



PATIENT

Stella Anderson

SPECIES

Canine

BREED

Boston Terrier

SEX

Spayed Female

AGE

11 Years

WEIGHT

26 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Marco Lichfield

HOSPITAL NAME

Sova Animal Hospital

REFERRING VET

Dr. John Ammeraal

INVOICE

41164

DATE

9/8/22

PRESENTING CLINICAL SIGNS

P has history of elevated values, last BW was done 08/25/2021 and most recent 08/28/2022
Abnormal PE/Chem/CBC/UA Results: BW showed ALT 244, AlkP 2259, and CBC showed platelet count 749.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (4.75 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

The left kidney is normal in size (4.75 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

Adrenal Glands

The right adrenal gland is normal in size (1.46 cm long x 0.35 cm at the cranial pole and 0.42 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.8 cm long x 0.39 cm at the cranial pole and 0.51 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.



PATIENT

Stella Anderson

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.

SPECIES

Canine

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

BREED

Boston Terrier

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

SEX

Spayed Female

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

AGE

11 Years

PRIMARY FINDINGS

- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- **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.

WEIGHT

26 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

SECONDARY FINDINGS

- Non-obstructive dystrophic mineralization bilaterally in the kidneys

IMAGING PERFORMED BY

Marco Lichfield

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The described laboratory changes as well as ultrasonographic liver and gallbladder changes can all be seen with hyperadrenocorticism. Normal adrenal glands on ultrasound do not rule out hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted. If clinical signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop. If not recently evaluated, blood pressure is recommended. If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

HOSPITAL NAME

Sova Animal Hospital

REFERRING VET

Dr. John Ammeraal

INVOICE

41164

Otherwise, a discrete cause for this patient's liver enzymes is not identified in these images, and other considerations could include testing for Leptospirosis and/or a fine needle aspirate of the liver. However, these laboratory changes are non-specific and can be seen with extrahepatic diseases resulting in a reactive hepatopathy as well. Therefore, addressing any concurrent chronic infection, inflammation, dental disease, etc. should also be considered.

DATE

9/8/22



PATIENT

Stella Anderson

In the meantime, an empirical course of antibiotics as well as hepatic nutraceuticals such as Ursodiol, Denamarin, etc. with monitoring of liver enzymes for improvement could be considered.

SPECIES

Canine

BREED

Boston Terrier

SEX

Spayed Female

AGE

11 Years

WEIGHT

26 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

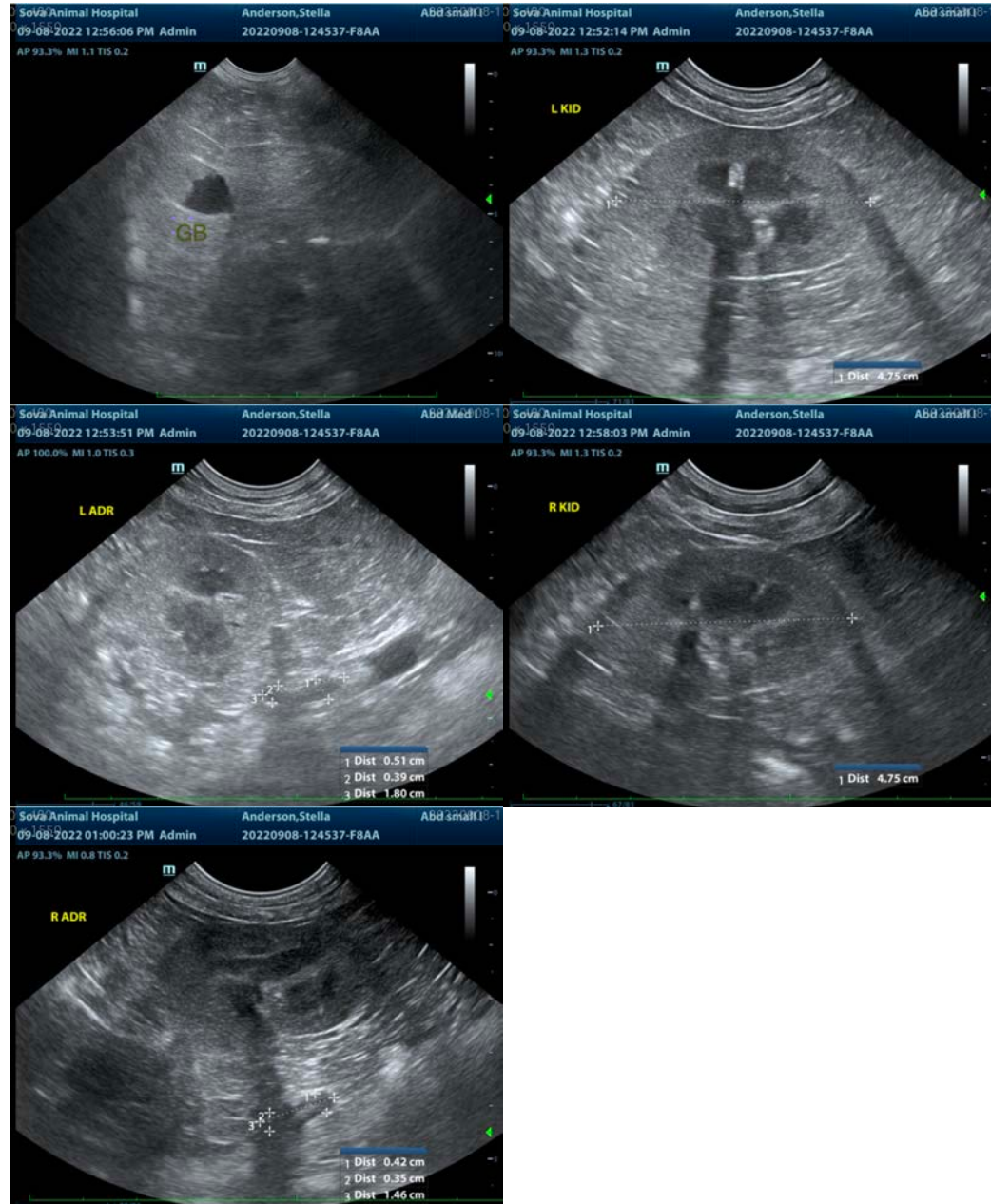
Marco Lichfield

HOSPITAL NAME

Sova Animal Hospital

REFERRING VET

Dr. John Ammeraal



INVOICE

41164

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.

DATE

9/8/22

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