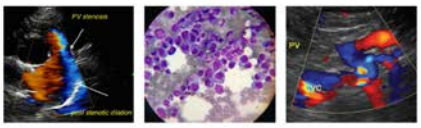
IMAGING PERFORMED BY
svsimaging.net 309-737-3070

SVS IMAGING



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Lily Newberry

SPECIES

Canine

BREED

Border Collie/Lab

SEX

Spayed Female

AGE

8 Years

WEIGHT

57 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Narske

INVOICE

39036

DATE

6/23/22

PRESENTING CLINICAL SIGNS

Lethargic, not eating Currently on Prednisone Painful cranial abdomen
Abnormal PE/Chem/CBC/UA Results: Anemic since June 1st Today's bloodwork: RBC 1.69, HCT 17.7%, HGB 4.1, MCV 104.7, MCHC 23.2, RETIC 427, WBC 55.44, NEU 29.72, LYM 19.82, MONO 5.71, PLT 100, GLU 272, ALT 717, ALKP >2000, TBIL 6.2, LIP 5081

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. 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 cystic calculi.

The left kidney has a normal shape and size (7.3 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.27 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large in size measuring 1.2 cm at the cranial pole, 0.43 cm at the caudal pole, and 2.94 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat abnormal in appearance in that there is a hyperechoic nodule in the cranial pole, enlarging it. This nodule measures 1.08 cm x 0.85 cm. There is no obvious evidence of vascular invasion visualized.

The right adrenal gland is normal in size measuring 0.40 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

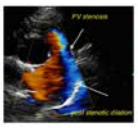
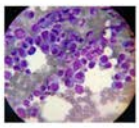
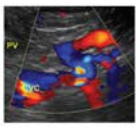
Spleen

The spleen is large in size. The spleen echotexture is heterogenous and mildly mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is large in size and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. The gallbladder wall measures at 0.32 cm. There is a large amount of primarily non-organized hyperechoic echogenic debris in the dependent portion of the gallbladder. There is scant free fluid surrounding the gallbladder and hyperechoic, inflamed mesentery around the neck of the gallbladder. There is no evidence of bile duct dilation visualized. Findings are concerning for significant gallbladder disease.

PATIENT

Lily Newberry

SPECIES

Canine

BREED

Border Collie/Lab

SEX

Spayed Female

AGE

8 Years

WEIGHT

57 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Narske

INVOICE

39036

DATE

6/23/22

Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering is adequate and there is no impression of reduced peristaltic activity. 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 layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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.

Pancreas

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

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.

ULTRASONOGRAPHIC FINDINGS

- Hyperechoic nodule in the cranial pole of the left adrenal gland – Left/right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Large, mottled spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Large, heterogeneous, irregular liver – 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 thickened wall and scant free fluid and inflammation surrounding.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The gallbladder is large and distended with intraluminal material. Additionally, it has a slightly thickened wall and some surrounding fluid/inflammation. This case is somewhat confusing in that there appears to be more than just gallbladder disease going on. Per the history, the patient is significantly anemic. It is unclear if any of the bilirubin elevation could be secondary to hemolysis, etc. or if the cause of the anemia is known. There is significant gallbladder disease present here, but it is not clear if this is the only

PATIENT

Lily Newberry

SPECIES

Canine

BREED

Border Collie/Lab

SEX

Spayed Female

AGE

8 Years

WEIGHT

57 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Narske

INVOICE

39036

DATE

6/23/22

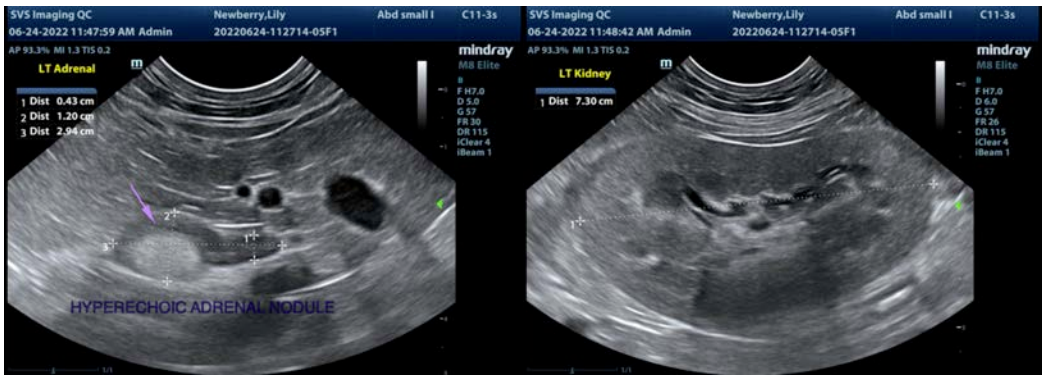
medical condition going on.

