



PATIENT

Howdy Loomis

SPECIES

Canine

BREED

Labrador

SEX

Neutered Male

AGE

8.5 Years

WEIGHT

105 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Dr. Meghan Myers

HOSPITAL NAME

Hershire AH

REFERRING VET

Dr. Meghan Myers

INVOICE

37110

DATE

4/25/22

PRESENTING CLINICAL SIGNS

Pet has 1-2 week history of progressive lethargy and slight decreased appetite. Seems very painful/uncomfortable with hind end. Unsure if belly pain vs. hind leg pain vs. back pain. Struggling to stand in position to have BM. Is currently on metronidazole, fortiflora and just gave rimadyl injection this morning. Radiograph was concerning for either just pylorus or possible splenic mass- suspect pylorus.

Abnormal PE/Chem/CBC/UA Results: cbc/chem/t4/lytes: all normal 3 view chest xrays: mild age related changes, no neoplasia seen mild cardiomegaly- has chronic grade 2/5 heart murmur

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 cystoliths, polyps or a mass. A trivial amount of free floating sediment is observed.

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

The **left kidney** measures 7.23 cm. The capsule is smooth. The definition of the cortico-medullary junction is accentuated due to increased echogenicity, circumferentially, of the medulla. That is, the medulla appears hyperechoic to the cortex. This is likely due to the presence of fat and mineralizations of the diverticulae, arcuate arteries, and renal pelvis. Very small nephroliths are suspected due to some acoustic shadowing. Pyelectasia is absent. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

The **right kidney** measures 6.95 cm. The capsule is smooth. A mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are noted. There are no obvious nephroliths. Pyelectasia is absent. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

(Slightly oblique angle). The **left adrenal gland** measures at least 0.51 cm at the cranial pole, 0.46 cm at the caudal pole, and 1.78 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.

The **right adrenal gland**. No obvious abnormalities are noted. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is folded on itself, but, subjectively does not appear enlarged for a dog of Howdy's stature. The capsule is smooth. It is within normal limits in size, architecture and echogenicity. It has a mildly mottled echotexture throughout. No obvious abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Possible hepatomegaly, 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. It has a mildly coarse



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echotexture, but is homogeneous. It is diffusely hyperechoic, i.e., it is isoechoic to the spleen. The walls of the portal veins are mildly hyperechoic/more prominent. Focal lesions are not visualized.

SPECIES

Canine

The gallbladder wall is within normal limits in size, thickness and echogenicity. A moderate amount of echogenic material (sludge) is present within the lumen. The sludge is gravity-dependent. 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

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

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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.

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Pancreas

The pancreas has a mildly coarse echotexture. These changes are most likely due to nodular hyperplasia and areas of fibrosis. Signs of active pancreatitis or neoplasia are not appreciated.

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Other

Lymph nodes

No abnormalities are observed

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Abdominal effusion is not visualized.

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ULTRASONOGRAPHIC FINDINGS

- A delay in gastric emptying may be present if Howdy was fasted, and an ultrasound of the stomach should be repeated after a longer fasting period of approximately 14-20 hours, particularly if a mass is suspected. No obvious abnormalities are noted within the stomach or the gastrointestinal tract to suspect neoplasia, however, subtle lesions may be missed due to the presence of ingesta and fluid in the stomach. The pylorus is within normal limits on the radiographs.
- The spleen is folded on itself, which is not abnormal. This can be uncomfortable on abdominal palpation, however. It should not cause lethargy or difficulty rising. The mildly mottled echotexture may be due to nodular or lymphoid hyperplasia, extramedullary hematopoiesis, as well as splenitis. There are no obvious signs of neoplasia, however, a fine needle aspirate would be required to exclude the latter with certainty.
- The diffuse hyperechogenicity of the liver is suggestive of a vacuolar hepatopathy, which may occur due to stress, chronic illness or inflammation, or hyperadrenocorticism. Differential diagnoses, such as hepatitis, and cholangitis/cholangiohepatitis with a secondary bacterial infection are considered less likely. Cholestasis cannot be excluded given the biliary sludge. The mildly coarse echotexture appears within normal limits for a dog of Howdy's age.
- The presence of sludge in the gallbladder is most likely clinically insignificant, however, some dogs may show clinical signs of gastroesophageal reflux disease (GERD), and abdominal discomfort, therefore, obtaining a history regarding signs of GERD from the client is suggested.

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- Mild degenerative changes of both kidneys are present, which are suggestive of age related degeneration. The abnormalities associated with the left kidney appear to be associated with the deposition of fat and mineralization within the medulla and pelvis and do not appear to be clinically significant, however, an evaluation of blood work, including a SDMA and a urinalysis (first morning specific gravity) is suggested.
- The pancreatic changes are most likely due to nodular hyperplasia and areas of fibrosis, which are considered secondary to age and possibly to previous episodes of pancreatitis, respectively. There are no signs of active pancreatitis or neoplasia.

