

**DATE PRESENTING CLINICAL SIGNS**

12/23/21

History: Azotemia 2nd opinion; PE- very enlarged prostate.  
Current Medications: Enalapril, Azodyl, 200 cc sq LRS q48 hrs.

**PATIENT**

Chi Rybarczyk

Lab Results: Azotemia, anemia, CKDz.  
Radiographs: Attached separately.  
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.  
Sedation: Not required for a full diagnostic ultrasound.  
Stat Report: **requested.**

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****BREED**

Shih Tzu

**Urinary System**

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, or masses. There is a small line of shadowing, hyperechoic debris in the dependent portion of the bladder, most consistent with sandy debris.

**SEX**

Intact Male

The prostate is large in size, measuring 2.31 cm x 3.91 cm when measured in cross section. It is slightly irregular in shape, and the parenchyma is heterogeneous with numerous small, discreet cystic lesions. The prostatic urethra appears normal with no evidence of irregularity, invasion of mass effect or calculi.

**AGE**

12/23/15

The left kidney has a normal size (4.31 cm) and is somewhat irregular in shape, likely from previous infarcts. There is mild pyelectasia at 0.42 cm and evidence of non-obstructive nephroliths measuring 0.30 and 0.31 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion.. Renal vasculature is normal.

**WEIGHT**

17.7 Pounds

The right kidney has a normal size (4.29 cm) and is somewhat irregular in shape, likely from previous infarcts. There is mild pyelectasia at 0.53 cm and evidence of non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Renal vasculature is normal.

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.38 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**IMAGING PERFORMED BY**

Stephanie Pearce  
RDMS, RVT

The right adrenal gland is normal in size measuring 0.43 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**HOSPITAL NAME**

Chadwell AH

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**REFERRING VET**

Dr. Gold

**Liver**

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

**INVOICE**

33683

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measured 0.35 cm. Jejunum wall measured 0.23 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

### ***Other***

Both the left and right testicles were visualized. The left testicle is within normal limits. The right testicle has a hypoechoic nodule measuring 0.81 cm x 1.57 cm.

## **PRIMARY FINDINGS**

- Large, heterogeneous, irregular, mildly cystic prostate – most consistent with benign prostatic hypertrophy +/- prostatitis.
- Decreased corticomedullary distinction in both kidneys with evidence of previous infarction, non-obstructive nephroliths, and bilateral pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left and right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other. The hyperechoic mineralized foci observed at the corticomedullary junction of the left and right kidney are consistent with small, non-obstructive nephroliths.
- Hypoechoic nodule in right testicle – This could be consistent with a tumor (benign or neoplastic), abscess, granuloma, or other.

## **SECONDARY FINDINGS**

- Small amount of sandy debris within the urinary bladder – Recommend continued monitoring and urinalysis and culture.

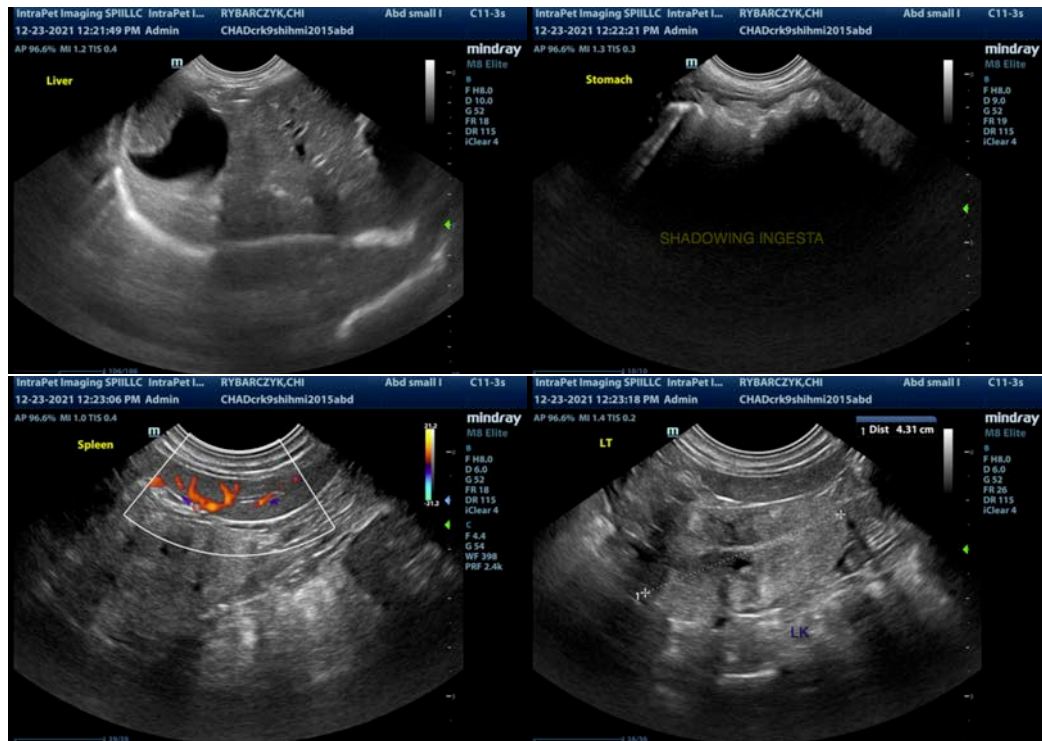
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Moderate ingesta within the stomach lumen – most consistent with kibble. If the patient was adequately fasted, consider such differentials as delayed gastric emptying or partial outflow tract obstruction (none visualized).

