



**PATIENT**

Lucy Ruttan

**PRESENTING CLINICAL SIGNS**

Diagnosed Cushings patient on Vetoryl. Still has vomiting and diarrhea. Attending suspects uncontrolled Cushings.. Painful cranial abdomen.  
Abnormal PE/Chem/CBC/UA Results: Moderate elevation of liver enzymes ACTH stim test pending

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

Labradoodle

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 was noted. Ureteral papillae were normal.

**SEX**

Spayed Female

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 6.17 cm. The left kidney measured 6.55 cm.

**AGE**

9 years

**WEIGHT**

22 kg

**Adrenal Glands**

The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The right adrenal gland measured 0.85 cm at the caudal pole and 0.74 cm at the cranial pole. The left adrenal gland measured 0.87 cm at the cranial pole and 0.98 cm at the caudal pole.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Belan

**Spleen**

The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are consistent with normal age-related alteration. The capsule was smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. No evidence of active acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**HOSPITAL NAME**

Signal Hill AH

**REFERRING VET**

Dr. Sweet

**Liver**

The **liver** was enlarged, heterogenous and nodular. Gallbladder revealed grouping of sand that measured approximately 1.0 cm.

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**Gastrointestinal**

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There was retention of ingesta noted in the **stomach**. The intestines were 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. The mesenteric lymph nodes are reactive and measured up to 0.9 cm.

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**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

**ULTRASONOGRAPHIC FINDINGS**

Vacuolar hepatopathy, nodular hyperplasia liver pattern with gallbladder sand.

Retention of ingesta.

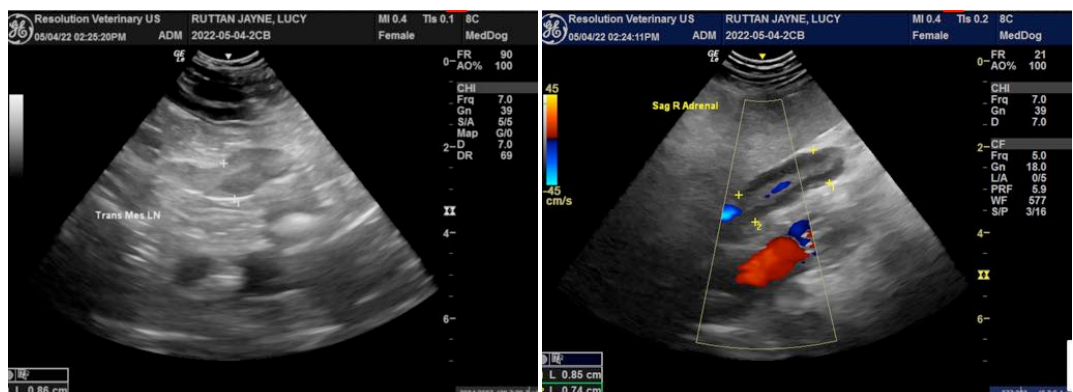
Bilateral adrenal hypertrophy consistent with PDH.

Minor pancreatic changes were noted. This is consistent with pancreatitis and may be responsible for the painful abdomen.

Otherwise, geriatric abdomen. No evidence of neoplasia.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Ursodiol therapy is warranted over the next 8 weeks in an attempt to dissolve biliary sand. If the patient was n.p.o. at the time of the sonogram then the soft shadowing material in the stomach could represent grass or similar foreign matter. Recheck sonogram of the liver and gallbladder are recommended to assess if dissolution of the biliary sand has occurred.





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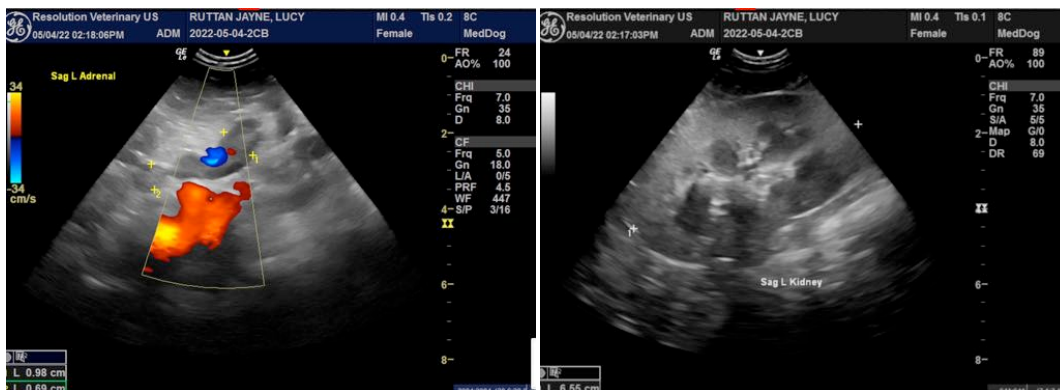
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Canine

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.

**BREED**

Labradoodle

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com

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