



**PATIENT**

Zacha Fuentes

**SPECIES**

Canine

**BREED**

Mixed

**SEX**

Spayed Female

**AGE**

10 Years

**WEIGHT**

54.3 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Julissa Diaz

**HOSPITAL NAME**

Centro Veterinario del Norte

**REFERRING VET**

Dr. Crespo

**INVOICE**

40287

**DATE**

8/9/22

**PRESENTING CLINICAL SIGNS**

Patient was referred for abdominal ultrasound. On July 2 she started having hematuria and she was taken to the veterinarian and she was treated with an antibiotic. No improvement was observed and she went back to rDVM and he did a CBC and abdominal radiographs; no evidence of bladder stones were observed. Today she presented for ultrasound as rDVM suspect crystals/ sediments in urine or TCC. On presentation, pet is BAR. Heart and lung sounds were normal. The urine was very dark red and vulva is hooded. Radiographs were repeated today and no stones observed

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is adequately distended with primarily anechoic contents. The trigone and proximal urethral mucosa are thick, irregular and hyperechoic. The apical urinary bladder wall is also diffusely thick with more focal, slightly polypoid lesions extending from both the ventral and dorsal wall, approximately 1.5 cm into the lumen of the bladder. No cystoliths are observed.

The right kidney is normal in size (6.7 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.

The left kidney is normal in size (6.3 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.

**Adrenal Glands**

The area of the right adrenal gland is examined without evident pathology.

The left adrenal gland is normal in size (0.64 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

The spleen is subjectively normal in size 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.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**Gastrointestinal**

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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 (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions



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per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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

**Pancreas**

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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**Free Abdomen**

There is no evidence of free peritoneal effusion noted in these images.

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There is no apparent lymphadenopathy noted in these images.

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

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- The urinary bladder wall changes, especially in the area of the trigone/proximal urethra are most concerning for infiltrative neoplasia such as transitional cell carcinoma versus other. A benign inflammatory disease (cystitis/polypoid cystitis) cannot be ruled out, especially given the multifocal nature of the lesions, but is considered less likely, given the appearance, especially in the trigone.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Urinalysis and urine culture, if indicated based on urinalysis results, are recommended. Submission of urine to look for BRAF gene mutation, which is associated with urinary bladder cancer, could be considered. Other diagnostic options include traumatic catheterization, fine needle aspirate (with small risk of tumor seeding/trailing) or cystoscopy for further sampling.

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

In the meantime, empirical medical management with a broad-spectrum antibiotic, ideally based off of culture results, and an anti-inflammatory such as Piroxicam, may help alleviate clinical signs. If an anti-inflammatory such as Piroxicam is prescribed, gastrointestinal support in the form of an antacid or a misoprostol versus other is also recommended.

