

**PATIENT**

Chloe Dugan

**PRESENTING CLINICAL SIGNS**

chloe was presented for uncontrolled diabetes , she is peeing a lot and drinking a lot , she has mucus vaginal discharge currently giving 17 unites twice daily owner is worried about cushing disease as cause of insulin resistant

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: last blood work shows high fructosamine level (584) alp 524. glucose 348 . ggt 26 , bun 35 , cholesterol 395 , triglycride 448 urine analysis / culture : pending

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

Cocker Spaniel

*Urinary System*

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Primarily anechoic content was present in the lumen with minor dependent mineral. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

**SEX**

Female Spayed

No overt evidence of pathology associated with the uterine remnant.

**AGE**

12

No evidence of pathology in the area of the aortic trifurcation.

**WEIGHT**

35

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Mild pyelectasia was present in the left kidney along with cortical cysts present in both kidneys. Areas of medullary mineral were present in both kidneys. The left kidney measured 5.7 cm in length. The right kidney measured 5.4 cm in length.

*Adrenal Glands*

**INTERPRETED BY**

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

The left adrenal gland was normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.49 cm width in the cranial pole and 0.72 cm width in the caudal pole.

The right adrenal gland was not definitively visualized.

**IMAGING PERFORMED BY**

Samual Gabriel

*Spleen*

**HOSPITAL NAME**

CJAH

The spleen was normal in size and contour with generalized mild splenic parenchyma heterogeneity with multifocal hyperechoic parenchymal foci noted. 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 / Gallbladder*

**REFERRING VET**

Gabriel

The liver was mildly enlarged in size. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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The gallbladder was non distended in size with moderate nondependent subjectively mobile nonorganized luminal debris. The gallbladder walls were normal without evidence of inflammatory changes. The cystic duct and common bile ducts were normal without evidence of dilation.

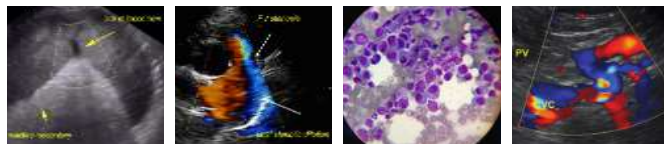
*Gastrointestinal*

**DATE**

2-5-22



<b>PATIENT</b>	The visible gastric walls were normal. The stomach contained ingesta exhibiting progressive distal acoustic shadowing. No overt evidence of obstruction to pyloric outflow. The ventral gastric body wall measured 0.42 cm width.
Chloe Dugan	
<b>SPECIES</b>	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 duodenum wall width measured 0.38 cm and the jejunum wall width measured 0.38 cm.
Canine	
<b>BREED</b>	Normal visible colon wall layers were present with apparent formed feces in lumen.
Cocker Spaniel	<b><i>Pancreas</i></b> The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
<b>SEX</b>	<b><i>Free Abdomen</i></b> No overt lymphadenopathy or peritoneal effusion was present.
Female Spayed	
<b>AGE</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
12	<b>Primary</b>
<b>WEIGHT</b>	<ul style="list-style-type: none"> <li>• Mild urinary bladder mineral.</li> <li>• Bilateral chronic renal changes with medullary mineral, cortical cyst, and mild left kidney pyelectasia.</li> <li>• Hyperechoic splenic parenchymal foci - microinfarction, pinpoint fibrosis, or mineralization possible.</li> <li>• Hepatopathy exhibiting generalized parenchymal remodeling - subjectively benign.</li> <li>• Moderate gallbladder debris (nonmucocele).</li> <li>• Heterogeneous pancreas - age related / patient variant, remodeling owing to previous inflammation, or low grade to chronic pancreatitis possible.</li> </ul>
35	
<b>INTERPRETED BY</b>	<b>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The pyelectasia in the left kidney may be owing to chronic renal changes, potential pelvic scarring owing to previous calculi passage, IV fluid therapy (if applicable), while the possibility of low grade left kidney pyelonephritis may be possible. Urine C/S and baseline protein: creatinine ratio on sterile urine sample is recommended given likelihood of glucosuria. This patient may be passing small amounts of mineral from the kidneys into the urinary bladder.
<b>IMAGING PERFORMED BY</b>	Baseline UCCR +/- ACTH stimulation test in the face of diabetes could be considered a strong clinical suspicion for hyperadrenocorticism.
Samual Gabriel	A GI panel to include PLI/TLI/Cobalamin/Folate may be considered for further clarification of the pancreas as well as assessment for structurally insignificant gastrointestinal disease as a potential contributor to uncontrolled diabetes.
<b>HOSPITAL NAME</b>	Hepatosupportive medications including denamarin and ursodiol may prove beneficial.
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**PATIENT**