The liver and spleen are significantly enlarged. I would strongly recommend a fine needle aspirate of these organs to rule out round cell neoplasia, and with the elevation in glucose reported, close monitoring for developing diabetes. Consider evaluation of urine for glucose, ketones, etc. Depending on the duration of the current steroid therapy, some of the hepatomegaly could be due to a steroid hepatopathy.

I feel this patient could benefit from a cholecystectomy, but it is a clinical assessment/judgement call to decide if she is stable enough for surgery, does she need a blood transfusion, and if the gallbladder is the primary medical condition going on. If gallbladder surgery is pursued, recommend biopsy of the liver and a full explore evaluating the left adrenal and looking for any evidence of GI lesions that could be contributing to the anemia. Additionally, post-operative care will need to be likely more intensive, as the potential for post operative complications could be higher.

There is also a nodule in the left adrenal gland. I suspect this is somewhat an incidental finding, but this could represent an early neoplastic lesion, or be a benign nodule, etc. Recommend a blood pressure evaluation to rule out a pheochromocytoma and for preanesthetic evaluation. Once this patient is stabilized and feeling better, you can regroup and address the adrenal nodule. These are my recommendations for evaluation of a unilateral adrenal nodule.

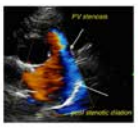
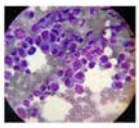
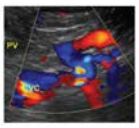
- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT) once the patient has clinically recovered from this illness.
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- If no symptoms of cushings are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).
- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.



