



PATIENT

Lulu Minshull

SPECIES

Canine

BREED

Chihuahua

SEX

Intact Female

AGE

3 Years 8 Months

WEIGHT

1.7 kg

INTERPRETED BY

Eric Lindquist, DMV,
DABVP(CFM), Cert.
IVUSS

IMAGING PERFORMED BY

Dr. Mariusz
Chmielinski DVM

HOSPITAL NAME

Apex Veterinary
Services LTD

REFERRING VET

Alpine 24/7 ER Doctor

INVOICE

12225

DATE

11/11/25

PRESENTING CLINICAL SIGNS

Evaluation for elevated liver enzymes noted on prior bloodwork. Mild, intermittent vomiting of yellow bile reported over several months. Appetite, energy, and weight remain normal.

Abnormal PE/Chem/CBC/UA Results: Vital Signs: Temperature [Celsius]:38.0, Heart Rate/min (HR):122, HR: Pulse Ratio: 1:1, Respiratory Rate/ min: 26, Respiratory Effort: 0, Mucus Membranes/ CRT: pink, moist/ CRT< 2 sec, Mentation: BAR, Hydration: Adequate, BCS (scale 1 to 5): 2.5/5, Hematology: RBC, HCT, and hemoglobin within normal limits. Platelets elevated (511 ×10⁹/L) WBC count normal with balanced differential; . Chemistry: ALT mildly elevated (155 U/L) – Glucose mildly increased (6.6 mmol/L) BUN, creatinine, SDMA, electrolytes, and total protein all within reference range – kidney function normal. Bilirubin normal (1.3 μmol/L) despite previous external report of elevation. Bile Acids: Pre-prandial: 27.1 μmol/L (↑; ref 0.0–14.9) Post-prandial: 100.3 μmol/L (↑↑; ref 0.0–29.9)

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 **uterus** was slightly thickened and hypertrophied with an empty lumen. This may be an active heat cycle. The uterus measured 0.90 cm in width.

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 left kidney measured 3.06 cm in length. The right kidney measured 3.3 cm in length.

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 left adrenal gland measured 0.37 cm width at the caudal pole and 0.31 cm width at the cranial pole. The right adrenal gland measured 0.28 cm width at the cranial pole and 0.30 cm width 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 were noted.

Liver



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The **liver** presented with normal vascular volume and a normal uniform parenchyma. Overall hepatic size was slightly subnormal. Portal hilus was imaged with normal portal vein volume measuring 0.50 cm. The vena cava measured at 0.45 cm. No evidence of portosystemic shunting.

The gallbladder and common bile duct were unremarkable.

Gastrointestinal

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. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

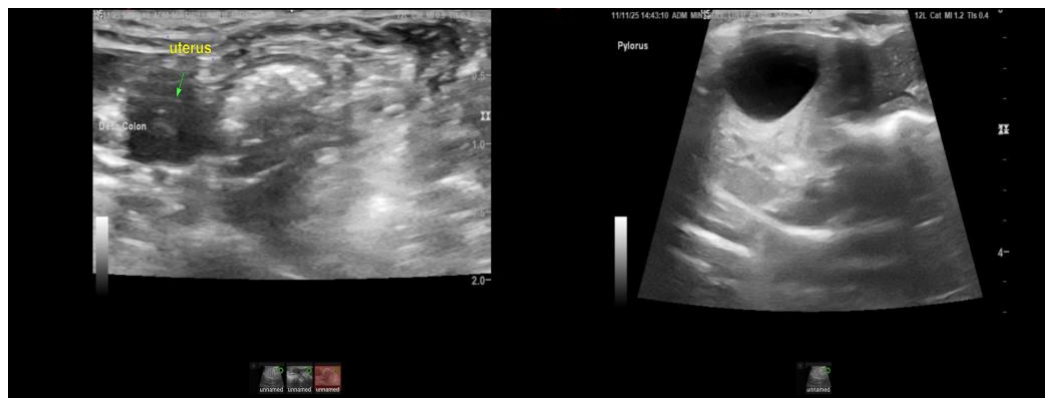
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC FINDINGS

- Minor micro hepatica- no evidence of portosystemic shunting.
- Prominent uterus.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If ovariohysterectomy is to be performed in this patient, recommend liver biopsy at the time of the surgery. If bile acid elevations are persistently present, portal hypoplasia/microvascular dysplasia is likely.





