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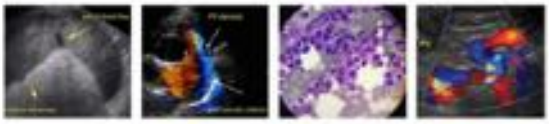

IMAGING PERFORMED BY
pawsonography@gmail.com 530-708-8340

**PATIENT**
Kota Sand

**SPECIES**
Canine

**BREED**
Shih Tzu

**SEX**
Spayed Female

**AGE**
13 years

**WEIGHT**
4.2 kg

**INTERPRETED BY**
Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

**IMAGING PERFORMED BY**
Loetitia Saint-Jacques, LVT

**HOSPITAL NAME**
Pine Creek VC

**REFERRING VET**
Kristi Cortright

**INVOICE**
12232

**DATE**
2.16.23

## PRESENTING CLINICAL SIGNS

History: Frequent urination, hematuria. Grade 4/6 L-sided murmur.
Working diagnosis
r/o bladder neoplasia, uroliths, polyps
Meds: Gabapentin 50MG BID, Carprofen 25mg 1/2t PO in AM, 1/4t PO in PM, Finished Clavamox.
Has been on Pimobendane and Lasix in past, but owner not giving as directed per rDVM records.

Abnormal PE/Chem/CBC/UA Results: BUN/CREAT Ratio 31, Lymphocytes 44, PLT 658, UA - Microalbuminuria 9.6, Occult blood 3+, WBC 4-10, RBC 4-10

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended. A >3.00 cm mass effect is observed primarily along the dorsal wall, but extends to the cystourethral junction and a portion of the ventral wall. The mass is irregular and heterogenous with a few foci of mineralization. A small scant amount of suspended echogenic debris is observed within the lumen. No cystic calculi are observed. The proximal urethra appears normal in thickness.

The left kidney is normal in size (3.80 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild to moderate loss of corticomedullary distinction. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present. There is no evidence of infarcts or hydroureter.

The right kidney is normal in size (3.88 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

### *Adrenal Glands*

The left adrenal gland is mildly enlarged (0.61 cm at cranial pole) (0.62 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is in normal size (0.43 cm at cranial pole) (0.52 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

### *Spleen*

The spleen is normal in size (0.93 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

### *Liver*

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and slightly mottled in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

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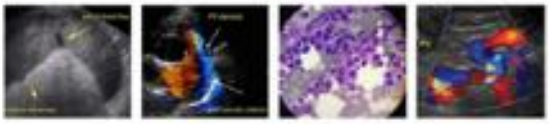

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The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

***Gastrointestinal***

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

***Pancreas***

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

***Free Abdomen***

There is no obvious evidence free fluid. One to two prominent lymph nodes are observed at the aortic trifurcation (the largest measuring 0.54 cm in length).

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Urinary bladder mass. Neoplasia (i.e., transitional cell carcinoma) is suspected, with a lower possibility of an inflammatory process.
- The prominent lymph nodes at the aortic trifurcation may represent reactive change or infiltrative neoplasia.

### Secondary Findings

- Bilateral chronic renal changes
- Mild left adrenomegaly
- The hepatic parenchymal changes are nonspecific and are most consistent with benign age-related remodeling, with a lower possibility of more insidious disease.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- A urine BRAF test is recommended to further evaluate for lower urinary tract neoplasia.
- Due to the suspicion for transitional cell carcinoma in the urinary bladder, consider initiation of piroxicam, +/- misoprostol (stomach protectant), with serial monitoring (i.e., every 1-3 months) of the patient's renal values to assess for the development of nephrotoxicity. If more aggressive chemotherapy is desired, consider consultation with a board-certified oncologist.

