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Clinical Sonography & Telecytology
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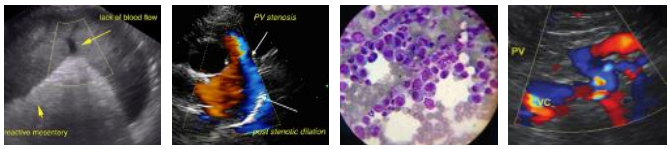

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Copper Miranda

SPECIES

Canine

BREED

Mix

SEX

MN

AGE

9 yr

WEIGHT

35 lb

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Dr. Rivera

HOSPITAL NAME

DPC Veterinary Hospital

REFERRING VET

Dr. Rivera

INVOICE

10626ag

DATE

05/15/2022

PRESENTING CLINICAL SIGNS

History: 9YR OLD NEUTERED MIXED DOG PRESENTED FOR TROUBLE URINATING AND STILL VOMITING. PET IS BEING TREATED FOR A PROSTATE AND HAS BEEN ON LONG TERM DOXY. OWNER COMPLAINS OF VOMITING FOR AT LEAST A MONTH. HE NO LONGER IS STRAINING OR SITTING WHEN URINATING(IMPROVEMENT).

Abnormal PE/Chem/CBC/UA Results: Physical Examination Key -- (N= Normal, A= Abnormal) CV/Respiratory: Normal heart rate and rhythm, no murmur, pulses strong and synchronous, normal bronchovesicular sounds. EENT: OU: lenticular sclerosis. Did not examine AU. No nasal discharge. Oral cavity: Not examined Musculoskeletal: BCS = 4/9. Ambulatory x 4 Uro/Perineum: No significant lesions Abd/GI: Soft, non-painful. No obvious masses or fluid wave palpated Lymph Nodes: No peripheral lymphadenopathy Neurological: Alert and appropriate. No significant abnormalities Skin: Good hair coat. No ectoparasites seen Mentation: QAR Hydration: N Rectal: No masses, soft stool, brown "reddish" stool, sl enlarged prostate - R side felt larger

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder was normal in size and tone. Subjective thickened urinary bladder walls were present in the area of the dorsal and ventral trigone extending into the cystourethral junction. The apical bladder wall was overtly normal. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. The ventral trigone wall measured approximately 1 cm width.

Normal size and margination was present in the right kidney. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortex were uniform in texture with some increased echogenicity and mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present or hydronephrosis. The right kidney measured 5.9 cm in length.

Normal size was present in the left kidney. Moderate hydronephrosis exhibited by replacement of the majority of the medullary parenchyma with anechoic urine was present. Concurrent dilated and tortuous visualized left ureter exiting the left kidney extending for 2-3 cm was present. The left kidney measured 5.5 cm in length.

The area of the aortic trifurcation was free of pathology.

Multiple enlarged, hypoechoic medial iliac lymph nodes were present. The lymph nodes exhibited symmetrical to rounded margination with abnormal width: length ratio (>0.5). The enlarged lymph nodes were bordered by echogenic to reactive mesentery. The mesenteric root lymph nodes measured 2.5 cm length and 1.3 cm width.

The prostate was enlarged in size. The prostatic parenchyma was primarily hypoechoic to heterogeneous with areas of pinpoint hyperechoic parenchyma foci. The margins of the gland were indistinct and difficult to differentiate from the surrounding tissue. The prostate measured 4.3 cm x 3.6 cm.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured – cm width at the caudal pole and – cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured – cm width at the caudal pole and – cm width at the cranial pole.

