



PATIENT PRESENTING CLINICAL SIGNS

PATIENT Lola Thorpe
SPECIES Canine
BREED Blue Heeler
SEX Spayed female
AGE 13 years
WEIGHT 35 lbs

History: Grade 3/4 dental dz, diffuse scaling to the skin with alopecia around the collar area, arthritis to hips with hx of surgical TPLO procedures to stifles bilaterally. History of PU/PD. Current Medications gabapentin 100-200mg/12 hours
Abnormal PE/Chem/CBC/UA Results: ALT (249) and ALKP (307) increase from 1 year ago, GGT (35 stable from last year), hyperkalemia (5.8) and hypercholesterolemia (337) and triglyceride elevation (294). Platelets increased 582. T4 normal. USG 1.007, pH 8.5 and rest of UA WNL. fecal and HWT normal.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction and appeared normal. 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.

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 right kidney measured 5.94 cm. The left kidney measured 6.3 cm with an anechoic cyst in the dorsal cortex of the left kidney measuring 1.0 cm.

Adrenal Glands

The left **adrenal gland** was enlarged and measured 2.28 x 0.88 cm at the caudal pole and 0.9 cm at the cranial pole. The left adrenal gland was expansive and heterogenous with slight irregular contour. Slight mineralization was noted in the left adrenal gland. The right adrenal gland was enlarged and measured 3.21 x 2.19 cm at the cranial pole and 0.9 cm at the caudal pole. Heterogenous capsular expansion was noted without capsular escape.

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.

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Ark AH

REFERRING VET

Dr. Jackson

DATE

8/17/22

Invoice
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PATIENT *Liver*

Lola Thorpe The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Anechoic cystic nodules were noted in the right cranial liver measuring 3.12 x 3.0 cm. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder wall was slightly echogenic with minor micropolypoid changes.

SPECIES

Canine

BREED *Gastrointestinal*

Blue Heeler There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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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.

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ULTRASONOGRAPHIC FINDINGS

Hepatic remodeling with minor gallbladder thickening and subjectively benign cysts.

Bilateral, pronounced adrenal enlargement.

IMAGING PERFORMED BY

Jenna Walsh, CVT

Moderate pancreatic remodeling. History of pancreatitis is likely given the pancreatic presentation.

Age related splenic and renal changes.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I suspect pituitary dependent hyperadrenocorticism if all parameters are present. Both adrenal glands are irregular. Technically an argument can be made for potential neoplasia on either. However, pronounced PDH is most likely. I recommend monitoring the adrenal structure and any growth or irregular progression over the next 6-8 weeks.

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Some level of low-grade pancreatitis is possible. Subxiphoid palpation is recommended to assess if there is any pain or discomfort.

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Efficient & Accurate Cushing's Work up-Lindquist

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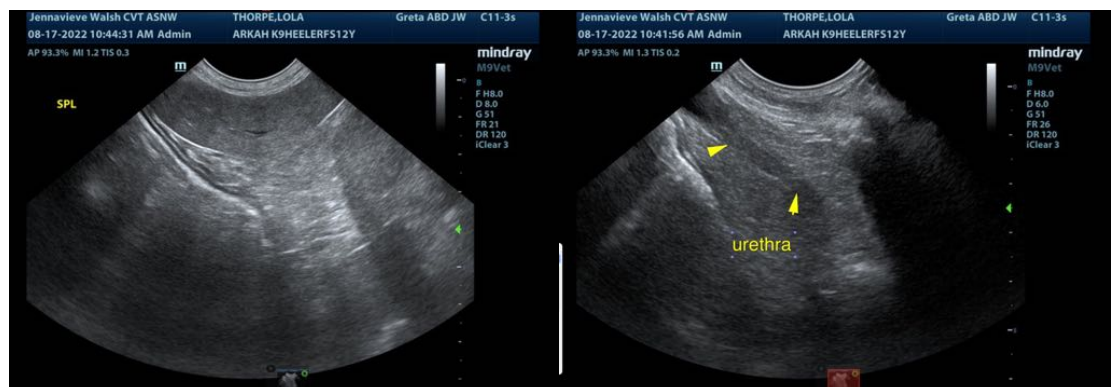
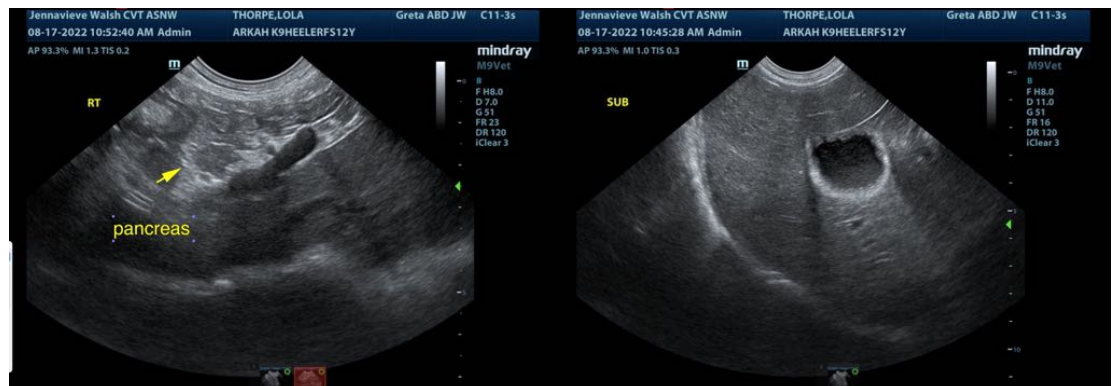
Notes regarding Cushing's Clinical Presentations:

