



PATIENT

PRESENTING CLINICAL SIGNS

Mikey Vaia

History: History of PU/PD
Abnormal PE/Chem/CBC/UA Results: ALP - 619, ALT 281, Ca 11.6 Trig 5.17, Chol 441, Normal LDDS

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Urinary System

Lhasa Apso Mix

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal.

SEX

Neutered male

AGE

12 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 this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight mineralization was noted in the kidneys. The right kidney measured 5.44 cm. The left kidney measured 4.68 cm.

WEIGHT

28.5 lbs

INTERPRETED BY

Adrenal Glands

Eric Lindquist, DMV
DABVP, Cert. IVUSS

Both **adrenal glands** appeared flattened and isoechoic to the surrounding fat. The right adrenal gland measured 1.64 x 0.33 cm at the caudal pole and 0.39 cm at the cranial pole. The left adrenal gland measured 1.2 x 0.25 cm at the cranial pole and 0.33 cm at the caudal pole.

IMAGING PERFORMED BY

Dr. Prescott

Spleen

HOSPITAL NAME

Roundout Valley VA

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.

REFERRING VET

Dr. Prescott

Liver

INVOICE

93093

The **liver** revealed multi-focal, coalescing nodular changes with regional swelling. This created mass effects. There was mild disruption of architecture. This is most consistent with hepatoma and pronounced nodular hyperplasia. However, emerging neoplastic event cannot be ruled out. Multi-focal, lobar biliary mineralization was noted. There was minor gallbladder sand and calculi with echogenic gallbladder wall. Increased portal markings were noted throughout the liver.

DATE

11/15/21



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Gastrointestinal

Mikey Vaia

The **stomach** was filled with ingesta. The intestines were 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

Lhasa Apso Mix

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

Neutered male

ULTRASONOGRAPHIC FINDINGS

Hepatic remodeling.

AGE

12 years

Micro and macronodular changes with lobar biliary calculi and gallbladder calculi.

Subjectively flattened adrenal glands.

WEIGHT

28.5 lbs

Age related renal changes with mineralization.

Slight bladder thickening.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Bile acid profile and FNA of the liver is recommended for further definition. Assessment for cortisone therapy in this patient's clinical history is recommended. Baseline cortisol is warranted. If it measures less than 2 then ACTH stimulation would be warranted to rule out Addison's given the flattened adrenal glands. Occasionally, Addisonian patients can have PU/PD. There is no evidence of Cushing's disease. I am concerned for long term viability of the liver. Bile acid profile is indicated. There is a minor potential for underlying neoplasia, yet this is likely pronounced nodular hyperplasia owing to chronic inflammatory disease. Liver support protocol is warranted with liver oriented diet +/- antibiotics based on cytology results and Ursodiol therapy. Recheck sonogram is recommended in 6-8 weeks after initiating liver support protocol. If bile acid elevations are present then PU/PD may be related to the liver. Urinalysis is warranted to assess for urinary tract infection as cause of the urinary signs.

IMAGING PERFORMED BY

Dr. Prescott

HOSPITAL NAME

Roundout Valley VA

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For an additional charge an internal medicine consult can be utilized through [Sonopath.com](http://sonopath.com). You can select the internal medicine drop down at <http://spa.sonopath.com/>.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

