
**PATIENT PRESENTING CLINICAL SIGNS**

**Fred Foose** History: Owner reports patient has not been eating well and is losing weight over the course of a few weeks, has been vomiting more than normal especially after eating a large meal and drinking a lot of water. normal urination habits. Weight loss 3lbs Stools have varied from normal to pudding like, no blood reported in stool, no dark tarry stool reported - metronidazole and Cerenia helped temporarily, vomiting has decreased since feeding smaller more frequent meals Previous history - has had high grade sarcoma removed in May with narrow margins

**SPECIES**

Canine

**BREED**

Boston Terrier

Abnormal PE/Chem/CBC/UA Results: BUN 134 (9-31) SDMA and Crea WNL; Na 135 (140-152), Potassium 2.8 (4-5.4), Chloride 83 (108-119), Alb 4.6 (2.7-3.9); UA results spgr 1.016, pH 5.5, trace protein - UPC 0.6

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**
**SEX**

Neutered Male

**Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

**AGE**

12.5 years

The prostate is normal in size (0.59 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**WEIGHT**

20 lbs

The left kidney is normal size (4.43 cm in length); with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. A few small cortical cysts are seen. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
 Diplomate ACVIM  
 (Small Animal Internal  
 Medicine)

The right kidney is normal size (5.15 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**IMAGING PERFORMED BY**

Meghan Myers VMD

**Adrenal Glands**

The left adrenal gland is mildly enlarged (0.66 cm at cranial pole) (0.76 cm at caudal pole) with a slightly irregular shape. The parenchyma is mildly heterogenous with some loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature appear normal.

**HOSPITAL NAME**

Hershire AH

The right adrenal gland is borderline enlarged (1.29 cm at cranial pole) (0.56 cm at caudal pole) with a slightly irregular shape. The parenchyma is mildly heterogenous with some loss of glandular detail. Surrounding vasculature appears normal.

**REFERRING VET**

Meghan Myers VMD

**Spleen**

The spleen is normal in size (1.62 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.40 cm irregular, hyperechoic nodule is observed near the caudal pole. Splenic vasculature is normal.

**INVOICE**

11924

**Liver**

The liver is subjectively enlarged with swollen, slightly irregular peripheral contours. The parenchyma is isoechoic to hyperechoic relative to the spleen, and diffusely mottled in appearance, with numerous, varying-sized hypoechoic to mildly heterogenous nodules throughout the organ. On the right side, a 7.00

**DATE**

11.30.22

cm swelling is observed. There is rounding at the peripheral margins in this region. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated, echogenic debris/sludge is observed within the lumen, most of which is gravity dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

### ***Gastrointestinal***

The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is diffusely thickened with retention of the normal layering. There is evidence of mucosal striations and speckling in most segments. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

### ***Pancreas***

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

### ***Free Abdomen***

No obvious evidence of free fluid. The abdominal lymph nodes are normal/not visible.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- The small intestinal wall changes are most consistent with a thrombic enteropathy (i.e., lymphangiectasia, inflammatory bowel disease, infectious/parasitic disease, or less likely, emerging neoplasia).
- The hepatic parenchymal changes could be consistent with emerging neoplasia (particularly on the right side). However, a benign age-related process (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy) cannot be excluded.

