



PATIENT

Sophie Munger

SPECIES

Canine

BREED

Puggle

SEX

Female, spayed

AGE

11 Yrs.

WEIGHT

21 lbs.

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Dr. Calihan

HOSPITAL NAME

Pacific Crest Mobile VS

REFERRING VET

Dr. Boekenoogan

INVOICE

11954

DATE

8/25/21

PRESENTING CLINICAL SIGNS

History: Ultrasound requested following mild elevation ALT 259 (ref 10-125) and t.Bili 1.7 (ref 0-0.9) on 8/4/2021. In-house screening ultrasound by rDVM showed hyper echoic foci in spleen and 1 in liver so full scan was requested. Clinically pt is doing well, was seen on 8/20 for hind limb stiffness and started on Carprofen for that, and Denamarin for liver enzyme elevations.

Abnormal PE/Chem/CBC/UA Results: Alert and ambulatory, very friendly geriatric canine in good coat and body condition, normal vitals today. Sedated for procedure w torb/midaz/dexdom; FNAs liver were taken

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

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 left kidney is normal size (4.48 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. Renal vasculature is normal.

The right kidney is normal size (4.77 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. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.45 cm at cranial pole) (0.43 cm at caudal pole) (1.82 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.

The right adrenal gland is normal size (0.65 cm at cranial pole) (0.36 cm at caudal pole) (1.96 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 (1.38 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 in the region of the hilus. Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Vascular and 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 small amount of suspended echogenic debris is observed within the lumen. There was a subtle increase in portal markings. Hepatic vasculature is of normal volume with no evidence of congestion.



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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 region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

SEX

Free Abdomen

Female, spayed

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

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ULTRASONOGRAPHIC FINDINGS

WEIGHT

21 lbs.

Primary Findings:

- Diffuse hepatopathy. Differentials include inflammatory disease (i.e., chronic active hepatitis, cholangiohepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia (unlikely) +/- concurrent benign age-related change.

Secondary Findings:

- Splenic myelolipomas.
- Minor bilateral age-related renal changes.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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- If the hepatic cytologies are inconclusive, consider pre and post prandial serum bile acids +/- surgical liver biopsies with aerobic and anaerobic cultures and acquisition of additional hepatic tissue samples for potential copper quantitation.
- If the liver value elevations are acute in nature, consider leptospirosis testing (i.e., blood and urine PCR, serology).
- Given the patient's age, three-view thoracic radiographs should be performed prior to anesthesia.

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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.

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

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