

**DATE PRESENTING CLINICAL SIGNS**

7/30/23

History: Referral for Continued Care. Urinary Obstruction. Not Eating. Not drinking. Lethargic. Vomiting. History Attached.

**PATIENT**

Bella Henning

Current Medications: Maropitant Citrate (Cerenia) 10mg/mL Solution Injection, Oral Buprenorphine 0.3mg/ml 0.2, Ondansetron 2mg/mL Injection.

Lab Results: Attached.

**SPECIES**

Feline

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**BREED**

DSH

Imaging Performed By: Rachel Brillhart, RDMS.

**SEX**

Spayed Female

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal. This is a mild change. Urinary catheter was also present and in proper position with the urinary bladder.

**AGE**

2006

**WEIGHT**

6.6 Pounds

The **right kidney** revealed cortical infarcts, mineralization and pyelectasia (0.38 cm). Caudal cortical collapse was noted in the right kidney- the right kidney was subnormal in size as a result, measuring 2.83 cm. Moderate degenerative renal changes were noted in the right kidney.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

The **left kidney** revealed pyelectasia (0.51 cm). The left kidney measured 3.19 cm. Mild to moderate degenerative renal changes were noted in the left kidney.

Blood flow to the kidneys was subnormal on color flow assessment.

**HOSPITAL NAME**

Animal Emergency  
Hospital

**Adrenal Glands**

The **left adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.49 cm.

**REFERRING VET**

Dr. Hicks

The region of the **right adrenal gland** revealed no evident pathology.

**Spleen**

The **spleen** in this patient was uniform, yet volume contracted. Hydration status should be assessed.

**INVOICE**

23708

**Liver**

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some moderate age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of

congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

### ***Gastrointestinal***

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall. Muscularis/mucosal ratio was 1:1. The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic disease. No concerning lymphadenopathy was visible. No evidence of obstruction was present. Chronic inflammatory bowel disease is likely with a low possibility of an early neoplastic event such as lymphoma. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule out this possibility. The colon was particularly thickened in this patient, measuring up to 0.43 cm. Some stricturing pattern was noted in the descending colon.

### ***Pancreas***

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some moderate parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

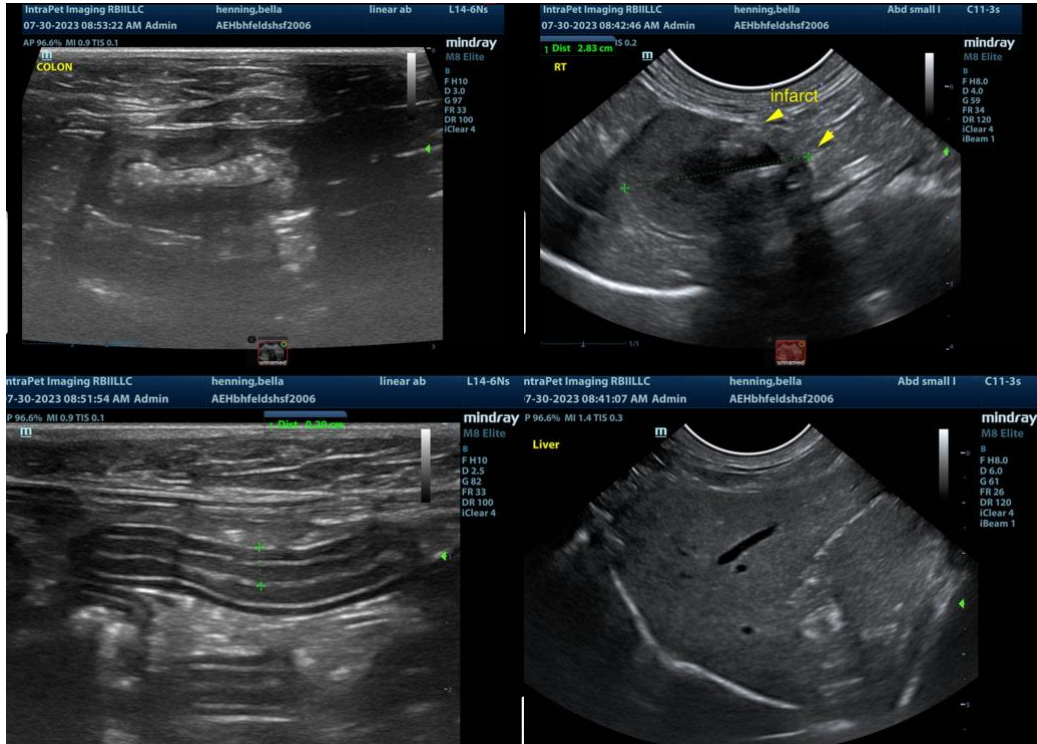
## **ULTRASONOGRAPHIC FINDINGS**

- Moderate degenerative renal changes with infarcts, collapse and dystrophy in the right kidney and mild to moderate degenerative changes and pyelectasia in the left kidney.
- Volume contracted spleen
- Intestinal and colonic thickening, likely inflammatory bowel and colitis, however, cannot rule out emerging colonic neoplasia.
- Geriatric abdomen otherwise

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

Colonoscopy and mucosal biopsies would be ideal. 72hr IV fluid protocol is warranted to correct the azotemia. The patient may be moving calculi periodically with secondary cortical renal collapse and infarcts; however, concurrent prerenal disease represented by the GI and pancreatic presentation may also be playing a role. I recommend a fresh fecal smear and fecal floatation analysis +/- colonoscopy would be ideal. No overt evidence of neoplasia, however, emerging colonic neoplasia cannot be completely ruled out. Recheck sonogram is recommended in 7-10-days once stabilized to assess any colonic progression or regression in presentation.





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.

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