSS OF LAYERING







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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