



## PATIENT

Cooper Grewal

## SPECIES

Canine

## BREED

Havanese Mix

## SEX

MN

## AGE

5yr

## WEIGHT

17.3kg

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

## IMAGING PERFORMED BY

Dr. Jill Rankin

## HOSPITAL NAME

Chestermere Vet Clinic

## REFERRING VET

Dr. Bikram Grewal

## INVOICE

23381

## DATE

12/29/2025

## PRESENTING CLINICAL SIGNS

The patient presents with a history of dermatitis and liver enzyme elevations, with a recent workup that has ruled out hyperadrenocorticism (Cushing's disease). Recent bloodwork revealed lymphocytosis, hyperglycemia, high cholesterol (11.33), a mildly elevated ALT at 166, and a markedly elevated ALP at 1899. A normal T4 level of 20 was noted. Due to these findings, a dexamethasone suppression test was performed to investigate for Cushing's disease. The results were normal, with a resting cortisol of 80 (reference range 28-120) and both the 4-hour and 8-hour post-dexamethasone cortisol levels showing suppression at less than 28. A subsequent brief abdominal ultrasound was performed, which found the liver to be possibly larger than expected. The primary presenting complaint is intermittent dermatitis. The patient has no reported gastrointestinal signs such as vomiting or diarrhea. There have been mild fluctuations in weight, but it has remained relatively stable between 12/06 and 12/10.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of urine/lumen sediment, mineral, or calculi. The ureteral papillae were normal. The ureters were not visible, which is normal. No evidence of inflammatory or neoplastic changes was noted.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.2 cm in length. The right kidney measured 5.4 cm in length.

The area of the aortic trifurcation was free of pathology.

The residual prostate appeared normal and free of pathology

### Adrenal Glands

The left adrenal gland was mildly enlarged; the right adrenal gland was borderline enlarged with uniformly hypoechoic parenchyma. The left adrenal gland measured 0.78 cm width at the caudal pole. The right adrenal gland measured 0.71 cm width at the caudal pole.

### Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

### Liver/Gallbladder

The liver presented increased in size. The parenchyma of the liver was subjectively increased in echogenicity compared to the spleen and renal cortices. The liver parenchyma was non-homogenous with a mild coarse echotexture. The capsule of the liver was symmetrical in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. Normal vascular



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volume. No visualized masses or nodules were present. The gallbladder was non-distended in size with mild to moderate non-organized debris. The common bile duct was not visualized without overt evidence of dilation or post hepatic obstructive criteria.

### **Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of mechanical/metabolic ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

### **Pancreas**

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

### **Free Abdomen**

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary**

- Enlarged hyperechoic liver
- Mild non-organized gallbladder debris
- Bilateral borderline/ mild adrenomegaly
- Normal gastrointestinal tract/ pancreas

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic vacuolar hepatopathy, inflammatory hepatic disease, non-obstructive cholestasis, hyperplasia, lipodosis, hepatotoxicosis, less likely hepatic neoplasia possible. Given normal LDDST, the borderline mild adrenomegaly is of unclear clinical significance.

Recheck adrenal workup may be considered if clinical signs consistent with Cushing's syndrome are non-reported or arise in conjunction with fructosamine level if persistent hyperglycemia +/- CBC pathology review if persistent lymphocytosis.

Assuming normal clotting status and using a 25g needle, hepatic FNA cytology could be considered for potential clarification. Hepatosupportive medications may prove beneficial.

For an additional charge, internal medicine consult can be utilized through SonoPath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>



