



PATIENT

Reggie Horn

PRESENTING CLINICAL SIGNS

History: Vomiting, diarrhea, anorexic, abdominal splinting, azotemia, pancreatitis.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: Abn CPL, wbc 26, neu 22.3, bun 60.5, crea 3.8, phos 19.4, glob 4.3, glu 226, chol >450, alp 144, Tbil 1.1, Na 137, Cl 89

BREED

Pomeranian

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 distended. A small amount of suspended, echogenic debris is observed within the lumen. 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.

SEX

Male Neutered

The prostate is not definitively visualized due to it's pelvic location.

AGE

14 years

The left kidney is normal size (3.62 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is mild to moderate loss of corticomedullary distinction. Several small nephroliths are visualized. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

8.5 lbs.

The right kidney is normal size (3.56 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Several small nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is mildly enlarged (0.59 cm at cranial pole) (0.67 cm at caudal pole) (1.68 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.

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Shari Reffi CVT

The right adrenal gland is mildly enlarged (0.71 cm at cranial pole) (0.62 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.

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Newton VH

Spleen

The spleen measures 1.20 cm in width at the level of the hilus. A 1.28 x 1.19 cm hypoechoic to slightly heterogeneous nodule is observed just proximal to the hilus. The lesion causes capsular expansion. A similar appearing nodule measuring 1.07 x 0.96 cm in observed at the caudal aspect. A third nodule measuring 0.45 cm in diameter is seen at the medial aspect. The remaining parenchyma is relatively homogeneous. Splenic vasculature is normal with no evidence of thrombosis.

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Liver

The liver is subjectively normal in size with rounding of the right peripheral margin. The parenchyma is hypoechoic relative to the spleen. A 2.97 x 2.39 cm isoechoic swelling/mass is observed in the right lateral lobe. The remaining parenchyma is homogeneous. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately

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distended. The wall is thin and smooth. A small to moderate amount of adherent debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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Gastrointestinal

SPECIES

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. Segments of the small intestinal lumen are mildly fluid-distended. At least one small intestinal segment exhibits hyperperistalsis. In a few areas, there is evidence of mucosal fogging. The small intestinal wall is normal in thickness with a normal layering pattern. Discreet masses are not identified. The colonic wall is normal. The lumen of the descending colon contains granular to liquid-appearing fecal material. There is no obvious evidence of obstruction.

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Pancreas

SEX

The left limb of the pancreas is subjectively prominent in size with minimal deviation from the normal peripheral contours. The parenchyma is isoechoic relative to surrounding omental fat and slightly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated. The mesentery effacing the serosal surface is mildly hyperechoic.

Male Neutered

AGE

Free Abdomen

14 years

The mesentery in the cranial to mid-abdomen is hyperechoic. Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

WEIGHT

Other

8.5 lbs.

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

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ULTRASONOGRAPHIC FINDINGS

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

Primary Findings:

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- Bilateral nephropathy with non-obstructive nephroliths.
- The splenic nodules are concerning for a neoplastic process (i.e., round cell tumor, sarcoma) with a lower possibility of benign pathology.
- The hepatic swelling/mass could be consistent with neoplasia (i.e., adenoma, adenocarcinoma). Alternatively, a benign process (i.e., regenerative nodule) is possible.
- The pancreatic changes are suggestive of chronic +/- active pancreatitis.
- The small intestinal wall changes are consistent with an inflammatory process which may be acute or chronic (i.e., inflammatory bowel disease) in nature. The cranial peritonitis may be secondary to bowel and/or pancreatic pathology.

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Secondary Findings:

- Mild bilateral adrenomegaly.
- Gall bladder debris, non-mucocele.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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1. Regarding the azotemia, consider the following:

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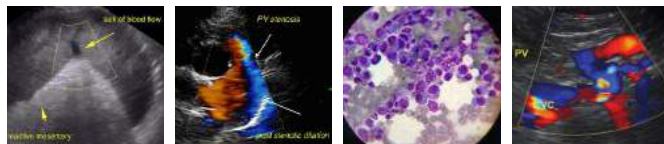
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- a. Urine culture and sensitivity.
 - b. +/- UPC (if proteinuria is present)
 - c. Baseline blood pressure measurement
 - d. IV fluid diuresis/supportive care
2. Regarding the splenic nodules, consider the following:
 - a. Three-view thoracic radiographs are recommended to assess for pulmonary metastatic disease.
 - b. Fine needle aspirates of the nodules, (if clotting status is appropriate). A 25-gauge needle should be used.
 3. Other diagnostic considerations include:
 - a. A malabsorption panel including serum cobalamin, folate, PLI and TLI.
 - b. A fecal evaluation for ova/Giardia
 - c. Ultimately, endoscopic, or surgical gastrointestinal biopsies may be necessary to determine an underlying cause for the GI signs. However, given the patient's renal disease, anesthesia is not considered a safe option for the patient at this time.





