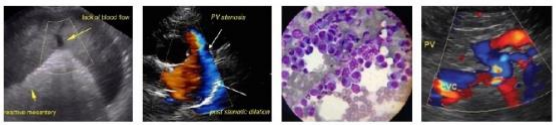




**PATIENT**

Malibu Young

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

14 Years

**WEIGHT**

3.56 kg

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Beatties PH Stoney Creek

**REFERRING VET**

Dr. Baskin

**INVOICE**

21625

**DATE**

3/13/23

## PRESENTING CLINICAL SIGNS

History: P is eating but losing weight. BMs very dry and going outside of litter box. Has been vomiting, this morning even water. Patient seems to be urinating alot according to owner. Doughy abdomen, full bladder, large full colon(palpable fecal balls)prolonged skin tent and significant muscle loss. No meds.
Abnormal PE/Chem/CBC/UA Results: HCT low, HGB low, Neuts high, Platelets high, PCT high, Urea high 13.2 (5.7-12.9)

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

Urinary bladder is subjectively mildly over-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.

The right kidney is small in size, and the left kidney is compensatorily large. Both kidneys are irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is no pyelectasia noted and no mineral is observed. The left kidney measures 4.1 cm. The right kidney measures 2.87 cm. A hyperechoic band parallel to the corticomedullary border is present bilaterally.

### *Adrenal Glands*

Left adrenal gland is normal in size (0.57 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.26 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

### *Spleen*

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.

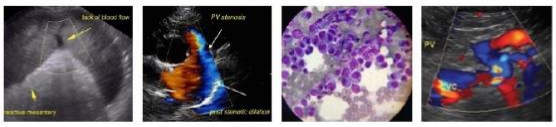
### *Liver*

Liver is subjectively 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.

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 visible stomach wall is normal in thickness 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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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 of the small intestine is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness and layering. The colon is subjectively full of firm stool.

### *Pancreas*

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### *Free Abdomen*

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Chronic kidney disease with bilateral medullary rim sign- This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc. The medullary rim sign is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

- 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.

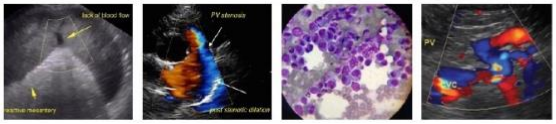
- Subjectively full colon, consistent with patients physical exam findings and history. Constipation/obstipation should be ruled out.

### Secondary Findings

- Urinary bladder debris

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

One partial differential for this patients reported clinical signs includes constipation, possibly secondary to dehydration brought on by chronic kidney disease. Recommendations, if not recently evaluated, include urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended, followed by supportive/symptomatic medical management of constipation, if it's believed to be clinically significant, with fluid therapy/rehydration, and potentially stool softeners and/or even enemas, etc. Additionally, however, given the reported weight loss, T4/free T4 is recommended, as is 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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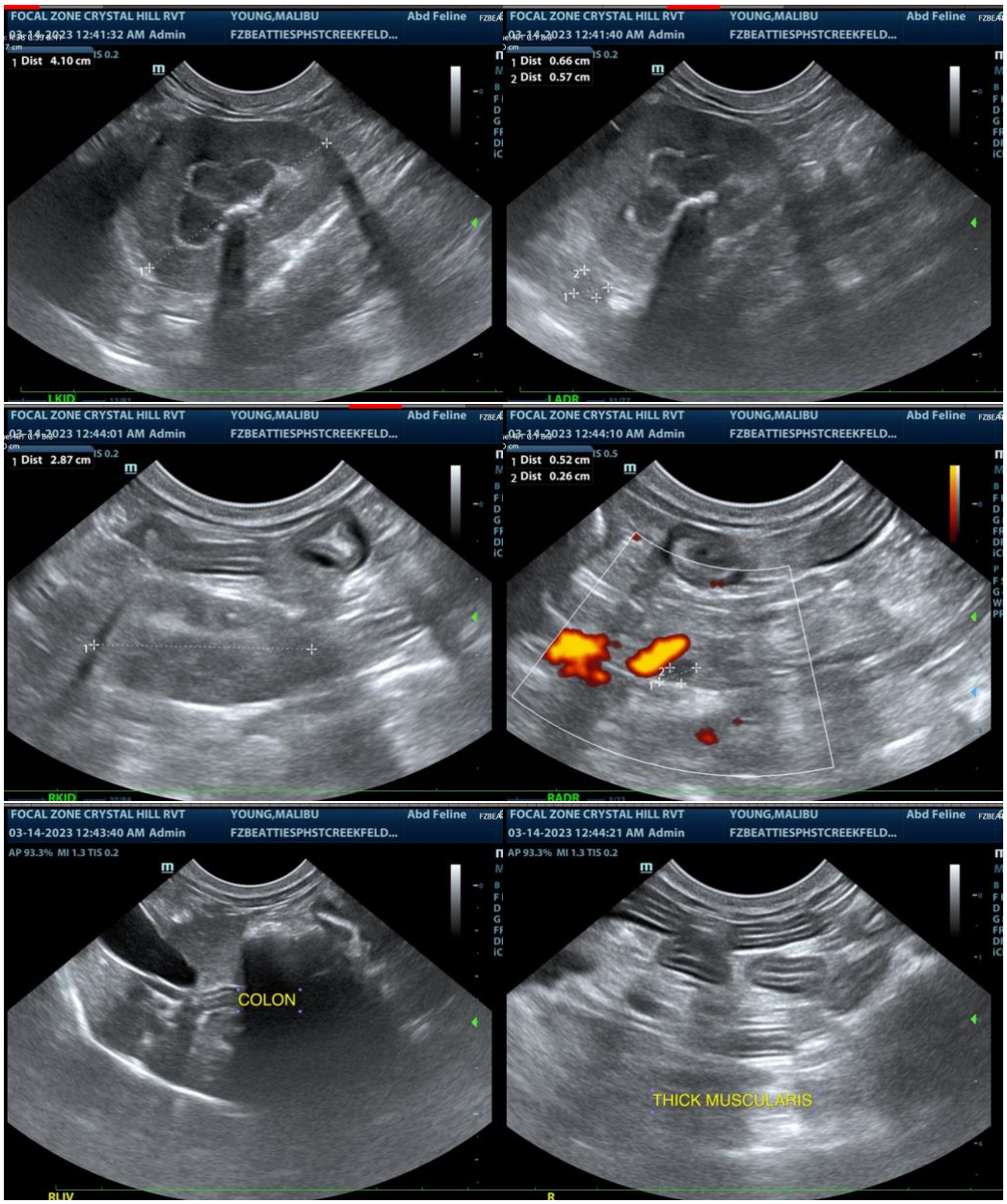
Ideally, biopsies of the GI tract, being sure to include ileum, if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.



