

IMAGING PERFORMED BY

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**DATE PRESENTING CLINICAL SIGNS**

4/26/22 Patient presents for evaluation of proteinuria- 4+ protein with elevated UP/CR. Client also requests echocardiogram at this time. No murmur or history of cardiac disease.

**PATIENT**

Smokey Gerhart  
Current Medications: None current.  
Lab Results: See attached.  
Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Torbugesic IV.  
Stat Report: Not requested.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

Beagle

**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, masses or cystic calculi.

**SEX**

Neutered Male

The prostate is borderline large, measuring 2.0 cm in the sagittal view. It is slightly heterogeneous with occasional ill-defined, hyperechoic foci. The capsule remains smooth and there are no cystic lesions observed.

**AGE**

6/2/14

The left kidney has a normal shape and size (6.27 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

40 Pounds

The right kidney has a normal shape and size (5.63 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. 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 0.44 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 0.49 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**

Perry Hall 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. Miller

**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**

37149

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 hyperechoic sludge. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains a moderate to large amount of shadowing debris. 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 layers 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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.

## **ULTRASONOGRAPHIC FINDINGS**

- Prominent, heterogeneous prostate with occasional hyperechoic foci – Correlate these findings with the age of neutering and possible previous prostatic disease. If this patient was neutered prior to puberty, then consider a fine needle aspirate of the prostate.
- Hypoechoic, shadowing debris within the gastric lumen – Correlate these findings with feeding history and abdominal radiographs. If this patient was adequately fasted, then consider the possibility of ingested foreign material, delayed gastric emptying, outflow tract obstruction, etc. (none visualized).
- Mild hyperechoic material within the gallbladder lumen – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

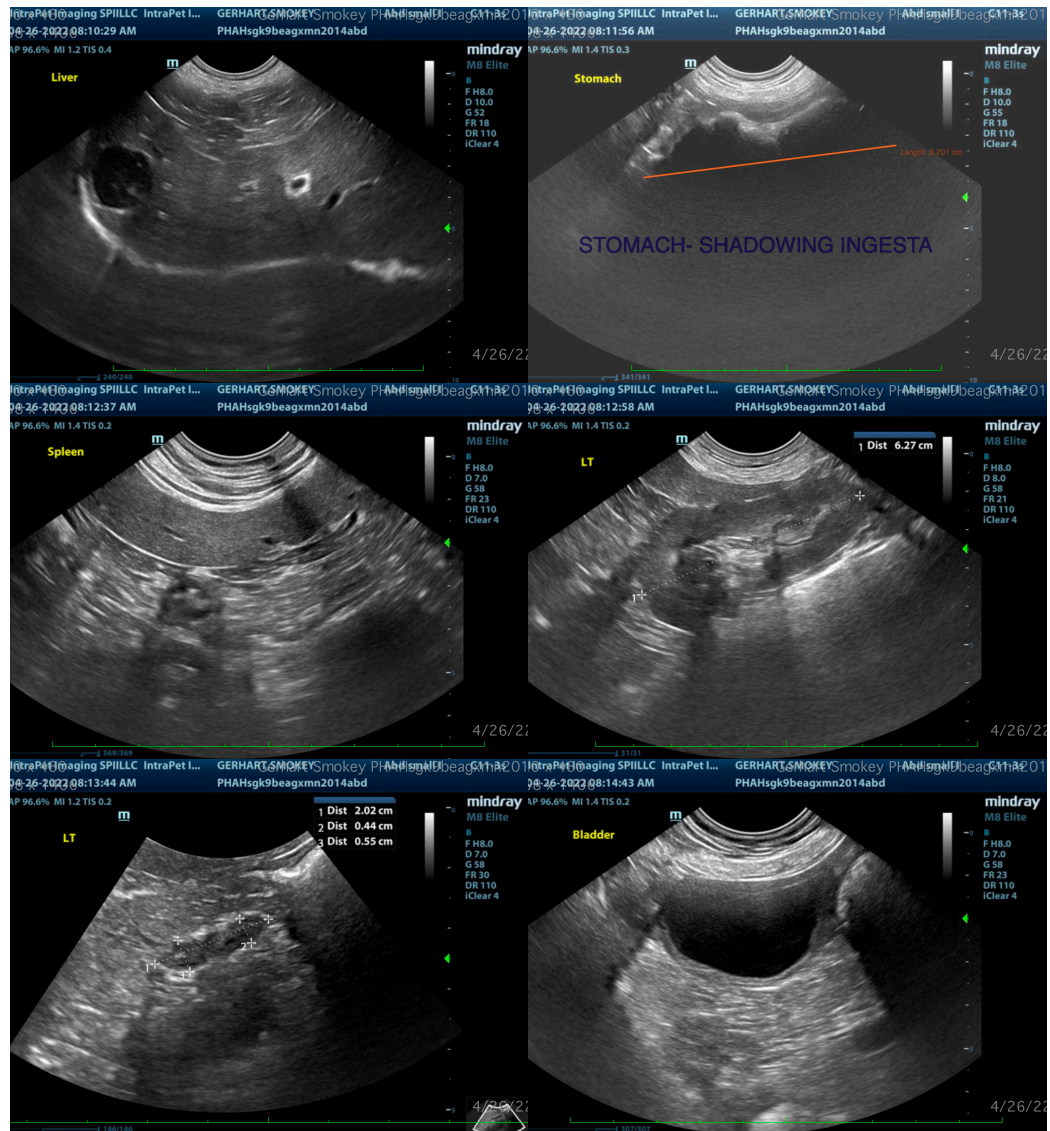
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

