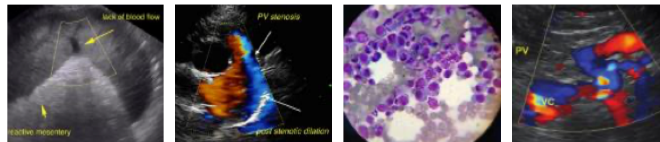


SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Skye Morano

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered Male

AGE

12 years

WEIGHT

9.3 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi,

HOSPITAL NAME

Andover AH

REFERRING VET

CVT Dr. Binlear

INVOICE

11765

DATE

10.3.22

PRESENTING CLINICAL SIGNS

History: Severe anemia of unknown origin.
Current meds: Prednisone 5mg q12h, Doxycyline 200mg 1/4 q24h.

Abnormal PE/Chem/CBC/UA Results: RBC 1.31, HGB 2.6, HCT 5.39, MCV 41, LYMPH 10.99, GLU 128, (PVC in house 9%)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** wall is 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 cm, are normal.

The **prostate** is normal in size (0.84 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The **left kidney** is normal size (3.82 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The **right kidney** is normal size (4.23 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The **left adrenal gland** is normal size (0.46 cm at cranial pole) (0.48 cm at caudal pole) (1.21 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 (1.18 cm at cranial pole) (0.51 cm at caudal pole) (1.63 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 (0.92 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

The **liver** is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. The hepatic parenchyma is hypoechoic relative to the spleen. A 0.65 cm ill-defined hypoechoic nodule is visualized. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The **gall bladder** lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of aggregated, echogenic, mostly gravity dependent debris/sludge is observed within the lumen. 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 pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. The lumen of the descending colon contains shadowing fecal material. There is no evidence of an obstructive pattern.

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
Trace free fluid is observed. The mesentery in the midabdominal region is mildly hyperechoic. 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 patient's severe anemia is unclear. Considerations include autoimmune disease, occult blood loss (i.e., GI), bone marrow disease, infectious disease (i.e., tick-borne), other.

Secondary Findings

- The hypoechoic hepatic nodule trends toward the benign (i.e., nodular hyperplasia) with a lower possibility of an emerging tumor.

- The etiology of the mild midabdominal peritonitis is unclear.

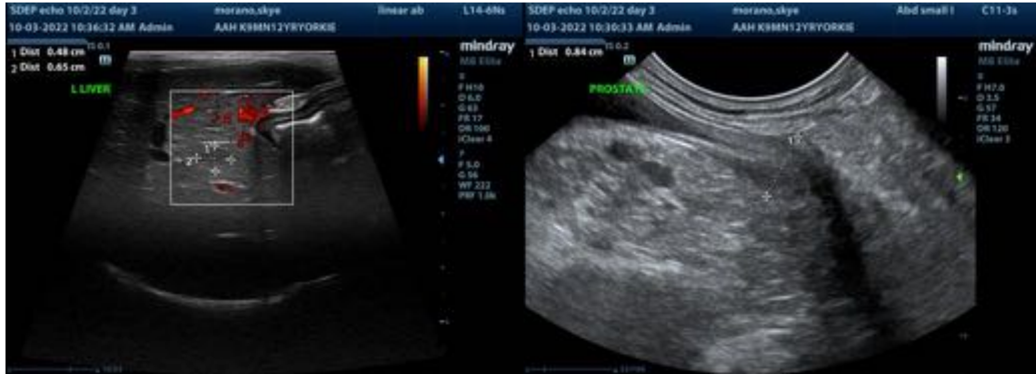
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A repeat CBC (send to a diagnostic lab) with reticulocyte count is recommended to determine if the anemia is regenerative. If the anemia is regenerative, a slide agglutination test should be considered as well as an upper GI endoscopy to assess for low-grade GI blood loss, particularly if the clinical suspicion for this issue is high.

Three-view thoracic radiographs are recommended to assess for occult neoplasia in the chest.

A comprehensive tick panel, including PCR and serology (submission to North Carolina State University's Vector Borne Disease Diagnostic Lab) is recommended. https://cvm.ncsu.edu/research/labs/clinical-sciences/vector-borne-disease)

