

PATIENT

Amos Fallon

SPECIES

Canine

BREED

Labrador Retriever

SEX

Intact Male

AGE

5 years

WEIGHT

59.5 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Kelly Vazquez, CVT

HOSPITAL NAME

Westwood Regional
VH

REFERRING VET

Dr. Hartwick

INVOICE

30355

DATE

5/13/22

PRESENTING CLINICAL SIGNS

Patient with history of high liver enzymes, presents due to acute onset of bloody urine x 12 hrs. Good stream initially - then drops only. Abnormal survey radiographs = R/O blood/tumor, etc. in bladder. Possible history of autoimmune disease? Faint + ANA. Hepatopathy. Current meds: Prednisone taper, Simplicef, Baytril, just finished Immuran.

Abnormal PE/Chem/CBC/UA Results: HCT 31.4, retics 305.2, WBC 17.7/neutrophilia/monocytosis (improved WBC was 30), PLTs normal, PT/PTT WNL, BUN 31, creat. 0.9, ALT > 1000, ALP high, T. bili 0.5, chol. 415, amylase 1613, lipase 4819.

ABDOMINAL RADIOGRAPHS

Possible free gas in the abdomen and surrounding the urinary bladder. Mineralization and calcification of the urinary bladder are also suspected. An emphysematous urinary bladder is suspected. Very mild hepatomegaly which is most likely due to administration of steroids.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urogenital System

Urinary bladder

The urinary bladder is not visualized. The prostate is visualized, as is the proximal urethra and a portion of the trigone of the urinary bladder. However, hyperechoic striations with "dirty shadows" are observed where the urinary bladder should be located. This is highly suggestive of free gas in the abdomen, most likely due to emphysematous cystitis.

Kidneys

The **left** kidney measures 7.08 cm. The capsule is smooth. The cortex is mildly hyperechoic and a mild to moderate 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 within normal limits. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 7.03 cm. Findings are similar to the left.

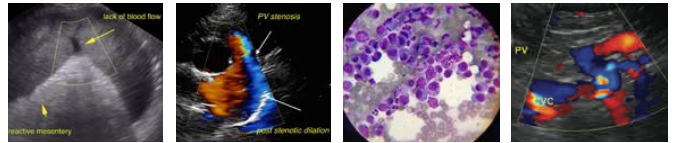
Prostate

The prostate has a coarse or granular echotexture with a few punctate hyperechoic foci, suggestive of mineralization. It measures 1.77 cm in diameter x 2.72 cm in length, which is considered acceptable for an intact male.

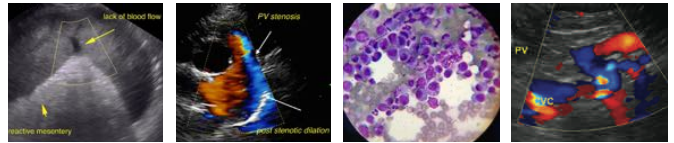
Testicles

The testicles are symmetrical and homogenous in echotexture. No focal lesions are observed.

