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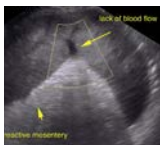
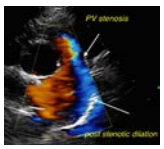
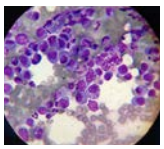
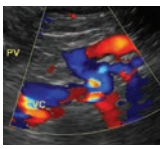

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1-800-838-4268 info@sonopath.com

PATIENT

Jemini Hanger

SPECIES

Canine

BREED

Pit X

SEX

Spayed Female

AGE

13.25 Years

WEIGHT

26.4 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Wendy Turner

HOSPITAL NAME

Pennsauken AH

REFERRING VET

Dr. Taryn Mooney

INVOICE

43869

DATE

1/3/23

PRESENTING CLINICAL SIGNS

Hx solitary pulmonary nodule, hepatosplenomegaly, urolithiasis, splenic mass

Abnormal PE/Chem/CBC/UA Results: 11/11/22: ALT 149 (10-125), ALP 437 (23-212), T bili 1.1 (0-0.9), Amylase 2068 (500-1500), monos 1.17 (0.16-1.12). UA: USG 1.019, mild leuks, protein 30mg/dl

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. There is a large accumulation of dependent hyperechoic shadowing structures, most consistent with a grouping of cystic calculi in the dependent portion of the urinary bladder.

The left kidney has a normal shape and size (6.95 cm) with occasional small cortical cysts. Overall echogenicity is slightly hyperechoic with poor 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 (8.28 cm) with occasional small cortical cysts. Overall echogenicity is slightly hyperechoic with poor 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 normal in size measuring 0.58 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 0.67 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 large and irregular. The blood flow through the hilus and splenic parenchyma appears normal. There is a hypoechoic, cavitated, mixed echogenic mass effect visualized in the cranial portion of the spleen measuring approximately 6.19 cm x 5.42 cm.

Liver

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 are occasional hyperechoic nodules visualized within the parenchyma. Examples measure 1.19 cm and 1.17 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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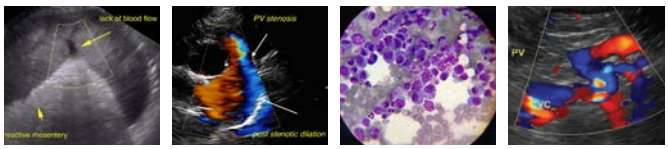

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Gastrointestinal

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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. 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

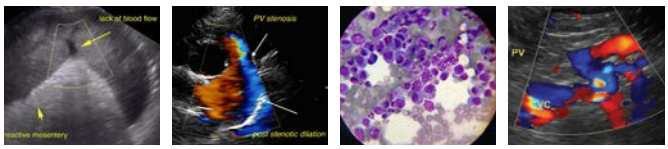
- Grouping of dependent shadowing calculi in the urinary bladder – Correlate with abdominal radiographs. Recommend urinalysis and culture.
- Large, mixed echogenic, cavitated splenic mass – A large, heterogenous mass with cavitations is present within the splenic parenchyma. The mass distorts the splenic capsule. Differentials for the mass include neoplasia (e.g., hemangiosarcoma, hemangioma), hematoma, abscess, other. A neoplastic process is favored.
- Heterogeneous liver with occasional hyperechoic nodules – 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 appearance of the hyperechoic nodules trends towards a benign etiology.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys with small cortical cysts – The bilateral renal findings are consistent with age-related change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A large, cavitated mass effect is visualized on the spleen. This could be related to the pulmonary nodule, or there could be two concurrent disease processes. Consider a contrast CT scan of the chest cavity, looking for evidence of additional nodules and the possible presence of metastasis. If this is a primary pulmonary nodule, they can often remain silent and grow relatively slowly, but unfortunately a



