



**PATIENT**

Luna Jewra

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Intact Female

**AGE**

11 months

**WEIGHT**

2.25 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Barnes

**HOSPITAL NAME**

Westview VH

**REFERRING VET**

Dr. Barnes

**INVOICE**

42066

**DATE**

1/11/23

**PRESENTING CLINICAL SIGNS**

History: Was seen by out of town Vet for Vomiting . Had xrays and blood work. Treated with Urso. Pup is no longer vomiting and feeling well. AUS to look for PSS  
Xrays WNL CBC: WNL CHEM: ALP 548 (N 25-225), ALT 2037 (N 0-122), GGT 74 (N 4-16) BA Panel Pre 74.6, Post 107.7 U/A: USG 1.038, Ph 8, prot 0.3, Bili 3+, Bili crystals, rest WNL

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder** revealed a minimal amount of urine present in the bladder. There was no evidence of calculi. The bladder wall was unremarkable. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 3.67 cm.

**Adrenal Glands**

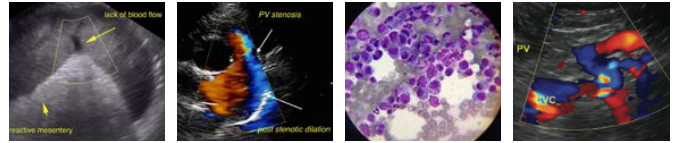
Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.44 x 0.59 cm at the cranial pole and 0.48 cm at the caudal pole. The left adrenal gland measured 1.3 x 0.23 cm at the cranial pole and 0.27 cm at the caudal pole.

**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 was noted.

**Liver**

The **liver** revealed slight, coarse architecture with uniform parenchyma. The liver was fairly normal in size. Intrahepatic and extrahepatic vascularity appeared normal. The vena cava to aortic ratio was essentially normal at 1:1 each measuring 0.6 cm. The portal vein was visualized with normal branching and measured 0.5 cm prior to its branching. The gallbladder and common bile duct were unremarkable.



**PATIENT**

**Gastrointestinal**

Luna Jewra

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. Soft stool was noted in the colon. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

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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.

**SEX**

Intact Female

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

Acute inflammatory hepatopathy.

11 months

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**WEIGHT**

2.25 kg

Acute hepatic insult such as Leptospirosis or similar that is causing bile acid elevation as well as liver enzyme elevations should be considered in this patient. FNA or core liver biopsy would be warranted. There is mild anesthetic risk; however, Propofol induction for ovariohysterectomy and concurrent liver biopsy can be considered; however, empirical treatment is likely necessary prior to any surgical procedure. Ampicillin and Metronidazole combination is suggested.

**INTERPRETED BY**

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**Royal Canin Hepatic Support diet or Hills L/D, Metronidazole** (7.5 mg/kg PO bid) over the next 14 days, **Lactulose** (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a **high-quality protein supplement** of minor amount of **yogurt or cheddar cheese**. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAME and nutraceuticals as needed. **Ursodiol** (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. **Zinc** serum level keep between 200–500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.

