

**PATIENT**

Lucy Griffin 56152A

**SPECIES**

Canine

**BREED**

Shepherd Mix

**SEX**

Spayed Female

**AGE**

15 years

**WEIGHT**

14.4 kg

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

Madison Vet Spec  
Dr. Graham

**INVOICE**

12131

**DATE**

2.1.23

**PRESENTING CLINICAL SIGNS**

History: Lucy presented to the MVS Emergency Service on Feb 01, 2023, at 11:50am, for evaluation of suspect vitreal mass OS. Lucy also has a history of Cushing's disease managed with Vetoryl.

Abnormal PE/Chem/CBC/UA Results: Muscle Condition Score: Marked muscle mass in the lumbar and pelvic limb musculature EENT: Marked buphthalmias, OD with what appears to be a healed corneal ulcer. SDMA 18 BUN 59 Alb 4.1 ALP 4569 ALT 660 GGT 784 HCT 30.2 Retic-HGB 21.8 Plt 805k USG 1.014, WBC >50/HPF, Rods and suspect cocci present.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is distended. The ventral wall is mildly thickened (up to 0.49 cm) with a slightly irregular mucosal surface. A scant amount of echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

The left kidney is normal in size (5.99 cm in length) with a normal shape and smooth peripheral contours. The cortex is hyperechoic with pinpoint hyperechoic to mineralized foci, and numerous varying-sized cortical cysts. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter. The region of the trigone and visible portion of the proximal urethra are normal.

The right kidney is normal in size (6.60 cm in length) with a normal shape and smooth peripheral contours. The cortex is hyperechoic with pinpoint hyperechoic to mineralized foci, and numerous varying-sized cortical cysts. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. Mild pyelectasia is present (0.23 cm in the longitudinal plane). There is no evidence of infarcts or hydroureter.

**Adrenal Glands**

The left adrenal gland is enlarged (1.28 cm at cranial pole) (1.40 cm at caudal pole) with an irregular shape. At the caudal pole, a 0.91 cm hypoechoic nodule is visualized. In addition, a 1.00 cm irregular hyperechoic nodule is seen. The remaining parenchyma is heterogenous with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged (1.42 cm at cranial pole) (1.27 cm at caudal pole) with a slightly irregular shape. The parenchyma is heterogenous with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is subjectively normal in size with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**Liver**

The liver is enlarged with irregular peripheral contours. On the left side, numerous, varying-sized, coalescing, heterogenous, cavitated masses with focus of mineralization are observed (the largest measuring >8.50 cm (near the mid-line)). The masses cause capsular expansion. The hepatic parenchyma on the right side is heterogenous. A 0.95 cm cystic lesion is also seen on the right (at the caudal aspect). Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. (See also "Other" category).

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are mostly anechoic. The cystic and common bile ducts are normal/not seen.

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**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

**Pancreas**

In the region of the left limb, the pancreas is largely isoechoic relative to surrounding omental fat. (See also "Other" category).

**Free Abdomen**

Trace free fluid is observed.

A 0.62 cm lymph node is observed in the left caudal abdomen (near the aortic trifurcation). In addition, a 1.75 cm lymph node is seen.

**Other**

In the right cranial quadrant, a >6.50 cm heterogenous, slightly cavitated mass is visualized.

**ULTRASONOGRAPHIC FINDINGS****Primary Findings**

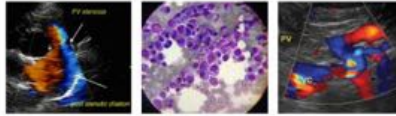
- Multiple left hepatic masses. Neoplasia (i.e., adenocarcinoma, round cell tumor, sarcoma) is suspected, with a low possibility of a benign process. The right-sided hepatic parenchymal changes are nonspecific and may be secondary to regenerative nodular hyperplasia, inflammatory disease, infiltrative neoplasia, hepatotoxicosis (i.e., copper), fibrosis or other hepatopathy.
- The origin of the mass effect in the right cranial quadrant is unclear. It may be arising from liver, pancreas, mesentery, other. Again, neoplasia is suspected.

