



PATIENT	PRESENTING CLINICAL SIGNS
Zero Brook	Elevated ALT, increasing CCL tear 2 weeks ago Abnormal PE/Chem/CBC/UA Results: ALT (SGPT) 586IU/L 12-118 (previously 339 in January) Alk Phosphatase 211IU/L 5- 131
SPECIES	
Canine	
BREED	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Mix	Urinary System
SEX	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.
Neutered male	Prostate
	The prostate is homogenous and within normal limits for a neutered male.
AGE	Kidneys
11 years	The left kidney measures 6.30 cm. The capsule is smooth, however, the cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. A small number of mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.
WEIGHT	The right kidney measures approximately 6.30 cm. Findings are similar to the left kidney.
65 lbs	
INTERPRETED BY	Aortic bifurcation/trifurcation
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	No abnormalities observed.
IMAGING PERFORMED BY	Adrenal Glands
Dr. Moon	The left adrenal gland measures 0.58 cm at the cranial pole, 0.66 cm at the caudal pole and 2.84 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.
HOSPITAL NAME	The right adrenal gland measures 0.63 cm at the cranial pole, 0.60 cm at the caudal pole and 2.33 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.
Shiloh VH	
REFERRING VET	Spleen
Dr. Schneider	The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified. A well circumscribed, hyperechoic nodule, measuring 5.6 mm in diameter x 5.5 mm in length, is observed at the head of the spleen. It does not affect the integrity of the capsule. An acoustic shadow is created by the nodule. A few pinpoint hyperechoic foci are observed throughout the spleen, which are suggestive of mineralization.
INVOICE	
99493	
DATE	
4/25/22	



PATIENT

Zero Brook

Liver

SPECIES

Canine

BREED

Mix

SEX

Neutered male

There are no obvious signs of hepatomegaly and its borders are smooth and sharp, to mildly rounded. A diffuse, mildly coarse or granular echotexture is observed, which may be due to a reactive hepatopathy. It is diffusely hyperechoic, i.e. it is isoechoic to the falciform fat. Ill-defined hyperechoic “patches” of various size are noted scattered throughout the parenchyma. A hyperechoic nodule, measuring 5.6 mm in diameter x 5.6 mm in length is observed. Its appearance is suggestive of mineralization, fibrosis and possibly fat. Perivascular cuffing of multiple blood vessels is present, which may be due to fat, mineralization, as well as inflammation.

The gallbladder (GB) wall is within normal limits in size, thickness and echogenicity. A moderate to large amount of free floating echogenic material (sludge) is present within the lumen of the GB. There is no evidence of edema surrounding it. There are no obvious signs of an obstruction.

Gastrointestinal

AGE

11 years

A large amount of gas is present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

WEIGHT

65 lbs

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

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

Pancreas

IMAGING PERFORMED BY

Dr. Moon

No overt abnormalities are observed with the echogenicity or echotexture of the **left or right limbs**. There is no evidence of hyperechogenicity of the surrounding mesentery, i.e., signs of active pancreatitis are not present.

HOSPITAL NAME

Shiloh VH

Other

Lymph nodes No abnormalities are observed

REFERRING VET

Dr. Schneider

Abdominal effusion is not visualized.

ULTRASONOGRAPHIC FINDINGS

INVOICE

99493

- The ill-defined, hyperechoic “patches” observed throughout the hepatic parenchyma may be due to fibrosis, inflammation, and fat. The diffuse, mildly coarse or granular hepatic echotexture may be due to a reactive hepatopathy, while the diffuse hyperechogenicity is suggestive of a vacuolar hepatopathy, which may occur due to stress, a chronic illness or hyperadrenocorticism. Cholestasis may also be present. Zero’s adrenal glands are within normal limits in size, echogenicity and echotexture. Other differential diagnoses, such as

DATE

4/25/22



PATIENT

Zero Brook

hepatitis, cholestasis and cholangitis/cholangiohepatitis are considered less likely. The perivascular cuffing of multiple blood vessels may be due to deposition of fat, mineralization, as well as inflammation. The same differential diagnoses exist for the small, well circumscribed hyperechoic nodule, in addition to nodular regeneration.

