



**PATIENT**

Bella Uranko

**SPECIES**

Feline

**BREED**

Domestic Medium Hair

**SEX**

Spayed female

**AGE**

14 years

**WEIGHT**

6.9 lbs

**INTERPRETED BY**

Tam Mengine, DVM,  
DABVP (canine/feline  
practice)

**IMAGING  
PERFORMED BY**

Dr. Mengine

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

Dr. Mengine

**INVOICE**

31862

**DATE**

7/19/22

**PRESENTING CLINICAL SIGNS**

History: Patient presented with 1 month of hx of hematuria that did not respond to amoxicillin, and 1 yr history of wt loss with good appetite (1.5 pounds), and several year hx of HOCM and controlled hyperthyroidism. Currently on furosemide, clopidogrel, pimobendan and y/d diet. Recent CBC / Chem / T4 was normal except ALT 247. Urine culture and GI panel pending.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is distended with anechoic urine, and no luminal sediment is present. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction and appeared normal. The ureteral papillae, trigone and pelvic urethra are of normal appearance, and the ureters are not visible (normal). No masses, calculi or mucosal irregularities are noted.

The left kidney exhibits mildly decreased corticomedullary differentiation. There is diffuse mineralization present within the renal cortex. There is no evidence of nephrolithiasis, pyelectasia or hydronephrosis. The proximal ureter is not visible (normal). The left kidney revealed renal infarcts. The left kidney is (3.55) cm in length.

The right kidney exhibits mildly decreased corticomedullary differentiation. There is diffuse mineralization present within the renal cortex. There is no evidence of nephrolithiasis, pyelectasia or hydronephrosis. The proximal ureter is not visible (normal). There are several chronic infarct lesions present. The right kidney measured 3.3 cm. There is focal perinephric inflammation present.

**Adrenal Glands**

The adrenal glands are both identified in their normal locations. They are normal in size and shape with appropriate parenchymal echogenicity and normal phrenic vasculature. The left adrenal gland height is (3.9) mm at the cranial pole and (4.6) mm at the caudal pole. The right adrenal gland height is (3.6) mm at the cranial pole and (3.8) mm at the caudal pole.

**Spleen**

The spleen is of appropriate size and has a normal, homogenous parenchyma with a smooth, continuous capsular surface. The splenic vasculature is normal with no evidence of congestion or thrombosis, and blood flow through the splenic hilus appears normal. The spleen measured 0.88 cm at the hilus.

**Liver**

The liver is subjectively enlarged with a dilated hepatic vasculature. The parenchyma has a coarse echotexture and the portal vasculature is within normal limits.

The gallbladder is distended with anechoic contents. The wall was thin and continuous with no focal lesions. The cystic and common bile ducts are normal / not visible.



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**Gastrointestinal**

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The stomach is empty. The gastric wall is mildly thickened at (2.9) mm with normal deviations due to rugal folds and exhibits appropriate wall layering. The pylorus is of normal appearance.

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The small bowel has (focal / diffuse) changes to the normal 1:3 muscularis to mucosa ratio. Wall measurements are (normal / increased) up to ( )mm. Overall wall layering is (preserved / lost). Additionally there are focal segments of the jejunum with significantly thickened submucosal layer. The jejunum measures up to 3.3 mm in thickness. The duodenum measures 3.5 mm.

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The visible portions of the colon are of normal thickness, up to (1.5) mm, with intact wall layering. The ileocecal junction is visualized and appears normal.

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**Pancreas**

The pancreas is diffusely hypoechoic, but otherwise normal. There is no evidence of peripancreatic inflammation. The pancreatic duct appears normal.

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**Free Abdomen**

There is no evidence of free fluid within the peritoneal cavity. The omentum and intra-abdominal fat are of appropriate echogenicity. There are several, enlarged mesenteric lymph nodes measuring up to 1.0 x 0.9 cm.

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**ULTRASONOGRAPHIC FINDINGS**

**PRIMARY FINDINGS:**

1. Chronic renal disease with mineralization and infarcts.
2. Diffusely thickened small bowel.
3. Hepatic venous congestion.
4. Hypoechoic pancreas.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The changes in the small intestine and mesenteric lymph nodes are suggestive of infiltrative bowel disease, including both inflammatory bowel disease or gastrointestinal lymphoma. Recommendations include:

- ❖ fecal parasite testing and empiric fenbendazole treatment
- ❖ trials with a novel protein or hydrolyzed diet
- ❖ A complete GI panel.
- ❖ Definitive diagnosis would require biopsy of the affected tissue, ideally with intra-operative ultrasonographic guidance. If there is concurrent lymphadenopathy, ultrasound-guided sampling of the lymph node using a 25 or 22G needle could be considered. (dog only - Resting cortisol levels could also be considered).

