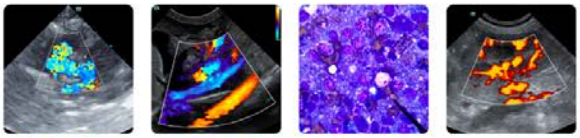

PATIENT

Gunner Cole

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

Neutered Male

AGE

13 Years 1 Month

WEIGHT

26.5 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Armstrong Animal Clinic

REFERRING VET

Dr. Dolan

INVOICE

72958

DATE

2/13/26

PRESENTING CLINICAL SIGNS

P presented for US due to elevated liver values. P is on Keppra

Abnormal PE/Chem/CBC/UA Results: BUN 36, ALT 205, ALP 656 Chol 394, CK 255,

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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, or masses. In the dependent portion of the urinary bladder there is a focal hyperechoic shadowing structure most consistent with a small stone or multiple overlapping small stones, measuring approximately 0.32 cm.

The prostate is normal in size (0.84 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. There is a focal pinpoint mineralization noted. The prostatic urethra appears normal with no evidence of irregularity, invasion, or mass effect.

The left kidney has a normal shape and size (4.93 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.

The right kidney has a normal shape and size (5.44 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.

Adrenal Glands

The left adrenal gland is “plump” measuring 0.56 cm at the cranial pole and 0.71 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 0.54 cm at the cranial pole and 0.50 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.

Spleen

The spleen is subjectively normal in size (1.63 cm), echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a hyperechoic lesion at the periphery of the spleen measuring 0.51 cm, most consistent with a benign myelolipoma.

Liver

The liver is large in size, and normal in echogenicity with rounded margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the

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vasculature and biliary tract appear normal. There is a poorly defined hyperechoic cystic structure visualized in the mid region of the liver measuring approximately 1.96 cm x 2.37 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and likely incidental at this time. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. 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. No masses or focal lesions were observed.

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 0.39 cm. Jejunum wall measures 0.35 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 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.

PRIMARY FINDINGS

- Dependent mineralizations (stones, sandy debris, etc.) visualized in the urinary bladder – Recommend a urinalysis, culture and radiographs to further evaluate.
- Pinpoint foci in the prostate – Correlate with the age of neutering. If this patient was neutered after puberty, this could represent an area of previous inflammation, etc. If this patient was neutered prior to puberty, this would be atypical and there would be increased concern for prostatic neoplasia.
- Large, heterogeneous liver with a hyperechoic cystic lesion – 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 hyperechoic lesion has the appearance most consistent with a cystadenoma, cystadenocarcinoma, other. Recommend continued monitoring.

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SECONDARY FINDINGS

- "Plump" left adrenal gland – Findings are likely consistent with anatomic variation, early hyperplasia is possible.
- Hyperechoic lesion at the periphery of the spleen – Findings are most consistent with a benign myelolipoma. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

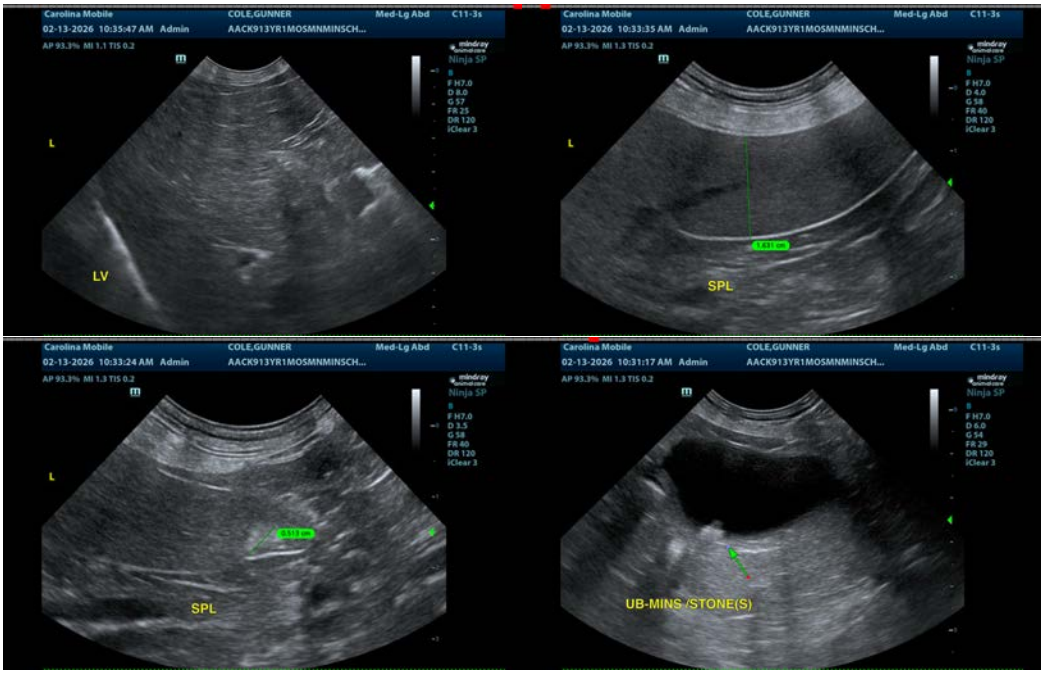
The liver is large and heterogeneous. This is a non-specific finding, which is often see with a vacuolar hepatopathy, but other hepatopathies are possible. Additionally, there is a poorly defined hyperechoic cystic lesion in the mid region of the liver, most consistent with a cystadenoma or cystadenocarcinoma. This is likely too deep to easily sample. Consider the following for initial evaluation:

