SonoPath
Clinical Sonography & Telecytology
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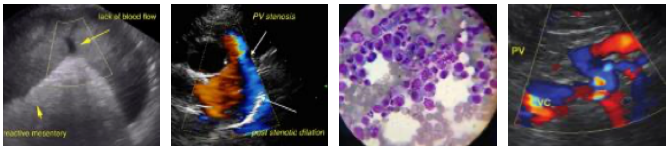


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Shadow Hayes

SPECIES
Canine

BREED
Mixed breed

SEX
Female, spayed

AGE
15.5 Yrs.

WEIGHT
36.6 lbs.

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

IMAGING PERFORMED BY
Dr. Tam Megnine

HOSPITAL NAME
Stoney Creek VH

REFERRING VET
Dr. Tam Mengine

INVOICE
12380

DATE
10/19/21

PRESENTING CLINICAL SIGNS

History: Elevations in liver values noted on annual labwork, pet is asymptomatic - ALT 230 (76 in 2020), ALP 1490 (266 in 2020)

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 (5.09 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Hyperechoic shadowing diverticular foci are visualized. 2-3 cortical cysts are present. The larger cyst, which is at the caudal pole, is septated. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (7.02 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.

Adrenal Glands

The left adrenal gland is borderline enlarged (0.56 cm at cranial pole) (0.72 cm at caudal pole) (1.85 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 (0.96 cm at cranial pole) (0.54 cm at caudal pole) (1.80 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.

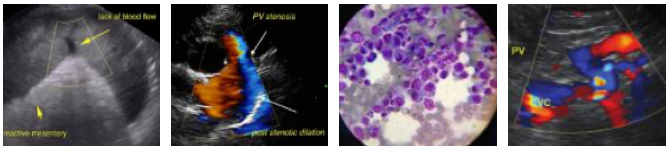
Spleen

The spleen is normal in size (1.76 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance. Several irregular hyperechoic nodules are observed throughout the organ, mainly at the medial aspect. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with normal curvilinear peripheral contours. The parenchyma is hyperechoic relative to the spleen and diffusely mottled in appearance with numerous small, ill-defined hypoechoic nodules throughout the organ. A 1.29 x 1.13 cm anechoic cyst is observed in the left lateral lobe. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is distended. The wall is normal in thickness. A large amount of aggregated echogenic partially dependent debris/sludge is observed within the lumen. 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 segmentally dilated with gas and chyme. The small intestinal wall thickness is normal with a normal layering pattern. There is evidence of mucosal speckling in some segments. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

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.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The left medial iliac lymph node is visible measuring 1.32 cm in length.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

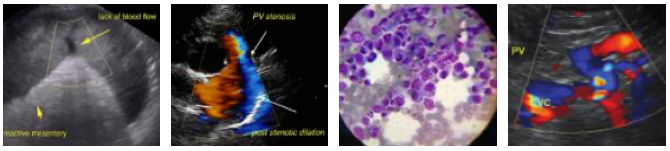
- The hepatic parenchymal changes are non-specific and could be secondary to benign pathology (i.e., regenerative nodular hyperplasia, age-related remodeling, vacuolar hepatopathy). Alternatively, infiltrative neoplasia (i.e., round cell tumor) is possible. Given the disproportionate elevation in ALP compared to the ALT, inflammatory disease is considered less likely.
- Gallbladder sludge, non-mucocele.

Secondary Findings:

- The splenic parenchymal changes trend toward the benign (i.e., extramedullary hematopoiesis or lymphoid hyperplasia with myelolipomas. Neoplasia is possible but considered unlikely.
- Borderline left adrenomegaly.
- Bilateral age-related renal changes.
- The small intestinal mucosal speckling is occasionally associated with enteritis/inflammatory bowel disease. However, correlation with clinical findings is recommended.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Consider a fine needle aspirate of the liver to further evaluate for infiltrative neoplasia. A 25-gauge needle should be used for aspiration. Clotting times should be assessed prior to the procedure. If cytology results are inconclusive and an aggressive approach is desired, a surgical liver biopsy with aerobic and anaerobic bile cultures as well as acquisition of additional hepatic tissue samples for potential copper quantitation can be considered. Alternatively, if a more conservative approach is desired, consider rechecking liver values in 2-3 months to assess for progression. If the values have increased at that time, repeat abdominal imaging +/- hepatic tissue sampling may be warranted.