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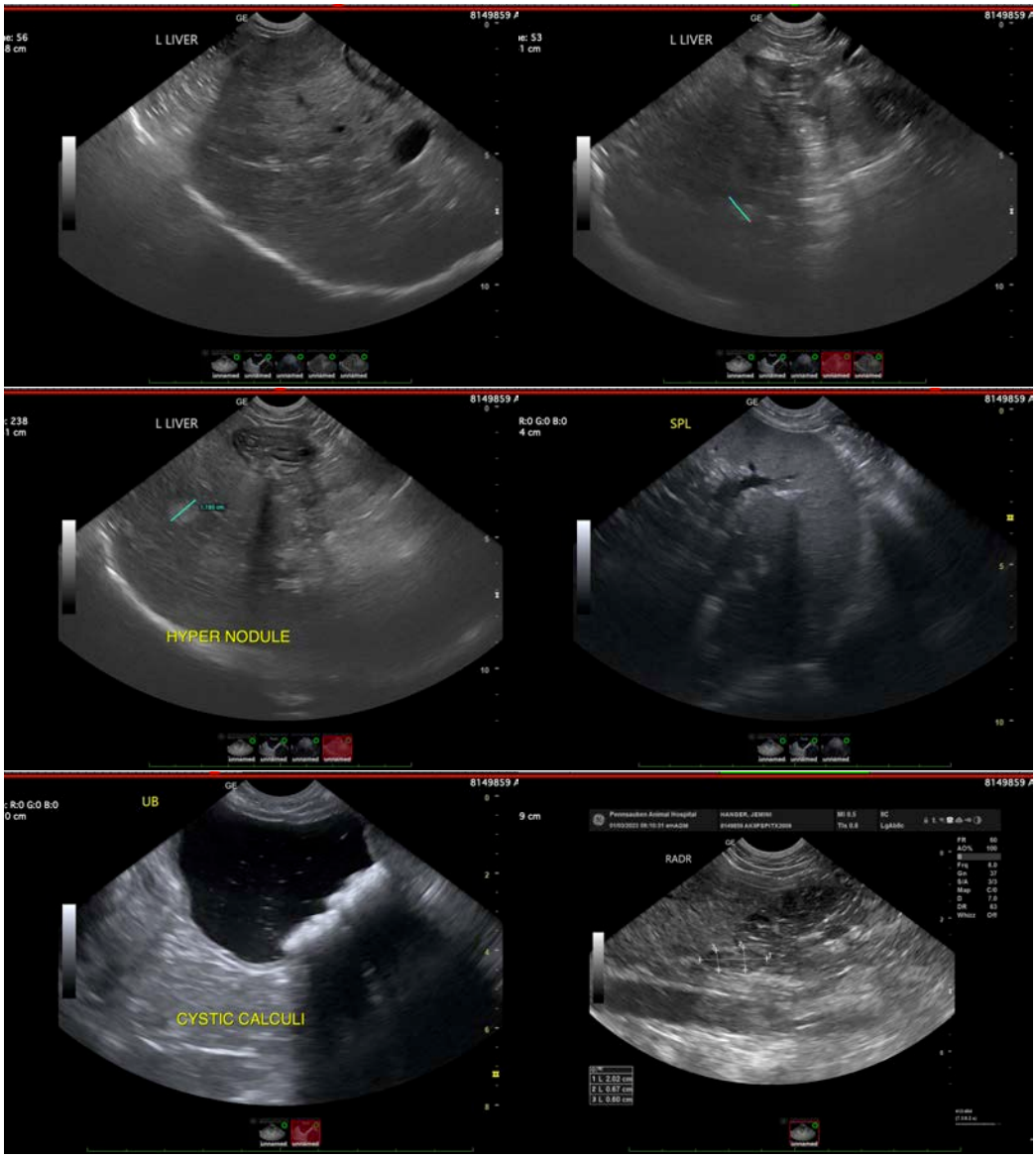
metastatic disease tends to progress quickly and present with multiple lesions. If there is no evidence of metastasis, then a splenectomy could be considered for both diagnostic and therapeutic purposes.

The liver is heterogeneous and there are moderate liver enzyme elevations present. The elevation in bilirubin is concerning. This could possibly be secondary to hemolysis(?) or significant primary liver disease. Consider a liver function test on a non-hemolyzed sample. Additionally, a fine needle aspirate of the liver could be helpful, and a biopsy of the liver is surgery is pursued.

There are multiple stones in the dependent portion of the urinary bladder. Correlate these findings with abdominal radiographs to try and determine if these are small enough to pass naturally. Correlate with urinalysis and culture results to try and determine if dissolution would be an option. Otherwise, cystotomy may be necessary.



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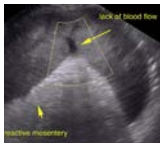
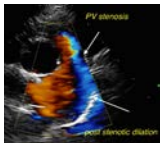
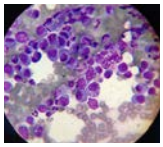
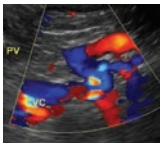

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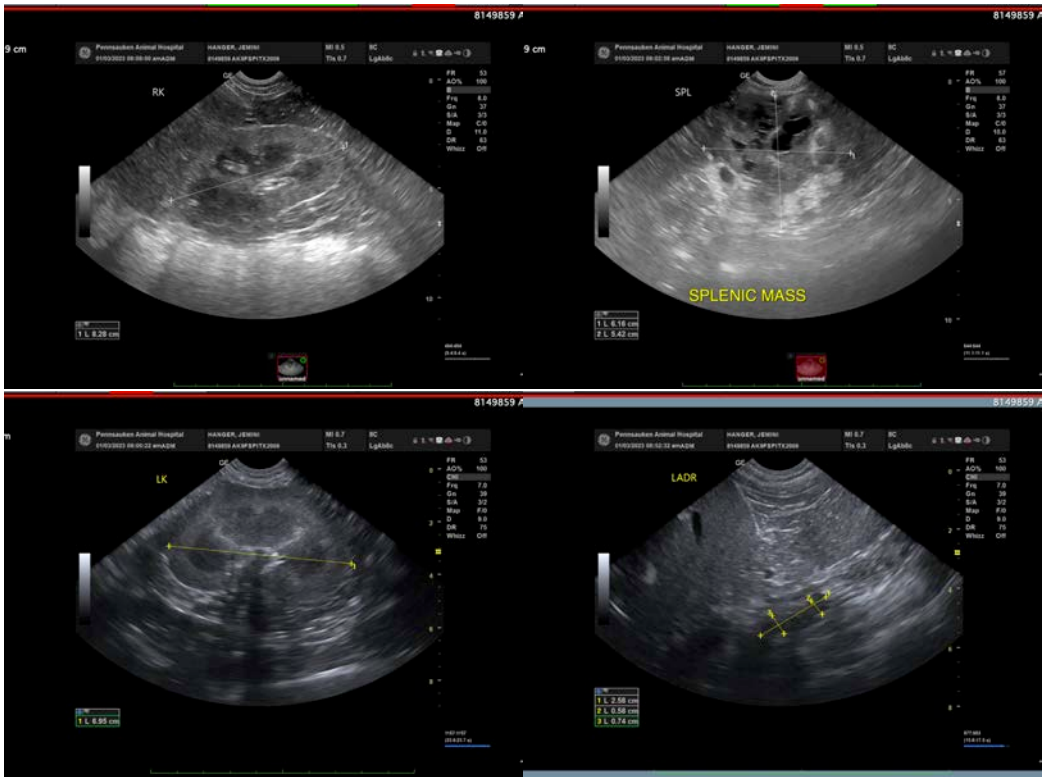

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com