



PATIENT

Bailey Terry

SPECIES

Canine

BREED

Puggle

SEX

Spayed Female

AGE

13 Years

WEIGHT

25 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Dr. Tam Mengine

HOSPITAL NAME

Stoney Creek VH

REFERRING VET

Dr. Tam Mengine

INVOICE

37933

DATE

5/24/22

PRESENTING CLINICAL SIGNS

Patient was first noted to have elevated liver values in 9/21 on routine wellness monitoring that have been progressing despite denamarin. Most recently - ALT 357 (from 247), ALP 811 (from 367). Patient has no signs of illness at home.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 4.22 cm. The capsule is smooth. The cortex is mildly hyperechoic and a very mild loss of the normal definition of the cortico-medullary junction is present. Very small mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. The mesentery is medial to the kidney is mildly hyperechoic.

The **right** kidney measures 4.89 cm. Findings are similar to the left kidney.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.83 cm at the cranial pole, 0.61 cm at the caudal pole. The cranial pole is enlarged, very round and in the form of a nodule. There are no signs of a mass. No abnormalities are noted with the gland's overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature are unremarkable. The mesentery immediately surrounding the gland is moderately hyperechoic.

The **right** adrenal gland measures 0.62 cm at the cranial pole, 0.68 cm at the caudal pole, and 0.71 cm mid-diameter. A plump, cranial pole is evident and a possible nodule is present (0.63 cm in diameter x 0.74 cm in length). No abnormalities are noted with the gland's overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature are unremarkable. The mesentery immediately surrounding the gland is moderately hyperechoic.

Spleen

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. Pinpoint to punctate hyperechoic well-circumscribed nodules are dispersed haphazardly throughout the parenchyma. Mild perivascular cuffing consistent with myelolipomas is observed, which is not considered clinically significant. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Hepatomegaly is suspected, however, this is better characterized at the time of the ultrasound or with radiographs. The liver's borders are smooth and sharp, to mildly rounded. The liver's echotexture is mildly coarse or granular, but homogeneous. It is diffusely hyperechoic, i.e., it is iso to mildly hyperechoic to the falciform fat and isoechoic to the spleen. Focal lesions are not observed. No



PATIENT

Bailey Terry

abnormalities are observed with the hepatic vessels visualized. A miliary echotexture is observed during the C-loop view.

SPECIES

Canine

The gallbladder wall is within normal limits in thickness and echogenicity. A mild to moderate amount gravity dependent and free floating echogenic material (sludge), of mixed echogenicities, is present within the GB. There is no evidence of cholelithiasis. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

BREED

Puggle

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

SEX

Spayed Female

Ingesta, fluid and gas are present within the duodenum and small intestines. Wall thickness and the definition of the wall layers of the duodenum and the small intestines are within normal limits. Abnormally dilated loops of bowel are not observed.

AGE

13 Years

The colonic wall is mildly thickened. The submucosa is mildly thickened and irregular, however, mural detail is preserved.

Pancreas

WEIGHT

25 Pounds

The pancreas has a mildly coarse echotexture, which is most likely secondary to age related changes, however, previous episodes of pancreatitis cannot be excluded. There are no signs of active pancreatitis or neoplasia.

Other

Lymph nodes

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

No abnormalities are observed

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

IMAGING PERFORMED BY

Dr. Tam Mengine

- **Bilateral adrenomegaly** for a dog of Bailey's stature. Bilateral adrenomegaly may be due to adrenal hyperplasia secondary to chronic illness, which is a form of stress. Pituitary dependent hyperadrenocorticism is also possible. The **nodule at the cranial pole** of the **left** adrenal gland may be due to a benign adenoma or myelolipoma. It does not show obvious signs of malignancy. A possible, but less well delineated nodule is observed at the of the **right gland**. The mesentery surrounding both glands is mildly to moderately hyperechoic, which is suggestive of an inflammatory process. Hyperadrenocorticism (HAC) is considered less likely based on the absence of clinical signs, and a decision to pursue further diagnostics should be correlated with clinical signs, rather than sonographic findings. i.e., an ACTH stimulation test or low dose dexamethasone suppression test is not necessary if a patient is not demonstrating clinical signs of HAC. However, it is always prudent to evaluate an arterial blood pressure and a urine protein: creatinine ratio. If one or both are positive, further diagnostics and treatment are indicated.

HOSPITAL NAME

Stoney Creek VH

REFERRING VET

Dr. Tam Mengine

INVOICE

37933

- **Hepatic changes** are suggestive of both vacuolar and reactive hepatopathies. There are no obvious signs of neoplasia, hepatitis, or cholangitis/cholangiohepatitis.

