



## PATIENT

Duke Kielman

## SPECIES

Canine

## BREED

Pitbull Mix

## SEX

Neutered male

## AGE

15 years

## WEIGHT

37.5 kg

## INTERPRETED BY

Alicia Angosto  
Guerrero, DMV,  
PgDip, MSc.

## IMAGING PERFORMED BY

Dr. Louise Corbeil

## HOSPITAL NAME

Cochrane AC

## REFERRING VET

Dr. Corbeil

## INVOICE

77879

## DATE

5/21/26

## PRESENTING CLINICAL SIGNS

History: Abd ultrasound for persistent marked ALP elevation and mild ALT elevation when bloodwork done to screen liver and kidneys prior to starting NSAIDs.

Concurrent conditions: arthritis, multiple SQ masses, allergies

Medications: cartrophen, gabapentin, librela, metacam (1/2 dose due to elevated liver enzymes), zenrelia

No history of PU/PD

05-14-2026 CBC - Mild non-regenerative anemia; HCT 33%; Chem - ALT 144; AlkP >2000 (Diluted: ALT 246 rr 10- 125, AlkP 2428 rr 23- 212) Normal Tbil normal; Lymphocytes 0.72 x10<sup>9</sup>/L rr 1.05- 5.1 Platelets 533 x10<sup>9</sup>/L rr 148- 484

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The bladder lumen is normally distended, and the wall of the urinary bladder appears thin and smooth. The urine is anechoic. Normal appearance of the bladder neck and proximal urethra. There are no calculi, and no evidence of inflammatory or neoplastic changes.

The left kidney is normal in shape and size, measuring 6.86×3.52 cm, with cortical thickness measuring 0.55 cm in the sagittal plane. The right kidney is normal in shape and size, measuring 6.95×3.41 cm, with cortical thickness measuring 0.60 cm in the sagittal plane. A small right renal cortical cyst measuring 3.41×4.80 mm is identified. In both kidneys, the renal cortex demonstrates overall normal echogenicity. The corticomedullary ratio and corticomedullary definition are preserved. There is no evidence of pyelectasia, nephrolithiasis, or hydronephrosis. Color Doppler demonstrates an overall normal vascular pattern.

### Adrenal Glands

Both adrenal glands demonstrate mildly globoid morphology with overall normal echogenicity. Dorsoventral diameters measured in the sagittal plane are mildly enlarged for a dog of this size. The left adrenal gland measures 0.65 cm at the cranial pole and 0.96 cm at the caudal pole. The right adrenal gland measures 0.73 cm at the cranial pole and 0.78 cm at the caudal pole. These measurements represent the maximum values obtained from three separate measurements.

### Spleen

The spleen could not be visualized within the submitted video clips.

### Liver

The liver is subjectively mildly enlarged, with rounded margins and regular contour. The hepatic parenchyma is relatively homogeneous, although mild diffuse increased parenchymal attenuation/decreased ultrasound penetration is present. A few very subtle small hypoechoic foci are



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scattered throughout the hepatic parenchyma, without evidence of a dominant mass lesion or marked nodular distortion. No hepatic lymphadenopathy is identified.

The gallbladder lumen is normally distended. The wall is thin overall, although a few very small sessile mural projections are present, most compatible with early mucosal/mucinous glandular hyperplastic change. The gallbladder contents are predominantly anechoic. No evidence of gallbladder mucocele formation or biliary ductal dilation is identified.

### ***Gastrointestinal***

The stomach is empty and folded with mild intraluminal gas. Gastric wall thickness measures 3.48 mm, with preserved wall layering.

The pylorus measures 6.77 mm. The duodenum measures 4.60 mm. The jejunum measures approximately 4.59 mm. Intestinal wall layering remains preserved throughout the evaluated gastrointestinal tract. No focal obstructive pattern, ileus, foreign material, or convincing inflammatory intestinal change is identified ultrasonographically.

