



PATIENT PRESENTING CLINICAL SIGNS

Nicky Rowland

Presented for evaluation of uncontrolled diabetes mellitus (diagnosis of DM in May 2021). Appetite is unpredictable and Nicky is pick. Switched food 5 days ago to canned food only from dry Glycobalance. For the last 3-4 days, she requires encouragement to eat and drink; won't drink regular water but will drink "slurry water". Owner reports she was very vocal over the weekend, concerned she is confused or painful. Was previously on 5U Prozac BID, but over 14 days, this insulin was not working, so was switched to 3.5U Lantus BID about 10 days ago. Also takes 0.625mg fluoxetine SID. Concerned for underlying disease causing issues with diabetic regulation. No weight loss (weight has increased since July 2021)

SPECIES

Feline

BREED

DLH

SEX

Spayed Female

Abnormal PE/Chem/CBC/UA Results: Hospitalized overnight from 8/30-8/31 on insulin CRI to bring down BG (responsive to IV insulin) and correct dehydration. Freestyle Libre Sensor applied. 8/6/21 - Glu 485, Fructosamine 412 8/30/21 - Glu 419, ALT 143, Cre 1.5, USG 1.035, 4+ glycosuria, negative ketonuria

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

AGE

12 Years

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

WEIGHT

10 Pounds

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight pinpoint mineralizations noted. Slight cortical collapse noted at the caudal pole of the right kidney. The right kidney measured 4.4 cm. The left kidney measured 3.35 cm with calculi and infarcts noted.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

Adrenal Glands

IMAGING PERFORMED BY

Dr. Jolee Stegemoller

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 left adrenal gland measured 1.36 cm x 0.4 cm at the cranial pole and 0.46 cm at the caudal pole The right adrenal gland measured 1.4 cm x 0.54 cm at the cranial pole and 0.37 cm at the caudal pole.

HOSPITAL NAME

North Idaho AH

Spleen

REFERRING VET

Dr. Dawn Mehra

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

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Liver

DATE

8/31/21

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic



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lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

Gastrointestinal

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The **gastrointestinal tract** revealed minor variable thickening and echogenic submucosal changes most consistent with low grade end result of chronic GI disease such as IBD and may be related to malassimilation of nutrients if any weight loss is present. No obvious neoplastic patterns were noted and luminal content as unremarkable.

BREED

DLH

Pancreas

The **pancreas** was hypoechoic, irregular and nodular, consistent with history of inflammation or possible low-grade inflammation. Subxiphoid palpation is recommended to assess for pain or discomfort associated with the pancreas.

SEX

Spayed Female

ULTRASONOGRAPHIC FINDINGS

- Renal calculi
- Chronic GI changes
- Possible low-grade pancreatitis

AGE

12 Years

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

WEIGHT

10 Pounds

No evidence of neoplastic criteria. Low-grade pancreatitis may be playing a role in this patient as well as chronic inflammatory bowel. Periodic passage of calculi may be an issue.

Potential Causes of Diabetic Dysregulation

This is a suggestive checkoff list when faced with an unregulated diabetic patient:

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

UTI

Dietary indiscretion/intolerance

Pancreatitis

IMAGING PERFORMED BY

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Hyperthyroidism/hypothyroidism

Exogenous steroids (including topical eye meds)

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Cushing's

Acromegaly

Owner compliance

REFERRING VET

Dr. Dawn Mehra

Insulin quality issues

Antibodies to insulin

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Underlying Neoplasia

Diffuse liver disease

DATE

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For an additional charge, internal medicine consult can be utilized through SonoPath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.



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One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

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REFERRING VET

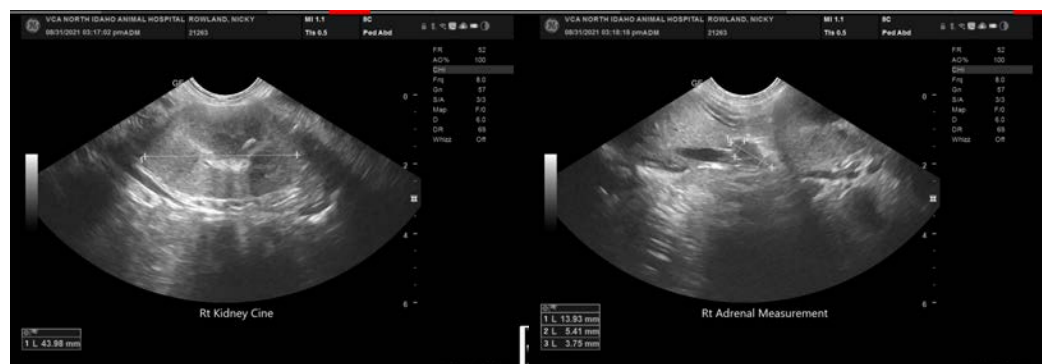
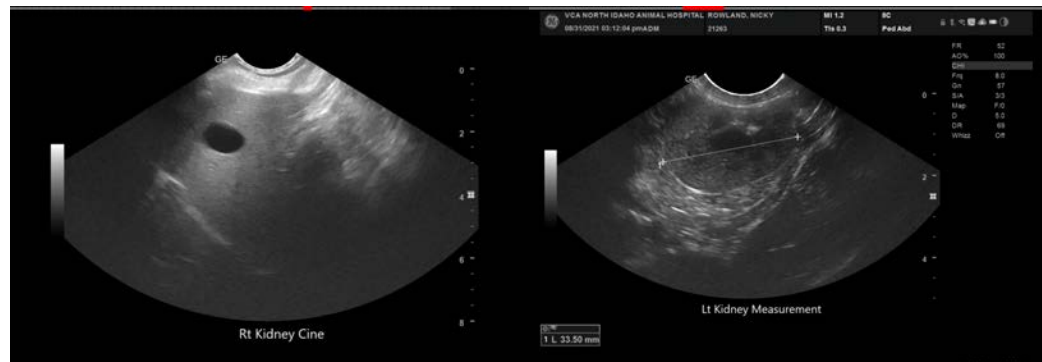
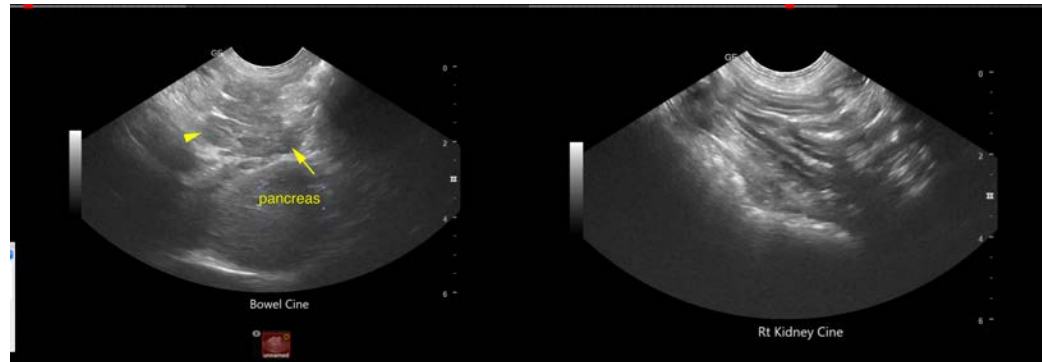
Dr. Dawn Mehra

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

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Feline

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.

BREED

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

info@SonoPath.com

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