



PATIENT

Pepper McCarthy

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered male

AGE

14 years

WEIGHT

12.6 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Gunther

HOSPITAL NAME

New Frontier Animal
Medical Center

REFERRING VET

Dr. Gunther

INVOICE

30702

DATE

5/24/22

PRESENTING CLINICAL SIGNS

History: Recently diagnosed with Cushing's disease. Started in Vetoryl 4 weeks ago.
Abnormal PE/Chem/CBC/UA Results: LDDS test diagnosed Cushing's but did not differentiate between adrenal or pituitary

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** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. Corticomedullary definition was nebulous and the ratio favored the cortex slightly. The ureters were not visible and assumed to be normal. These changes are most consistent with chronic interstitial nephritis yet infiltrative disease could not be entirely ruled out without biopsy though neoplasia is not suspected. Occasional cortical cysts and cortical mineralization were noted in the renal cortices. The right kidney measured 4.55 cm. The left kidney measured 4.7 cm. The kidneys appeared approximately 50% compromised.

Adrenal Glands

The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins was noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. The left adrenal gland measured 0.7 cm. The right adrenal gland measured 0.95 cm at the cranial pole and 0.62 cm at the caudal pole. A hyperechoic lipogranulomatous nodule was noted in the cranial pole of the right adrenal gland.

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 with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. 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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Gastrointestinal

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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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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.

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ULTRASONOGRAPHIC FINDINGS

AGE

14 years

Minor bilateral adrenal hypertrophy. Most consistent with PDH.

Moderate degenerative renal changes.

Excessive gallbladder debris, likely secondary to Cushingoid status.

WEIGHT

12.6 lbs

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Ursodiol therapy is recommended along with geriatric diet. Management for PDH is warranted. The renal values should be monitored carefully given the fairly advanced degenerative state.

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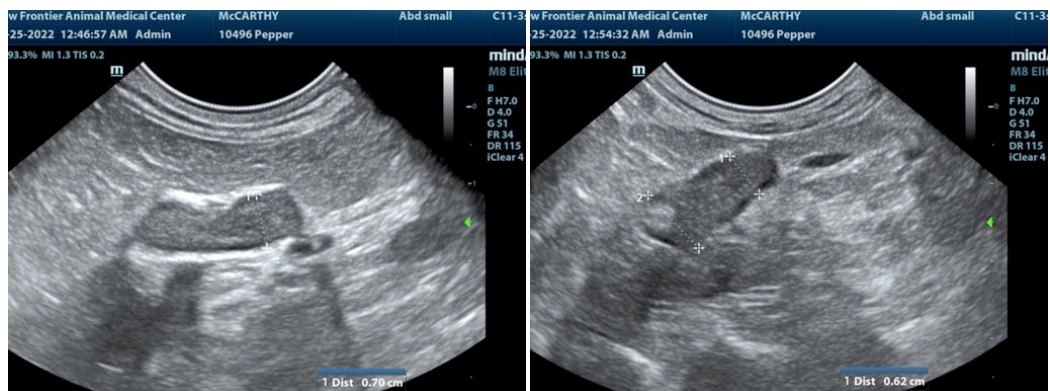
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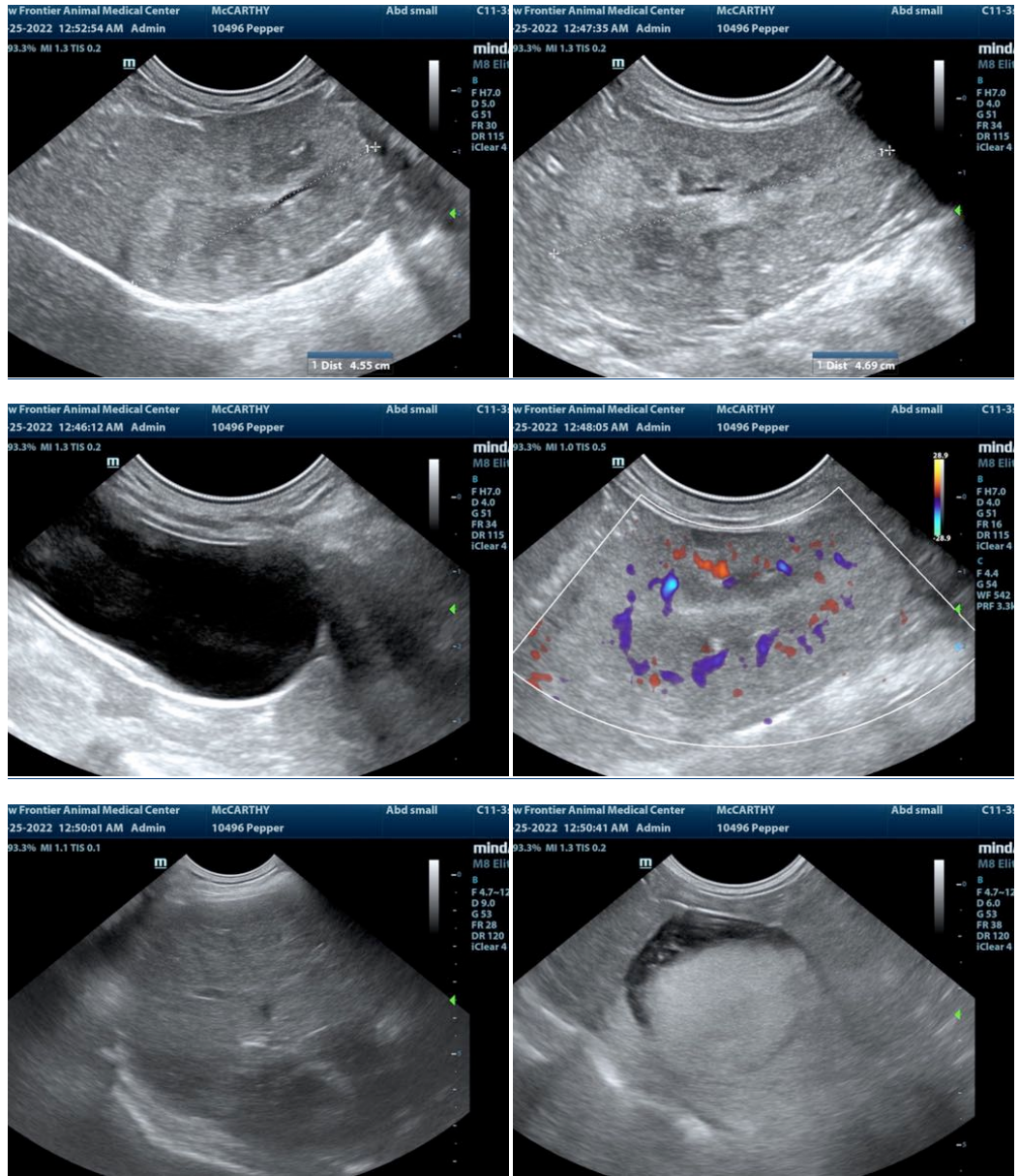
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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