



**DATE**

7/29/22

**PATIENT**

Roxy Clarke

**SPECIES**

Feline

**BREED**

Domestic Longhair

**SEX**

Spayed female

**AGE**

6/21/09

**WEIGHT**

10.5 lbs

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**HOSPITAL NAME**

Animal Emergency  
Hospital

**REFERRING VET**

Dr. King

**INVOICE**

32073

**PRESENTING CLINICAL SIGNS**

Vomited a few times 4-5 days ago now lethargic, hiding and not eating indoor only Pepe the sibling just got put to sleep, anemia and Felv Pos she was tested and was negative, and owner had RDVM send out to lab-- all negative she is indoor only. Triple negative combo test today.

Current Medications: Ampicillin, Buprenorphine, Protonix.

Lab Results: See attached.

Radiographs: very gassy and dilated GIT, worried for fb, LFB other.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Left kidney is normal in size (4.27 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal in size (4.69 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**Adrenal Glands**

Left adrenal gland is normal in size (0.53 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.62 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

### ***Gastrointestinal***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen of the small intestine is empty with no evidence of obstruction or foreign material except in the mid caudal abdomen there is a focal loop of bowel that appears to be small bowel with early/emerging loss of layering suspected and a luminal echogenic interface with distal, progressively shadowing material that is consistent with a hairball density or similar foreign material. The bowel cranial to the foreign material is distended with fluid and chyme, which is consistent with an obstructive pattern.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

Free fluid and enhanced hyperechoic mesentery was noted around the suspected foreign body.

Mesenteric lymph nodes are enlarged with swollen irregular capsular contour and loss of normal length to width ratio (rounded in shape). Nodes are hypoechoic with loss of normal parenchymal detail.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

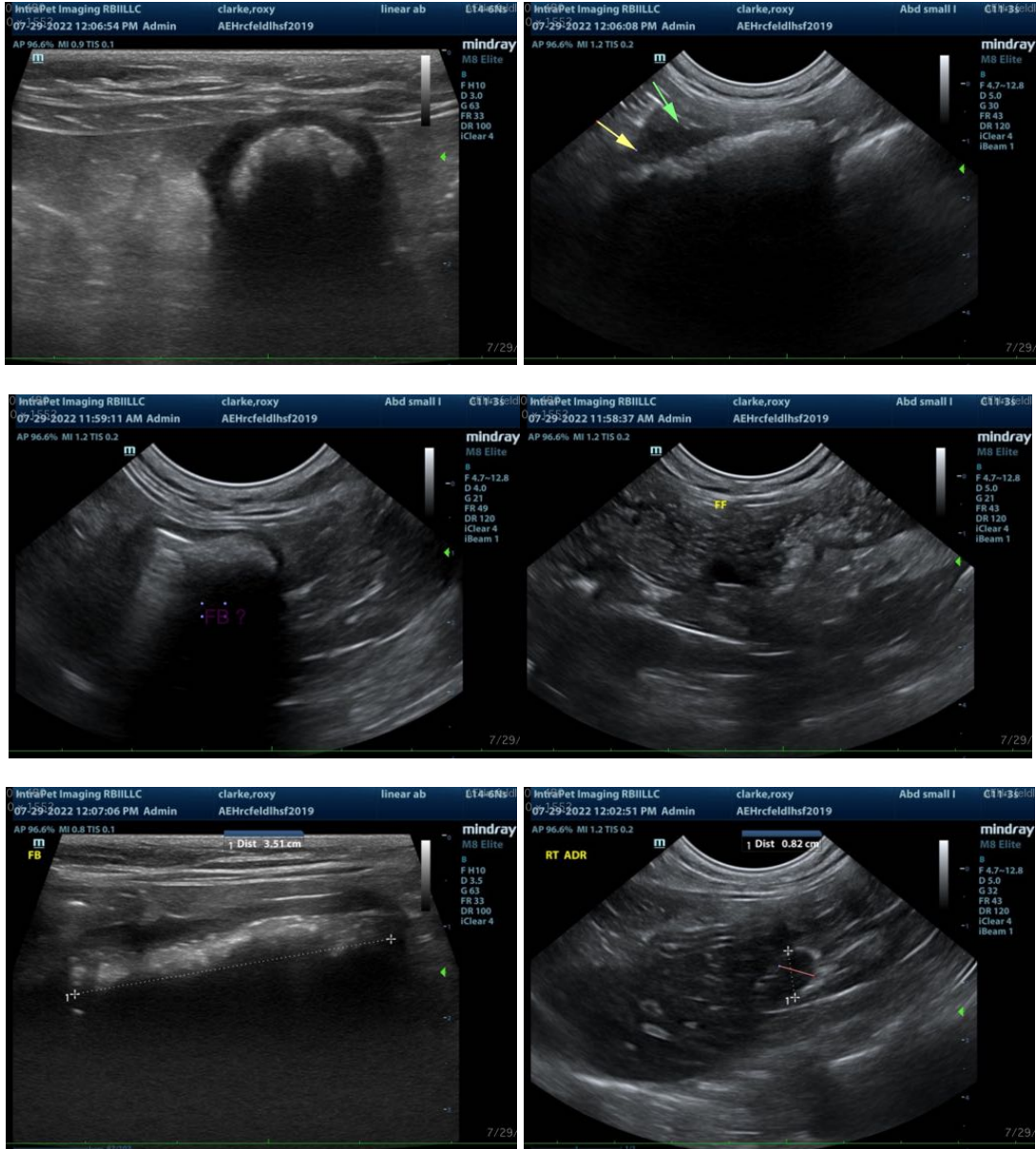
- There is an obstructive pattern present in these images caused by what appears to be a small intestinal hairball/foreign material. The accumulated hair/foreign material is in an area of the bowel with emerging loss of layering suspected. A top concern based on these images is at least a partial if not total obstruction caused by hairball or similar material that is likely secondary to underlying infiltrative bowel disease with concurrent lymphadenopathy.
- Free fluid and enhanced mesentery are concerning for a focal, inflammatory reaction/peritonitis.
- Aggressive lymph nodes – most consistent with infiltrative round cell or metastatic neoplasia. A benign aggressive inflammatory response cannot be ruled out without tissue sampling +/- culture.

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

Recommendations for this patient include an exploratory laparotomy for suspected foreign body/obstruction removal as well as biopsies of the bowel in the affected foreign material area as well as diffusely, given the diffusely thick muscularis layer relative to mucosa. A biopsy of the mesenteric lymph nodes is recommended at the same time.

Given the appearance of the foreign material colon versus small bowel cannot be definitively ruled out, but is considered much less likely. However, if a more conservative approach is elected, given the suspicion that the

blockage is secondary to infiltrative bowel disease and may be hair, supportive/symptomatic medical management with IV fluids, antiemetics, gastroprotectants, fasting, etc. could be considered for 12-24 hours with recheck imaging to determine improvement versus progression. In the low likelihood, but possible instance that hydration and supportive care could lubricate and allow passage of the hair/foreign material. Given the suspicion of focal peritonitis around the bowel loop and the need for biopsies of the abnormal bowel anyway this conservative approach should only be considered if surgery is not an option.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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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