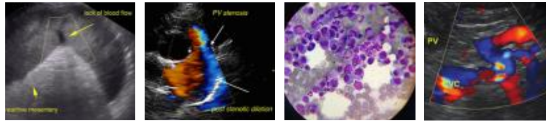


PATIENT
Lucky Quinn

SPECIES
Canine

BREED
Norwich Terrier

SEX
MN

AGE
14 y

WEIGHT
20.6 lbs.

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
Alpine AH

REFERRING VET
Dr. Clark

INVOICE
14281

DATE
7/12/22

PRESENTING CLINICAL SIGNS

Patient presented for distended abdomen and bloating for 4 weeks. Patient has low energy and can only walk for short distances without becoming tired. Coughing also started a week ago, Owner is unsure if this was due to a bone he ate. Radiographic Findings Enlarged liver? Possible mass in abdomen?
Abnormal PE/Chem/CBC/UA Results: Creatine 366

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.9 cm in diameter.

The area of the aortic trifurcation was free of pathology.

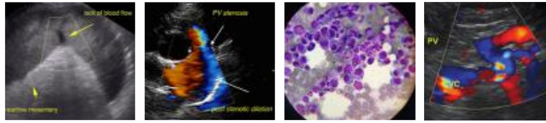
Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Mild nonuniform cortex echogenicity was present in both kidneys. Pinpoint areas of medullary mineral were present. No evidence of pelvic dilation was present. The left kidney measured 4.6 cm in length. The right kidney measured 5.1 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.8 cm length x 0.54 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 1.8 cm length x 0.42 cm width at the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease. The spleen exhibited normal size.



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Liver/ Gallbladder

The liver presented enlarged in size. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The liver exhibited overall normal hepatic parenchyma echogenicity with moderate coarse echotexture. Several to multiple variably sized nondisruptive nonuniformly hyperechoic intraparenchymal nodules were present. An example of a nodule measured 1.3 up to 3.2 cm. The nodules did not distort the hepatic capsule. Subjective mild Increased prominence of the portal vascular borders was noted. The hepatic vasculature exhibited normal volume without evidence of congestion.

The gallbladder was non distended in size with mildly hyperechoic yet non-thickened gallbladder walls. Anechoic content with mild nondependent mildly hyperechoic gallbladder debris was present. No evidence of peripheral gallbladder inflammation was noted. The cystic duct and common bile ducts were normal without evidence of dilation.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall width measured 0.47 cm.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material. The small intestinal wall width measured 0.46 cm.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. This is likely consistent with age-related pancreatic changes and considered incidental.

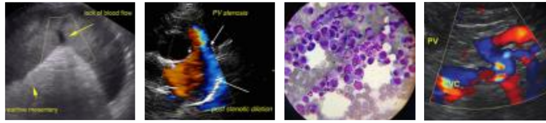
Free Abdomen

No omental masses, lymphadenopathy or evidence peritoneal free fluid was present. Potential increased omental fat was present.

Rapid view of the heart revealed no evidence of pericardial masses or effusion in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Bilateral chronic renal changes exhibiting pinpoint medullary mineral
- Hepatomegaly exhibiting nonuniform parenchyma including variably sized nondisruptive mildly hyperechoic Intraparenchymal nodules
- Mild gallbladder debris (non-mucocele)
- Sonographically unremarkable peritoneal cavity



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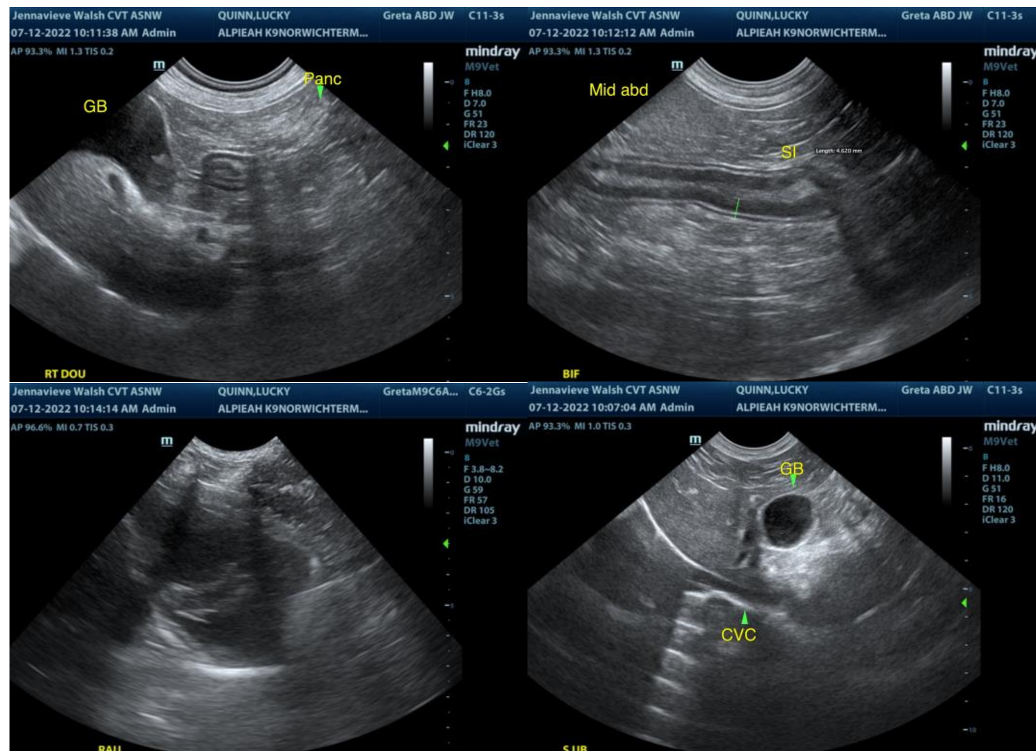
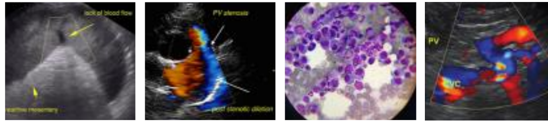
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The hepatic presentation was nonspecific, given the lack of hepatic enzyme elevations. Subjectively, the variably sized, mildly hyperechoic intraparenchymal hepatic nodules, although nonspecific, are suggestive of areas of benign lipogranulomas or nodular hyperplasia. Potential for neoplastic criteria is thought unlikely.

Assuming normal clotting status, ultrasound-guided FNA of a hepatic nodule using a 25-gauge needle could be considered for screening cytology and further clarification. Sonographic monitoring of these nodules for evidence of progression would be a more conservative approach.

Otherwise, largely geriatric abdomen without evidence of significant abdominal visceral pathology was noted. Three view chest radiographs to assess for evidence of primary pulmonary disease, as well as cardiopulmonary status, are warranted. Full echocardiographic work-up with ECG could be considered if clinical signs consistent with exercise intolerance continue.





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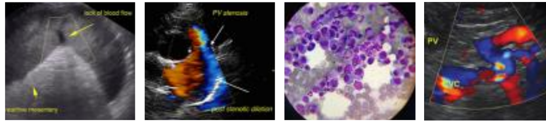

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com