



PATIENT

Tyson Boudreau

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Male Neuter

AGE

11

WEIGHT

10.4 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Belan

HOSPITAL NAME

Ramsay Animal
Clinic

REFERRING VET

Dr. Gupta

INVOICE

13885

DATE

5/17/22

PRESENTING CLINICAL SIGNS

Non clinical moderate elevation of ALP and ALT
Abnormal PE/Chem/CBC/UA Results: Mod elevation ALP ALT

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder was mildly subnormal in size owing to lack of urine distention with mild, variably prominent urinary bladder walls. Anechoic urine with multiple, variably sized dependent cystic calculi and mineralized sand were present. Areas of nonobstructive mineral were noted in the prostatic urethra. The urethra exhibited normal structure and tone to a depth of 3.0 cm.

The residual prostate was normal in size measuring 0.57 cm in diameter.

The area of the aortic trifurcation was free of pathology.

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. No evidence of pelvic dilation was present. Minor areas of medullary mineralization were present. The left kidney measured 3.8 cm in length. The right kidney measured 5.1 cm in length.

Adrenal Glands

The bilateral adrenal glands were mildly prominent in size yet maintained symmetrical capsule contour with subtle nonhomogeneous nonmineralized parenchyma. The left adrenal gland measured 0.84 cm width at the caudal pole and 0.69 cm width at the cranial pole. The right adrenal gland measured 0.65 cm width at the caudal pole and 0.58 cm width at the cranial pole.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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, neoplastic, or benign parenchyma changes were not noted.

Liver/ Gallbladder

The liver exhibited overtly normal size with maintained symmetrical capsule contour. Mild nonuniform hepatic parenchyma exhibiting normal echogenicity was present. Mild increased prominence of portal vascular borders was noted. Intermittent subtle nonhomogeneous to mildly hypoechoic intraparenchymal nodules were present, an example measured 1.3 cm in diameter.

The gallbladder was non-distended in size sonographically normal gallbladder walls without evidence of overt neoplastic criteria. Anechoic content was present with moderate nondependent congealed yet nonorganized luminal debris. The cystic and common bile ducts were normal.



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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 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 overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Hepatopathy exhibiting mild nonuniform to intermittent subtly nodular parenchyma
- Mild gallbladder debris - possible very early gallbladder mucocele
- Bilateral chronic renal changes with minor nonobstructive medullary mineral
- Urinary bladder and nonobstructive proximal urethral calculi / sand
- Heterogeneous pancreas
- Mildly prominent bilateral adrenal glands

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The overall appearance of the liver was nonspecific yet consistent with benign hepatopathy. Considerations may include vacuolar hepatopathy, cholestasis, inflammatory / immune-mediated disease with parenchymal remodeling, areas of probable nodular to regenerative hyperplasia or hematopoiesis with neoplastic criteria considered unlikely. Ultrasound-guided FNA of the liver, assuming normal clotting status, and using a 25-gauge needle could be considered for screening cytology primarily to assess for evidence of Inflammatory cells. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial.

Adrenal testing may be considered if clinical signs consistent with adrenal hyperfunction i.e., PU/PD, polyphagia, etc., are present or develop. However, given no overt reported clinical signs, adrenal hyperfunction at this time is considered unlikely.

The heterogeneous pancreas is likely suggestive of age-related pancreatic changes and considered incidental. Potential for low-grade to chronic pancreatitis may be considered if clinically indicated or evidence of cranial abdominal / subxiphoid discomfort on palpation.

Urine culture and sensitivity are suggested on a sterile urine sample. This patient may be potentially passing small amounts of mineral from the kidneys into the urinary bladder.



