

PATIENT

Cooley Wilson

SPECIES

Canine

BREED

German Shepherd

SEX

Spayed Female

AGE

08/08/2012

WEIGHT

57.6 lbs

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

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

HOSPITAL NAME

Brighton AH

REFERRING VET

Elizabeth Wetzel, DVM

INVOICE

11848

DATE

10.20.22

PRESENTING CLINICAL SIGNS

Clinical Exam Findings 8-11-22:

Cardiovascular: MM moist and pink, with CRT <2s. Heart rate and rhythm WNL. No murmurs ausculted. Femoral pulses WNL.

Respiratory: No crackles or wheezes noted. No cough on tracheal palpation.

Skin: No visible ectoparasites noted. Lipoma noted left inguinal fold. Small, raised, pink, alopecic masses noted on left lateral abdomen and left pinna.

Eyes: Clear OU, with no ocular discharge noted. PLR WNL OU.

Ears: Clean, with TM visible and intact AU.

Nose: No nasal discharge or obvious FB noted.

Oral cavity: No dental calculus noted. No abnormalities noted on or under the tongue.

Gastrointestinal: Abdomen soft and non-painful. No obvious masses/organomegaly/obstruction noted on abdominal palpation.

Neurologic: Cranial nerve reflexes intact and WNL. No proprioceptive deficits noted.

Musculoskeletal: Ambulatory x 4, with normal gait and range of motion. No palpable orthopedic pain/injuries/swelling noted. No loss of muscle mass or asymmetry noted.

Urogenital: Neutered male. No mammary gland tumors noted. No discharge noted. Prostate is smooth and symmetric.

Peripheral lymph nodes: All palpate normal size.

Behavior: BAR. No behavioral abnormalities noted.

Abnormal lab-work values: ALP has increased to 723 (was 630 in August, 342 in September). TT4 is WNL.

Current Medications: Levothyroxine BID

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** wall is 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 (1.43 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 (7.05 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. Renal vasculature is normal.

The **right kidney** is normal size (7.18 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. Renal vasculature is normal.

Adrenal Glands

The **left adrenal gland** is mildly enlarged (0.96 cm at cranial pole) (0.93 cm at caudal pole); normal shape; smooth peripheral contours. A 0.84 x 0.46 cm hyperechoic nodule is observed at the cranial



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pole. Glandular echogenicity and detail at the caudal pole are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The **right adrenal gland** is mildly enlarged (2.19 cm at cranial pole) (0.90 cm at caudal pole) (3.79 cm in length); 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.

Spleen

The **spleen** is normal in size (2.60 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. Several, ill-defined myelolipomas are observed adjacent to the vasculature. Splenic vasculature is normal.

Liver

The **liver** is normal to slightly prominent in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen with minor changes consistent with age-related remodeling. A 0.85 cm hyperechoic nodule is observed on the left side, at the caudal aspect. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The **gall bladder** lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated, hyperechoic to mineralized, partially dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

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 segmentally dilated with gas. 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. The colonic lumen contains shadowing fecal material. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the **pancreas** is visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic 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

The **peritoneal cavity** is normal. There is no evidence of inflammation or effusion. The abdominal **lymph nodes** are normal/not visible.

Other

A **brief echocardiogram** reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Given the patient's clinical history of an elevated ALT and the sonographic changes, a chronic hepatopathy (i.e., chronic hepatitis, hepatotoxicity (i.e., copper), fibrosis) is suspected. However, concurrent benign change (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy, and/or age-related remodeling) is also possible.



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- The gall bladder sludge is likely a benign incidental finding.

Secondary Findings

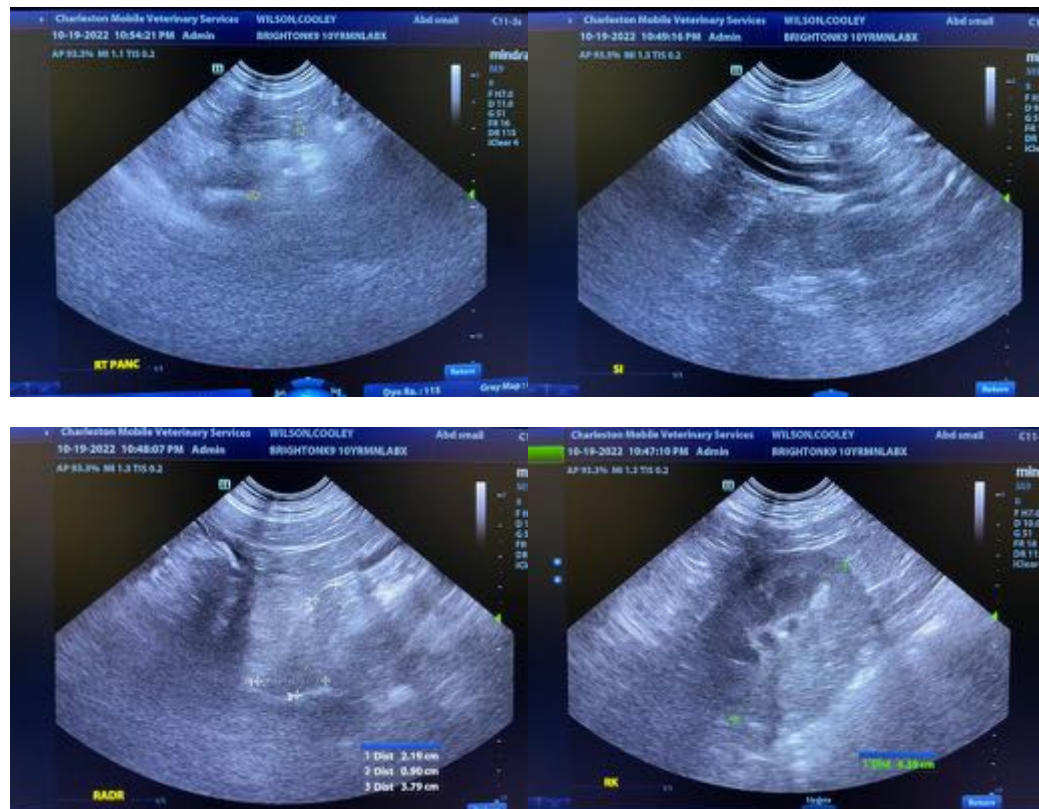
- Mild bilateral adrenomegaly. The left adrenal nodule trends toward the benign (i.e., nodular hyperplasia) with a lower possibility of an emerging tumor.
- Minor bilateral age-related renal changes
- Age-related pancreatic remodeling with fibrosis. Mild chronic pancreatitis is also possible, particularly if the patient's clinical history supports this diagnosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the chronicity of the elevated liver values and the patient breed, laparoscopic or surgical liver biopsies are recommended, along with aerobic and anaerobic bile cultures and copper quantitation.

