



**PATIENT PRESENTING CLINICAL SIGNS**

Jojo Engle Uncontrolled diabetes mellitus - BG II over the place - doing curve today  
Abnormal PE/Chem/CBC/UA Results: Bg's varying anywhere from 40 to 400 and in between from 12/2022- present

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

**Urinary System**

Dachshund

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**SEX**

Neutered Male

Prostate is normal in size, echotexture and echogenicity for a neutered male.

**AGE**

11 Years 8 Months

The right kidney is normal in size (4.45 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

**WEIGHT**

15 Pounds

The left kidney is normal in size (4.51 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Adrenal Glands**

The right adrenal gland is normal in size (measurement), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**IMAGING PERFORMED BY**

Heather

The left adrenal gland is unable to be well visualized in these images. The right is normal and measures 0.72 cm at the cranial pole and 0.49 cm at the caudal pole.

**HOSPITAL NAME**

ACC Flanders

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**REFERRING VET**

Dr. Villari

**Liver**

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**INVOICE**

45445

**DATE**

2/23/23

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta.



**PATIENT**

Jojo Engle

There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

**SPECIES**

Canine

The visible small intestines are normal in wall thickness and layering. Subtle hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The lumen is empty with no evidence of obstruction or foreign material.

**BREED**

Dachshund

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

***Pancreas***

**SEX**

Neutered Male

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

***Free Abdomen***

**AGE**

11 Years 8 Months

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

**WEIGHT**

15 Pounds

There is no evidence of heart base or pericardial pathology noted in these images. If cardiac function evaluation is desired, a full echocardiogram is recommended.

**ULTRASONOGRAPHIC FINDINGS**

**INTERPRETED BY**

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- **Bilateral medullary rim sign** - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

**IMAGING PERFORMED BY**

Heather

- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.

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- **Mild gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

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- **Subtle mucosal speckling** - Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state.

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- Chronic active pancreatitis

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The majority of the changes described above are expected in a diabetic patient. The changes that could potentially be contributing to poor regulation are the potential chronic pancreatitis as well as potentially bowel disease. The mucosal speckling is likely a post-prandial variant in this patient. However, further evaluation of both is recommended, beginning with a



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gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory.

**SPECIES**

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In the meantime, transition to a low-fat diet may help diabetes control. Having said that, given the reported episodes of hypoglycemia, there is some concern that the episodes of hyperglycemia are actually secondary to a Somogyi effect, and it may be that a short-term blood glucose curve doesn't provide adequate information to improve regulation, in which case placement of a freestyle libre sensor may help.

