

**PATIENT**

Waffles Zapata

SPECIES

Canine

BREED

Miniature Pinscher

SEX

Neutered male

AGE

10 years

WEIGHT

15 pounds

INTERPRETED BYR. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)**IMAGING
PERFORMED BY**

Rachel Runnells RVT

HOSPITAL NAMESVS Imaging Kansas
City**REFERRING VET**

Dr. Kuecker

INVOICE

10059ag

DATE

02/22/22

PRESENTING CLINICAL SIGNS

History: Vomiting, diarrhea, anorexia with marked elevations in ALT and AST and bile acids elevation. After a week, ALP is now moderately elevated. Symptoms have improved on liver meds.

Abnormal PE/Chem/CBC/UA Results: Uncontrolled diabetes mellitus and liver enzyme elevations. Currently on 4 U Insulin, ursodiol, denamarin. Just finished Clavamox for UTI.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 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. Pinpoint to focal areas of medullary mineral were present. Both kidneys exhibited subtle cortex hypertrophy. No evidence of pelvic dilation was present. The left kidney measured 4.5 cm in length. The right kidney measured 4.9 cm in length.

The area of the residual prostate appeared normal and free of pathology.

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 criteria. The left adrenal gland measured 1.8 cm width in the cranial pole and 0.55 cm width in the caudal pole. The right adrenal gland measured 1.1 cm width in the cranial pole and 0.77 cm width in the caudal pole.

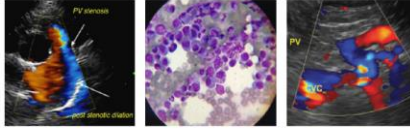
Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

The liver presented mildly enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion.

The gallbladder was non-distended in size with mild particulate to pinpoint hyperechoic nonorganized debris. The cystic and common bile ducts were normal.

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Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained minor retained ingesta/chyme with no signs of ileus, obstruction or foreign material. The gastric body wall measured 0.23 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. Subjective mildly increased duodenal mucosa echogenicity with intermittent jejunal mucosa speckling was present. The jejunum wall measured 0.24 cm. The duodenum wall measured 0.43 cm.

Normal visible colon wall layers were present with strongly shadowing feces in lumen.

Pancreas

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free abdomen

Focal, mildly prominent to enlarged solitary likely gastric lymph node was present directly caudal to the stomach and adjacent to the pylorus. The lymph node was essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). The lymph node measured 0.54 cm in diameter. The lymph node was not consistent with inflammatory or neoplastic criteria and is likely incidental.

ULTRASONOGRAPHIC FINDINGS

- Hepatopathy-subjectively benign, metabolic/reactive (diabetic) hepatopathy, inflammatory/immune mediated disease, cholestasis or emerging lipidosis possible with neoplasia considered a less likely differential diagnosis.
- Mild gallbladder debris (non-mucocele), potentially secondary to fasting or previously mentioned cholestasis.
- Mild gastroenteritis pattern.
- Bilateral chronic renal changes exhibiting pinpoint medullary mineralization-no overt pyelonephritis.
- Nonspecific mildly prominent right adrenal gland.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status, hepatic FNA using a 25g needle could be considered for screening cytology primarily to address for evidence of inflammatory cells. Continued hepatosupportive medications recommended.

A GI panel to include PLI/TLI/Cobalamin/Folate may be considered to assess for low grade pancreatitis or inflammatory enteropathy both of which may present sonographically normal.

Potential Causes of Diabetic Dysregulation

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



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Dietary indiscretion/intolerance
Pancreatitis

