IMAGING PERFORMED BY

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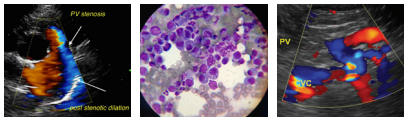

SonoPath

Clinical Sonography & Telecytology

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DATE

3/28/23

PATIENT

Rufus Kraus

SPECIES

Canine

BREED

Mixed

SEX

Neutered Male

AGE

3/27/11

WEIGHT

24.4 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Saubier

INVOICE

46204

PRESENTING CLINICAL SIGNS

Beginning last night started vomiting. Has continued this morning. Dental several months ago – liver values elevated at that time. Recheck BW approx. 1 week ago - liver values worsened. Started Denamarin, Amoxicillin and Metronidazole. History of back pain. Recently owner has noted having trouble getting comfortable and slow on stairs.

Current Medications: Ampicillin, Metronidazole, Protonix, Ondansetron, Vitamin B Complex.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (4.95 cm) with mild pyelectasia at 0.21 cm. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.83 cm) with mild pyelectasia at 0.17 cm. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.91 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.63 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. The wall of the stomach appears diffusely thickened and irregular, and some regions with a significant decrease in wall layering. In some of the thickest areas, the stomach measures up to 1.83 cm, and there is significant inflammation surrounding the stomach. Findings are most consistent with severe gastritis, but a neoplastic lesion cannot be excluded as a possibility.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.39 cm. Jejunum wall measures 0.28 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with moderate to severe pancreatitis.

Free Abdomen

There is scant free abdominal fluid. No lymphadenopathy is noted, but the omentum is severely hyperechoic in the cranial abdomen around the pancreas and stomach.

ULTRASONOGRAPHIC FINDINGS

- Large, hypoechoic, mottled pancreas surrounded by hyperechoic mesentery and scant fluid – The pancreatic changes are most consistent with moderate to severe pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.

- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

- Severe gastric wall thickening with reduced detail of wall layering – Findings could be consistent with severe gastritis or infiltrative disease (round cell neoplasia, carcinoma, etc.).

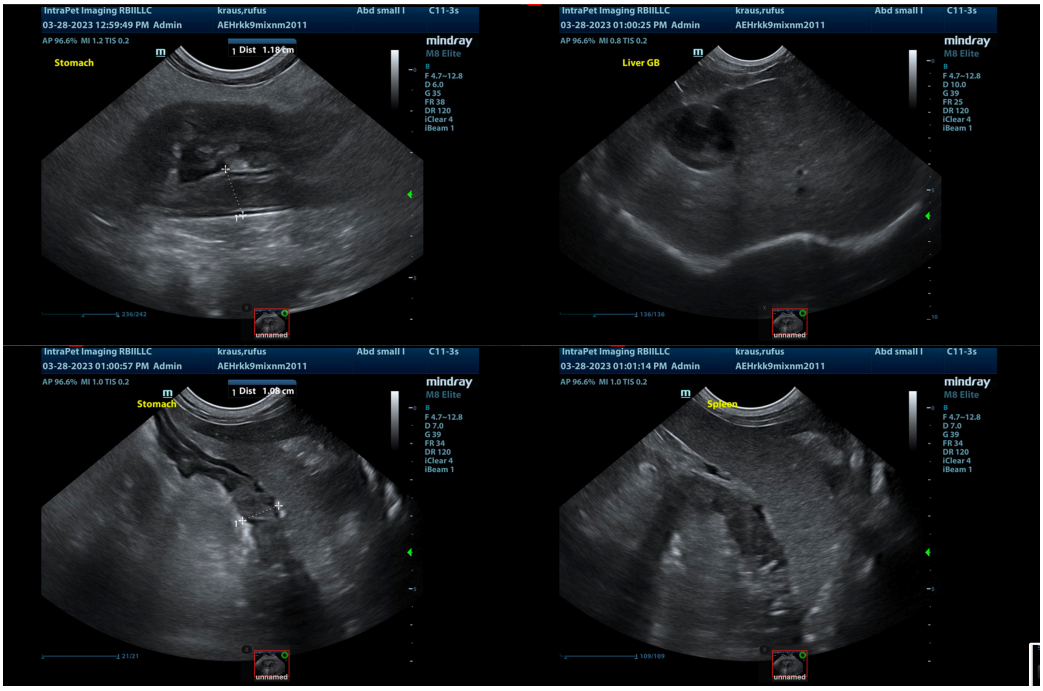
- Small volume free abdominal fluid with severe inflammation in the cranial abdomen – Findings are most consistent with focal peritonitis (likely sterile).

