

PATIENT

Louie Surach

PRESENTING CLINICAL SIGNS

History: chronic vomiting foamy bile in the morning since July 2021. Is on Pepcid
Abnormal PE/Chem/CBC/UA Results: nsf

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

BREED

Shih Tzu Mix

The urinary bladder is well 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.

SEX

Neutered male

Prostate

The prostate is homogenous and within normal limits for a neutered male.

AGE

6 years

Kidneys

WEIGHT

20.8 lbs

The **left** kidney measures 4.69 cm. The capsule is smooth. The cortex is very mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. Blood flow is adequate. The surrounding mesentery is very mildly hyperechoic.

The **right** kidney measures 4.83 cm. The cortex is very mildly hyperechoic, i.e., it is mildly hyperechoic to the liver. Findings are similar to the left.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Aortic bifurcation/trifurcation

No abnormalities observed.

IMAGING PERFORMED BY

Diane McFadden, RVT

Adrenal Glands

HOSPITAL NAME
Parsippany Troy Hills

The **left** adrenal gland measures 0.46 cm at the cranial pole, 0.34 cm at the caudal pole and 1.86 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.

REFERRING VET

Dr. Dulude

The **right** adrenal gland measures 0.47 cm at the cranial pole, 0.32 cm at the caudal pole and 1.13 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.

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Spleen

DATE

5/13/22

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. A nodule of mixed echogenicity is observed mid-body. It measures 1.28 cm in diameter x 1.48 cm in length. The nodule does not appear to alter the integrity of the splenic capsule. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.



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Liver

SPECIES

Canine

There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver's echotexture is homogeneous and it is within normal limits in echogenicity. No focal lesions are observed. No abnormalities are observed with the hepatic vessels visualized.

BREED

Shih Tzu Mix

The gallbladder wall is within normal limits in thickness and echogenicity. A trivial amount of echogenic material is present within the GB. 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.

SEX

Neutered male

Gastrointestinal

Mild fogging of the mucosa of the cardia of stomach is noted.

AGE

6 years

The gastric wall is within normal limits in thickness and the wall layers are well defined. However, subjectively, fogging of the mucosa is present. No obvious abnormalities are observed with its peristalsis.

WEIGHT

20.8 lbs

The duodenum is within normal limits in thickness. The definition of wall layers is preserved, however, subjectively, the mucosa is mildly prominent.

No abnormalities are observed with small intestines, including the ileo-cecal-colic junction. Abnormally dilated loops of bowel are not observed.

Gas and ingesta are present in the transverse colon.

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

IMAGING PERFORMED BY

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Pancreas

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

HOSPITAL NAME

Parsippany Troy Hills

Other

Lymph nodes No abnormalities are observed

REFERRING VET

Dr. Dulude

Abdominal effusion is not visualized.

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Heart

A brief video clip of the heart was submitted. Pericardial and pleural effusion are not identified. No abnormalities are noted with the contractility of the heart. A mass is not visualized.

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ULTRASONOGRAPHIC FINDINGS

- The splenic nodule is suggestive of a benign process, for example, nodular or lymphoid hyperplasia and extramedullary hematopoiesis (EMH). Neoplasia is considered unlikely, but cannot be excluded.
- Gastrointestinal signs are suggestive of chronic inflammation, which may occur due to chronic vomiting, and/or due to underlying inflammatory disease, for example, inflammatory bowel disease.
- Shih Tzus and Shih Tzu mixed breeds are predisposed to bilious vomiting syndrome (also known as gastroesophageal reflux disease (GERD)). Some patients may suffer from underlying inflammatory bowel disease or food intolerance. Obtaining a history regarding signs of GERD from the client is suggested.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Obtaining a history regarding signs of GERD from the client is suggested.

