



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT** Lucy Gine  
**SPECIES** Canine  
**BREED** Beagle  
**SEX** Spayed Female  
**AGE** 11 Years  
**WEIGHT** 36.8 Pounds

History: This is a very convoluted and complicated case with a myriad of problems. I will try my best to keep it short: -Hypothyroidism -Reported PUPD per O (Water intake measurement still not performed) -Reportedly has atypical Cushing's, not on Vetoryl. MRI in 2021 reportedly normal appearing pituitary gland. -Proteinuria. -Splnectomy in 2018 due to stromal sarcoma of the spleen. Hx of supraspinatous tendinopathy. -Excessive panting per O. -Known benign liver nodule in the liver. Current meds: - Gabapentin 100mg SID -Benazepril 5mg SID -Thyrotab 0.3mg BID P presented to me for a liaison consultation given the several referrals, and O wanted guidance. A second AUS req. Possible bladder stone (recurrent) seen on the scan today. I also believe the renal mineralization appears moderate.

Abnormal PE/Chem/CBC/UA Results: AUS at another hospital Aug 2022: -8/2022 Known urinary bladder polyp. -8/2022 Reported subtle renal mineralization as AUS at another clinic -The LEFT adrenal gland was not visualized during the August AUS at another hospital. -Liver nodule unchanged. 9/1/2022: -BP 152mmHg -Chem: >>ALT 275 (12-118) IU/L >>AlkP 1334 (5-131) IU/L >>GGT 13 (1-12) IU/L >>Triglycerides 626 (29-291) mg/dL >>Normal renal figures and the rest of the chem/lytes wnl. >>Platelets 852 (170-400) 10<sup>3</sup>/uL >>USG 1.020 >>UPC ratio 1.1 \*repeating labs FASTED today BP today 182mmHg on doppler.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.37 cm thick). Mucosa is hyperechoic and irregular. No masses are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. A 0.75 cm shadowing cystolith is noted along the dependent wall, as well as 0.5 cm in diameter polyp attached to the apex of the urinary bladder.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia or infarcts observed. The left kidney measured 6.2 cm. The right kidney measures 6.6 cm. Non-obstructive areas of mineralization/nephroliths are noted bilaterally.

**Adrenal Glands**

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measures 0.83 cm at the cranial pole and 0.7 cm at the caudal pole. The right adrenal gland measures 0.98 cm at the caudal pole. The cranial pole of the right adrenal gland is not fully visualized.

**Spleen**

The spleen has been previously removed.

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by a nodule within otherwise hyperechoic liver parenchyma, specifically, a mixed but primarily

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Sorbo

**HOSPITAL NAME**

Millbrook AC-VBF

**REFERRING VET**

Sorbo

**INVOICE**

17293

**DATE**

9/13/22



**PATIENT** hypoechoic 2.0 cm nodule is noted near the gallbladder. Visible vasculature and biliary tree appear normal without distension or congestion.

Lucy Gine

**SPECIES** Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Canine

***Gastrointestinal***

**BREED** The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta.

Beagle

There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

**SEX**

Spayed Female

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

**AGE**

11 Years

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

***Pancreas***

**WEIGHT**

36.8 Pounds

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

***Free Abdomen***

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

**ULTRASONOGRAPHIC FINDINGS**

**IMAGING PERFORMED BY**

Sorbo

**HOSPITAL NAME**

Millbrook AC-VBF

**REFERRING VET**

Sorbo

**INVOICE**

17293

**DATE**

9/13/22

- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- Heterogenous Liver with liver nodule – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia. \* Liver nodule – Differentials for a discrete liver nodule include primarily benign changes such as nodular hyperplasia, fibrosis of an old hematoma, granuloma, etc.; however, while considered less likely, primary hepatic neoplasia, infiltrative round cell neoplasia and metastatic disease can mimic benign lesions and cannot be definitively ruled out. A nodule in this patient has been reportedly monitored elsewhere, and has reportedly been determined to be benign.
- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.



**PATIENT**

Lucy Gine

- Chronic Cystitis with a cystolith noted in today's images and a echogenic density attached to the apex of the bladder consistent with the reported (previously diagnosed elsewhere) polyp - Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

**SPECIES**

Canine

- Age-related kidney changes with nonobstructive nephrolithiasis bilaterally

**BREED**

Beagle

- The spleen has been previously removed

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SEX**

Spayed Female

This patients history of clinical signs, hypertension, proteinuria, etc., combined with the adrenal gland, liver and gallbladder changes described above are all suggestive of hyperadrenocorticism. Testing for hyperadrenocorticism in the form of a low dose dexamethasone suppression test is warranted and/or if as is reportedly the case, hyperadrenocorticism has been previously diagnosed. Treatment is recommended to help alleviate clinical signs. Treatment could be administered in the form of Vetoryl or Lysodren/Mitotane, based on clinician preference.

