



**PATIENT PRESENTING CLINICAL SIGNS**

Cooper Giddens

P presented for pre-dental exam 5/10/23. Heart murmur detected, chest rads and BW were done. Rads revealed cardiomegaly and pulmonary congestion. P was started on furosamide, enalapril, and vetmedin. Bloodwork showed Increased ALP and Ca. A LDDST was done and was positive for HAC. iCa was done and was low normal. Recheck chem and a u/a was sent out today. BP was checked: 218/157 (177)

**SPECIES**

Canine

**BREED**

Chiweenie

Abnormal PE/Chem/CBC/UA Results: Ca 12, TP 7.6, Alb 4.2, ALT 179, ALP 3531, Chol 583 LDDST: Pre 4.8, 4hr 2.6, 8hr 4.4 iCa 1.24 (1.25-1.45)

**SEX**

Neutered Male

**AGE**

8/10/13

**WEIGHT**

18 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**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 were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The iliac trifurcation was unremarkable.

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 4.0 cm. The right kidney measured 4.7 cm.

**Adrenal Glands**

The caudal pole of the **left adrenal gland** was visualized, yet resolution was poor. The caudal pole appeared unremarkable.

The **right adrenal gland** presented normal size and contour, measuring 0.70 cm at the cranial pole and 0.30 cm at the caudal pole.

**IMAGING PERFORMED BY**

Dr. Andrew Beachy

**HOSPITAL NAME**

Linn Vet Hospital

**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 were noted.

**REFERRING VET**

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**INVOICE**

43443

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**Liver**

Exam of the cranial abdomen demonstrated excessive **liver** size, swollen contour, with conserved uniform architecture. Parenchymal echogenicity was diffusely isoechoic to the spleen and falciform fat. Minor excessive GB debris was noted with the presence gall bladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. This type of liver presentation typically is associated with slow and gradual SAP elevations with low-grade ALT rise. USG-FNA sampling is encouraged if more aggressive LE profiles are present such as ALT > 200 or rapid rise in SAP. These presentations are usually reactive hepatopathies owing to other disease processes either endocrine (Diabetes, Hypothyroidism, Cushing's disease), "antigen surveillance" from the gut/pancreas, or idiopathic breed predisposed progressions.



**PATIENT**

**Gastrointestinal**

Cooper Giddens

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.

**SPECIES**

Canine

**Pancreas**

**BREED**

Chiweenie

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**

**AGE**

8/10/13

- Benign hepatopathy
- Subjectively normal adrenals with left adrenal visualized obliquely and not in its entirety, yet no overt masses noted in that region.

**WEIGHT**

18 Pounds

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INTERPRETED BY**

Eric Lindquist, DMV

FNA of the liver could be considered for further definition, yet subjectively it appears benign. Recommend ensuring that USG is persistently  $<1.020$  and urine cortisol to creatinine ratio is elevated. Skull CT to assess pituitary status would be warranted in this patient. A small percentage of approximately 10-15% of PDH patients can have normal adrenals, which would be the case if this patient is truly Cushing's. However, no adrenal dependent Cushing's present. No contraindication to anesthetic procedure if necessary.