- Recommend pre- and post-prandial bile acids to assess liver function.
- Recommend a fine needle aspirate of the liver (provided coagulation parameters are normal)

The left adrenal is "plump" and the right adrenal appears normal. If signs of Cushing's are present, you could consider adrenal function testing in the case of possible mild hyperplasia.

There is a small, mineralized foci visualized in the spleen. This could be a normal finding associated with previous inflammation, etc. in intact males, or possibly in a male neutered after puberty. If this patient was neutered prior to 6 months of age, this would likely be abnormal, and a fine needle aspirate could be considered, looking for possible early prostatic neoplasia.

Recommend radiographs, urinalysis and culture to further assess the mineralization visualized in the urinary bladder.



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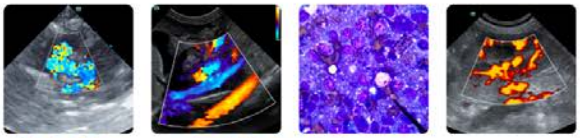

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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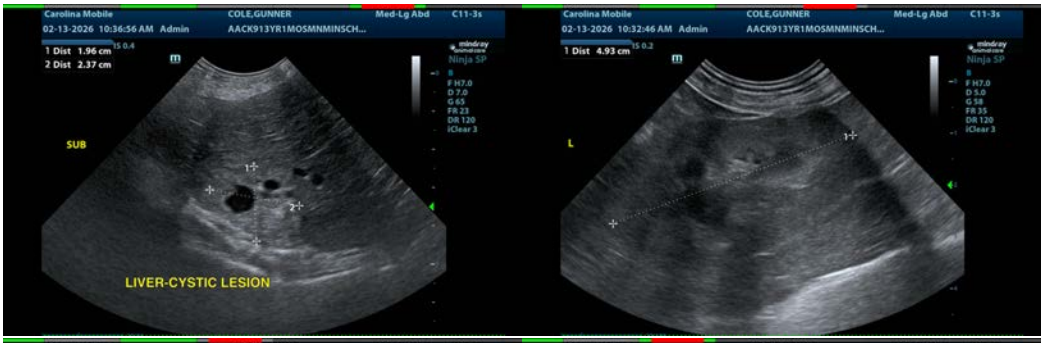

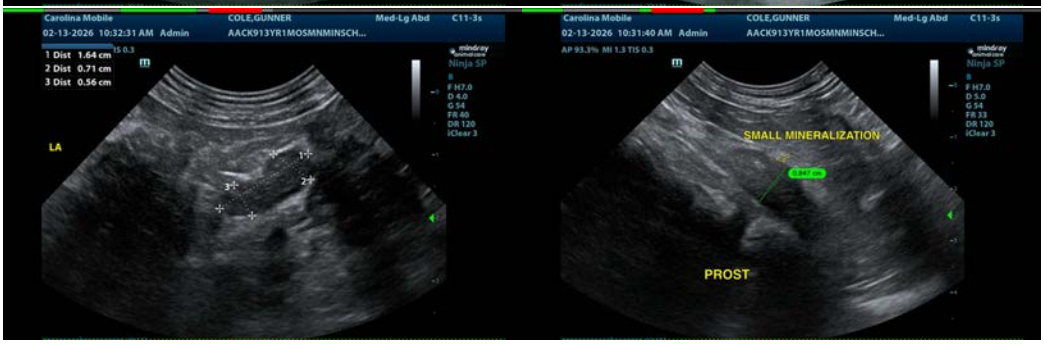

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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