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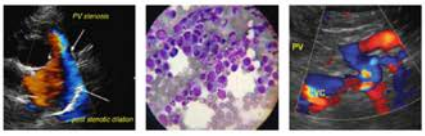

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PATIENT
Kit Kit Roush

SPECIES
Feline

BREED
DLH

SEX
Spayed Female

AGE
16 Years 11 Months

WEIGHT
6.88 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Amy Mayhew, LVT

HOSPITAL NAME
SVS Imaging MI

REFERRING VET
Dr Taylor

INVOICE
46666

DATE
4/13/23

PRESENTING CLINICAL SIGNS

Weight loss (was 12# 4-13-22) dx hyperthyroidism 2-7-23 (not controlled), IRIS stage 2, cystitis No vomiting/diarrhea, has hairball less than once a month.

Abnormal PE/Chem/CBC/UA Results: 2-7-23 small palpable thyroid, tachycardic, dental disease USG 1.019, WBC 5/HPF, > 50/HPF, Urine culture No Growth, BP = 164 mm Hg CBC: WNL Chem: SDMA 16 H Creat 1.5 BUN 39 H phos 6.2 T4 4.8 diagnosed with hyperthyroidism - started treatment with methimazole 2.5mg sid 3-30-23 USG 1.016, WBC 5/HPF, > 50/HPF - no improvement CBC: Monos 621 H Chem: SDMA 23 H (16) Creat 1.6 (1.5) BUN 47 H (39 H) phos 6.7 H (6.2) T4 4.4 (medication was not entirely consistent dosing), unmasking of renal disease - start renal diets

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended with primarily anechoic contents. There is a solitary heterogeneous vascular nodule/polyp/mass lesion along the mid dorsal wall approaching the trigone area that measures 0.80 cm thick x 1.3 cm long. No cystoliths are observed.

Kidneys are bilaterally irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is no pyelectasia noted. A non-obstructive nephrolith is noted in the left kidney. The kidneys are normal in size. The left kidney measures 3.53 cm. The right kidney measures 3.62 cm.

Adrenal Glands

The right adrenal gland is normal in size (0.60 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.33 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

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. 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. There is no evidence of cystic or common bile duct 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.

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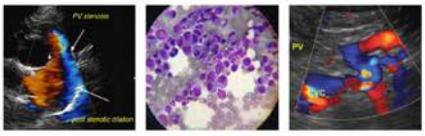

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The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering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

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 in size with swollen irregular contour. Parenchyma is heterogenous characterized by hyperechoic tissue remodeling intermixed with ill-defined hypoechoic nodules. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation. Additionally, there are several cystic areas of the pancreas including a 0.90 cm round area in the left limb that contains multiple small cysts, as well as a large, walled off anechoic fluid filled 2.5 cm in diameter structure just caudal to the stomach, believed to be a larger cyst.

Free Abdomen

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

The mesenteric and medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

- The lesion in the urinary bladder may represent a benign inflammatory change or polyp. However, infiltrative neoplasia cannot be definitively ruled out without additional information.
- **Inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.
- **Chronic Kidney Disease –** This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.
- **Pancreatic nodular hyperplasia –** Infiltrative neoplasia cannot be ruled out but is considered less likely. Additionally, multiple cystic lesions appear to be associated with the pancreas and likely represent benign cysts. However, abscesses and/or even infiltrative neoplasia, while considered less likely, are possible.
- **Reactive mesenteric and medial iliac lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient has multiple pathologies noted in the images above. The top differentials for the reported weight loss include the reportedly unregulated hyperthyroidism +/- concurrent gastrointestinal malabsorptive disease. Therefore, recommendations include managing the hyperthyroidism if possible.

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.

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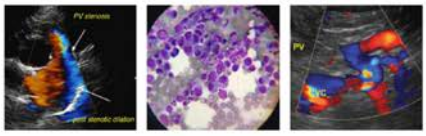

