

**PATIENT**

Annie Carton

**SPECIES**

Canine

**BREED**

28 lbs.

**SEX**

SF

**AGE**

8 years

**WEIGHT**

28 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Sarah Pender, CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Westerhof

**INVOICE**

15373

**DATE**

11/3/22

**PRESENTING CLINICAL SIGNS**

Vomiting food and water, weightloss, lethargic. During scan was coughing/hacking and then brought up dark bloody fluid with a few blood clots in it. It is believed she regurgitated it up. Abnormal PE/Chem/CBC/UA Results: Labs showed newly diabetic, very high white blood cell count, and bilirubin levels are two times normal. Very slight anemia

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Minor, nondependent, particulate sediment, which may indicate cellular debris / protein, crystalline debris, or mucus, was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. Mild nonuniform increased cortex echogenicity with adequate corticomedullary border demarcation was present. No pyelectasia was noted. The left kidney measured 7.1 cm in length. The right kidney measured 7.2 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.3 cm length x 0.43 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.2 cm length x 0.39 cm width at the caudal pole.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver/ Gallbladder**

The liver exhibited normal to possible mild generalized enlargement with asymmetrical capsule contour and generalized irregular to nonhomogeneous increased parenchyma echogenicity exhibiting moderate coarse echotexture with evidence of parenchymal remodeling. The gallbladder was non-distended in size containing primarily anechoic content with evidence of minor gallbladder wall edema. The common bile duct was not definitively visualized without overt evidence of common bile duct dilation, stasis, or obvious post hepatic obstructive criteria.

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***Gastrointestinal***

The stomach presented moderate to variably thickened stomach walls exhibiting decreased mural echogenicity and mildly indistinct gastric wall layer detail. Mild gastric distension with primarily anechoic fluid was present.

The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. Decreased intestinal mural echogenicity was present with occasional mucosal speckling. A segmental to diffuse ileus pattern consisting of mild fluid accumulation in the intestinal lumen was present without obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

***Pancreas***

The pancreas exhibited generalized enlargement with swollen asymmetrical contour. Hypoechoic to nonhomogeneous parenchyma compared to adjacent hyperechoic peripancreatic omentum. Generalized hyperechoic mesentery and mild volume peritoneal free fluid was noted. No evidence of significant lymphadenopathy, although likely mild isoechoic mesenteric lymphadenopathy is suspected.

***Free Abdomen***

No omental masses were noted.

**ULTRASONOGRAPHIC FINDINGS**

- Heterogeneous to hyperechoic irregular liver - sonographically suggestive of chronic hepatopathy, considerations may include metabolic, reactive, vacuolar (diabetic) hepatopathy, chronic inflammatory / immune-mediated disease, vacuolar hepatopathy, fibrosis, or other hepatopathy while the possibility of infiltrative hepatic neoplasia cannot be excluded
- Nondistended gallbladder exhibiting evidence of mild gallbladder wall edema - possible mild acute cholecystitis
- Pancreatitis
- Acute subjectively severe gastroenteritis pattern - potential for occult infiltrative intestinal neoplasia possible
- Generalized peritonitis pattern exhibiting hyperechoic mesentery and mild volume peritoneal free fluid

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The primary clinical player in this case, given recently diagnosed diabetic, may be primary pancreatitis with secondary severe acute gastroenteritis. However, the possibility of underlying neoplastic criteria involving the gastrointestinal tract and liver cannot be excluded.

Assuming normal clotting status hepatic FNA cytology +/- effusion analysis cytology and/or C/S if clinically indicated for further assessment is warranted. No overt evidence of post hepatic obstructive criteria. Pending additional diagnostics, aggressive hepato-gastrointestinal support and therapy for



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pancreatitis, which may include some or all of the following protocol with assessment of clinical response and potential recheck sonogram is recommended. A guarded prognosis is indicated.

