



**PATIENT PRESENTING CLINICAL SIGNS**

Nala Herman Reason for Visit: vomiting

**SPECIES**

Canine

**BREED**

Schnauzer

**SEX**

Female, spayed

**AGE**

10 yrs.

**WEIGHT**

15 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Michaleen

**HOSPITAL NAME**

DPCVH

**REFERRING VET**

Dr. Feldt

**INVOICE**

13489

**DATE**

7/5/22

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone is normal.

The left kidney is normal size (5.20 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (5.58 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

*Adrenal Glands*

The left adrenal gland is normal size (0.55 cm at cranial pole) (0.59 cm at caudal pole) (2.95 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 evaluated. No obvious pathology is observed in this region.

*Spleen*

The spleen is subjectively normal in width (1.58 cm in width at the level of the hilus) with folded contour and undulating medial margin. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

*Liver*

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and slightly heterogeneous 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 distended. The wall appears normal to slightly thickened (up to 0.21 cm). A large amount of aggregated echogenic suspended sludge in a stellate pattern is observed within the lumen. The mesentery adjacent to the gallbladder is hyperechoic. A small amount of fluid is also observed in this region. The cystic and common bile ducts are normal/not seen.

*Gastrointestinal*

The gastric lumen is mildly distended with ingesta/fluid. 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 fluid (mild). The small intestinal wall thickness is normal with a normal



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layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The lumen of the descending colon contains firm fecal material. No obstructive disease is noted.

**Pancreas**

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The left limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat. No distinct focal lesions are observed. The pancreatic duct is visible but not overtly dilated (0.22 cm in diameter).

**BREED**

Schnauzer

**Free Abdomen**

A small to moderate amount of anechoic free fluid is present. The mesentery in the cranial abdomen is mildly hyperechoic. The abdominal lymph nodes are normal/not visible.

**SEX**

Female, spayed

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

10 yrs.

**Primary Findings:**

- The gallbladder changes are consistent with a fully-formed mucocele with adjacent peritonitis. Although the gallbladder wall appears intact, there is a possibility of a small rupture or impending rupture. Concurrent cholecystitis is also suspected.
- Non-specific diffuse hepatopathy. Changes could be consistent with inflammatory disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), hepatotoxicosis (i.e., copper), other hepatopathy +/- concurrent age-related change (i.e., regenerative nodular hyperplasia or vacuolar hepatopathy). Correlation with the patient's liver values is recommended.

**WEIGHT**

15 lbs.

**Secondary Findings:**

- Minor age-related renal changes.
- The pancreatic changes may be a normal variant for this patient or could be consistent with mild pancreatitis.

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Medicine)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- A cholecystectomy with submission of the gallbladder for histopathology is recommended along with a liver biopsy. If surgery is pursued, thoracic radiographs and clotting times are recommended in advance. Referral to a board-certified surgeon is recommended due to the potential for perioperative complications.
- If surgery is not pursued, initiation of Ursodiol as well as broad spectrum antibiotic therapy (for cholecystitis) is recommended with close sonographic monitoring (i.e., every 3-4 weeks) of the gallbladder to assess for progression. If this approach is pursued, the client must be warned of the risks of gallbladder rupture with subsequent bile/septic peritonitis.

**IMAGING PERFORMED BY**

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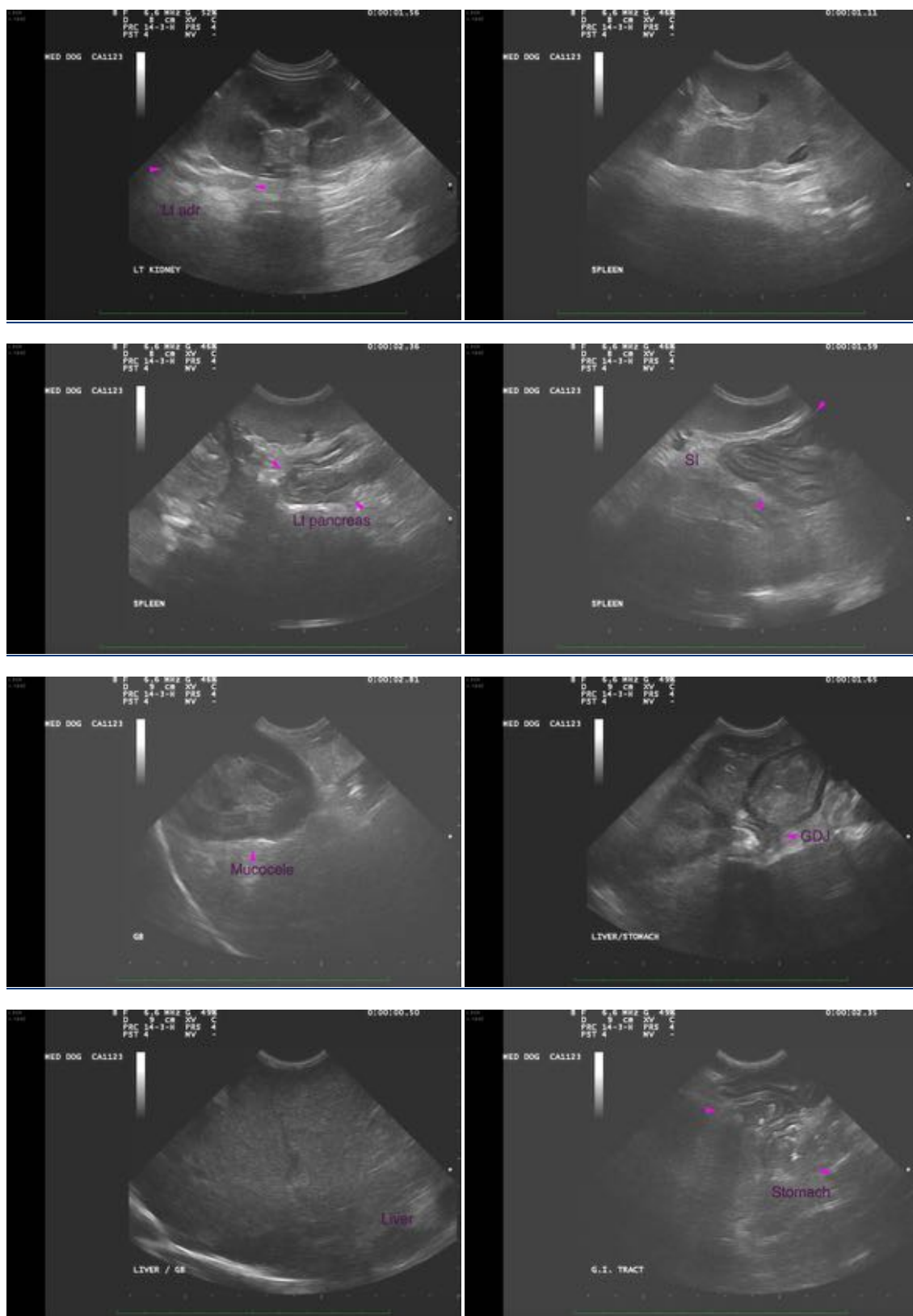
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The information and recommendations provided are based on the images presented by the referring



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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.

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Andrea.nicastro@sonopath.com

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