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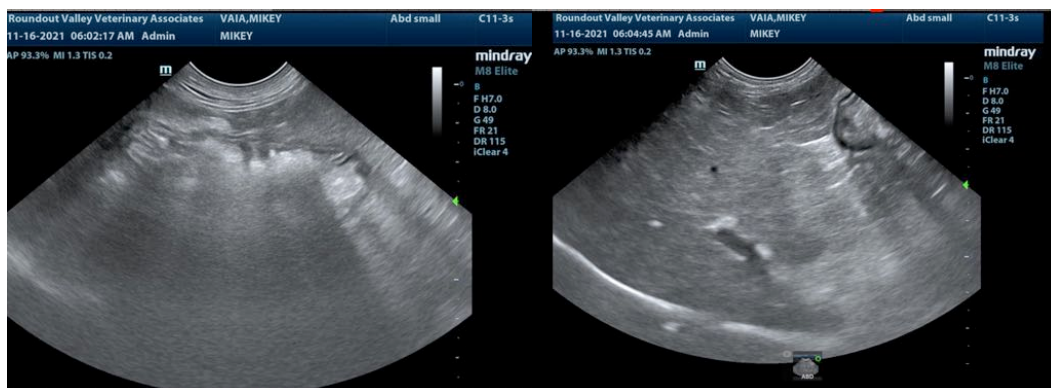
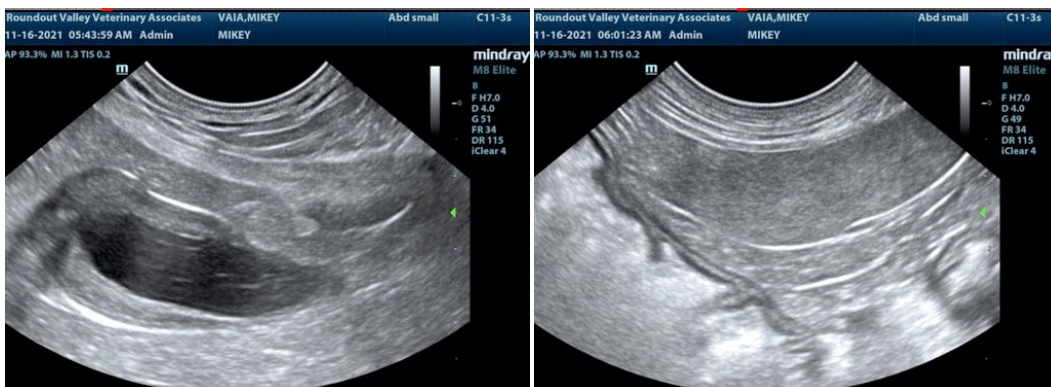
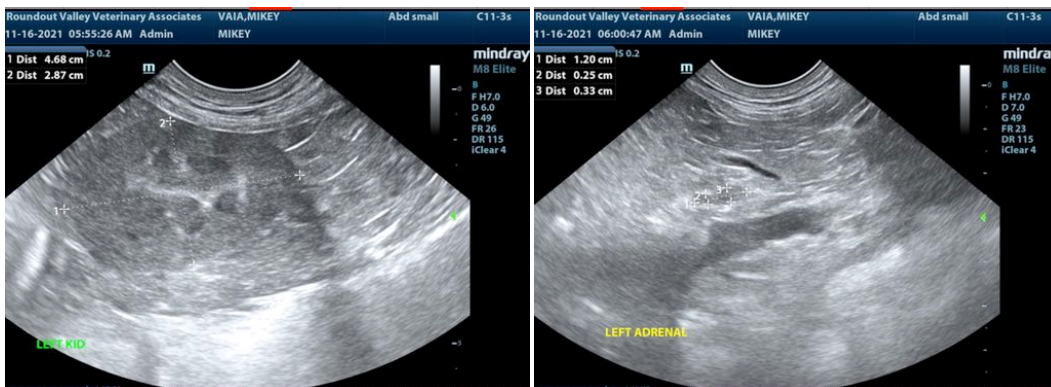
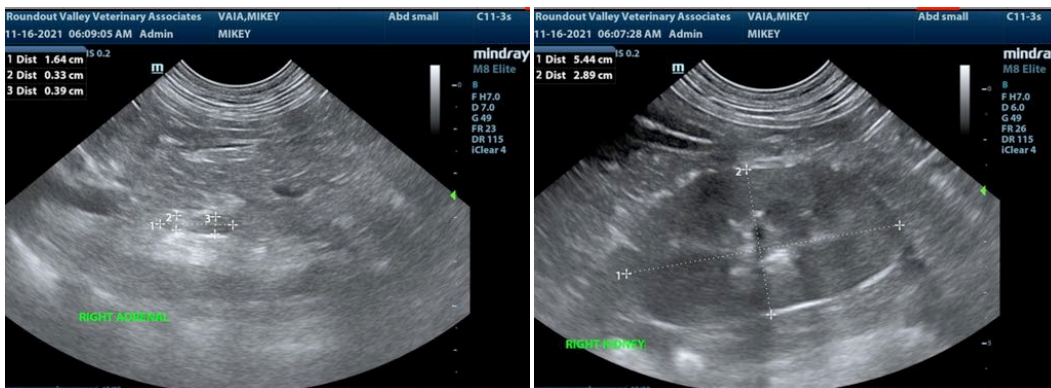
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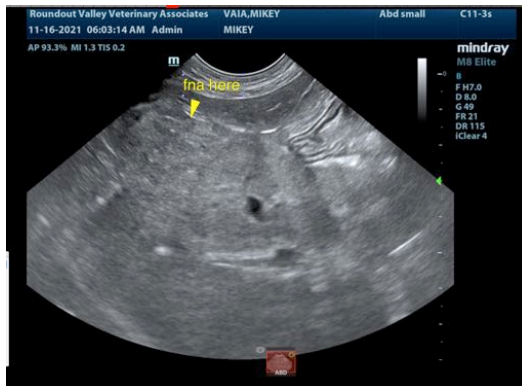
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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info@SonoPath.com