**Peritonitis Protocol**

**Colloids/Hetastarch**

10 to 20 mL per kilogram per hour dogs

10 to 15 mL per kilogram per hour cats

(Can bolus first 1/3 of dose over 15 minutes)

**Plasma** 10 mL / kilogram IV over 4 hours

**Buprenorphine** 0.02 mg/kg IV IM SC q4-6 hours **Or CRI Lidocaine** 30-50 ug/kg/min

**Dolasetron** for nausea: 0.6-1 mg/kg/day Iv or PO

**Famotidine** 1 mg/kg IV IM p.o. dc s.i.d. /b.i.d.

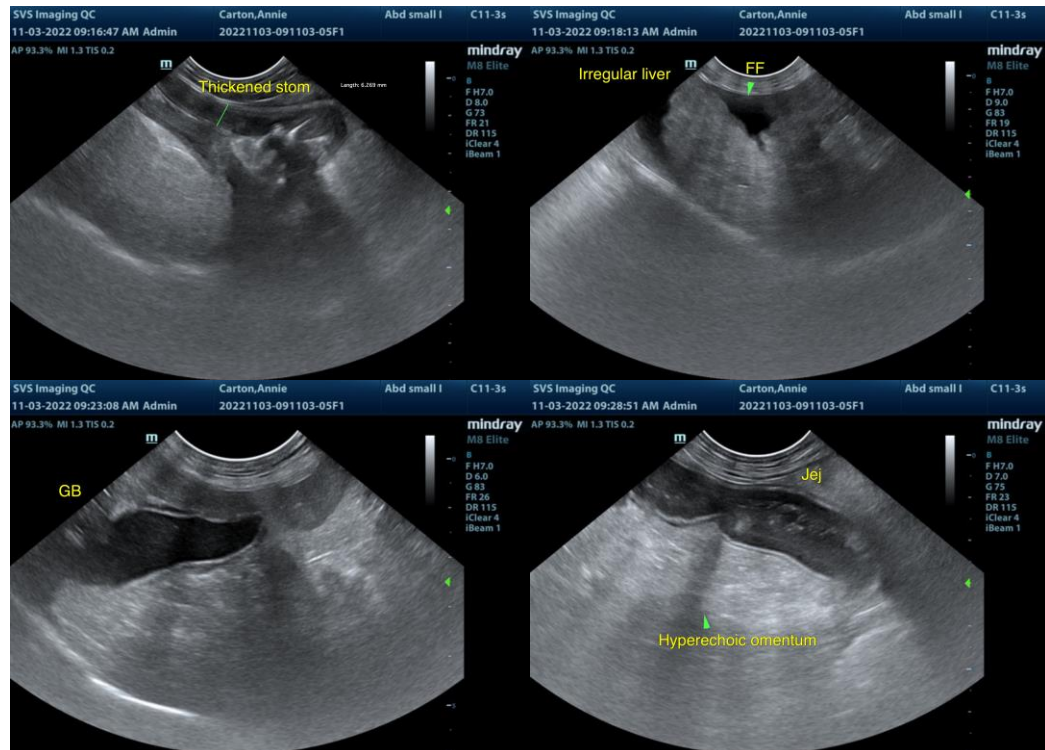
**Sucralfate** 0.5-1 g p.o. t.i.d. dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid

**Clindamycin** 10mg/kg IV p.o. bid

**Enrofloxacin** 10-15 mg/kg IV p.o. s.i.d. dogs, 5 mg/kg Iv po Sid cats

**Metronidazole** 10-20 mg/kg IV p.o. b.i.d.

**Dexamethasone** physiological 1 mg/kg to treat adrenal burnout if long standing sickness, shock dose 4-10 mg/kg.





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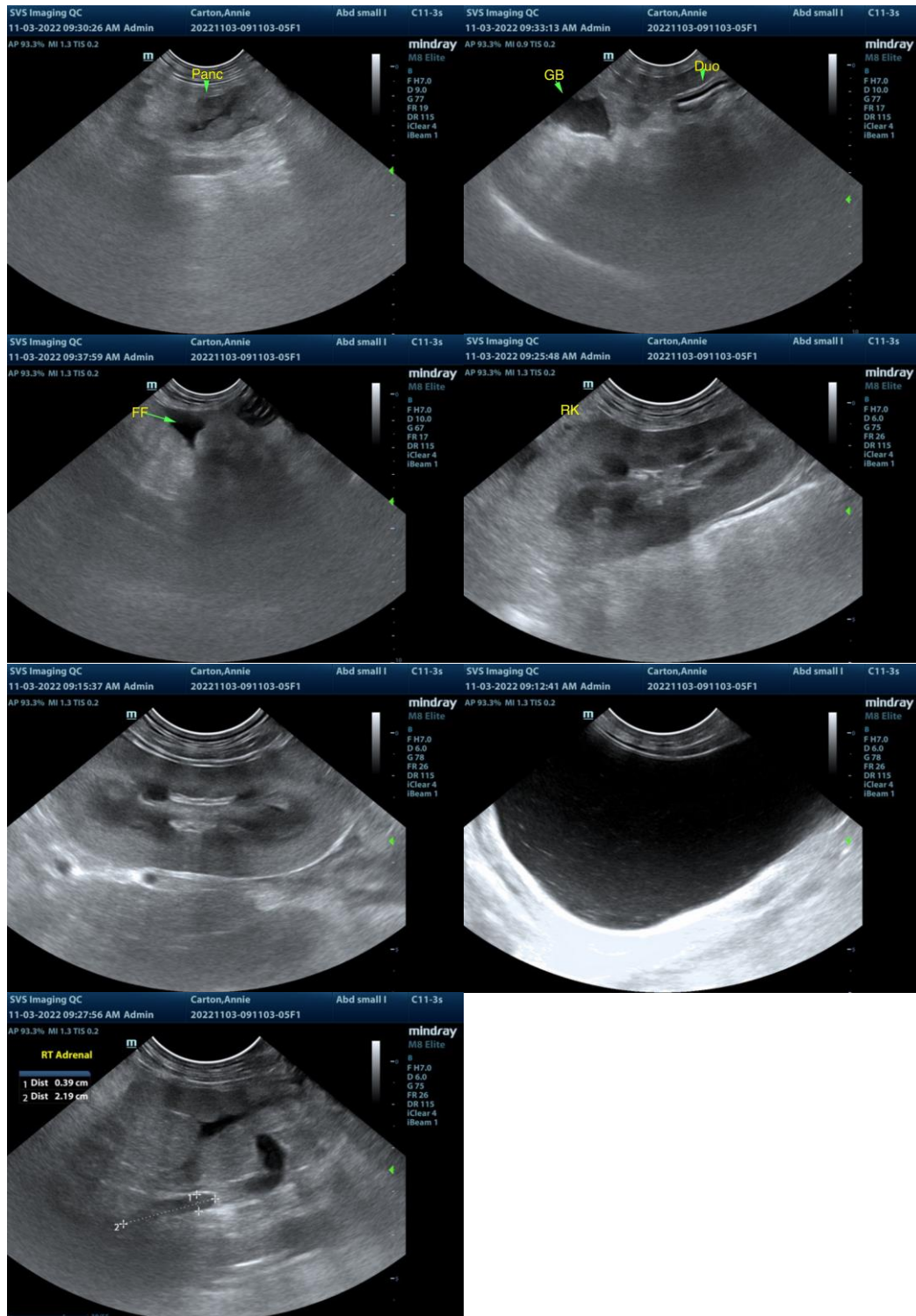
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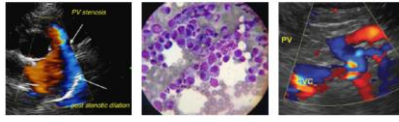


The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I

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Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

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can be of any further assistance please contact me.

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