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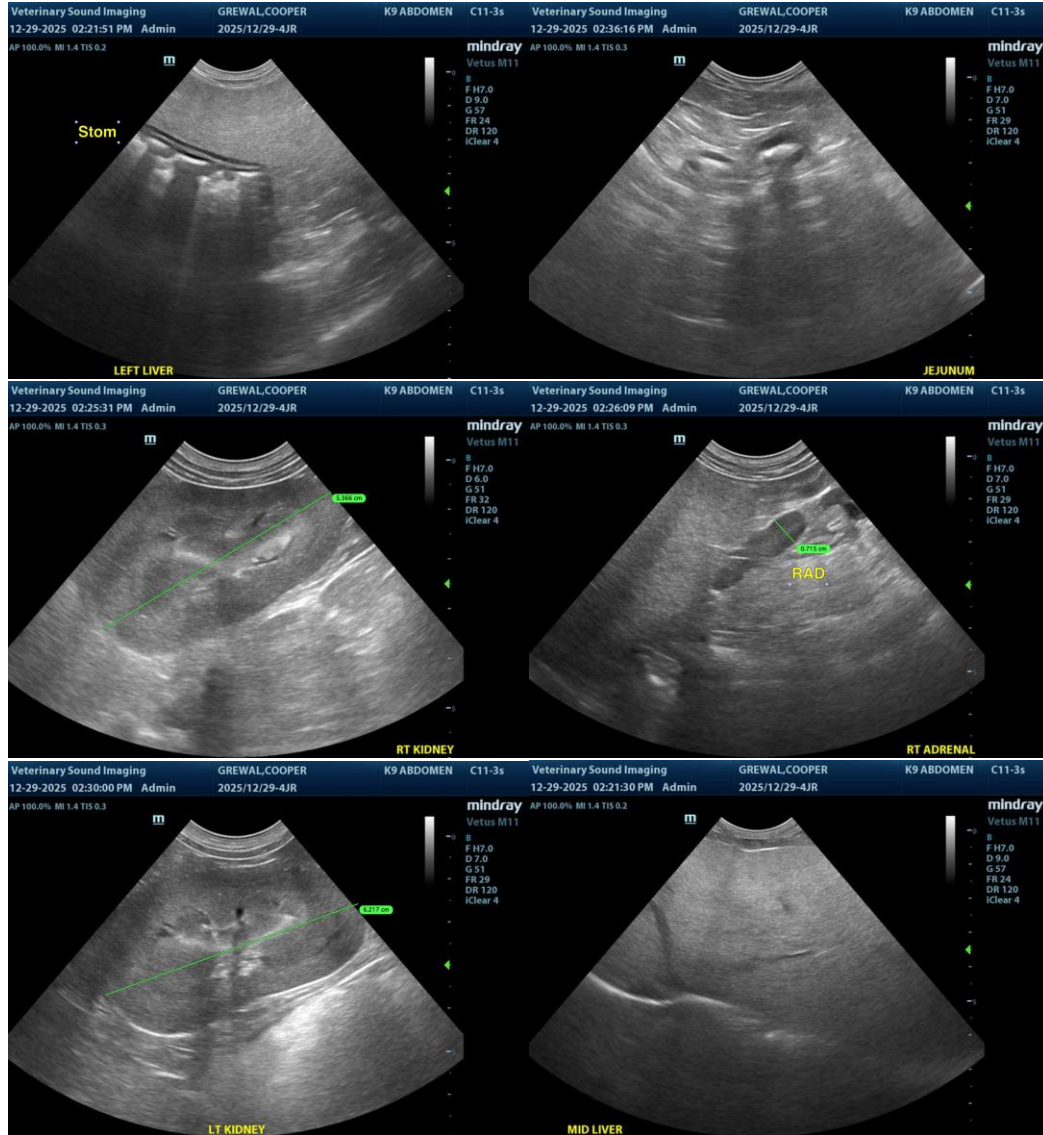
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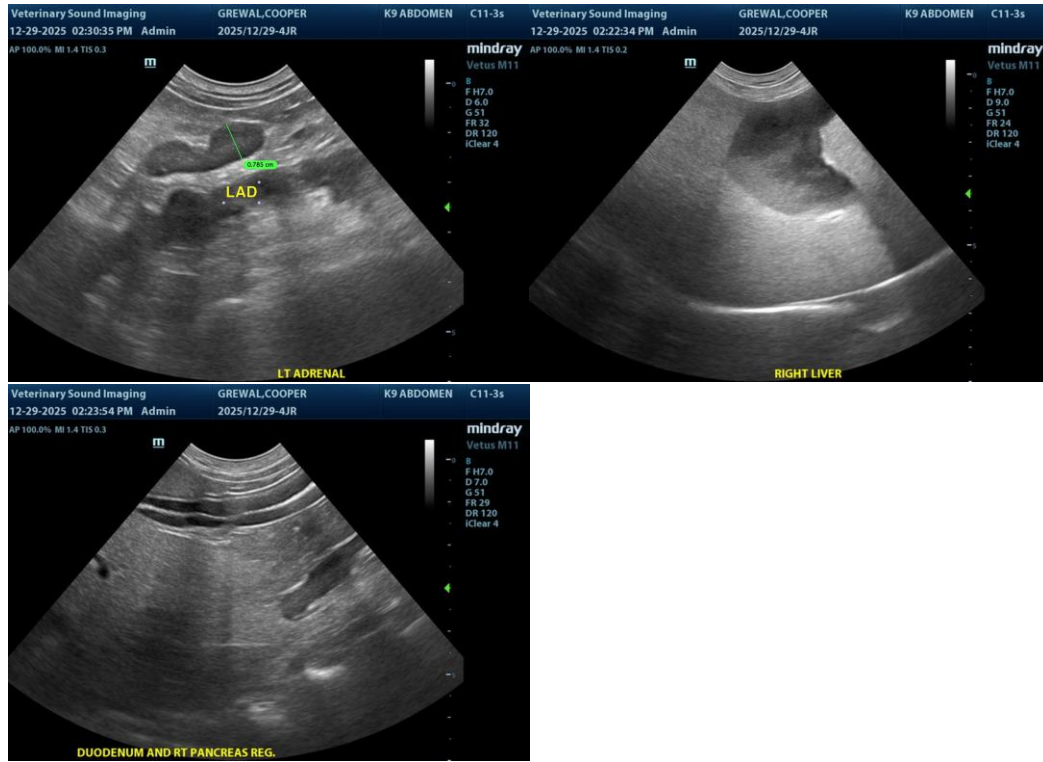
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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[info@sonopath.com](mailto:info@sonopath.com)