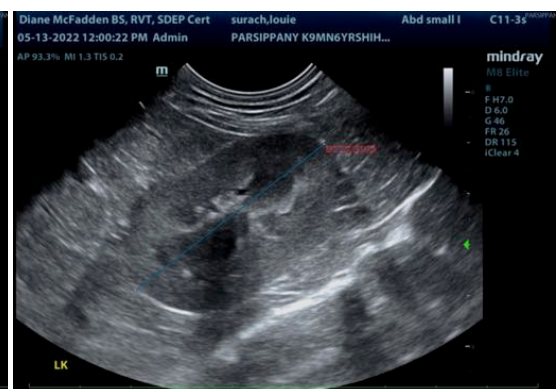
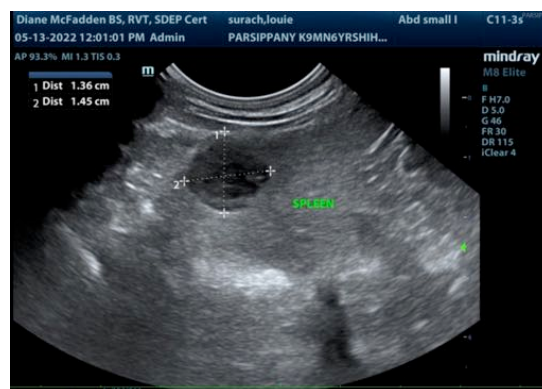
Treatment with an anti-acid or proton pump inhibitor may be required depending on the history; 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO q12h)

Other recommendations may include the following

- Deworming, (e.g. fenbendazole)
- Diet trial (veterinary prescription brand hypoallergenic, hydrolyzed or novel protein)
- Endoscopy and biopsies of the upper and lower GI tract diet, if no response to deworming and diet trials. However, an exploratory laparotomy is another option (see below).

An ultrasound-guided fine needle aspirate (FNA) of the splenic nodule with a 25 gauge needle may be performed to confirm this suspicion, however, another option is to re-evaluate the nodule in 6 to 8 weeks. If EMH, nodular or lymphoid hyperplasia, the nodule should be more organized or will have resolved.

If the nodule is still present in 6-8 weeks, one could consider performing a splenectomy, which would be both therapeutic and diagnostic. Gastric and intestinal biopsies could also be performed at the same time to rule out inflammatory bowel disease.





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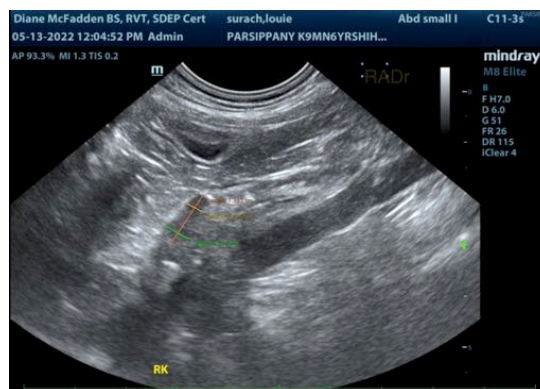
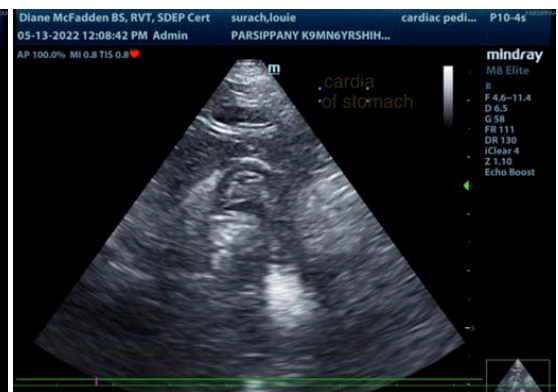
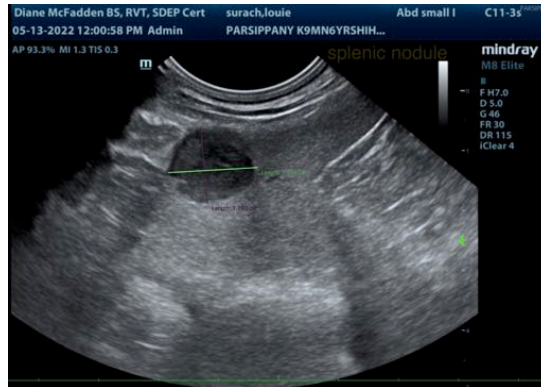
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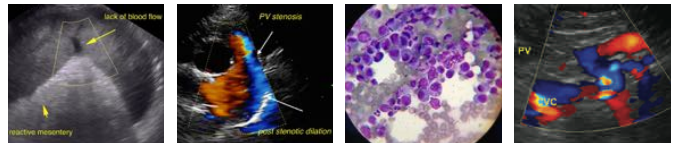


The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com



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