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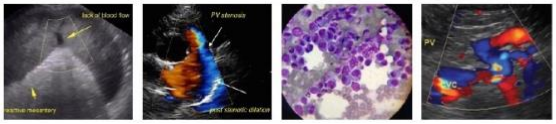

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289-808-2608 info@thefocalzone.com

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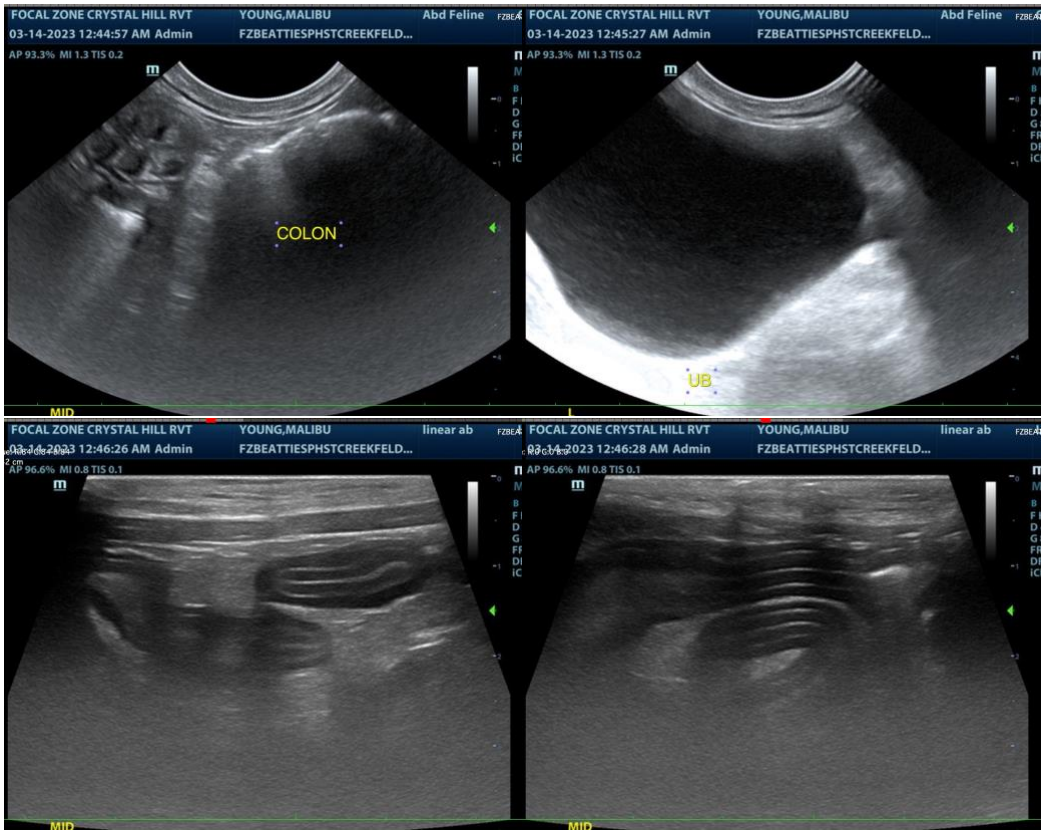


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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