



PATIENT

Trahern Womeldorf

SPECIES

Canine

BREED

Welsh Terrier

SEX

Male Neutered

AGE

11 Years 5 Months

WEIGHT

19.3 lbs.

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM
(Small Animal Internal
Medicine)

**IMAGING
PERFORMED BY**

Dr. Munoz

HOSPITAL NAME

Lone Mountain Animal
Hospital

REFERRING VET

Dr. Munoz

INVOICE

11889kk

DATE

9/23/21

PRESENTING CLINICAL SIGNS

History: On 9/10 - elevated liver values found on routine BW, p was seen for ear infection at the time. O unable to schedule Abd US until today. Today, liver values were rechecked and were found to be slightly higher. No concerns reported by owner, p eating with good appetite and acting wnl.

Abnormal PE/Chem/CBC/UA Results: Chem on 9/10/2021: ALP 9,864, ALT 1,488, AST 98, GGT 61, TP 7.9, Glob 4, Chol 768, Trig 320, Tbili 0.1. UA: USG 1.015, 1+ protein, 0-1 RBC. Remainder of BW wnl. Mammalian liver profile 9/23/2021: ALT 1569, GGT 69, ALP - value suppressed, Chol 712, Tbili 0.3. Muscle wasting on both hindlimbs Abdominal x-rays taken today - official report pending.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

***42 Still images and 17 video clips are available for interpretation.*

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.91 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (4.95 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (5.29 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

Adrenal Glands

The left adrenal gland is borderline enlarged (0.70 cm at cranial pole) (0.58 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is not definitively visualized.

Spleen

The spleen is normal in size (2.34 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is hypoechoic relative to the spleen and diffusely heterogeneous in appearance. A 5.49 x 1.82 cm isoechoic to slightly hypoechoic swelling is observed in the deep left to mid-liver. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of echogenic debris is



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observed within the lumen, most of which is gravity-dependent and some of which is suspended. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

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Pancreas

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The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

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The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A 1.26 cm jejunal lymph node is visualized.

ULTRASONOGRAPHIC FINDINGS

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19.3 lbs.

Primary Findings:

- Non-specific diffuse hepatopathy. Differentials include inflammatory/immune-mediated disease, hepatotoxicosis (i.e., copper), infiltrative neoplasia, +/- concurrent benign age-related change. The hepatic swelling could be consistent with a neoplastic process. Alternatively, benign pathology (i.e., nodular hyperplasia) is possible.
- Gall bladder debris - incidental.

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Secondary Findings:

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis, or chronic pancreatitis.
- Minor, bilateral, age-related renal changes.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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1. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
2. If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin Advanced). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
3. Consider Leptospirosis testing (i.e., blood and urine PCR, serology) particularly if the disease is endemic in the patient's geographic region.

