



**PATIENT**

Jake Cooke

**SPECIES**

Canine

**BREED**

Dachshund

**SEX**

MN

**AGE**

13 years

**WEIGHT**

20.66 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**HOSPITAL NAME**

Cottage Grove  
Veterinary Clinic

**REFERRING VET**

Dr. Damewood

**INVOICE**

13535

**DATE**

3/23/22

**PRESENTING CLINICAL SIGNS**

Significant weight loss, especially muscle. Pendulous abdomen. History of allergic dermatitis (under dermatologist's care). Current Medications prednisolone 5 mg EOD, cyclosporine 75 mg SID Primary Question/Differential to Be Answered in This Exam What is the source of his liver enzyme elevation? Abnormal PE/Chem/CBC/UA Results: Will have copy of records: Most notable ALP 13,301, ALT 519, AST 58, SDMA 23 Creat 0.9 (IRIS stage 2) Will do further cortisol testing after weaned off of prednisolone.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with dependent mineral to small calculi were present. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.8 cm in diameter.

The area of the aortic trifurcation was free of pathology.

Normal renal size with asymmetrical margination were present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. Multiple cortical cysts and suspect cortical infarctions were present in both kidneys. Nonobstructive medullary mineral was noted in both kidneys. The renal medullary volume was subjectively reduced. The left kidney measured 6.3 cm in length. The right kidney measured 6.0 cm in length.

**Adrenal Glands**

The bilateral adrenal glands were enlarged in size exhibiting uniform to mildly hyperechoic nodular changes. No overt evidence of vascular invasion or parenchymal escape, as well as no evidence of adrenal mineralization. The left adrenal gland measured 2.7 cm length x 1.0 cm width at the caudal pole. The right adrenal gland measured 4.0 cm length x 1.4 cm width at the caudal pole. An example of a right adrenal nodule measured 1.1 cm x 0.94 cm.

**Spleen**

The spleen was not present owing to the previous splenectomy. No evidence of pathology was noted in the area of the previous spleen.

**Liver/ Gallbladder**

The liver exhibited moderate to potential severe generalized enlargement. A moderately expansive, nonhomogeneously hyperechoic to hypoechoic nodular mass was present in the left mid liver



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measuring 7.0-8.0 cm in diameter. Intermittent hepatic Intraparenchymal cysts and suspected areas of nodular to regenerative hyperplasia or small lipogranulomas were present. The area of the gallbladder was indistinctly visualized potentially owing to gallbladder contraction. The potential for mild gallbladder debris is suspected.

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. Minor retained gastric ingesta / chyme as present in the stomach.

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 ileus, obstruction, or foreign material.

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

**Pancreas**

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

**Free Abdomen**

No evidence of free fluid was noted.

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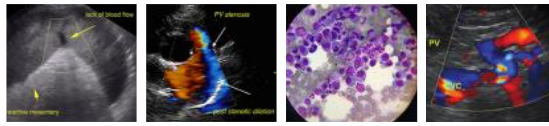
**ULTRASONOGRAPHIC FINDINGS**

- Mid dependent urinary bladder mineral
- Bilateral chronic renal changes with nonobstructive medullary mineralization and multiple cortical cysts
- Bilateral nodular adrenomegaly - adenomatous change or hyperplasia suspected, neoplasia possible yet thought less likely
- Generalized hepatomegaly exhibiting mid to left intraparenchymal mass and intermittent cysts
- Pancreatic parenchymal remodeling - likely age-related pancreatic changes, potential for low-grade to chronic pancreatitis possible

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Assuming normal clotting status, ultrasound-guided FNA of the liver mass +/- hepatic parenchyma for screening cytology and further clarification is warranted. This patient may be passing small amounts of mineral from the kidneys into the urinary bladder. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

Adrenal testing Including blood pressure assessment is warranted if clinical signs consistent with adrenal hyperfunction are present.



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A GI panel to include PLI/TLI/Cobalamin/Folate and three view chest radiographs could be considered to assess for or rule out occult disease, which may be contributing factors to the patient's weight loss.

