



**PATIENT**

Spike Alman

**SPECIES**

Canine

**BREED**

Miniature Schnauzer

**SEX**

Neutered Male

**AGE**

9 Years

**WEIGHT**

17 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Kathleen Byrnes, DVM

**HOSPITAL NAME**

Byrnes VRS, PC

**REFERRING VET**

Stewarts Mtn. View AH

**INVOICE**

17974

**DATE**

10/30/22

**PRESENTING CLINICAL SIGNS**

History: P presented for ultrasound after progressive elevation in ALKP. P has a history of seizures that are no under control with phenobarbital and zonisamide. ALKP was elevated prior to seizures starting and prior to starting phenobarbital. Seizures started 2021

Abnormal PE/Chem/CBC/UA Results: 2018 ALKP 650 (5-160) 2022 ALKP 2839 (5-160) Phenobarbital Level 11.9 subtherapeutic but seizures controlled Urinalysis usg 1.035 Pro 30 mg/dL

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized, and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction. Slight pinpoint mineralizations were noted.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 4.86 cm. The left kidney measured 4.42 cm.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.37 cm at the cranial pole and 0.39 cm at the caudal pole. The left adrenal gland measured 0.49 cm at the caudal pole and 0.41 cm at the cranial pole.

**Spleen**

The **spleen** was uniformly enlarged- this may be normal if the patient was sedated.

**Liver**

The **liver** was swollen with subtle micronodular changes throughout the parenchyma.

The **gallbladder** was overdistended with dependent and suspended debris with micropolypoid gallbladder wall changes, consistent with immature mucocele.

**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. 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** was mildly hypoechoic to surrounding mesentery.



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## ULTRASONOGRAPHIC FINDINGS

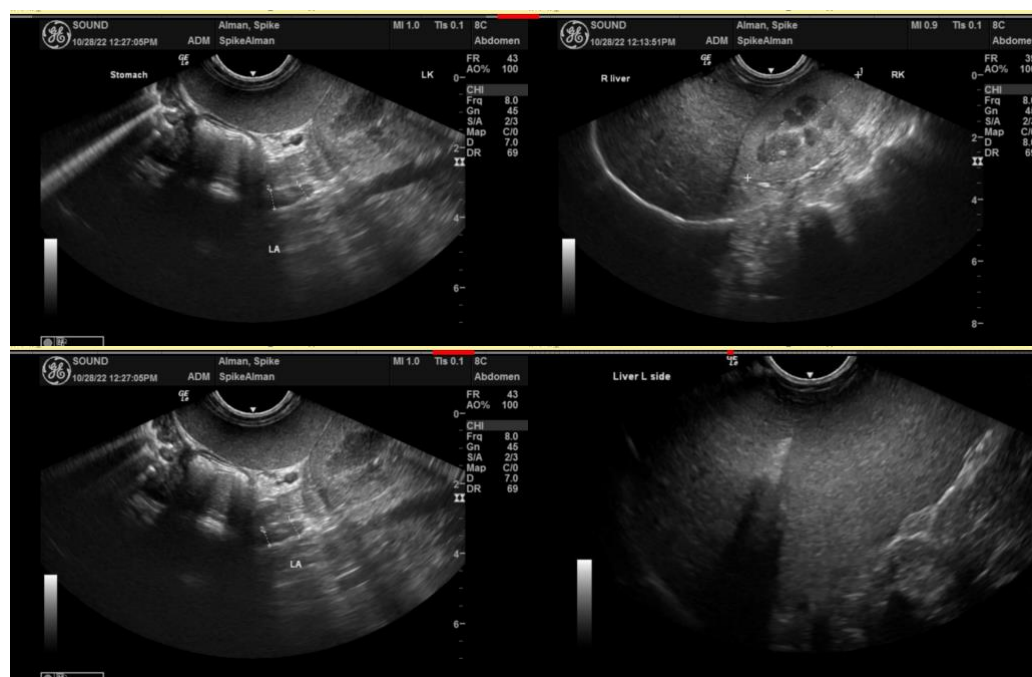
- Gallbladder mucocele
- Micronodular hepatic changes
- Mild splenomegaly
- Pinpoint mineralizations noted in the urinary bladder
- Mildly hypoechoic pancreas

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Ultrasound guided FNA of the liver is indicated to ensure this is a nodular hyperplasia presentation, as opposed to potential for round cell neoplasia or suppurative hepatitis (less likely). Ursodiol therapy would be warranted over the next 6-8 weeks. Recheck sonogram after 6-8 weeks of ursodiol +/- gallbladder motility study. If gallbladder motility study shows poor or negative movement from the gallbladder, then cholecystectomy should be considered.

Subxiphoid palpation is recommended to assess for any discomfort in the area of the left pancreatic limb.

FNA of the spleen is warranted to ensure this is a reactive state.



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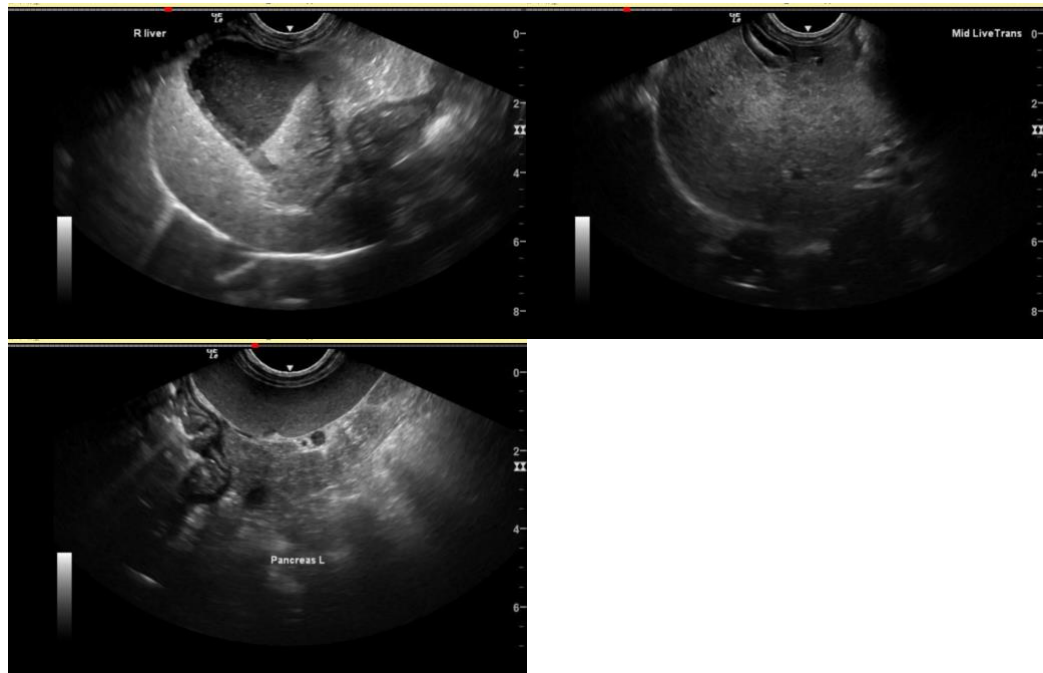
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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