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Clinical Sonography & Telecytology
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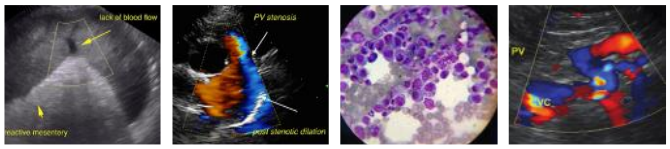

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1-800-838-4268 info@sonopath.com

PATIENT

SPECIES

BREED

SEX

AGE

WEIGHT

INTERPRETED BY

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

IMAGING PERFORMED BY

HOSPITAL NAME

REFERRING VET

INVOICE

DATE

PRESENTING CLINICAL SIGNS

Patient presents for elevated liver enzymes.

Abnormal PE/Chem/CBC/UA Results: ALT 235, AP 2249.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 5 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 were noted.

Normal size and margination was 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 mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.9 cm in length. The right kidney measured 6.2 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

The right adrenal gland was mildly prominent in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 2.1 cm length and 0.74 cm width in the caudal pole. The right adrenal gland measured 2.1 cm length and 1.2 cm width in the caudal pole. No evidence of neoplastic criteria was observed.

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.

Liver

The liver exhibited mild enlargement, symmetrical capsule contour with a heterogeneous non-uniform to indistinctly nodular parenchyma. Evidence of diffuse parenchymal remodel was present. No overt masses or nodules. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with focal areas of hypoechoic gallbladder wall echogenicity without overt thickening. Areas of mild congealed echogenic gallbladder luminal debris were noted. The cystic and common bile ducts were normal.

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 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.

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

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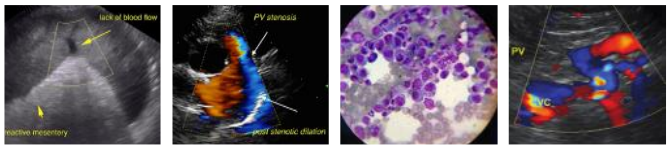

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Pancreas

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

Free Abdomen

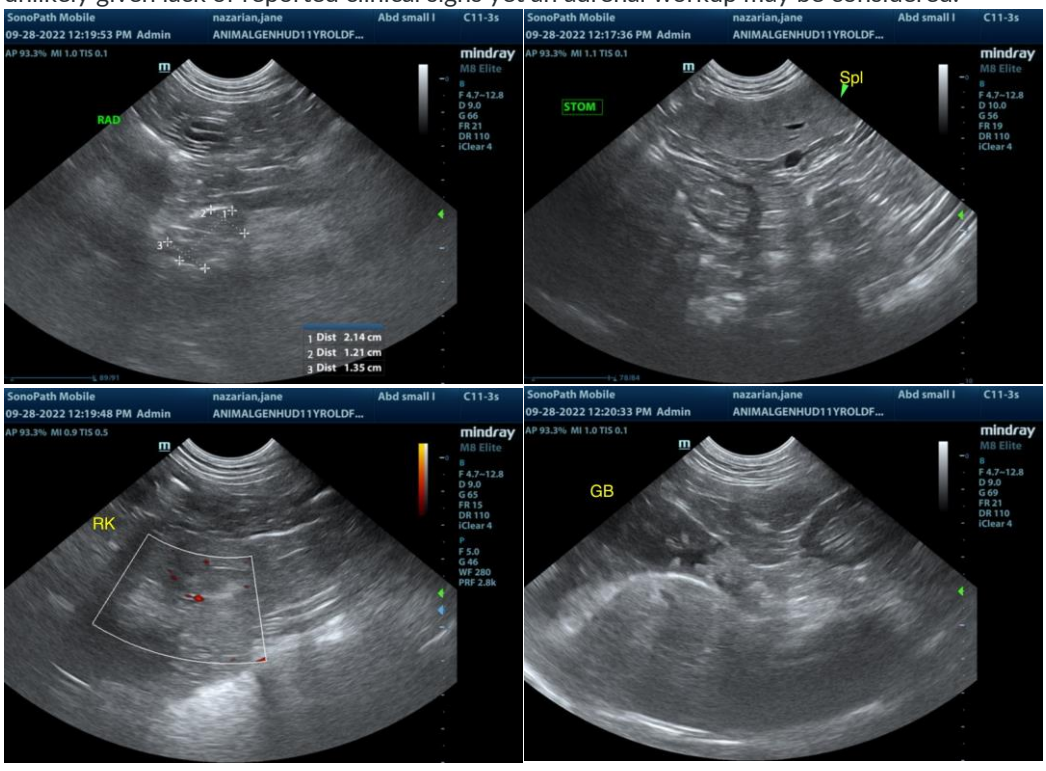
No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Heterogeneous to indistinctly nodular liver-nonspecific, vacuolar hepatopathy, chronic inflammatory/immune mediated disease possible with infiltrative neoplasia considered less likely
- Moderate mildly congealed gallbladder debris (non-mucocele), potential for minor chronic cholecystitis
- Bilateral chronic renal changes
- Age related adrenal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status and using a 25g needle, a hepatic FNA for screening cytology is warranted for further clarification. Hepatic core surgical biopsy may be required for a definitive diagnosis. Hepatosupportive medications such as Denamarin or Vitamin E as well as Ursodiol due to its antioxidant and immunomodulatory effects within the liver would be warranted, although these medications may not result in decreased hepatic enzyme levels. Primary adrenal disease is considered unlikely given lack of reported clinical signs yet an adrenal workup may be considered.



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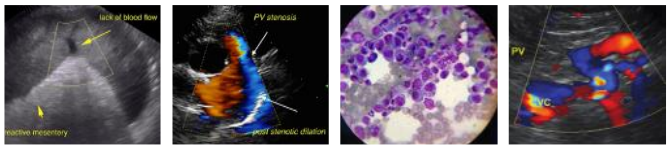

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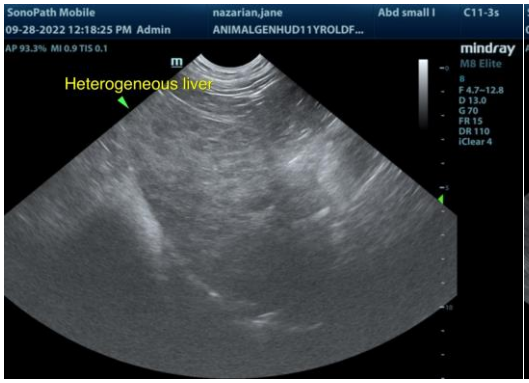

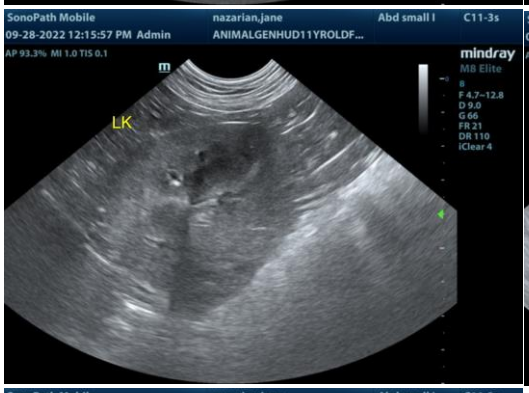

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

REFERRING VET

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)

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