



**PATIENT**

Buttons Taylor

**SPECIES**

Feline

**BREED**

DSH

**SEX**

FS

**AGE**

16

**WEIGHT**

8.58

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Dr. Saum Hadi

**HOSPITAL NAME**

Bethany Family Pet  
Clinic

**REFERRING VET**

Dr. Saum Hadi

**INVOICE**

13750

**DATE**

4/27/22

**PRESENTING CLINICAL SIGNS**

P presented to me for the first time yesterday 4/26. Was being seen and worked up at a different vet for straining in the litter box, hyporexia, and lethargy. Prior UA + culture in early april revealed an E. coli infection. P was started on a 3 week course of zeniquin to no improvement of clinical signs. Finishing zeniquin within a few days. Repeat UA culture will be scheduled following completion of abx and pending ultrasound results. P also has history of hyperthyroidism, managed with 2.5 mg methimazole BID. Typically well managed, but last TT4 was in early April was low normal (see abnormal). P is historically on prednisolone 2.5 mg EOD for atopic dermatitis and purina HA for same. Historic stage 2/4 CKD. Historic grade 4/6 sternal systolic heart murmur.

Abnormal PE/Chem/CBC/UA Results: CBC: Hct 32.7%; platelets 317,000/uL; WBC 8650/uL, differential NSF. Chemistry a. Creatinine 2.8 mg/dL, urea 51 mg/dL; phosphorus 4.8 mg/dL b. GGT 11 U/L(H, mild); normal ALP and ALT c. Albumin 2.8g/dL, globulin 5.8 g/dL(H, mild) d. Total calcium 13.6 mg/dL e. U/A (voided): USG 1.015; pH 5.5, 1+ protein, 2+ heme; WBC 15-20/hpf, RBC 20-30/hpf, moderate bacteria 9-40/hpf f. Urine culture; 4/6: E.coli 50,000 to 100,000 CFU/mL; susceptible to all antibiotics tested. g. Ionised calcium 1.54 mmol/L

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder was mildly subnormal in size owing to a lack of urine distention. Full evaluation of the urinary bladder walls was limited given this presentation. Subjective mild generalized to variable urinary bladder wall thickening exhibiting mild nonhomogeneous echotexture was present, with the ventral urinary bladder wall measuring approximately 0.4 cm wall width. Minimal anechoic urine was present with potential for mild particulate sediment and suspect pinpoint to focal areas of luminal mineral. No overt evidence of urinary bladder masses was noted.

The area of the aortic trifurcation was free of pathology.

A normal 1:3 cortex / medulla ratio was maintained in the kidneys. Moderate loss of corticomedullary border demarcation, more prominent in the left kidney, expected for the age of the patient was present. No evidence of pelvic dilation was present. The left kidney was mildly subnormal in size compared to normal renal size for felines, as well as compared to the right kidney, measuring 2.2 cm in length. By comparison, the right kidney measured 3.2 cm in length. Mild variable medullary echogenicity with mild left kidney pyelectasia was present.

**Adrenal Glands**

The left and right adrenal glands were not definitively visualized.

**Spleen**

The spleen exhibited potential for mild subnormal size owing to volume contraction with primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with



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minor potential for inflammatory or neoplastic disease. No overt evidence of splenic neoplastic criteria was noted. The spleen measured 0.5 cm in width at the level of the hilus.

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**Liver/ Gallbladder**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

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**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall width measured 0.21 cm.

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The visualized small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material. No overt or visualized intestinal masses were noted. The small intestinal wall width measured 0.20 cm.

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Normal visible colon wall layers were present with apparent formed feces in lumen.

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**Pancreas**

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

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**Free Abdomen**

Mild to moderate volume peritoneal free fluid was present subjectively within the mid to caudal abdomen. The free fluid was primarily anechoic with potential for mild echogenic changes suggestive of possible mild cellular component. Associated regional nonuniform to indistinctly nodular mesentery was present primarily in the areas of peritoneal free fluid. No overt evidence of omental masses, significant lymphadenopathy, or lymphatic masses was noted.

