



**PATIENT PRESENTING CLINICAL SIGNS**

**Toby Traer**  
**HISTORY:** PU/PD, Polyphagic, several months, obese  
**Abnormal PE/Chem/CBC/UA Results:** CBC:WNL except for mildly increased retic and PCT 32  
**CHEM:** ALKP=1279 U/L (23-212) very low TT4= <6nmol/L (13-51) Idexx Ref Lab: TT4 8.1 (N 13-53)  
**FT4 <3.86 (N 7.7-47.6) cTSH 0.76 (N 0.05-0.6) Low TT4, and low FT4 along with increased cTSH is consistent with Hypothyroidism LDDST 0 hr Cortisol 195 nmol/l (N 28-120) 4 hr Cortisol <28 8 hr Cortisol 47** The results of the LDDST in this dog may support PDH. The dog is showing some escape from the dexamethasone suppression at the 8 hr sample IE: Values above 42 nmol/l at 8 hours. If the clinical signs support this possible diagnosis of Cushings then the LDDST is supportive as well. The 4 hour blood has suppressed so that would fit with PDH. Also the 4 and the 8 hr sample did suppress to less than 50% of the basal 0 hr Cortisol which again supports PDH.

**SPECIES**

Canine

**BREED**

Lab

**SEX**

Male, neutered

**AGE**

7 Yrs.

**WEIGHT**

57.7 kg.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Dr. Barnes

**HOSPITAL NAME**

Westview VH

**REFERRING VET**

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2/28/22

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is not definitively visualized due to its pelvic location.

The left kidney is normal size (7.77 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (8.80 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal size (0.58 cm at cranial pole) (0.53 cm at caudal pole) (2.60 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.50 cm at cranial pole) (0.77 cm at caudal pole) (2.98 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is overall subjectively normal in size (2.09 cm in width at the level of the hilus). A 1.27 x 1.12 cm isoechoic nodule/swelling is observed at the caudomedial aspect. The nodule causes mild capsular expansion. The remaining peripheral margins are curvilinear. The parenchyma is otherwise homogeneous in appearance. Splenic vasculature appears normal with no evidence of thrombosis.

**Liver**



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The liver is subjectively prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion. The gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal.

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***Gastrointestinal***

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The gastric lumen is not distended. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

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***Pancreas***

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

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***Free Abdomen***

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

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57.7 kg.

**ULTRASONOGRAPHIC FINDINGS**

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(*Small Animal Internal  
Medicine*)

**Primary Findings:**

- Suspected benign hepatopathy. Top differentials include regenerative nodular hyperplasia and/or vacuolar hepatopathy. Given the liver enzyme pattern and sonographic changes, inflammatory disease and infiltrative neoplasia are considered less likely.
- The splenic nodule could be consistent with an early neoplastic process (i.e., round cell tumor). Alternatively, a benign focus of lymphoid hyperplasia, extramedullary hematopoiesis or inflammation may be present.

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**Secondary Findings:**

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

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\*The clinical history is highly suggestive of pituitary-dependent hyperadrenocorticism. However, the adrenal glands are normal in size and shape. This finding does not rule out the possibility of Cushing's disease. However, it may be prudent to rule out other causes of PU/PD and elevated liver enzymes prior to initiation of medical therapy for Cushing's disease.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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- A urinalysis with a urine specific gravity is strongly recommended to confirm isosthenuria (if not already performed).

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- Consider a urine culture and sensitivity and pre- and post-prandial serum bile acids to further evaluate for causes of PU/PD and an elevated ALP, respectively.

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- An ACTH stimulation test can also be considered to further confirm the diagnosis of Cushing's disease.

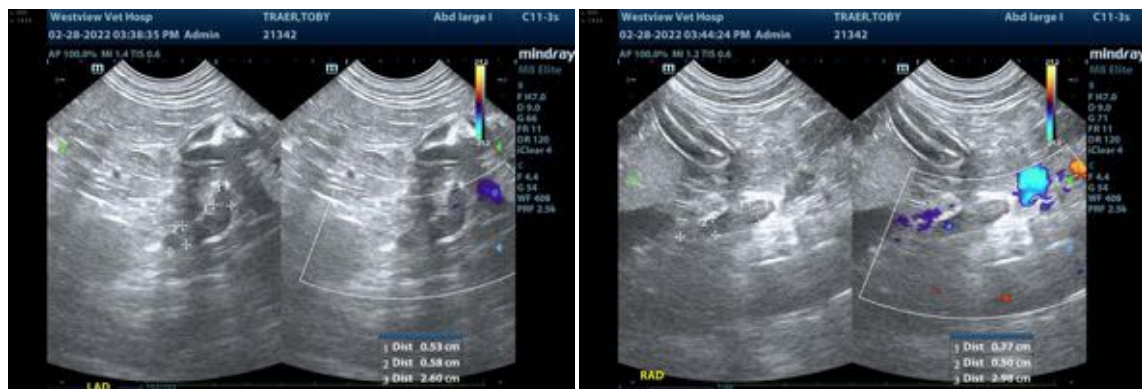
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Lab

- Depending on the results of the above diagnostics, initiation of medical therapy for Cushing's disease (i.e., trilostane) can be considered with close monitoring of the patient's cortisol levels and electrolytes.

