



PATIENT

Princess Martins

SPECIES

Canine

BREED

Mix

SEX

Female

AGE

12 years

WEIGHT

25.2 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Rebecca Hamilton

HOSPITAL NAME

All Creatures Denville

REFERRING VET

Dr. Silas

INVOICE

71594

DATE

2/16/26

PRESENTING CLINICAL SIGNS

- Hematuria, polydipsia
- Abdominal pain caudal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** presented a relatively uniform thickening of the cranioventral and craniodorsal mucosae with micropolypoid mucosal changes without involvement of the submucosae. The bladder measured up to 0.8 cm in apical wall thickness. This occupied the cranial bladder wall. The urine presented some echogenicity consistent with suspended debris. No evidence of urethral pathology was present. This presentation is most consistent with chronic cystitis. Technically transitional cell carcinoma cannot be ruled out without histopathological review but is not overtly suspected based on this pattern. Cystocentesis and urine culture +/- pathological review of urine cytology would be warranted. No overt calculi were present at this time.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 5.4 cm. The right kidney measured 5.64 cm.

Adrenal Glands

The **right adrenal gland** was heterogenous, most consistent with remodeling and age related changes. There is a potential for emerging neoplasia. The right adrenal gland measured 1.8 x 0.7 cm at the cranial pole and 0.7 cm at the caudal pole.

The **left adrenal gland** was nodular with slight, irregular capsular expansion. The phrenic vein was not occupied. The left adrenal gland measured 2.45 x 0.67 cm at the cranial pole and 0.67 cm at the caudal pole.

Spleen

The **spleen** revealed a mixed, echogenic target type nodule that measured 1.0 cm at the cranial pole and a separate nodule measuring 1.5 cm at the mid caudal body. The caudal splenic lesion is concerning owing to capsular expansion.

Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of



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congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Gastrointestinal

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

Heart

Rapid view of the heart revealed no evidence of pathology in the right auricle or pericardium.

ULTRASONOGRAPHIC FINDINGS

- Expansive splenic nodule and separate nodular changes of the spleen.
- Chronic cystitis bladder pattern.
- Heterogenous right adrenal gland.
- Nodular, slight irregular capsule of the left adrenal gland.
- Age related pancreatic and renal changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Resection of the cranial third of the bladder can be considered from a surgical approach, yet the pattern is most consistent with chronic cystitis, yet I cannot completely rule out potential carcinoma. BRAF testing is warranted.

An aggressive approach in this patient would be to perform splenectomy +/- apical bladder wall resection and left adrenalectomy. However, the more concerning, immediate issue is the spleen as the capsular expansion on the caudal nodule is most concerning. Proactive splenectomy or ultrasound-guided FNA is indicated or a recheck sonogram in 2-3 weeks to assess for any progression. However,



