

## PATIENT PRESENTING CLINICAL SIGNS

**Cooper Vandiveer** History: A persistent, mild elevation in BUN and Creatinine, normal blood glucose, but urine glucose went from 100 to 1000 in 2 weeks. She is not symptomatic other than the owners don't think she eats enough and they give her everything.

## SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: PE normal. BUN 36, creatinine 1.6. UA spg >1.050.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

## BREED

Chihuahua

### Urinary System

The **urinary bladder** wall is 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. The region of the trigone normal.

## SEX

Spayed Female

The **left kidney** is normal size (3.71 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

## AGE

18 mos

The **right kidney** is normal size (4.43 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### Adrenal Glands

## WEIGHT

9.6 lbs

The **left adrenal gland** is normal size (0.46 cm at cranial pole) (0.42 cm at caudal pole); 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 (0.82 cm at cranial pole) (0.41 cm at caudal pole) (1.63 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.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Harold Mike Beard

### Spleen

The **spleen** is normal in size (0.80 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

## HOSPITAL NAME

Animal Care VC

### 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.

## REFERRING VET

Dr. Sharon Stone

The **gall bladder** lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

### Gastrointestinal

The **stomach and intestine** are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. 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. There is no evidence of an obstructive pattern.

## INVOICE

11426

## DATE

8.18.22

### **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.

### **Free Abdomen**

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

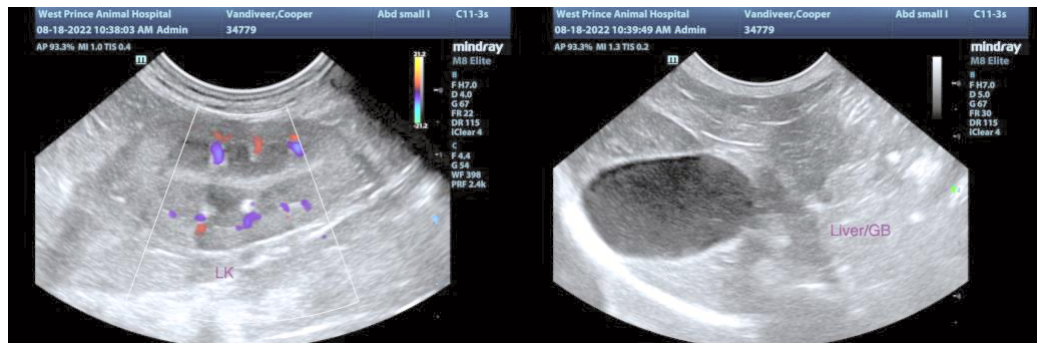
## **ULTRASONOGRAPHIC FINDINGS**

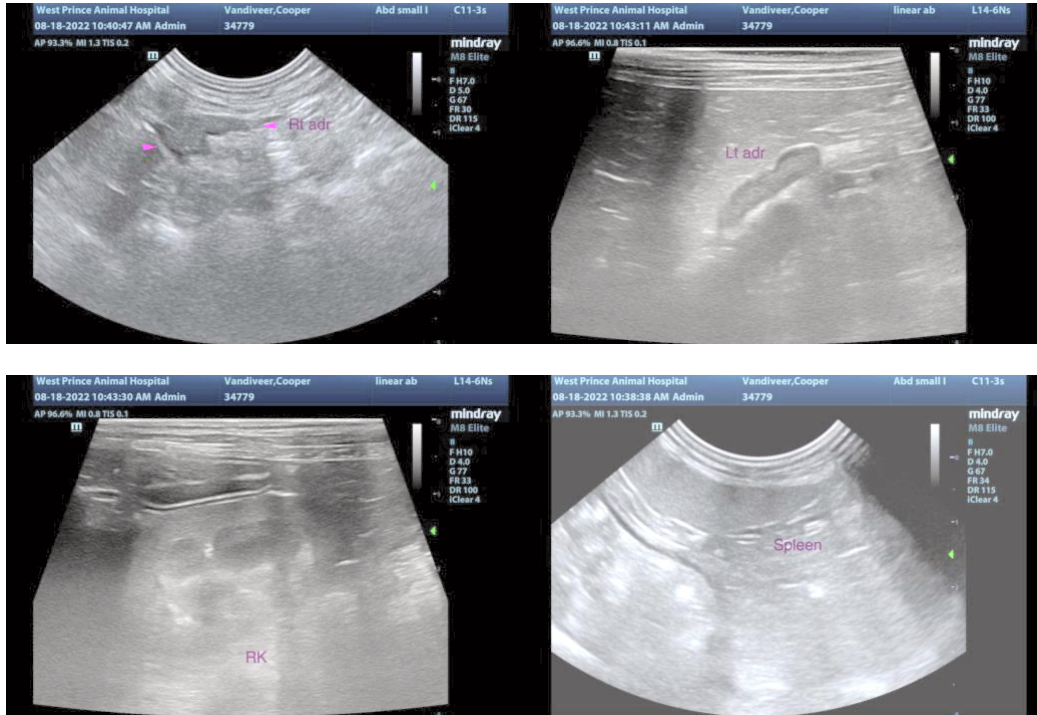
### **Primary Findings**

- Unremarkable abdomen. An obvious cause for the mild azotemia and glucosuria is not identified in this study. Considerations include subclinical, congenital Fanconi Syndrome or acquired renal tubular insult (i.e., toxin, infection, drug-induced, food-induced (imported jerky treats)), other.

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

- Urine amino acid levels are recommended to further evaluate for Fanconi Syndrome. <https://www.vet.upenn.edu/research/academic-departments/clinical-sciences-advanced-medicine/research-labs-centers/penngen/penngen-tests/genetic-tests/Detail/13/>
- Also consider an arterial or venous blood gas to assess blood for metabolic acidosis and other metabolic derangements.
- If proteinuria is present, a UPC should be performed.
- Also consider a urine culture and sensitivity to rule out pyelonephritis.
- Leptospirosis testing (i.e., blood and urine PCR, serology) can also be considered.





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, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
[info@SonoPath.com](mailto:info@SonoPath.com)