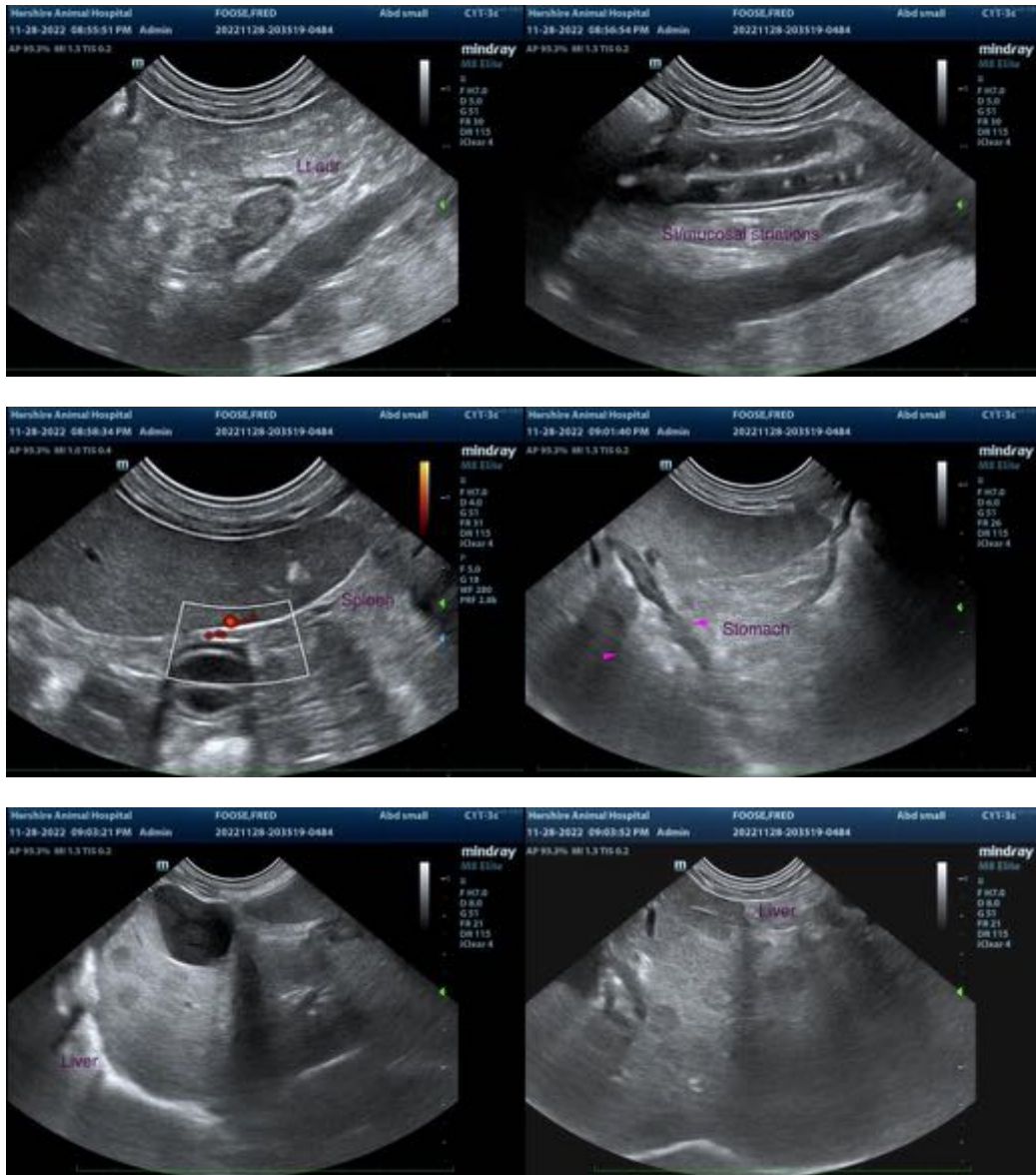
### **Secondary Findings**

- The bilateral adrenal changes are most consistent with hyperplasia.
- Bilateral chronic age-related changes with dystrophic mineralization
- The hyperechoic splenic nodule likely represents a benign process (i.e., myelolipoma).

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Regarding the bowel changes, consider the following:
  1. Fecal evaluation for ova and Giardia, if not already performed
  2. Prophylactic deworming with Fenbendazole
  3. Malabsorption panel, including serum cobalamin and folate, TLI and PLI
  4. Transition to a low-fat hydrolyzed protein or limited antigen diet
  5. Ultimately, gastrointestinal biopsies (i.e., endoscopic, or surgical) may be necessary to get a definitive diagnosis. Three-view thoracic radiographs should be performed prior to any anesthetic event.

- Regarding the hepatic parenchymal changes, a fine-needle aspirate is recommended to further assess for Infiltrative neoplasia (if clotting status is appropriate). In particular, aspiration of the swelling on the right side is recommended. If cytology results are inconclusive, surgical biopsy may be necessary to get a definitive diagnosis.





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.

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