



**PATIENT**

Steve Anderson

**SPECIES**

Feline

**BREED**

Domestic Shorthair

**SEX**

Neutered male

**AGE**

10 years

**WEIGHT**

20 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Schroeder

**HOSPITAL NAME**

Animal Health  
Associates

**REFERRING VET**

Dr. Schroeder

**INVOICE**

30712

**DATE**

5/24/22

**PRESENTING CLINICAL SIGNS**

Patient has hx of CRD and obstructive cardiomyopathy. He has had episodes of cystitis and urinary tract infections in the past. In past few days o noted inappropriate bloody urination. Last night he developed straining and dribbling small amounts of urine. Appetite is good.

Abnormal PE/Chem/CBC/UA Results: Hematuria, granular casts, mild pyuria, culture pending, no bacteria noted. USG 1.030 BUN 37 mg/dl Creatinine 2.0 mg/dl (stable) Globulin 5.5 g/dl BP is normal.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder** was slightly thickened at the cystourethral junction and bladder wall. Sand accumulation was noted and measured 1.0 cm. It was non-obstructive at the time of the sonogram. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. Corticomedullary definition was nebulous and the ratio favored the cortex slightly. The ureters were not visible and assumed to be normal. These changes are most consistent with chronic interstitial nephritis yet infiltrative disease could not be entirely ruled out without biopsy though neoplasia is not suspected. Cortical infarcts were noted in both kidneys. The left kidney measured 3.93 cm. The right kidney measured 4.1 cm with pelvic mineralization.

**Adrenal Glands**

Both **adrenal glands** were 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 0.39 cm.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.



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**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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**Heart**

Rapid view of the heart revealed pleural effusion. This does not appear to be cardiac related as the left atrial size appears normal.

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**ULTRASONOGRAPHIC FINDINGS**

Chronic interstitial nephrosis with infarcts and mineralization. History of nephron/urolithiasis is likely. Current urolithiasis/ 1.0 cm of sand.

**INTERPRETED BY**

Pleural effusion.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**IMAGING PERFORMED BY**

The patient is likely passing calculi from the kidneys to the bladder and bladder through the urethra periodically causing episodic azotemia. Pleurocentesis is warranted with cytospin for further definition. Thoracic ultrasound is warranted to assess for masses as some irregular tissue appears present on brief view of the thorax.

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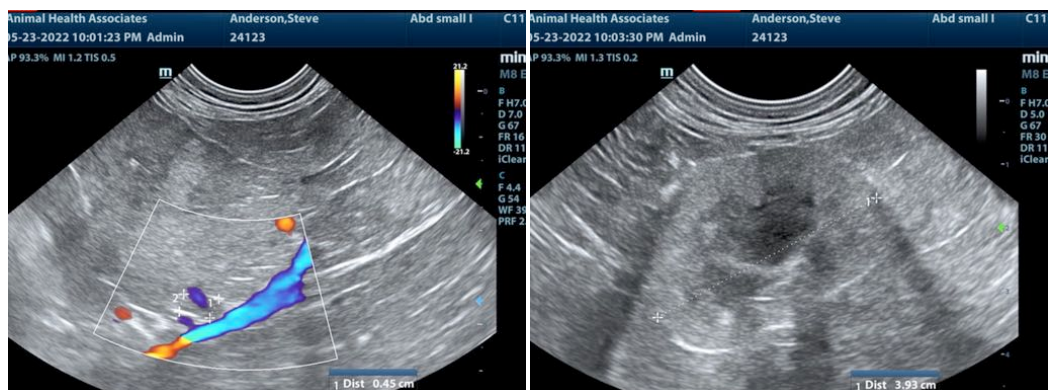
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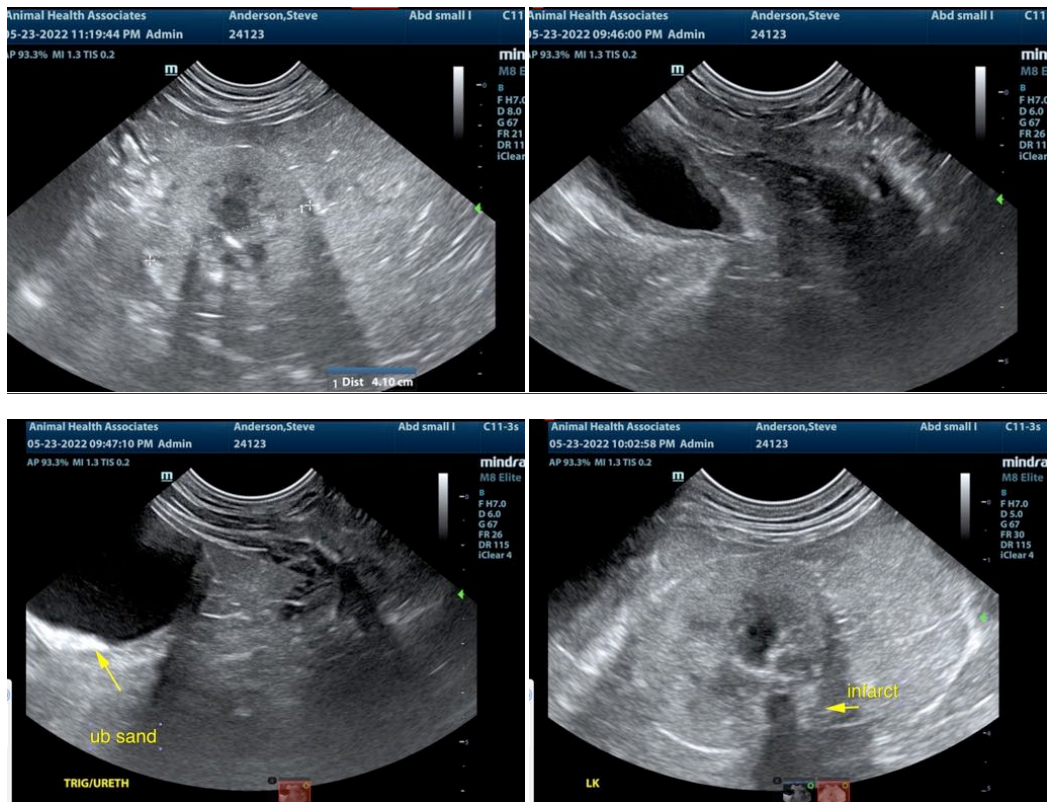
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com