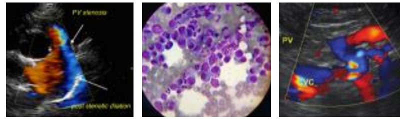
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

DATE

4/24/23

PATIENT

Mabel Felts

SPECIES

Canine

BREED

Bulldog

SEX

Spayed Female

AGE

3/21/17

WEIGHT

33 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

HOSPITAL NAME

Essex Middle River VC

REFERRING VET

Dr. Franchini

INVOICE

22182

PRESENTING CLINICAL SIGNS

History: Presented on 4/13/ for concerns for a UTI. Owner noted pet leaking urine. Not noting any blood.

Current Medications: Pet on allopurinol for leishmaniasis - being managed at UPENN.
Lab Results: UA - USG 1.016, Urine C/S negative
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Additionally, there are multifocal punctate mineral densities, consistent with mineral/sand debris, or potentially small cystoliths, measuring approximately 0.1 cm in diameter. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Left kidney is normal is size (6.01 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 or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present. Punctate nonobstructive nephroliths are noted, as well as mineral sand/debris within the renal pelvis.

Right kidney is normal is size (6.16 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 or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present. Punctate nonobstructive nephroliths are noted, as well as mineral sand/debris within the renal pelvis.

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The right adrenal gland measures 2.43 cm long x 1.0 cm at the cranial pole and 1.05 cm at the caudal pole. The left adrenal gland measures 2.42 cm long x 0.64 cm at the cranial pole and 0.72 cm at the caudal pole.

Spleen

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). A 2.0 cm x 1.5 cm hypo- to anechoic, slightly heterogenous, non-capsule-disrupting nodule is noted in the mid body. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. 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 and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas 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 evidence of free fluid. The 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.

Other

There is no evidence of heart base or pericardial pathology noted in these images at this time. If cardiac function evaluation is desired a full echocardiogram is recommended.

Subtle ring downs are noted at the level of the diaphragm.

The uterine stump is subjectively, mildly prominent.

ULTRASONOGRAPHIC FINDINGS

- Bilateral medullary rim sign with small nonobstructive nephroliths, as well as mineral/sand debris within the kidneys and the urinary bladder – Regarding the 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.

- Mild bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.

- Hypoechoic hepatomegaly-This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.

- Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

- Subtle ring downs at the level of the diaphragm could be suggestive of concurrent pulmonary pathology.

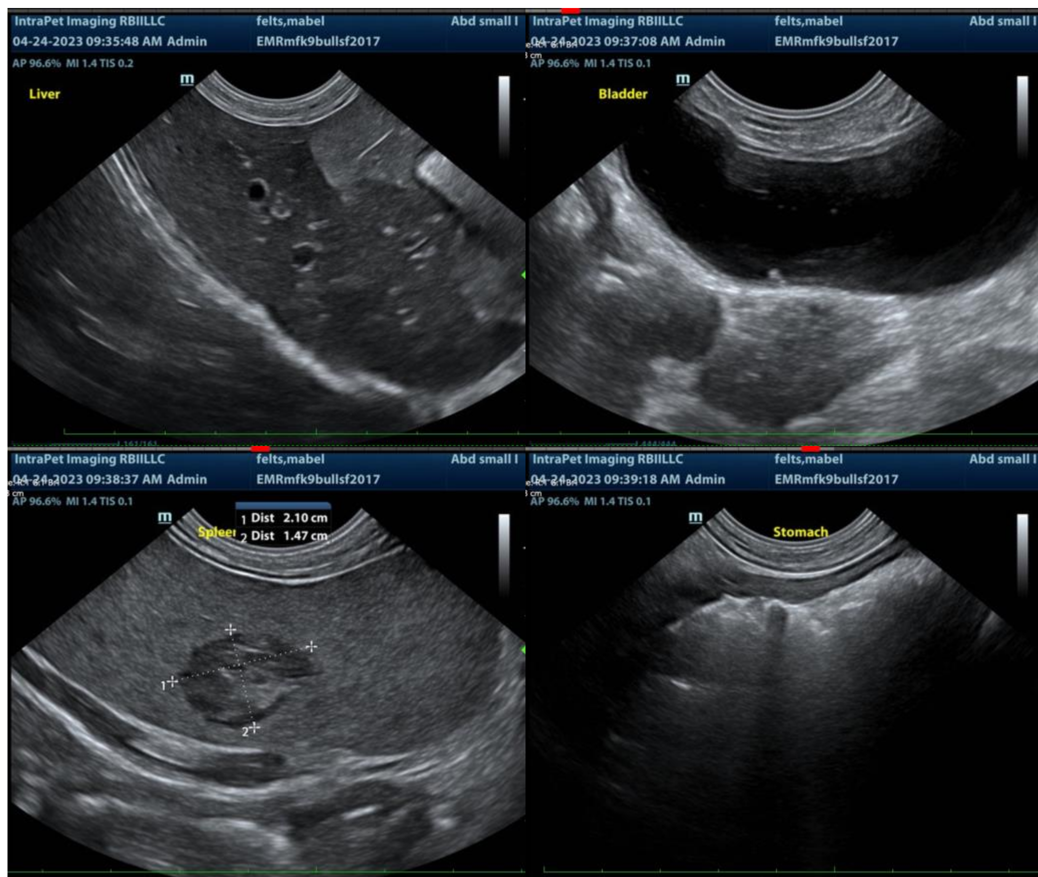
- Hypo to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

