



PATIENT

Molly Rugg

PRESENTING CLINICAL SIGNS

P presented for US due to acute lethargy, Elevated liver enzymes, Mild anemia, elevated WBC

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

BREED

Terrier x

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

SEX

Spayed Female

The left kidney has a normal shape and size (5.53 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

AGE

12 Years

The right kidney has a normal shape and size (6.26 cm) with a cortical cyst visualized measuring 0.89 cm. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

59 lbs

Adrenal Glands

INTERPRETED BY

Kathleen Sennello DVM,
 MS, Diplomate ACVIM
 (Small Animal Internal
 Medicine)

The left adrenal gland is normal in size measuring 0.55 cm at the cranial pole and 0.61 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 1.3 cm at the cranial pole and 0.78 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

IMAGING PERFORMED BY

Kathleen Byrnes

Spleen

HOSPITAL NAME

Aloha Veterinary
 Hospital

The spleen is normal in size but slightly irregular in shape. The blood flow through the hilus and splenic parenchyma appears normal. There are two cavitory mass effects visualized in the spleen, one measures 1.65 cm x 2.39 cm. The other measures 1.8 cm x 1.41 cm.

Liver

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The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a small cystic structure visualized measuring 0.77 cm. Additionally, on some views there is a poorly defined hyperechoic structure visualized in the mid dorsal region of the liver measuring 3.0 cm x 3.9 cm. This is not visualized on all views.

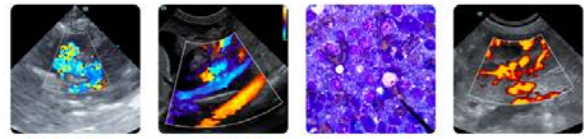
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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of debris formed into a hyperechoic "sludge ball". The cystic and common bile ducts are normal/not visible.

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3/11/26



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Gastrointestinal

The stomach contains moderate fluid. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. There is occasional focal shadowing material within the fluid. No evidence of obstructive foreign material visualized.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.50 cm. Jejunum wall measures 0.34 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

The right auricle and pericardium were visualized and were unremarkable. No obvious pathology is visualized. If cardiac function evaluation is desired a full echocardiogram is warranted.

ULTRASONOGRAPHIC FINDINGS

- Two cystic/cavitated hypoechoic splenic mass lesions – Findings could represent benign (hematoma, hemangioma, etc.) or neoplastic (sarcoma, carcinoma, round cell neoplasia, etc.) lesions.
- Heterogeneous liver with a small cystic lesion and a poorly defined hyperechoic mass effect – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The mass effect described is not clearly evident on all views but is visualized on multiple views. It has a somewhat benign appearance and could be consistent with a small adenoma or similar-continued monitoring is warranted.
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.
- Moderately fluid distended stomach with some intraluminal shadowing material – Correlate with feeding history. This could be a normal post-prandial patient or could represent mild



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delayed gastric emptying. No evidence of an obstructive lesion is visualized at this time.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SPECIES

There are two small cystic/cavitated lesions visualized associated with the spleen. These could represent benign or neoplastic lesions. The cavitated nature is more concerning for a neoplasm. Options moving forward could include a splenectomy for both diagnostic and therapeutic purposes. Alternately, a fine needle aspirate could be considered.

BREED

Terrier x

It is not definitively clear if the patient's acute symptoms are secondary to the splenic lesions or if there is an acute concurrent issue. There is some fluid and shadowing material visualized within the stomach possibly consistent with ileus. Additionally, there are some hepatic changes noted. Depending on the degree of liver enzyme elevations and which enzyme elevations are present, an acute hepatopathy or gastroenteritis like event could also be considered. If this is a concern, further diagnostics such as a liver function test +/- a fine needle aspirate +/- Leptospirosis screening could be considered.

SEX

Spayed Female

AGE

12 Years

The hyperechoic lesion in the liver is likely not in an area that would be easy to sample. Recommend continued monitoring with ultrasound.

WEIGHT

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Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement (disregard if this has already been done).

