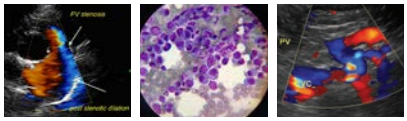
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

8/16/22

PATIENT

Isabella Jacks

SPECIES

Canine

BREED

Bichon Frise

SEX

Intact Female

AGE

10/6/09

WEIGHT

10 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

Edgewood VH

REFERRING VET

Dr. Wright

INVOICE

40522

PRESENTING CLINICAL SIGNS

Urinating frequently, straining to defecate.

Current Medications: Clavamox 62.5mg BID, Diazapem 2mg PRN, Metamucil.
Lab Results: 5/24/22- ALP 115, ALT 67, BUN 15, Crea 0.7, Glu 131+, TP 6.9.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Declined at this time.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.83 cm). Mucosa is hyperechoic and irregular. Some mineral debris/sand is suspected in the proximal urethral. There is a ureterolith that appears to be lodge in the left ureter distally at the level of the ureteral papillae at the urinary bladder. No evidence of masses. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. There is a scant amount of anechoic free fluid and markedly enhanced/hyperechoic fat and mesentery surrounding the mesentery bladder and caudal abdomen.

The kidneys are normal in size to mildly enlarged. The left kidney measures 4.63 cm. The right kidney measures 5.39 cm. Overall hyperechoic echogenicity and slight loss of corticomedullary definition. Normal smooth peripheral margination and shape are maintained. Both renal pelvises are moderately to markedly dilated with anechoic fluid. Both renal pelvises measure 0.90 cm dilated in the transverse view. Non-obstructive nephroliths are present bilaterally. Both ureters are also dilated, with the left ureter being traced all the way to the ureteral papillae, where there is a ureterolith lodged. The right ureter is unable to be traced to the level of obstruction.

Adrenal Glands

The right adrenal gland is normal in size (1.42 cm long x 0.68 cm at the cranial pole and 0.83 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 (1.7 cm long x 0.58 cm at the cranial pole and 0.50 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is largely normal in appearance (shape, echotexture and echogenicity); however, it is volume contracted. Hydration status assessment is recommended. A small 0.5 cm diameter hypo- to anechoic nodule is noted.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. 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.

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 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

Note the caudal abdominal changes described above.

The sublumbar 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.

Ringdowns are present at the level of the diaphragm.

No uterine or ovarian pathology appreciated in these images.

ULTRASONOGRAPHIC FINDINGS

- **Chronic Cystitis with mineral sand debris in the proximal urethra -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

- **Bilateral nephroliths and at least a left ureterolith causing marked pyelectasia -** A right ureterolith is suspected based on concurrent pathology, but is not visible in these images. Concurrent pyelonephritis secondary to migrating urolithiasis cannot be ruled out.

- **Reactive sublumbar lymph nodes –** Likely secondary to chronic cystitis and migrating urolithiasis +/- infection.

- **Heterogenous Liver –** These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

- **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.

- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

- Ringdowns – Suggestive of concurrent pulmonary pathology.

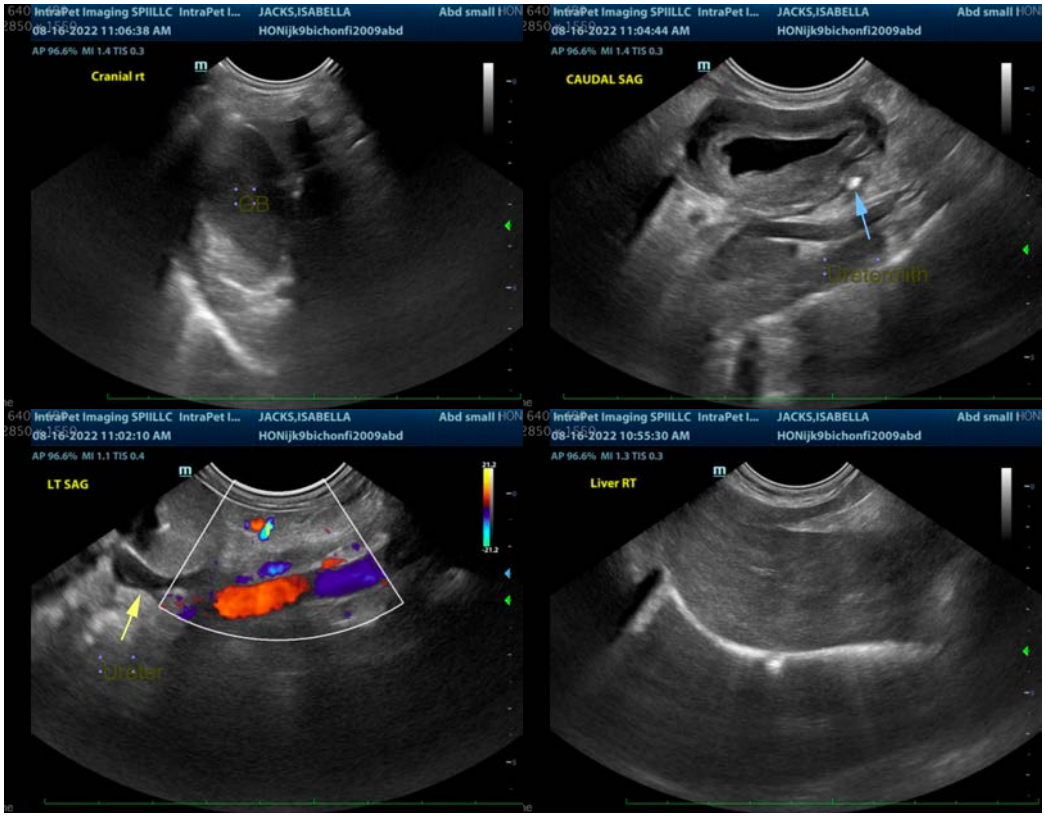
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

