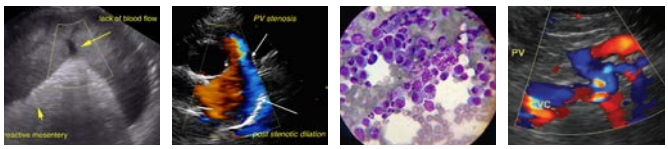
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Rio Metzler

SPECIES

Canine

BREED

Welsh Corgi

SEX

Neutered Male

AGE

13 Years

WEIGHT

40 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Judy Schroeder

HOSPITAL NAME

Animal Health Associates

REFERRING VET

Dr. Judy Schroeder

INVOICE

45727

DATE

3/7/23

PRESENTING CLINICAL SIGNS

Patient has a history of urolithiasis, pancreatitis, GI FB surgery, possible adrenal mass (questionable). Routine bloodwork was normal except for hematuria. Radiographs showed multiple stones in bladder and kidneys, but also concern for a splenic mass and renal changes.

Abnormal PE/Chem/CBC/UA Results: Hematuria. Urine culture negative. Chem, CBC, T4 normal. Radiographs showed some concern for splenic mass and kidney irregularity, as well as multiple uroliths and nephroliths.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris. 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 large pile of shadowing calculi and debris.

The prostate is normal in size (1.03 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney is irregular in shape (likely due to previous infarcts) and has decreased corticomedullary distinction, measuring 6.02 cm. Numerous, moderate sized nephroliths are present. Additionally, there is pyelectasia present measuring 0.28 cm, and a stone in the renal pelvis measuring 0.37 cm. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of hydroureter. Renal vasculature is normal.

The right kidney is irregular, likely due to previous infarcts, and has decreased corticomedullary distinction at 5.28 cm with many moderate sized shadowing nephroliths visualized. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia or hydroureter. Renal vasculature is normal.

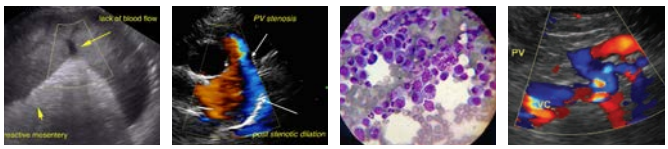
Adrenal Glands

The left adrenal gland is normal in size measuring 0.41 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

Spleen

The spleen is subjectively normal in size but irregular in shape. Echotexture is homogenous. The blood flow through the hilus and splenic parenchyma appears normal. There is a moderate sized, somewhat isoechoic mass effect towards the head of the spleen. This lesion is irregular and has numerous shadowing hyperechoic regions. It is somewhat poorly defined, measuring approximately 3.98 cm x 1.85 cm.



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Liver

The liver is subjectively normal in size, but irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is an isoechoic mass effect measuring 3.67 cm x 2.84 cm located caudoventral to the gallbladder.

The gall bladder lumen is moderately distended. The wall of the gall bladder has irregular polypoid projections and there is a moderate amount of non-organized echogenic debris. 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. Jejunum wall measures 0.32 cm. 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

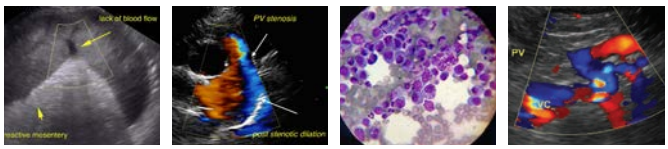
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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.

ULTRASONOGRAPHIC FINDINGS

- Large pile of shadowing stones in the urinary bladder – Correlate with abdominal radiographs, urinalysis and culture.
- Irregular kidneys with decreased corticomedullary distinction and numerous moderate sized nephroliths. Possible early mild obstructive disease in the left kidney - Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Isoechoic mass effect near the head of the spleen – This could represent a benign or neoplastic lesion (hemangioma, hemangiosarcoma, round cell neoplasia, hyperplasia, other). Recommend fine needle aspirate.
- Heterogeneous liver with isoechoic 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. There is an isoechoic mass effect visualized near the gallbladder. This could represent a large regenerative nodule, a primary liver mass, etc. (Adenoma, carcinoma, other).