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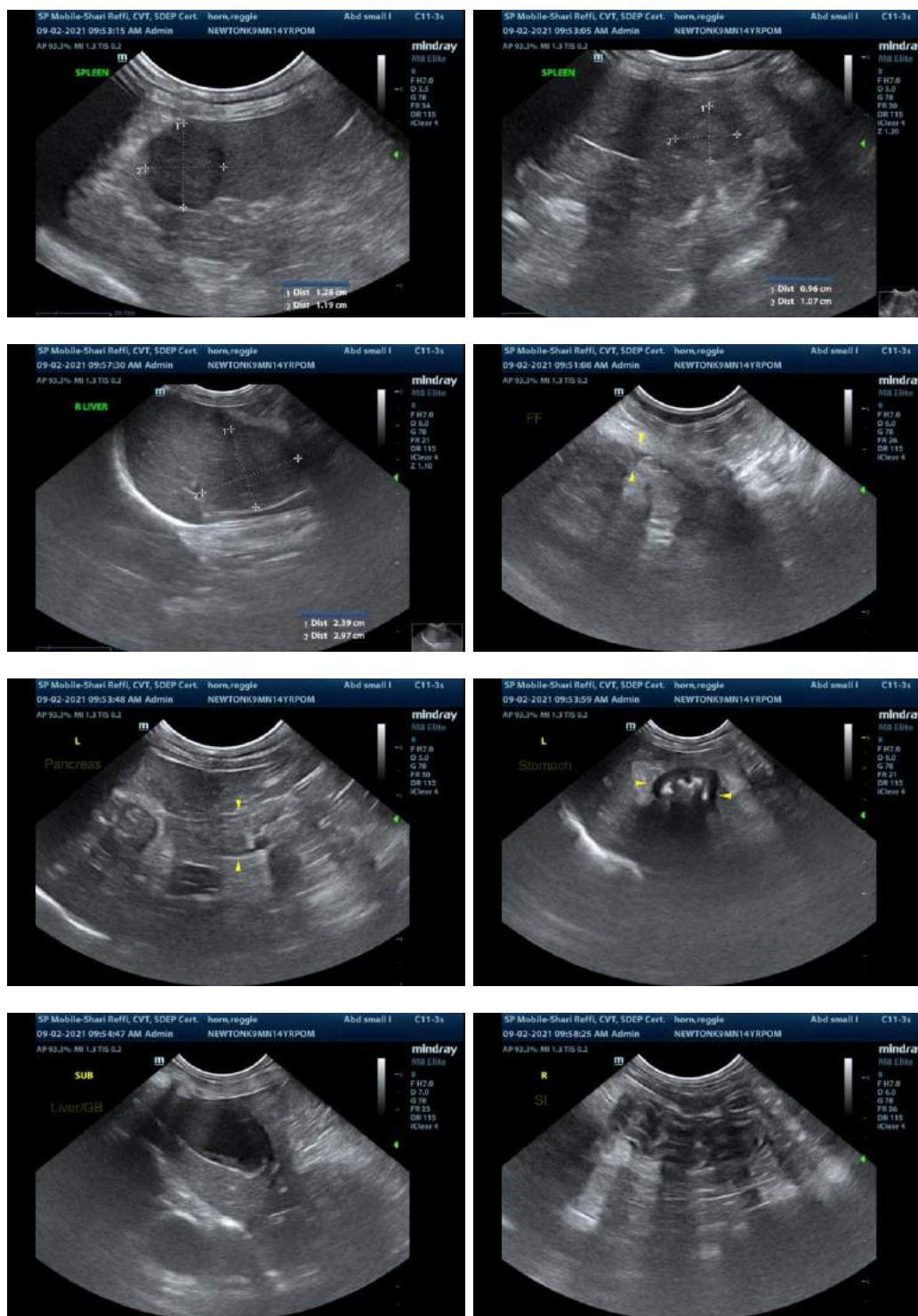
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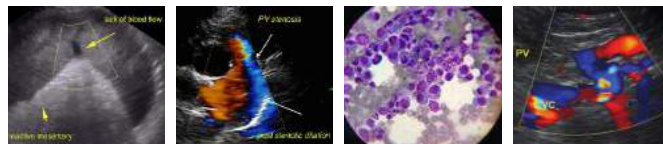
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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 ACVIM (*Small Animal Internal Medicine*)
Andrea.nicastro@sonopath.com