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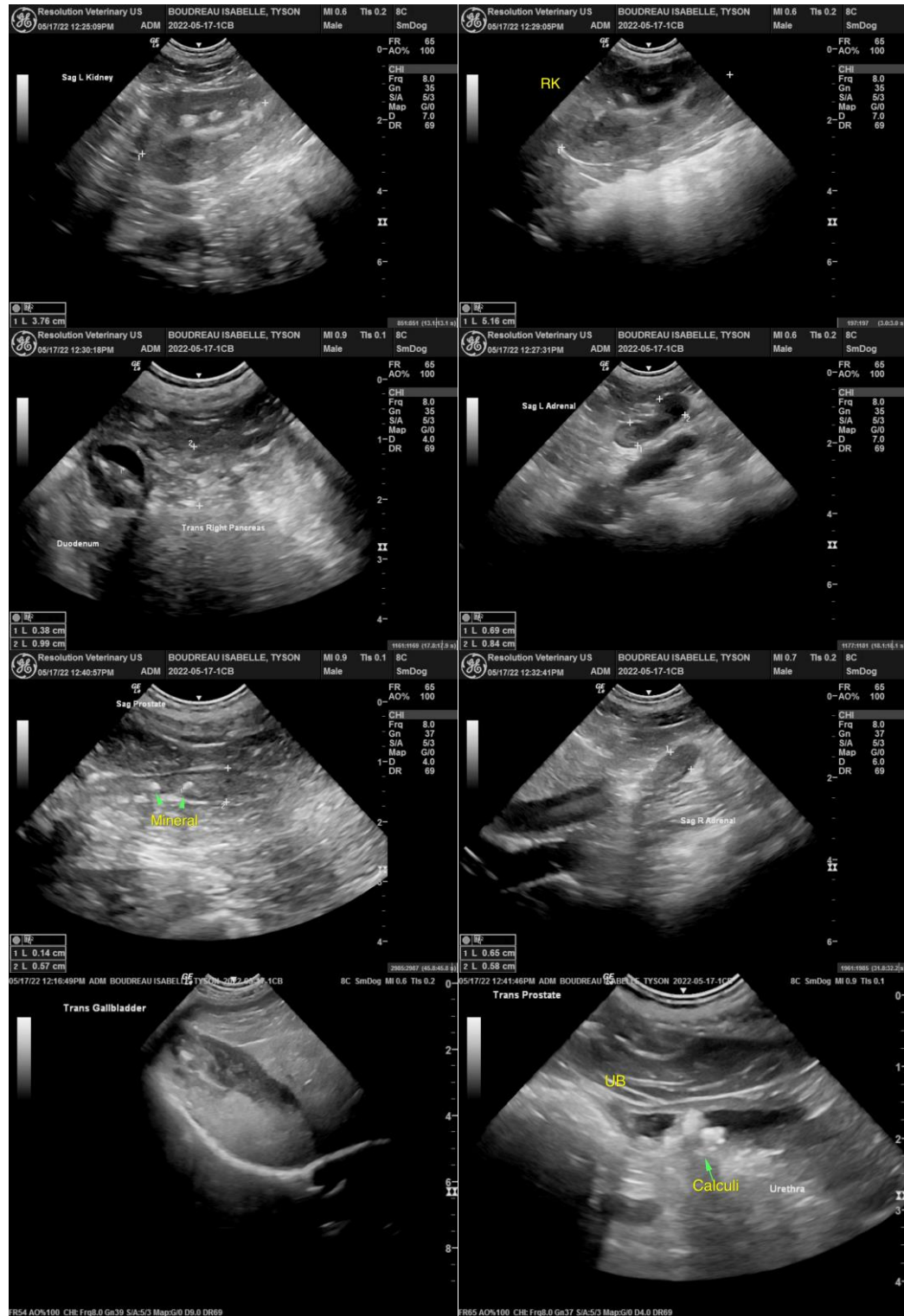
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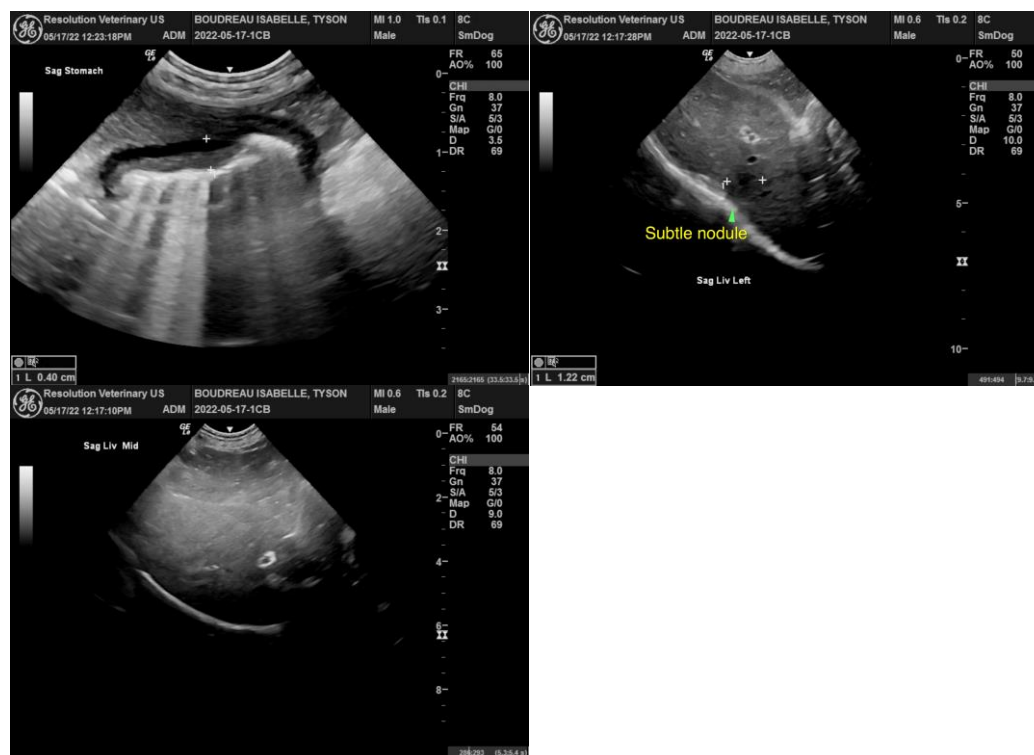
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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