Nearly all Cushing's dogs have SAP elevations and true PU/PD (USG < 1.025) and most are polyphagic.

Cushing's dogs are > 6 years and usually > 9 years old, usually have poor skin coats, body scores > 3/5, and are usually sedentary animals.

Its important to remember that Cushing's dogs usually look and play the part and other diseases cause false + stress related cortisol spikes. On rare occasion a Cushing's dog will not follow the rules but this is truly an exception.

Potential Cushing's patient workups can be costly and frustrating if not definitive and, in my experience, the non-definitive patient usually has something else going on that may be contributing to some of the clinical signs a Cushing's dog will have, especially SAP elevations or PU/PD. Based on this prelude of information I came up with the following algorithm in the spirit of diagnostic efficiency. The following suggested protocol is based on current available literature on Cushing's disease and extensive clinical-sonographic experience evaluation + Cushing's and False + LDDST & ACTH stim. cases in order to maximize the efficiency of a Cushing's workup in practice.





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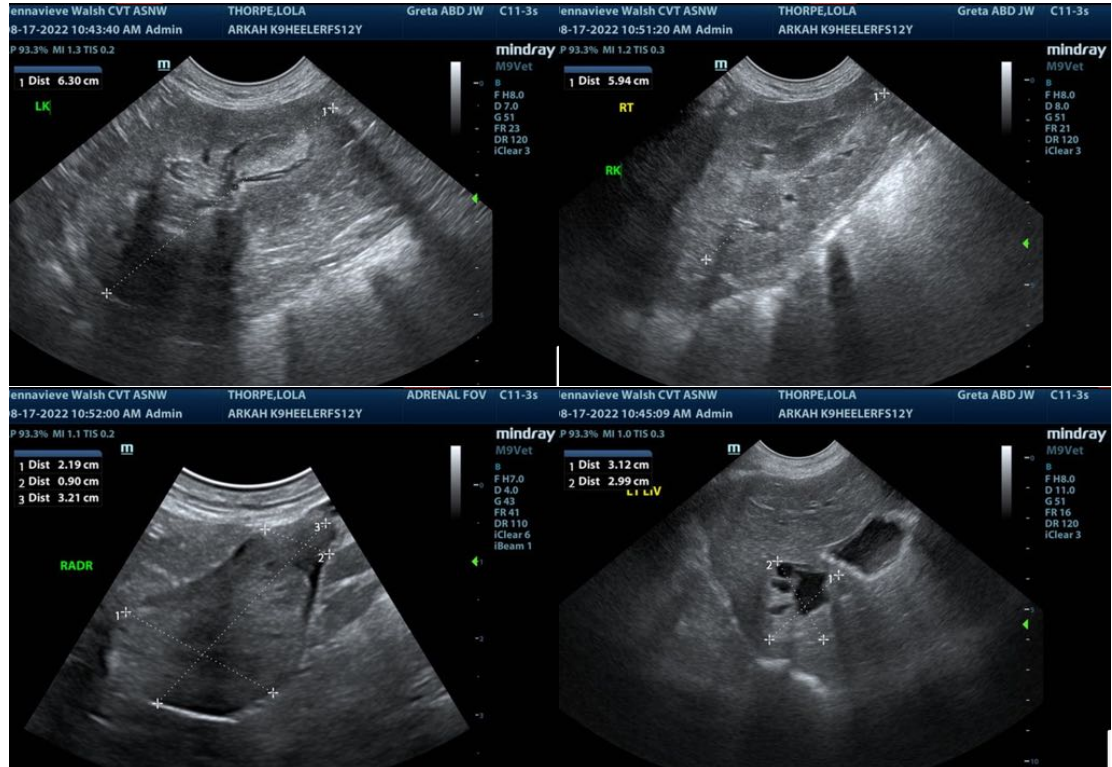
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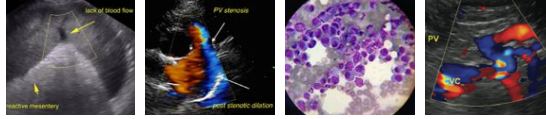
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS
CEO of Sonopath.com



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