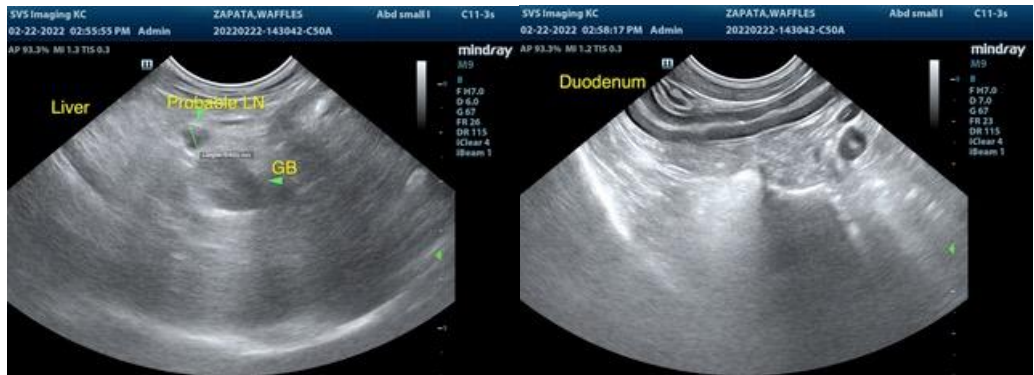
Hyperthyroidism/hypothyroidism
Exogenous steroids (including topical eye meds)

Cushing's
Acromegaly

Owner compliance

Insulin quality issues
Antibodies to insulin

Underlying Neoplasia
Diffuse liver disease



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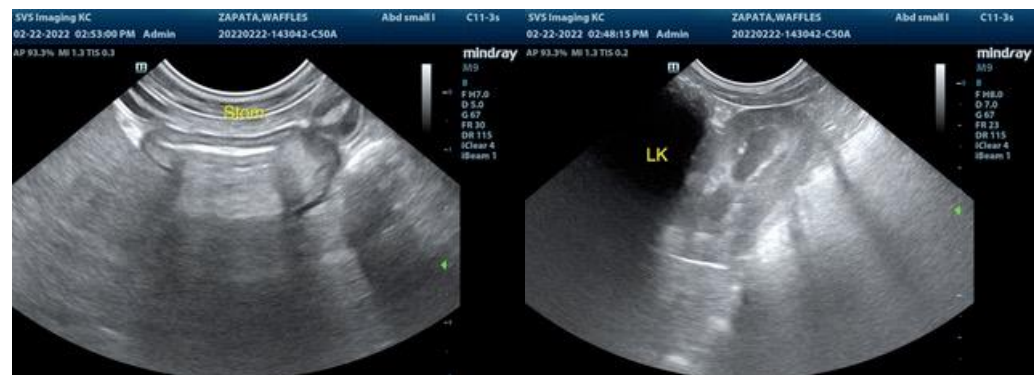
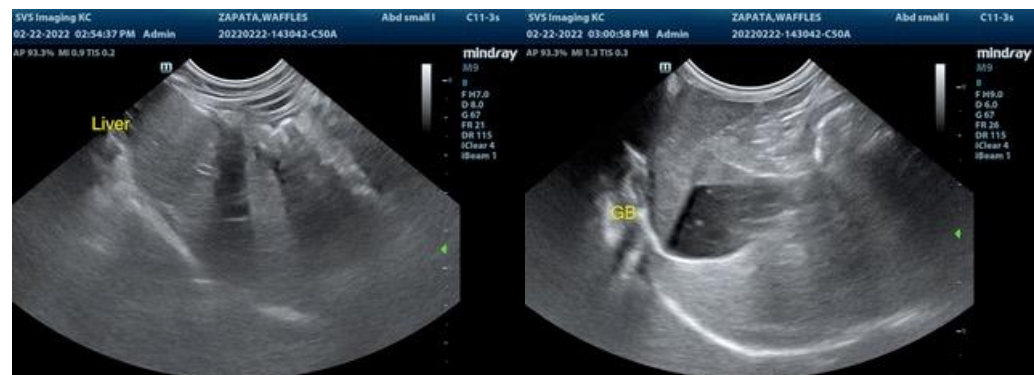
Dr. Kuecker