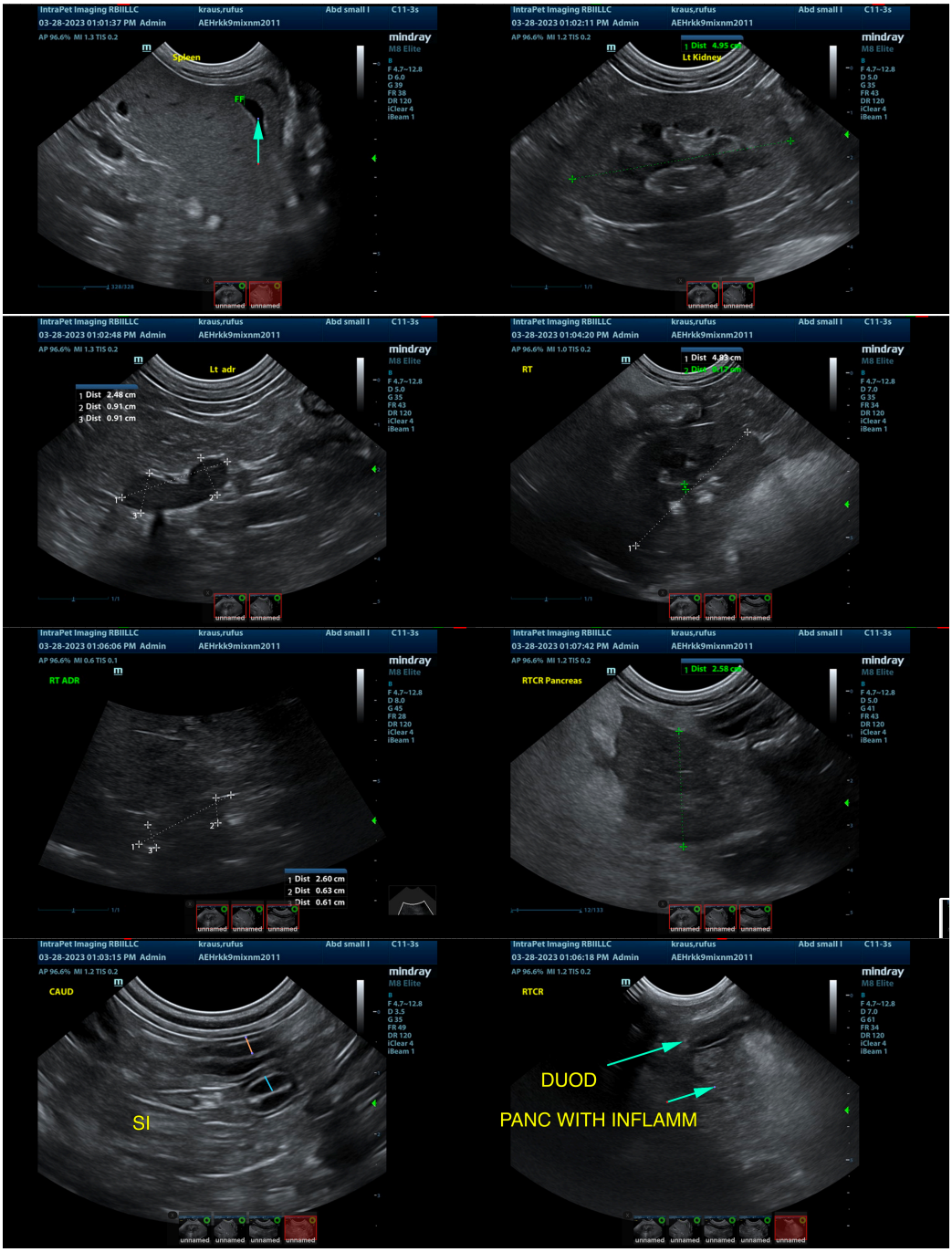
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pancreas is large, hypoechoic, and surrounded by hyperechoic mesentery. These findings are most consistent with moderate to severe pancreatitis. In this region, the gastric wall is severely thickened and surrounded by hyperechoic mesentery. Additionally, there is a decrease in the detail of wall layering. I'm hoping that these changes are most consistent with diffuse gastritis secondary to the focal peritonitis, but there is the possibility of infiltrative disease in the stomach wall, causing inflammation of its own. Recommend medical management for severe pancreatitis and reevaluation of the stomach wall when the patient is feeling better. If there is no improvement in the patient's clinical status in 72 hours (sooner if the patient is not doing well), consider reevaluation with ultrasound and possible fine needle aspirate of the gastric wall.

I suspect much of the liver enzyme elevation could be secondary to pancreatic and gastric inflammation. If the liver enzymes persist, you could consider performing a liver function test (pre- and post-prandial bile acids), and possibly a fine needle aspirate of the liver.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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PANC WITH INFLAMM

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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