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- Small gallbladder polyps – The significance of the gall bladder polyps and debris is unclear. This could represent an early mucocele, cholestasis, or chronic inflammation, or could be an incidental finding.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

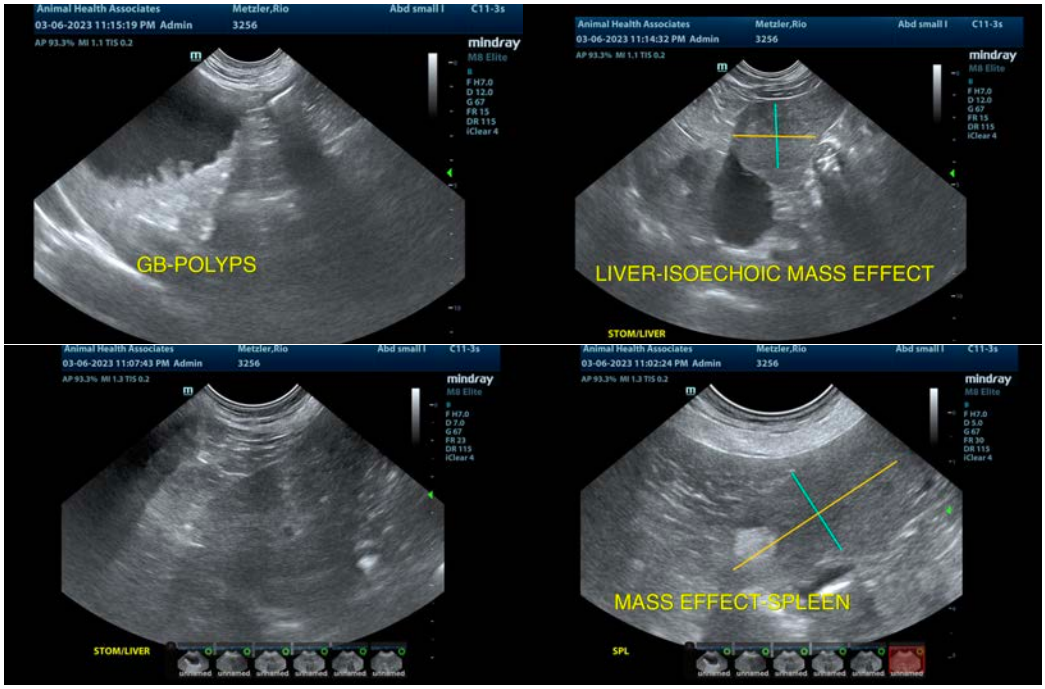
There are numerous stones visualized in the urinary bladder. Recommend a urinalysis and culture. If these stones are not associated with infection, they are most likely not readily dissolvable, and a cystotomy may be necessary. At that time, you could consider splenectomy for both diagnostic and therapeutic purposes, or you could consider a fine needle aspirate of the mass effect in the cranial aspect of the spleen.

There is an isoechoic mass effect in the liver. This could represent a benign large regenerative nodule, etc. A primary hepatic lesion is most likely (less likely metastasis, etc.). Options moving forward would include a fine needle aspirate, a biopsy at the time of surgery, and continued monitoring or consideration for surgical removal (likely a contrast CT scan, etc.). Generally, this appears as a somewhat subtle lesion, and continued monitoring would be an option, but a more aggressive neoplastic lesion cannot be ruled out.

Both kidneys are very irregular with too numerous to count moderate sized nephroliths, and the left kidney has a small nephrolith in the renal pelvis and renal pelvic dilation. If not already done, routine urinalysis and culture should be performed, particularly given the urinary bladder findings as well as a blood pressure evaluation and monitoring of renal values.

Complete visualization of the right adrenal was challenging on today's exam. The area was well imaged, and a large adrenal mass is unlikely to be present. Recommend continued monitoring of the region.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.



