



**PATIENT**

Lily Blust

**SPECIES**

Canine

**BREED**

Schnauzer Mix

**SEX**

FS

**AGE**

9 years 8 months

**WEIGHT**

7 lbs

**INTERPRETED BY**

Dr Brittany Sinclair,  
 BVSc(hons),  
 DACVECC

**IMAGING PERFORMED BY**

Rebecca Hamilton

**HOSPITAL NAME**

Newton Veterinary  
 Hospital

**REFERRING VET**

Dr. Chan

**INVOICE**

11498

**DATE**

3/17/2026

**PRESENTING CLINICAL SIGNS**

- Suspect bladder stone bs. Mass urinary issue.
- Meds: Gabapentin

Abnormal PE/Chem/CBC/UA Results: GLU 135, Chol 344, ALT 207, ALP 322, GGT 21, Tbil 0.6, urine: USG 1.046, PH 8, protein 2 +, Struvite crystal ++.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, or abnormal thickening visualized. A gravity dependent cystolith present measuring 1.79 cm in length.

The kidneys have a smooth capsule and with hazing of corticomedullary definition to the point of inability to determine cortical/medullary ratio. Hyperechoic, shadowing foci present in renal parenchyma and calyces consistent with nephrocalcinosis is noted bilaterally. No evidence of pelvic dilation was present.

**Adrenal Glands**

Both adrenal glands were visualized and recognized as having normal shape, size, position and echogenicity for this breed and age. The visible phrenic vasculature was unremarkable.

Left adrenal measures 1.78 cm in length, 0.45 cm at the cranial pole and 0.54 cm at the caudal pole. Right adrenal measures 1.43 cm in length, 0.71 cm at the cranial pole and 0.45 cm at the caudal pole.

**Spleen**

The spleen was normal with age appropriate homogeneous parenchyma and a smooth capsule with normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

**Liver**

The liver is subjectively enlarged in size with slight rounding of lobes and homogenous hyperechoic parenchyma with no specific nodules or masses. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder is moderately distended with anechoic fluid, with hyperechoic non-shadowing partially organized debris present. There is no surrounding free fluid or signs of active inflammation.

**Gastrointestinal**

The stomach contains minimal luminal contents. It measures at a normal thickness of with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall



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layering maintaining the typical 1:3 muscularis:mucosa layer ratio. There were no focal lesions consistent with obstruction or a mass effect observed.

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

**Pancreas**

The visible pancreas was observed to be largely isoechoic to surrounding omental fat.

**ULTRASONOGRAPHIC FINDINGS**

- Large cystolith.
- Bilateral nephrocalcinosis.
- Hyperechoic hepatomegaly.
- Gallbladder debris.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Urinary bladder cystoliths may lodge in the urethra causing obstruction, with male pets carrying a higher risk due to smaller urethral size. They may also act as a nidus of infection and inflammation. Dissolution diets (hills c/d, royal canin urinary S/O, purina proplan UR, etc) may be tried if struvite stones are suspected with serial imaging used to monitor progress. If small enough in relation to patient size, urohydropulsion under general anesthesia may successfully remove stones. Surgical removal of stones should be considered if risk of urethral obstruction is unacceptable or dietary therapy is not successful. Cystoscopic removal of stones, with or without lithotripsy may be considered if locally available. A flexible cystoscope is required for male dogs. Calcium oxalate, struvite, urate, and cystine stones are all susceptible to laser lithotripsy. Some dogs are not considered good candidates for laser lithotripsy including:

1. Male dogs less than 15 pounds: The endoscope may be too large to traverse the urethra.
2. Male dogs with more than two bladder stones greater than 5 mm in diameter (depending on the size of the dog)
3. Female dogs whose entire bladder is full of stones greater than 5 mm in diameter
4. Dogs with uncontrolled urinary tract infection: Once infection is controlled, lithotripsy can be considered.

Renal changes are likely age related degenerative changes. Correlate clinical significance with blood work/urinalysis findings and clinical signs. Nephroliths may act as a nidus of infection and predispose to urinary tract infections. They can also cause sterile inflammation leading to renal hematuria. They have the potential to move into the ureters or bladder causing obstructive uropathy.

Hepatic parenchymal changes are a common finding in the face of endocrinopathies, infectious or inflammatory hepatitis (bacterial, viral, auto-immune other), and neoplasia among other things. As elevated liver enzymes are present, fine needle aspirate is recommended to further define. Ultimately liver biopsy may be required for more definitive diagnosis.



