



**PATIENT PRESENTING CLINICAL SIGNS**

**Tyler Choo**  
**SPECIES** Canine  
**History:** Weight loss, not eating much, not acting himself. Having skin issues as well, o concerned about internal issues Adequan injection on 2/2023 - was on prednisone in march 2023, carprofen just started 100mg - 1/2 tab BID, ellevet CBD chews daily, trazodone for u/s sedation  
**Abnormal PE/Chem/CBC/UA Results:** Alk Phos - 2295(hi) , chol - 518 (hi), T4 - 0.5 (lo) , RBC - 4.7 (lo) , MCV - 80 (hi) , platelet ct. - 673 (hi) , neu - 86 (hi) , lymphocytes - 8 (lo) , EOS - 1 (lo) , Prev. T4 was <0.5 (lo) on 1/27/2023

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Rottweiler

**Urinary System**

**SEX**

Neutered male

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.

**AGE**

13 years

**WEIGHT**

55.4 lbs

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 his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 6.0 cm. The right kidney measured 7.0 cm.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Adrenal Glands**

**IMAGING PERFORMED BY**

Heather

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 left adrenal gland measured 1.2 cm at the caudal pole and 0.7 cm at the cranial pole. The right adrenal gland measured 1.4 cm at the cranial pole and 1.3 cm at the caudal pole.

**HOSPITAL NAME**

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**Spleen**

**REFERRING VET**

Dr. Hallihan

The **spleen** was normal size and relatively normal contour with multifocal hyperechoic areas of mineralization. This is a benign change; however, can be related to Cushing's disease or other endocrinopathies. The spleen was folded upon itself cranially.

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**Liver**

**DATE**

4/10/23

The **liver** presented generalized enlargement and diffuse parenchymal mineralization. The parenchyma itself was uniform. Gallbladder sand was noted.



**PATIENT**

**Gastrointestinal**

Tyler Choo

A minor amount of non-shadowing, non-obstructive ingesta was noted in the stomach. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. The duodenum presented a minor amount of stasis.

**SPECIES**

Canine

**Pancreas**

**BREED**

Rottweiler

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**SEX**

Neutered male

**Heart**

Rapid view of the heart revealed no evidence of pathology.

**AGE**

13 years

**ULTRASONOGRAPHIC FINDINGS**

Bilateral adrenal hypertrophy.

**WEIGHT**

55.4 lbs

Metabolic mineralization of the liver and spleen, likely owing to underlying endocrinopathy such as Cushing's.

Excessive gallbladder sand and debris.

Minor duodenitis pattern.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

If the patient appears Cushingoid then work-up for PDH is indicated. Ursodiol therapy is warranted as well as bile acid profile. FNA of the spleen and liver could be justified. Underlying duodenitis is likely. I recommend stopping NSAID treatment with a GI protectant protocol. Prognosis is guarded. There was no overt evidence of neoplasia; however, the cortisone therapy may be suppressing a more significant presentation. The following therapy can be considered.

**IMAGING PERFORMED BY**

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**Helicobacter/Gastritis protocol**

A clinical trial of **Zithromax (Dogs: 5-10 mg/kg p.o. q24h. May increase dosing interval to q48h after 3-5 days of treatment)**, **Metronidazole (10-20 mg/kg p.o. b.i.d.)**, **Pepcid (0.5-1 mg/kg s.i.d.)** and **Sucralfate (0.5-2 g/dog PO)** or **Omeprazole (1 mg/kg p.o. s.i.d.)** over the next 3 weeks along with a **novel-protein or hydrolyzed diet** with slurry feeding b.i.d./t.i.d. over the next 2-4 days and then increase to canned diet bid. Dry food should be avoided over the next 4 weeks. A recheck sonogram to assess GI improvement or progression would be ideal in 4 weeks.

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Internal medicine consult can be utilized through SonoPath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

