



PATIENT

Nero Palmer

SPECIES

Canine

BREED

Mixed

SEX

Neutered Male

AGE

10 Years

WEIGHT

14.5 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Gudrun Gunther

HOSPITAL NAME

New Frontier AMC

REFERRING VET

Dr. Gudrun Gunther

INVOICE

38094

DATE

5/27/22

PRESENTING CLINICAL SIGNS

Diagnosed with diabetes 1 year ago Came in laterally recumbent in DKA today
Abnormal PE/Chem/CBC/UA Results: CBC - stress leukogram CHEM - azotemia (new since March), hypoglycemia, hyponatremia, hypokalemia, hypochloridemia UA - pyuria, bacteriuria, hematuria

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** and visible pelvic urethra were unremarkable for the level of repletion presented. The urine, however, did present some mildly echogenic dependent and suspended debris consistent with mucous, exfoliated cells from renal or bladder origin, and/or blood clots as these echogenic changes can all present similarly. This is often related to urinary tract infection but may represent simple evidence of exfoliated debris or sterile inflammation. Cystocentesis, urinalysis, +/- culture would be recommended to rule out and define any UTI.

The **kidneys** presented dystrophic changes with pyelectasia and infarcts in the left kidney, moderate degenerative changes/interstitial nephrosis pattern in the right kidney. The right kidney measured 3.75 cm. The left kidney measured 3.7 cm. Hyperechoic medullary rim sign noted in both kidneys, typical of diabetics. Fresh infarcts noted in the right kidney with active inflammation.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.49 cm at the caudal pole and 1.2 cm at the cranial pole. The left adrenal gland measured 0.54 cm.

Spleen

The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are consistent with normal age-related alteration. The capsule was smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. No evidence of active acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

Liver

The **liver** in this patient was mildly enlarged and uniform with hyperechoic parenchymal changes. There were subtle, hypoechoic heterogenous nodular changes. Minor gallbladder polyp noted.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The **pancreas** revealed hyperechoic parenchymal changes with remodeling.



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ULTRASONOGRAPHIC FINDINGS

- Bladder debris
- Dystrophic kidneys with pyelectasia, possible chronic pyelonephritis and diabetic nephropathy

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommend full urinary workup in this patient with culture and sensitivity. 72-hour IV fluid protocol recommended and coverage for UTI. No evidence of neoplasia. Underlying pancreatic inflammation plus UTI likely both playing a role in the lack of regulation of the diabetic state.

BREED

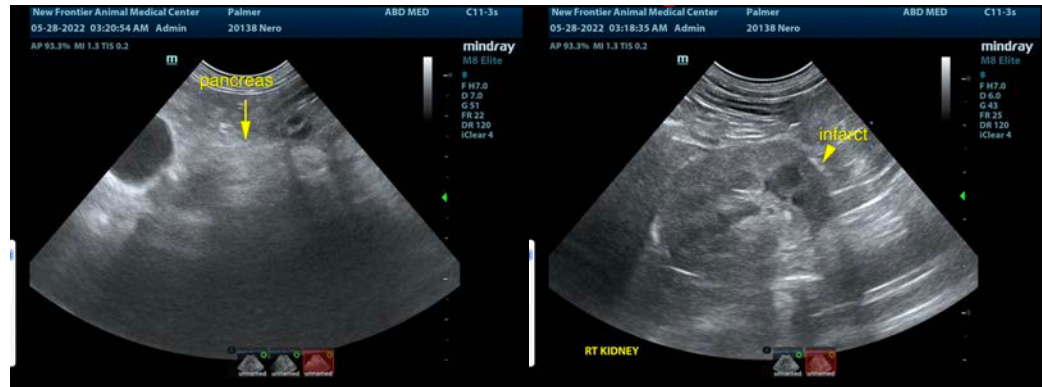
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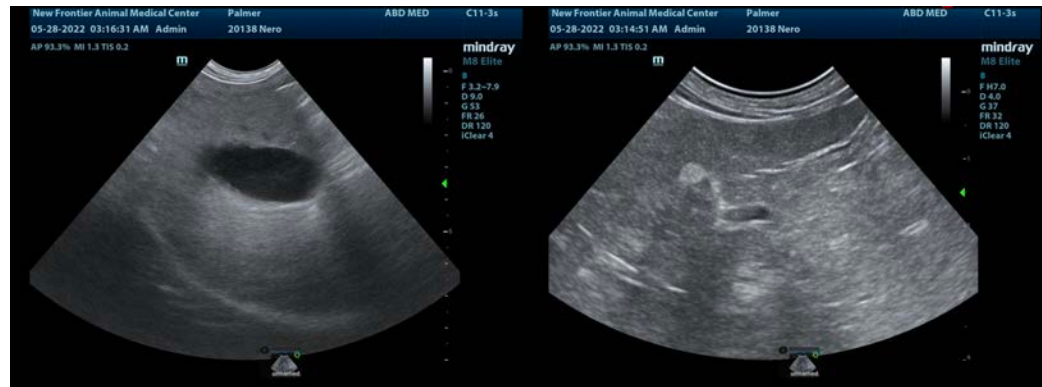


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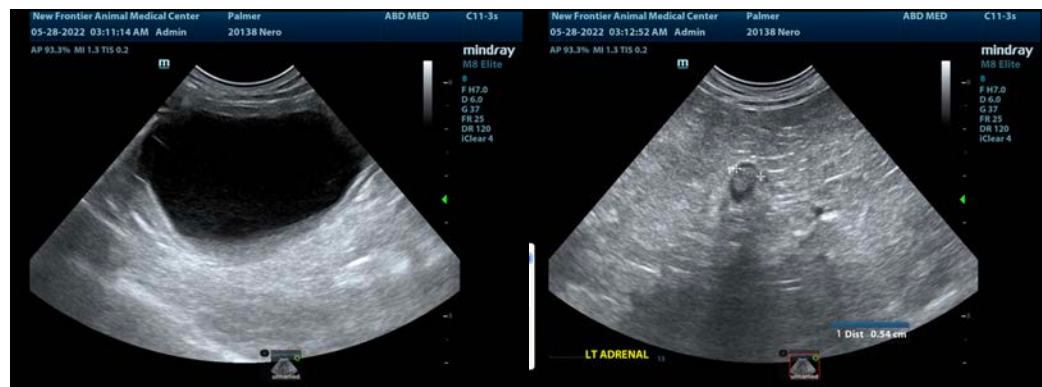


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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

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