Left testicle 3.24 cm; Right testicle 3.03 cm



PATIENT	Aortic bifurcation/trifurcation
Amos Fallon	No abnormalities observed.
SPECIES	Adrenal Glands
Canine	The left adrenal gland measures 0.32 cm at the cranial pole, 0.13 cm at the caudal pole and 1.41 cm in length. Although no abnormalities are noted with the gland's echogenicity or echotexture, it is smaller and thinner than what is usually expected. The phrenico-abdominal vein, surrounding vasculature and mesentery are unremarkable.
BREED	
Labrador Retriever	The right adrenal gland is not visualized.
SEX	Spleen
Intact Male	The spleen is within normal limits in size and architecture, and the capsule is smooth. Pinpoint to punctate hyperechoic foci are dispersed throughout the parenchyma in a haphazard fashion. This is suggestive of dystrophic calcification. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified, however, the walls of the blood vessels are hyperechoic, which is suggestive of mineralization, fat deposition, and fibrosis.
AGE	
5 years	
WEIGHT	Liver
59.5 lbs	Subtle signs of free gas are noted upon evaluation of the liver. Mild hepatomegaly is suspected, which is confirmed on the radiographs. The liver's borders are smooth, but mildly rounded. It is homogeneous and diffusely hyperechoic.
INTERPRETED BY	
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	The gallbladder wall is within normal limits in thickness and echogenicity. There is no evidence of echogenic material within the GB or edema surrounding it. 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.
IMAGING PERFORMED BY	Gastrointestinal
Kelly Vazquez , CVT	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.
HOSPITAL NAME	
Westwood Regional VH	The duodenum is within normal limits in thickness and the definition of wall layers is preserved,
REFERRING VET	No abnormalities are noted with the small intestinal wall thickness or the definition of the wall layers. Abnormally dilated loops of bowel are not observed.
Dr. Hartwick	The colonic wall is not thickened and mural detail is considered normal.
INVOICE	Pancreas
30355	No overt abnormalities are observed with the echogenicity or echotexture of the pancreas. There is no evidence of hyperechogenicity of the surrounding mesentery, i.e., signs of active pancreatitis are not present.
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PATIENT

Other

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Lymph nodes

No abnormalities are observed

SPECIES

Canine

Abdominal effusion is not visualized.

Free gas is noted throughout the abdomen, however, it is most severe in the region of the urinary bladder.

BREED

Labrador Retriever

ULTRASONOGRAPHIC FINDINGS

SEX

Intact Male

- **Emphysematous cystitis** is highly suspected, which often occurs due to an infection with *E. coli* or other gas producing bacteria, including *Klebsiella*.

AGE

5 years

- **Free gas** is present in the abdomen; it is most severe in the region of the urinary bladder.

- Glomerulonephritis and pyelonephritis cannot be excluded, particularly with the administration of immunosuppressive drugs.

WEIGHT

59.5 lbs

- **Dystrophic calcification** of the kidneys and spleen.

- The hepatomegaly and diffuse hyperechogenicity of the liver a vacuolar hepatopathy may be due to stress, such as chronic illness, as well as the administration of glucocorticoids. However, *hepatotoxicity* due to the administration of azathioprine cannot be excluded. Other differential diagnoses include *copper hepatopathy* of the Labrador retriever, as well as *immune mediated hepatitis*, hepatitis due to infectious causes, toxin exposure, medications, etc. *Leptospira* spp. cannot be excluded. Cholestasis and suppurative cholangitis/cholangiohepatitis may be contributing to the changes observed.

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- The small and flattened left **adrenal gland** is attributed to the **administration of prednisone**. The right adrenal gland was not visualized.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

HOSPITAL NAME

Westwood Regional
VH

Aggressive antibiotic therapy is necessary pending a urine culture and sensitivity.

Enrofloxacin is recommended, in addition to a third generation cephalosporin (cefovecin). Trimethoprim-sulfa may be necessary.

REFERRING VET

Dr. Hartwick

The following are recommended

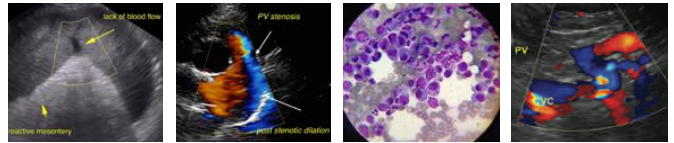
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- Intravenous fluids
- Analgesics, ideally intravenously, including opioids, and gabapentin
- Decrease immunosuppressive agents as much as possible.
- Referral to an internist, if possible
- Surgery of the urinary bladder may be necessary