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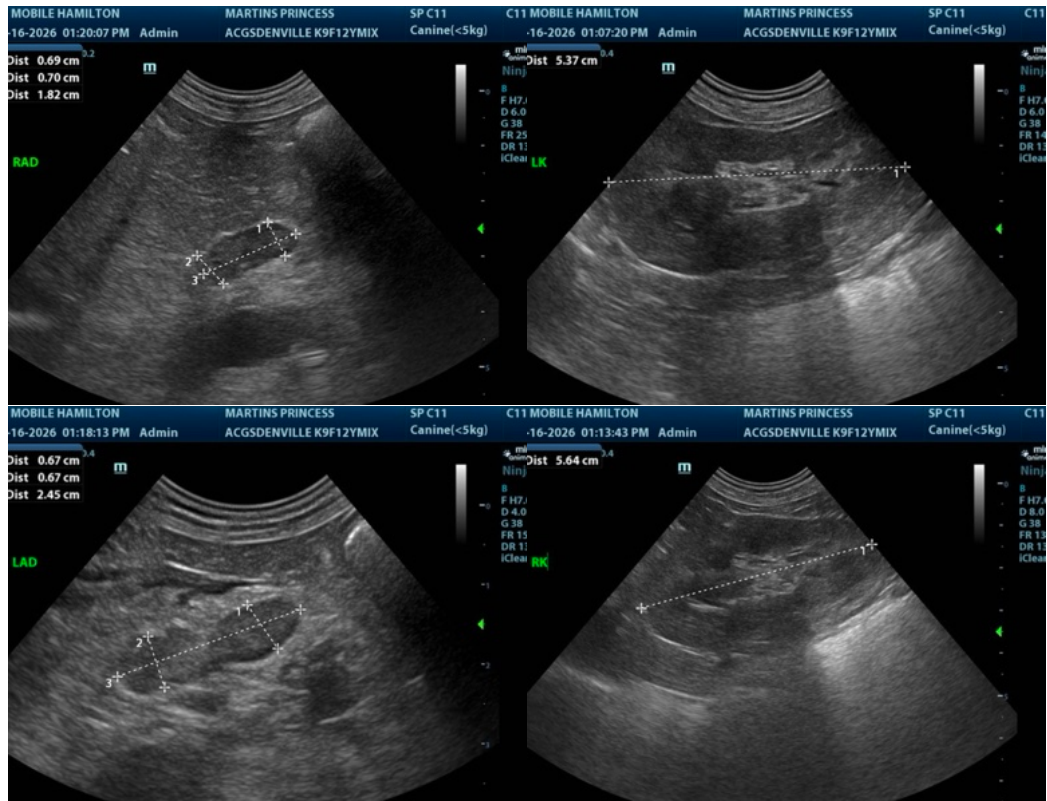
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given the differentials of potential hemangiosarcoma, rapid micrometastasis can occur in 80% of cases. Therefore, proactive splenectomy upon an incidental finding of this type is my personal recommendation. Whether apical bladder resection and left adrenalectomy occur, this is a subjective choice. The left adrenal differentials include hyperplasia and age related remodeling, likely with a minor potential for emerging carcinoma or pheochromocytoma. If hypertension is an issue, then left adrenalectomy would be appropriate as well as urine metanephrine levels.

This case can be managed in multiple differential fashions depending upon personal preference. Personally, proactive splenectomy, apical bladder resection +/- left adrenalectomy would be a personal choice as long as chest radiographs and BRAF testing are negative. There was no evidence of reproductive organs noted.





