IMAGING PERFORMED BY

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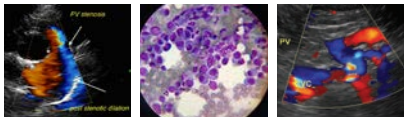

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

11/2/22

PATIENT

Lula Brenner

SPECIES

Canine

BREED

Basenji X

SEX

Spayed Female

AGE

5/1/06

WEIGHT

24.5 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. King

INVOICE

42512

PRESENTING CLINICAL SIGNS

A few weeks ago urinating around the house- rdvm ran labwork was ok, urine was active. did 10 days of antibiotics Not improving, then noted she was hunched and straining to urinate, seems very painful, crying RDVM 11/1- films- no obvious stones, did not urinate at hospital and continued being painful and straining. hx of hind limb ampuation for a sarcoma- about 2 years ago-- at that time no evidence of metastatic disease.

Current Medications: Ampicillin, Cerenia, Gabapentin, Buprenorphine.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

At the beginning of the exam, the urinary bladder was empty. A urinary catheter was placed, and the bladder was filled, resulting in a normal appearing wall, but a large amount of suspended echogenic, non-shadowing debris was present. The urethra is not able to be fully examined due to its pelvic location.

The right kidney is normal in size (4.91 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.

The left kidney is normal in size (4.54 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.

Adrenal Glands

The right adrenal gland is normal in size (1.83 cm long x 0.68 cm at the cranial pole and 0.59 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (2.1 cm long x 0.62 cm at the cranial pole and 0.44 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

There is a heterogeneous, hypoechoic, 2.0 cm x 3.0 cm structure in the area of the spleen that may represent the spleen, but if so, the spleen has a honeycomb appearance, characterized by multifocal coalescing nodules throughout the parenchyma of the structure described. Enhanced hyperechoic surrounding fat is noted.

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. The common bile duct is visible and is mildly

dilated near the upper end of normal, but not pathologically overdistended. There is no evidence of effusion or inflammation.

Gastrointestinal

The visible stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is moderately distended with echogenic non-shadowing luminal contents as well as fluid and very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease. However, complete visualization of the far wall is partially inhibited by gas.

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 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 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.

Free Abdomen

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

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- Large amount of urinary bladder debris
- **Honeycomb Spleen –** This finding is strongly suggestive of infiltrative disease such as round cell neoplasia. Benign disease cannot be ruled out but is considered less likely. **Note, it is a little atypical to have this appearance in an overall small versus enlarged spleen. If the structure described above is not the spleen, another differential is potentially a coarse, irregular, nodular pancreas. However, the structure appears most consistent with the spleen.

SECONDARY FINDINGS

- **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.
- **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 FIP, 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is no evidence of cystoliths and/or masses to explain this patient's urinary signs. However, the urethra could not be fully examined, and either stones and/or tumors/nodules within the non-visible urethra/distal urethra are still possible.

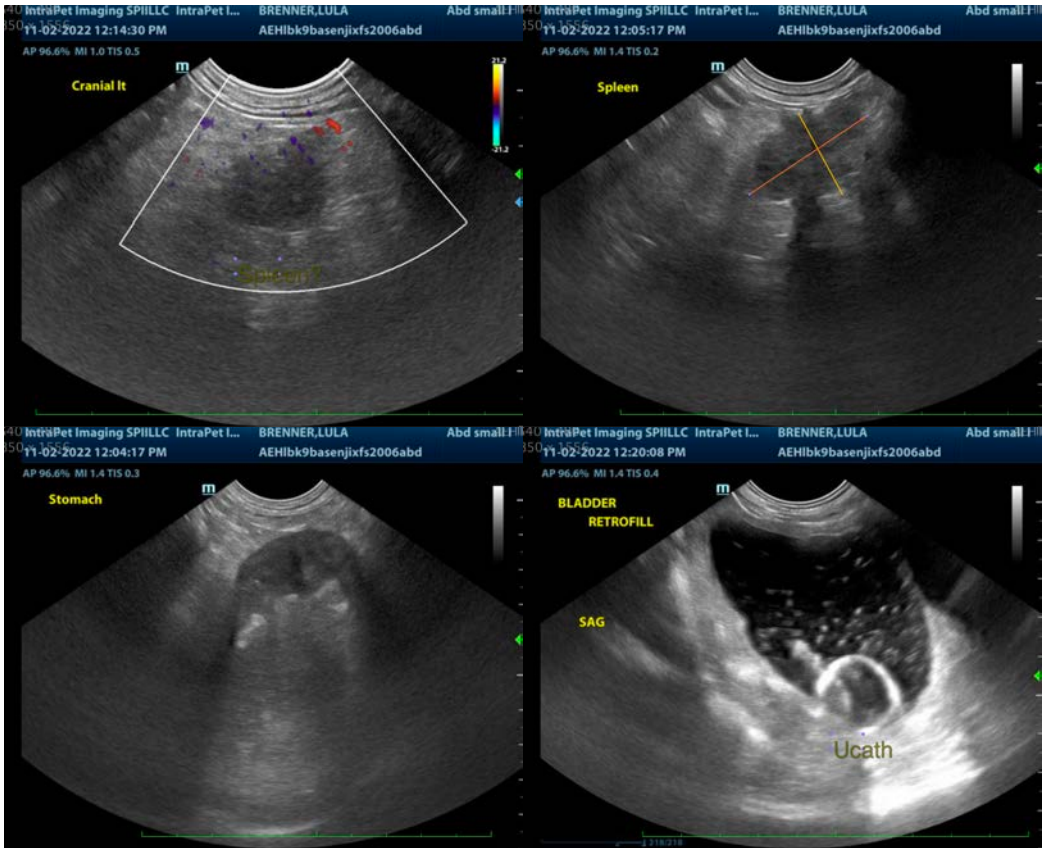
Further examination could be pursued in the form of an abdominal CT scan or potentially cystoscopy, or urinary bladder cancer could be further examined by submission of urine to look for BRAF gene mutation, which is associated with urinary bladder cancer.