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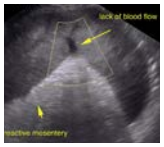
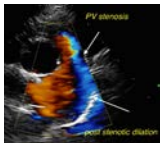
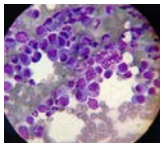
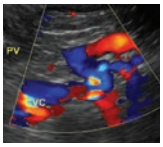

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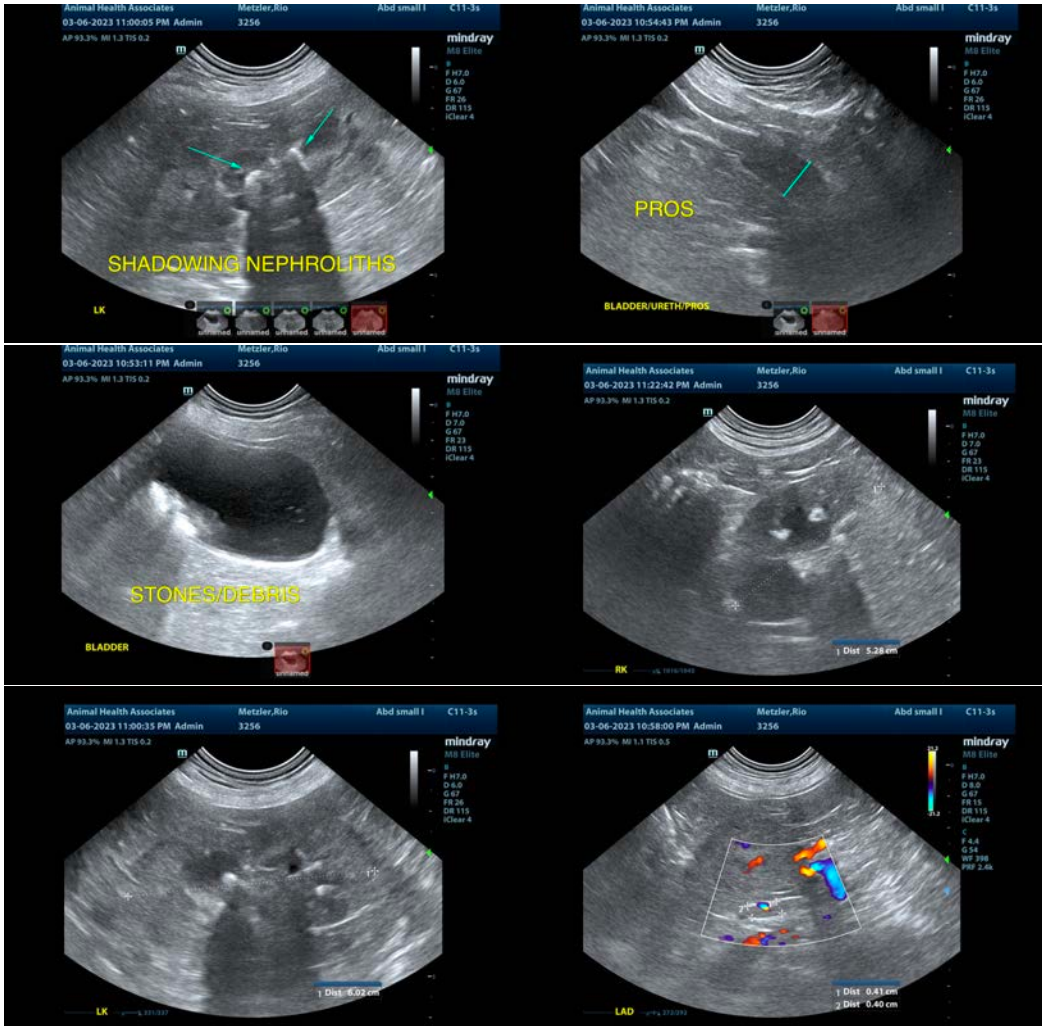

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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