IMAGING PERFORMED BY

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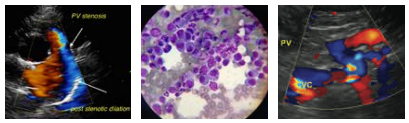

SonoPath
Clinical Sonography & Telecytology
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DATE
3/1/22

PATIENT
Freddy Folk

SPECIES
Canine

BREED
Pit Mix

SEX
Neutered male

AGE
10/13/17

WEIGHT
71 lbs

INTERPRETED BY
Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME
Animal Care Center

REFERRING VET
Dr. Beavers

INVOICE
96487

PRESENTING CLINICAL SIGNS

Ongoing chronic urinary issues. Non resolving hematuria. Treated previously for cystitis. Also has been treated for prostatitis.
Current Medications: Baytril 727mg SID for about a month, just finished 2/21/22, Meloxicam 3.75mg SID starting around 2/18/22 and still on currently.
Lab Results: See attached.
Radiographs: No signs of bladder stones.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Patient sedated with Torbugesic.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities or masses. The more distal urethra in the area of the prostate has two small, shadowing, hyperechoic areas that could either be within the prostatic urethra or in the adjacent colon. These areas measure 0.45 cm and 0.22 cm in length and they are not visible in multiple images.

The prostate is normal in size (0.79 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion or mass effect. In one image there are two structures one measured 0.45 cm and the other measured 0.22 cm. In the region of the prostatic urethra this could also be intraluminal, mineralized debris within the colon. These focal mineralizations are not evident on multiple views so the significance is uncertain.

The left kidney has a normal shape and size (6.43 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.47 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Small, non-obstructive nephroliths were noted. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.59 cm at the caudal pole It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.63 cm at the caudal pole It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver
The liver is subjectively normal/borderline small in size, and mildly heterogenous and hypoechoic. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed. The gallbladder lumen is moderately distended. The wall of the gallbladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal
The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS
PRIMARY FINDINGS:

- Normal/borderline small mildly heterogenous and hypoechoic liver. These lesions are subtle and could be normal for this individual. Correlate with blood work and liver function testing.
- Moderate gallbladder sludge. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Mineralization visualized in the area of the prostatic urethra. The significance of this is uncertain as these structures are not visualized in multiple images and could be consistent with mineralized debris within the colon.
- Decreased corticomedullary distinction in both kidneys with right-sided, non-obstructive nephroliths. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.

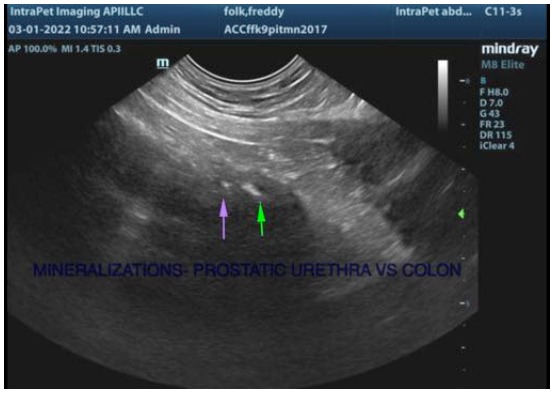
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

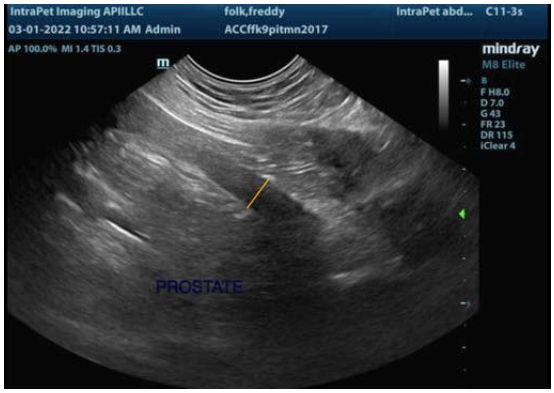
No focal bladder masses are visualized. Additionally, there are no intraluminal calculi observed. The prostate appears relatively normal and in one sagittal view of the prostatic region there are two small, intraluminal mineralizations that could represent calculi within the prostatic urethra or could represent mineralized material within the colon superimposed over the prostate. I was unable to visualize these mineralizations in multiple views, so their significance is uncertain. If not already done consider gently passing a urethral catheter to see if there is any resistance and to observe if any material is pushed back into the urinary bladder (need to evaluate with ultrasound as these would be very small calculi). Additionally I recommend sterile sampling and urinalysis and culture (needs to be off antibiotics for at least a week for accurate culture).

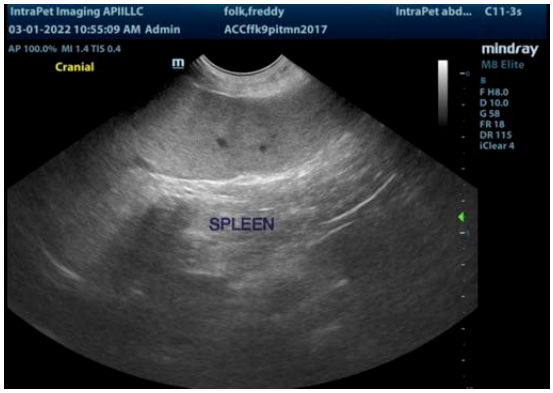
The significance of the renal changes is uncertain. The kidneys appear relatively normal, but appear to have less distinction in the corticomedullary distinction as I would expect to see in an older dog.

