



**PATIENT**

Jake Bleile

**SPECIES**

Canine

**BREED**

Jack Russel X

**SEX**

MN

**AGE**

13

**WEIGHT**

10 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Belan

**HOSPITAL NAME**

Alpine 24-7 AH

**REFERRING VET**

Dr. Lupton

**INVOICE**

17345

**DATE**

7/21/23

**PRESENTING CLINICAL SIGNS**

Vomiting last few days

Abnormal PE/Chem/CBC/UA Results: Severe elevation of ALPK and moderate elevation of ALP

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Mild asymmetrical luminal surface to micropolypliod changes were present likely associated with age-related mural changes. Anechoic urine was present in the lumen with minor dependent to non-dependent, hyperechoic sediment was present, which may indicate pinpoint minor crystalline debris or minor passed mineral. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of significant inflammatory or neoplastic changes or urinary bladder tumors were noted.

The residual prostate was free of pathology.

No evidence of pathology in the area of the aortic trifurcation.

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Focal areas of medullary mineral were noted. Right kidney lateral cortical cyst was present. The left kidney measured 5.0 cm in length. The right kidney measured 5.0 cm in length.

**Adrenal Glands**

The left adrenal gland was normal in size with nonhomogeneous subtly nodular parenchyma and mild capsule asymmetry without suspicion for overt neoplasia. The left adrenal gland measured 0.72 cm width in the cranial pole and 0.56 cm width in the caudal pole.

The right adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The right adrenal gland measured 0.66 cm width in the cranial pole and 0.41 cm width in the caudal pole.

**Spleen**

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Multiple, hyperechoic nodules were present throughout the cranial to caudal parenchyma with some of the nodules appearing to coalesce. 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 hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas. No splenic masses were noted.

**Liver/ Gallbladder**

The liver was enlarged with areas of capsule asymmetry and markedly nonhomogeneous to mixed echogenic remodeled hepatic parenchyma exhibiting several to multiple irregular, nonhomogeneous,



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hyperechoic areas of hepatic parenchyma to macronodules. An example of a macronodule measured 2.1 cm in diameter. The gallbladder was non-distended in size containing anechoic content with moderate inspissated hyperechoic gallbladder sediment. No evidence of inflammatory criteria was noted. The cystic and common bile ducts were normal.

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. Variably echogenic gastric nonshadowing ingesta was present.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Variably echogenic, segmental, similar appearing nonshadowing intestinal ingesta was present.

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**

- Enlarged, markedly nonhomogeneous / nodular liver - nonspecific, vacuolar hepatopathy, chronic inflammatory / immune-mediated disease, hyperplasia, hematopoiesis, fibrosis, probable lipogranulomas, infiltrative neoplasia all potentials
- Moderate inspissated gallbladder sediment - not overtly consistent with mucocele criteria
- Benign to coalescing hyperechoic splenic nodules - consistent with myelolipomas
- Structurally unremarkable gastrointestinal tract with gastric and segmental intestinal ingesta - ingesta consistent with food
- Pancreatic remodeling
- Minor UB lumen mineral - likely passed from kidneys
- Chronic renal changes with mild medullary mineral and right kidney cortical cyst
- Suspect mild left adrenal adenoma

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. Assuming normal clotting status, hepatic FNA cytology is recommended for further assessment. Hepatic core surgical biopsy is likely required for a definitive diagnosis. Low-grade to chronic pancreatitis may be suspected if evidence of cranial abdominal or subxiphoid discomfort on palpation. Some degree of nonobstructive delayed gastric emptying could be considered if documented NPO. As-needed gastrointestinal support is recommended.