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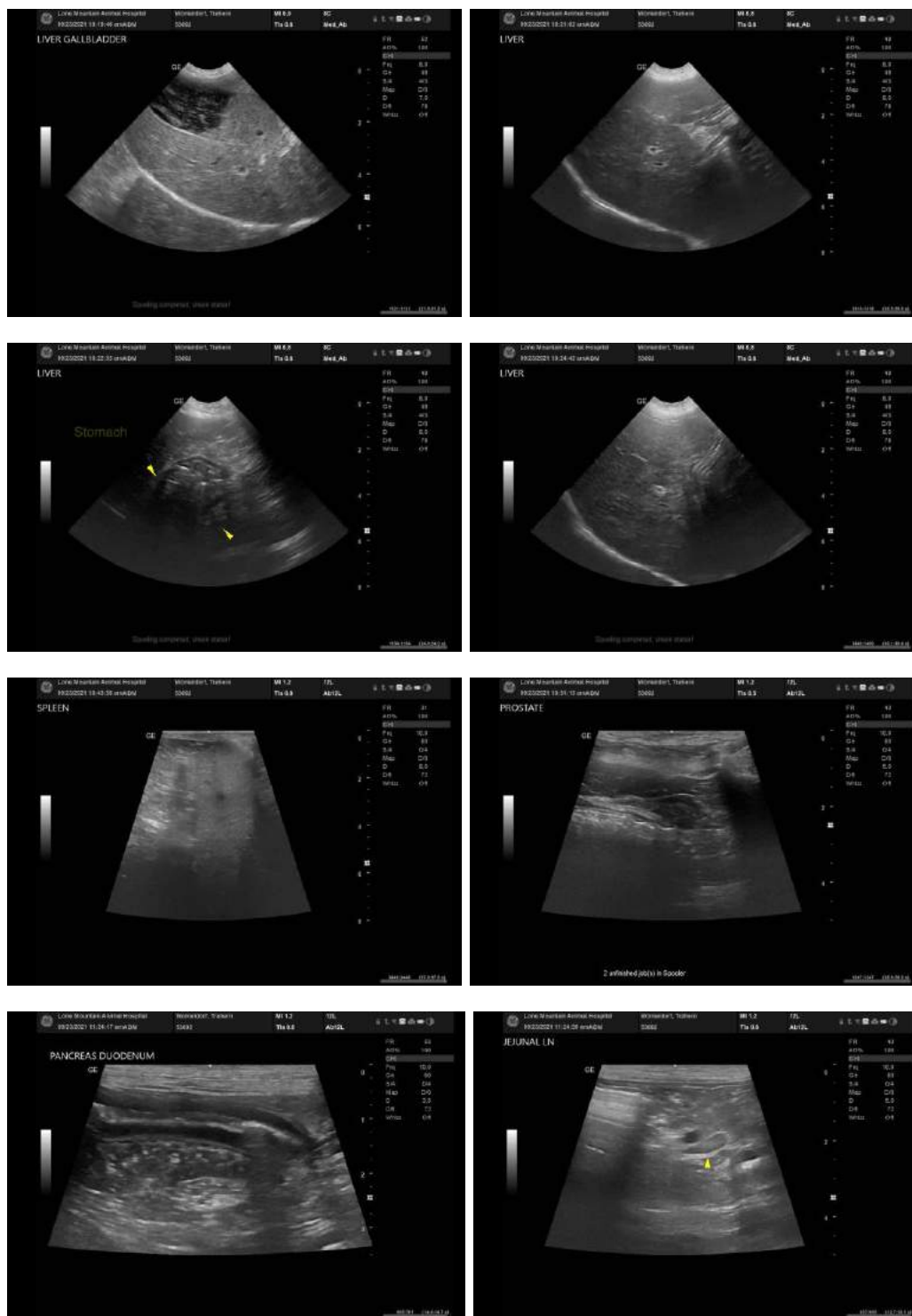
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4. Three-view thoracic radiographs are also recommended to assess cardiopulmonary status.





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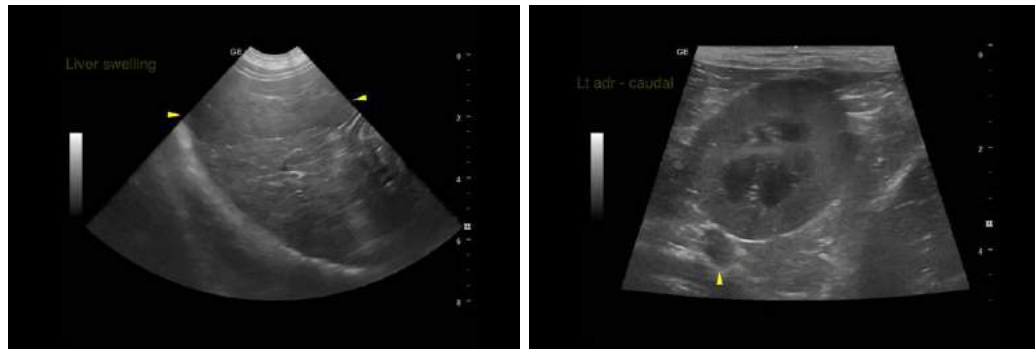
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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