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**DATE PRESENTING CLINICAL SIGNS**

9/23/22 Recurrent UTI. Hyperthyroidism.

**PATIENT** Current Medications: Methimazole, Azithromycin, Hydroxyzine.  
Lab Results: Elevated WBC, EOS, BUN.

Kahala Fefel Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.

**SPECIES**

Feline

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

DLH

**SEX**

Spayed Female

**AGE**

7/1/05

**WEIGHT**

7 lb 6 oz

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Stephanie Warga  
RDMS, RVT

**HOSPITAL NAME**

Chadwell AH

**REFERRING VET**

Dr. Gold

**INVOICE**

41602

**Urinary System**

The urinary bladder is mildly to moderately distended with anechoic urine. The Bladder wall is diffusely thickened and severely irregular with numerous polypoid type lesions. This irregularity involves the entire urinary bladder including the trigone region and the proximal urethra. Wall measurements vary from 0.82-0.47 cm.

The left kidney has a normal shape and size (3.06 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with mildly reduced 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (2.99 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with mildly reduced 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, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.43 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. There are occasional punctate hyperechoic foci, possibly consistent with mineralizations.

The right adrenal gland is normal in size measuring 0.49 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect. There are occasional punctate hyperechoic foci, possibly consistent with mineralizations.

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and 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 0.26 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is normal and isoechoic to surrounding 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, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

- Severely thickened, irregular urinary bladder – findings are most consistent with bacterial cystitis and secondary polyps, but an underlying neoplastic process cannot be excluded as a possibility.
- Occasional hyperechoic foci in the adrenal glands – This is more typical for older cats with mineralization. Recommend continued monitoring.
- Mildly reduced corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

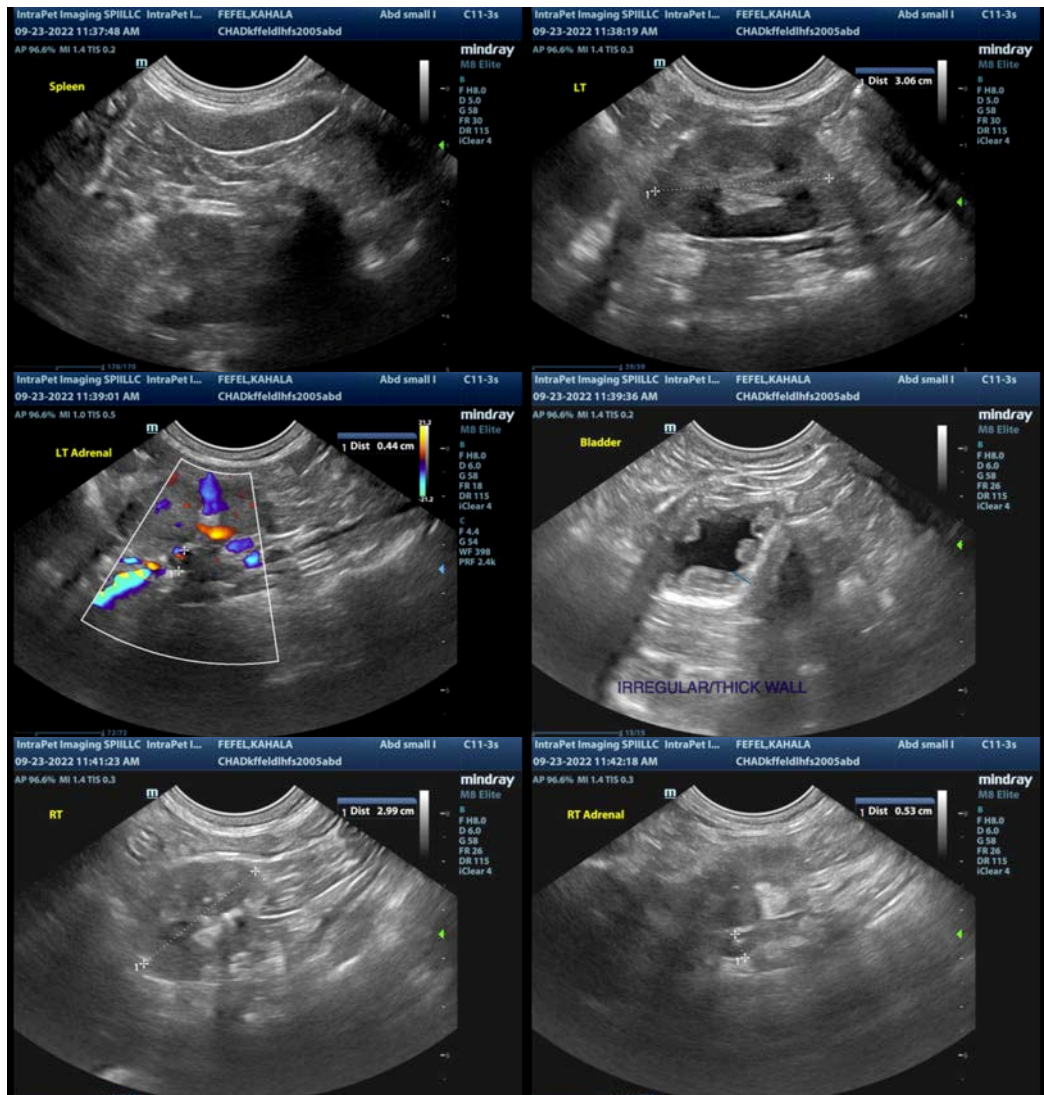
The urinary bladder wall is severely irregular with numerous focal thickenings, polypoid type masses, etc. Evaluation for wall defects, etc. cannot be done when it is this inflamed. Recommend urinalysis and culture and treatment with antibiotics until the bladder wall normalized, or a week past normalization, as bacteria are likely embedded in the wall of the urinary bladder. This patient's urine should be cultured mid treatment, probably around two weeks to ensure that antibiotic therapy is appropriate, and again a week after cessation of antibiotics to make sure the infection has cleared. The history states this patient is on azithromycin. If this is for the urinary tract infection, this antibiotic is often ineffective for treating urinary tract infections in cats, as it is excreted primarily in the bile and feces and doesn't reach an adequate MIC in the urinary. Recommend reimaging once the urinary bladder has normalized, and recommend chronic probiotic therapy (lifelong and particularly when taking antibiotics).