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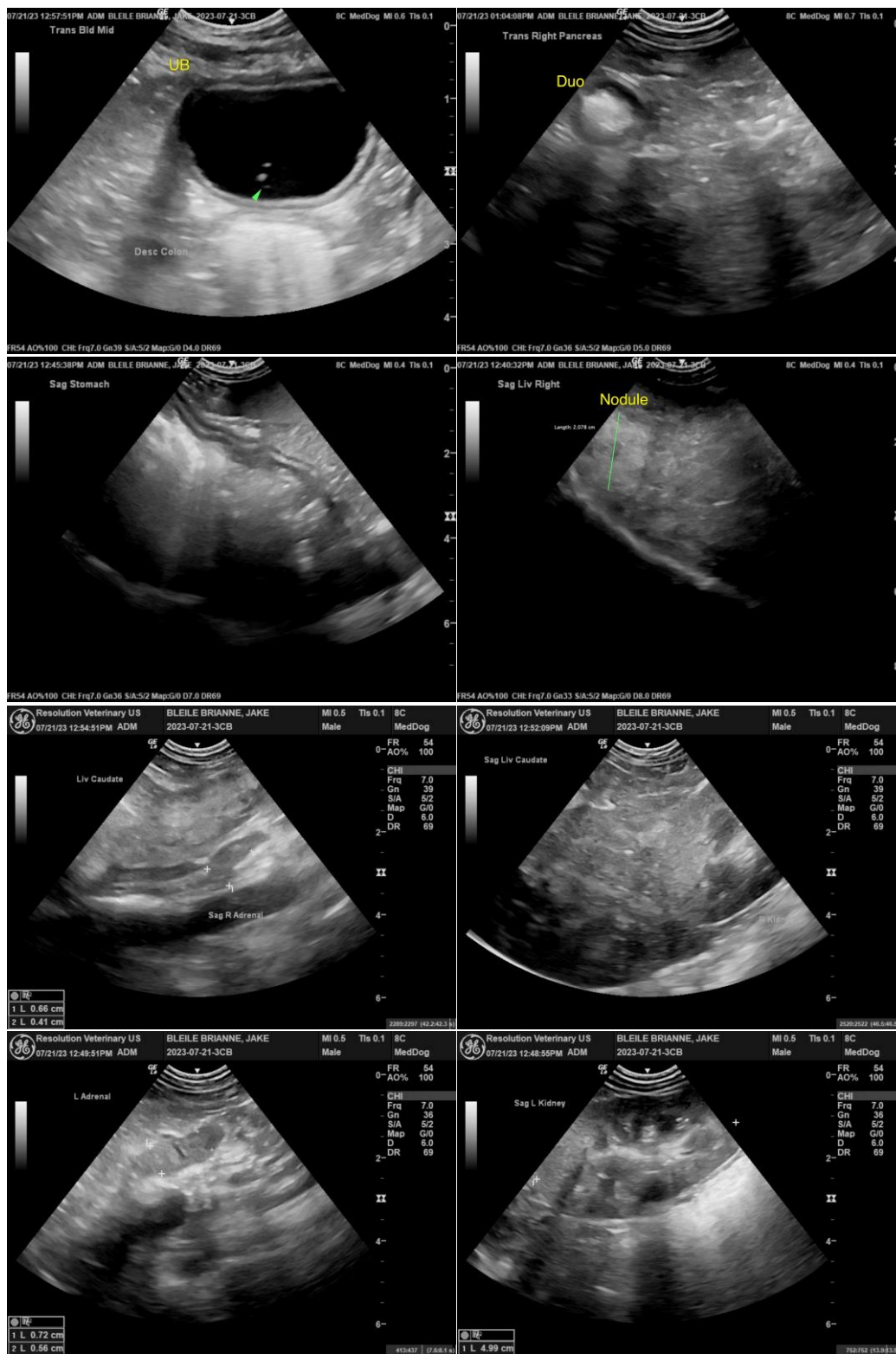
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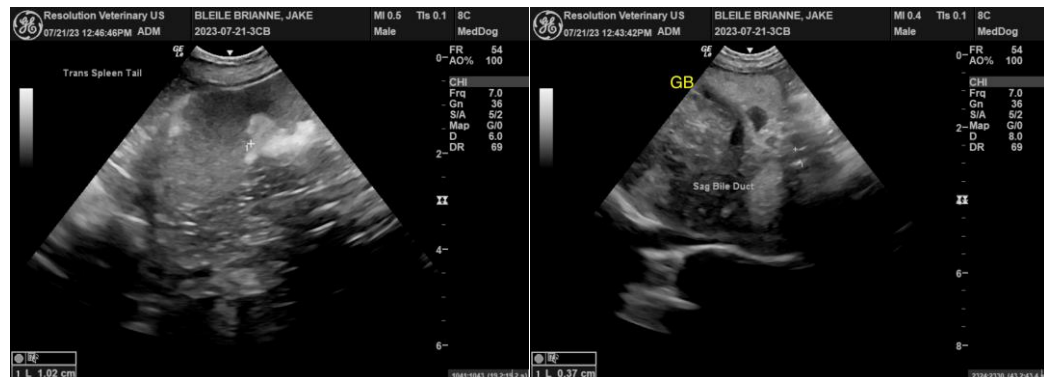
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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](mailto:info@sonopath.com)