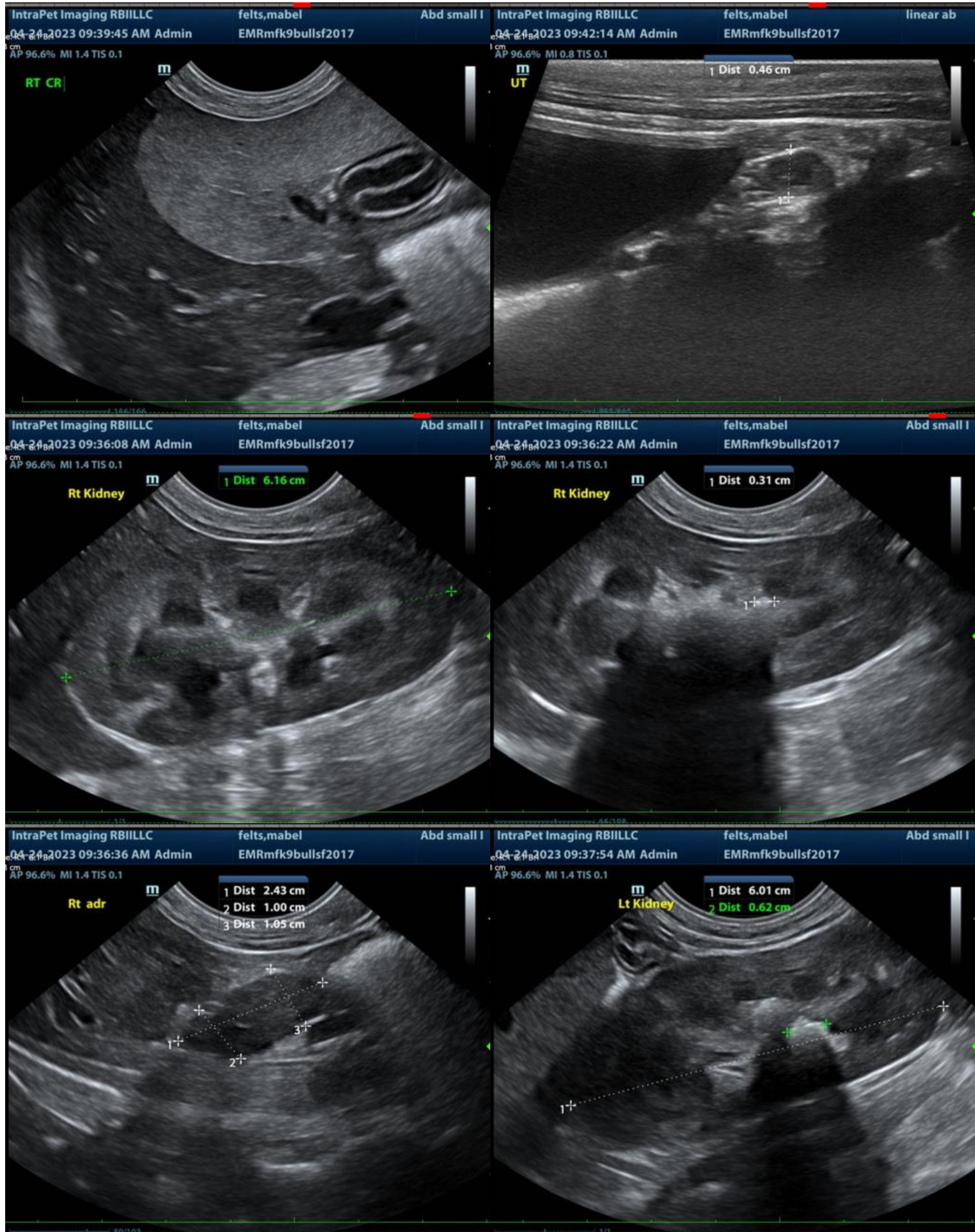
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the concern for possible concurrent pulmonary pathology, 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.

