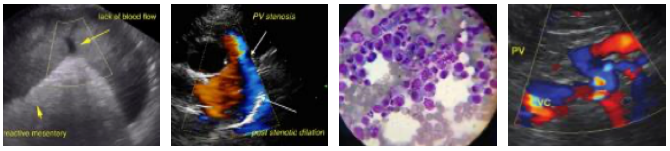
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Cristal Rivera

SPECIES
Canine

BREED
Maltese

SEX
Female, spayed

AGE
10 Yrs.

WEIGHT
9 lbs.

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

IMAGING PERFORMED BY
Dr. Ferrer

HOSPITAL NAME
Paseos VC

REFERRING VET
Dr. Trinidad

INVOICE
14799

DATE
4/11/23

PRESENTING CLINICAL SIGNS

History: Patient presented as a referral for an abdominal ultrasound complaint of a distended abdomen. Tx furosemide
Abnormal PE/Chem/CBC/UA Results: Hyperproteinemia Radiographs show hepatomegaly.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended. The wall is normal in thickness with a smooth mucosal surface. A few small cystic calculi are observed within the lumen. The remaining luminal contents are anechoic. The region of the trigone is normal. At least one small ureterolith is observed in the proximal urethra.

The left kidney is normal in size (3.42 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few small, non-obstructive nephroliths are visualized. There is no evidence of infarcts or hydroureter. At least one small cortical cyst is seen.

The right kidney is normal in size (3.66 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. The cortex is isoechoic relative to the spleen. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis.

Adrenal Glands

The left adrenal gland is normal to slightly small in size (0.29 cm at cranial pole) (0.30 cm at caudal pole) with a normal shape and smooth peripheral contours. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

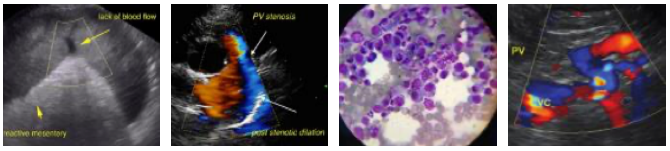
The right adrenal gland is normal size (0.44 cm at cranial pole) (0.37 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (0.99 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance. A 0.42 cm hypoechoic nodule is observed near the medial aspect. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic to slightly hypoechoic relative to the spleen and subtly heterogeneous in appearance. A 0.73 cm cyst is observed deep on the left side. 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 scant amount of echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.



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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 ileocecocolic junction and colonic wall are normal. No obstructive disease is noted.

Pancreas

The right limb of the pancreas is normal in size with normal curvilinear peripheral contours. The parenchyma is largely isoechoic 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

There is no obvious evidence of free fluid. A few prominent mesenteric lymph nodes are visualized, the largest measuring 1.67 cm in length. The nodes are normal in shape and echogenicity.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- 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. However, correlation the patient's liver values is recommended.
- Small cystic and proximal urethral calculi.

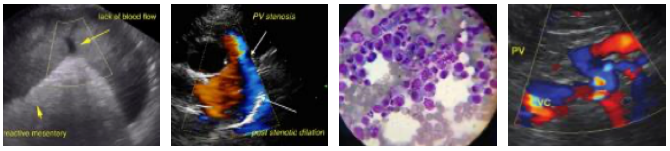
Secondary Findings:

- Bilateral, chronic renal changes with non-obstructive nephrocalcinosis.
- The splenic changes, including the small hypoechoic nodule, trend toward the benign (i.e., lymphoid hyperplasia or similar) with a lower possibility of emerging neoplasia (i.e., round cell tumor).
- Minor age-related pancreatic remodeling.
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.