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**ULTRASONOGRAPHIC FINDINGS**

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- Suspect chronic cystitis with pinpoint to focal luminal mineral
- Bilateral chronic degenerative renal changes more prominent in the left kidney with subnormal left kidney size and mild pyelectasia
- Minor hepatic parenchymal remodeling
- Mild to moderate volume peritoneal free fluid with associated regional nonuniform to indistinctly nodular mesentery

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the peritoneal free fluid is unclear with considerations including non-septic, septic, or potential neoplastic effusion, i.e., carcinomatosis. Lymphomatosis, or similar possible.



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Recommend abdominocentesis for fluid analysis, cytospin cytology with rapid slide preparation of the sediment (if present) to conserve the integrity of the cells and optimize cytological interpretation +/- culture and sensitivity if evidence of inflammatory cells are present.

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FIP is technically a potential in this case yet considered unlikely, given the age of the patient.

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Without evidence of subnormal albumin levels that would diminish oncotic pressure to the point of causing free fluid, as well as no overt evidence of passive hepatic congestion, other significant structural hepatopathies, or diffuse hepatic disease, and no overt evidence of concurrent intestinal mural pathology that may result in peritoneal free fluid, concern for possible lymphatic obstruction owing to carcinomatosis, lymphomatosis, or similar may be indicated, although not definitive.

