



**PATIENT**

Fiona Clayton

**SPECIES**

Canine

**BREED**

Pitbull

**SEX**

Spayed Female

**AGE**

11/29/2007

**WEIGHT**

52.4 lbs

**INTERPRETED BY**

Andrea Nicastro,  
DVM, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Andrea Nicastro,  
DVM, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**HOSPITAL NAME**

Sun Dog Cat Moon

**REFERRING VET**

Pruitt

**INVOICE**

10388

**DATE**

2/17/22

**PRESENTING CLINICAL SIGNS**

**Clinical Exam Findings:**

Acute onset inappetence x 2-3d (reduced appetite since Sunday)

CKD (but on carprofen owner aware that this is not ideal, but patient does well on it so on our preferred to take the chance)

History of elevated alkaline phosphatase

Concern for arrhythmia and (tachycardia vs stress)

ABNORMAL Lab work Values: RBC 5.32, HCT 35, lymphopenia (0.8)

Elevations- ALP (1100), ALT (554), BUN (88), calcium (11.9), creatinine (2.2), hyperkalemia (6.1)

UA pending

Current Medications: Cerenia injectable, metro po 10mg/kg, omeprazole 0.5mg/kg PO BID, sucralfate 1g slurry po tid

Fine Needle Aspirates: Client did not approve sedation nor FNA

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (6.74 cm in length); with a slightly irregular shape. The cortex is variably thickened and hyperechoic. Several cortical cysts are present. There is mild to moderate loss of corticomedullary distinction. Several nonobstructive nephroliths are present. Trace pyelectasia is present is observed. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (7.36 cm in length); with a slightly irregular shape. The cortex is variably thickened and hyperechoic. Several cortical cysts are present. There is mild to moderate loss of corticomedullary distinction. Several nonobstructive nephroliths are present. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

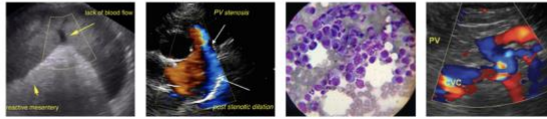
**Adrenal Glands**

The left adrenal gland is normal size (0.57 cm at cranial pole) (0.72 cm at caudal pole) (2.18 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (1.17 cm at cranial pole) (0.75 cm at caudal pole) (2.84 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is normal in size (2.53 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.84 cm slightly cystic nodule is observed within the parenchyma. Splenic vasculature is normal.



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**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

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The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal/not seen.

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**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

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**Pancreas**

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

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**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

**Other**

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

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PERFORMED BY**

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- Bilateral, non-specific, chronic nephropathy with nonobstructive nephrolithiasis
- An obvious cause for the patient's elevated liver enzymes is not identified in this study. Considerations include inflammatory/immune-mediated disease, hepatotoxicosis (i.e., copper), Leptospirosis, infiltrative neoplasia (unlikely), other hepatopathy, +/- age-related change (i.e., vacuolar hepatopathy, regenerative nodular hyperplasia).
- Gall bladder debris non-mucocele
- The small cystic splenic lesion may represent a benign lesion. Alternatively, emerging neoplasia cannot be completely excluded.

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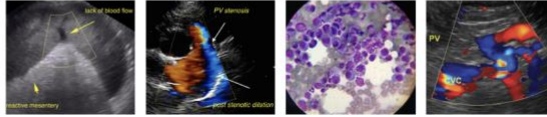
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Regarding the azotemia, consider the following:
  1. Urine culture and sensitivity
  2. UPC (if proteinuria is present)
  3. Baseline blood pressure measurement
  4. Continued empirical treatment for possible gastric ulceration.
  5. Consider performing a reticulocyte count to determine if the anemia is regenerative.
- Regarding the elevated liver values, hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) would be necessary to get a definitive diagnosis. Also consider Leptospirosis testing (i.e., blood and urine PCR, serology) depending on the degree of suspicion for infection. If conservative management is desired, consider empirical treatment for bacterial cholangiohepatitis (i.e, amoxicillin-clavulanic acid, +/- metronidazole, hepatic antioxidants). If liver values do not improve within 5-7 days of initiating therapy, antibiotics should be discontinued.
- Regarding the cystic splenic nodule, if a conservative approach is desired, consider a repeat ultrasound in 4 weeks to assess for progression.
- Other considerations include the following:
  1. Repeat potassium level to determine if hyperkalemia is persistent. If so, consider a resting cortisol level to further assess for hypoadrenocorticism. However, this disease is unlikely in an older patient.
  2. Also consider an ionized calcium to determine if hypercalcemia is persistent. If so, a PTH/PTHrP can be considered
  3. Given the patient's age, three-view thoracic radiographs are recommended to assess for occult neoplasia.