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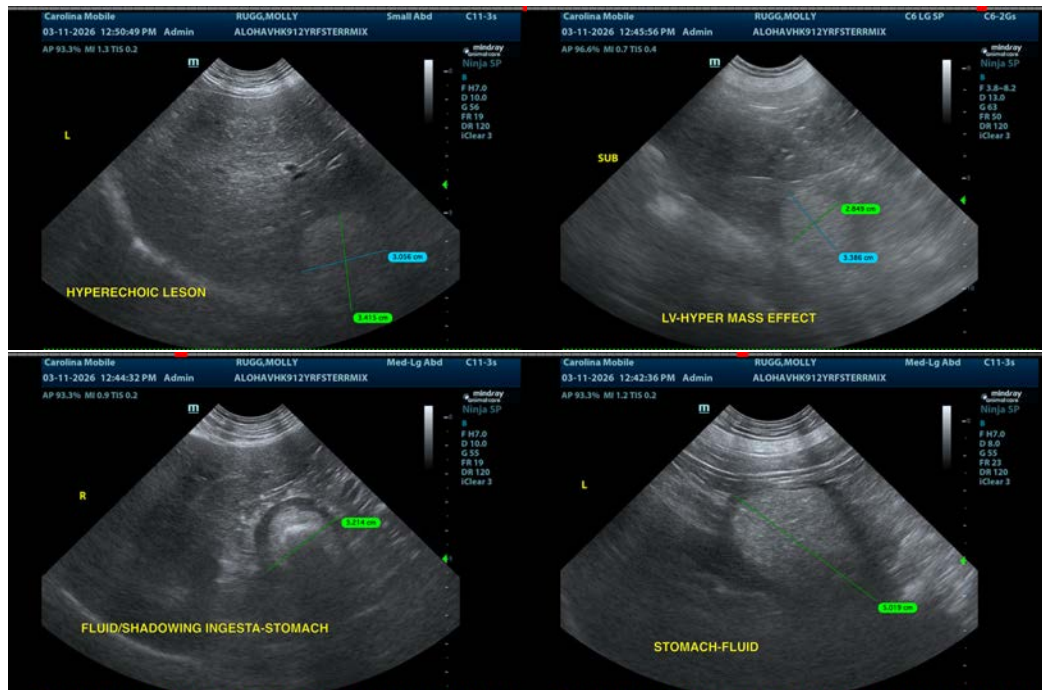
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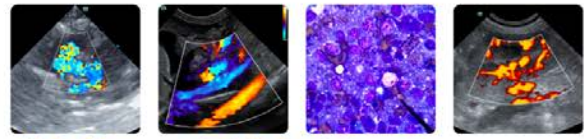
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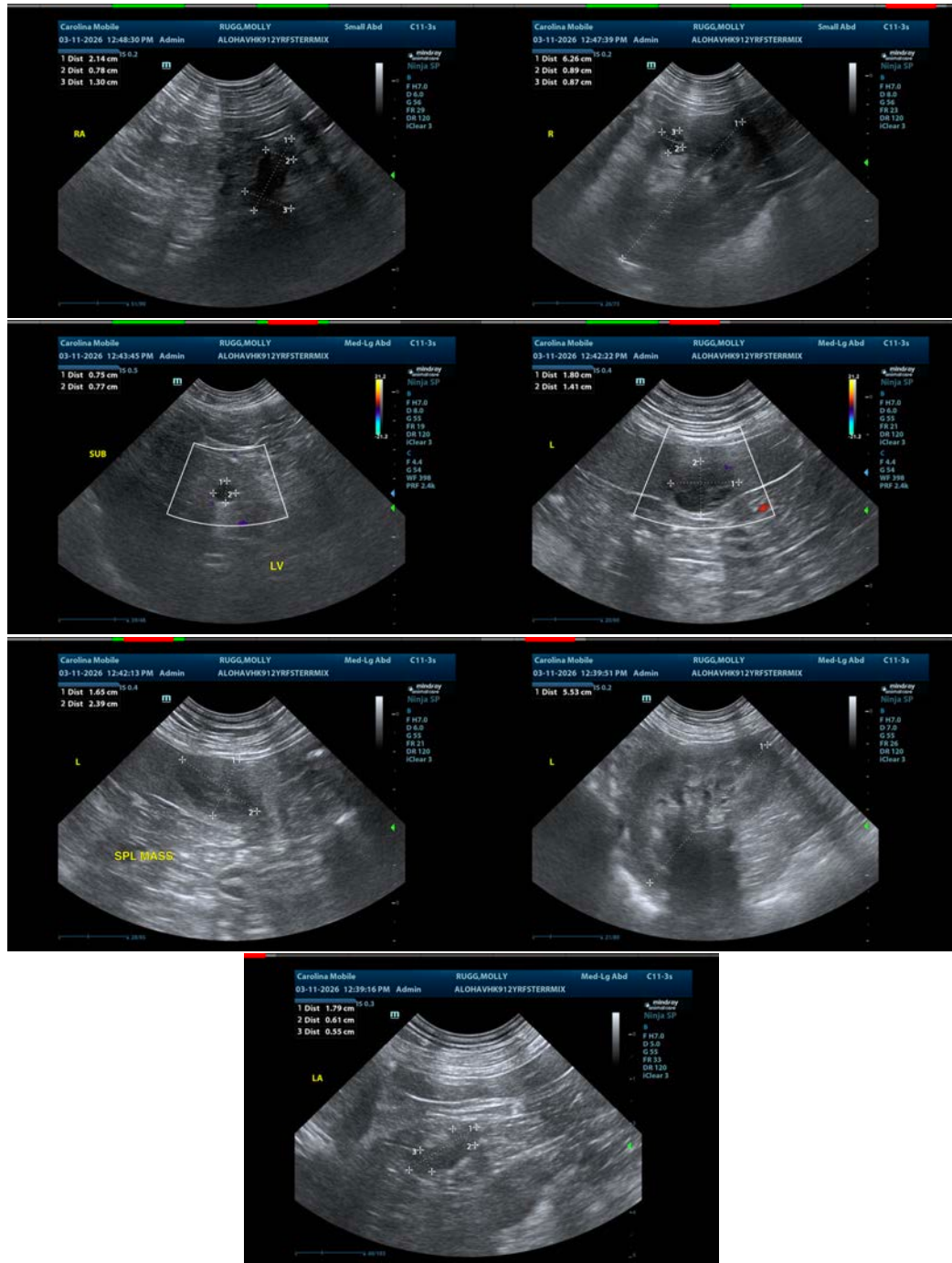
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

info@sonopath.com