



**PATIENT**

Pete Nicholls

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Neutered Male

**AGE**

8 years

**WEIGHT**

4.2 kg

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Governors Road AH

**REFERRING VET**

Dr. Farooq

**INVOICE**

10810

**DATE**

4/27/22

**PRESENTING CLINICAL SIGNS**

History: Previously positive for Lyme's, no current issues. tense abd, unable to confirm organomegaly/abnormalities elevated liver enzymes

Abnormal PE/Chem/CBC/UA Results: decreased urea/creatinine, mild elevation of ALT, mild decrease in amylase. Bile Acids Preprandial / Random a123.0 0.0 - 14.9 μmol/L Bile Acids Postprandial b110.0 0.0 - 29.9 μmol/L Partial Thromboplastin Time (PTT) 9.7 10.6 - 16.8 seconds

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and the visualized portion of the proximal urethra are normal

The prostate is prominent in size with normal curvilinear peripheral contours. The parenchyma is homogenous. No focal lesions are observed. The proximal urethra is not overtly dilated.

The left kidney is normal size (3.77 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (4.16 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal size (0.38 cm at cranial pole) (0.43 cm at caudal pole) (1.26 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.92 cm at cranial pole) (0.33 cm at caudal pole) (1.44 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is not visualized in its entirety. In the visualized portions, the size appears normal and the peripheral contours are curvilinear. The parenchyma is homogenous. No focal lesions are observed. Splenic vasculature appears normal with no evidence of thrombosis.

**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative, or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.



**PATIENT**

Pete Nicholls

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Neutered Male

**AGE**

8 years

**WEIGHT**

4.2 kg

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Governors Road AH

**REFERRING VET**

Dr. Farooq

**INVOICE**

10810

**DATE**

4/27/22

**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

**Pancreas**

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- An obvious cause for the elevated liver values is not identified in this study. Considerations include microvascular dysplasia, inflammatory disease (i.e., chronic active hepatitis, bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), Leptospirosis or other hepatopathy. Hepatic neoplasia is considered unlikely given the liver size and sonographic appearance.

**Secondary Findings**

- Bilateral chronic age-related renal changes
- The prominent prostate may be a normal variant for this patient or may represent late-in-life neutering or possibly, emerging neoplasia. Correlation with the patient's clinical history is recommended.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- A surgical liver biopsy is recommended to get a definitive diagnosis. If surgery is pursued, additional hepatic tissue samples for potential copper quantitation, as well as aerobic and anaerobic bile cultures should be obtained.
- Also consider Leptospirosis testing (i.e., blood and urine PCR, serology), particularly if the liver enzyme elevation values are acute in nature.
- If a conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, +/-metronidazole, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
- Regarding the prominent prostate, consider a urine BRAF test, if prostatic neoplasia is of concern. It should be noted however, that a negative BRAF test does not completely rule out the possibility of lower urinary tract neoplasia.



**PATIENT**

Pete Nicholls

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Neutered Male

**AGE**

8 years

**WEIGHT**

4.2 kg

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING  
PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Governors Road AH

**REFERRING VET**

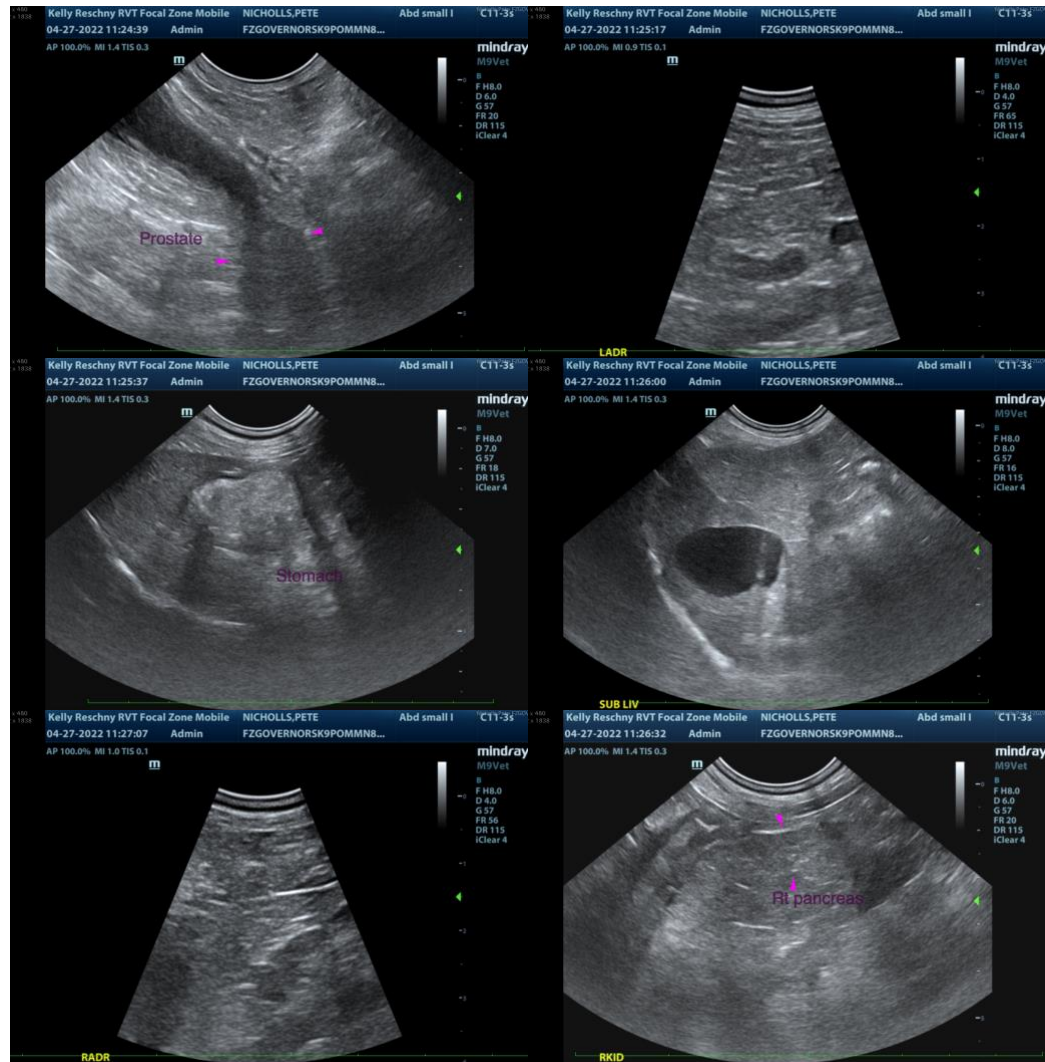
Dr. Farooq

**INVOICE**

10810

**DATE**

4/27/22



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.

**Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
info@SonoPath.com