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The changes in the kidneys are consistent with chronic renal disease. Recommendations include:

- ❖ a CBC, chemistry panel, urinalysis, urine protein creatinine ratio and blood pressure measurement are recommended
- ❖ urine culture should also be considered, particularly if urine sediment is active
- ❖ dietary and supportive care recommendations can be made, based on the staging of the disease as outlined in the IRIS guidelines

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Additionally the changes in the pancreas are likely indicative of either past episodes of pancreatitis or a benign age related change. There is no obvious cause for hematuria noted in the ultrasound. The changes to the kidneys could contribute to chronic hematuria, it is also possible that the Clopidogrel is exacerbating any mild bleeding in the urinary tract. A urine culture is recommended.

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Portions of the patient's thorax visualized exhibit pleural effusion. As the patient is already being treated for congestive heart failure, the changes in the thorax and liver suggest that reevaluation of the current cardiac treatments are recommended. Thoracocentesis is recommended to relieve pleural effusion can be considered if the patient is symptomatic.

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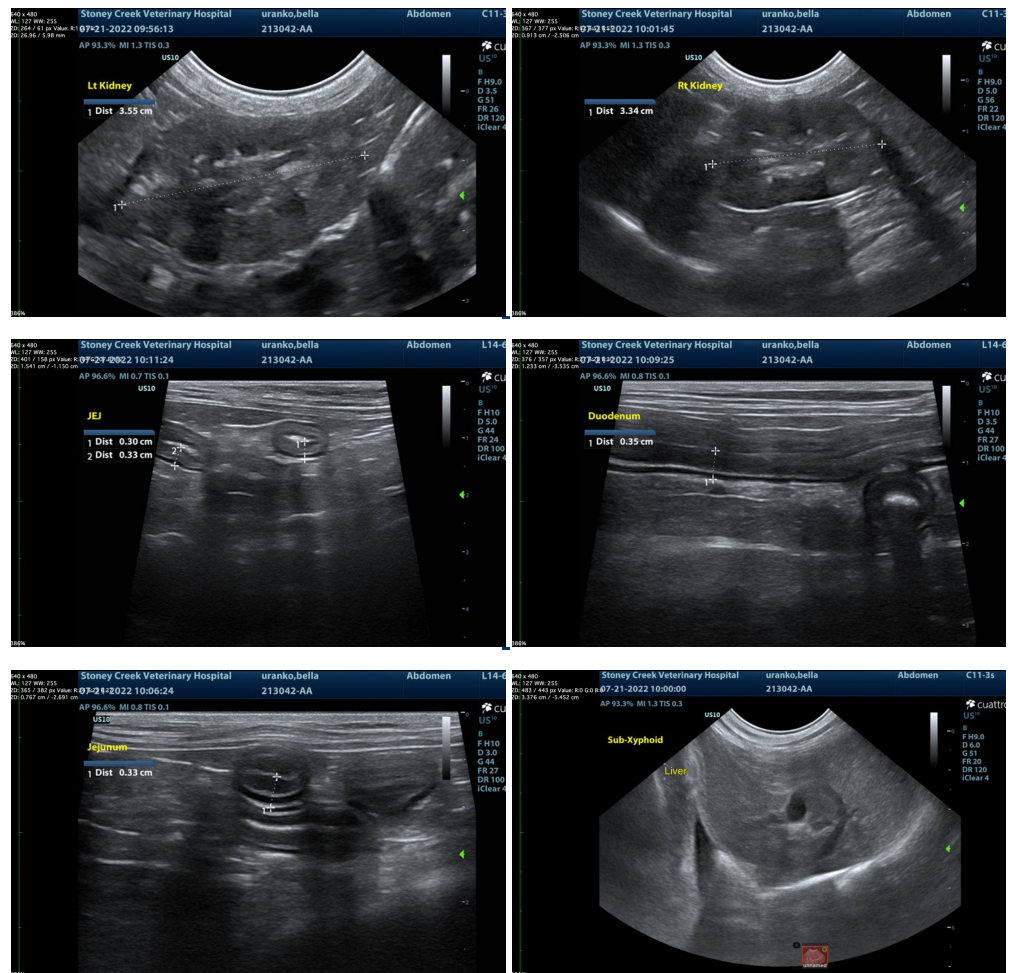
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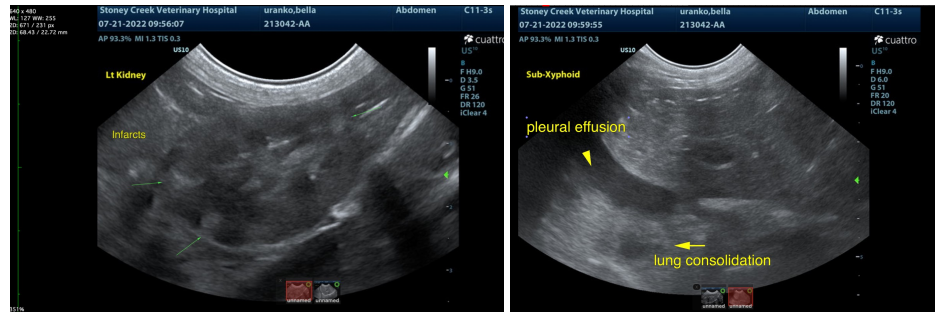
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Tam Mengine, DVM, DABVP (canine/feline practice)**

info@SonoPath.com