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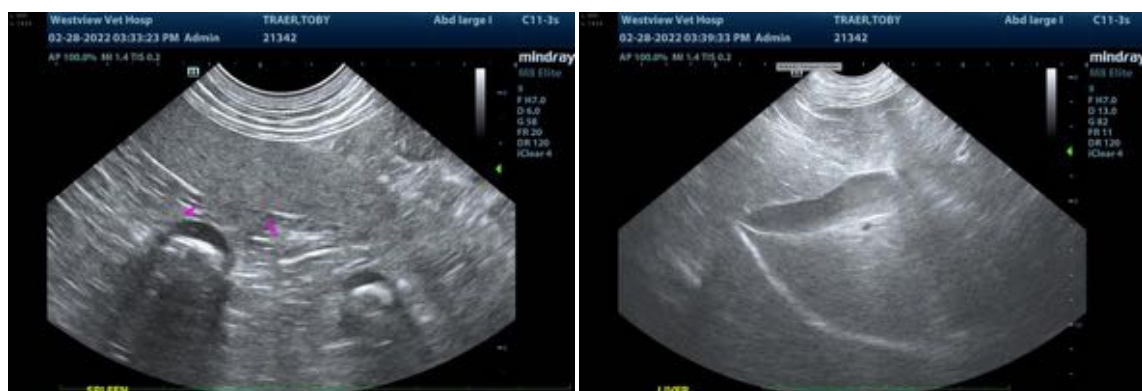


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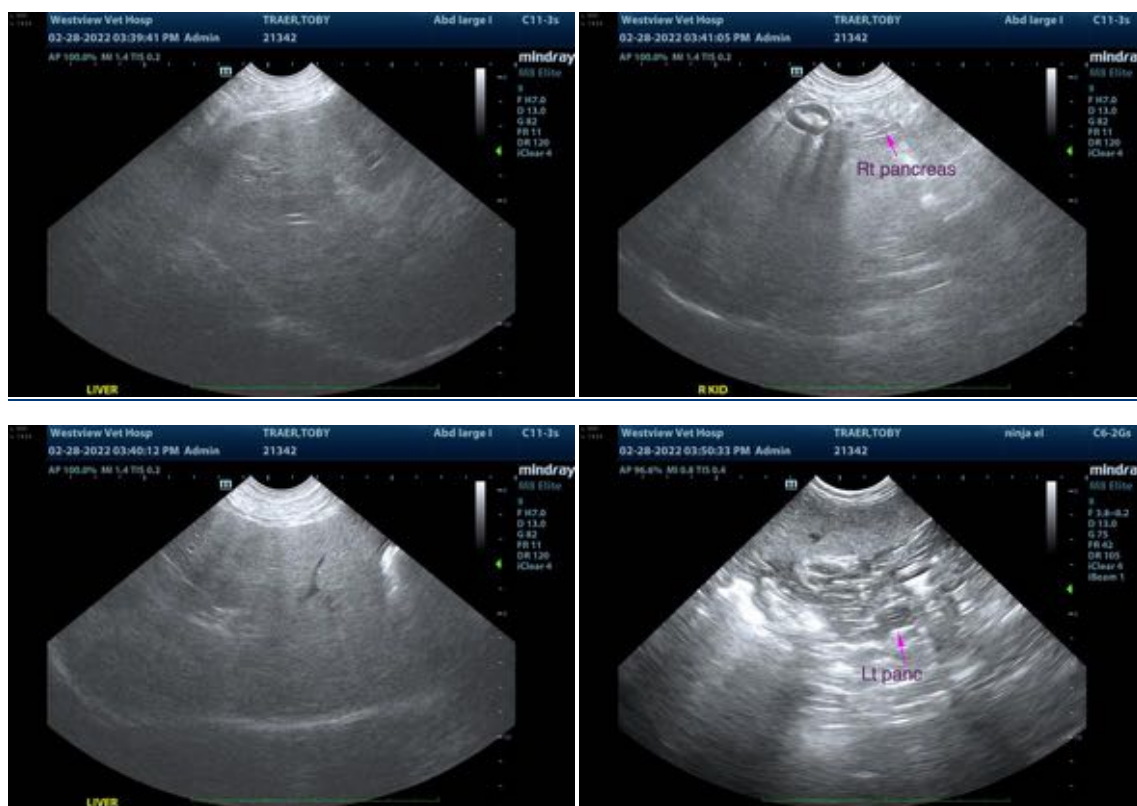
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

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