



## PATIENT

Ruby Halloway

## SPECIES

Canine

## BREED

Lab Mix

## SEX

Spayed Female

## AGE

9 years

## WEIGHT

96 lbs

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jenna Walsh, CVT

## HOSPITAL NAME

Edgewood AC

## REFERRING VET

Dr. Kimball

## DATE

5/18/22

## INVOICE

10927

## PRESENTING CLINICAL SIGNS

History: Splenic mass found on exam. No free abdominal fluid. Primary Question/Differential to Be Answered in This Exam Are there masses other places than the spleen?

## 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 moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. The cystourethral junction and the visible portion of the proximal urethra are normal.

The left kidney is normal size (7.29 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (7.99 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

### Adrenal Glands

The left adrenal gland is normal in size at the cranial pole and enlarged at the caudal pole (0.44 cm at cranial pole) (1.49 cm at caudal pole) (3.28 cm in length); and has an irregular shape. A 1.86 x 1.13 cm mildly hyperechoic nodule is observed at the caudal aspect. Glandular echogenicity and detail at the cranial aspect are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged at the cranial pole and normal in size at the caudal pole (1.84 cm at cranial pole) (0.32 cm at caudal pole) (2.85 cm in length). A 1.87 x 1.05 cm hyperechoic to slightly heterogenous nodule is observed at the cranial aspect. Glandular echogenicity and detail at the caudal aspect are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

### Spleen

A >12 cm heterogenous cavitated mass is arising from the parenchyma. The mesentery surrounding the mass is hyperechoic. In the remainder of the spleen, the peripheral margins are slightly irregular and the parenchyma is mottled. Splenic vasculature appears normal with no evidence of thrombosis.

### Liver



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The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen with minor changes consistent with age-related remodeling. A 1.44 cm hyperechoic nodule is observed deep on the right side, adjacent to the diaphragm. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion.

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

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### 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. No obstructive disease is noted.

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### Pancreas

A portion of the pancreas is obscured by the large, splenic mass. In the visualized portion of the left limb, the pancreas appears prominent and slightly hypoechoic relative to surrounding omental fat and is subtly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

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### Free Abdomen

A small amount of free fluid is present. The mesentery throughout the abdomen is hyperechoic. The abdominal lymph nodes are normal/not visible.

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### Other

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

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## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Large, splenic mass. Neoplasia (i.e., hemangiosarcoma, hemangioma) is considered likely with a lower possibility of benign pathology. Diffuse peritonitis is present, likely secondary to splenic pathology.
- The diffuse hepatic parenchymal changes are most consistent with age-related remodeling. However, micro-metastases cannot be completely excluded. The hyperechoic hepatic nodule trends toward the benign (i.e., regenerative nodule) with a low possibility of a neoplastic process.

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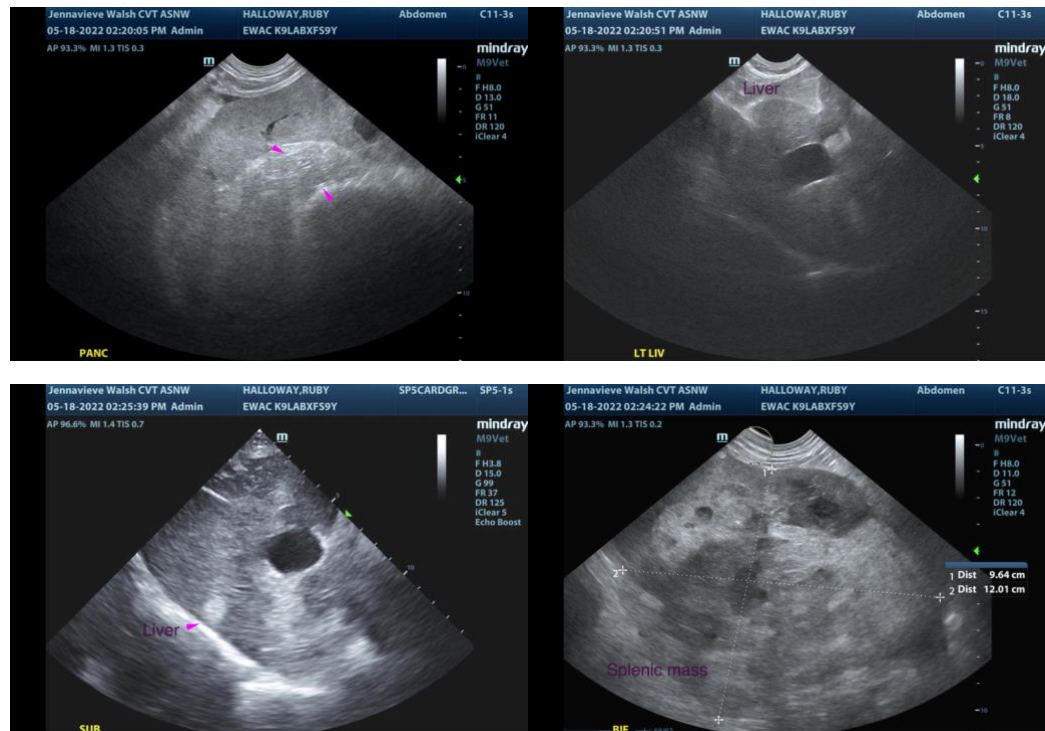
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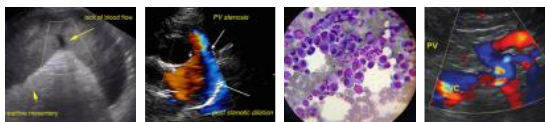
**Secondary Findings**

- Minor age-related renal changes
- The bilateral adrenal nodules may be secondary to a benign process (i.e., nodular hyperplasia). However, emerging tumors, either unilaterally or bilaterally, cannot be completely excluded.
- The pancreatic changes may be a normal variant for this patient or could be consistent with mild, chronic pancreatitis. Correlation with clinical findings is recommended.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Three-view thoracic radiographs are recommended to assess for pulmonary metastases. If there is no evidence of pulmonary metastatic disease, a splenectomy with submission of the spleen for histopathology can be considered along with a liver biopsy to assess for micro-metastatic disease.





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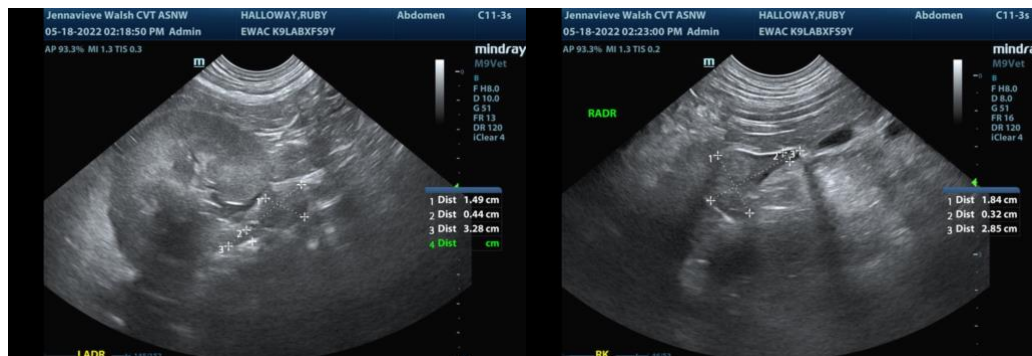
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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