



**PATIENT PRESENTING CLINICAL SIGNS**

Poppy Castro

Weight loss, vomiting, diarrhea, febrile on and off. Seen Dec 28/22 at Simcoe AH, bloodwork shows protein losing enteropathy and elevated WBC- was treated with Clav, Metronidazole and Zeniquin for 14 days Now anorexic, more hypoproteinemic, dull, vomiting, melena. Abdominal rads abnormal. Needs U/S Consulted 2 X with Internal medicine at Idexx- needs U/S STAT to see what is going on Had IV fluids, Cerenia and Buprenorphine today at Simcoe AH. Went home overnight due to cost constraints. meds: Cerenia 0.78cc IV, Buprenorphine 0.02 mg/kg and 2 more doses home at 0.01 mg/kg

**SPECIES**

Canine

**BREED**

Cockapoo

**SEX**

Spayed Female

**AGE**

10 Years

**WEIGHT**

7.8 Pounds

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately 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.

The right kidney is normal in size (5.06 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.

The left kidney is normal in size (5.1 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**

The right adrenal gland is normal in size (2.73 cm long x 1.79 cm at the cranial pole and 0.72 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (2.19 cm long x 0.43 cm at the cranial pole and 0.58 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

The 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**

The 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.

The 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 stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The stomach is markedly overdistended with anechoic fluid. No evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Queensway AH

**REFERRING VET**

Dr. Kennedy

**INVOICE**

44197

**DATE**

1/12/23



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The small bowel has loops with normal wall thickness and layering and an empty diameter. However, multifocally throughout the abdomen, there are small bowel loops with thick walls and loss of mural detail, measuring between 0.63 cm and 0.75 cm thick. One of these loops is overdistended with granular echogenic material/debris with progressive shadowing that could represent foreign material versus ingesta/chyme secondary to the partially obstructive area caused by the infiltrative process.

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

**Pancreas**

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**Free Abdomen**

There is no apparent lymphadenopathy noted in these images.

There is a large amount of hyperechoic enhanced mesenteric fat surrounding the abnormal small bowel loops described above. Anechoic free fluid is also present.

**ULTRASONOGRAPHIC FINDINGS**

- Multifocal infiltrative small bowel disease with loss of mural detail and suspected partial obstruction secondary to the infiltrative disease, surrounded by changes consistent with peritonitis – Top differential, given the loss of mural detail, is infiltrative neoplasia. A benign process is possible but considered much less likely.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

Ultimately, an exploratory laparotomy for biopsies of the multifocal infiltrative small bowel disease as well as alleviation of partial obstruction via resection and anastomosis, etc. is recommended. However, given this patient's reported hypoalbuminemia, surgery may or may not be possible without aggressive supportive medical intervention prior to.

Sampling of the free abdominal fluid to help determine whether the fluid is septic, is recommended to help determine the emergent necessity for surgery.

Pending the initial treatment plan and results etc., other eventual recommended diagnostics to help guide medical management post-operatively include a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory as well as (if not recently evaluated) a urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.



