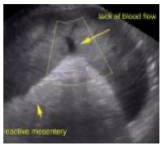
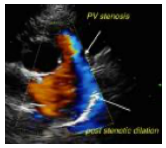
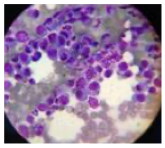
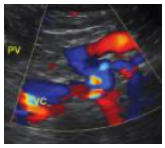
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Lola Merritt

SPECIES
Canine

BREED
Maltipoo

SEX
Spayed Female

AGE
10 years

WEIGHT
13.2 lbs

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

IMAGING PERFORMED BY
Kelly Vazquez

HOSPITAL NAME
Animal General on Hudson

REFERRING VET
Dr. Vivian Ng

INVOICE
11780

DATE
10.5.22

PRESENTING CLINICAL SIGNS

History: Elevated liver enzymes. Current med: levothyroxine.
Abnormal PE/Chem/CBC/UA Results: Globulin 5.1, ALT 187, ALP 749, chol. 484.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

One still image and one video clip of the **urinary bladder** is available for interpretation. The urinary bladder is mildly distended. The wall is of appropriate thickness for the level of repletion. The mucosal surface in the region of the apex is slightly irregular. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The **left kidney** is normal size (4.12 cm in length); normal shape and architecture with smooth peripheral contours. The cortex is mildly heterogenous. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The **right kidney** is normal size (4.13 cm in length); normal shape and architecture with smooth peripheral contours. The cortex is mildly heterogenous. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The **left adrenal gland** is normal size (0.35 cm at cranial pole) (0.44 cm at caudal pole) (1.42 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 mildly enlarged (0.80 cm at cranial pole) (0.68 cm at caudal pole) (1.72 cm in length); normal shape and smooth peripheral contours. The parenchyma is mildly heterogenous with some loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The **spleen** is normal in size (0.94 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 swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

The **gall bladder** is distended. The wall is normal in thickness. A large amount of aggregated, echogenic partially dependent to suspended sludge, in a partially stellate pattern 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 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. There is no evidence of an obstructive pattern.

Pancreas
The region of the left limb is largely isoechoic relative to surrounding omental fat. No obvious abnormalities are seen. (See also "Other" category).

Free Abdomen
No obvious evidence free fluid.

Lymph nodes
See "Other" catogory

Other
A 4.82 x 2.15 cm echogenic mass effect is observed in the right cranial abdomen.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Mass in the right cranial abdomen, the origin of which is unclear. It may be arising from pancreas, mesentery, liver, lymph node, other. Top differentials include neoplasia, inflammatory focus, granuloma, other.
- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- The gall bladder changes are consistent with an emerging mucocele.

Secondary Findings

- Bilateral age-related renal changes with dystrophic mineralization.
- The right adrenal changes are most consistent with hyperplasia with a lower possibility of an emerging tumor.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Regarding the mass sin the right cranial abdomen, consider the following:

1. Chest x-rays to assess for pulmonary metastatic disease
2. A fine-needle aspirate of the mass if clotting status is appropriate. A 25-gauge needle should be used. If cytology results are inconclusive, surgical removal with submission for histopathology may be necessary to get a definitive diagnosis. An abdominal CT scan would be useful in presurgical planning.

Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) at 10-15 mg/kg once a day is recommended. Serial sonographic monitoring (e.g., every 6-8 weeks) of the gall bladder is recommended to assess for progression to a fully formed mucocele.

Given the hyperglobulinemia, a serum protein electrophoresis can be considered.

Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdomen ultrasound +/- a more advanced hepatic work-up (i.e., tissue sampling) may be

warranted.

Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop.

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