*There is no obvious evidence of free fluid in the abdomen. The abdominal distention may be secondary to hepatomegaly and/or fat re-distribution.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Depending on the degree of hypoproteinemia, further workup may be warranted and could include the following:
    1. A fecal evaluation for ova/Giardia



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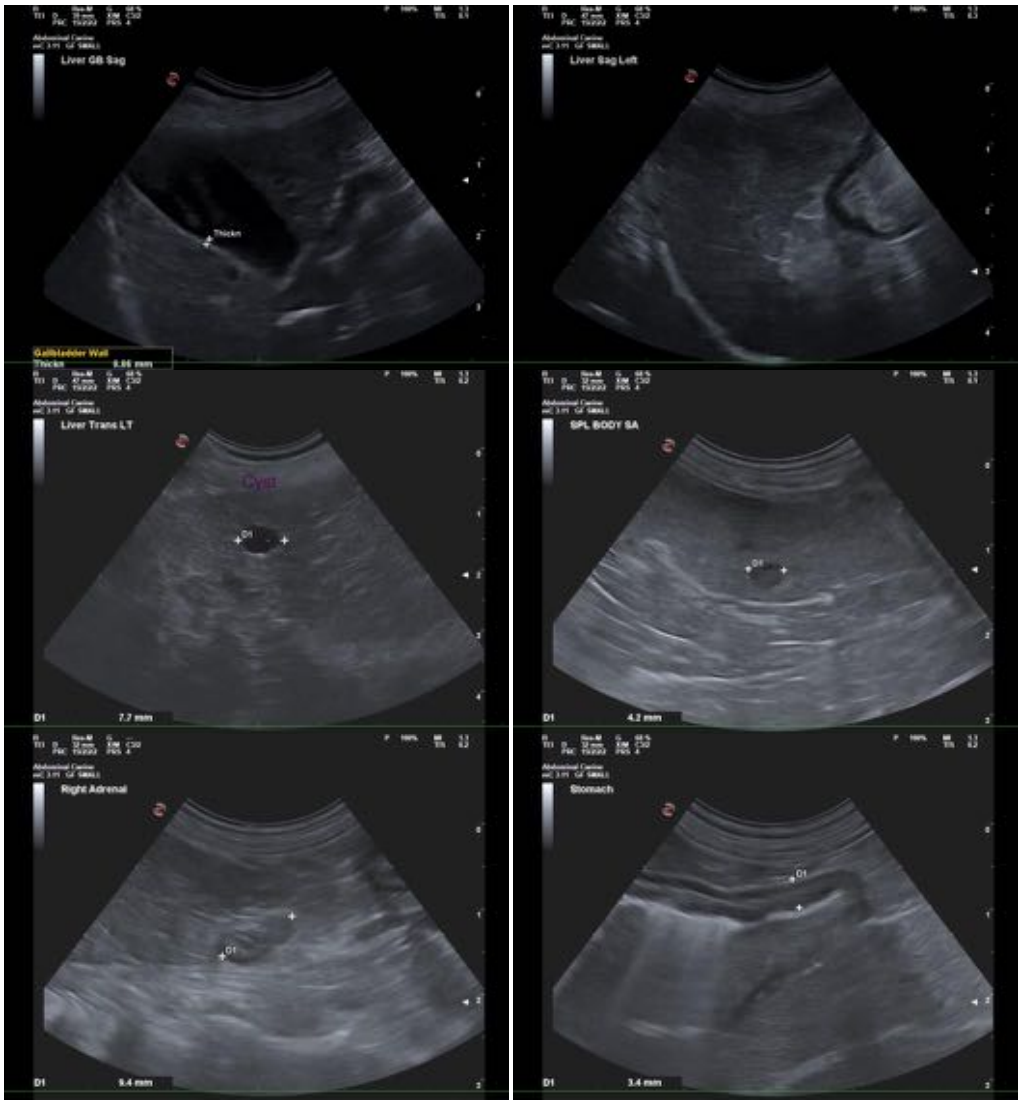
2. Pre and post prandial serum bile acids
3. UPC
4. Resting cortisol level
5. +/- GI biopsies

- Given the abdominal distention, also consider a T4/free T4 by equilibrium dialysis to assess for hypothyroidism.
- 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.
- A cystotomy with stone removal, analysis and culture is recommended. Alternatively, medical dissolution of the stones can be considered with a prescription renal diet and broad-spectrum antibiotic therapy. If there is no improvement in stone size after 4 weeks of therapy, a cystotomy should be reconsidered. If the stone size is reduced, continue therapy until complete dissolution has been achieved.