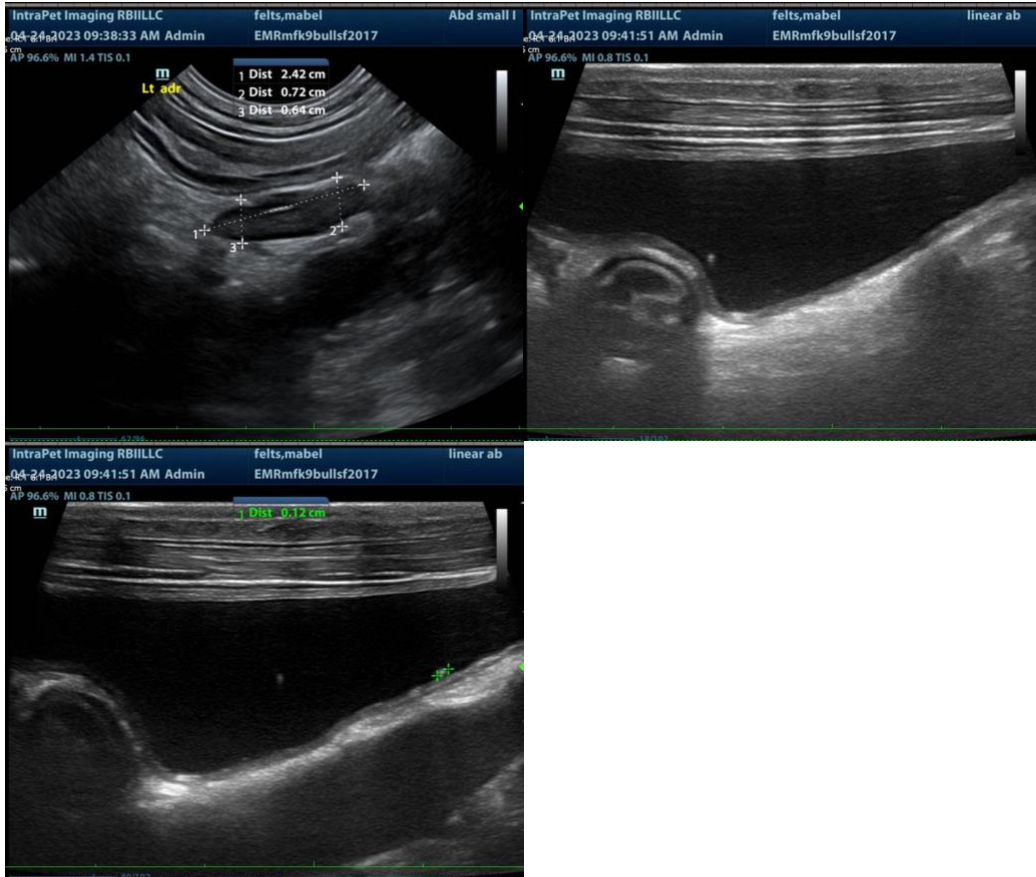
If not recently evaluated, further evaluation of both the kidneys and liver, +/- other causes for possible PU/PD contributing to the dilute urine and incontinence could be considered in the form of CBC/chemistry panel and electrolytes.

In the meantime, transition to a urinary health diet, potentially crystal/stone prevention diet could be considered if patient tolerates.





IntraPet Imaging RBIILLC
felts,mabel
Abd small I
04-24-2023 09:39:45 AM Admin
EMRmfk9bullsf2017
AP 96.6% MI 1.4 TIS 0.1
RT CR
IntraPet Imaging RBIILLC
felts,mabel
linear ab
04-24-2023 09:42:14 AM Admin
EMRmfk9bullsf2017
AP 96.6% MI 0.8 TIS 0.1
UT
1 Dist 0.46 cm
IntraPet Imaging RBIILLC
felts,mabel
Abd small I
04-24-2023 09:36:08 AM Admin
EMRmfk9bullsf2017
AP 96.6% MI 1.4 TIS 0.1
Rt Kidney
1 Dist 6.16 cm
IntraPet Imaging RBIILLC
felts,mabel
Abd small I
04-24-2023 09:36:22 AM Admin
EMRmfk9bullsf2017
AP 96.6% MI 1.4 TIS 0.1
Rt Kidney
1 Dist 0.31 cm
IntraPet Imaging RBIILLC
felts,mabel
Abd small I
04-24-2023 09:36:36 AM Admin
EMRmfk9bullsf2017
AP 96.6% MI 1.4 TIS 0.1
Rt adr
1 Dist 2.43 cm
2 Dist 1.00 cm
3 Dist 1.05 cm
IntraPet Imaging RBIILLC
felts,mabel
Abd small I
04-24-2023 09:37:54 AM Admin
EMRmfk9bullsf2017
AP 96.6% MI 1.4 TIS 0.1
Lt Kidney
1 Dist 6.01 cm
2 Dist 0.62 cm



The information and recommendations provided are based on the images presented by the referring veterinarian. 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
Beth.Johnson@SonoPath.com