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Clinical Sonography & Telecytology
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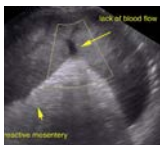
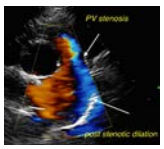
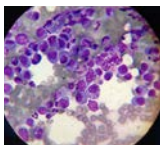
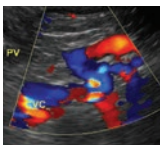

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1-800-838-4268 info@sonopath.com

PATIENT
Sasha Ramos

SPECIES
Canine

BREED
Cockapoo

SEX
Spayed Female

AGE
12 Years

WEIGHT
24.5 Pounds

INTERPRETED BY
Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
Ridge Road AH

REFERRING VET
Dr. Pathak

INVOICE
38071

DATE
5/27/22

PRESENTING CLINICAL SIGNS

On and off chronic hematuria, benign mass removed from cranial ub ~4 years ago. Elevated ALP.
Current meds: Flexatin daily, Carprofen prn.
Abnormal PE/Chem/CBC/UA Results: ALP 411 (down from 954); Chol 410, BUN 6, U/A 5/26/2022- USG 1.015, Bld/Hb 1+

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is well distended with contents that are primarily anechoic. A small to moderate amount of sediment is present; both free floating and gravity dependent. The wall is thicker than usual, measuring up to 3.20 mm at the junction of the apex and dorsal wall. The mucosa is mildly irregular, particularly at the apex.

In the longitudinal view, an acoustic shadow cast by a hyperechoic structure, consistent with a cystolith, is observed along the ventral wall. It measures 3.6 mm.

Another hyperechoic structure, measuring approximately 1.5 mm, without an acoustic shadow is seen cranial to the cystolith.

Also in the longitudinal view, an echogenic structure arising from the mucosa is noted at the apex. It is sessile, elongated and suggestive of a polyp. It measures approximately 8.3 mm in length x 2.9 mm in width. The structure is located at the junction of the apex and ventral wall when evaluated with the linear probe.

Another possible polyp is noted along the dorsal wall.

No abnormalities are noted with the trigone or proximal urethra.

Kidneys

The **left** kidney measures 5.13 cm. The capsule is smooth. The cortex is very mildly hyperechoic and a very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 4.79 cm. The capsule is smooth. The cortex is very mildly hyperechoic and a very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, with very subtle acoustic shadowing, i.e. suggestive of small nephroliths. Pyelectasia is not noted. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

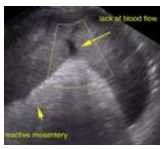
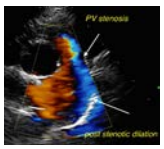
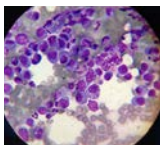
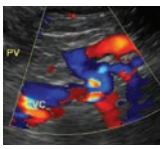
Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.52 cm at the cranial pole, 0.54 cm at the caudal pole and 2.08 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland is "plump" and very mildly enlarged for a dog of Sasha's stature. The maximum diameter of the cranial pole is 0.61 cm, and 0.67 cm at the caudal pole. It is approximately 1.53 cm in

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length. No abnormalities are noted with the gland's overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

Spleen

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

Liver

Mild hepatomegaly is suspected, however, this is better characterized at the time of the ultrasound or with radiographs. The liver's borders are smooth and vary between sharp to very mildly rounded. It is diffusely hyperechoic (isoechoic to the spleen), and a subtle, but diffuse, coarse or granular echotexture is observed. Focal lesions are not visualized and no obvious abnormalities are noted with the hepatic vessels.

The gallbladder wall is within normal limits in thickness and echogenicity. A moderate amount of echogenic material is present within the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

Gastrointestinal

Ingesta and gas are present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

A moderate amount of ingesta is present in the small intestines. The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. No abnormalities or observed with the ileocecal colic junction. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.