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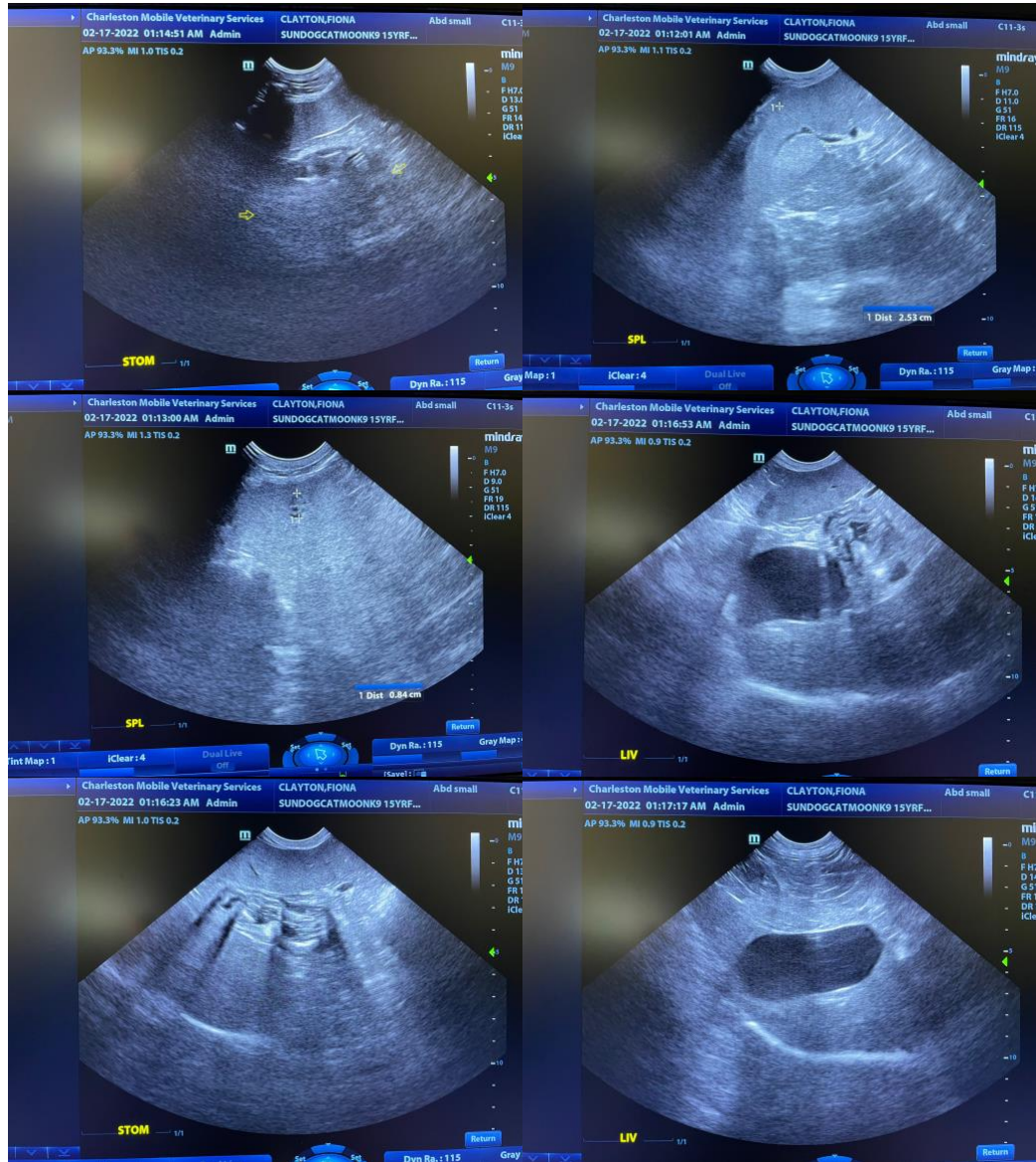
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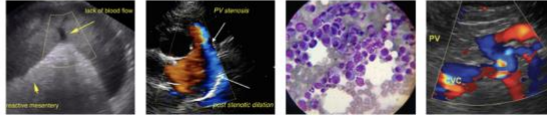
