

**PATIENT PRESENTING CLINICAL SIGNS**

Lucy (recheck) Sparber

Sedation alfaxalone/butorphanol IV- Recheck Gallbladder... Medications: Sildenafil 10mg BID Ursodiol 40 mg 1 BID- Gabapentin 12 mg tablets: 1 BID Amlodipine compounded chew 1.25 mg po sid Meloxicam 1.5 mg/ml 0.4 ml po sid Dasuquin ESM cyclosporin 2% ou bid for newly dx KCS artificial tears and eye flush prn for KCS.

**SPECIES**

Canine

**BREED**

Shih Tzu

Abnormal PE/Chem/CBC/UA Results: LABS attached.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**SEX**

**Urinary System**

Spayed Female

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. The Bladder wall, trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses, or calculi. Echogenic debris of this type can be associated with small crystals, cellular debris, and proteinaceous debris.

**AGE**

15y4m

The left kidney has a normal shape and size (3.47 cm) with numerous small hypoechoic cortical cysts examples of which measure at 0.3 cm and 0.38 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex: medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

13.2lbs

The right kidney has a normal shape and size (3.89 cm) with numerous small cortical cysts. A more complex cyst is visualized in the caudal pole measuring 0.76 cm. Additionally, there are some small shadowing foci visualized present, consistent with small non obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex: medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

Kathleen Sennello DVM,  
 MS, Diplomate ACVIM  
 (Small Animal Internal  
 Medicine)

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques,  
 LVT

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.41 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

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The right adrenal gland is normal in size measuring 0.97 cm at the cranial pole, 0.55 cm at the caudal pole, and 2.04 cm in length. It is visualized in its normal position between the right kidney and the caudal vena cava. It is abnormal in appearance in that there is an ill-defined hyperechoic nodule in the cranial pole with a maximal measurement today of 0.97 cm x 1.45 cm. This is significantly larger than the previous measurement of 1.0 cm x 0.55 cm subjectively the lesion appears similar. No evidence of vascular invasion is visualized.

**REFERRING VET**

Dr. Sarah Kalivoda

**INVOICE**

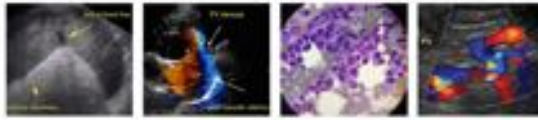
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**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. There is a small ill-defined hypoechoic nodule visualized at 0.37 cm. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

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**PATIENT**

**Liver**

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The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a small hypoechoic nodule/lesion visualized measuring 0.39 cm.

**SPECIES**

Canine

The gallbladder lumen is significantly distended. It has a large amount of hypoechoic suspended debris, some of which is adhering to the gallbladder wall and there is a hint of possible inflammation surrounding the gallbladder. The wall of the gall bladder measures normal at 0.2 cm.. The cystic and common bile ducts are normal/not visible.

**BREED**

Shih Tzu

**Gastrointestinal**

**SEX**

Spayed Female

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

**AGE**

15y4m

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 layering maintaining the typical 1:3 muscularis: mucosa layer ratio. The duodenum measured as normal (0.44 cm), and the jejunum measured as normal (0.33 cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**WEIGHT**

13.2lbs

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. 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.

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**Pancreas**

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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**ULTRASONOGRAPHIC FINDINGS**

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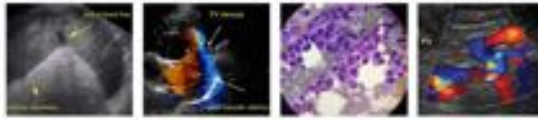
- Mildly echogenic debris in the urinary bladder. The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus. Recommend urinalysis and culture.
- Decreased corticomedullary distinction in both kidneys with bilateral small cortical cysts and occasional non-obstructive nephroliths. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Very small hypoechoic nodule visualized within the spleen. There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

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- Heterogenous liver with very small hypoechoic nodule. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Large, distended gallbladder with a large amount of suspended and dependent echogenic debris with possible mild surrounding inflammation. Subjectively the gallbladder debris appears slightly more severe than the previous scan.
- Hyperechoic nodule in the cranial pole of the right adrenal. Adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other. Measurements for this lesion today appear significantly larger.

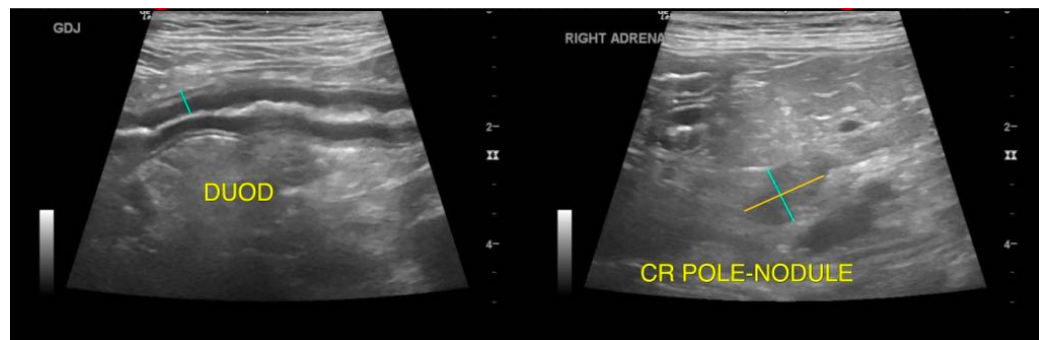
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The amount of debris in the gallbladder appears slightly more prominent and there is a hint of possible surrounding mild inflammation. Correlate these findings with clinical findings and current bloodwork. Recommend continued ursodiol. Options at this point would be to consider and elective cholecystectomy or continued monitoring with the knowledge that if the patient becomes acutely ill, gallbladder removal may be necessary.

