



PATIENT

Ben MacAline

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered Male

AGE

12 Years

WEIGHT

14.2 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Van Nieuwal

HOSPITAL NAME

Animal Emergency Hospital Volusia

REFERRING VET

Dr. Van Nieuwal

INVOICE

35028

DATE

1/22/22

PRESENTING CLINICAL SIGNS

Patient presented for vomiting and diarrhea starting this morning. Defecation had spots of blood around 2AM has since progressed to diarrhea with blood. The vomiting started at 4AM. Patient has a history of bladder stones that were removed oct, 2021 and has been on royal canin SO urinary diet since. Upon physical exam Patient was tense in the abdomen. The patient also has a heart murmur and is actively taking vetmedin and apoquel.

Abnormal PE/Chem/CBC/UA Results: Bloodwork shown ALP elevated at 883. WBC/RBC wnl. Coags wnl.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** revealed sand accumulation and suspended debris.

The **kidneys** revealed multifocal calculi, non-obstructive. The left kidney measured 4.0 cm. The right kidney measured 4.0 cm. The patient may be passing calculi periodically from the kidneys to the bladder.

Adrenal Glands

The **adrenal glands** were not visualized.

Spleen

The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are consistent with normal age-related alteration. The capsule was smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. No evidence of active acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

Liver

Exam of the cranial abdomen demonstrated excessive **liver** size, swollen contour, with conserved uniform architecture. Parenchymal echogenicity was diffusely isoechoic to the spleen and falciform fat. Minor excessive GB debris was noted with the presence gall bladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. This type of liver presentation typically is associated with slow and gradual SAP elevations with low-grade ALT rise. USG-FNA sampling is encouraged if more aggressive LE profiles are present such as ALT > 200 or rapid rise in SAP. These presentations are usually reactive hepatopathies owing to other disease processes either endocrine (Diabetes, Hypothyroidism, Cushing's disease), "antigen surveillance" from the gut/pancreas, or idiopathic breed predisposed progressions.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. The stomach was empty. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The **pancreas** revealed heterogeneous parenchymal changes. No evidence of foreign body.



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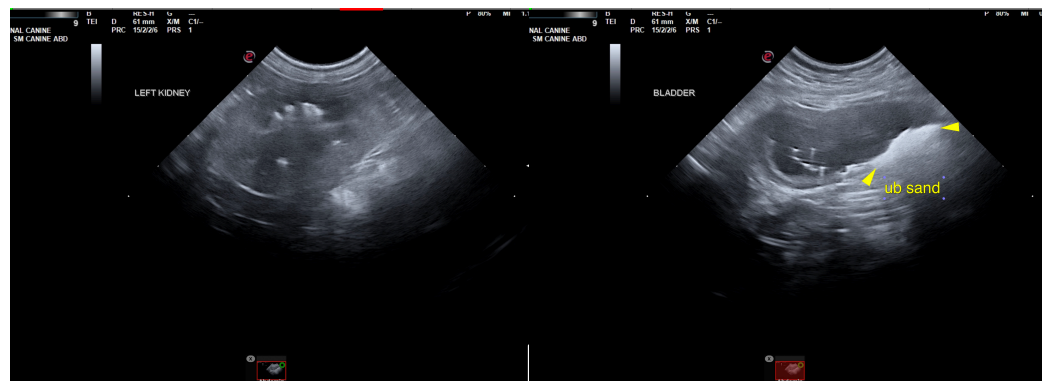
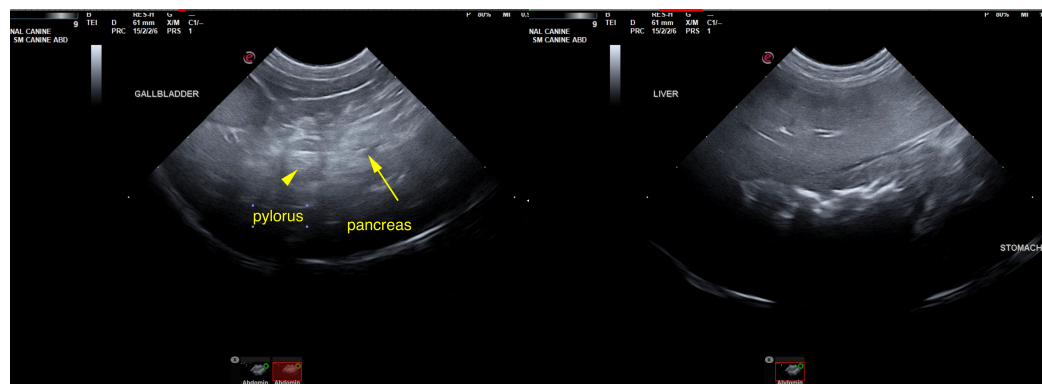
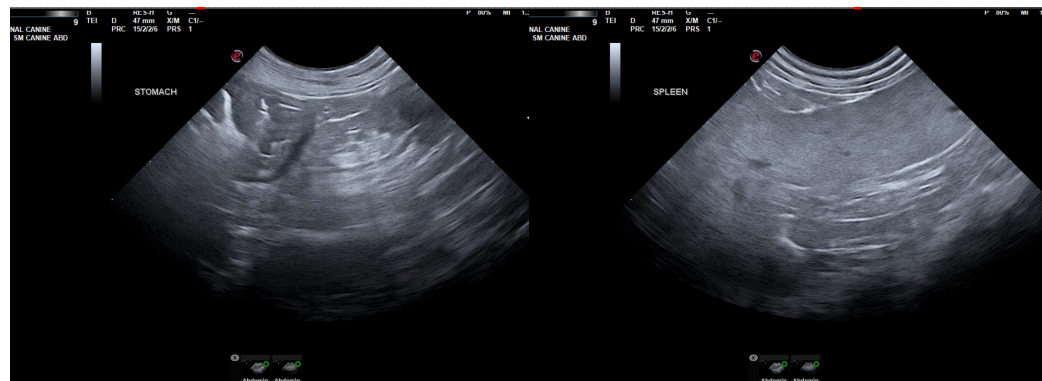
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ULTRASONOGRAPHIC FINDINGS

- Heterogeneous pancreas
- Structurally unremarkable GI tract
- Benign vacuolar hepatopathy with hepatomegaly
- Renal calculi, non-obstructive
- Bladder sand and small calculi, non-obstructive

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Subxiphoid palpation is recommended to assess for pain or discomfort associated with the pancreas. Suspect low-grade pancreatitis. Supportive care should prove effective. Eventual cystotomy, stone analysis and culture warranted. Dietary indiscretion, food intolerance, structurally insignificant inflammatory bowel or occult parasitism and occult Addison's are all potentials.





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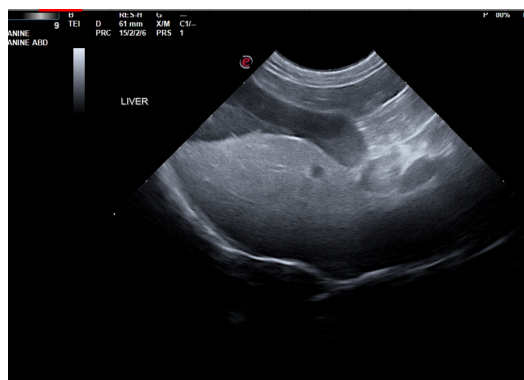
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

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