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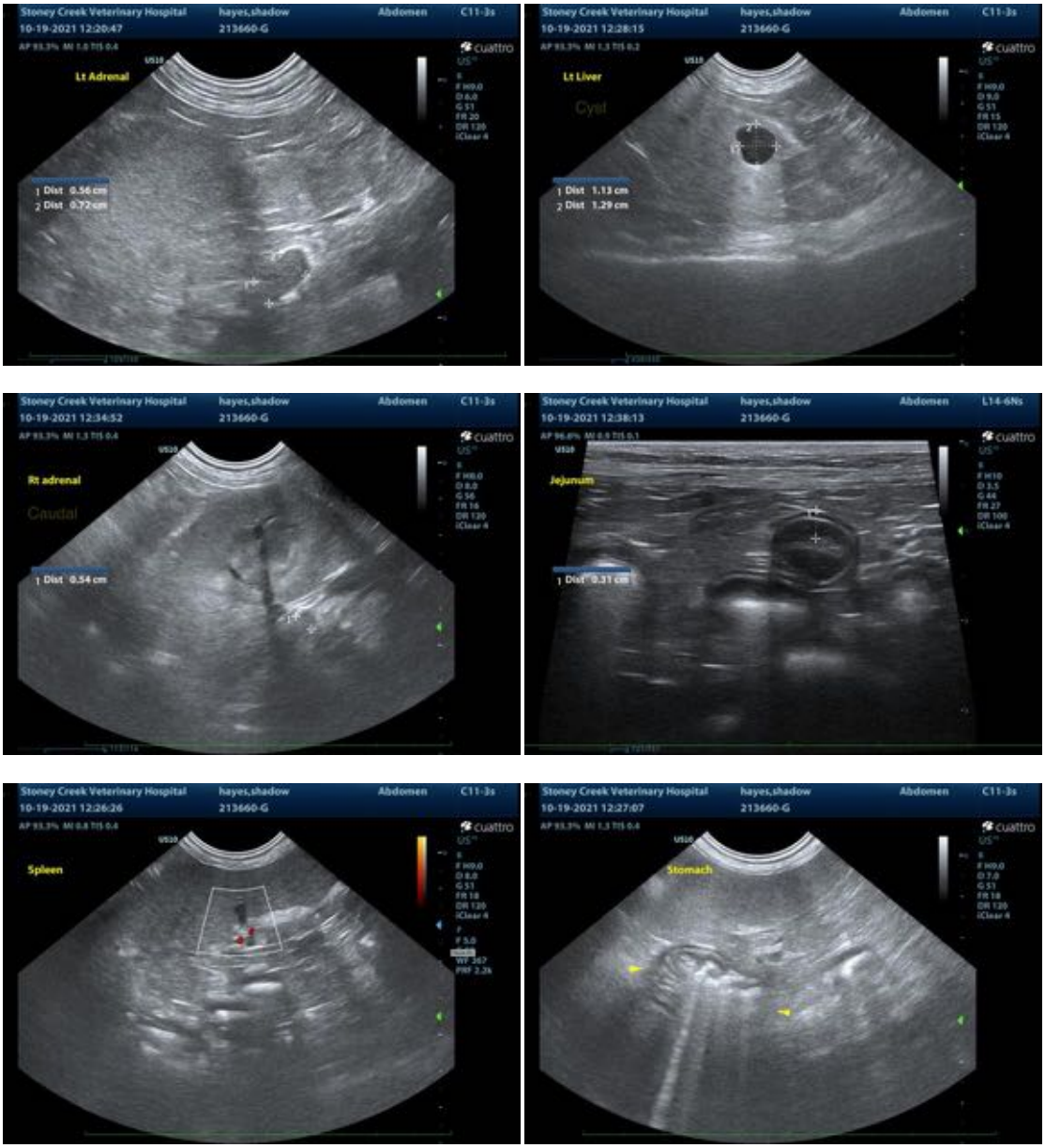
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.
- Three-view thoracic radiographs can also be considered to assess cardiopulmonary status, particularly given the patient's age.



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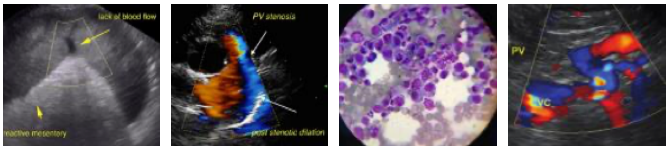

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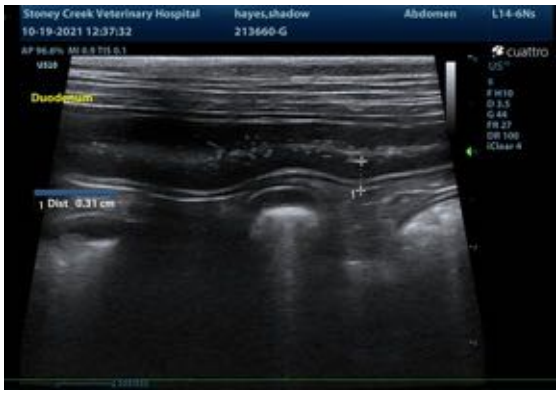

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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