



PATIENT

Louie Robertson

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered Male

AGE

6

WEIGHT

8.6 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Bennett

HOSPITAL NAME

Wilvet South

REFERRING VET

Bennett

INVOICE

23795

DATE

8/6/23

PRESENTING CLINICAL SIGNS

History for US: Presented 8/5 for 3 days duration vomiting and progressively worsening diarrhea, now bloody. No interest in food at all x 24 hours. O reports history of episodes of v/d (never bloody) and was previously diagnosed with pancreatitis at rDVM, but signs have never been this severe in the past. rDVM recommended starting hypoallergenic diet about 1 week ago, but v/d started shortly after starting the new diet. Exam: QDR, lethargic. MM light pink, tacky. Dull, abdomen tender. Mucoid bloody diarrhea during exam.

Abnormal PE/Chem/CBC/UA Results: CBC: HCT 63.4% H, WBC 24.68k H, Neut 14.21k H, suspect bands, Lym 8.18k H, Mono 2.15k H, rest WNL. EPOC: pH 7.359 L, LAC 5.33 H, BUN 40 H, Crea 2.34 H, Glu 62 L, HCT 65% H USG (prior to IVF): 1.040 PCV 59% TS 5.9 g/dl Chem10: Glu 17 (artifact due to delayed sample), Crea 2.4 H, BUN did not run, TP 6.1, Alb 2.4 Vcheck cPL = 1991.8 ng/mL (consistent with pancreatitis) Vcheck cortisol = 28.85 mcg/dl (not consistent with hypoadrenocorticism) Imagyst Fecal = all NEG 1030pm: Re-ran Chem10 on new blood sample to get missing values: Glu 53, Crea 2.0, BUN 51, TP 4.7, Alb 2.0, Glob 2.7, rest unchanged. Abdominal US with STAT submission to Sonopath

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** presented degenerative (moderate in the left and mild in the right) changes with infarcts, mineralization and disrupted architecture. The left kidney measured 3.0 cm. The right kidney measured 4.3 cm. Blood flow to the kidneys appeared to be subjectively subnormal.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.



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Gastrointestinal

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall with slight disruption of the normal 1:3 muscularis/mucosal ratio. The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic disease. No concerning lymphadenopathy was visible. No evidence of obstruction was present. Chronic inflammatory bowel disease is likely with a low possibility of an early neoplastic event such as lymphoma. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule out this possibility. This is a mild change. The colon was fluid filled.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

Free Abdomen

Reactive **mesentery** was noted. The mesenteric lymph nodes (up to 1.5 cm x 0.5 cm) presented normal length to width ratio with slight, swollen contour. There was no loss of parenchymal detail. This is most consistent with reactive lymphadenitis or lymphatic hyperplasia.

ULTRASONOGRAPHIC FINDINGS

- Gastroenteritis
- Dystrophic left kidney, moderate, with infarcts and mineralization- a history of passage of calculi is likely.
- Mild degenerative right renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The azotemia is likely both renal and prerenal. 72hr IV fluid protocol, GI protectants and broad spectrum antiparasitic protocol (despite negative fecal) are all indicated. No neoplastic criteria is noted. Recheck sonogram in 72hrs to ensure adequate resolution.



