



PATIENT

Rex Frankel

PRESENTING CLINICAL SIGNS

Diagnosed elsewhere in June w Cushings /was rx trilostane 10 mg BID HAs had multiple UTIs /previous culture negative historical skin issues/pyoderma Heart murmur holosystolic apical murmur 3/6 Was treated 10/26 for UTI w Baytril

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: Alk pho 1000 -(23-212) ACTH pre 8.6 /post 24.1 Urine collected today - USG 1.026 Hematuria/pyuria /cocci bacteria seen no protein noted

BREED

Havanese

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

Neutered Male

The urinary bladder is moderately distended with anechoic urine. There are some focal irregularities in the urinary bladder wall. One appears in the dependent apical region measuring 0.64 cm x 1.9 cm. Another is more poorly visualized and appears to be in the more caudal aspect of the urinary bladder. The area of the proximal urethra appears free of any mass lesions or calculi. Findings could be consistent with cystitis or bladder mass lesions. Correlate with urine culture findings, etc.

AGE

12 Years

The prostate is borderline large at 1.3 cm. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi. If this patient was neutered prior to puberty, this is likely enlarged and abnormal. If he was neutered later in life, this could be within normal limits.

WEIGHT

28 Pounds

The left kidney has a normal shape and size (4.7 cm) with small cortical cysts. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

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

The right kidney has a normal shape and size (5.05 cm) with small cortical cysts. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

IMAGING

PERFORMED BY

Dr. Arch Gordon

The left adrenal gland is borderline large, measuring 0.89 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.

HOSPITAL NAME

Coral Ridge AH

The right adrenal gland is borderline large measuring 0.72 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.

REFERRING VET

Dr. Arch Gordon

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.

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Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined hypoechoic nodules

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visualized within the hepatic parenchyma. These do not appear to interfere with normal architecture. They vary in size from 0.25-0.70 cm.

SPECIES

Canine

The gall bladder lumen is moderately distended. The wall of the gall bladder 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.

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Havanese

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.

SEX

Neutered Male

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. Duodenum wall measured 0.44 cm. Jejunum wall measures 0.33 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

AGE

12 Years

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.

WEIGHT

28 Pounds

Pancreas

The area of 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. The medial iliac lymph node is prominent/enlarged, measuring 1.48 cm in width. The omentum is of normal echogenicity.

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Medicine)

ULTRASONOGRAPHIC FINDINGS

- Focal irregularities to the urinary bladder wall – Clear visualization of all the lesions is somewhat difficult due to shadowing and inadequate urine distention in some images. There is concern that these could represent severe cystitis or underlying neoplastic lesions.
- Borderline enlarged prostate – The prostate appears relatively normal, but it is prominent and large for a neutered dog of this size. Correlate with the age of neutering. If the patient was neutered prior to puberty, this could be abnormal and a fine needle aspirate should be considered.
- Borderline bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.
- Heterogeneous, large liver with hypoechoic, ill-defined nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The nodules observed trend toward a more benign process but underlying neoplasia cannot be ruled out.

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- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

SPECIES

Canine

- Prominent medial iliac lymph node – This could represent a reactive lymph node or metastatic neoplasia.

BREED

Havanese

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The urinary bladder is somewhat difficult to visualize, but there is the impression of focal thickening and possible mass lesions. Correlate these findings with the results of the urine culture. If the urine does not culture positive, this would be more concerning for possible mass lesions. If the urine does culture positive, then consider treatment of the infection and reassessment of the urinary bladder at the end of treatment with a full urinary bladder. If underlying neoplasia is suspected, you could consider a traumatic catheterization of the urinary bladder and/or urine BRAF test. If urine BRAF test is positive, this increases the likelihood of an underlying neoplastic process. If it is negative, this is a non-diagnostic test and further evaluation is necessary.

SEX

Neutered Male

Additionally, the medial iliac lymph node is prominent, which could be concerning for either a reactive lymph node or metastatic disease. Recommend continued monitoring with ultrasound.

AGE

12 Years

The adrenal glands are borderline enlarged, and the liver is large and heterogeneous with ill-defined hypoechoic nodules. This could be consistent with a vacuolar hepatopathy and underlying Cushing's. Correlate with the clinical picture and your adrenal function test, and the response to Trilostane therapy to determine if PDH is present.