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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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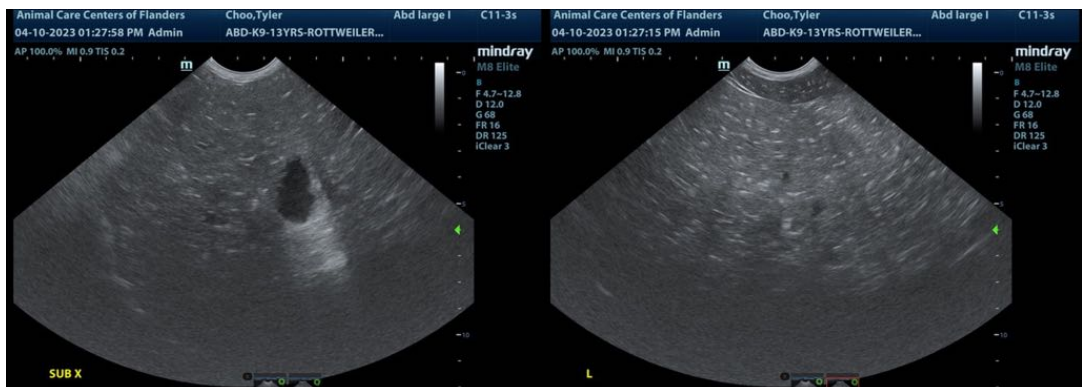
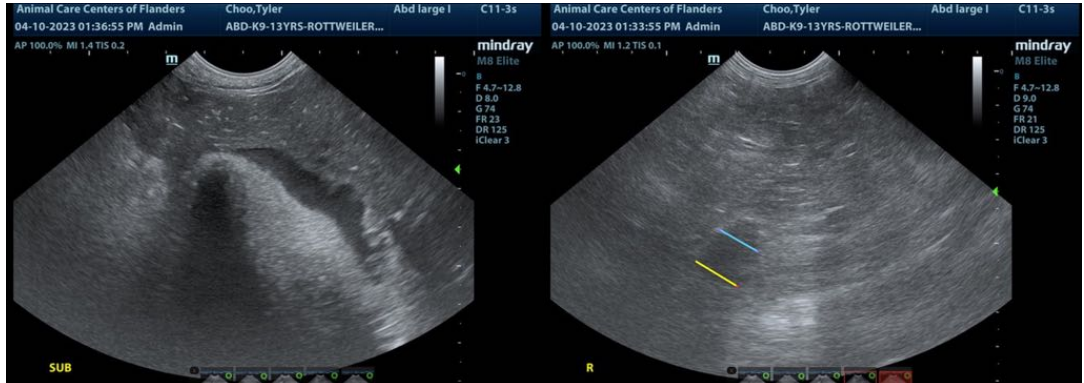
Dr. Hallihan

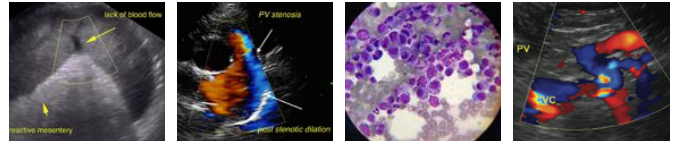
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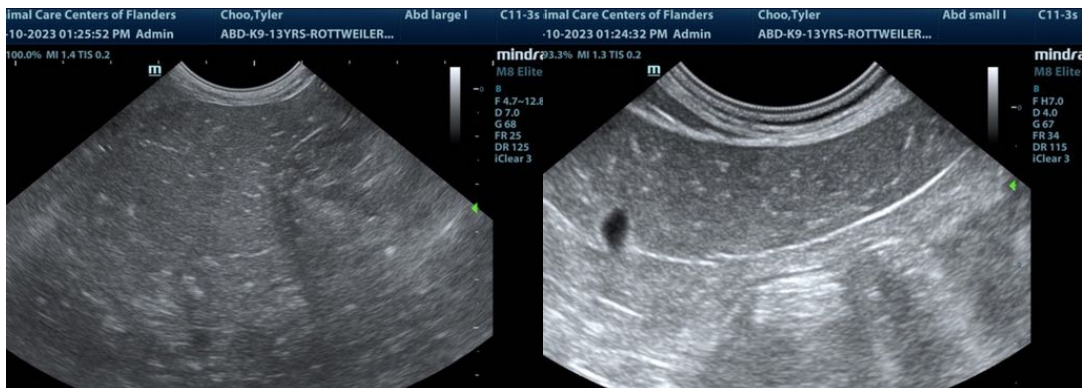
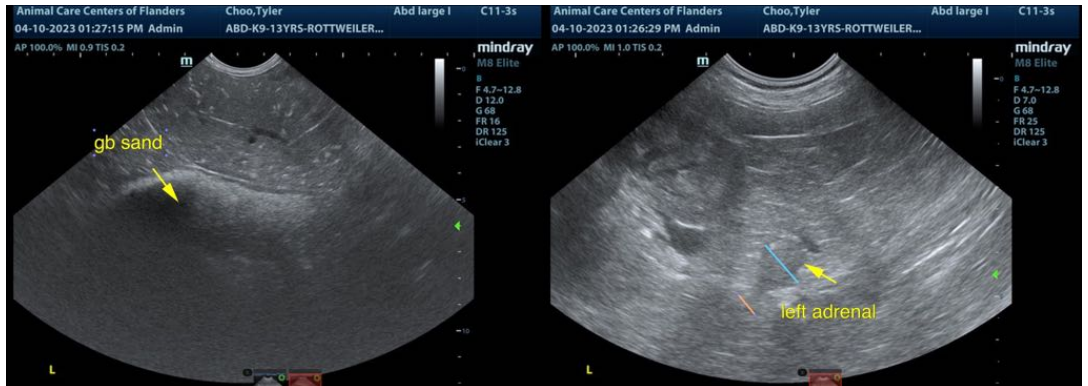
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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