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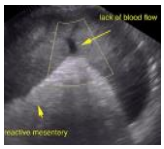
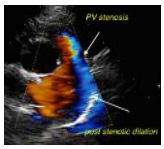
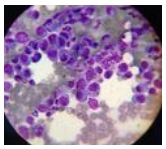
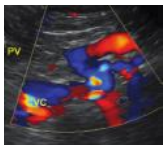

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Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with mild hyperechoic yet nonmineralized debris. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

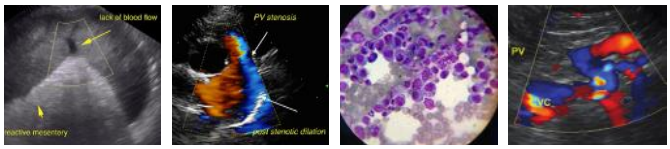
No evidence of omental lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Thickened trigone/cystourethral junction
- Prostatomegaly exhibiting nonhomogeneous hypoechoic parenchyma with pinpoint hyperechoic parenchyma foci
- Medial iliac lymphadenopathy
- Moderate left kidney hydronephrosis with concurrent proximal left hydroureter
- Mild to moderate right kidney chronic renal changes, no evidence of right hydronephrosis/hydroureter

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although sampling is required for definitive diagnosis, strong concern for diffuse prostatic and trigone/cystourethral junction neoplasia i.e. primary prostatic carcinoma invading into the urinary bladder or urothelial carcinoma involving the prostate. Potential for prostatitis and regional trigone and cystourethral junction cystitis possible yet thought less likely. High concern for early medial iliac



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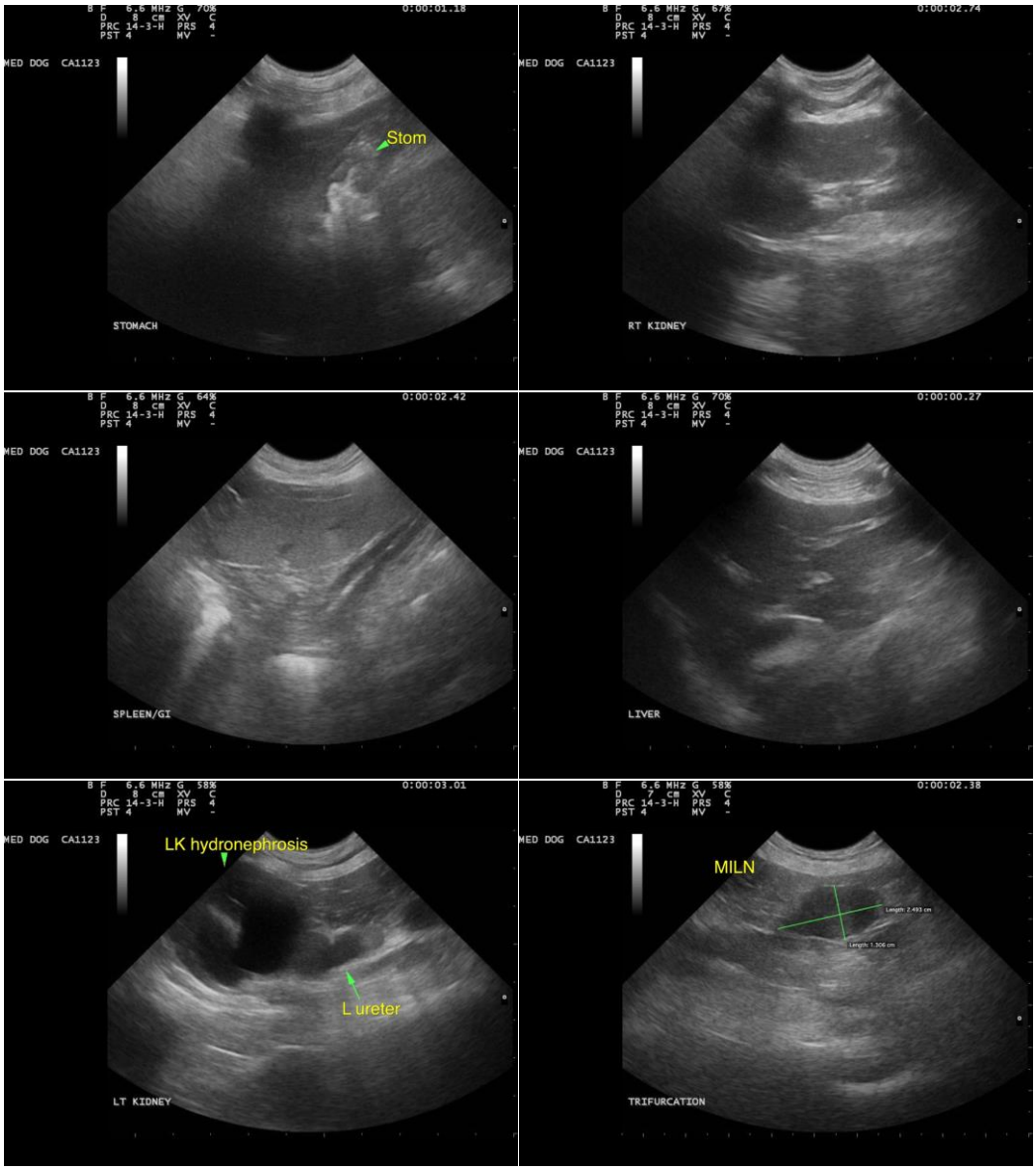
lymphatic metastasis given the presentation. Secondary left ureter obstruction given the thickened trigone and concurrent left hydronephrosis is likely. Screening BRAF assay and ultrasound guided FNA of the prostate +/- medial iliac lymph node if accessible is recommended with potential for oncology consult.