DABVP, Cert. IVUSS

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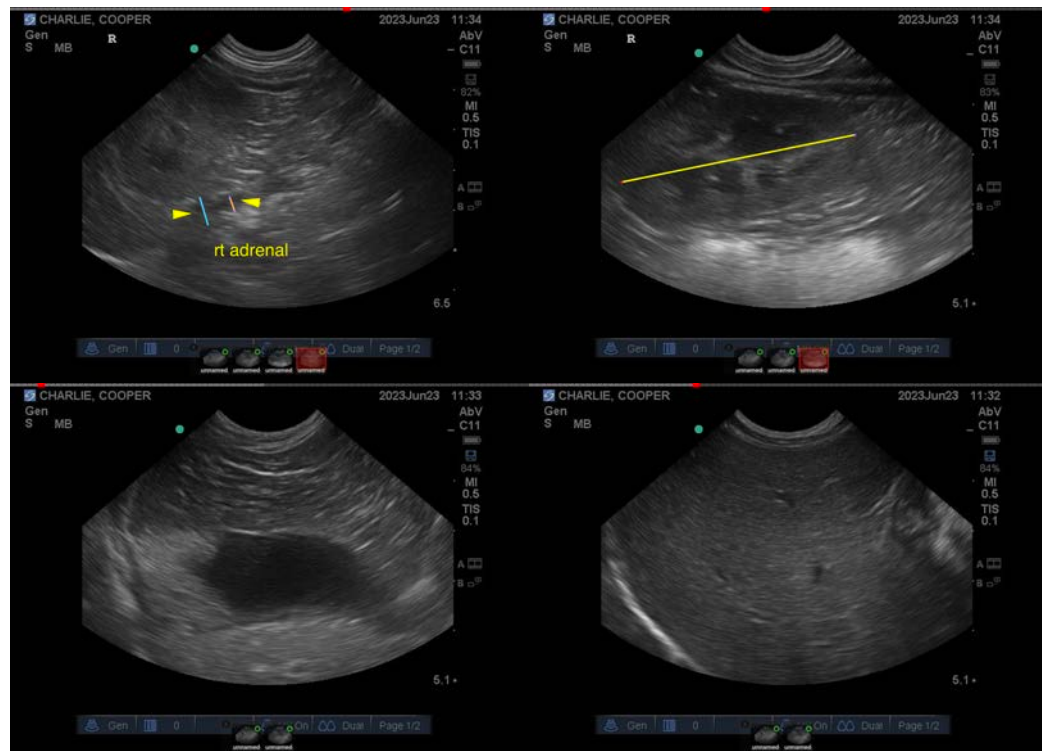
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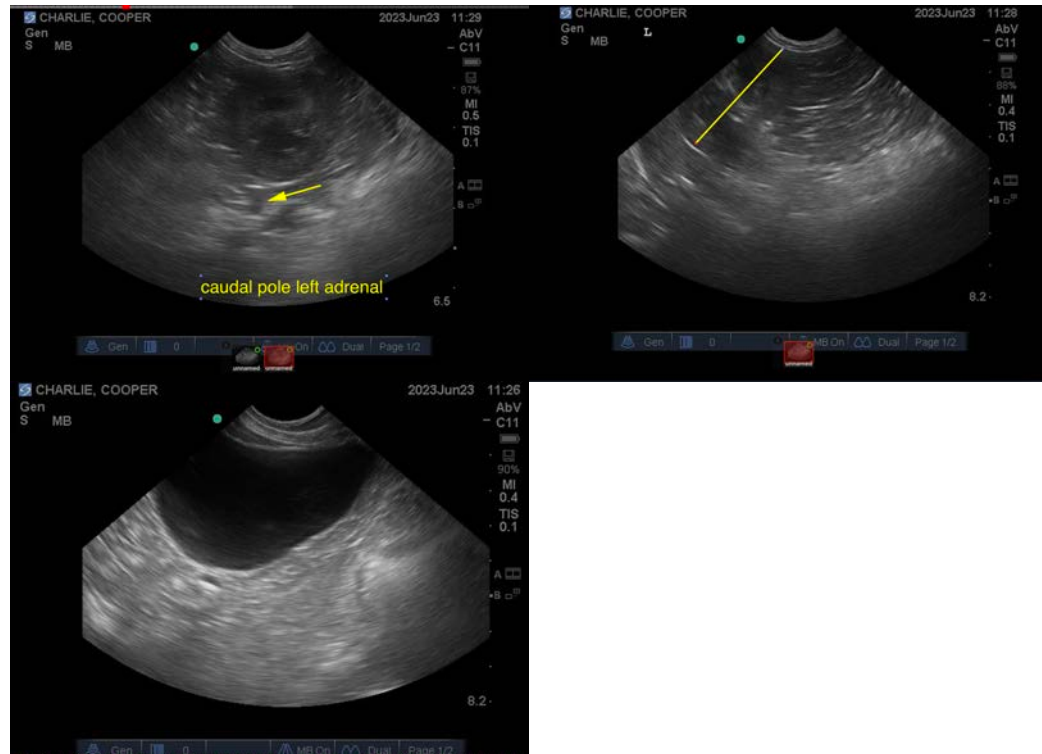
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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