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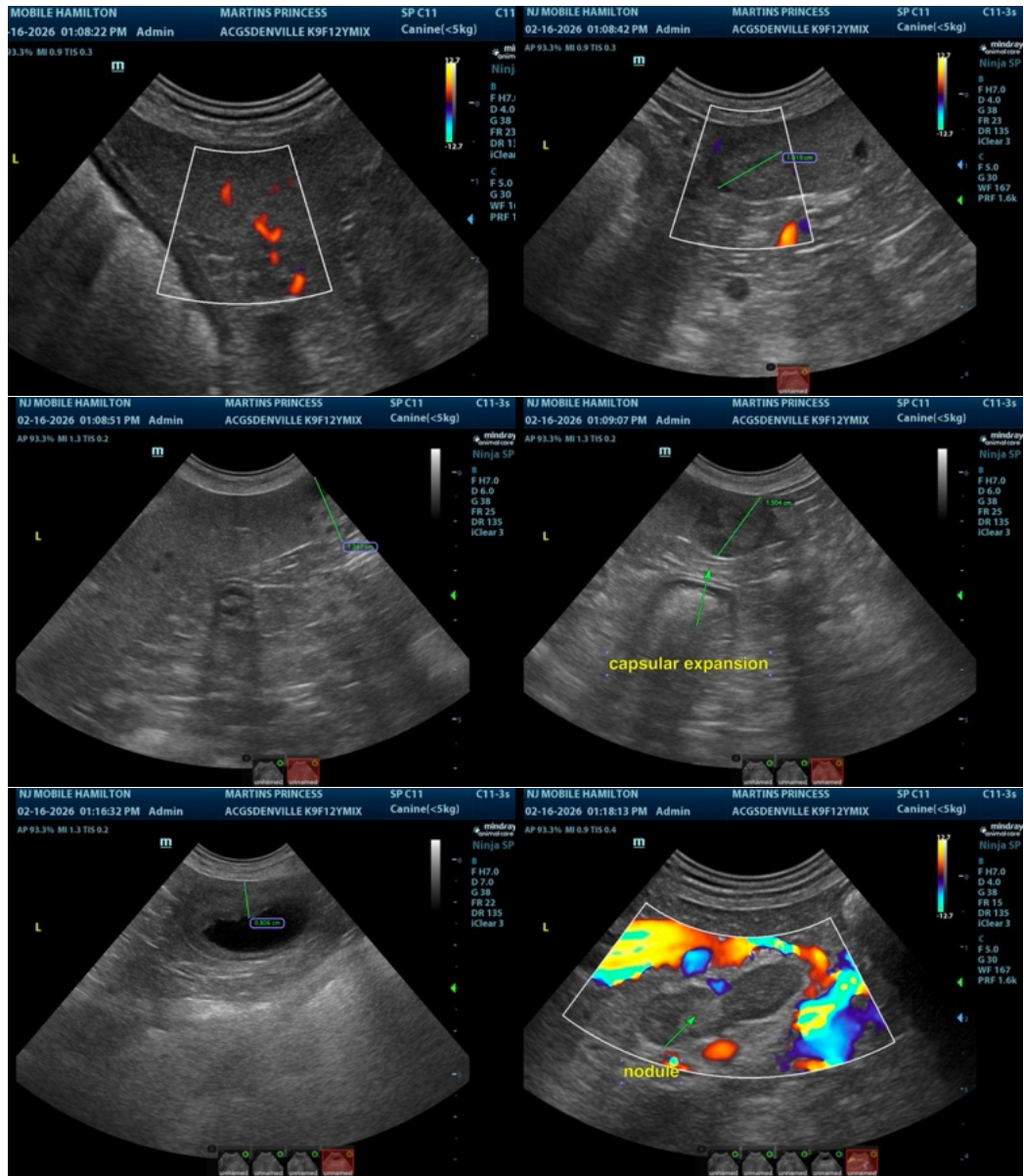
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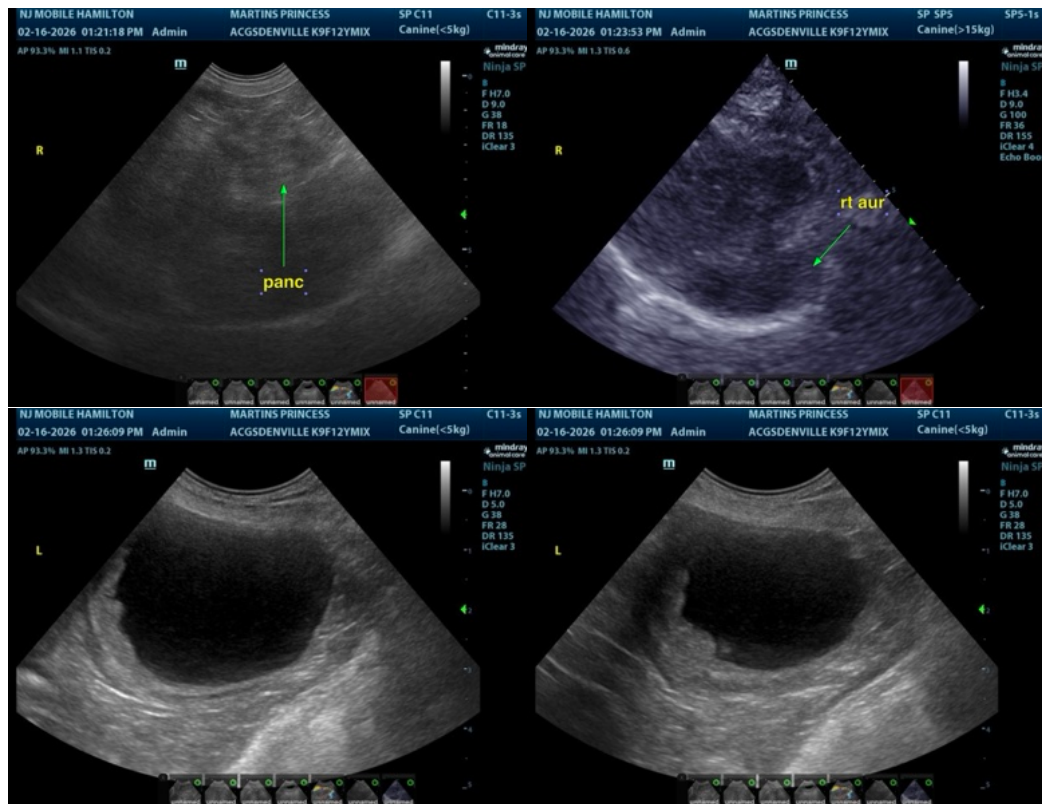
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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