

**DATE PRESENTING CLINICAL SIGNS**

6/3/22

5/28/22: Presented for vomiting. Had been ingesting mulch. No other known foreign material. PE: unremarkable. Radiographs were suspicious for foreign body. Hospitalized on IV fluids and supportive care. Recheck radiographs still suspicious. P transferred to ER over weekend. Did well and introduced food. Been feeding bland diet over the week.

**PATIENT**

Kitty Patton

**SPECIES**

Canine

**BREED**

Miniature Schnauzer

**SEX**

Spayed Female

**AGE**

7/31/21

**WEIGHT**

11 Pounds

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**HOSPITAL NAME**

Timonium AH

**REFERRING VET**

Dr. Falkowski

**INVOICE**

38368

Current Medications: Omeprazole (10mg/ml): Give 0.5ml PO BID since 5/29

Lab Results: CBC: wnl. Chemistry: ALP 16U/L Ddx: artifact

Amylase 485U/L Ddx: clinically insignificant

Radiographs: Abdominal radiographs (10am): Stomach appears empty. Moderate gas distended duodenum. Moderately gas distended cecum or small intestine. Colon contains fecal material. No overt masses or foreign bodies appreciated. Recheck Abominal Radiographs (11am): Stomach appears empty. Increased gas dilation in either duodenum or ascending colon. Moderately gass distended cecum. Colon contains fecal material.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**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 sediment, cystoliths, polyps or a mass.

**Kidneys**

The **left** kidney measures 3.60 cm. The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 3.31 cm. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. There are no signs of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

**Aortic bifurcation/trifurcation**

No abnormalities observed.

**Adrenal Glands**

The **left** adrenal gland measures 0.44 cm at the cranial pole, 0.40 cm at the caudal pole and 1.64 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 measures 0.49 cm at the cranial pole, 0.38 cm at the caudal pole and 1.42 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.

**Spleen**

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. Two almost isoechoic "nodules", measuring 1.43 cm in diameter x 0.87 cm in length and 1.02 cm in diameter x 1.03 cm in length, are noted mid-body. The first is in the form of a "reverse comma", while the second is circular. Extramedullary hematopoiesis or differentiation between red and white pulp is suspected. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

### **Liver**

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; i.e. it is hypoechoic to the spleen. Focal lesions are not observed and no abnormalities are observed with the hepatic vessels.

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.

### **Gastrointestinal**

A significant amount of gas and ingesta are present within the lumen of the stomach. The ingesta may be grass mixed with food, or possibly mulch. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis and a surgical foreign body is not present, i.e. an obstruction is not present.

The duodenum measures 0.33 cm. Subjectively, very mild fogging, stippling and striations of the mucosa are present.

The small intestinal wall thickness is within normal limits and the definition of the wall layers is preserved. Occasional fogging and stippling of the mucosa of multiple loops of jejunum are noted. Abnormally dilated loops of bowel are not observed.

Gas is present in the transverse colon.

The colonic wall is not thickened and mural detail is considered normal. Gas and formed stools are present in the descending colon.

### **Pancreas**

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

### **Other**

#### **Lymph nodes**

A mesenteric lymph node, measuring 0.93 cm in diameter x 2.64 cm in length, is noted. It is mildly enlarged and prominent, yet, within normal limits in echogenicity and echotexture, and has smooth contours. This is often a normal finding in young dogs. Very mild reactive hyperplasia may be contributing to its appearance. A second mesenteric LN is within normal limits 0.45 cm in diameter x 2.03 cm in length.

**Abdominal effusion** is not visualized.

## **ULTRASONOGRAPHIC FINDINGS**

- **Gastrointestinal (GI) tract:** The mild fogging, stippling and striations of the mucosa of the duodenum and a few loops of jejunum are somewhat subjective. Although these findings may not be clinically significant, they have been associated with GI inflammation, for example, a foreign body (mulch) that has passed through the GI tract, inflammatory bowel disease, food intolerance, etc. The ingesta present in Kitty's stomach may be grass, food, mulch, or a combination of these. There is *no evidence of an obstruction and surgery is not required* based on the images.
- **Mesenteric lymph nodes:** A single mesenteric lymph nodes is mildly enlarged, while the others are within the normal reference range. Young dogs may have very mildly enlarged lymph nodes, however,

very mild reactive hyperplasia may be contributing to the slight enlargement as there are signs of GI inflammation.

