



PATIENT PRESENTING CLINICAL SIGNS

Bella Hough History: Intermittent cough - r/o: collapsing trachea,
Abnormal PE/Chem/CBC/UA Results: See lab report that was emailed. Current Medications No
current medications.

SPECIES ALKP 2268, chol 363, CPK 536, urine specific gravity 1.015, 2+ protein. Minor anemia, hematocrit 37

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED *Urinary System*

Chihuahua 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.

SEX

Spayed female

AGE

14 years

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. Mineralization was noted in the kidneys. The left kidney measured 4.3 cm. The right kidney measured 4.05 cm.

WEIGHT

10.7 lbs

Adrenal Glands

The right **adrenal gland** was uniform and measured 2.44 x 0.94 cm at the cranial pole and 0.58 cm at the caudal pole. The left adrenal gland was enlarged and measured 2.5 x 1.06 cm at the cranial pole and 1.03 cm at the caudal pole. The left adrenal gland is heterogenous.

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Sara Hansen

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.

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Liver

The **liver** was diffusely hyperechoic to the falciform fat. Generalized hepatic enlargement was noted. Occasional hypoechoic nodule was noted. Minor excessive gallbladder debris was noted without mucocele formation. Minor striation was noted. The common bile duct was unremarkable.

DATE

9/8/22

Invoice

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PATIENT

Gastrointestinal

Bella Hough

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

BREED

Chihuahua

Pancreas

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

Spayed female

ULTRASONOGRAPHIC FINDINGS

Subjectively benign hepatopathy/lipidosis pattern. Underlying endocrinopathy is suspected.

AGE

14 years

Enlarged left adrenal gland.

WEIGHT

10.7 lbs

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Strongly concerned for left adrenal dependent Cushing's disease given the parameters. Strong concern for carcinoma. The left adrenal is expansive, yet no capsular escape or obvious vascular invasion. Appears resectable. There is a minor potential for left adrenal pheochromocytoma or hyperplasia. Eventual left adrenalectomy is indicated. Blood pressure measurements are also recommended. Ursodiol and hepatic nutraceuticals are indicated.

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

Efficient & Accurate Cushing's Work up-Lindquist

IMAGING PERFORMED BY

Sara Hansen

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.

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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.

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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.

REFERRING VET

Dr, Cox

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.

DATE

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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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PATIENT

