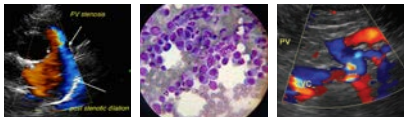
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

DATE

1/26/22

PATIENT

Dexter Ruff

SPECIES

Canine

BREED

Jack Russell

SEX

Neutered Male

AGE

8/31/06

WEIGHT

19.4 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Timonium AH

REFERRING VET

Dr. McMichael

INVOICE

43735

PRESENTING CLINICAL SIGNS

Elevated liver values. h/o chronic liver changes. Elevated in GGT/AST/worsening ALT. h/o seizures-phenobarb caused liver dysfunction 1.5 yrs ago. Bile acids elevated (and improved) Now Phenobarb level 12.6 (was 42). and liver values have been improved for 7 months. h/o stable cardiac disease. no medications needed (recent CVCA scan)

Current Medications: Phenobarbital 16.2mg: 1.5 tab PO q 12 hrs
Keppra XR 750mg q 12 hrs, Thyroid tabs 0.1mg tab: 1.5 tab PO q 12 hrs
Denamarin, Gabapentin 50mg PO q 12 hrs, Welactin
Lab Results: recent ACTH Stim- borderline. Attempted low dose Trilostane after long discussion and pet vomited multiple times.
Date of Previous IntraPet Ultrasound: 4/29/22. See attached.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall is diffusely mildly thickened, and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, or masses. In the dependent portion of the urinary bladder, there is a moderate amount of dependent sandy debris and small stones. These appear mobile and are extending in some images into the urinary bladder neck and proximal urethra/prostatic urethra. Recommend urinalysis and culture.

The prostate is normal in size (1.04 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, mass effect or calculi.

The left kidney has a normal shape and size (4.93 cm) with numerous small shadowing nephroliths, the largest of which measures at 0.45 cm. Overall echogenicity is slightly hyperechoic with poor 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, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.01 cm) with numerous small shadowing nephroliths, the most prominent of which measures 0.36 cm. Overall echogenicity is slightly hyperechoic with poor 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, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal/borderline large and slightly irregular, measuring 0.56 cm at the cranial pole, 1.07 cm at the caudal pole, and 2.29 cm in length. It is observed in its normal position cranial to the left renal artery. The caudal pole appears somewhat prominent as compared to the cranial pole and in some images is slightly hypoechoic. An overt mass lesion is not observed but continued monitoring is warranted (previous measurements 4/29/22 – caudal pole measured 0.87 cm).

The right adrenal gland is normal/borderline chunky, measuring 0.88 cm at the cranial pole, 0.84 cm at the caudal pole, and 2.12 cm in length. 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 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. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. 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. Duodenum wall measures 0.43 cm. Jejunum wall measures 0.37 cm. 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

- Shadowing, dependent sandy debris and small stones in the urinary bladder, proximal urethra, and prostatic urethra. Additionally, the urinary bladder wall is somewhat irregular and subjectively thickened. Recommend urinalysis and culture.

- Borderline bilateral adrenal enlargement with a prominent caudal pole of the left adrenal gland – The significance of this is currently unclear. Recommend a blood pressure evaluation and continued monitoring, particularly of the left adrenal gland.

- Decreased corticomedullary distinction in both kidneys with numerous non-obstructive nephroliths – The bilateral renal findings are consistent with age-related change. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.

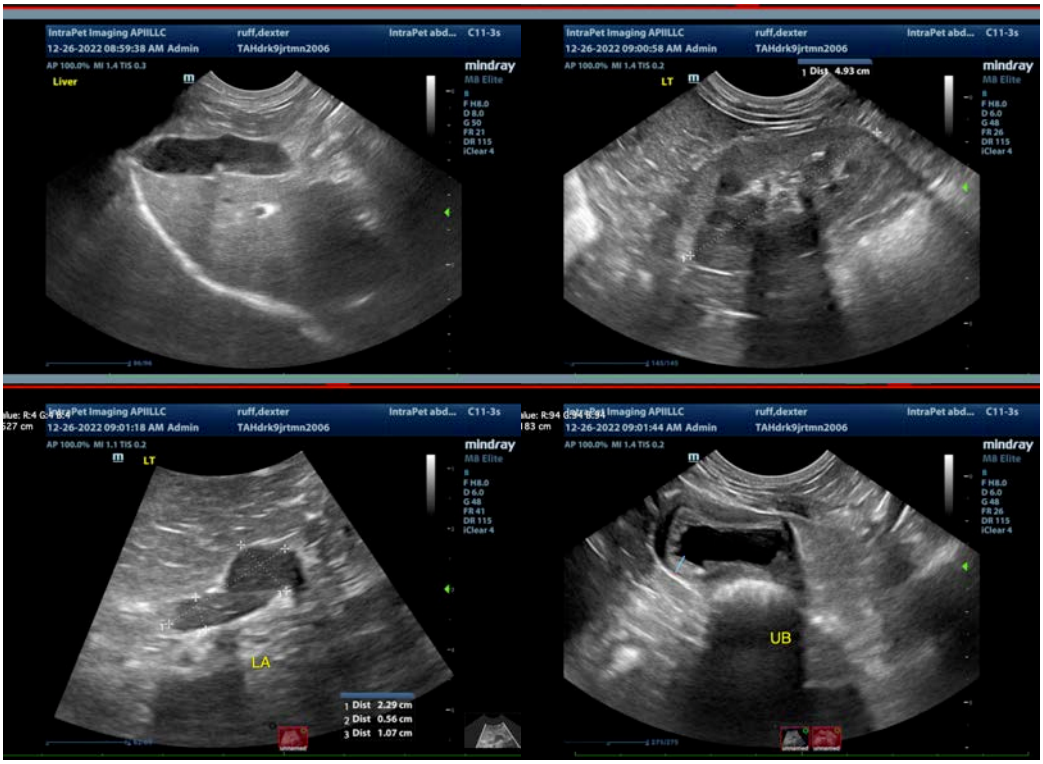
- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

