



**PATIENT**

Buddy Olivetti

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Neutered Male

**AGE**

14.5 years

**WEIGHT**

13.8 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING  
PERFORMED BY**

Tam Mengine, DVM,  
DABVP

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

Tam Mengine, DVM,  
DABVP

**INVOICE**

13152

**DATE**

1/25/22

**PRESENTING CLINICAL SIGNS**

Presented last week for decreased appetite and bad breath. CBC / Chem was performed, Ca++ 14.7, ALT ~ 636, ALP 525, BUN 45, Creat 1.7. U/A, iCa++ and bile acids pending. Thin but weight stable.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Minor dependent mineral to sand was present in the bladder. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was normal in size and contour, measuring 1.1 cm in diameter. Primarily uniform parenchyma exhibiting focal area of suspected nonobstructive prostatic urethral mineral were present.

The area of the iliac trifurcation was free of pathology, including no evidence of medial iliac or sublumbar lymphadenopathy.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Areas of nonobstructive medullary mineral were present in both kidneys. No evidence of pyelectasia was present in either kidney. The left kidney measured 4.2 cm in length. The right kidney measured 4.4 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.59 cm width at the caudal pole and 0.50 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.44 cm width at the caudal pole and 0.40 cm width at the cranial pole.

**Spleen**

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Intermittent, echogenic nodules were present in the primarily medial parenchyma and adjacent to the hilus. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas. No overt evidence of splenic neoplastic criteria was noted.

**Liver/ Gallbladder**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size without evidence of inflammatory mural changes. Mild, congealed, nonmineralized luminal debris was present in the gallbladder. The cystic and common bile ducts were normal.



**PATIENT**

Buddy Olivetti

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Neutered Male

**AGE**

14.5 years

**WEIGHT**

13.8 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Tam Mengine, DVM,  
DABVP

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

Tam Mengine, DVM,  
DABVP

**INVOICE**

13152

**DATE**

1/25/22

***Gastrointestinal***

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall width measured 0.38 cm. The duodenum wall width measured 0.42 cm.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

***Pancreas***

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

***Free Abdomen***

No omental masses, lymphadenopathy or peritoneal effusion were present.

**ULTRASONOGRAPHIC FINDINGS**

***Primary Findings***

- Dependent urinary bladder mineral / sand, probable focal nonobstructive prostatic urethral mineral
- Mild chronic renal changes with nonobstructive medullary mineral
- Benign splenic nodules - suggestive of probable benign myelolipomas
- Nonspecific hepatopathy
- Mild congealed gallbladder debris (non-mucocele)
- Overtly normal gastrointestinal tract

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The overall appearance of the liver was nonspecific with considerations including vacuolar hepatopathy and cholestasis, given the ALP elevation, with potential for primary or concurrent nonspecific hepatitis (infectious, inflammatory, etc.), given the ALT elevation. The possibility of occult hepatic neoplasia, given the hypercalcemia, cannot be definitively excluded. Further assessment may include, assuming normal clotting status, ultrasound-guided FNA of the liver for screening cytology.

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. Rectal palpation and three view chest radiographs are suggested if not done. A GI panel to assess for or rule out occult structurally insignificant gastrointestinal disease may be considered, given the patient's potential decreased body condition. Continued as-needed gastrointestinal support is recommended.



**PATIENT**

Buddy Olivetti

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Neutered Male

**AGE**

14.5 years

**WEIGHT**

13.8 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Tam Mengine, DVM,  
DABVP