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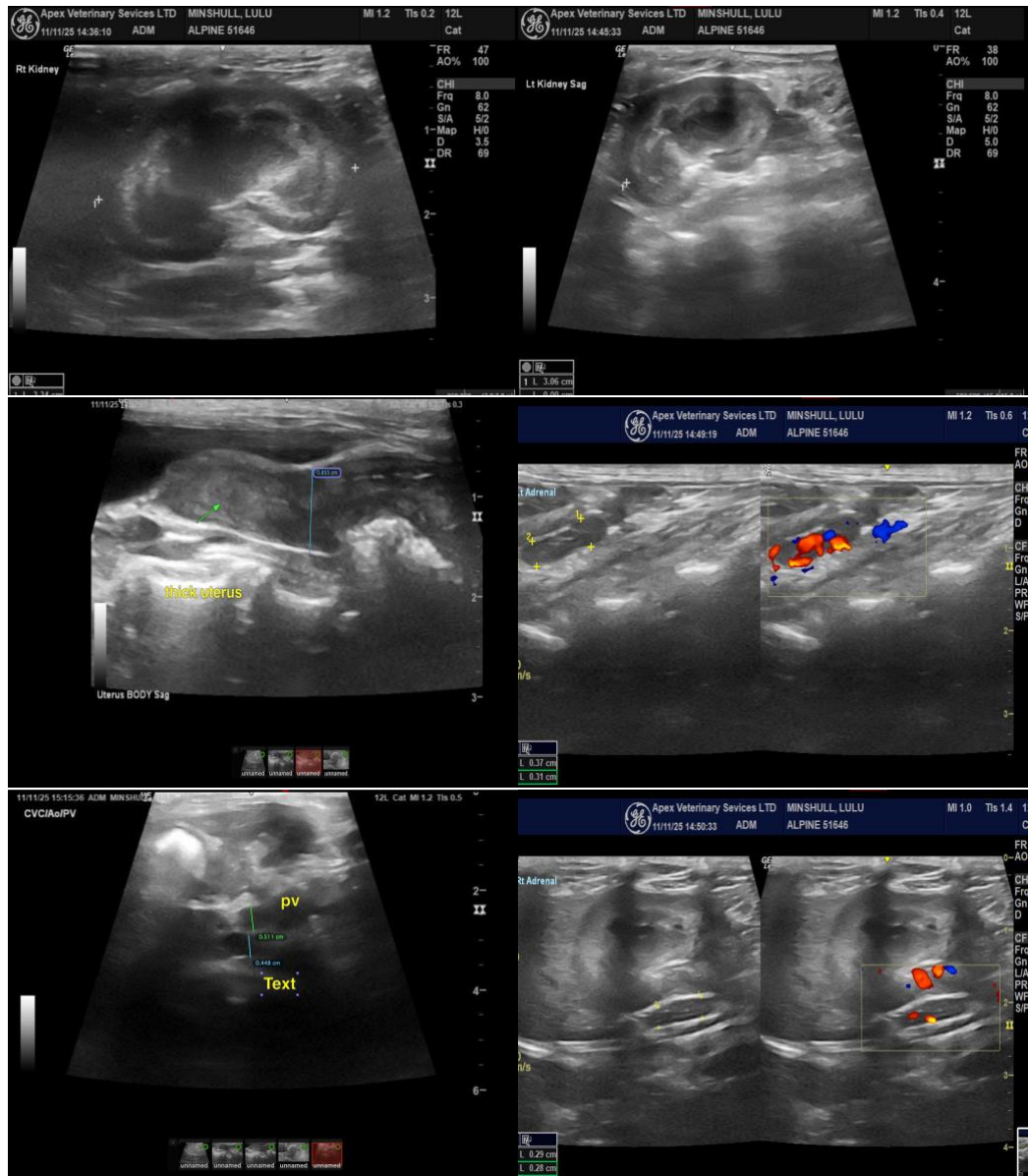
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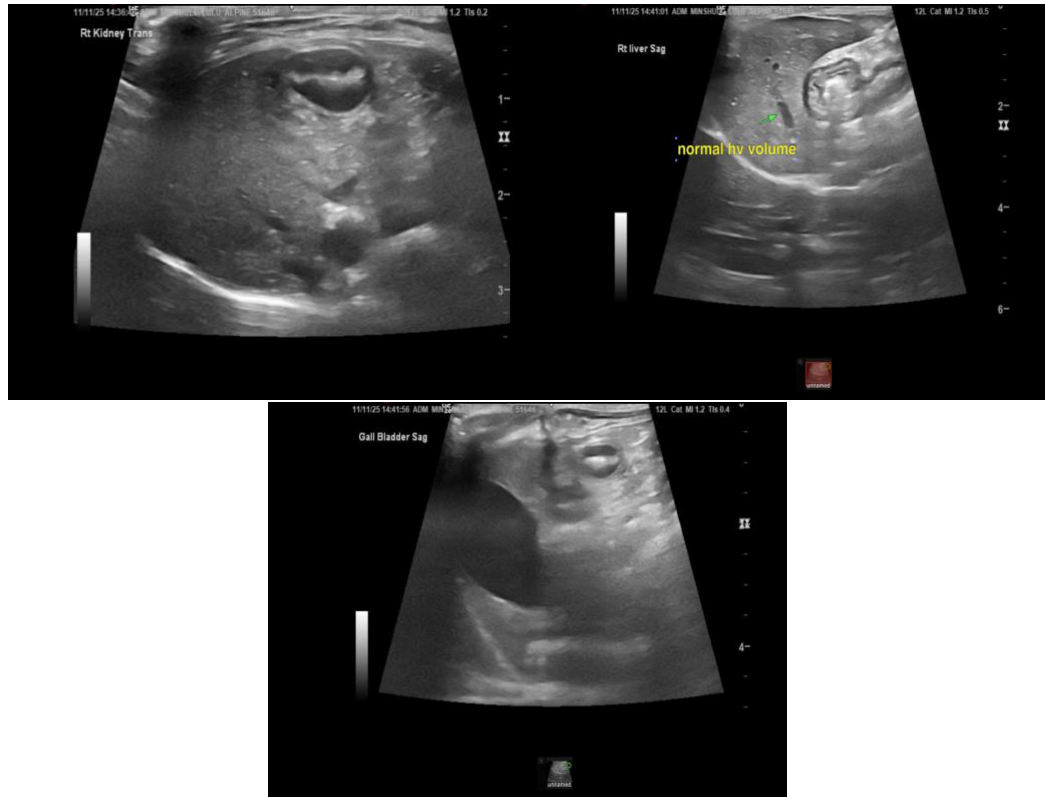
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,

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