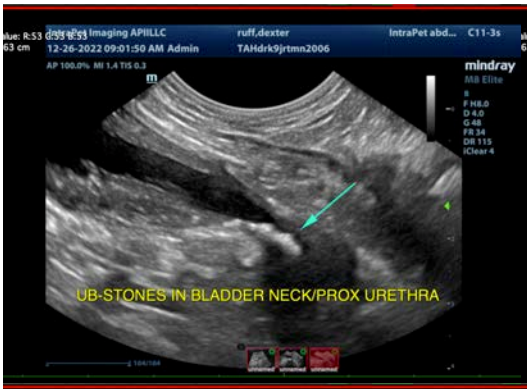
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

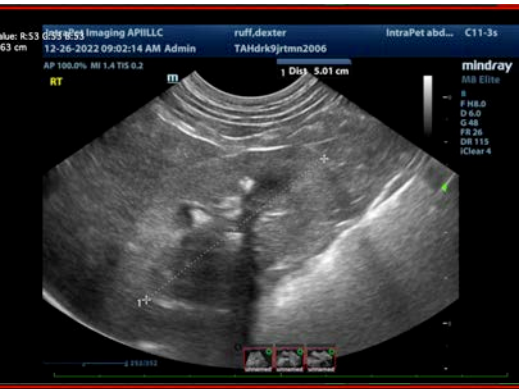
Today's scan appears relatively stable from the previous scan. No focal lesions have developed in the liver, and the gallbladder appears relatively normal. Findings are consistent with a primary hepatopathy, possibly secondary to Phenobarb +/- other issues. Given the abnormal bile acid levels, you could consider discontinuing Phenobarbital therapy, as you're likely at subtherapeutic levels at this point. Consider consultation with a veterinary neurologist regarding this option.

Both adrenal glands appear somewhat "chunky", and the caudal pole of the left adrenal is prominent, but not an overt nodule or mass lesion. At this point I would likely continue monitoring both the size of the adrenals and for progressive signs of Cushing's. Consider a blood pressure evaluation and the rare chance that this represents a pheochromocytoma.

The stones are persistent in the urinary tract and possibly appear more numerous. Correlate with a urinalysis, culture, and abdominal radiographs.

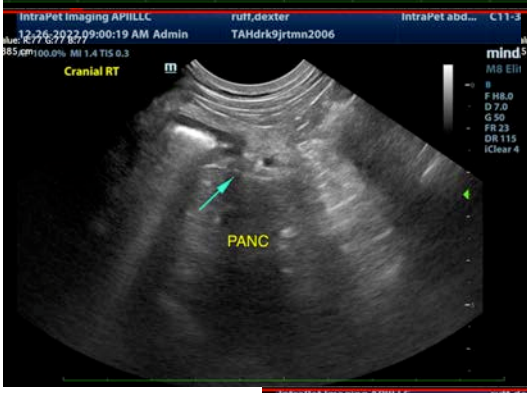



IntraPet Imaging APIIILLC
ruff,dexter
IntraPet abd... C11-3s
12-26-2022 09:01:50 AM Admin
TAHdrk9jrtmn2006
mindray
M8 Elite
UB-STONES IN BLADDER NECK/PROX URETHRA


IntraPet Imaging APIIILLC
ruff,dexter
IntraPet abd... C11-3s
12-26-2022 09:02:14 AM Admin
TAHdrk9jrtmn2006
RT
1 Dist 5.01 cm
mindray
M8 Elite


IntraPet Imaging APIIILLC
ruff,dexter
IntraPet abd... C11-3s
12-26-2022 09:02:42 AM Admin
TAHdrk9jrtmn2006
RT
1 Dist 2.12 cm
2 Dist 0.84 cm
3 Dist 0.88 cm
mindray
M8 Elite


IntraPet Imaging APIIILLC
ruff,dexter
IntraPet abd... C11-3s
12-26-2022 09:03:40 AM Admin
TAHdrk9jrtmn2006
SI
1 Dist 0.37 cm
mindray
M8 Elite


IntraPet Imaging APIIILLC
ruff,dexter
IntraPet abd... C11-3s
12-26-2022 09:00:19 AM Admin
TAHdrk9jrtmn2006
Cranial RT
PANC


IntraPet Imaging APIIILLC
ruff,dexter
IntraPet abd... C11-3s
12-26-2022 09:00:44 AM Admin
TAHdrk9jrtmn2006
Spleen


IntraPet Imaging APIIILLC
ruff,dexter
IntraPet abd... C11-3s
12-26-2022 09:01:47 AM Admin
TAHdrk9jrtmn2006
PROST

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.

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