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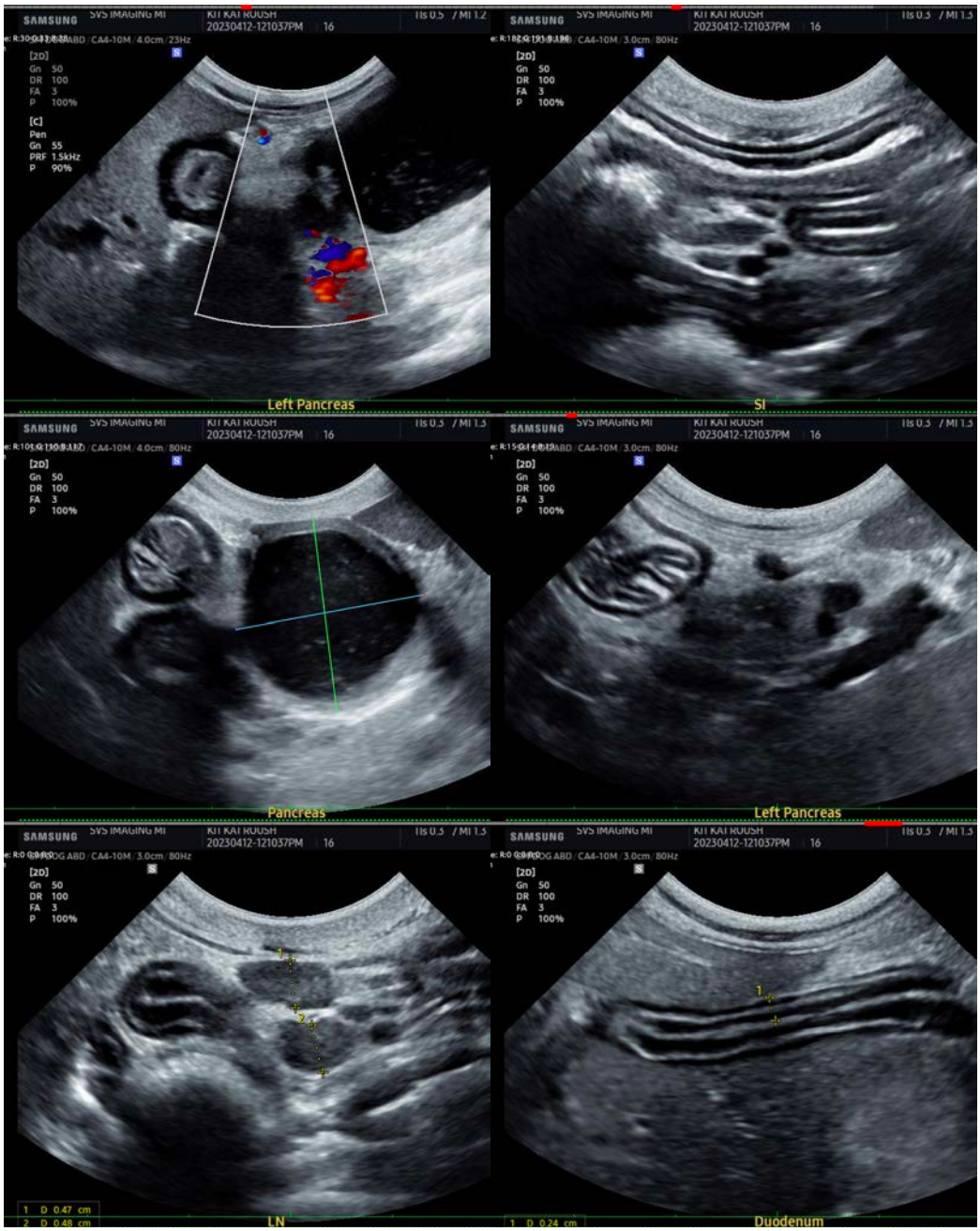
The persistent pyuria may be secondary to the nodule reported above, and tissue sampling is recommended. A fine needle aspirate of the nodule/mass could be considered if patient's coagulation status is appropriate with some risk of tumor seeding versus potentially traumatic catheterization or even cystoscopy for a biopsy. Surgery could be considered for an excisional biopsy. However, the nodule/mass is very close to the ureteral papillae and likely not fully excisable.

Finally, a fine needle aspirate of the large, believed to be pancreatic cyst is recommended for fluid analysis as well as culture and sensitivity if it can safely be reached and if patient's coagulation status is appropriate.



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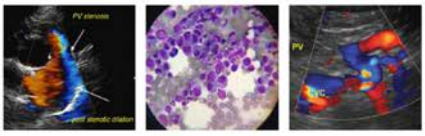

