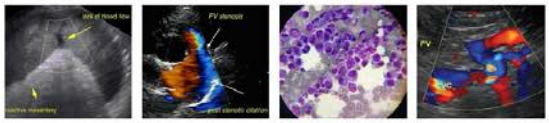
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

**PATIENT**

Rex Gaboriault

**SPECIES**

Canine

**BREED**

Terrier

**SEX**

Neutered Male

**AGE**

13 Years

**WEIGHT**

21.4 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Mount Rose AH

**REFERRING VET**

Dr. Katie Weldon

**INVOICE**

26125

**DATE**

10/7/21

## PRESENTING CLINICAL SIGNS

13 years 21.4 lbs. HISTORY: P has had a worsening heart murmur since it was first ausculted on August 12, 2021. Lungs clear. August 12, 2021 - Grade 2/6, PMI over the mitral valve September 9, 2021 - Grade 3/6 murmur ausculted over the mitral valve September 30, 2021 – Grade 4-5/6 murmur. P also has worsening renal values. Diet has been NutriSource chicken wet and some dry with chicken jerky. He was switched to k/d on 9/30/21. Bloodwork Results on 9/9/21 (was dehydrated and vomiting at this time): BUN = 83 (high) Creat = 1.7 (high) SDMA = 19 (high) K+ = 3.3 (low) Glucose = 125 (sl high) T4 = 2.6 (WNL) U/A Results: S.G. = 1.043 pH = 7.0 1+ protein neg glucose trace ketones 1+ bilirubin 0-2 WBC 0-2 RBC no bacteria, casts, or crystals RECHECK Bloodwork Results on 9/30/21: BUN = 123 (high - was 83) Creat = 2.3 (high - was 1.7) SDMA = 16 (high - was 19) Physical Exam: Weight: 21.6 lbs. T- 100.8 P- 136 R- shiver CRT: < 2 sec mm: pink/tacky Dehydration: 0% BCS: 3/5 Dental Score: 2 /4 EENT: No significant ocular or nasal discharge noted. Ears are clean. Lenticular sclerosis OU. CV/Resp: Grade 4-5/6 murmur ausculted over the mitral valve, normal sounds all lung fields GI: Abdomen palpates WNL, non-painful, no masses or organomegaly Musk: No joint abnormalities. Muscles are symmetrical. No pain elicited on manipulation/exam. Integ: WNL LN: All peripheral LN palpate WNL Neuro: WNL Urogen: WNL, no obvious visible or palpable abnormalities REASON FOR ULTRASOUND: • Check for causes of worsening heart murmur, as well as elevating renal values.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *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) largely appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi. There is very subtle mucosal irregularity visualized in the apical portion of the bladder wall.

The prostate is normal in size (0.88 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.01 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

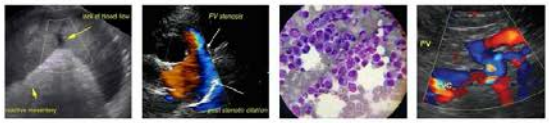
The right kidney has a normal shape and size (4.12 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.49 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.

The right adrenal gland is normal in size measuring 0.46 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.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

**PATIENT**

Rex Gaboriault

**SPECIES**

Canine

**BREED**

Terrier

**SEX**

Neutered Male

**AGE**

13 Years

**WEIGHT**

21.4 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Mount Rose AH

**REFERRING VET**

Dr. Katie Weldon

**INVOICE**

26125

**DATE**

10/7/21

### *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.

### *Liver*

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a hypoechoic nodule visualized within the parenchyma, measuring 1.64 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. 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 0.36 cm. Jejunum wall measured 0.24 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.

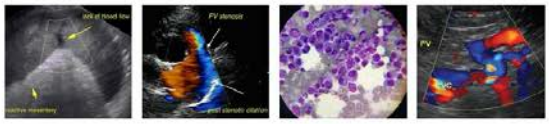
### *Free Abdomen*

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.

### PRIMARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Subtle mucosal irregularity in the apical wall of the urinary bladder – most likely consistent with cystitis, although it could be imaging artifact. Recommend urinalysis and culture.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

**PATIENT**

Rex Gaboriault

**SPECIES**

Canine

**BREED**

Terrier

**SEX**

Neutered Male

**AGE**

13 Years

**WEIGHT**

21.4 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Mount Rose AH

**REFERRING VET**

Dr. Katie Weldon

**INVOICE**

26125

**DATE**

10/7/21

- Mildly heterogeneous liver with hyperechoic liver nodule – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

## SECONDARY FINDINGS

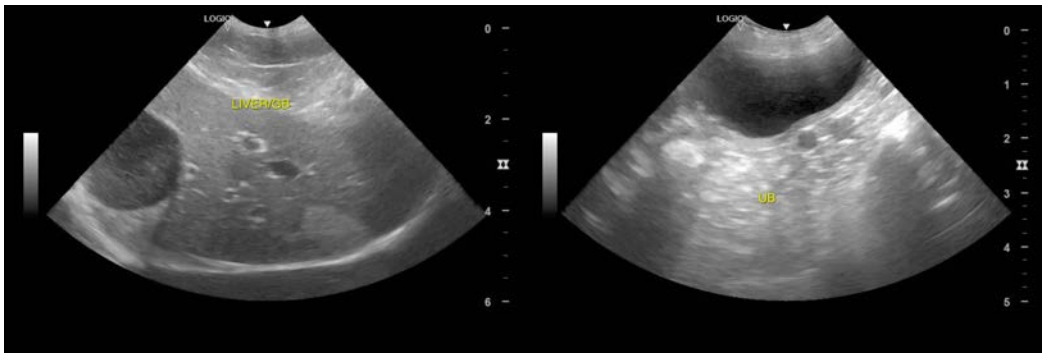
- Moderate gallbladder – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