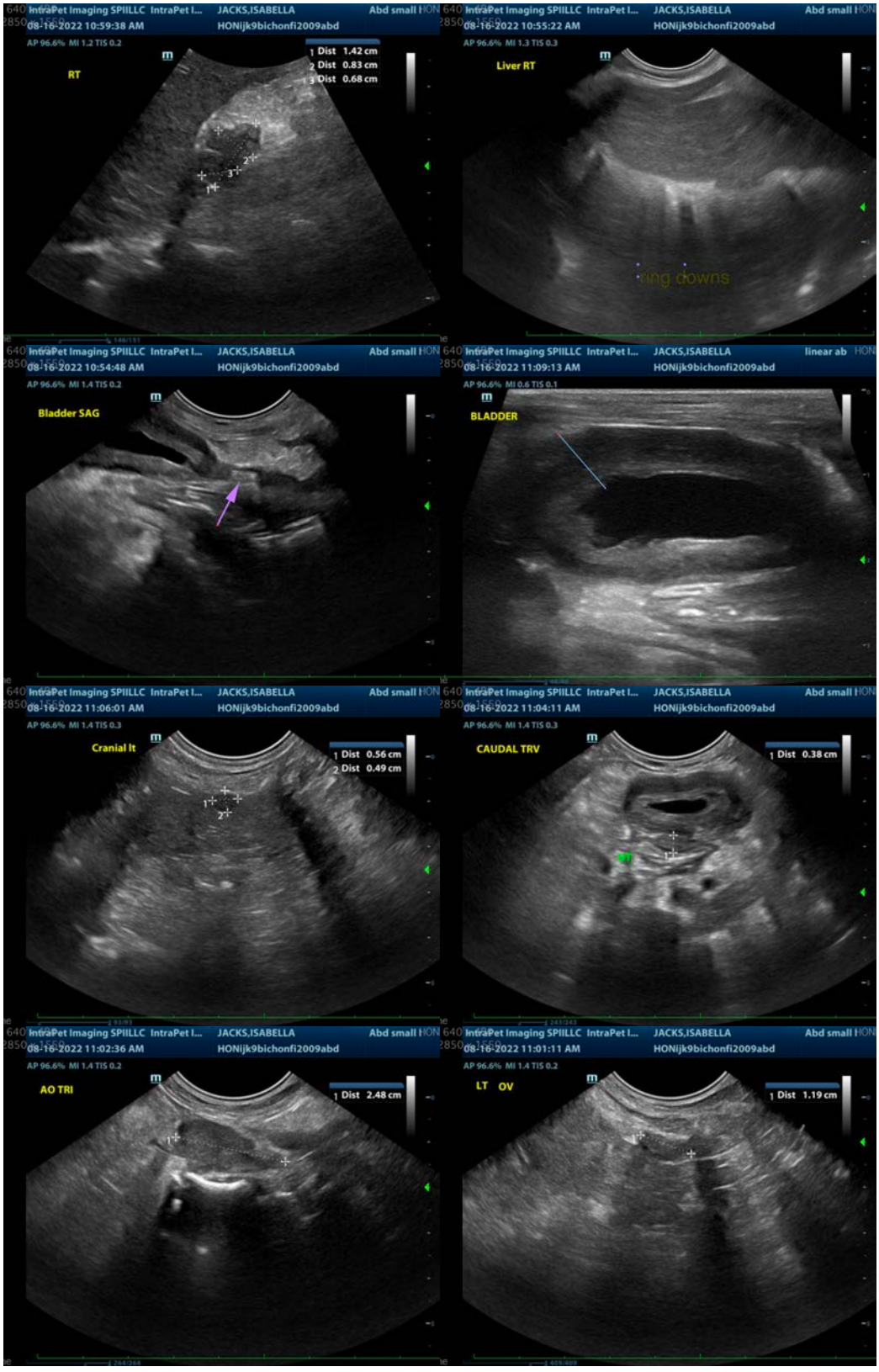
Given the ringdowns in these images, three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

A urinalysis and urine culture are recommended if not recently evaluated.

Medical therapy with antibiotics, hopefully directed by culture and sensitivity results, as well as fluid therapy, pain management, and symptomatic/supportive treatment of any related clinical signs, etc. could be considered, and may result in passage of the obstructing stones. However, passage may not occur, in which case surgical intervention will be necessary to alleviate the suspected bilateral ureteral obstruction to prevent ongoing hydronephrosis.

A pre-surgical planning abdominal CT scan with contrast may be helpful, but is likely not required to change the course of therapy.

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AP 96.6% MI 1.2 TIS 0.2
RT
1 Dist 1.42 cm
2 Dist 0.83 cm
3 Dist 0.68 cm
IntraPet Imaging SPIILLC IntraPet I... JACKS,ISABELLA Abd small
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Liver RT
IntraPet Imaging SPIILLC IntraPet I... JACKS,ISABELLA Abd small
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Bladder SAG
IntraPet Imaging SPIILLC IntraPet I... JACKS,ISABELLA linear ab
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BLADDER
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Cranial lt
1 Dist 0.56 cm
2 Dist 0.49 cm
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CAUDAL TRV
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IntraPet Imaging SPIILLC IntraPet I... JACKS,ISABELLA Abd small
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AO TRI
1 Dist 2.48 cm
IntraPet Imaging SPIILLC IntraPet I... JACKS,ISABELLA Abd small
08-16-2022 11:01:11 AM HONijk9bichonfi2009abd
AP 96.6% MI 1.4 TIS 0.2
LT OV
1 Dist 1.19 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.

Beth Johnson, DVM, DACVIM
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