

**PATIENT PRESENTING CLINICAL SIGNS**

Boomer Anderson

History: IMHA, received blood transfusion 12/2022. Diagnosed with low platelets 6/2023. Pt presented today for tachypnea and "gray gums" per o.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: CBC: HCT- 43.1% WBC- 11.75 K/mcL, EOSO 0.02 K/mcL (low) PLT- 274 K/mcL, PDW- 8.7 fL (low) CHEM17: ALT- 422 U/L (high), ALP- 416 U/L (high), GGT- 69 U/L (high), AMYL- 372 U/L (low) all other findings wnl EPOC: hct- 45%, LAC- 4.46 mmol/L (high), PCO2- 32.9 mmHg (low), PO2- 38.6 mmHg (low), SO2

**BREED**

Mixed

**SEX**

Neutered Male

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**AGE**

5 years

**Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

**WEIGHT**

74 lbs

The region of the prostate is not visualized due to its pelvic location.

**INTERPRETED BY**

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

The left kidney is normal in size (6.97 cm in length) with a normal shape, architecture and 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 hydroureter. Renal vasculature is normal.

**IMAGING PERFORMED BY**

Cathy Carter

The right kidney is normal in size (7.14 cm in length) with a normal shape, architecture and 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 hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is small in size (0.52 cm at cranial pole) (0.45 cm at caudal pole) with a slightly flattened contour. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**HOSPITAL NAME**

Willamette VH

The region of the right adrenal gland is evaluated. No obvious pathology is observed in this region.

**REFERRING VET**

Corrine Weston

**Spleen**

The spleen is normal in size (1.67 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.

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**Liver**

The liver is prominent to enlarged with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion.

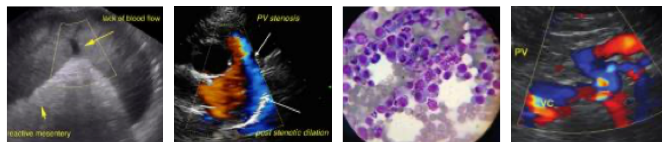
**DATE**

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The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of aggregated, echogenic-to-mineralized, mostly gravity-dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**Gastrointestinal**

The gastric lumen is mildly to moderately-distended with ingesta. 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 segmentally dilated with chyme. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The



**PATIENT**

colonic wall is normal. There is no evidence of an obstructive pattern.

Boomer Anderson

**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.

**SPECIES**

Canine

**Free Abdomen**

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

**BREED**

Mixed

**ULTRASONOGRAPHIC FINDINGS**

**SEX**

**Primary Findings**

Neutered Male

**AGE**

- The small left adrenal gland may be a normal variant for this patient or may be secondary to atrophy resulting from corticosteroids use (if applicable).
- The hepatic changes are nonspecific and may be secondary to an inflammatory hepatopathy (i.e., bacterial cholangiohepatitis, chronic hepatitis, vacuolar hepatopathy, hepatotoxicosis (i.e., copper), infiltrative neoplasia (less likely), other hepatopathy).

5 years

**WEIGHT**

74 lbs

**Secondary Findings**

**INTERPRETED BY**

- Gall bladder debris/sludge, non-mucocele

\*An obvious cause for the patient's tachypnea and abnormal gum color is not definitively identified in this study. Considerations include pulmonary thromboembolism, aspiration pneumonia, other respiratory disease.

Andrea Nicastro,  
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ACVIM (Small Animal  
Internal Medicine)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**IMAGING PERFORMED BY**

- Three-view thoracic radiographs are recommended to assess cardiopulmonary status.
- Also consider pulse oximetry and a baseline blood pressure measurement.
- Regarding the elevated liver values, consider the following (once the patient's respiratory status has stabilized)
  1. Leptospirosis testing (i.e., blood and urine PCR; serology), particularly if the clinical suspicion for this disease is high.

Cathy Carter

**HOSPITAL NAME**

Willamette VH

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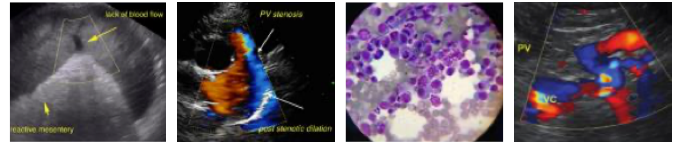
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2. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
3. 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 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.



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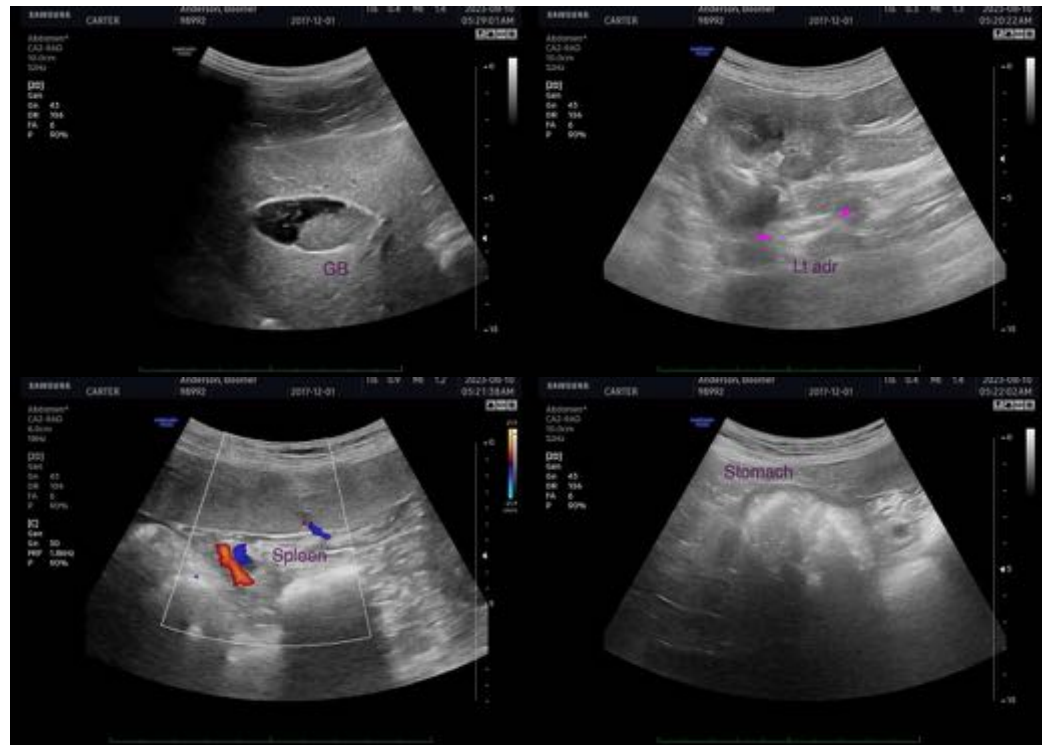
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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