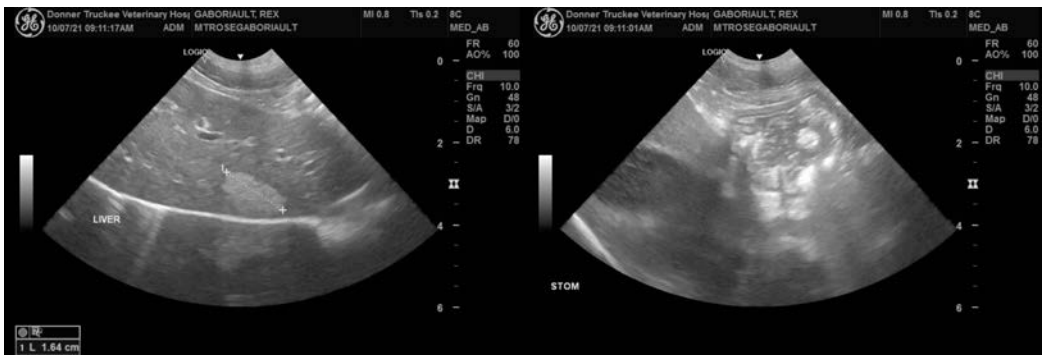
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes observed in the kidneys are consistent with the history, and most consistent with chronic progressive disease. There are no focal lesions such as an obstruction or severe dilation consistent with pyelonephritis visualized. Despite this, I would still recommend a urinalysis and culture due to the mildly irregular bladder mucosa, and I would recommend a blood pressure to evaluate for hypertension. If not already done, I would advise against the jerky treats, as your initial history provided some evidence of ketonuria and glucosuria, and jerky treats have been associated with Fanconi-like syndrome.

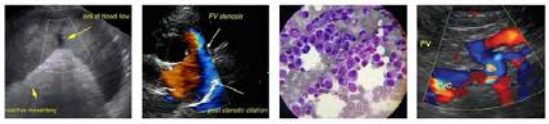
Additionally, the liver is slightly heterogeneous with a hyperechoic nodule. If liver enzymes are normal, this is likely an incidental finding. Recommend continued monitoring of the liver nodule.

There is moderate ingesta within the stomach. If the patient had an adequate fast, this could be consistent with delayed gatric emptying or partial obstruction. No obstruction was visualized, but the pyloric wall did appear prominent. The significance of this is uncertain.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

**PATIENT**

Rex Gaboriault

**SPECIES**

Canine

**BREED**

Terrier

**SEX**

Neutered Male

**AGE**

13 Years

**WEIGHT**

21.4 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, RVT

**HOSPITAL NAME**

Mount Rose AH

**REFERRING VET**

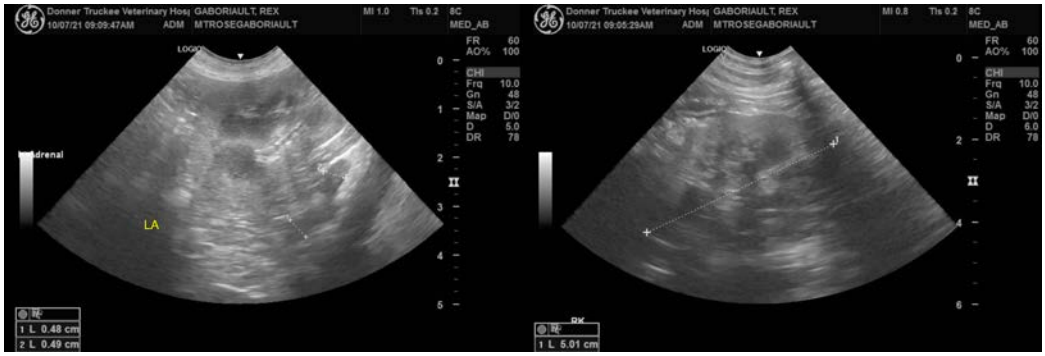
Dr. Katie Weldon

**INVOICE**

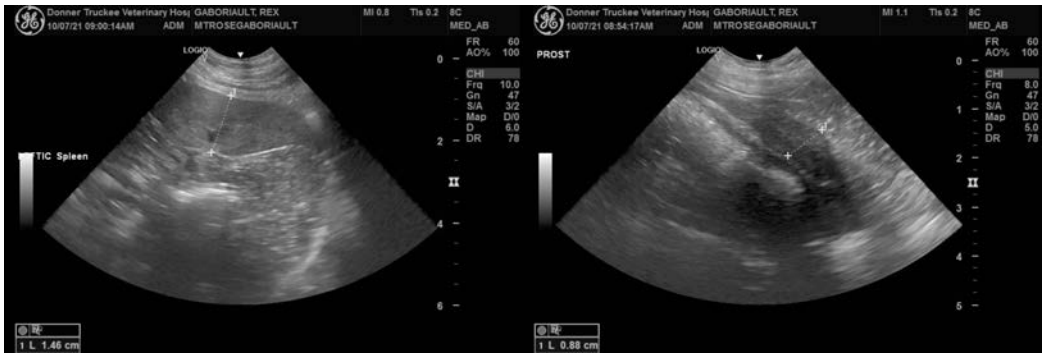
26125

**DATE**

10/7/21








**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