



PATIENT

Liana Rodriguez

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

5 Years 2 Months

WEIGHT

9.1 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Jill Rankin

HOSPITAL NAME

Calgary Family Vet

REFERRING VET

Dr. Yolanda Lopez

INVOICE

71952

DATE

11/19/25

PRESENTING CLINICAL SIGNS

Liana presents for evaluation of recurrent urinary tract infections (UTIs) and crystalluria. The patient has experienced recurrent UTIs, with episodes occurring in January, July, and September. Each infection was reportedly treated based on culture and sensitivity results. An x-ray performed and showed no uroliths appreciated. The referring veterinarian suspects a vulvar issue (tilted vulva) could be the root cause and is seeking to rule out other underlying pathology before considering surgical correction.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal is size (4.1 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal is size (4.1 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present. A hyperechoic band parallel to the corticomedullary border is present.

Adrenal Glands

The right adrenal gland is normal in size (0.59 cm at cranial pole and 0.56 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.34 cm at cranial pole and 0.33 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size (1.2 cm thick at the hilus) with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no visible free peritoneal effusion noted in these images.

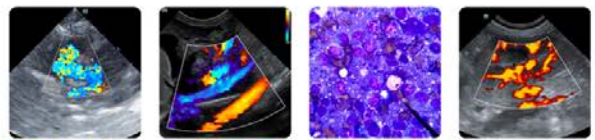
Mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

- Bilateral medullary rim sign - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.
- Moderately reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Mild gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is not a definitive ultrasonographically visible intraabdominal explanation i.e., cystoliths, mass, etc. for patient's reportedly recurrent urinary tract infections. Having said that, there are subtle changes that could indicate some possible mild or emerging underlying bowel disease and/or kidney disease, etc. that could potentially be contributing. These findings should be interpreted in combination with general metabolic health screen, any clinical history of possible diarrhea, etc.



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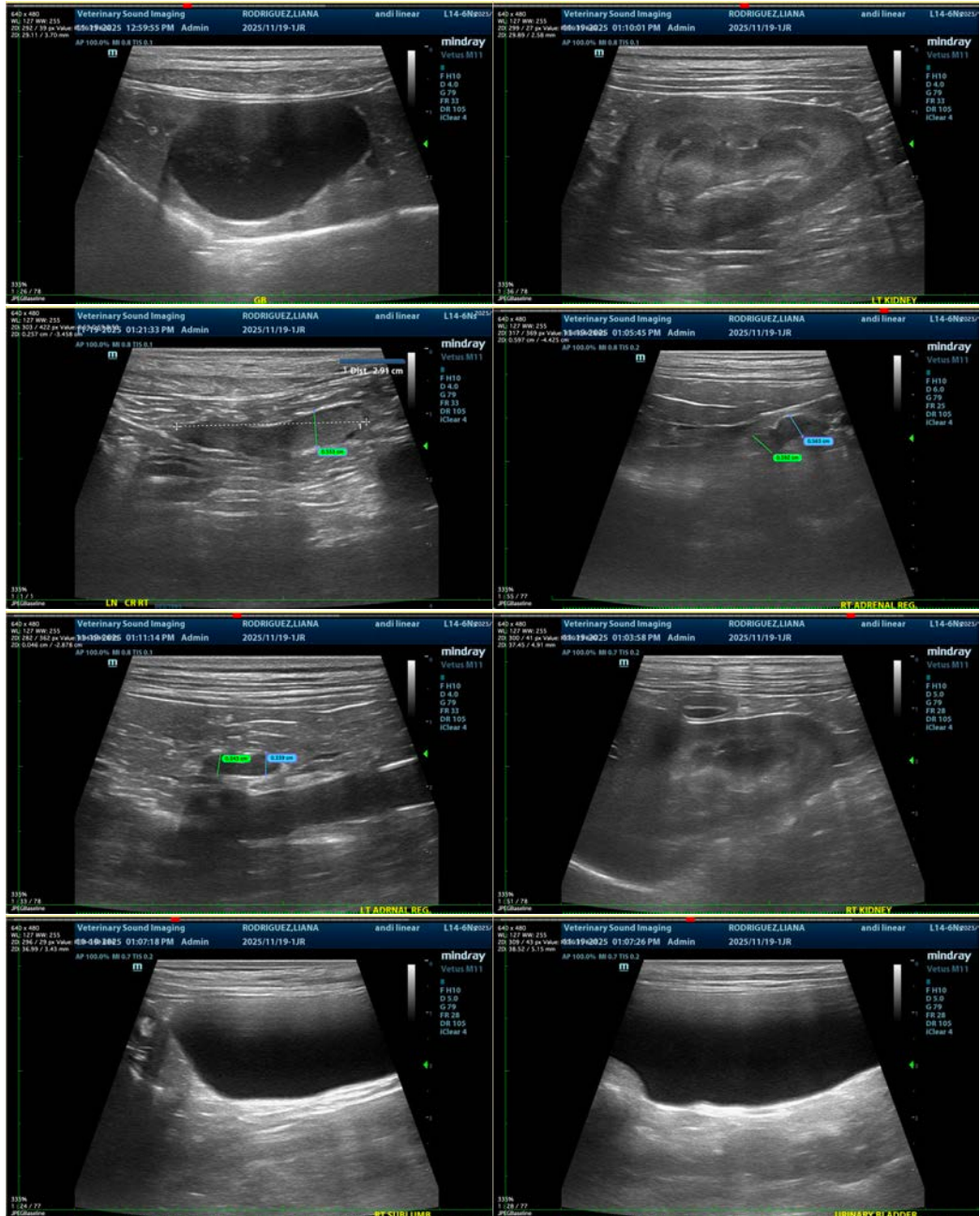
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Additionally, if not already done, management/treatment of the urinary tract infection as a complicated urinary tract infection i.e., persistent infection versus recurrent could be considered. This process often includes a longer course of antibiotics as well as a follow up culture a week to 10 days after starting antibiotics to ensure no change in resistance pattern, secondary organisms, etc. as well as a final culture a week to 10 days after finishing antibiotics to ensure the infection has fully cleared.

Ultimately, consultation with and/or referral to a veterinary internist could be considered, if available.





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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.

Beth Johnson, DVM, DACVIM
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