If a more conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (i.e., broad-spectrum antibiotics, hepatic antioxidants). If the patient's liver enzymes do not improve within 2-3 weeks of initiation therapy, hepatic tissue sampling should be revisited.

Three-view thoracic radiographs and clotting times (PT/PTT) should be performed prior to liver biopsy acquisition.





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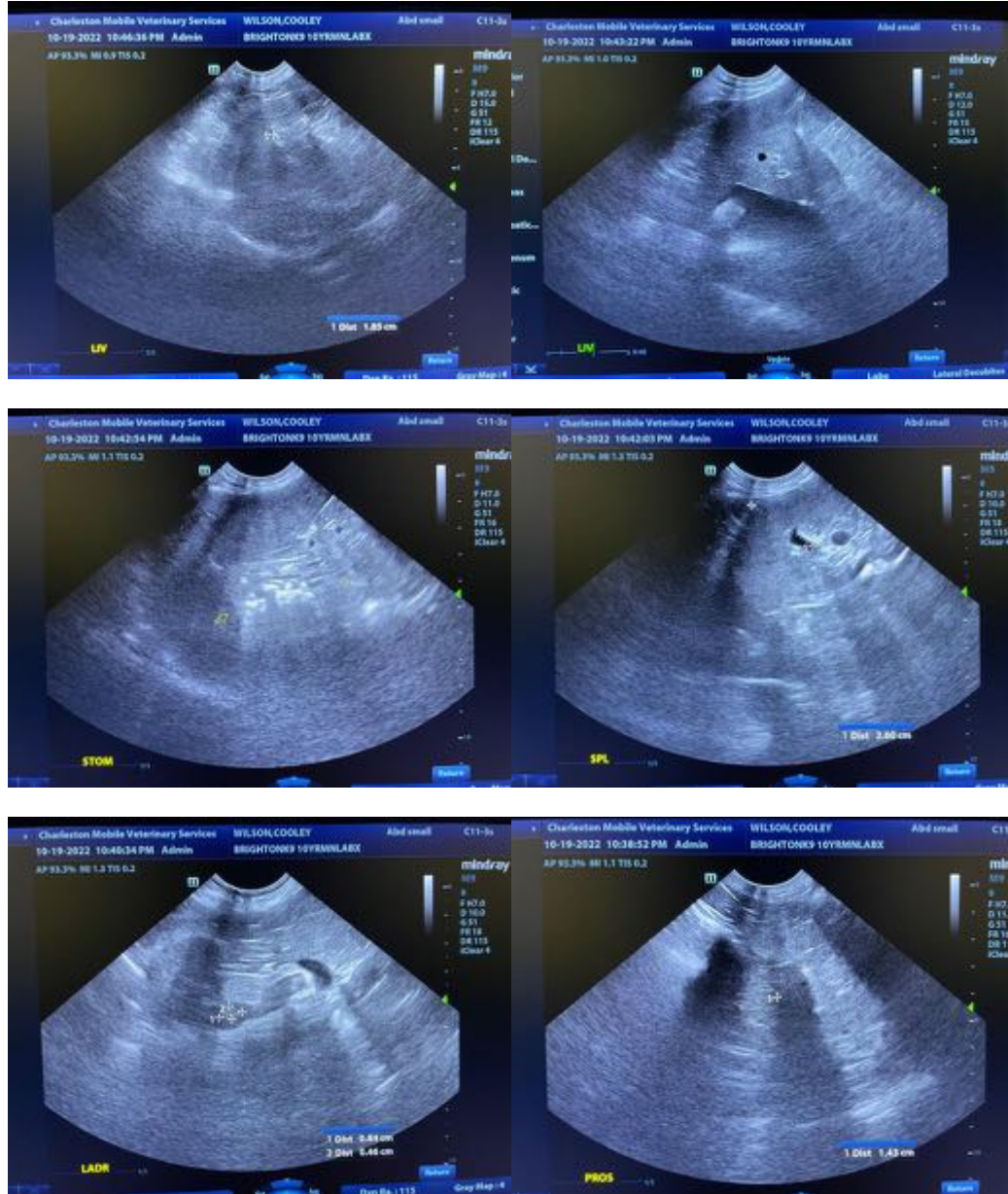
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com