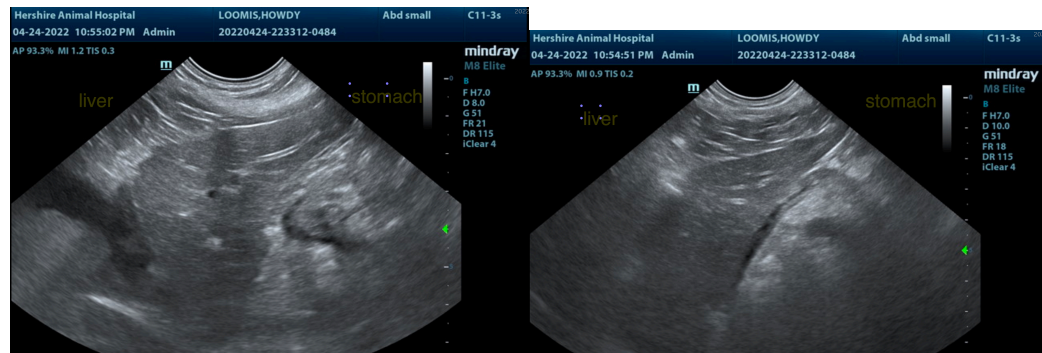
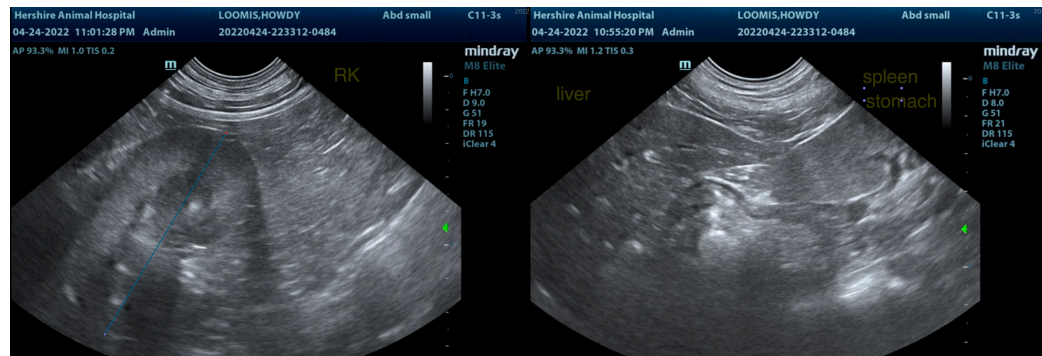
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious cause of Howdy's clinical signs is not identified on today's abdominal ultrasound.

A delay in gastric emptying may be present, which could cause abdominal discomfort, and obtaining a history regarding signs of GERD from the client is suggested based on the presence of biliary sludge.

An evaluation of blood work, including a SDMA and a urinalysis (first morning specific gravity) is suggested.

Based on the history provided, Howdy may be suffering from discomfort associated with osteoarthritis, which may be worse if it has been more humid in recent days or weeks. A trial of analgesics for osteoarthritis, using gabapentin, gapriprant (Galliprant) as it is not a prostaglandin inhibitor, methadone, amantadine, etc., is suggested to exclude pain as a cause of her decreased appetite in the morning. An uptitration of the dosages over 3-5 days is suggested to avoid sedation.





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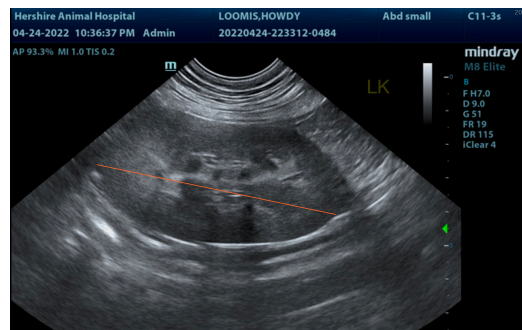
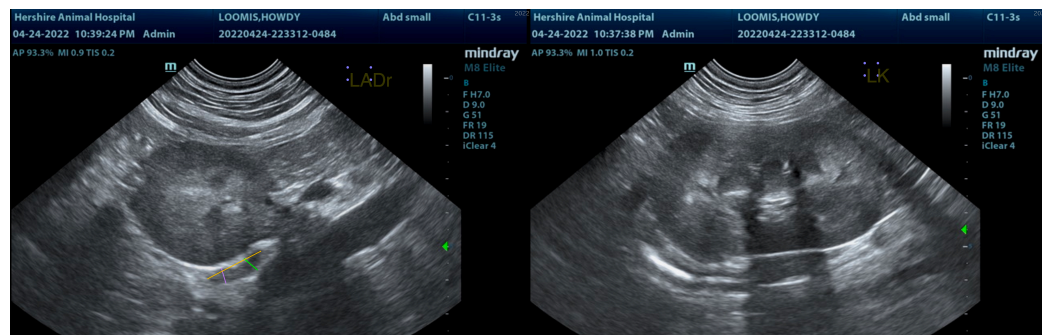
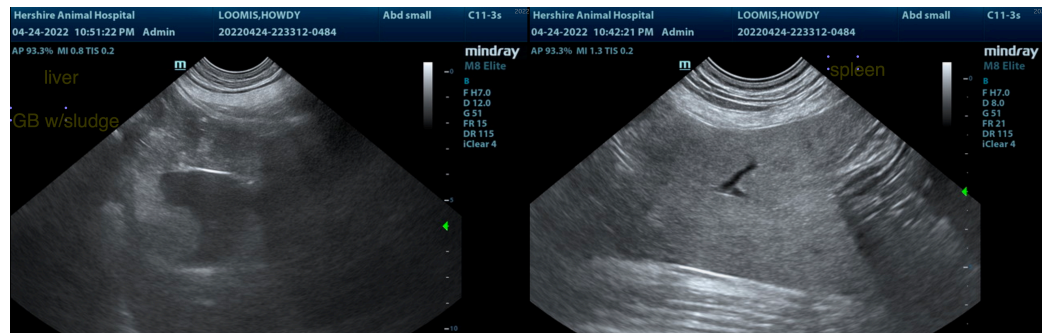
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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