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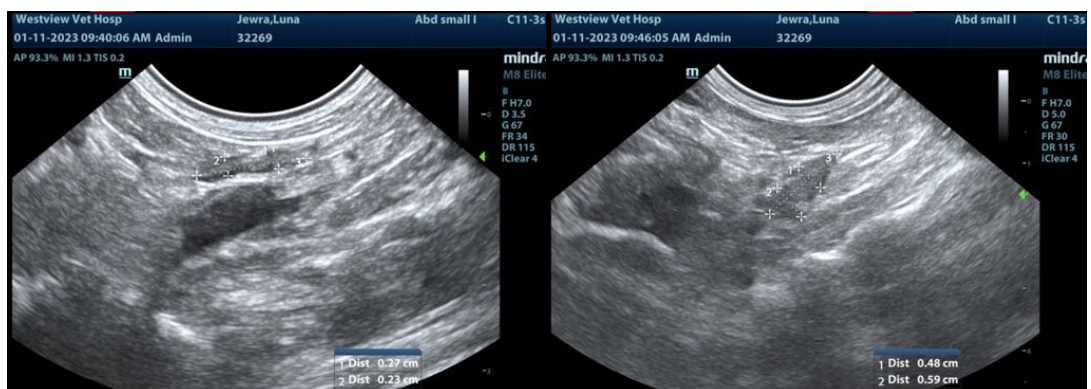
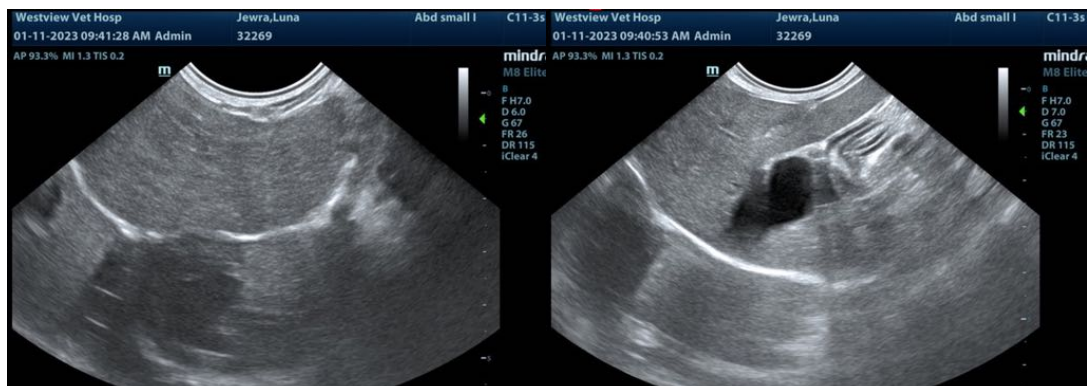
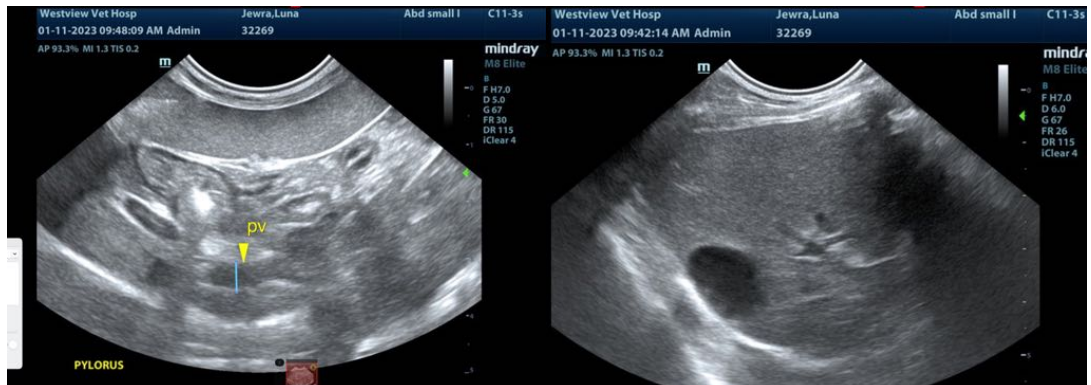
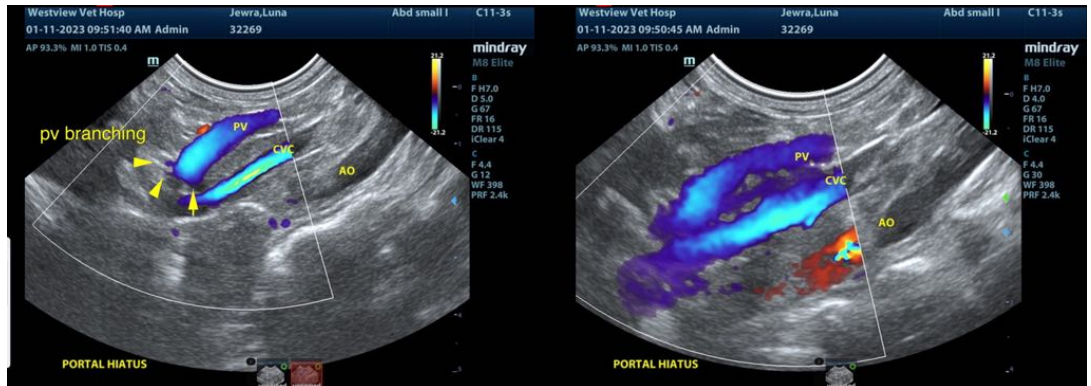
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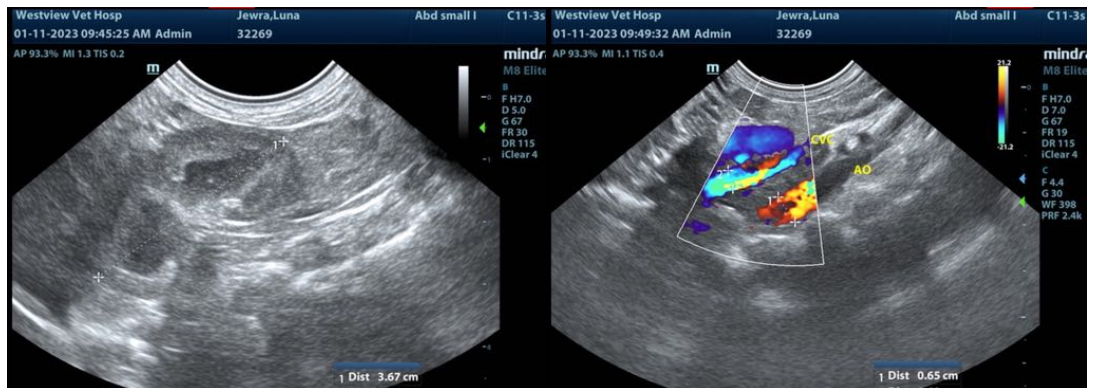
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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