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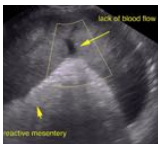
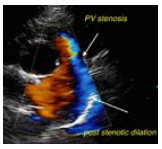
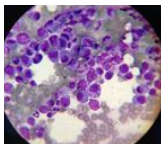
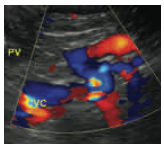

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1-800-838-4268 info@sonopath.com

PATIENT

Codi Rodriguez

SPECIES

Canine

BREED

Coonhound Mix

SEX

Spayed Female

AGE

12 years

WEIGHT

36.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Jessica Miller RDMS

HOSPITAL NAME

Summit Dog and Cat Hospital

REFERRING VET

Dr. Vogler

INVOICE

31488

DATE

7/6/22

PRESENTING CLINICAL SIGNS

Vomiting, not eating, lethargic
Abnormal PE/Chem/CBC/UA Results: ALKP 339, HCT 29.5, HGB 8.9, MCHC 30.2, Eos 0.04, Retics 150.4, RBC 4.00, MCV 73.8, MPV 18.2, Retc-HGB 21.9

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Left kidney is normal is size (5.87 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal is size (6.0 cm),shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

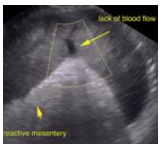
Adrenal glands are largely normal in size, shape and contour. Some parenchymal heterogenicity is present without concerning capsular distortion. These changes are likely normal for this age but should be monitored if there is any suspicion of adrenal disease. The cranial pole of the left adrenal gland contains a 0.6 cm, hyperechoic, non-capsule expanding nodule. The right adrenal gland contains a hypoechoic, non-capsule expanding nodule in the cranial pole that also measures 0.6 cm. The left adrenal gland measured 2.93 cm long x 0.85 cm at the cranial pole and 0.42 cm at the caudal pole. The right adrenal gland measured 2.6 cm long x 1.3 cm at the cranial pole and 0.57 cm at the caudal pole.

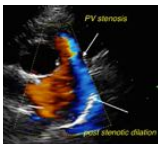
Spleen

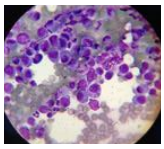
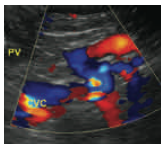
Spleen is subjectively large in size with normal smooth margins. Parenchyma is normal in echogenicity with a coarse/heterogenous echotexture. No masses are observed. An approximate 2.0 cm in diameter mixed, primarily hypoechoic, non-capsule disrupting nodule is noted in the caudal part of the spleen. A second approximately 1.0 cm hypoechoic to anechoic, non-capsule disrupting nodule is noted at the cranial aspect of the spleen. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. A 5.0 x 9.0 cm homogenous, primarily hyperechoic vascular mass is noted in the right ventral liver just adjacent to the gallbladder. Visible vasculature and biliary tree appear normal without distension or congestion.





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Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Bowel is diffusely mildly fluid distended without evidence of an obstructive pattern, plication and/or visible foreign material. Small intestinal hyperperistalsis is noted.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

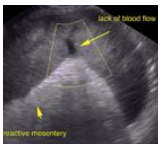
Free Abdomen

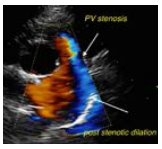
There is no evidence of peritoneal effusion or apparent lymphadenopathy noted in these images.

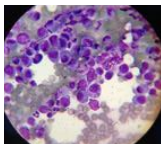
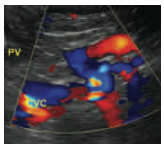
ULTRASONOGRAPHIC FINDINGS

Primary Findings

1. **Hyperechoic hepatomegaly.** This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
    - A **homogenous, right liver mass**, differentials for which include primary hepatic neoplasia such as hepatocellular carcinoma versus infiltrative round cell neoplasia. Differentials for which include primary hepatic neoplasia such as hepatocellular carcinoma versus infiltrative round cell neoplasia versus benign lesion such as a hepatoma or prominent nodular hyperplasia cannot be ruled out.
2. **Coarse splenomegaly –** can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, amyloidosis (leave amyloidosis out if canine) as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.





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- **Hyperechoic splenic nodules –** most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

3. **Gastroenteritis –** Consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other.

4. Likely **age related heterogenous adrenal** changes; however, differentials for the discrete nodules include primary adrenal cortical tumors such as adenoma versus adenocarcinoma (less likely), pheochromocytoma, myelolipoma or even adrenal hyperplasia secondary to pituitary disease cannot be ruled out. Often small, non-capsular expanding nodules without other evidence of disease or clinical signs to suggest adrenal disease are most often incidental.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The findings likely contributing to this patient's clinical signs include gastroenteritis. Therefore, recommendations include :

1. Empirical deworming with a 5 day course of Panacur, supportive management of clinical signs with anti-emetics, probiotics, etc. and potentially short term, bland, easy to digest diet.
2. While likely not contributing to the gastrointestinal signs, however, further recommendations for the liver mass include a FNA of the mass if the patient's coagulation status is appropriate. A FNA of the spleen can also be considered at that time especially given the patient's reported anemia.
3. The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted. If a LDDS test has been evaluated with a normal result, investigation of possible atypical hyperadrenocorticism with a full ACTH stimulation adrenal panel to the University of Tennessee could be considered.

   If clinical signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop.

   If not recently evaluated, blood pressure is recommended.