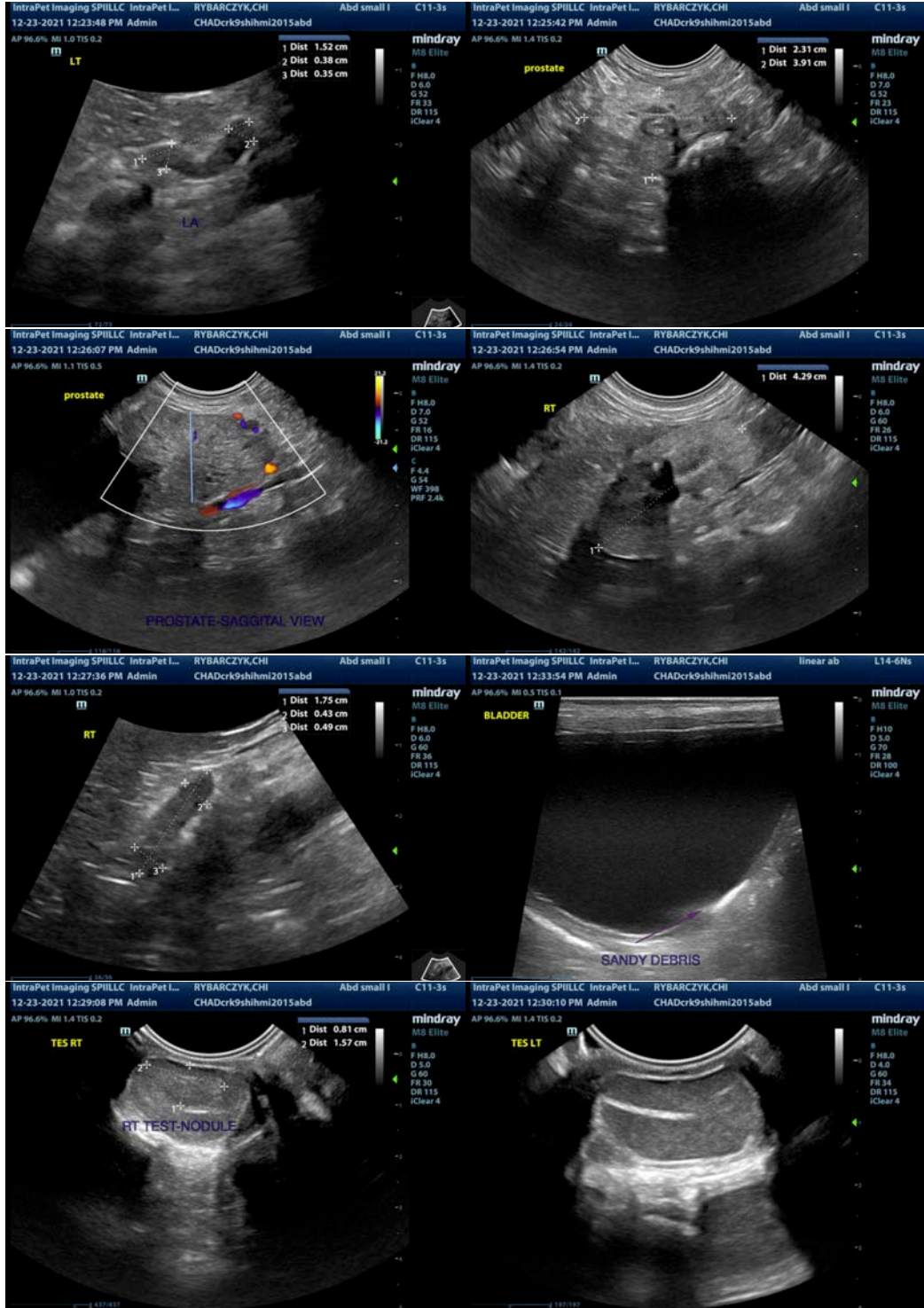
### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The kidneys appear severely affected with chronic changes, likely consistent with longstanding renal disease. Additionally, the prostate is large and cystic, which could be consistent with benign prostatic hypertrophy or current/previous prostatitis. If a current infection is present, then pyelonephritis could be exacerbating the current renal disease, causing an acute on chronic crisis.

Recommend urinalysis and culture, broad-spectrum IV antibiotics, diuresis, and blood pressure evaluation. If values are improving and the patient is more stable, consider neutering in the near future, both to help with the prostatic enlargement and to submit the right testicle for histopathology to evaluate the nodule visualized.

Recommend 3-view thoracic radiographs.





**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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)  
kathleen.sennello@sonopath.com