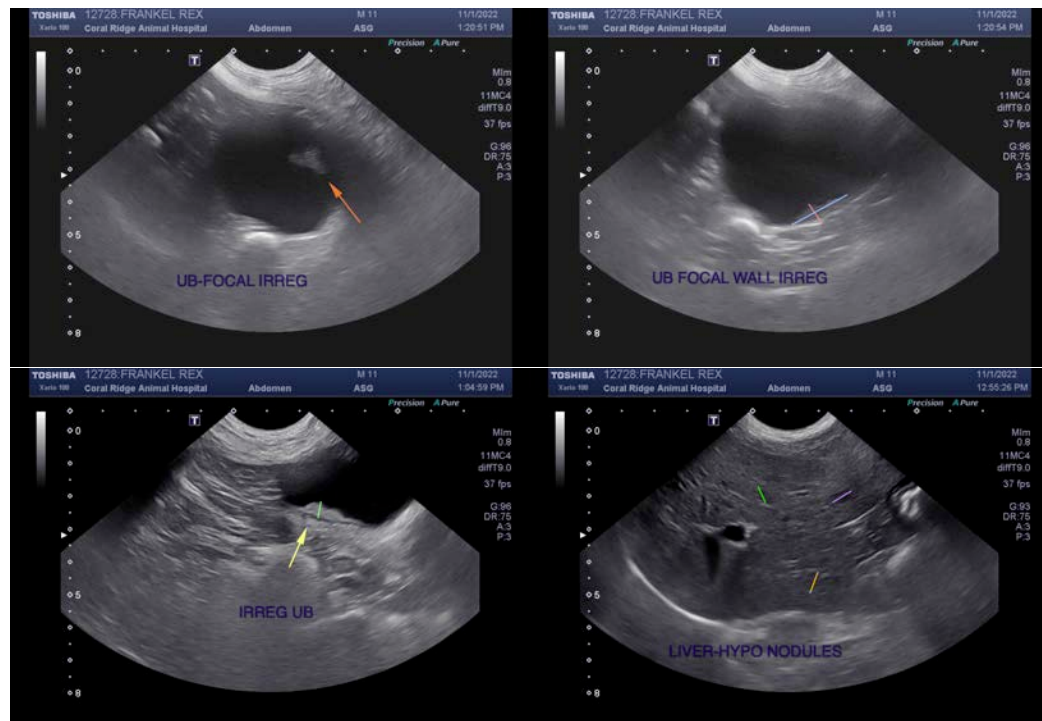
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Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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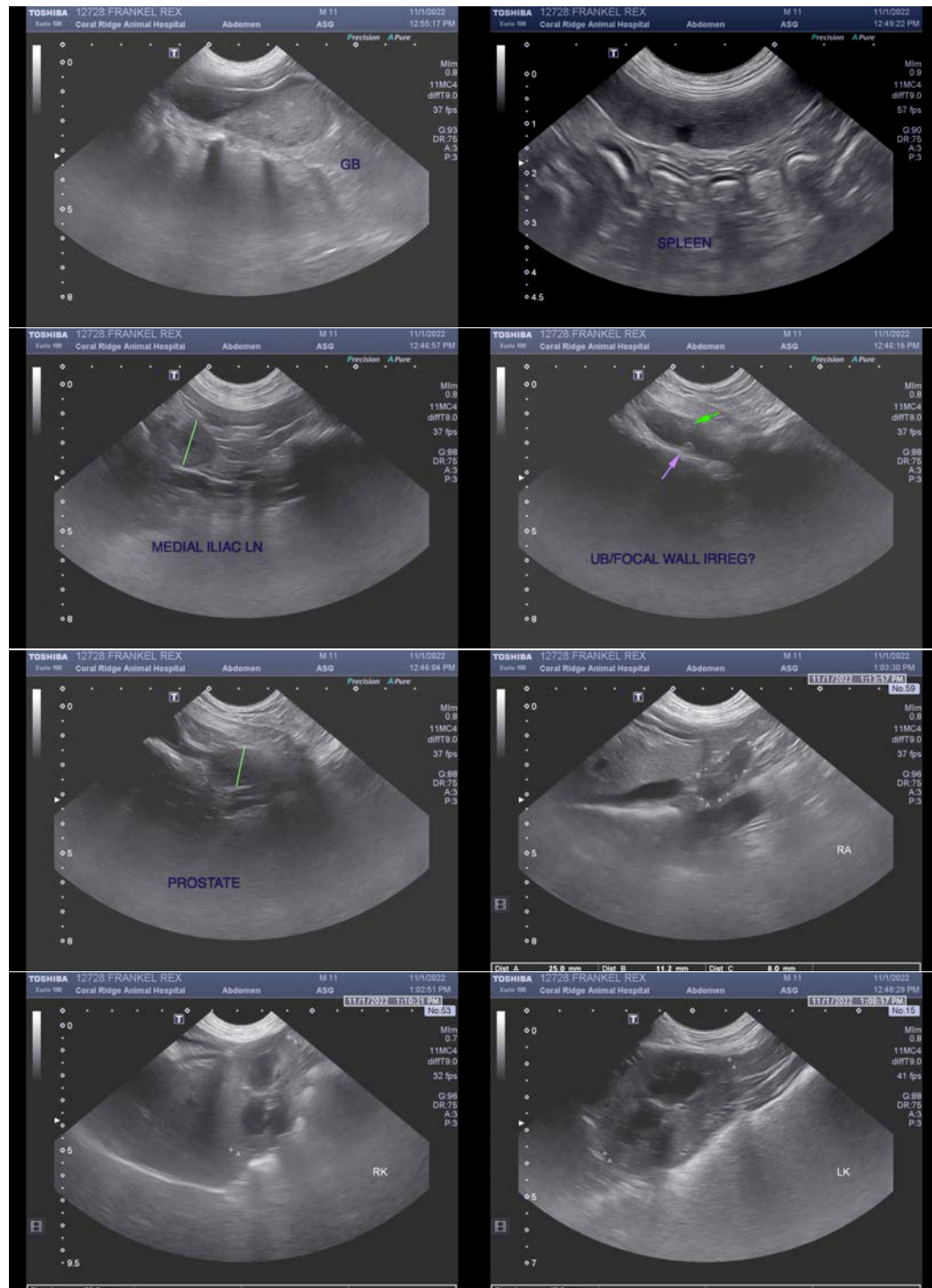
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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