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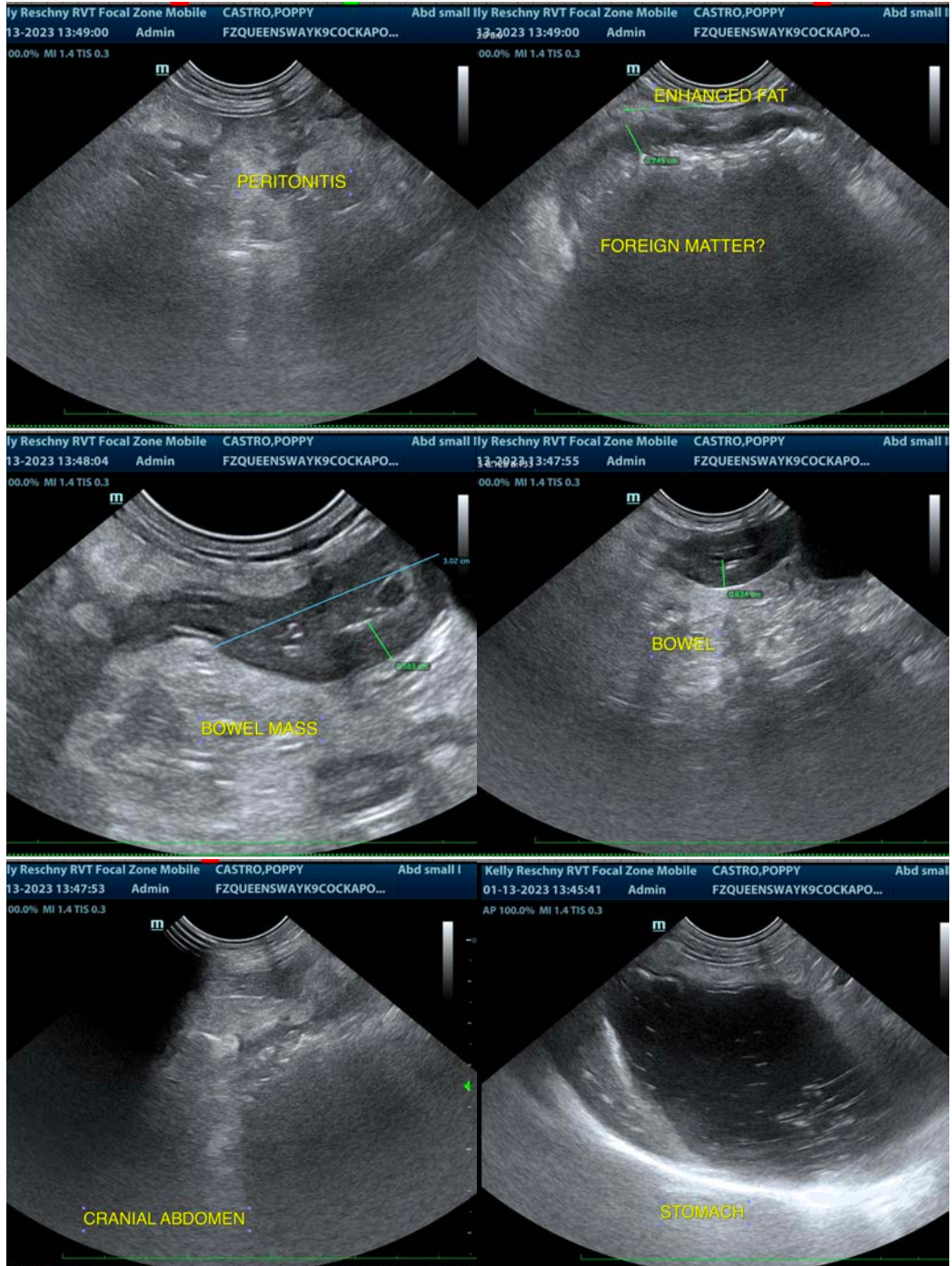
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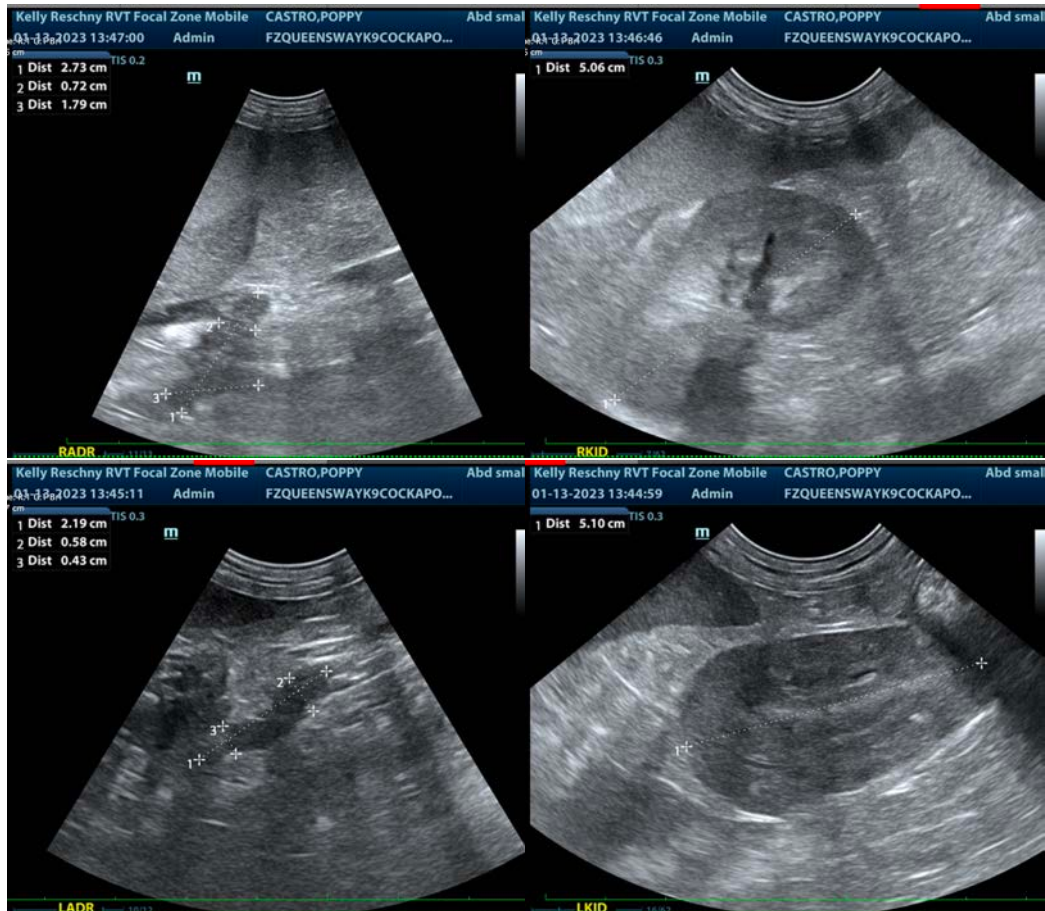
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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