



**PATIENT PRESENTING CLINICAL SIGNS**

Lucky Wermes

P has been very restless for about 2 days, not wanting to settle down at home panting often -lethargic, not wanting to eat -p hacking some today and licking nose Current Medications Gabapentin 300mg 2 C PO BID Primary Question/Differential to Be Answered in This Exam R/O DM, Hyperadrenocorticism, neoplastic dz

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

**Urinary System**

Rhodesian Ridgeback

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**SEX**

Neutered Male

Prostate is normal in size, echotexture and echogenicity for a neutered male.

**AGE**

10 Years

The right kidney is normal in size (8.04 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**WEIGHT**

86.2 Pounds

The left kidney is normal in size (cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Adrenal Glands**

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable in the left adrenal. In the right adrenal, parenchymal heterogeneity is present without concerning capsular distortion. Visible surrounding vasculature appears normal. The right adrenal gland measures 2.51 cm long x 2.06 cm at the cranial pole and 1.01 cm at the caudal pole. The left adrenal gland measures 2.84 cm long x 0.61 cm at the cranial pole and 1.1 cm at the caudal pole.

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**HOSPITAL NAME**

Reid Vet Hospital

**Liver**

**REFERRING VET**

Dr. Harrison Reid

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

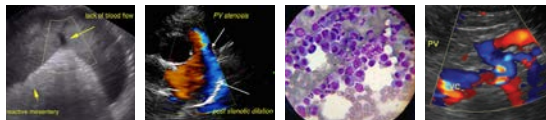
**INVOICE**

46715

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**DATE**

4/17/23



## PATIENT *Gastrointestinal*

Lucky Wermes

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

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Rhodesian Ridgeback

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

## SEX

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Neutered Male

## Pancreas

## AGE

10 Years

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

## WEIGHT

86.2 Pounds

## Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

## INTERPRETED BY

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DACVIM

There is no apparent lymphadenopathy noted in these images.

## ULTRASONOGRAPHIC FINDINGS

## IMAGING PERFORMED BY

Jenna Walsh, CVT

- **Bilateral adrenomegaly with a slightly more heterogeneous, slightly more abnormal shape in the right adrenal gland than the left** – this finding could be consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant, given that both adrenal glands are enlarged. However, given the asymmetrical, more atypical appearance of the right adrenal gland, a concurrent adrenal adenoma or even early adenocarcinoma in the right adrenal can't be ruled out.
- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- **Mild gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

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## REFERRING VET

Dr. Harrison Reid

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the appearance of this patient's adrenal glands combined with the reported restless behavior, if not already evaluated, a blood pressure is recommended. Ultimately, the appearance of the adrenal glands as well as the liver and gallbladder are consistent with hyperadrenocorticism, and further investigation of hyperadrenocorticism is recommended. However, prior to doing that, beginning therapy for the patient's diabetes, resolving the ketones, and stabilizing the patient is recommended to



**PATIENT**

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prevent false positive results with the hormone testing. Once the ketones have resolved and the patient is stable on insulin therapy, etc., further testing for hyperadrenocorticism is recommended, beginning with a low-dose Dexamethasone suppression test.

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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.

**Beth Johnson, DVM, DACVIM**  
Beth.Johnson@sonopath.com

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