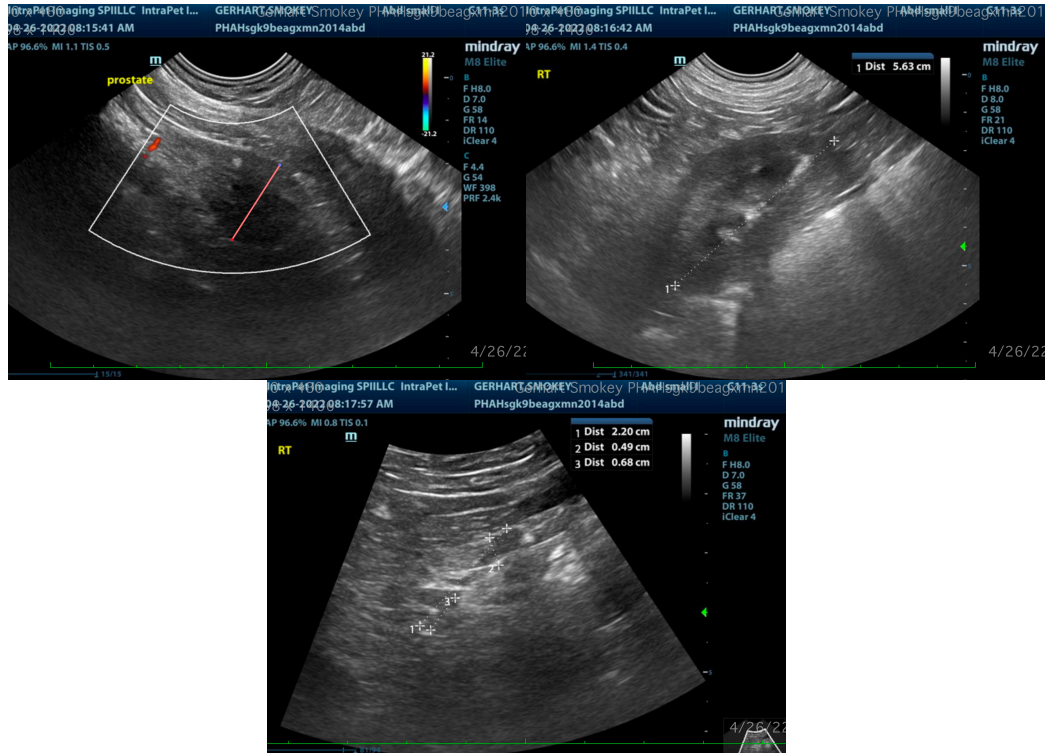
An obvious cause for the proteinuria reported is not observed. The prostate appears somewhat large and heterogeneous with some hyperechoic foci. Correlate these findings with the age of neutering. If this pet was neutered prior to puberty, this would be abnormal, and a fine needle aspirate could be considered. If this patient was neutered late in life, then options would be previous prostatic disease or less likely prostatic neoplasia.

There is shadowing material visualized within the gastric lumen. If the patient was adequately fasted, correlate these findings with abdominal radiographs, as this could represent gastric foreign material.

The proteinuria reported is relatively mild at this time. Recommend initial workup including 3-view

abdominal radiographs, 3-view thoracic radiographs, blood pressure evaluation, urine culture, and screening for tick borne disease. I would also consider confirm the proteinuria with a pooled urine sample collected at home (3 samples collected at different times, combined and tested) to rule out the stress of the hospital, etc.. If the proteinuria is confirmed and significant with no hypertension, etc., then consider options for considered monitoring or treatment. The ACVIM has an excellent consensus statement on their website discussing diagnostics and treatment options.





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.

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