DATE

5/24/22

- **Mild thickening of the colon** is present. This is a very non-specific finding, and may not be clinically significant. Despite this, an evaluation of Bailey's history regarding the consistency of her stools is suggested. It should be noted that the absence of sonographic changes does not



PATIENT

Bailey Terry

exclude underlying or subclinical disease. There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.

SPECIES

Canine

- As mentioned above, the gastrointestinal tract is considered within normal limits other than the colonic changes. Despite the absence of findings, the **mesentery** is mildly, but *diffusely* hyperechoic (not localized around the adrenal glands). This may be clinically insignificant, and may be due to the settings of the ultrasound machine, or possibly secondary to deposition of fat depending on a patient's body condition score. It may also occur with chronic inflammation. This does not seem to be consistent with Bailey's clinical history.

BREED

Puggle

- The hyperechoic well-circumscribed **splenic nodules** are suggestive of benign processes, such as, mineralization, lipogranulomas, and fibrosis. There are no signs of neoplasia. Myelolipomas are not considered clinically significant.

SEX

Spayed Female

- The **pancreatic** changes are suggestive of age related changes. There are no signs of active pancreatitis or neoplasia.

AGE

13 Years

- The **renal** changes are very mild and are suggestive of age-related degeneration.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A sonographic re-evaluation of the adrenal glands is suggested in 4 to 6 weeks to monitor the nodules and the hyperechoic mesentery surrounding the glands.

WEIGHT

25 Pounds

Other suggestions include the following

- Arterial blood pressure
- Urine protein: creatinine ratio
- If hypertension and/or proteinuria is/are present, further diagnostics, such as an ACTH stimulation test or a low dose dexamethasone suppression test, are recommended, and treatment for hyperadrenocorticism is indicated.
- Evaluation of Bailey's history regarding the consistency of her stools is suggested.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Dr. Tam Mengine

