**PATIENT**

Axl Brubaker

**PRESENTING CLINICAL SIGNS**

History: Cushing's. Currently taking trilostane.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: (03/11/2022) U/A: USG 1.012 and pH 8.0. CHEM: ALKP >2000, ALT 297, CHOL 457, GGT 19. CBC: Lymphocyte 0.8, HGB 19.9, HCT 62.44, MCH 24.6. Positive for lyme antibody.

**BREED**

Chihuahua/Pug Mix

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Neutered Male

**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 mostly 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.

**AGE**

9 years, 11 mos

The prostate is normal in size (1.67 cm length); (0.83 cm in width), and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**WEIGHT**

15 lbs

The left kidney is normal in size (4.69 cm in length); with a normal shape and smooth peripheral contours. There is a normal 1:3 cortex to medulla ratio with poor corticomedullary distinction. Pinpoint hyperechoic to mineralized foci are observed within the cortex. Hyperechoic shadowing diverticular foci are seen. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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

The right kidney is normal in size (5.50 cm in length); with a normal shape and smooth peripheral contours. There is a normal 1:3 cortex to medulla ratio with poor corticomedullary distinction. Pinpoint hyperechoic to mineralized foci are observed within the cortex. Hyperechoic shadowing diverticular foci are seen. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

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**Adrenal Glands**

The left adrenal gland is enlarged (0.88 cm at cranial pole) (0.84 cm at caudal pole) (1.89 cm in length); with a slightly irregular 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.

**HOSPITAL NAME**

Banfield PH Leesburg  
Village

The right adrenal gland is enlarged (0.66 cm at cranial pole) (0.84 cm at caudal pole) (1.94 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.

**REFERRING VET**

Dr. Cathy Jarrett

**Spleen**

A 1.84 1.57 cm isoechoic to slightly heterogenous, round nodule/mass is observed within the parenchyma. The lesion causes capsular expansion. In the remainder of the spleen the peripheral margins are curvilinear. The parenchyma is of appropriate echogenicity and echotexture. Numerous pinpoint-to-linear hyperechoic-to-mineralized foci/areas are observed. Splenic vasculature is normal with no evidence of thrombosis.

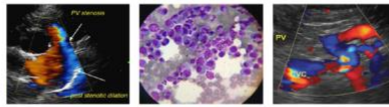
**INVOICE**

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**DATE**

3/17/22

**Liver**

**PATIENT**

Axl Brubaker

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen, with a few small, ill-defined hypoechoic nodules/areas. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

**SPECIES**

Canine

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of suspended echogenic debris is observed within the lumen. The cystic and common bile ducts are normal.

**BREED**

Chihuahua/Pug Mix

**Gastrointestinal**

The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The proximal duodenal lumen is mildly fluid-distended. In the remaining small intestinal segments, the lumen is segmentally dilated with chyme. There is evidence of mucosal fogging in the proximal duodenum. In the remainder of the small intestinal, the wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

**SEX**

Neutered Male

**AGE**

9 years, 11 mos

**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.

**WEIGHT**

15 lbs

**Free Abdomen**

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

**INTERPRETED BY**

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

**ULTRASONOGRAPHIC FINDINGS****Primary Findings**

- Splenic mass. Neoplasia (i.e., sarcoma, round cell tumor), is considered likely, with a lower possibility of a benign process (i.e., lymphoid hyperplasia). Diffuse dystrophic mineralization in the splenic parenchyma, likely secondary to an endocrinopathy (i.e., Cushing's Disease).

**Secondary Findings**

- The mild bilateral adrenomegaly is consistent with the previous diagnosis of pituitary-dependent hyperadrenocorticism.
- Bilateral degenerative renal changes with dystrophic mineralization
- Suspected benign diffuse hepatopathy. Top differentials include vacuolar hepatopathy and regenerative nodular hyperplasia.
- The mucosal fogging in the proximal duodenal mucosa may be a normal variant for this patient or may be secondary to an inflammatory process. Correlation with clinical findings is recommended.

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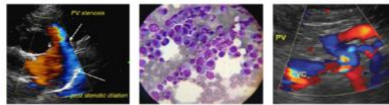
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Regarding the splenic mass, chest x-rays (three-view), are recommended to assess for pulmonary metastatic disease.

**DATE**

3/17/22



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- A fine-needle aspirate of the mass can be considered if clotting status is appropriate. If results are inconclusive, a splenectomy with submission of the spleen for histopathology should be considered. A liver biopsy should also be obtained at the time of surgery.