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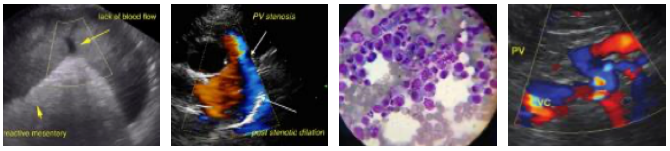

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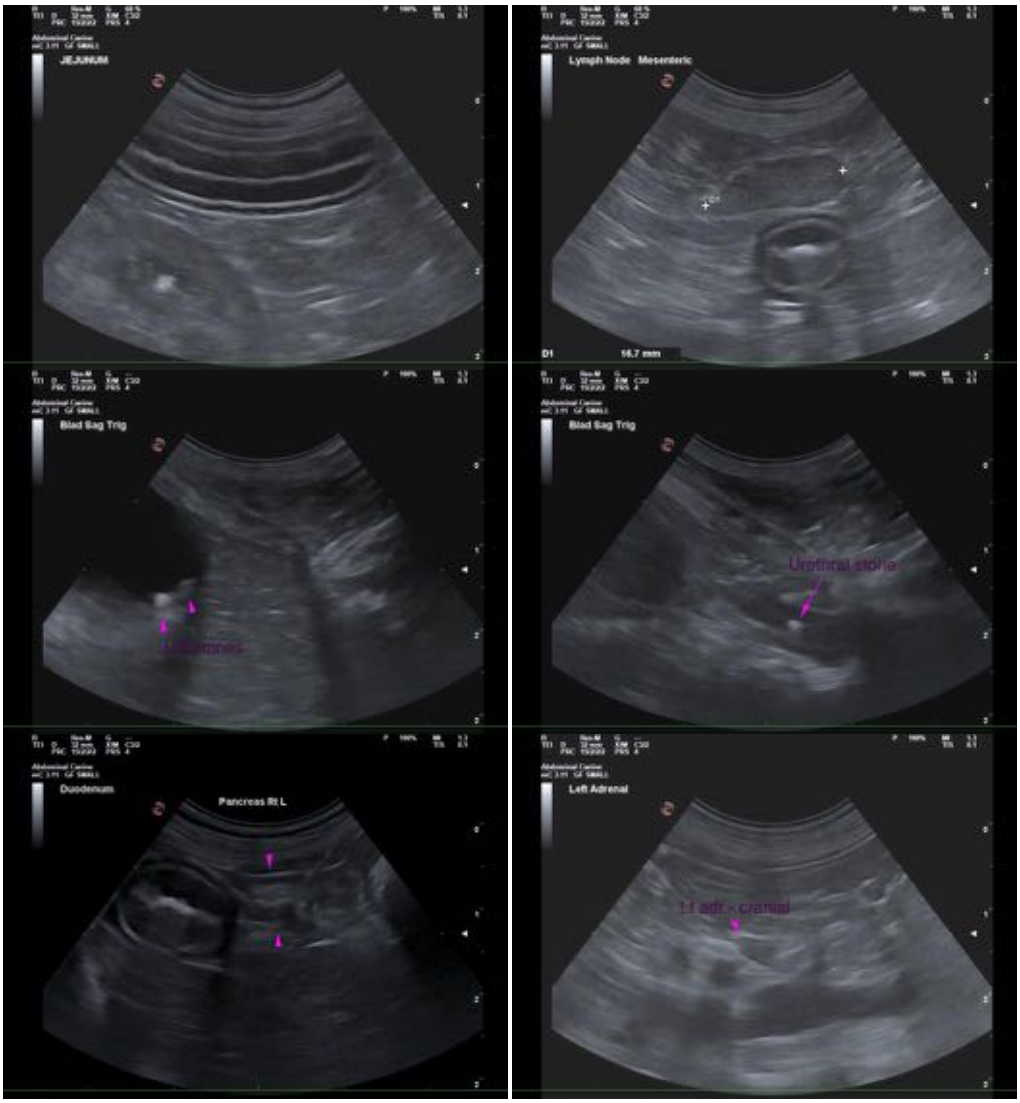

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
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