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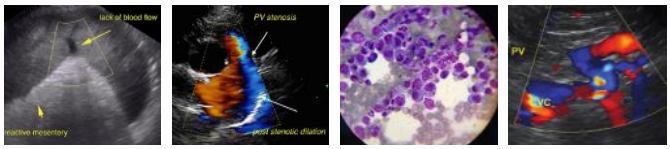

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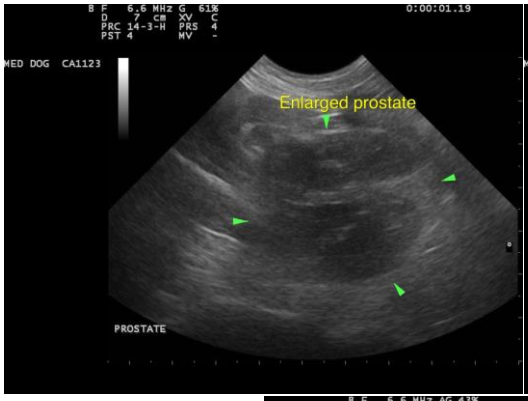

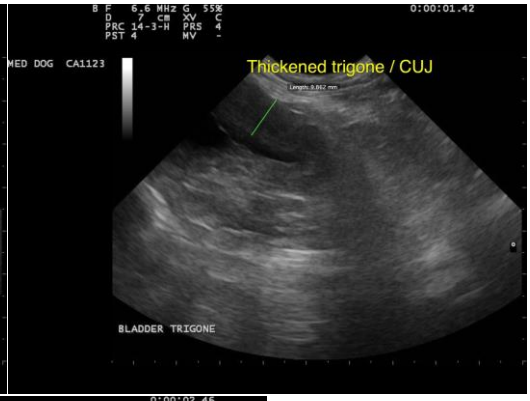

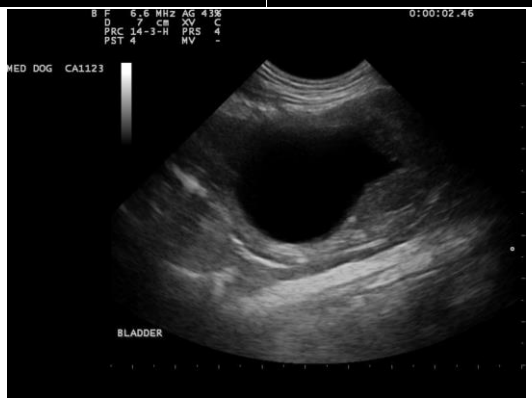

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com