**SPECIES**

Canine

**BREED**

Chihuahua/Pug Mix

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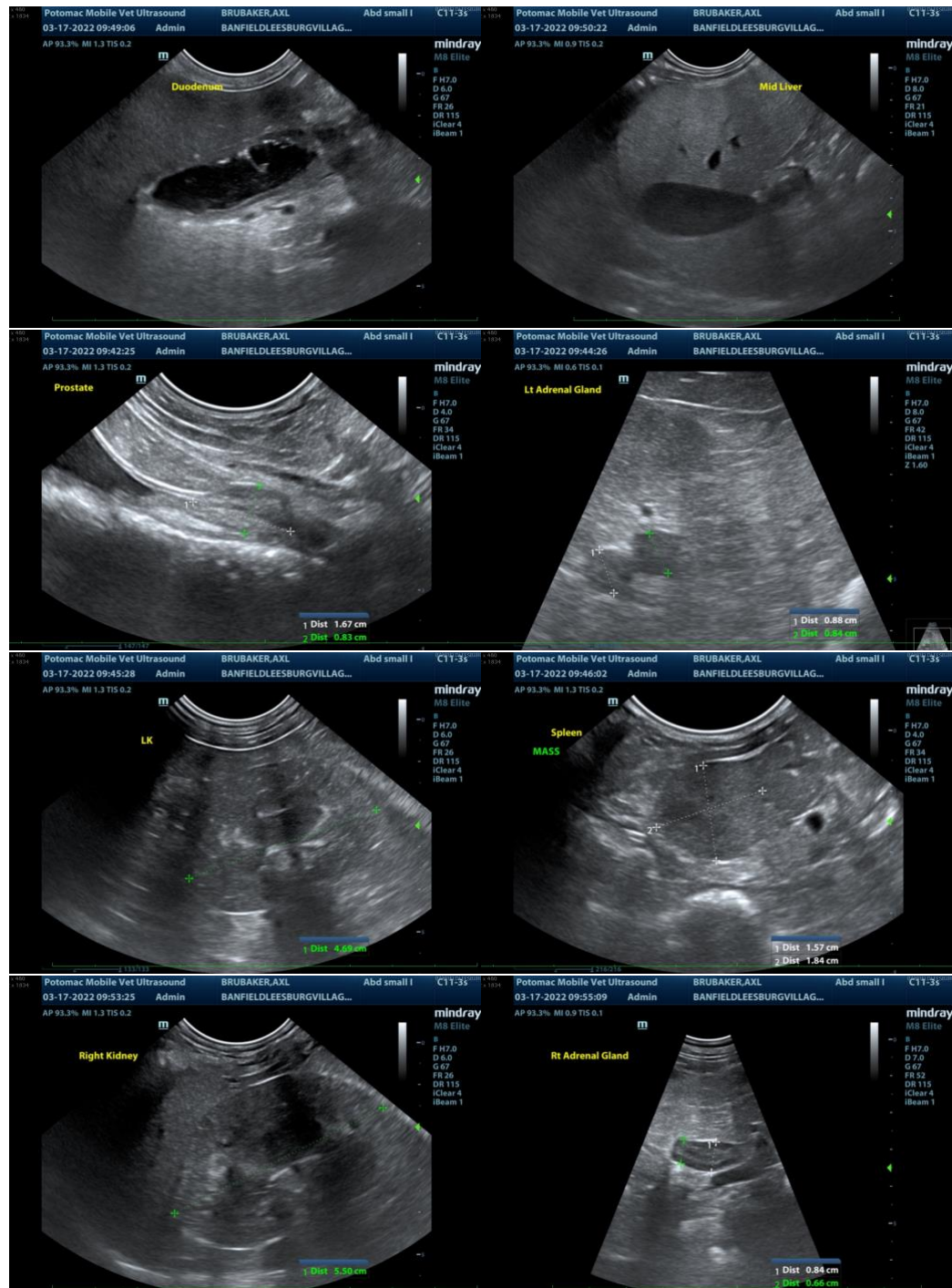
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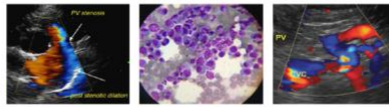


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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Canine

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.

**BREED**

Chihuahua/Pug Mix

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

**SEX**

Neutered Male

**AGE**

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