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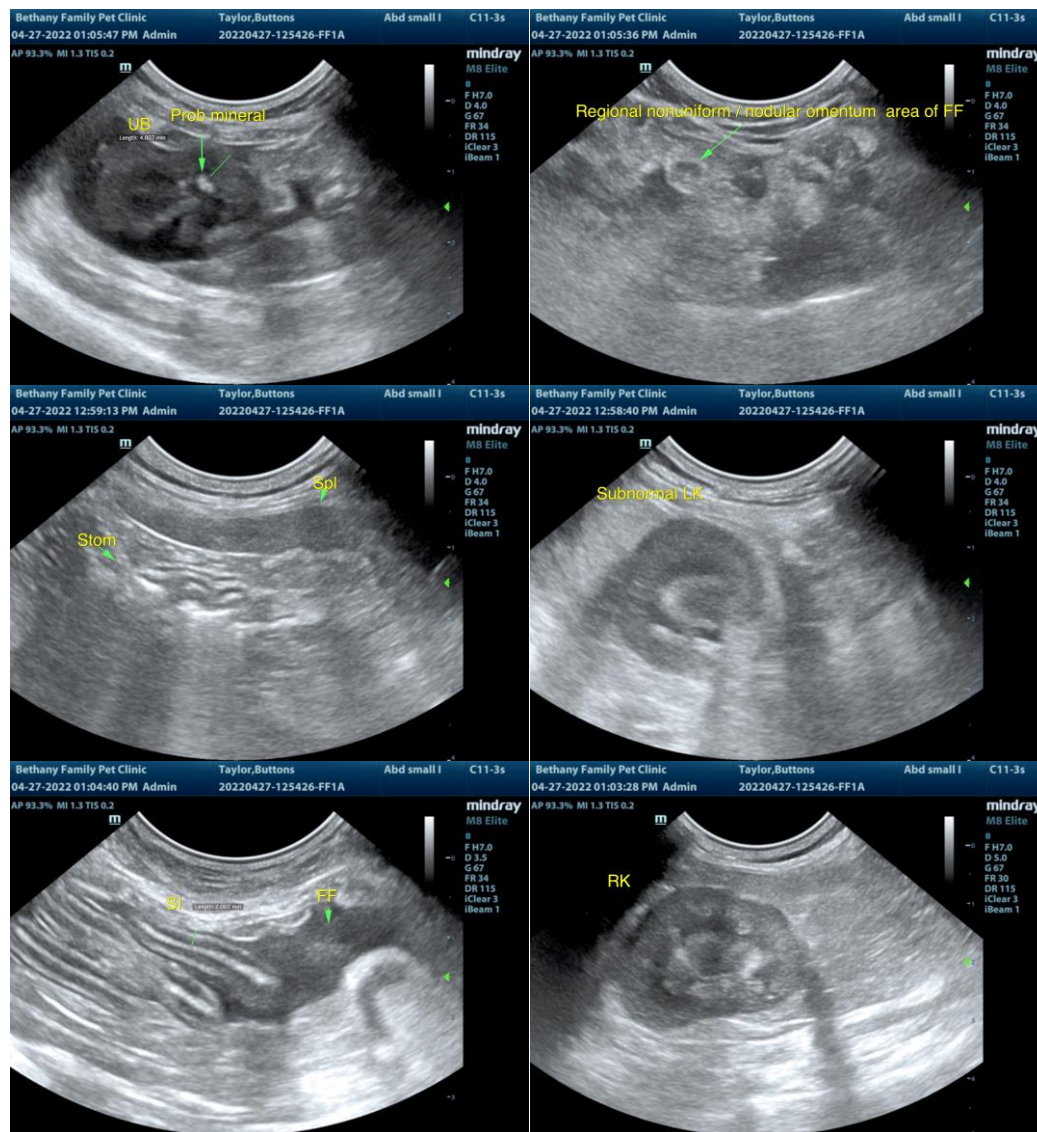
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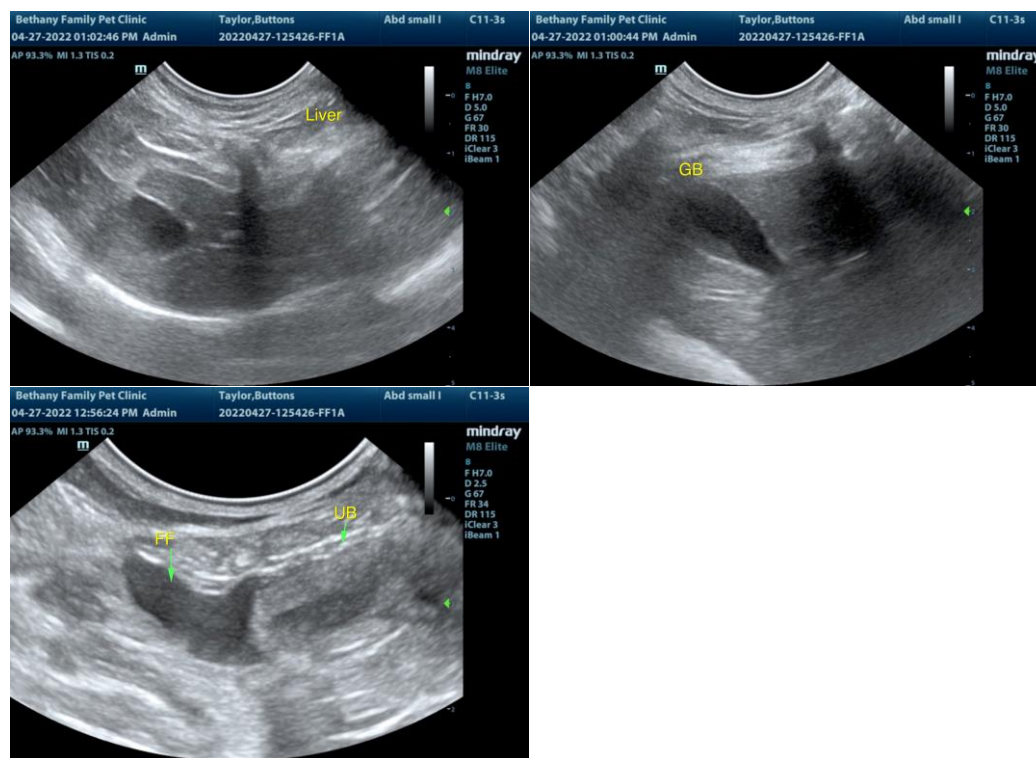
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
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