HOSPITAL NAME

Stoney Creek VH

REFERRING VET

Dr. Tam Mengine

INVOICE

37933

DATE

5/24/22



PATIENT

Bailey Terry

SPECIES

Canine

BREED

Puggle

SEX

Spayed Female

AGE

13 Years

WEIGHT

25 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Dr. Tam Mengine

HOSPITAL NAME

Stoney Creek VH

REFERRING VET

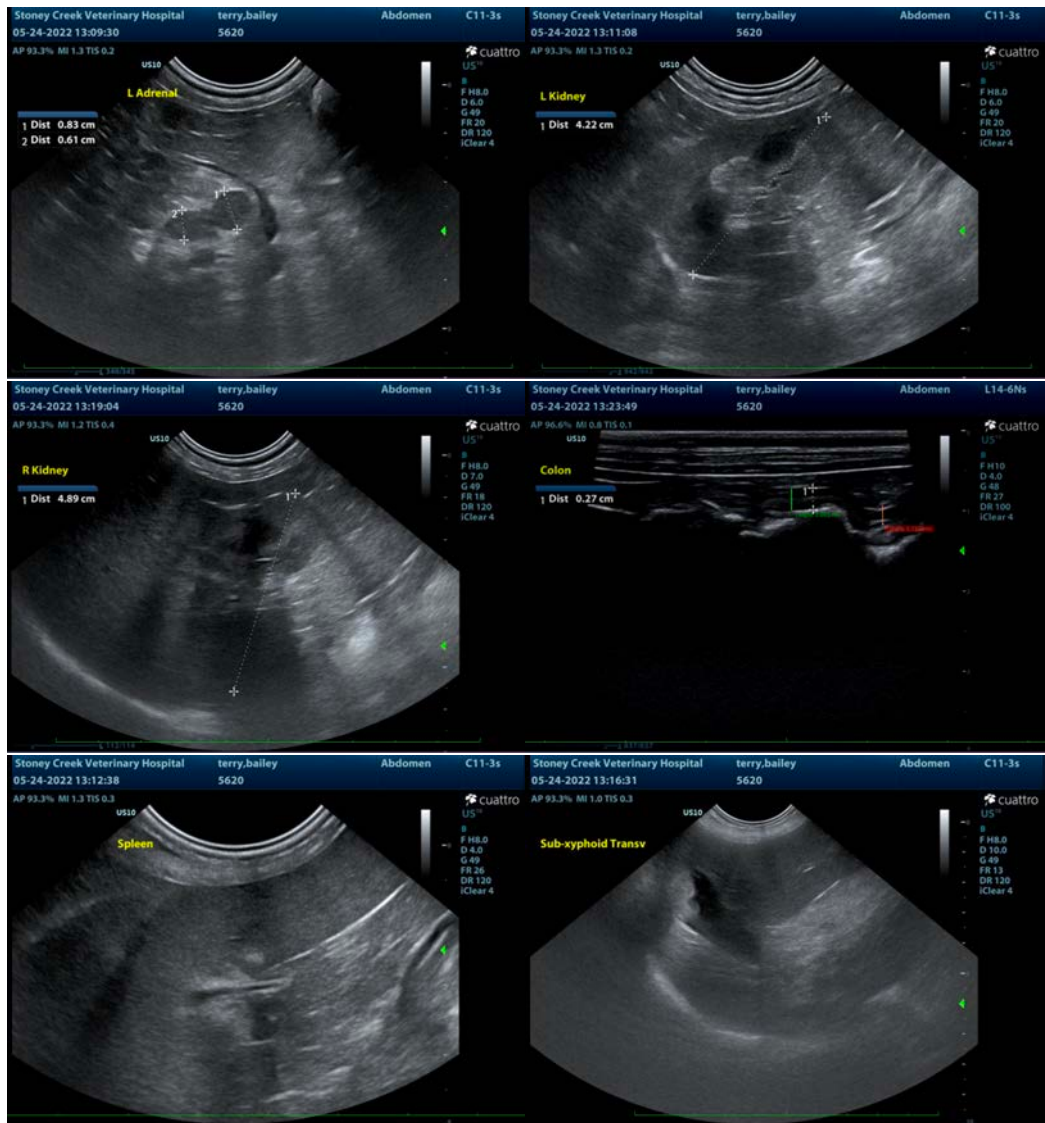
Dr. Tam Mengine

INVOICE

37933

DATE

5/24/22





PATIENT

Bailey Terry

SPECIES

Canine

BREED

Puggle

SEX

Spayed Female

AGE

13 Years

WEIGHT

25 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Dr. Tam Mengine

HOSPITAL NAME

Stoney Creek VH

REFERRING VET

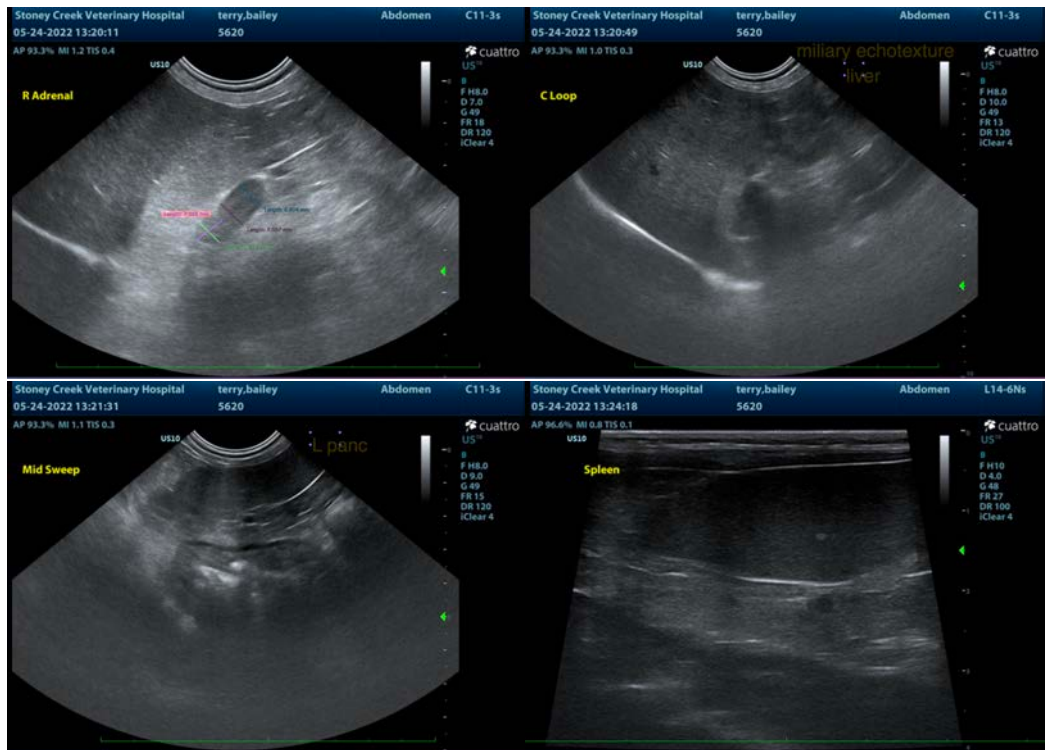
Dr. Tam Mengine

INVOICE

37933

DATE

5/24/22



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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com