The colon measures approximately 1.42–1.99 mm and contains formed fecal material within the descending colon.

### ***Pancreas***

The evaluated pancreatic regions do not show evidence of overt inflammation or neoplastic disease.

### ***Free Abdomen***

No sonographic evidence of abdominal effusion, peritonitis, or abdominal lymphadenomegaly is identified. The iliac trifurcation region appears normal. A medial iliac lymph node measures approximately 0.74×1.26 cm and maintains normal shape and echogenicity.

## PRIMARY FINDINGS

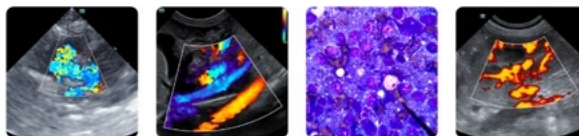
- Hepatomegaly with subtle diffuse hepatic parenchymal change.
- Mild bilateral adrenal enlargement with mildly globoid morphology.

## SECONDARY FINDINGS

- Small mural gallbladder projections compatible with early mucosal hyperplastic change.
- Small right renal cyst (incidental).

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The combination of marked ALP elevation, mild ALT elevation, mild hepatomegaly, subtle diffuse hepatic parenchymal change, mild bilateral adrenal enlargement, and early gallbladder mucosal



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hyperplastic change is most compatible with chronic metabolic/endocrine hepatopathy, with vacuolar hepatopathy and hyperadrenocorticism-spectrum disease considered primary differentials. The relatively mild ultrasonographic hepatic changes despite marked ALP elevation are not unusual in dogs with chronic vacuolar or steroid-associated hepatopathy.

Although there is no documented history of polyuria/polydipsia, the mild bilateral adrenal enlargement and hepatobiliary changes raise reasonable concern for underlying pituitary-dependent hyperadrenocorticism or chronic steroid-type hepatic remodeling. Chronic medication exposure and longstanding inflammatory disease may also contribute to hepatocellular enzyme induction and hepatobiliary remodeling in this patient.

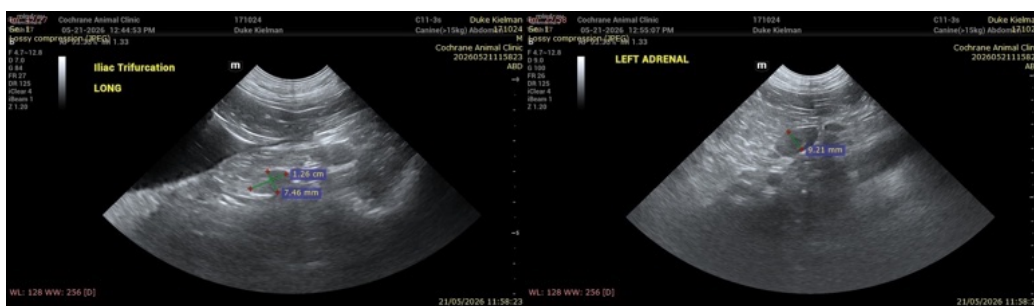
The small subtle hypoechoic hepatic foci are nonspecific and may represent mild nodular hyperplastic/regenerative change.

No convincing ultrasonographic evidence of aggressive hepatic neoplasia, severe biliary obstruction, or advanced chronic hepatopathy is identified at this time.

**Recommendations**

- Correlation with endocrine testing for hyperadrenocorticism is recommended given the adrenal and hepatobiliary findings.
- Serial monitoring of liver enzymes and clinical progression.
- If liver enzyme elevations continue to progress or clinical status changes, further hepatobiliary evaluation including bile acids, advanced hepatic testing, or hepatic sampling could be considered depending on overall clinical priorities.
- At this time, there is no strong ultrasonographic indication for urgent hepatic sampling. Conservative monitoring and further clinicopathologic/endocrine correlation are considered reasonable initial approaches.

Final diagnostic and therapeutic decisions should be made by the attending veterinarian, who can best integrate these findings with the patient's clinical status.