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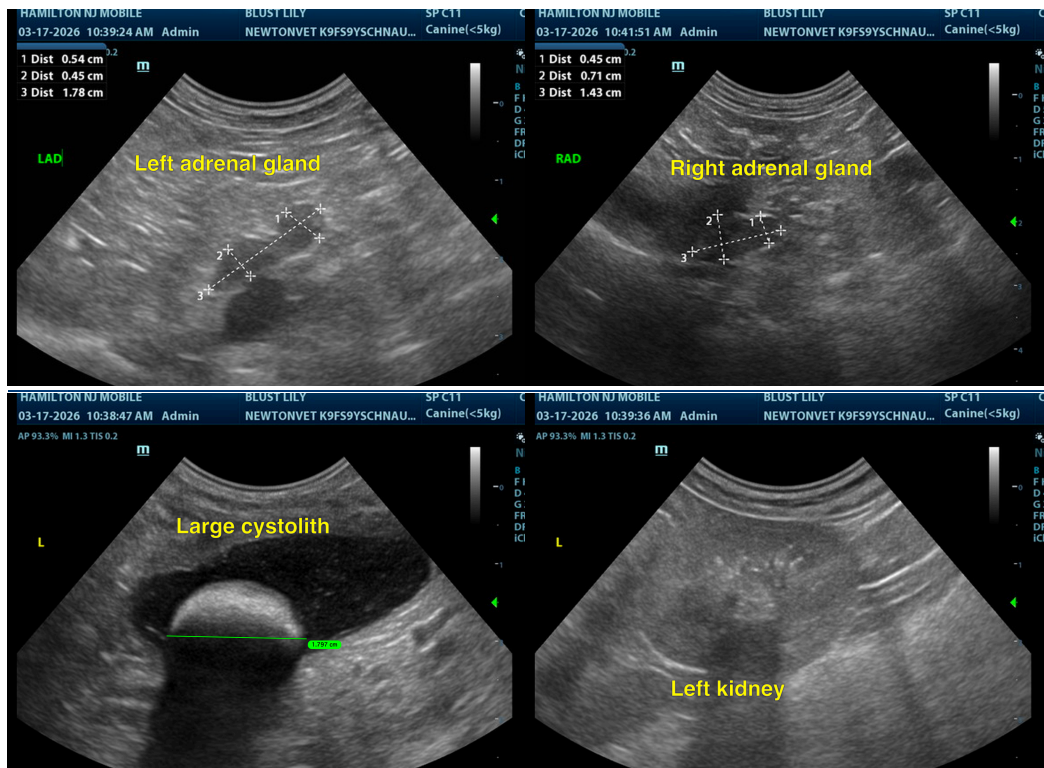
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Gall bladder debris is likely an incidental finding and is often subclinical and often does not warrant specific treatment or further investigation. Correlate clinical significance with bloodwork findings and clinical signs. Serial imaging for monitoring could be considered especially if liver enzymes subsequently become elevated. If otherwise clinically indicated, investigation for endocrinopathy such as hyperadrenocorticism or hypothyroidism could be considered as an underlying cause predisposing to gall bladder debris accumulation.





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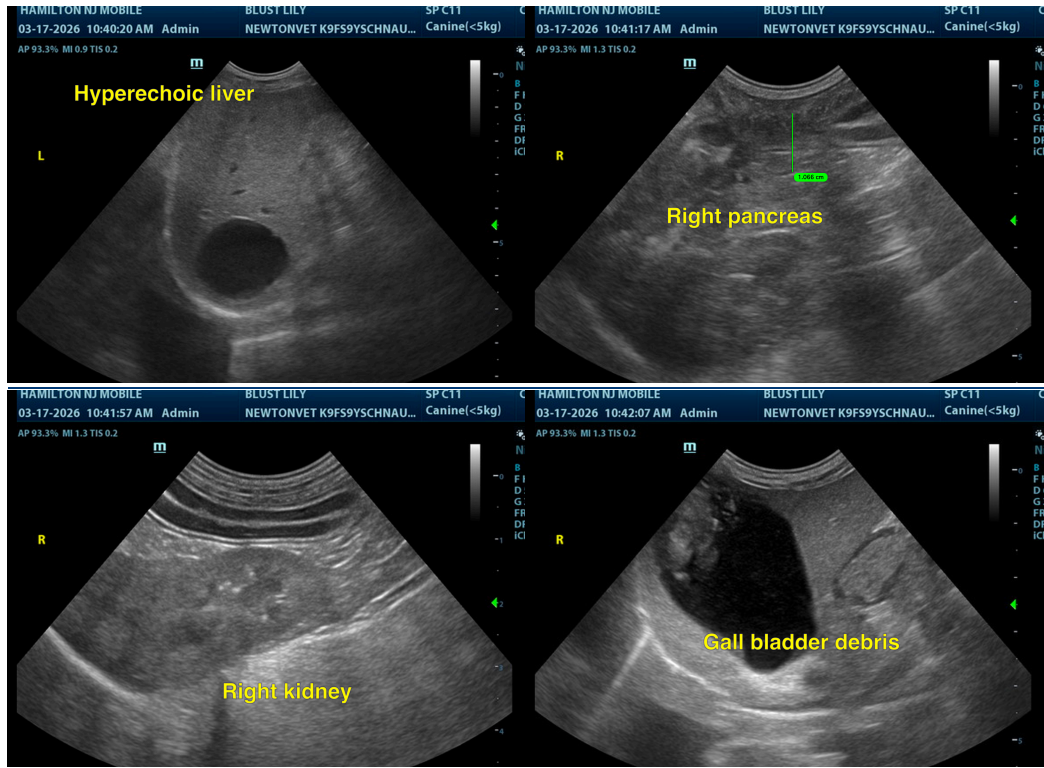
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Dr Brittany Sinclair, BVSc(hons), DACVECC

info@SonoPath.com