If the anemia is nonregenerative and an underlying cause is not identified with the above diagnostics, a bone marrow aspirate +/- core biopsy may be warranted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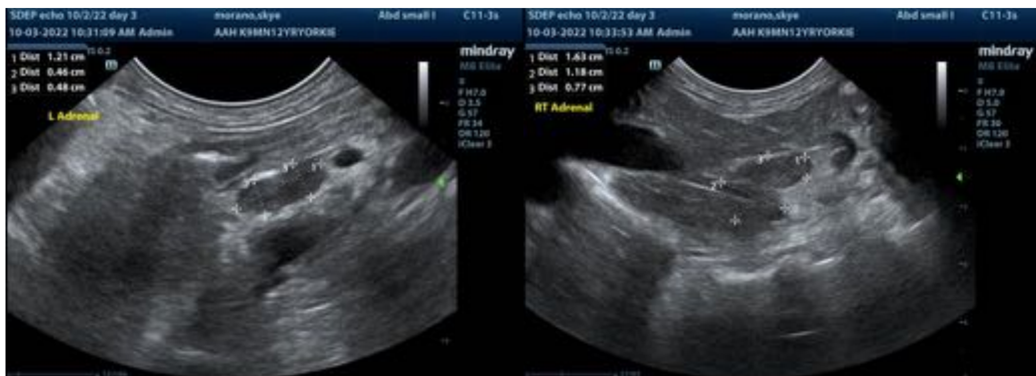
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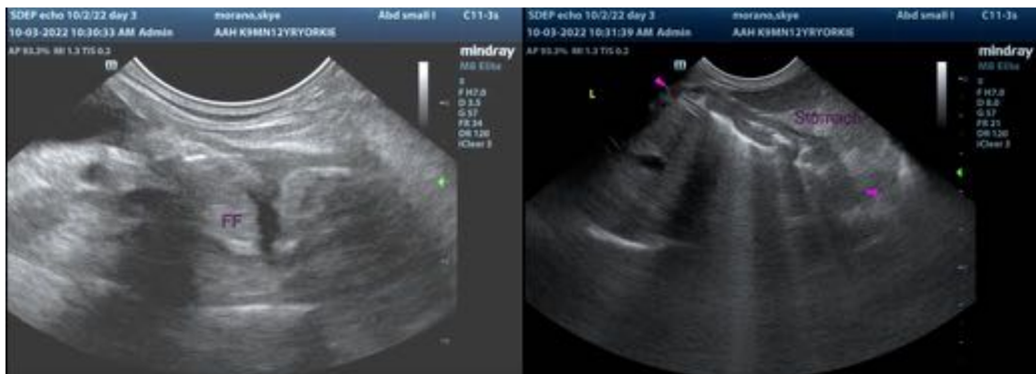
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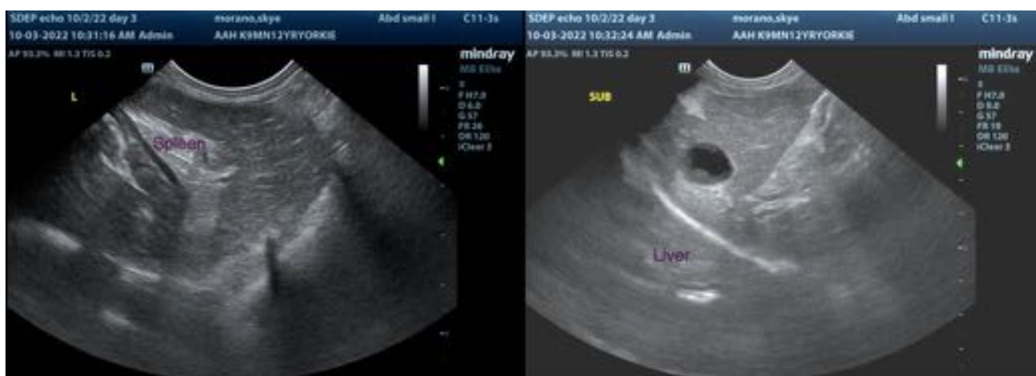
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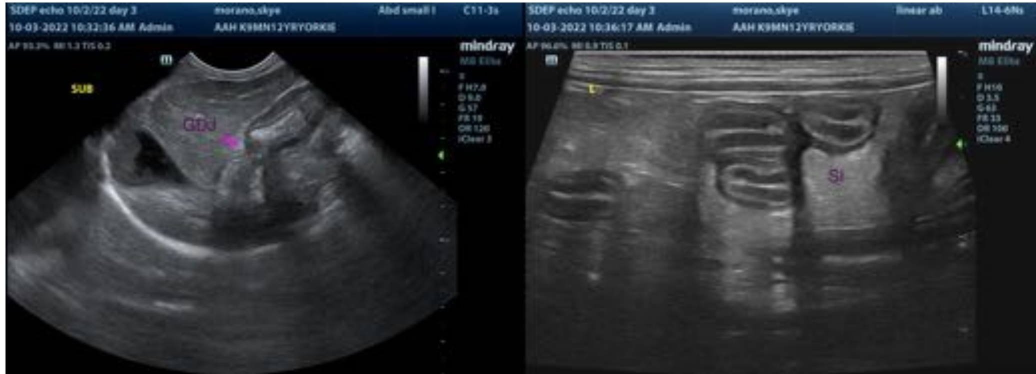

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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