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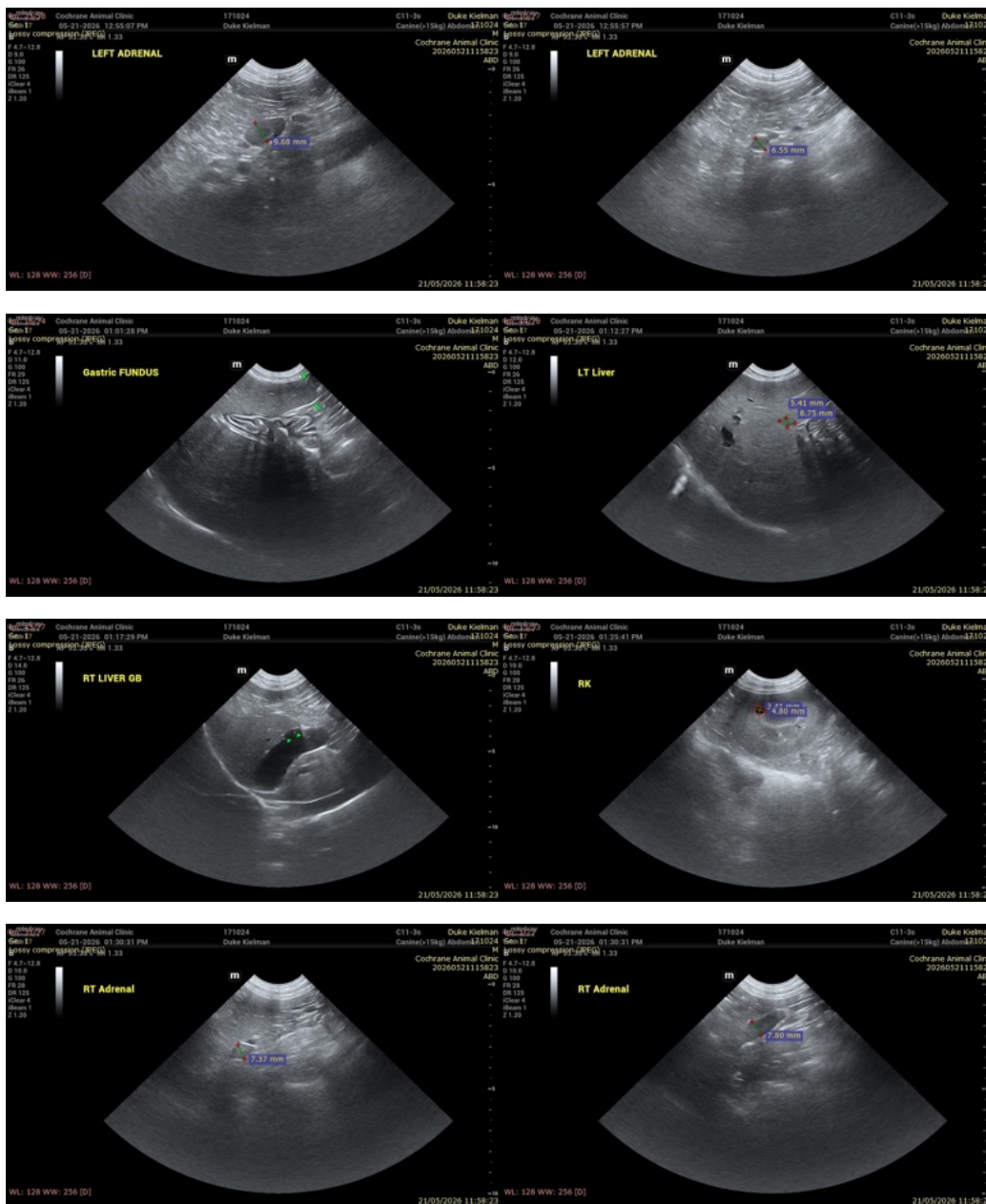
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

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