Pancreas

The pancreas has a mildly coarse echotexture, which is considered secondary to age related changes, however, previous episodes of pancreatitis cannot be excluded. There are no signs of active pancreatitis or neoplasia.

Other

Lymph nodes

No abnormalities are observed

Abdominal effusion is not visualized.

Heart

A brief video clip of the heart was submitted. Pericardial and pleural effusion are not identified. There is no evidence of a mass is not observed on evaluation of the right atrium or auricle.

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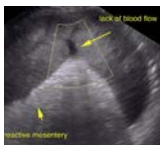
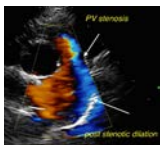
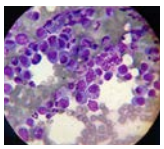
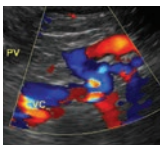

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ULTRASONOGRAPHIC FINDINGS

- **Urinary bladder**: A urinary tract infection is suspected based on the thickened and irregular mucosa. A cystolith is present, in addition to a smaller cystolith that is not yet fully formed, as well as a moderate amount of sediment. There are no obvious signs of an obstruction. The echogenic structures arising from the mucosa are most consistent with a polyploid cystitis, which may occur secondary to cystoliths, as well as urinary tract infections.

- **Adrenal glands:** The caudal pole of the **right** gland is more "plump" and very mildly enlarged for a dog of Sasha's stature. Mild adrenomegaly may occur secondary to adrenal hyperplasia due to stress or chronic illness, as well as a benign adenoma. There are no signs of a mass, therefore, neoplasia is considered much less likely. Emerging pituitary dependent HAC cannot be excluded. Sonographic results should be correlated with clinical signs, i.e., further diagnostics are not necessary if a patient is not demonstrating clinical signs of HAC.

- **Liver**: Vacuolar and reactive hepatopathies may explain the diffuse hyperechogenicity and suspected hepatomegaly and mildly coarse, granular echotexture, respectively. Cholestasis is also possible. Differential diagnoses, such as hepatitis, cholangitis/cholangiohepatitis are considered less likely, but should be correlated with clinical signs.

- **Gallbladder sludge**; most likely clinically insignificant, however, gastroesophageal reflux disease (GERD), may occur in some patients. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor or ursodeoxycholic acid may be required depending on the patient's history. Signs of suppurative cholecystitis are not apparent.

- **Kidneys**: Mild renal changes are present, which are suggestive of age related degeneration. Mild mineralization is also present, which may occur secondary to diet, as well as age related changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An evaluation of Sasha's diet is suggested (s/o index recommended)

Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor or ursodeoxycholic acid may be required depending on the patient's history.

A urinalysis and urine culture and sensitivity are recommended. If negative, treatment with enrofloxacin is suggested. If a clinical improvement is observed, 6-8 weeks of medication may be required.

Collection of any sand in the urine may be obtained via gauze and sent for analysis to determine if struvites, i.e. if dietary dissolution is possible (with antibiotic therapy). Another option would be urohydropulsion.

Gabapentin every 8-12 hours to treat underlying discomfort

Meloxicam to treat underlying inflammation, which is easier to titrate due to its liquid formulation.

A sonographic re-evaluation of the urinary bladder is suggested in 4 weeks.

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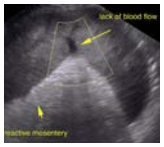
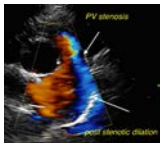
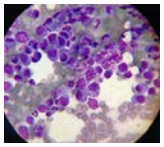
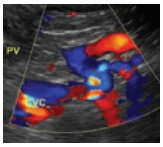