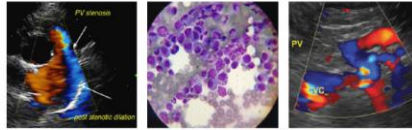
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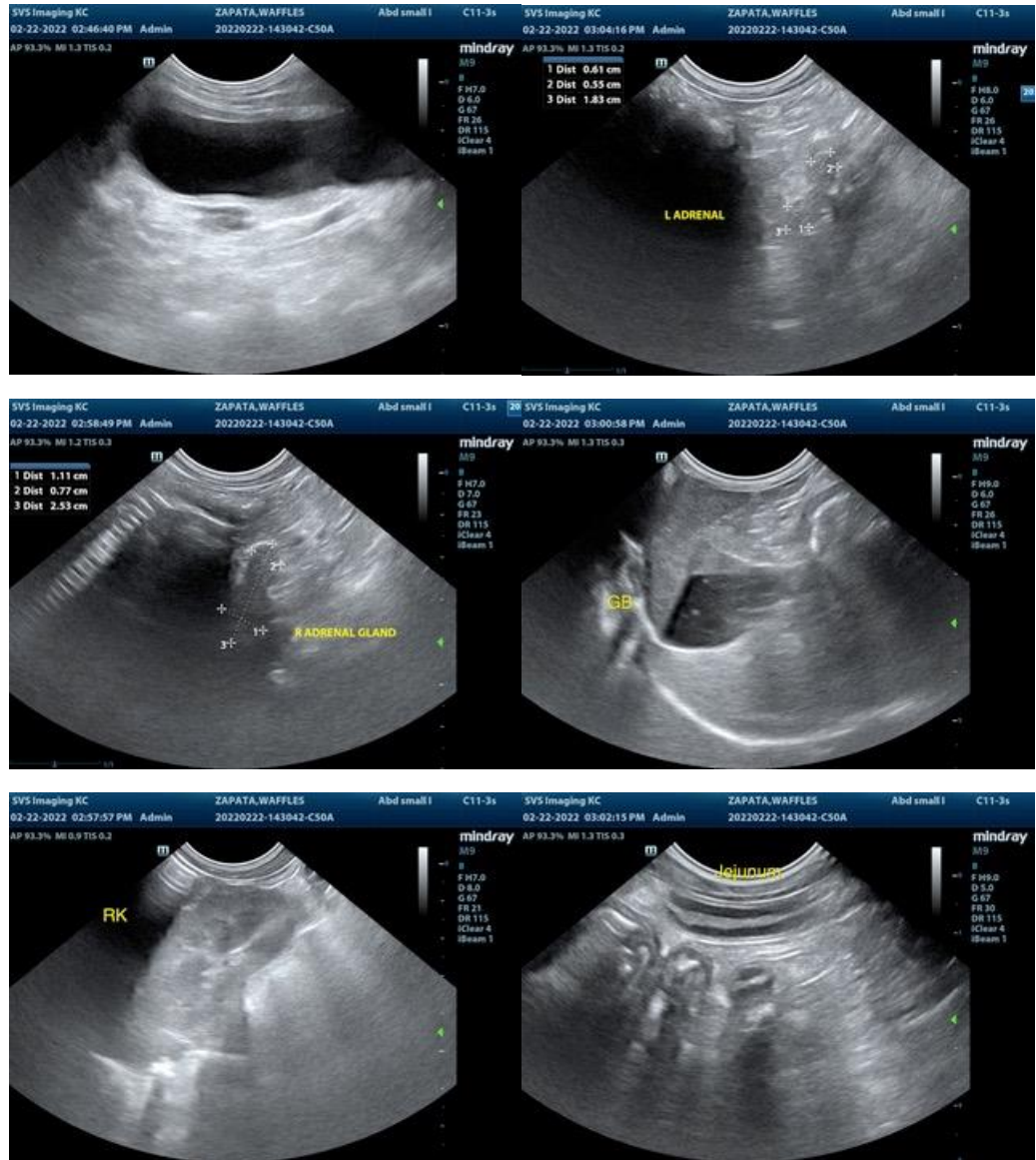
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

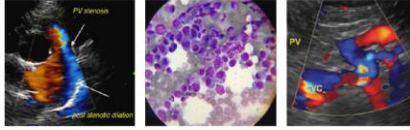
Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com

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SVS Mobile Imaging KC 816-401-5010
svsimagingkc@gmail.com



Clinical Sonography & Telectology

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