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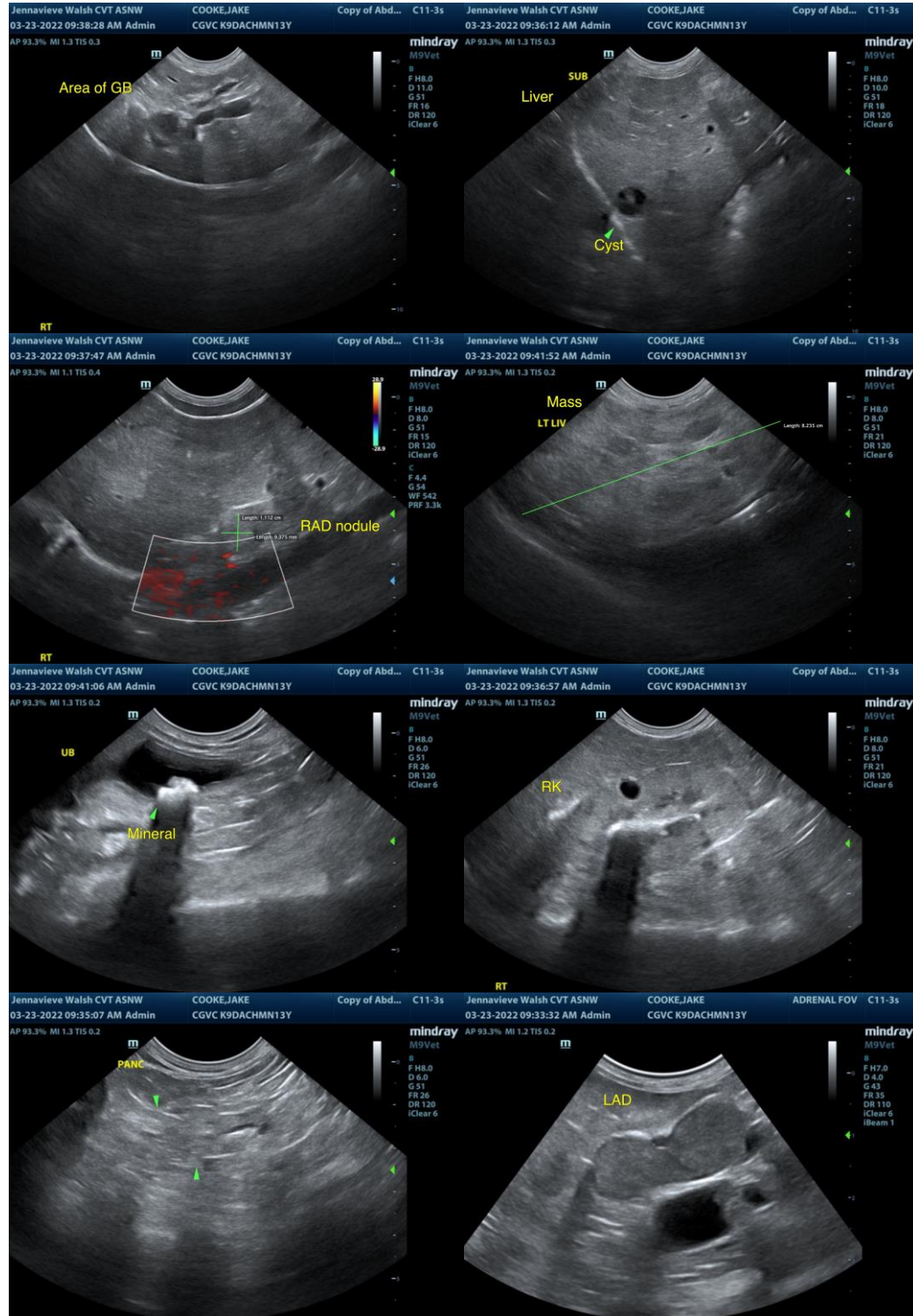
Dr. Damewood

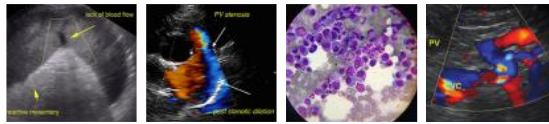
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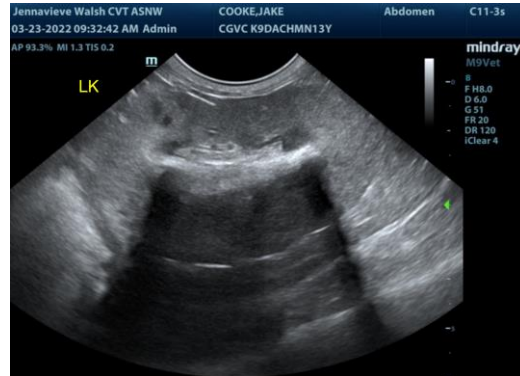
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
**info@SonoPath.com**