SPECIES

Canine

- The presence of sludge in the gallbladder is most likely clinically insignificant, however, some dogs may show clinical signs of gastroesophageal reflux disease (GERD), therefore, obtaining a history regarding signs of GERD from the client is suggested. There are no obvious signs of cholecystitis.

BREED

Mix

- Calcification of the splenic nodule is present based on the acoustic shadow observed. It does not have malignant characteristics.

SEX

Neutered male

- Mild degenerative changes of both kidneys are present, which are suggestive of age related degeneration.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

AGE

11 years

A serum thyroxin concentration and TSH are suggested as hypothyroidism can increase the ALT and ALP. It can also predispose an individual to rupture of the cranial cruciate ligament(s).

WEIGHT

65 lbs

A FNA of the liver may be pursued to confirm the presence of a vacuolar hepatopathy, however, a tissue biopsy is required to evaluate the hepatic architecture, and certain diagnoses may be overlooked with cytology alone.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Hepatitis, cholestasis, cholangitis/cholangiohepatitis cannot be excluded and secondary ascending bacterial infections may occur. Although indiscriminate use of antibiotics is not normally recommended, one could begin treatment with a broad-spectrum antibiotic and reassess liver enzyme activities, including a GGT, in a few weeks. However, this should only be done after evaluating Zero's thyroid function.

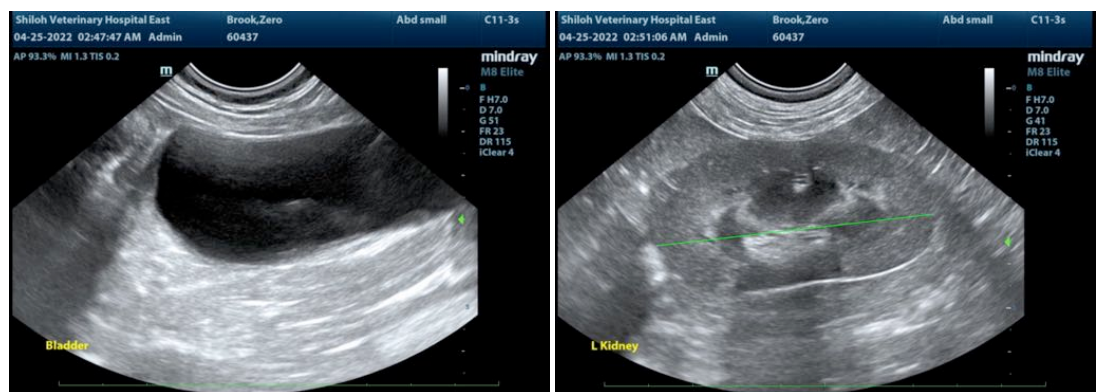
IMAGING PERFORMED BY

Dr. Moon

Evaluation of the history for exposure to medications, including non-steroidal anti-inflammatories, such as Aspirin or natural supplements, is also suggested.