Potential Causes of Diabetic Dysregulation

Chloe Dugan

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

**SPECIES**

UTI

Canine

Dietary indiscretion/intolerance

Pancreatitis

Hyperthyroidism/hypothyroidism

Exogenous steroids (including topical eye meds)

Cushing's

**BREED**

Acromegaly

Cocker Spaniel

Owner compliance

Insulin quality issues

Antibodies to insulin

**SEX**

Underlying Neoplasia

Diffuse liver disease

Female Spayed

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**WEIGHT**

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**IMAGING PERFORMED BY**

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**HOSPITAL NAME**

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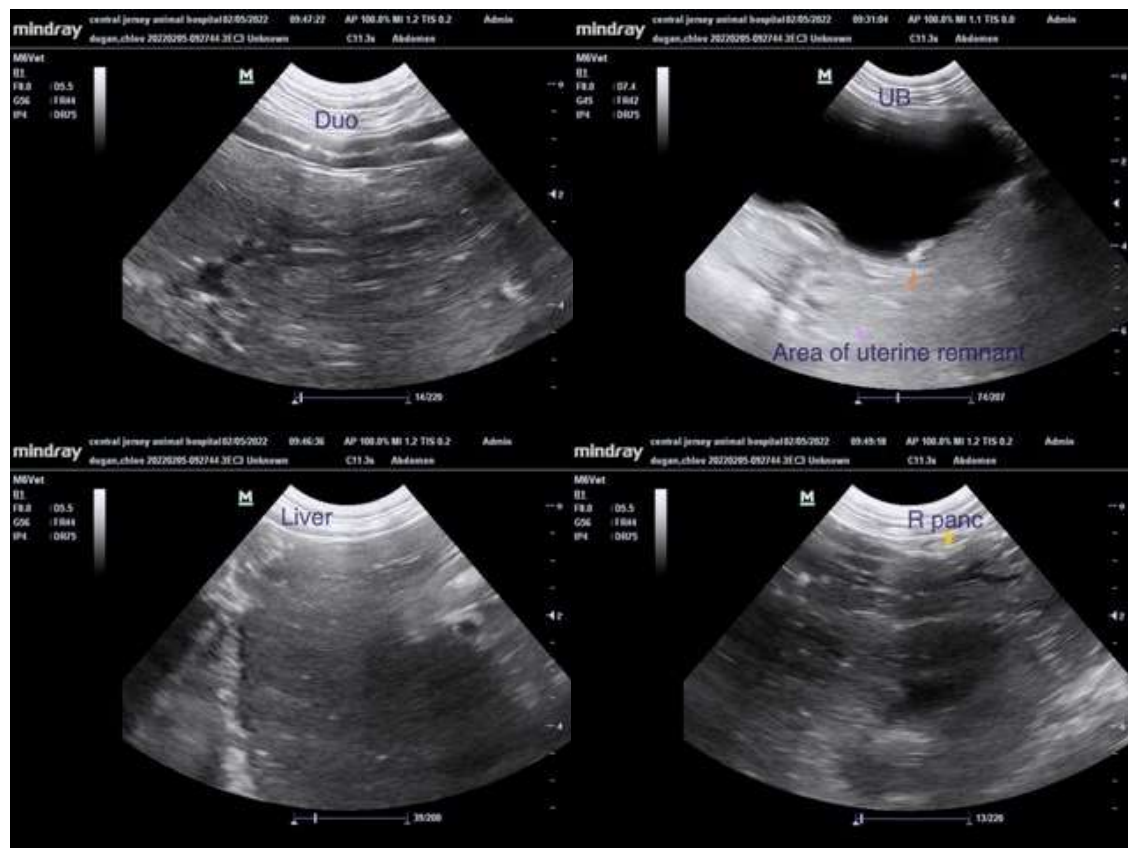
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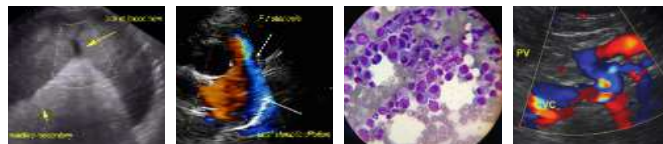
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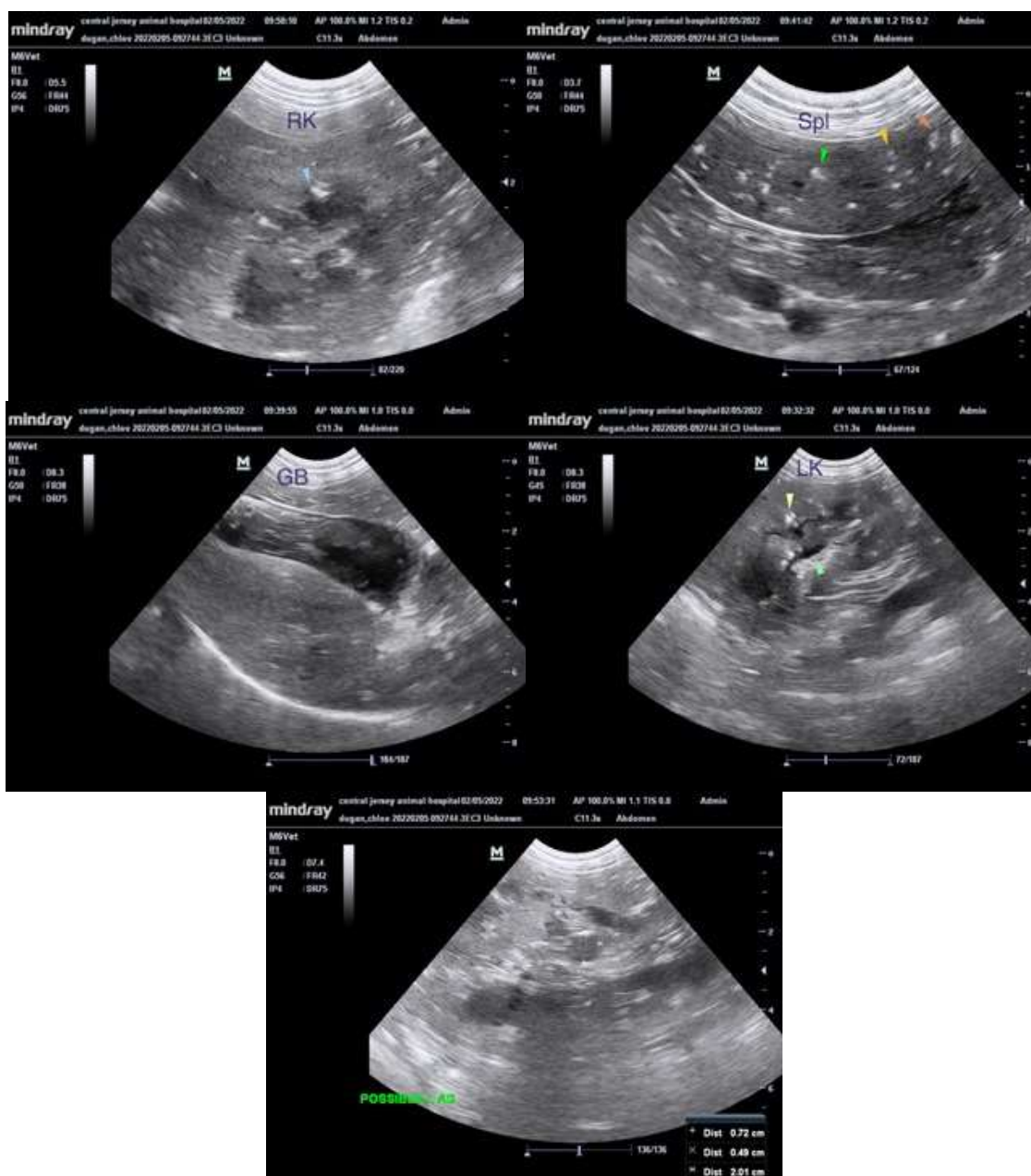
Gabriel

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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