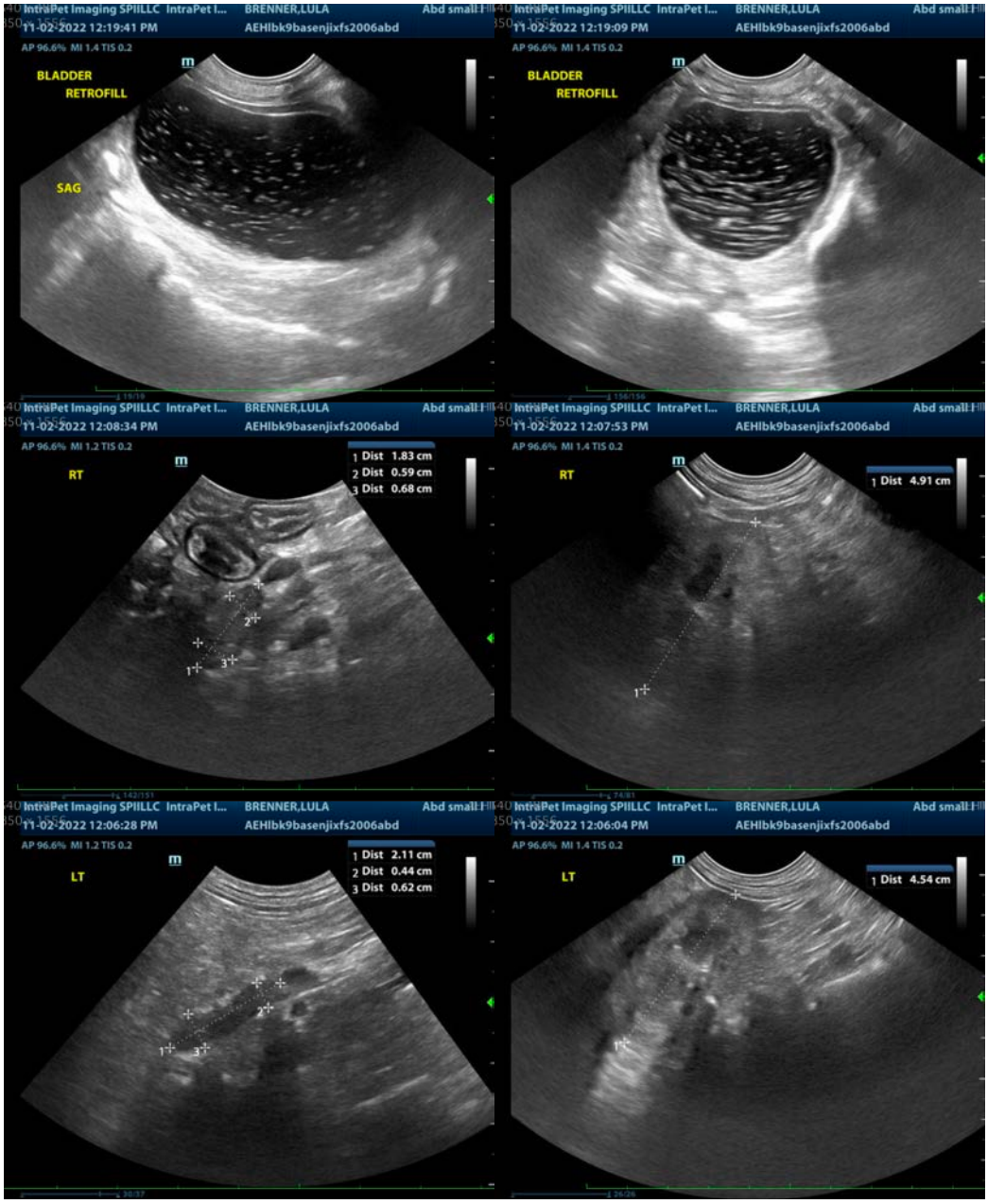
Prior to more invasive intervention, however, management of a suspected urinary tract infection based on culture and sensitivity results is recommended. Therefore, if the current course of antibiotics has not improved clinical signs, recommendations are to discontinue it, and then culture the urine a week to 10 days after finishing antibiotics in case a resistant bacteria is present that we aren't managing with the current antibiotics.

In the meantime, anti-inflammatory therapy may help improve clinical signs.

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.

A fine needle aspirate of the spleen is recommended if patient's coagulation status is appropriate, especially given this patient's reported history of sarcoma.

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BLADDER
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3 Dist 0.68 cm
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RT
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3 Dist 0.62 cm
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11-02-2022 12:06:04 PM AEHlbk9basenjixfs2006abd
AP 96.6% MI 1.4 TIS 0.2
LT
1 Dist 4.54 cm

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.

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