



**PATIENT**

Harper Armstrong

**SPECIES**

Canine

**BREED**

Bichon Frise

**SEX**

Intact Male

**AGE**

1 Year

**WEIGHT**

8 Lbs.

**INTERPRETED BY**

Andrea Nicastro, DMV,  
Diplomate DACVIM  
(Small Animal  
Internal Medicine)

**IMAGING PERFORMED BY**

Focused Ultrasound  
Resources

**HOSPITAL NAME**

Focused Ultrasound  
Resources

**REFERRING VET**

Living Springs

**INVOICE**

12780

**DATE**

12/2/21

**PRESENTING CLINICAL SIGNS**

History: routine labs run prior to neuter; abnormal  
Abnormal PE/Chem/CBC/UA Results: labs (11/24) PRE: ALT: 330, BA: 41, GGT: 11 POST: ALT: 318, BA: 74

**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 2.0 cm, are normal.

The prostate is enlarged (2.67 cm in width) with a normal shape and smooth peripheral contours. The parenchyma is hyperechoic. No focal lesions are observed. The prostatic urethra is not overtly dilated.

The left kidney presented normal size (3.99 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney presented normal size (4.45 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**Adrenal Glands**

The caudal pole of the left adrenal gland is visualized and is normal in size (0.35 cm in width) with a normal shape, glandular echogenicity and detail. Surrounding vasculature appears normal.

The right adrenal gland is normal size (0.49 cm at cranial pole) (0.34 cm at caudal pole) (1.38 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 (1.16 cm 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 curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Intrahepatic biliary tracts are normal. The portal vein to caudal vena cava ratio is <1:1 (0.47 to 0.67).

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.



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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 small intestinal lumen is not dilated. The small intestinal wall thickness is normal (0.24 cm) with a normal layering pattern and appropriate mural detail. Discrete 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 Other**

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

The testicles are subjectively normal in size and symmetrical with smooth peripheral contours and homogeneous parenchyma. Both are descended into the scrotum. The left testicle measures 1.48 cm x 1.41 cm. The right testicle measures 1.47 cm x 1.40 cm.

**ULTRASONOGRAPHIC FINDINGS**

- The portal vein to caudal vena cava ratio raises concern for the possibility of a congenital portosystemic shunt. This cannot be definitively confirmed. However, given the normal urine size and lack of renomegaly or urolithiasis, portal vein hypoplasia/microvascular dysplasia or primary parenchymal disease are also considerations.
- The prostate changes are most consistent with benign prostatic hyperplasia.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- To further evaluate for a portosystemic shunt, a contrast abdominal CT scan is recommended. If normal, a liver biopsy may be necessary to get a definitive diagnosis.





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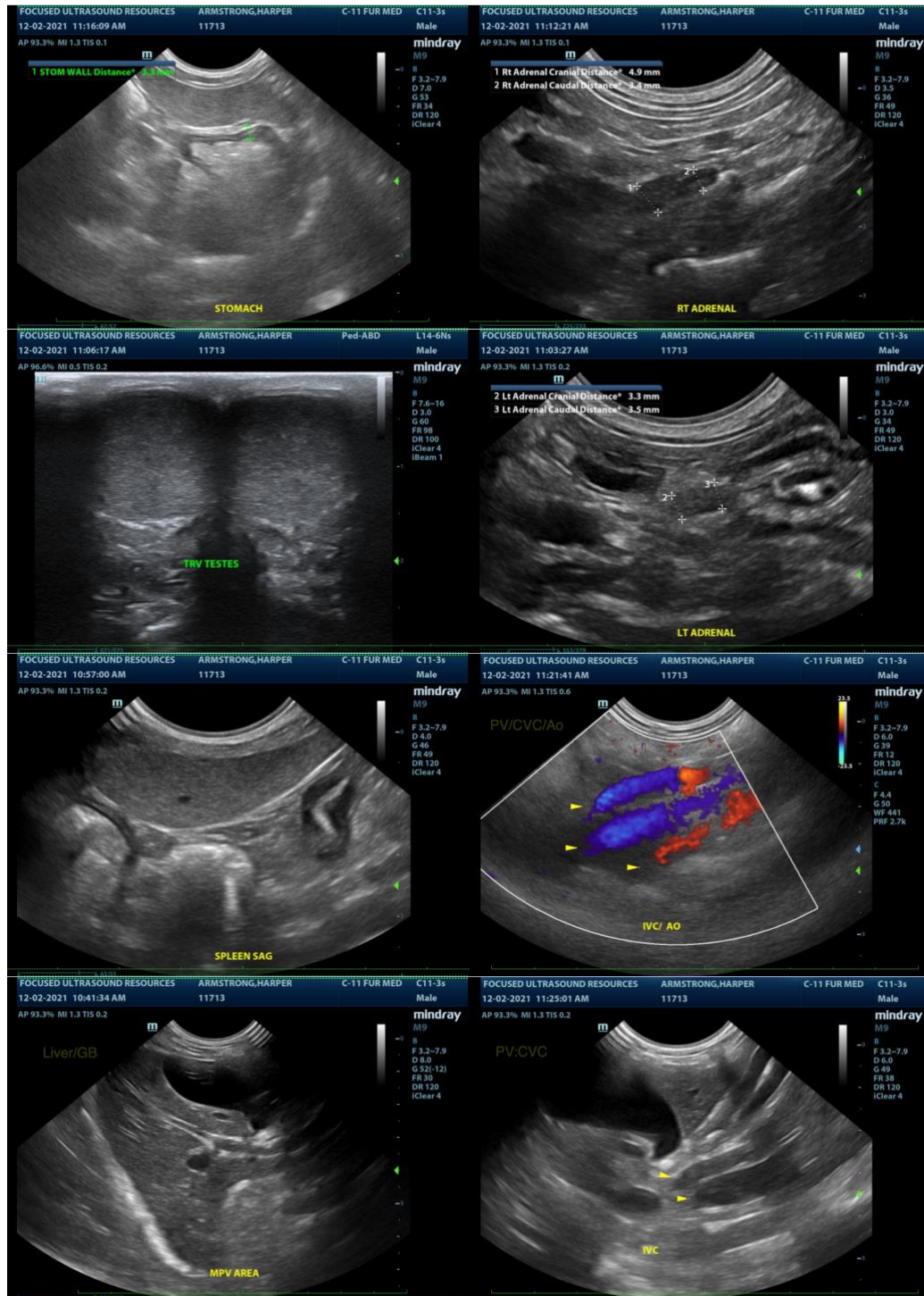
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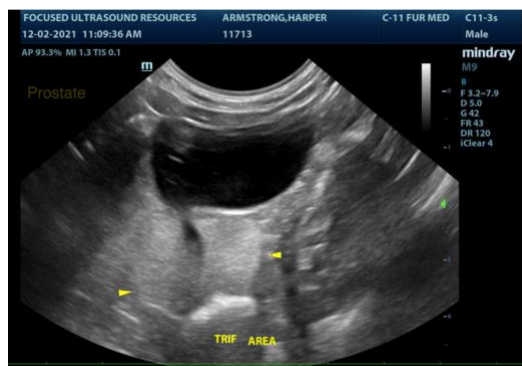
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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 DACVIM (Small Animal Internal Medicine)  
info@SonoPath.com