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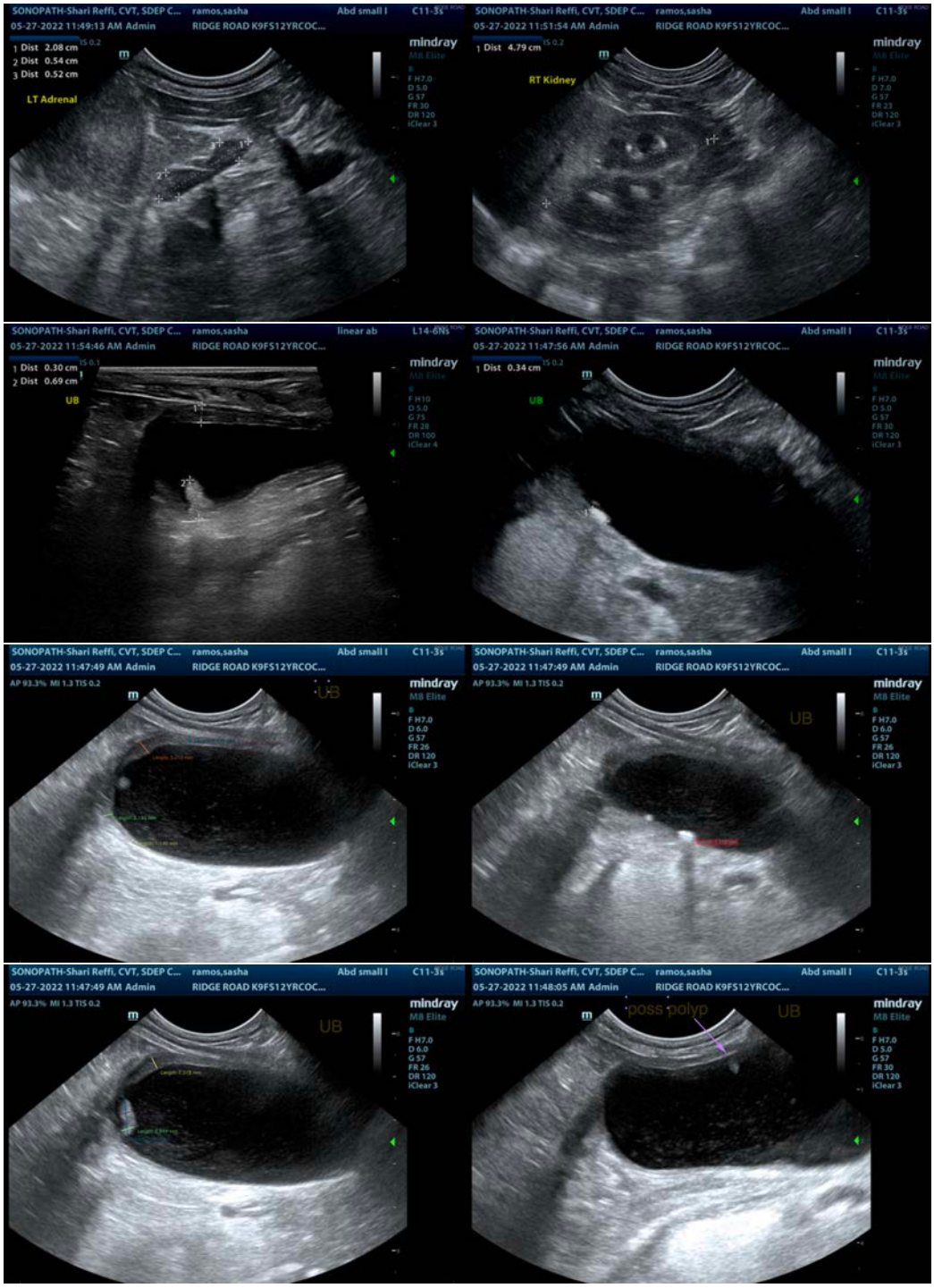

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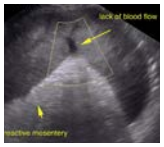
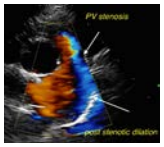
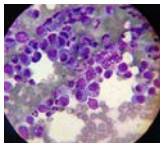
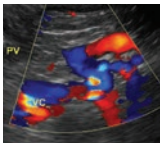