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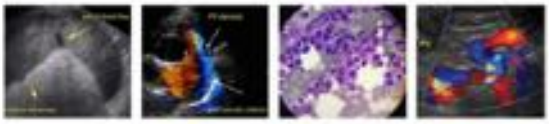

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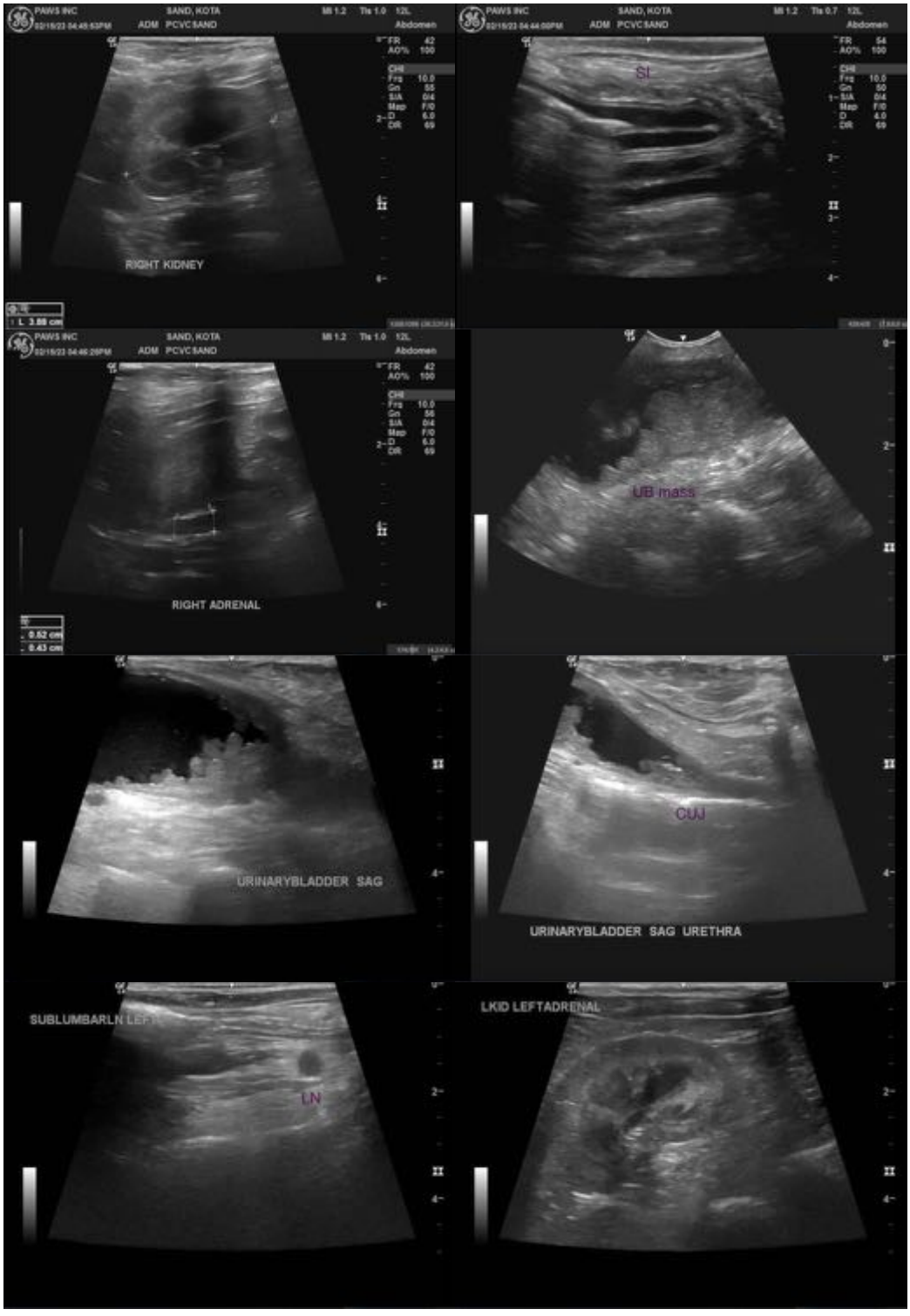

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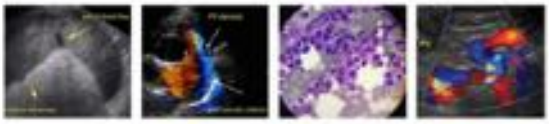

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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Andrea Nicastro**, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com