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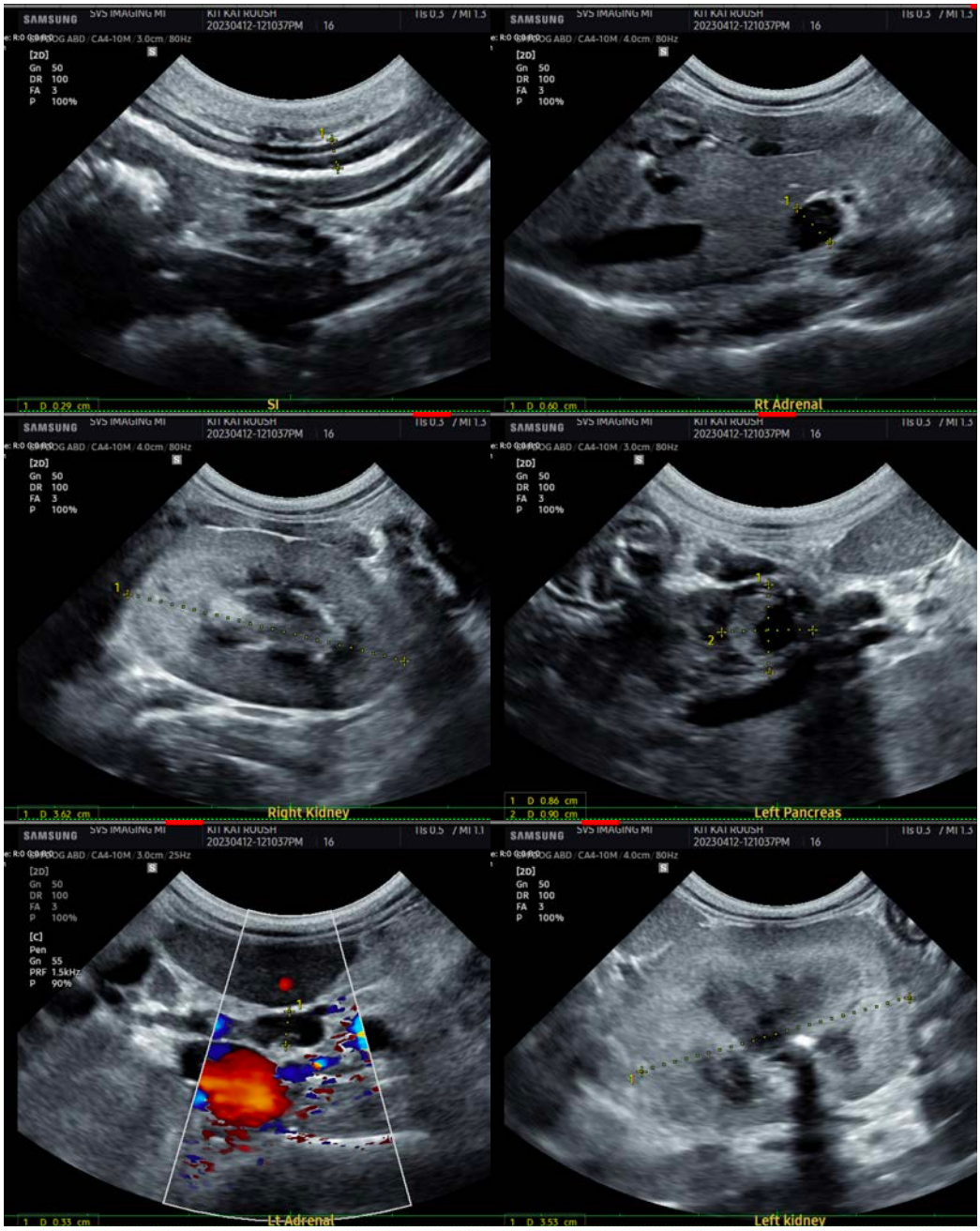

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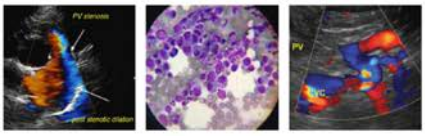

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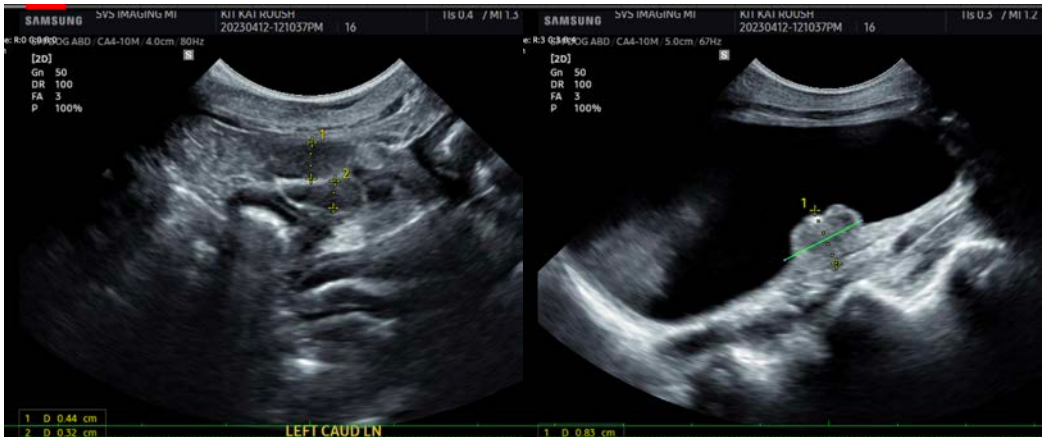

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com