HOSPITAL NAME

Shiloh VH



REFERRING VET

Dr. Schneider

INVOICE

99493

DATE

4/25/22



PATIENT

Zero Brook

SPECIES

Canine

BREED

Mix

SEX

Neutered male

AGE

11 years

WEIGHT

65 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Dr. Moon

HOSPITAL NAME

Shiloh VH

REFERRING VET

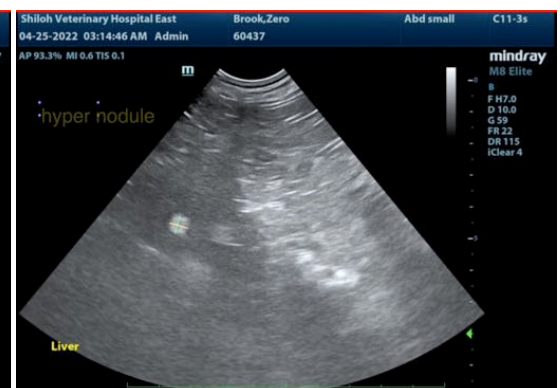
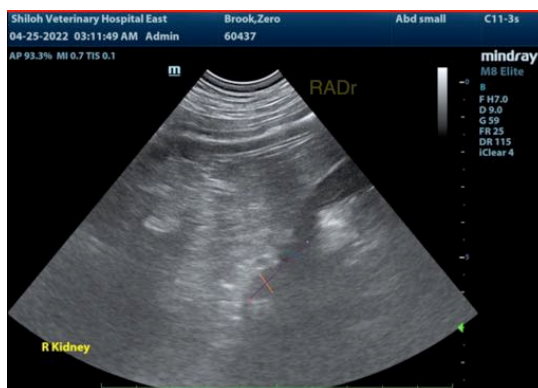
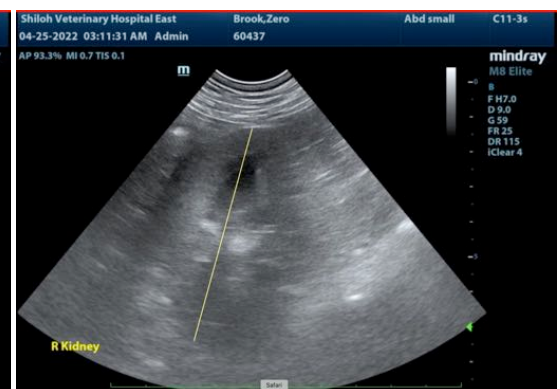
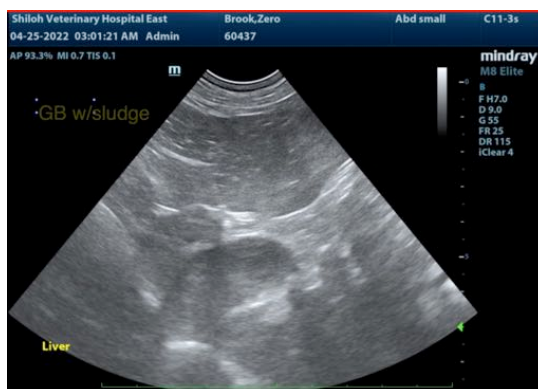
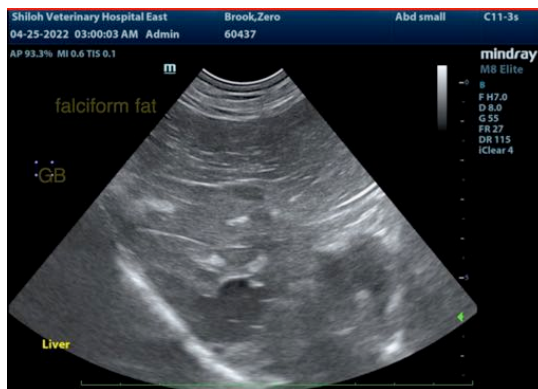
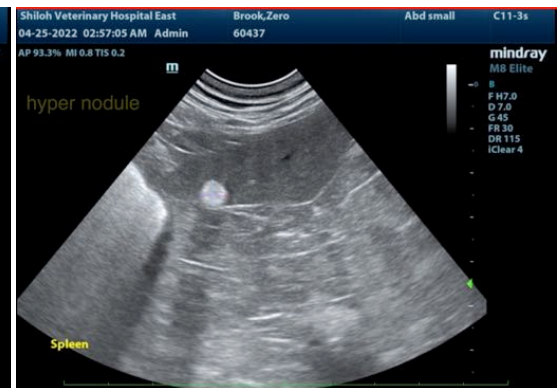
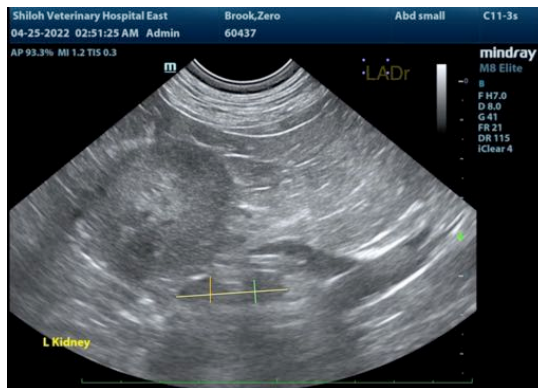
Dr. Schneider

INVOICE

99493

DATE

4/25/22





PATIENT

Zero Brook

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.

SPECIES

Canine

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.

BREED

Mix

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com

SEX

Neutered male

AGE

11 years

WEIGHT

65 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Dr. Moon

HOSPITAL NAME

Shiloh VH

REFERRING VET

Dr. Schneider

INVOICE

99493

DATE

4/25/22