



PATIENT

Molly Morgan

SPECIES

Canine

BREED

Terrier Mix

SEX

Spayed Female

AGE

10 years

WEIGHT

13.31 lbs

PRESENTING CLINICAL SIGNS

History: Severe periodontal disease anxious Recent elevated liver enzymes
Abnormal PE/Chem/CBC/UA Results: 9/1/21- ALT 177 (12-118) ALP 582 (5-131) other chem, CBC,UA,T4 all normal.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** and visible pelvic urethra were unremarkable for the level of repletion presented. The urine, however, did present some mildly echogenic debris consistent with mucous, exfoliated cells from renal or bladder origin, and/or blood clots as these echogenic changes can all present similarly. This is often related to urinary tract infection but may represent simple evidence of exfoliated debris or sterile inflammation. Cystocentesis, urinalysis, +/- culture would be recommended to rule out and define any UTI.

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. The right kidney measured 4.94 cm. The left kidney measured 4.96 cm.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Arpaia

HOSPITAL NAME

McKenzie AH

REFERRING VET

Dr. Arpaia

Adrenal Glands

The right **adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.96 x 0.5 cm at the caudal pole and 0.53 cm at the cranial pole. The left adrenal gland was slightly enlarged at the caudal pole and measured 0.64 cm and 0.5 cm at the cranial pole.

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.

INVOICE

92024

DATE

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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



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remodeling and history of inflammatory component. There was no overt suspicion of neoplasia. Gallbladder calculi were noted. Grouping of which measured 1.5 cm.

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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. Retention of ingesta was noted in the stomach. 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

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The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

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ULTRASONOGRAPHIC FINDINGS

Benign hepatopathy.

Gallbladder calculi.

Largely geriatric changes elsewhere.

Slightly prominent left adrenal gland.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no evidence of significant pathology. FNA of the liver could be considered for further definition. No contraindication for anesthetic procedure. Ursodiol therapy could be considered as a palliative effort to attempt to dissolve the gallbladder calculi. A recheck sonogram is recommended after 8-12 weeks of Ursodiol.

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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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