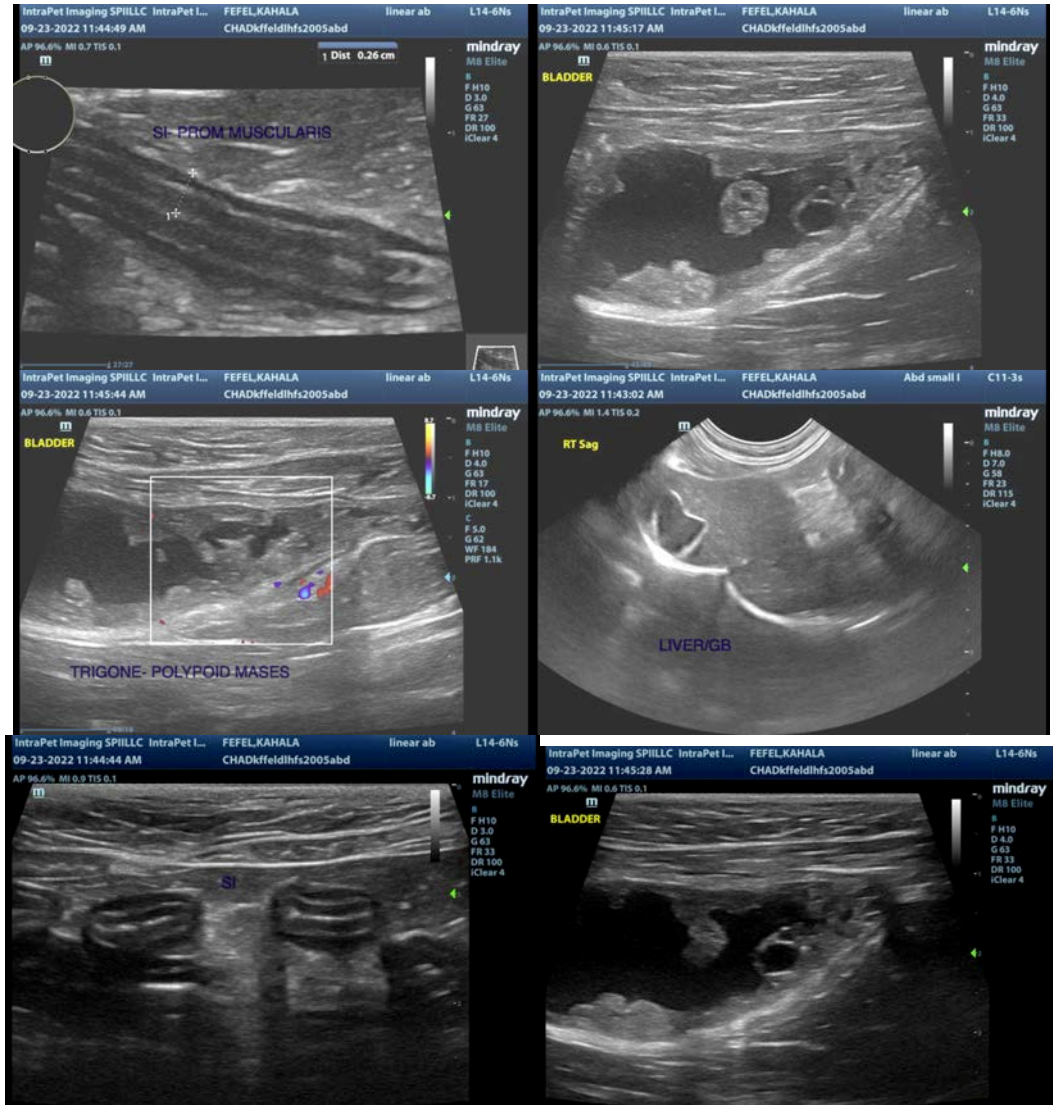
Both kidneys appear to have mildly reduced corticomedullary distinction for this age of a cat. I suspect there is early renal disease present considering the SDMA level, the dilute urine, and the elevation in BUN present.

Recommend blood pressure evaluation.

There are some hyperechoic foci visualized within both adrenal glands. The significance of this is currently unclear. Recommend continued monitoring.

Additionally, the muscularis layer is prominent in this cat. This can be an indicator of underlying GI disease but can also be a normal finding in some older cats. If there are no symptoms of GI disease at this time, recommend continued monitoring.





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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