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

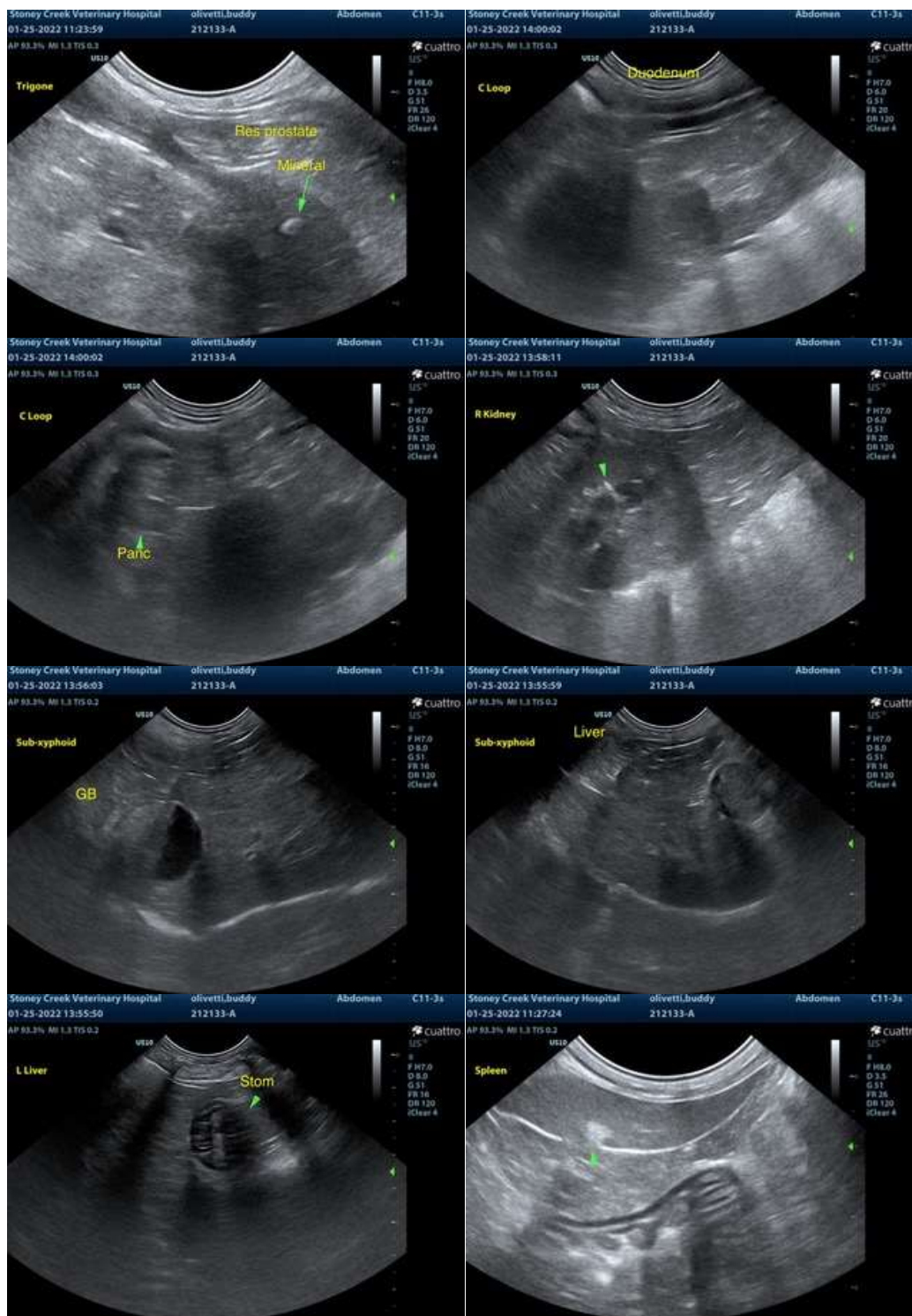
Tam Mengine, DVM,  
DABVP

**INVOICE**

13152

**DATE**

1/25/22





**PATIENT**

Buddy Olivetti

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

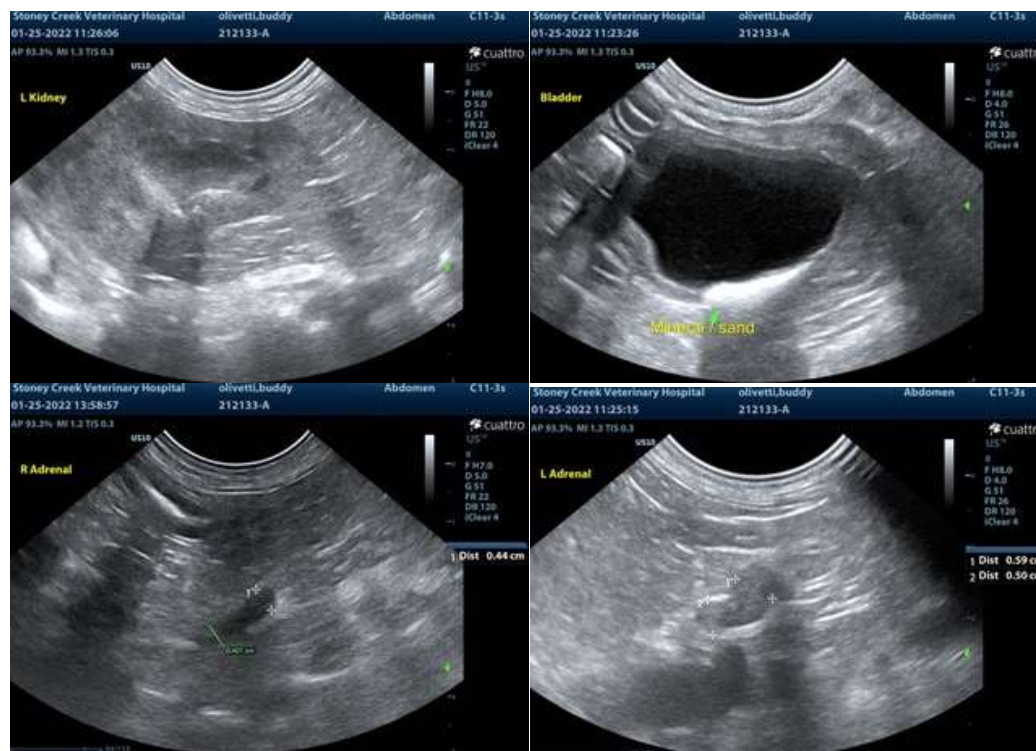
Neutered Male

**AGE**

14.5 years

**WEIGHT**

13.8 lbs.



**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Tam Mengine, DVM, DABVP

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

Tam Mengine, DVM, DABVP

**INVOICE**

13152

**DATE**

1/25/22

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com