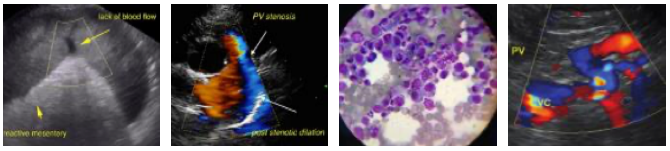
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

**PATIENT**
Molly Arma

**SPECIES**
Canine

**BREED**
Maltese

**SEX**
Female, spayed

**AGE**
14 Yrs.

**WEIGHT**
6.1 lbs.

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

**IMAGING PERFORMED BY**
Dr. Logas

**HOSPITAL NAME**
Bradentown VH

**REFERRING VET**
Dr. Logas

**INVOICE**
15201

**DATE**
8/21/23

## PRESENTING CLINICAL SIGNS

History: Pet has been gradually losing wt. She drinks a lot of water. Owner feeds her mostly chicken breast with steak. There is dry Pedigree available but she does not eat much of it. Blood work was done at another veterinarian approx 6 wks ago. The liver enzymes were elevated so she was prescribed Denamarin. She came to us for recheck.
Abnormal PE/Chem/CBC/UA Results: BCS 3/9, mature cataracts bilateral, Chemistry 8/9/23 AST 328, ALT 739, ALP 338, BUN 36, Ct 1.1, Urine spgr. 1.036 CBC WNL

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder wall is moderately distended. A 0.84 x 0.60 cm irregular echogenic nodule/mass is observed in the region of the trigone. The remaining wall is normal in thickness with a smooth mucosal surface. A small amount of suspended echogenic debris is observed within the lumen. No cystic calculi are seen.

The left kidney is normal size (3.69 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (4.16 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is prominent at the cranial pole and normal in size at the caudal pole (0.61 cm at cranial pole) (0.47 cm at caudal pole). The glandular echogenicity and detail are unremarkable. The phrenicoabdominal vein and surrounding vasculature are normal.

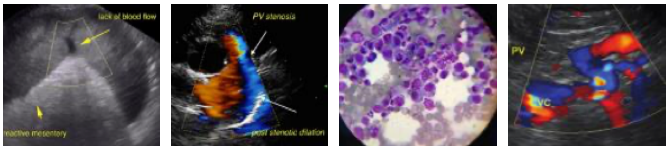
The right adrenal gland is normal size (0.53 cm at cranial pole) (0.50 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

### *Spleen*

The spleen is normal in size (0.96 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 normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The portal vein to caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is normal in thickness. Several polypoid like lesions are arising from the luminal surface. A small amount of aggregated echogenic partially dependent sludge 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 colonic wall is normal. No obstructive disease is noted.

### *Pancreas*

The right limb of the pancreas is visible 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*

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

## ULTRASONOGRAPHIC FINDINGS

**Primary Findings:**

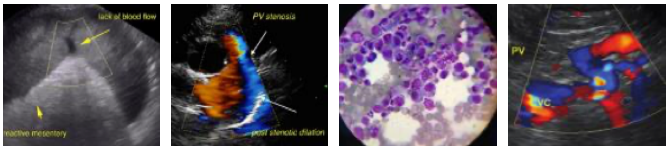
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) is suspected.
- Mild gallbladder sludge, non-mucocele.
- The urinary bladder lesion in the region of the trigone could be consistent with neoplasia (i.e., transitional cell carcinoma), inflammatory focus (i.e., polypoid cystitis), other.

**Secondary Findings:**

- Minor age-related pancreatic remodeling.
- Bilateral, chronic age-related renal changes.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Pre and post prandial serum bile acids are recommended to assess hepatic function.
- Consider Leptospirosis testing (i.e., blood and urine PCR, serology), particularly if clinical suspicion for disease is high.
- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation. Three-view thoracic radiographs are recommended prior to any anesthetic event.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis with amoxicillin-clavulanic acid along with hepatic antioxidants. If liver values do not begin to