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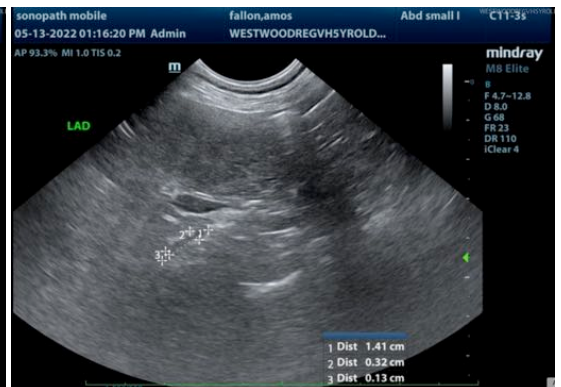
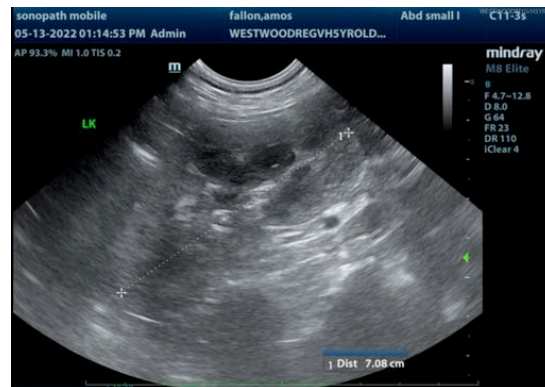
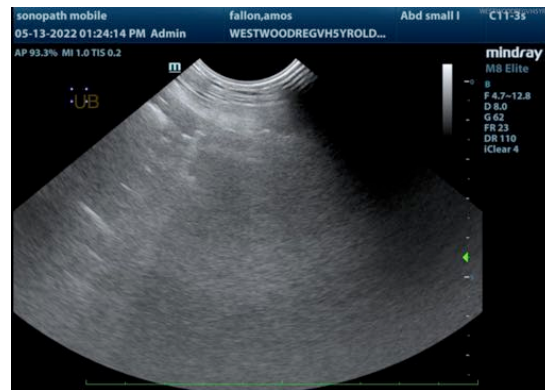
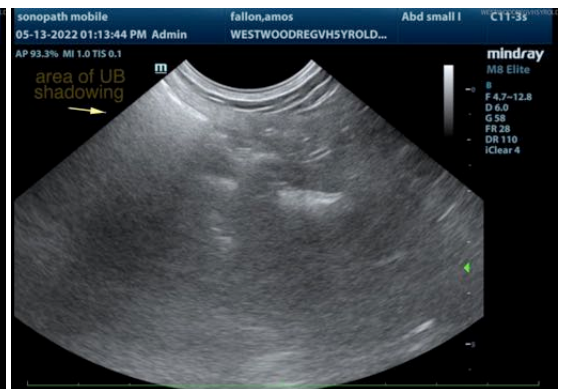
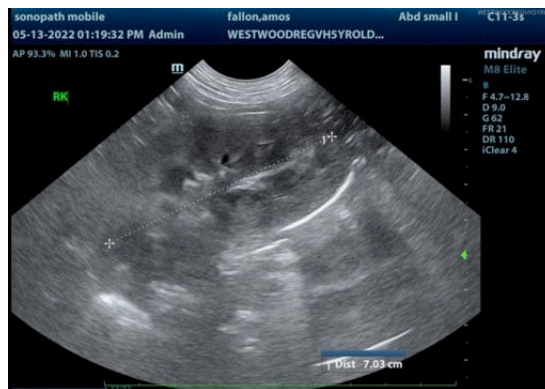
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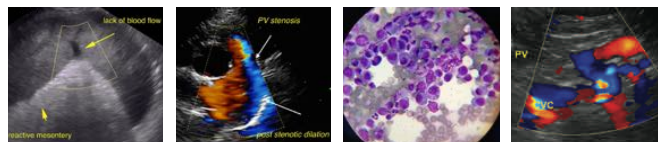
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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