

**PATIENT PRESENTING CLINICAL SIGNS**

Tech Bilello

History: Vomiting since Tuesday, not eating or drinking. lethargic. P had BW at rDVM - showed anemia (spun PCV of 19%). Transferred here for continued care. Here at ER pet had strong saline agglutination. Blood smear pathology consistent with IMHA. Spun PCV at ER 20%

Abnormal PE/Chem/CBC/UA Results: MM Pale, icteric Grade 2/6 L systolic murmur WBC 18.18 NEU 14.81 NEU % 81.5 LYM % 10.1 RBC 1.68 HCT 12.2 MCH 34.1 MCHC 47.1 RDW % 23.4 PLT 104

Microscopic Description Three scanned blood films are evaluated. The red cell density is markedly decreased. There is marked anisocytosis and moderate polychromasia with marked agglutination. Leukocytes appear mildly increased in number and consist predominantly of segmented neutrophils (see below differential). There is mild toxic change in the form of Döhle bodies. Occasional reactive lymphocytes are noted. Platelets appear normal in number and morphology. Interpretation Marked anemia with marked agglutination and evidence of regeneration Mild neutrophilia with a left shift, monocytosis, lymphopenia Normal thrombon Comments Thank you for the submission, concise clinical history, and good quality samples. This is consistent with IMHA. Atypical cells and etiologic agents were not observed. There is no evidence of thrombocytopenia at this time. Consider screening for relevant regional vector borne pathogens, underlying conditions (inflammatory/neoplastic), and recent therapeutics that could result in secondary IMHA. Report written by: Julie Tomlinson, DVM, DACVP

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Neutered male

**AGE**

2 ½ years

**WEIGHT**

15.3 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Van Nieuwal

**HOSPITAL NAME**

Animal Emergency  
Hospital Volusia

**REFERRING VET**

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**INVOICE**

44045

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4/27/23

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

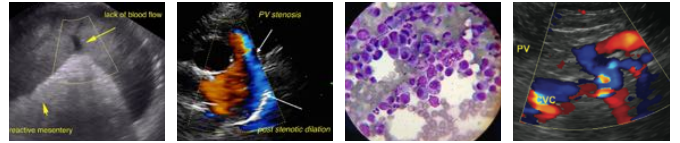
The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 3.7 cm each. The left kidney measured 3.8 cm.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left and right adrenal gland measured 0.4 cm.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.



**PATIENT**

**Liver**

Tech Bilello

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**WEIGHT**

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**ULTRASONOGRAPHIC FINDINGS**

Structurally unremarkable abdomen.

**INTERPRETED BY**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given the patient's history I suspect hemolytic or bone marrow disease. There was no evidence of visceral disease influencing the clinical signs.

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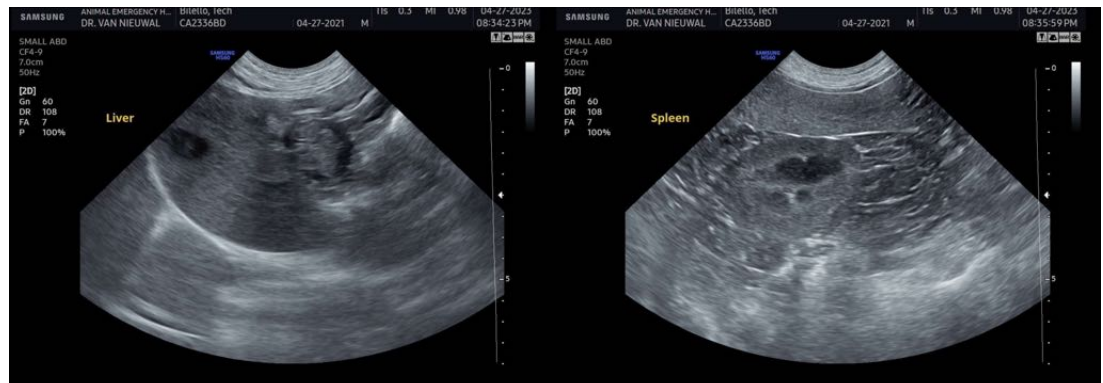
Dr. VanNieuwal

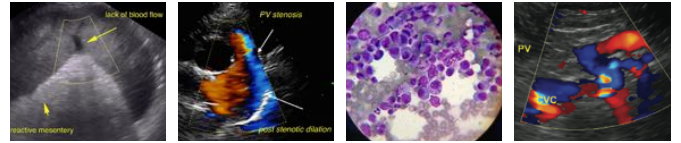
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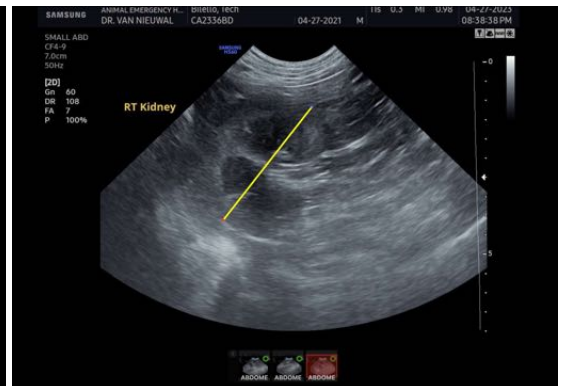
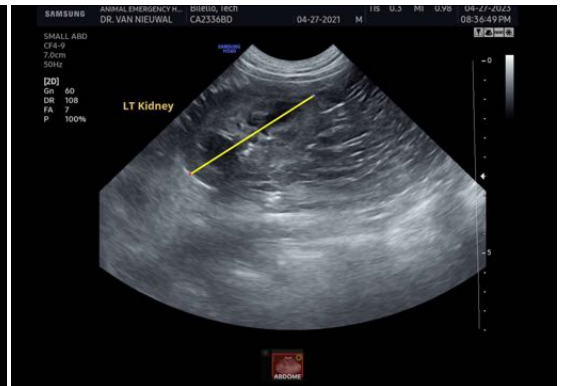
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
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