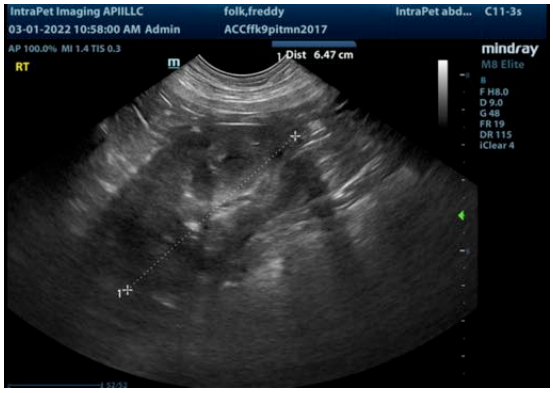
The liver changes are very subtle as well and could be normal for this individual. If there are liver enzyme elevations or the indication of an abnormal liver function test then further evaluation is recommended. Otherwise, monitoring is adequate.

Further evaluation of the urinary bladder is difficult at this time due to the recent antibiotics and anti-inflammatory medications. You can consider a urine BRAF test. If this is positive for the BRAF mutation then the likelihood of an underlying neoplastic process is higher. If it is negative then it is an inconclusive test result.





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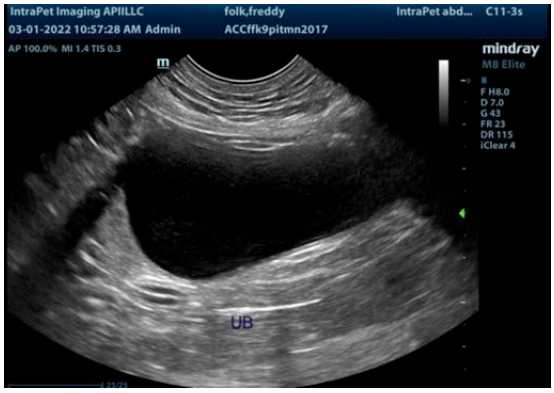
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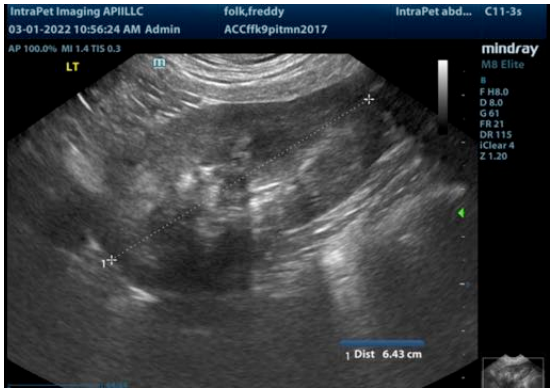
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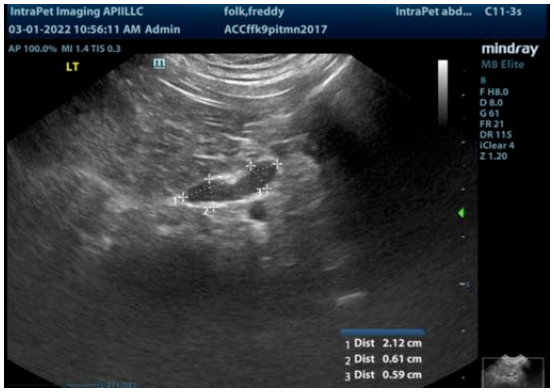
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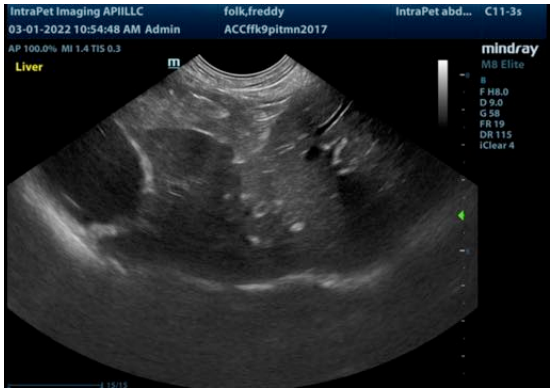
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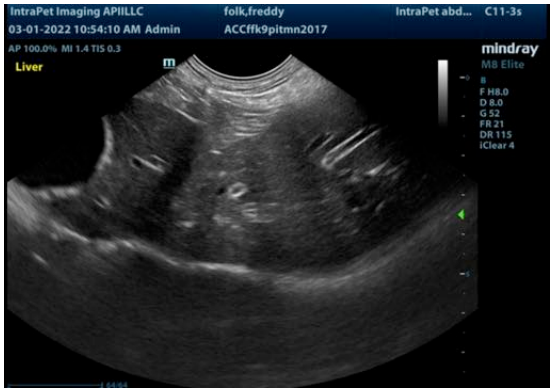
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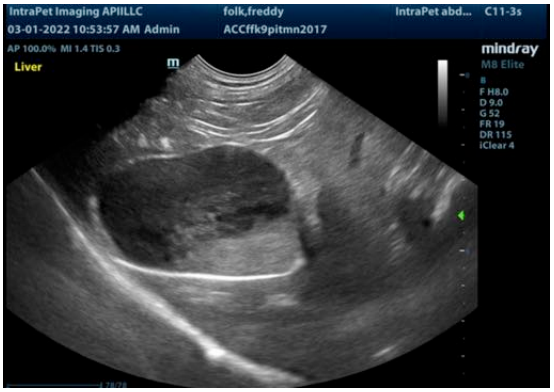

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com