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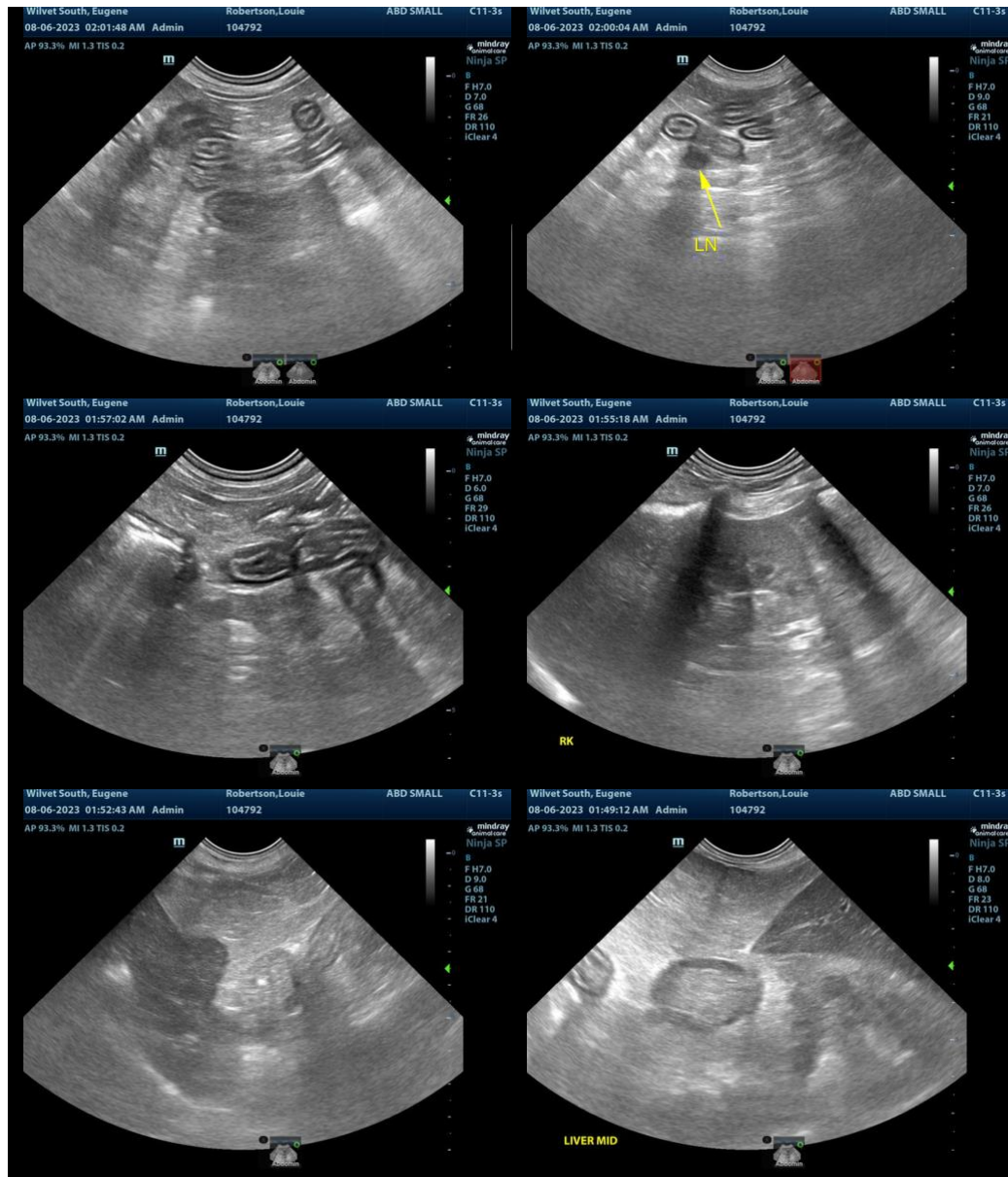
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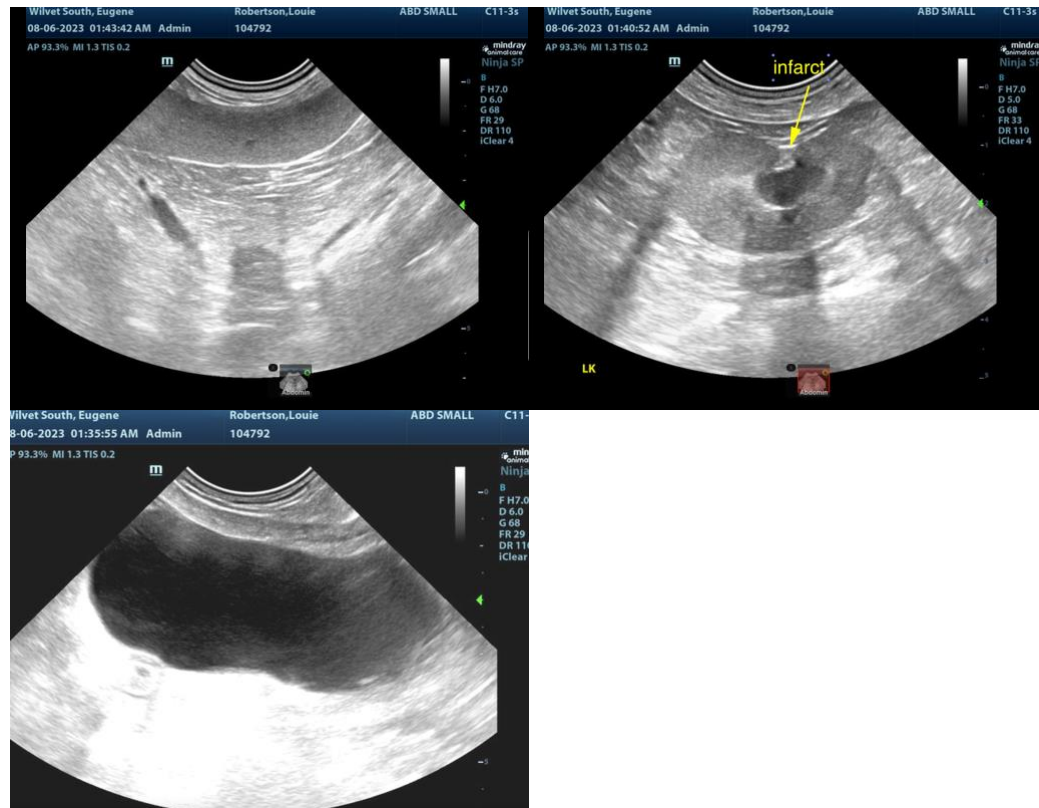
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com