



## PATIENT

Ashlee Smith

## SPECIES

Canine

## BREED

Toy Poodle

## SEX

Spayed Female

## AGE

04/02/2007

## WEIGHT

3.17 lbs

## INTERPRETED BY

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

## IMAGING PERFORMED BY

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

## HOSPITAL NAME

Blue Pearl Vet Emerg.

## REFERRING VET

Dr. McFadden

## INVOICE

10652

## DATE

4/4/22

## PRESENTING CLINICAL SIGNS

Clinical Exam Findings/Hx: P is a 15yo FS presenting with lethargy and being wobbly and shaky with an elevated temperature. O went away over the weekend and came home to P seeming a bit off.

Lethargy increased over the course of the week. rDVM gave fluids and ran some bldwk. Seemed to perk up after fluids but has declined since. Bldwk shows increased kidney values (see attached). P has not eaten much today. Just meds in cheese. 1/2 12.5mg Lasix SID, Enalapril 2.5mg SID and 1cc Clindimycin at 2pm. UTD vac

Pet has not gotten any heart meds due to renal values being elevated and lack of significant heart murmur.

Abnormal labwork Values: ALKP 545, ALT 910 Creat 3.3 BUN 82

Current Medications: Cerenia 1mg/kg IV SID Famotidine 1mg/kg IV BID unasyn 30mg/kg IV TID buprenorphine 0.015mg/kg IV Q8H

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder is moderately distended. A 0.87 cm irregular, echogenic nodule is observed along the caudal dorsal wall, just cranial to the region of the trigone. The remaining bladder wall is normal in thickness with a smooth mucosal surface. A scant amount of echogenic debris is suspended within the lumen. No cystic calculi are observed. The visualized portion of the proximal urethra is normal.

The left kidney is normal size (3.19 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. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (3.25 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

### Adrenal Glands

The left adrenal gland is normal size (0.40 cm at cranial pole) (0.38 cm at caudal pole) (1.00 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 (0.37 cm at cranial pole) (0.30 cm at caudal pole) (1.28 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 (0.93 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



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The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and homogenous in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. 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 small intestinal lumen is not dilated. The small intestinal wall thickness is normal (xxx cm) with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative 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 abdominal lymph nodes are normal/not visible.

**Other**

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

**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)) cannot be excluded.
- The urinary bladder nodule could be consistent with neoplasia (i.e., transitional cell carcinoma) or polypoid cystitis. If the patient has a history of chronic urinary tract infections, polypoid cystitis would be more likely.
- Gravity dependent, non-mucocele
- Minor, nonspecific renal changes

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Regarding the elevated liver enzymes and azotemia, Leptospirosis testing (i.e., blood and urine PCR, serology), should be considered. Also consider pre-and postprandial serum bile acids as



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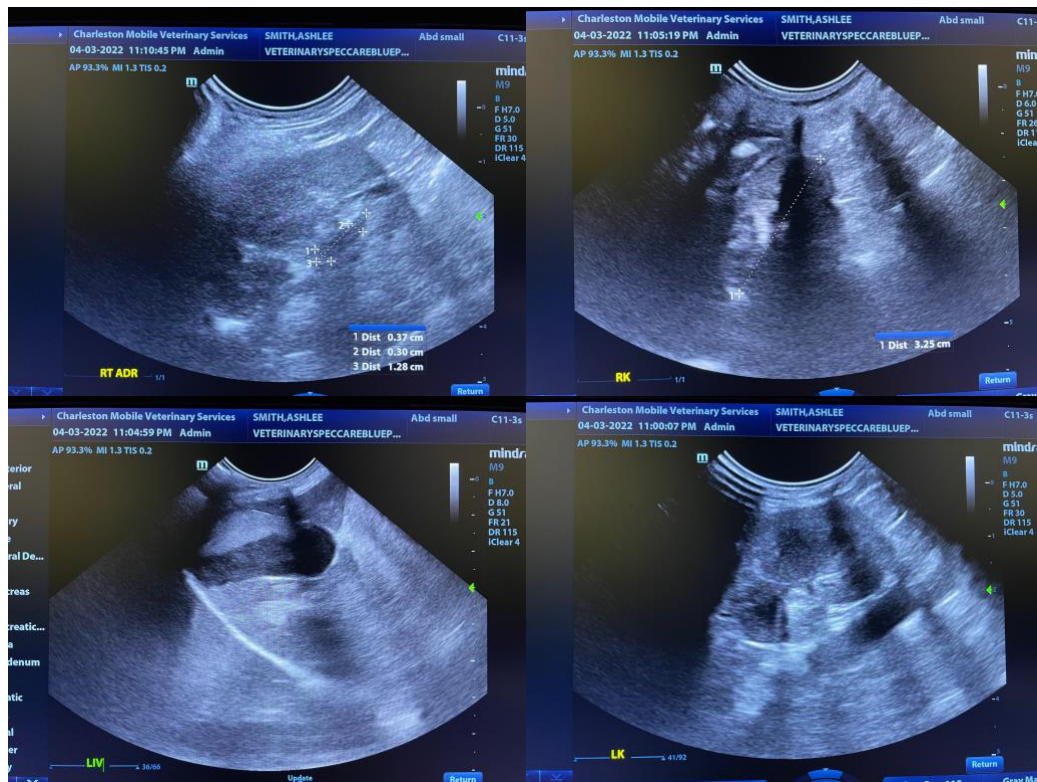
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well as hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy). Surgical biopsies are preferred in that they are more likely to be representative of global organ pathology. If biopsies are pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation are recommended.

- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, +/- metronidazole, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
- Given the patient's age, three-view thoracic radiographs are recommended to assess cardiopulmonary status.
- Regarding the urinary bladder nodule, consider a urine BRAF test to further assess for lower urinary tract neoplasia. If results are negative, biopsy/removal of the lesion may be necessary to get a definitive diagnosis.





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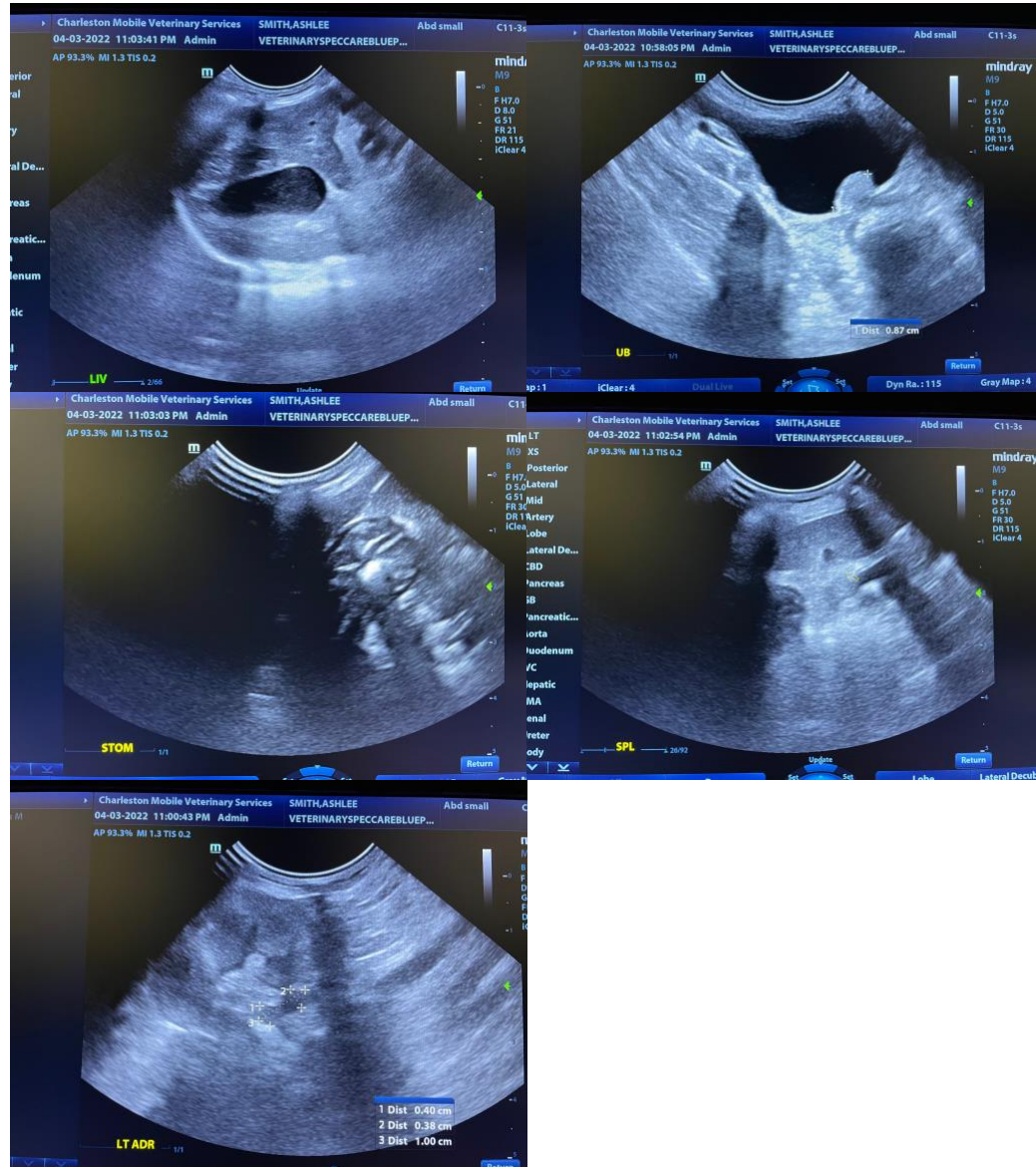
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
info@SonoPath.com