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SPECIES

Canine

BREED

Chihuahua

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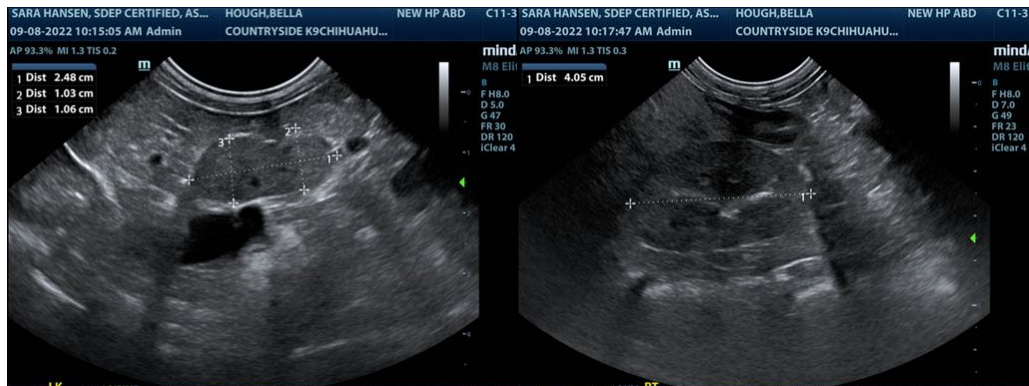
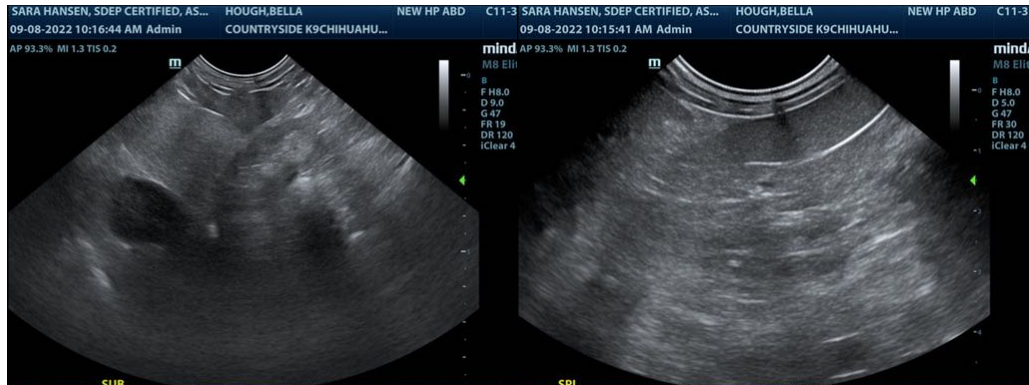
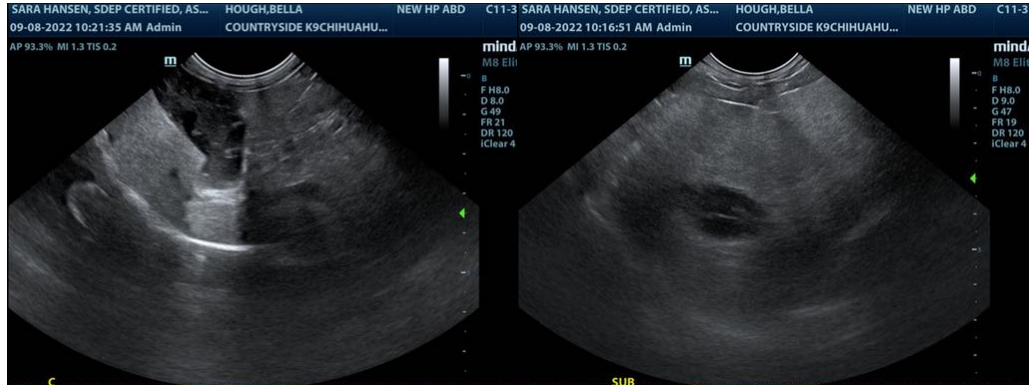
Spayed female

AGE

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WEIGHT

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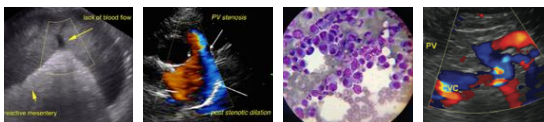
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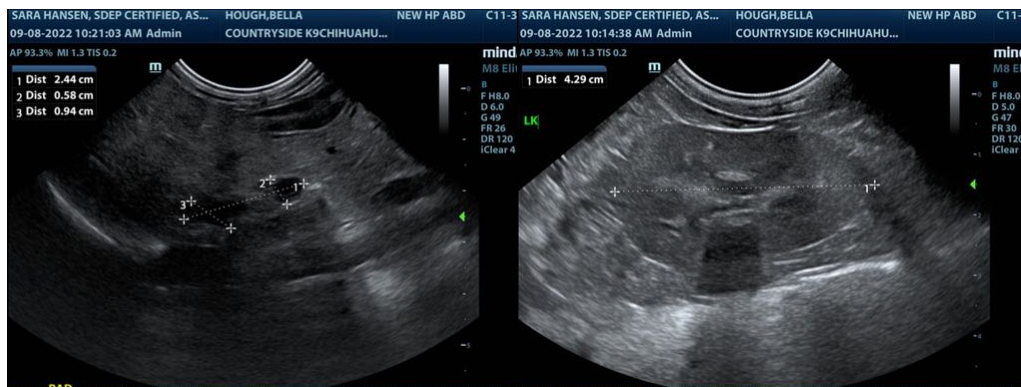
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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