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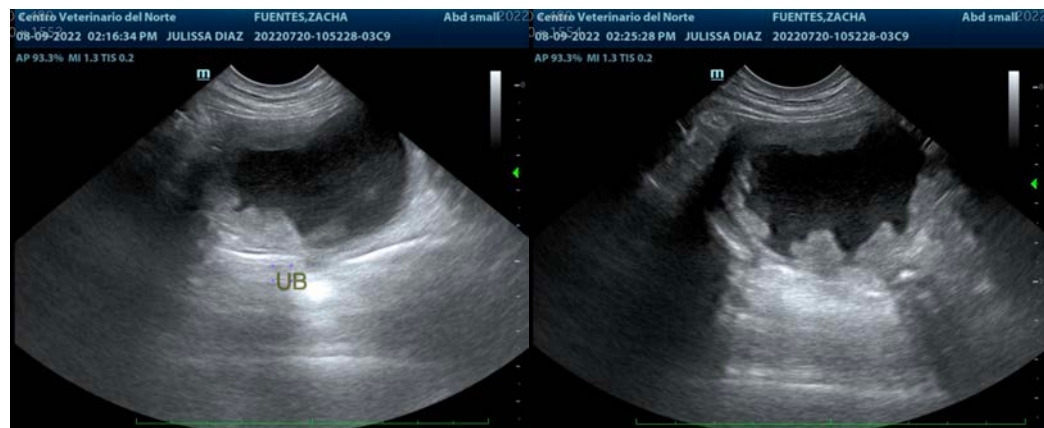
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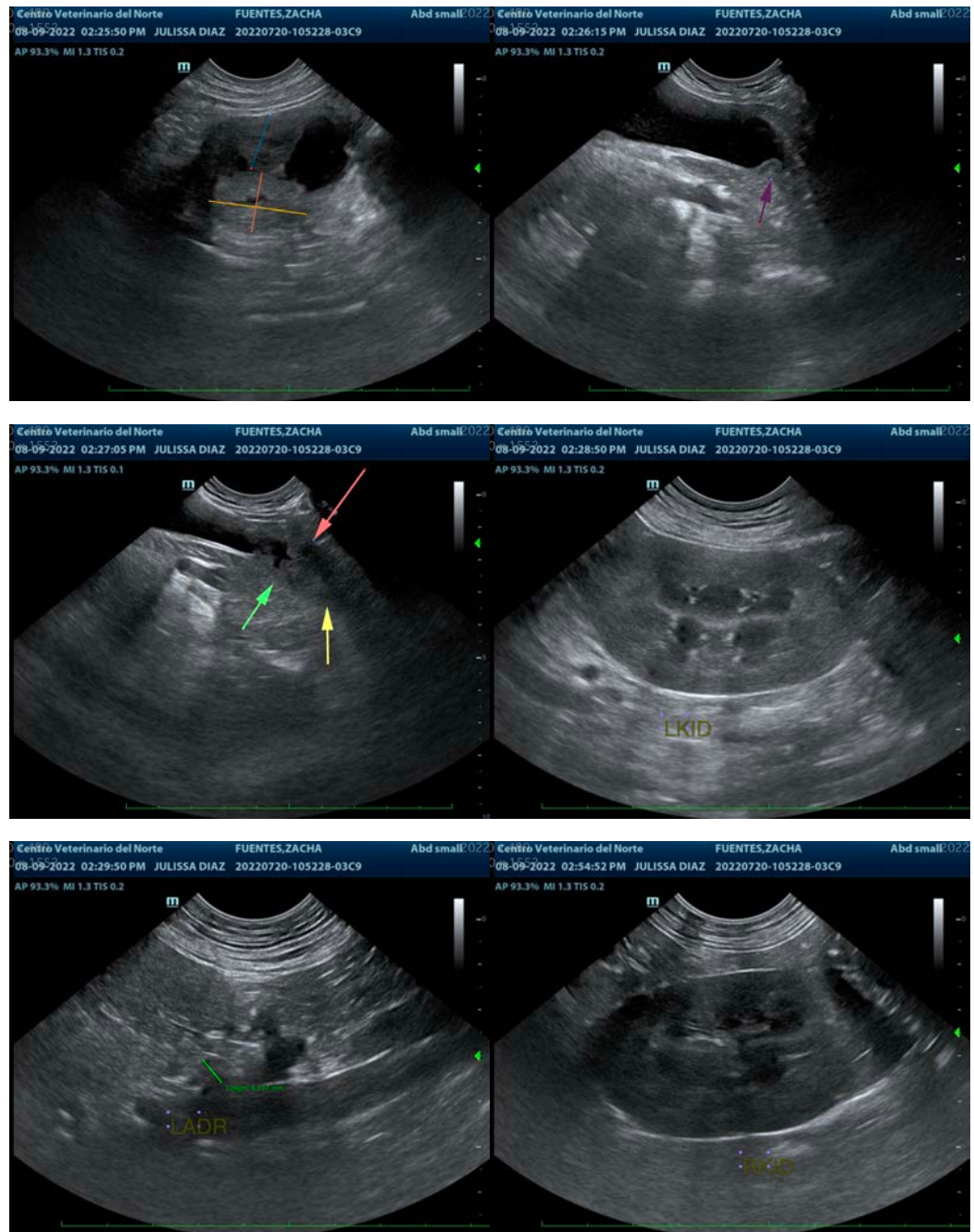
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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