IMAGING PERFORMED BY

svsimaging.net 309-737-3070

SVS IMAGING

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Lily Newberry

SPECIES

Canine

BREED

Border Collie/Lab

SEX

Spayed Female

AGE

8 Years

WEIGHT

57 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

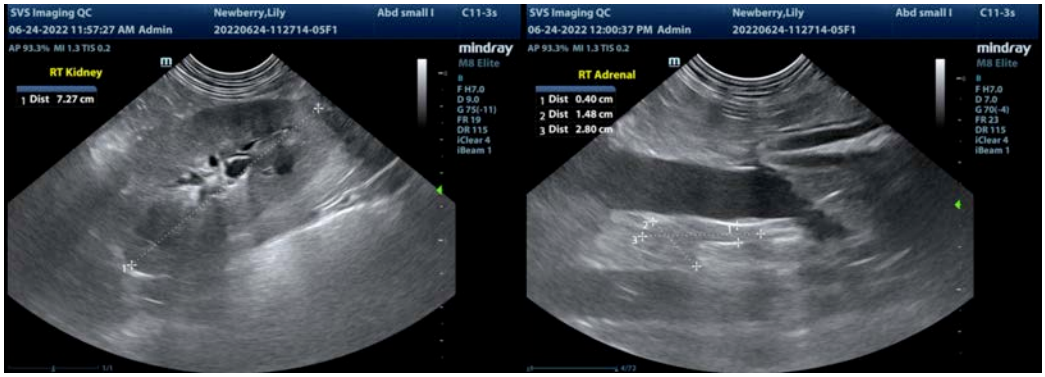
Dr. Narske

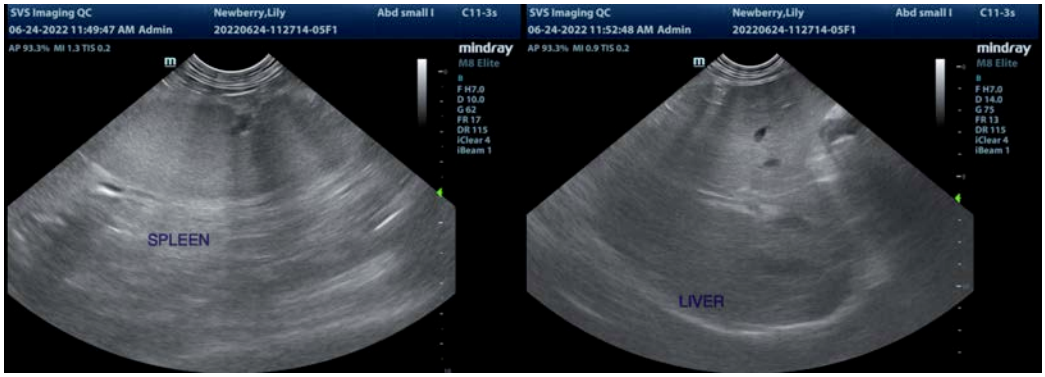
INVOICE

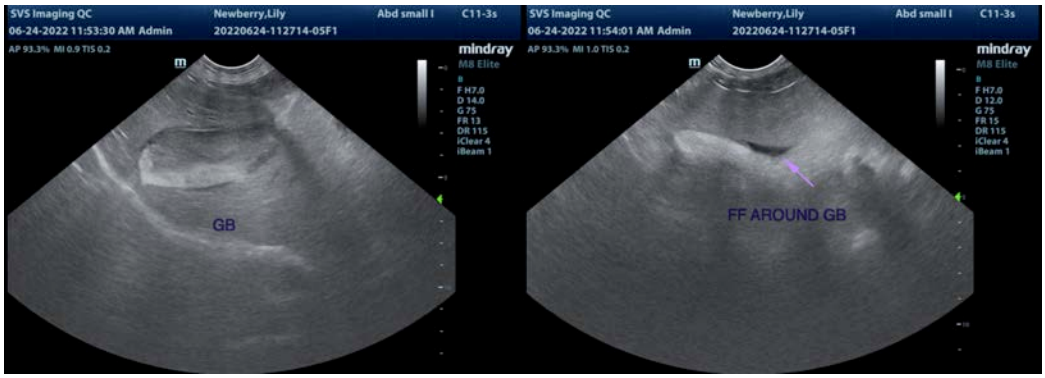
39036

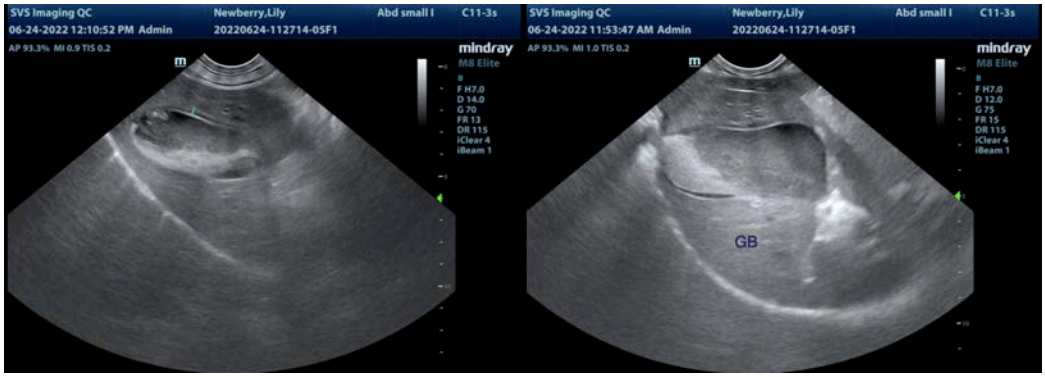
DATE

6/23/22





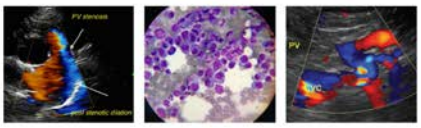




IMAGING PERFORMED BY

svsimaging.net 309-737-3070

SVS IMAGING



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Lily Newberry

SPECIES

Canine

BREED

Border Collie/Lab

SEX

Spayed Female

AGE

8 Years

WEIGHT

57 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. Narske

INVOICE

39036

DATE

6/23/22

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.

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

kathleen.sennello@sonopath.com