**BREED**

Dachshund

Additionally, if not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

**SEX**

Neutered Male

**AGE**

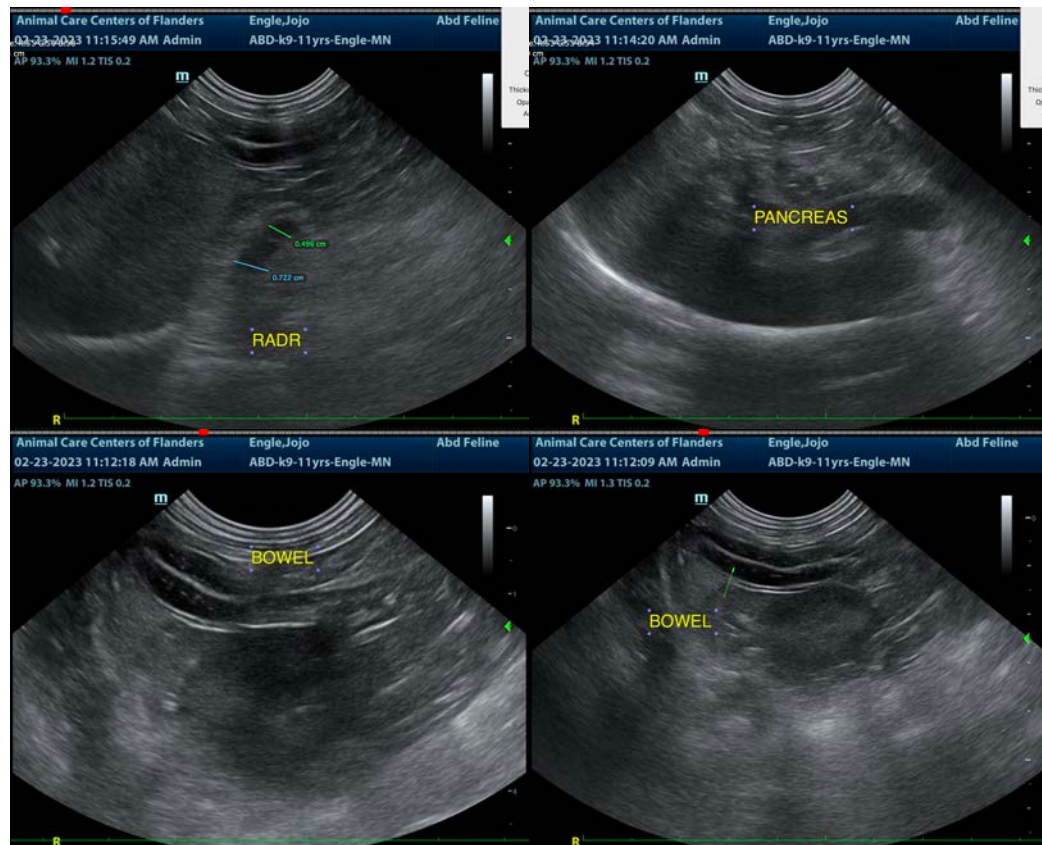
11 Years 8 Months

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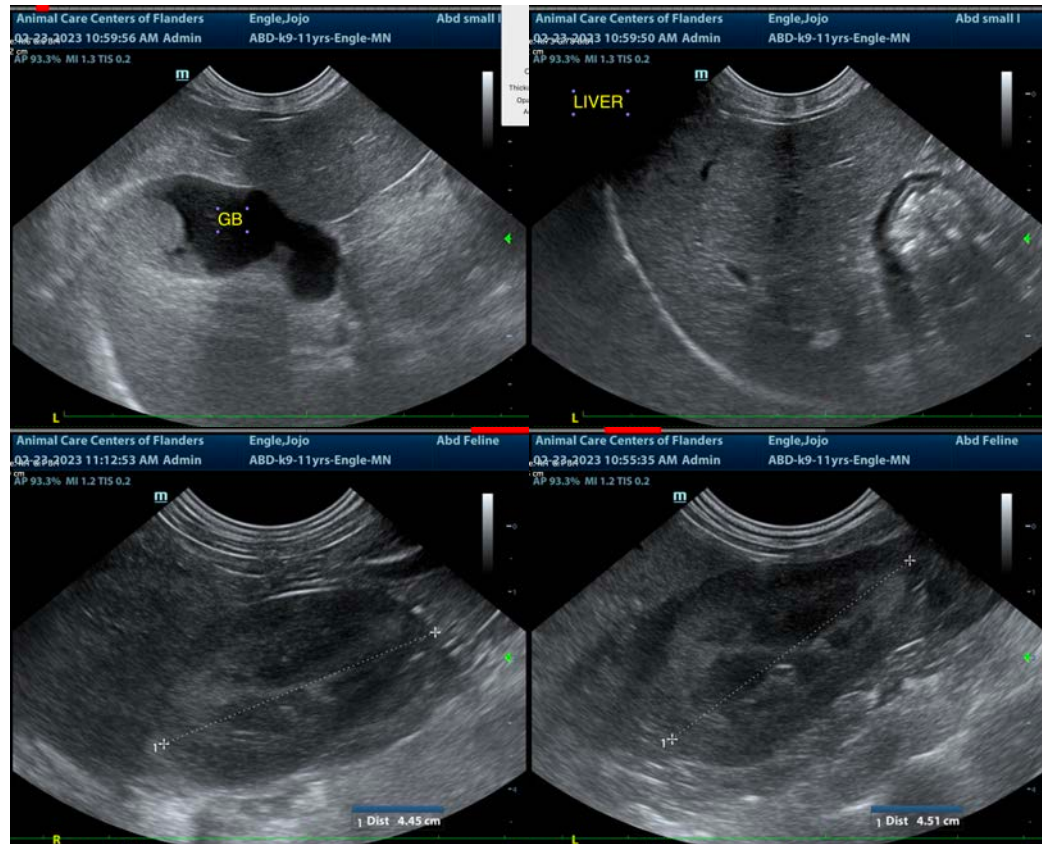
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2/23/23

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.

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