There are occasional small nodules visualized in the spleen and liver these are very small and suspect they are likely incidental at this time, recommend continued monitoring. The changes visualized associated with the kidneys and the urinary bladder are relatively stable. Consider a urinalysis and culture due to the echogenic debris in the urinary bladder.

The hypoechoic nodule in the cranial pole of the right adrenal measures as somewhat larger, this has been a slowly progressing trend over the last nine months. It is still relatively small, and no obvious vascular invasion is visualized at this time. Options include further evaluation for possible removal (see previous reports) or continued monitoring. Recheck blood pressure evaluations periodically to ensure there is no hypertension.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement. (Chest radiographs should be rechecked every 4-6 months)





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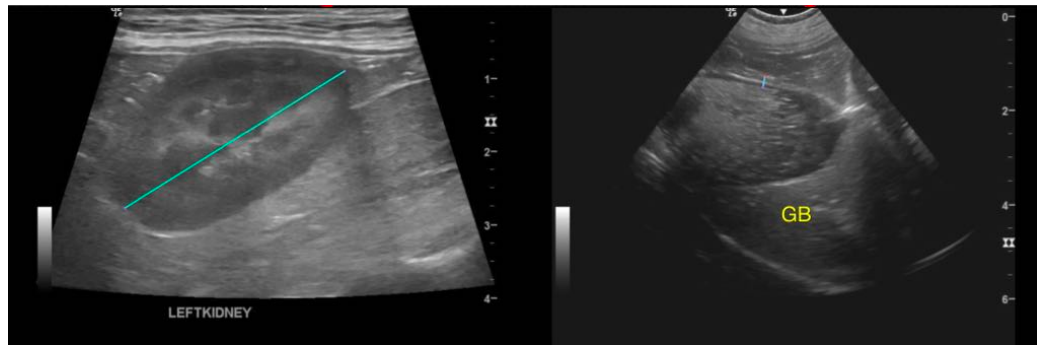
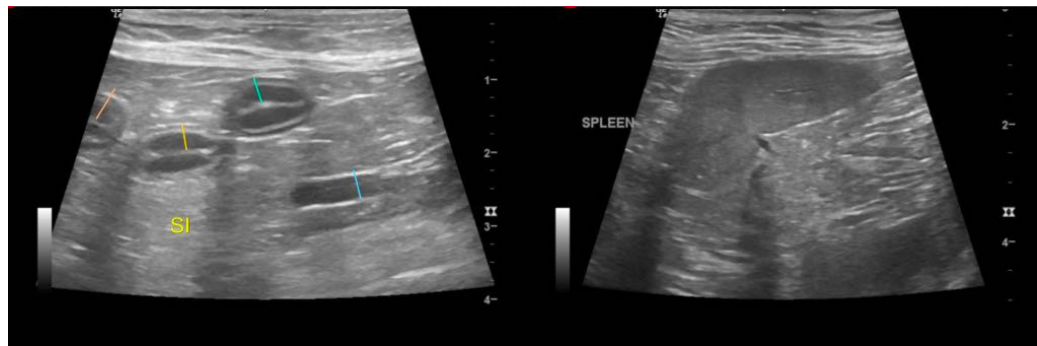
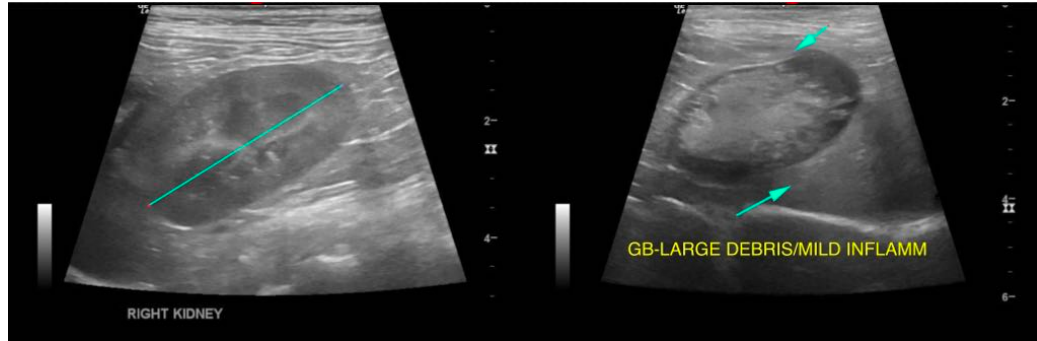
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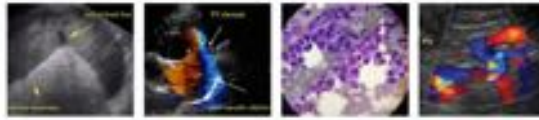
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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