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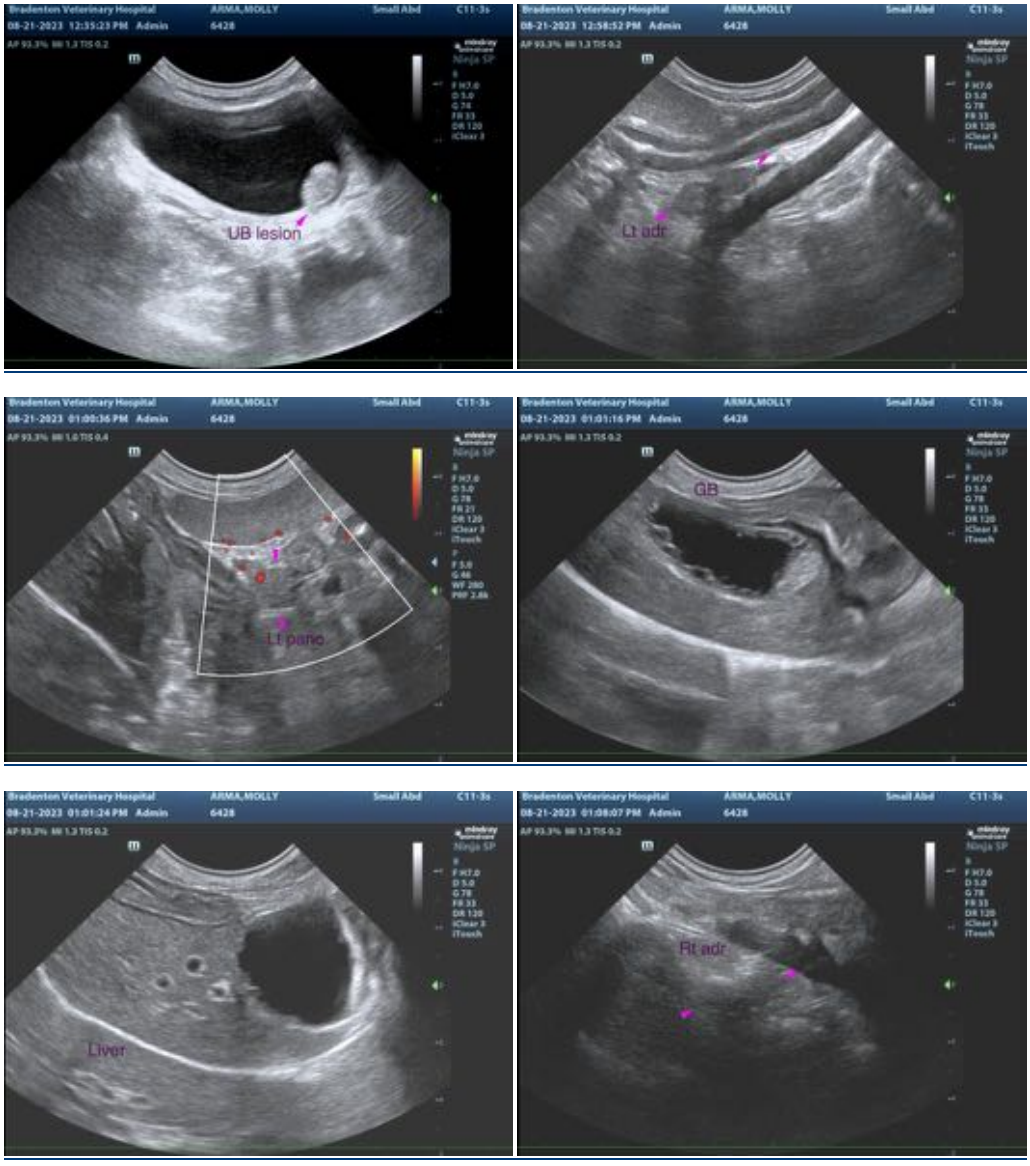
improve within 7-10 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling reconsidered. If values do improve, a 4–6-week course of treatment is recommended.

- Regarding the urinary bladder wall lesion, consider a urine BRAF test to further evaluate for lower urinary tract neoplasia. It should be noted that a positive result confirms cancer. However, a negative result does not rule out neoplasia and further testing (i.e., biopsies) may be necessary to get a definitive diagnosis.




**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

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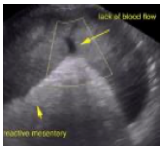
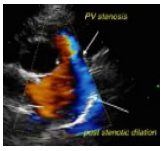
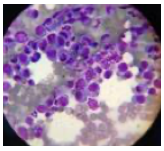
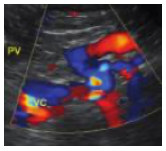

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can be of any further assistance please contact me.

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