**Secondary Findings**

- Bilateral chronic nephropathy with dystrophic mineralization, cortical cysts, and mild pyelectasia.
- The bilateral adrenal changes are consistent with the previous diagnosis of pituitary-dependent hyperadrenocorticism. The left adrenal nodules could be consistent with benign nodular hyperplasia or emerging tumors.
- The urinary bladder wall changes are most consistent with cystitis.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- Fine-needle aspiration of the hepatic lesions can be considered (if clotting status is appropriate). Twenty-five gauge-needles should be used. An abdominal CT scan would be useful in better characterizing the extent of the hepatic masses and the origin of the mass in the right cranial quadrant. However, given the diffuse pathology, palliative care should be considered in lieu of aggressive diagnostics and treatments.



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- Given the bladder wall changes and the presence of bacteria in the urinalysis, a urine culture and sensitivity is recommended. Broad-spectrum antibiotic therapy should be considered while awaiting test results.

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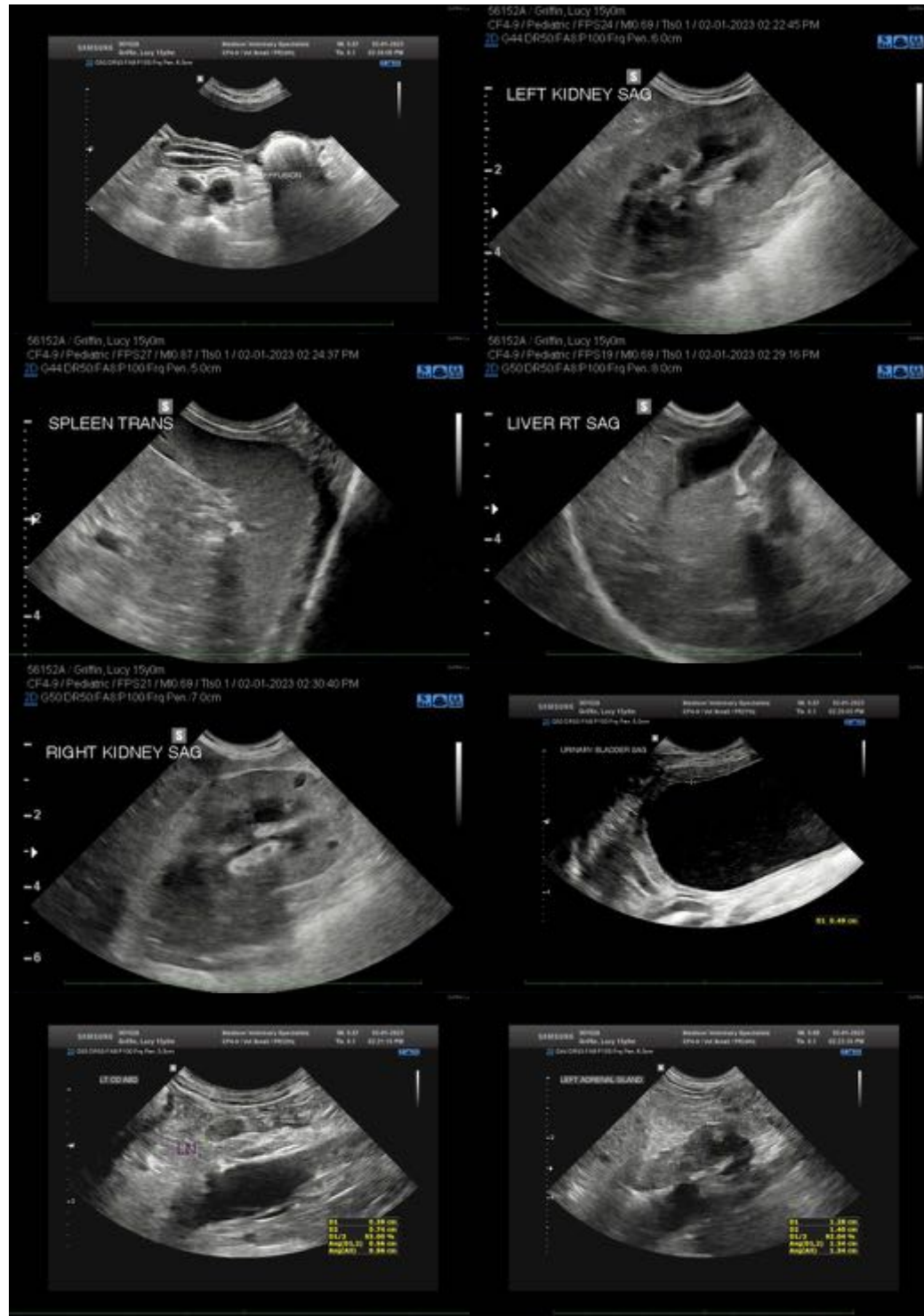
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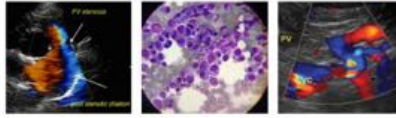
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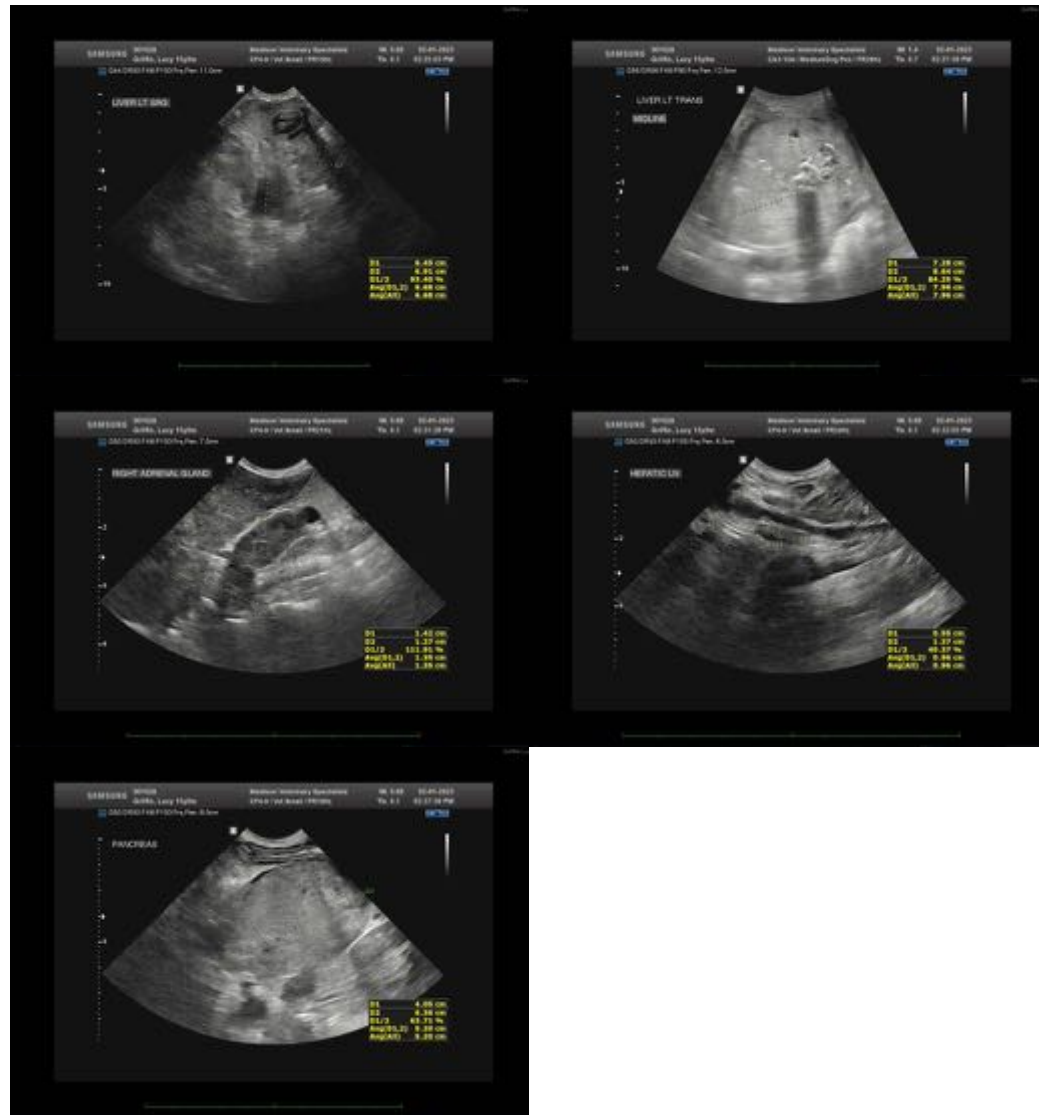
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
info@SonoPath.com