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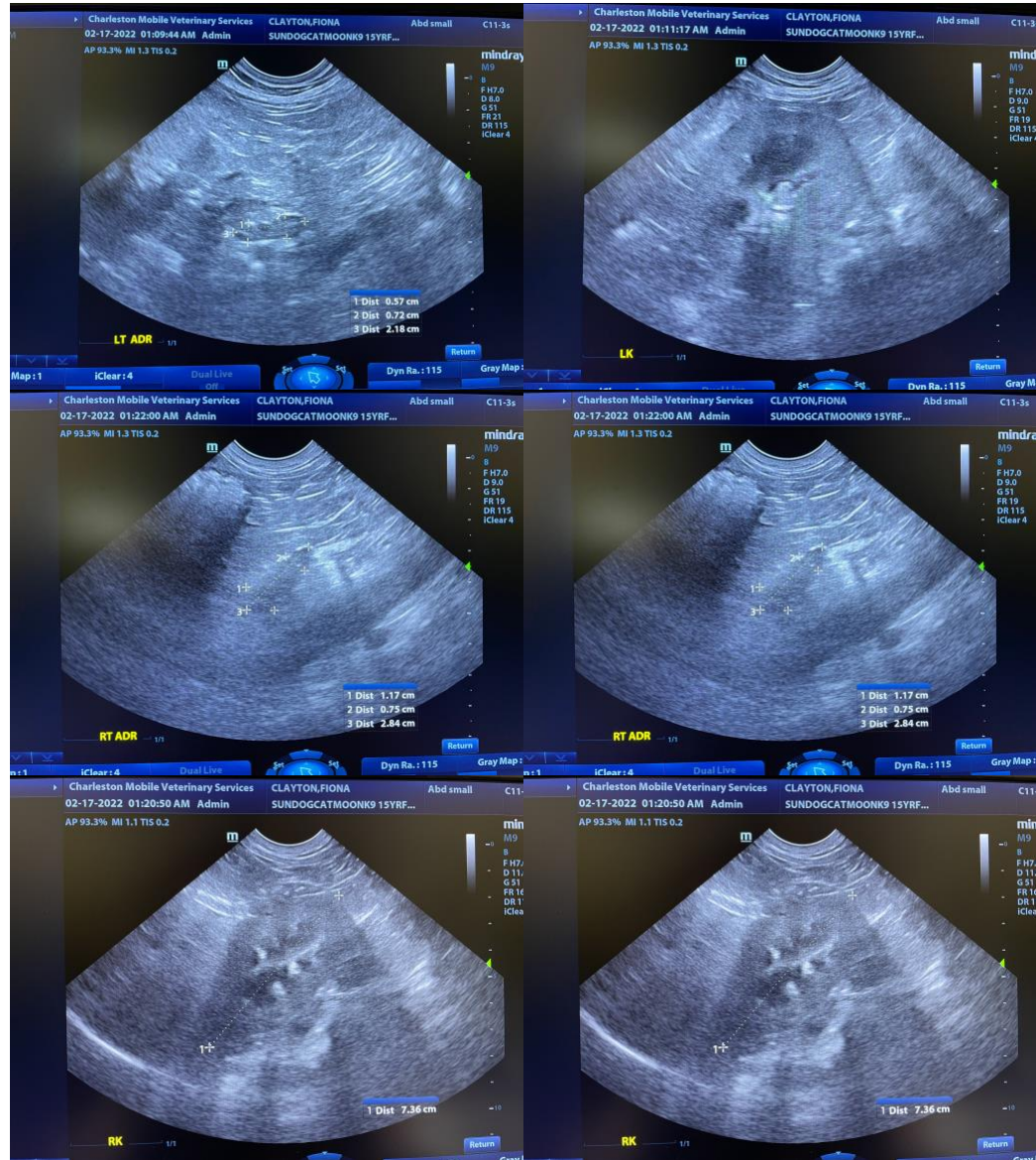
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
info@SonoPath.com