**AGE**

11 Years

If not recently evaluated, urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

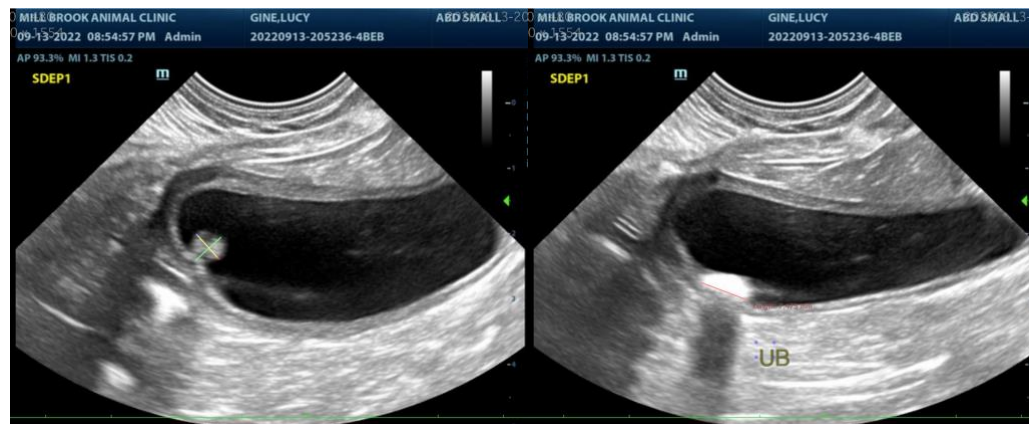
**WEIGHT**

36.8 Pounds

A fine needle aspirate of the liver nodule could be considered at this time if patients coagulation status is appropriate or alternatively, if sampling if sampling has been performed in the past, continued monitoring is appropriate.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM



**IMAGING PERFORMED BY**

Sorbo

**HOSPITAL NAME**

Millbrook AC-VBF

**REFERRING VET**

Sorbo

**INVOICE**

17293

**DATE**

9/13/22



**PATIENT**

Lucy Gine

**SPECIES**

Canine

**BREED**

Beagle

**SEX**

Spayed Female

**AGE**

11 Years

**WEIGHT**

36.8 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Sorbo

**HOSPITAL NAME**

Millbrook AC-VBF

**REFERRING VET**

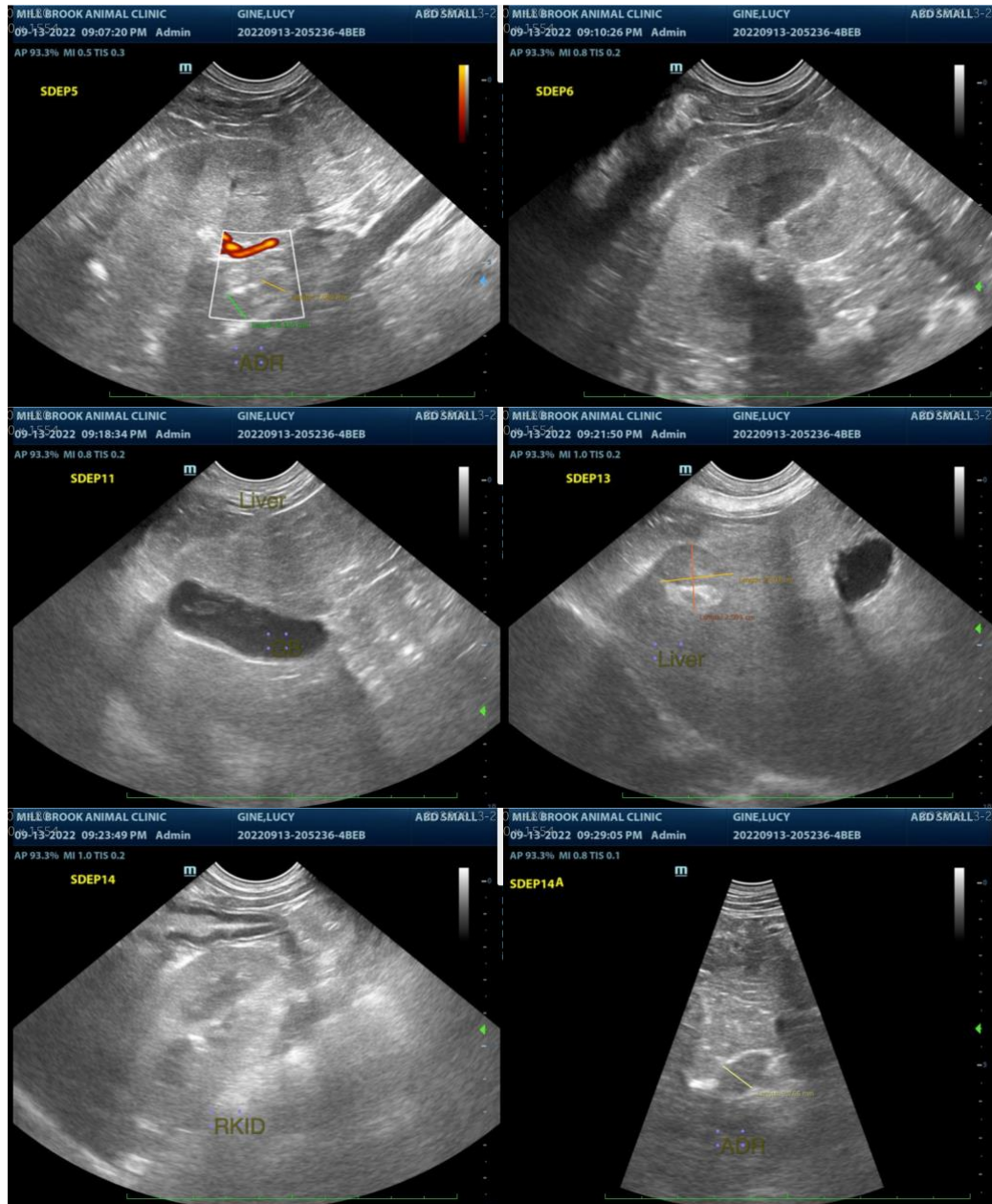
Sorbo

**INVOICE**

17293

**DATE**

9/13/22



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.

**Beth Johnson, DVM DACVIM**

Beth.Johnson@SonoPath.com