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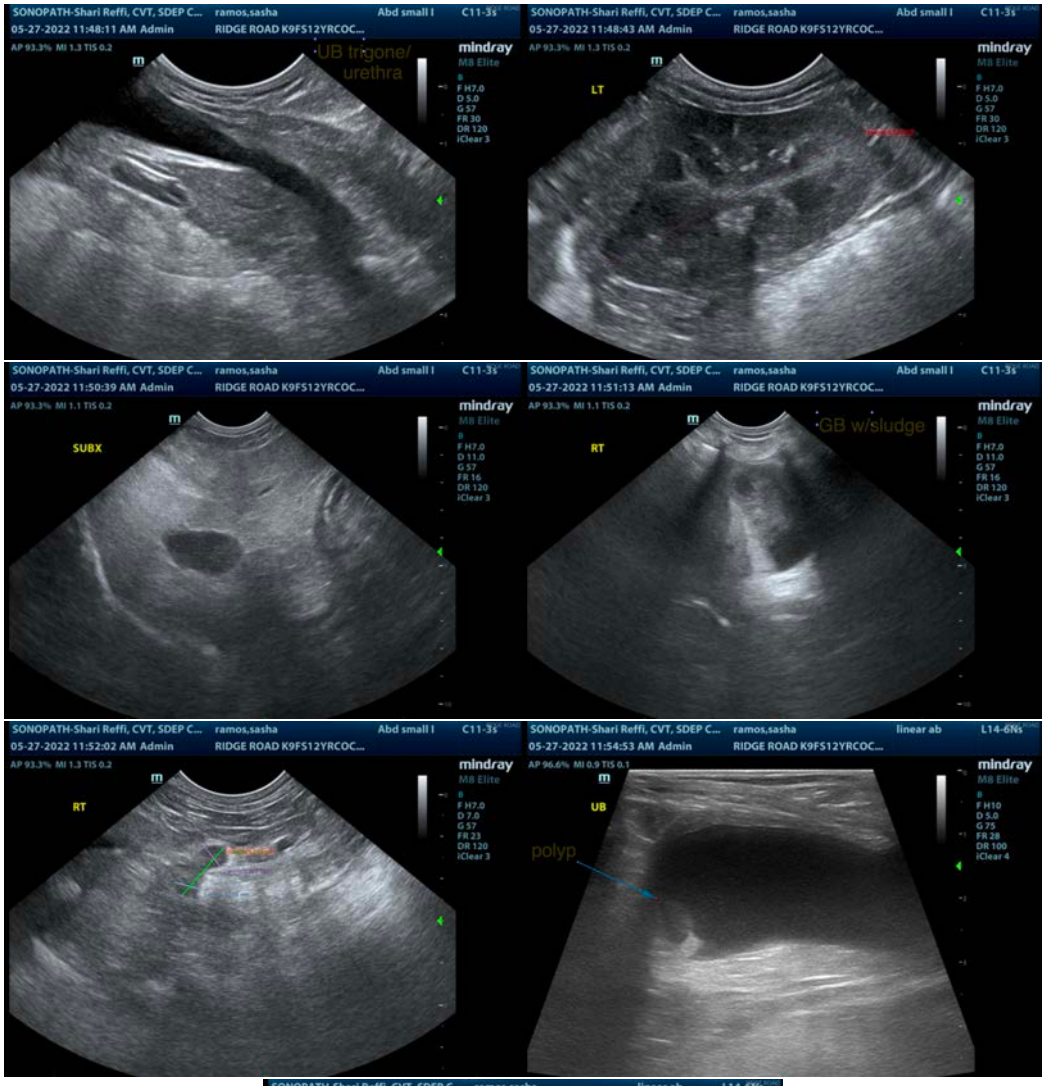

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM Lisa.Carioto@sonopath.com