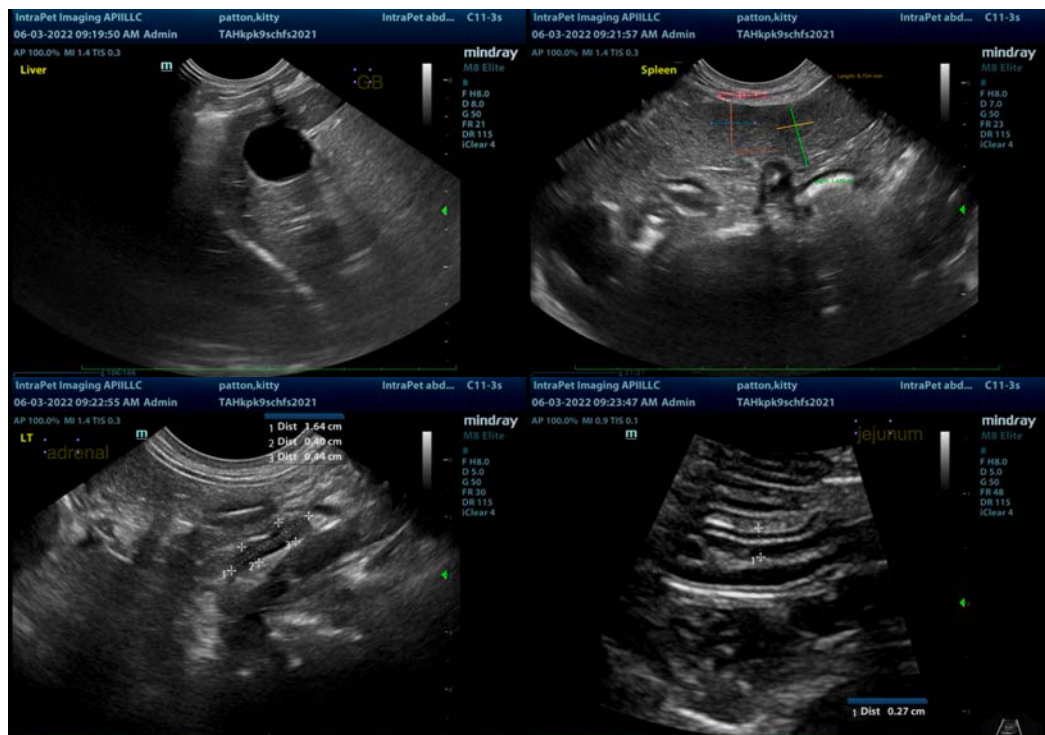
- **Spleen:** The two nodules are not considered pathological and are most likely extramedullary hematopoiesis or marked sensitivity of the ultrasound machine and differentiation of the red and white pulp.

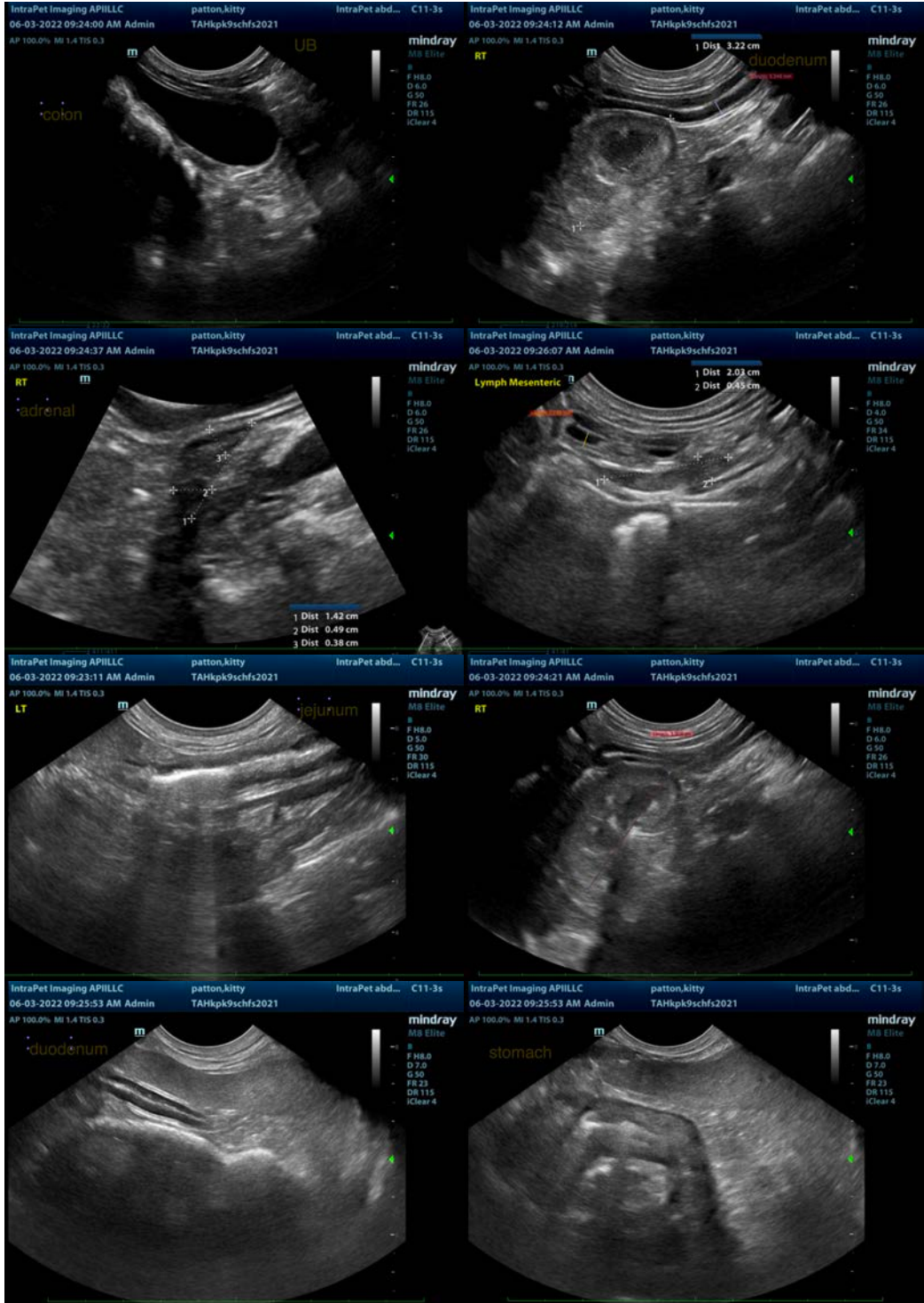
### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Obtaining a history regarding signs of gastroesophageal reflux disease (GERD), as well as pica, and diet, is suggested.

If GERD or pica is present, recommendations include

- Deworming, (e.g., fenbendazole), even if receiving monthly heartworm prevention.
- 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO q12h)
- Diet trial (veterinary prescription brand hypoallergenic, hydrolyzed or novel protein)
- +/- synbiotic
- +/- soluble fibre (psyllium husks)





**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 AVIM**

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