   If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

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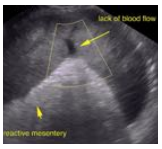
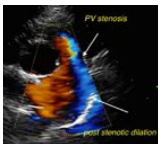
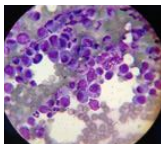
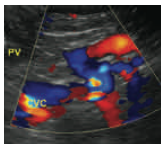

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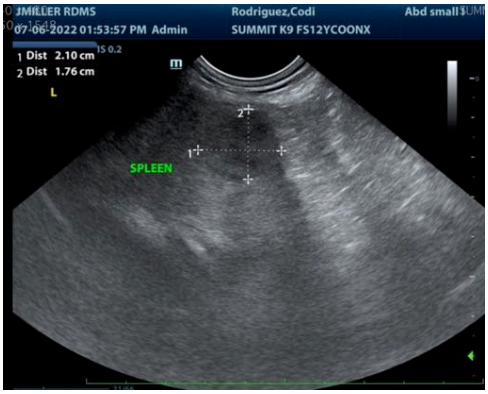

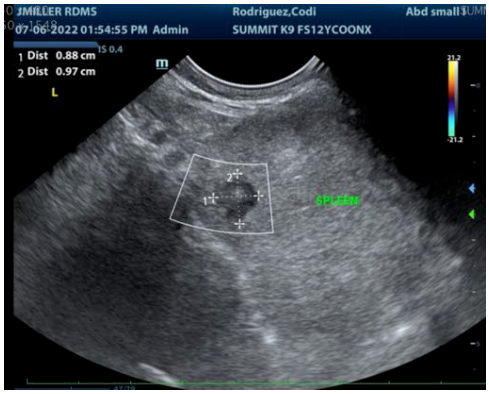

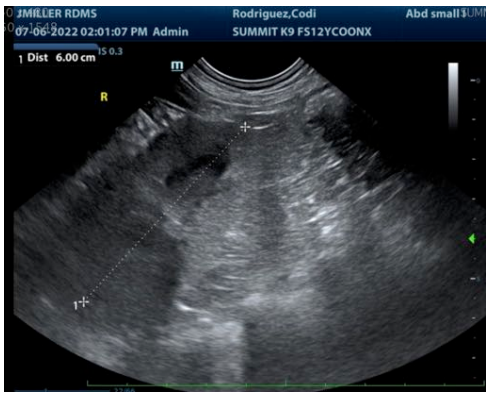

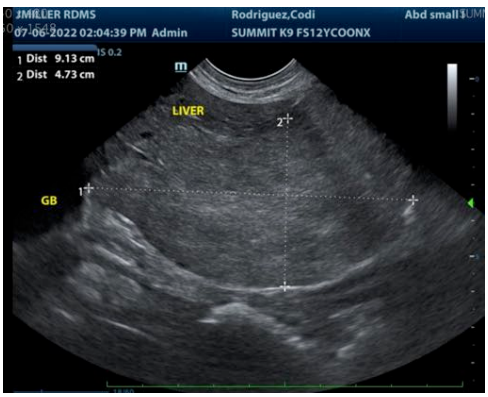

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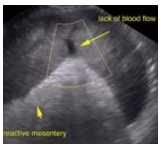
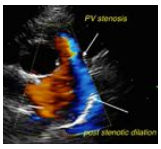
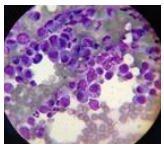
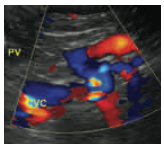

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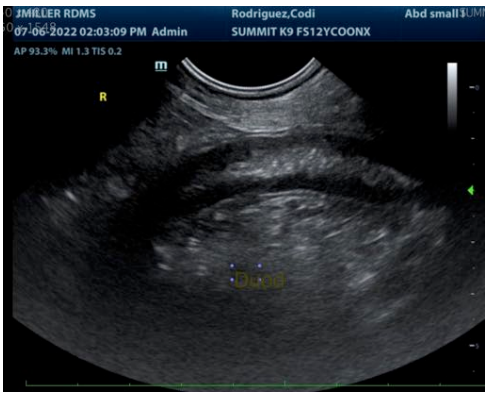

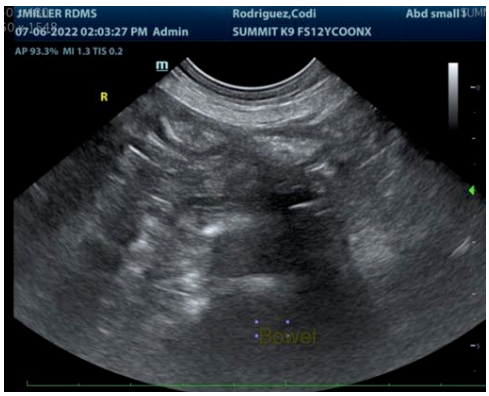

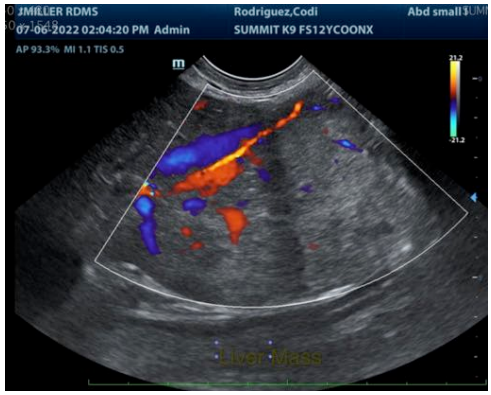

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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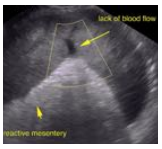

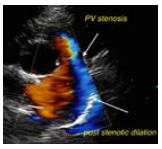

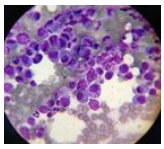
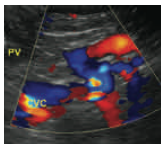

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