



PATIENT

Daisy White

SPECIES

Canine

BREED

West Highland Terrier

SEX

Spayed female

AGE

9 years

WEIGHT

22 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Reser

HOSPITAL NAME

Harvest Hills VH

REFERRING VET

Dr. Reser

INVOICE

32776

DATE

9/7/22

PRESENTING CLINICAL SIGNS

History: Dog has been treated for a little over a year for suspected IMTP, initially got as low as 20,000, responded well to pred and mycophenolate, was treated with doxy as well as precautionary. Dog responds well, but when the pred dose is reduced the platelets keep going down so have not been able to successfully get dog off meds. Currently, on qod pred, (20mg) and daily mycophenolate. Also started having diarrhea the past few months. It reponds well to metronidazole, but comes back within a few days of stopping flagyl. Suspect ARD, but not sure if related to the meds either

Abnormal PE/Chem/CBC/UA Results: Dog is now beginning to look more cushingoid, rounded abdomen, chem normal except for high ALP (1800). GI panel pending. CBC currently normal, platelets at 146,000

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 4.5 cm. The right kidney measured 5.0 cm.

Adrenal Glands

The left **adrenal gland** revealed capsular expansion without capsular escape or vascular invasion. The left adrenal revealed a nodule at the caudal pole that was expansive and measured 1.12 cm at the caudal pole and measured 0.37 cm at the cranial pole. The right adrenal gland was uniform and measured 0.5 cm.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

Liver

The **liver** was uniformly swollen. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.



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The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.

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Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine 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. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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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.

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ULTRASONOGRAPHIC FINDINGS

Enlarged left adrenal gland with nodular change. Adenoma, adenocarcinoma, pheochromocytoma.

WEIGHT

22 lbs

Mild excessive gallbladder debris and sludge.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend work-up for adrenal dependent Cushing's given the patient's history. Eventual left adrenalectomy is indicated. Ursodiol therapy is recommended as a preventative. There was no other evidence of significant disease.

IMAGING PERFORMED BY

Dr. Reser

Efficient & Accurate Cushing's Work up-Lindquist

Notes regarding Cushing's Clinical Presentations:

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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.

REFERRING VET

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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.

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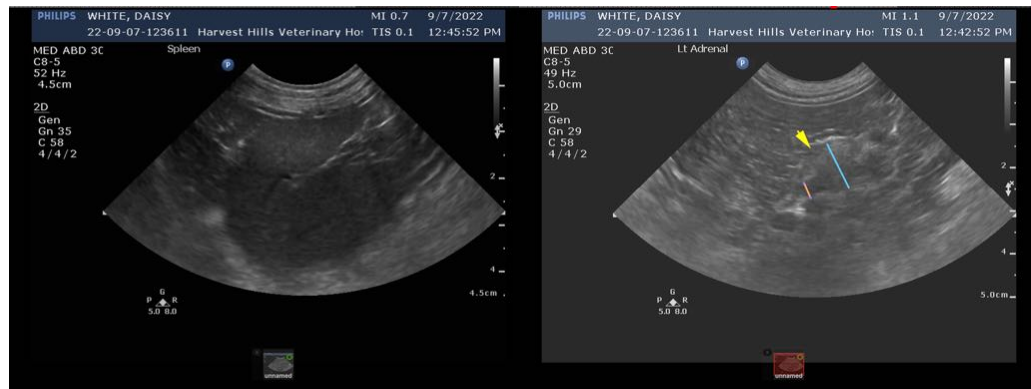
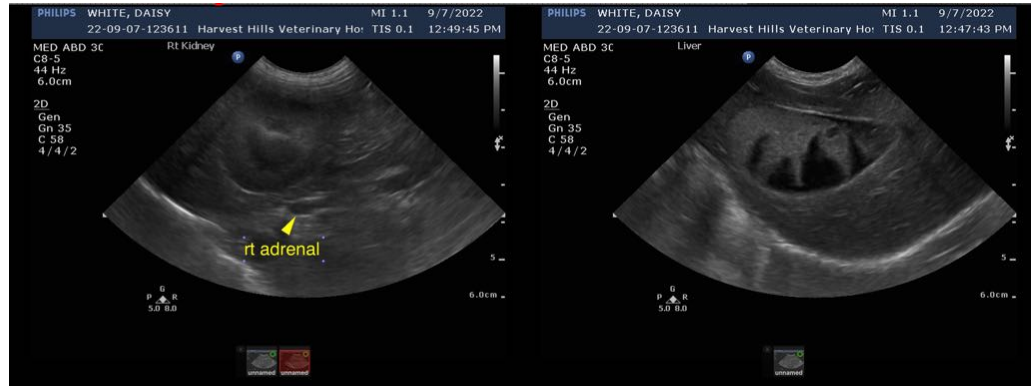
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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