**PATIENT**

Jasper Maynard

**SPECIES**

Canine

**BREED**

Dachshund

**SEX**

MN

**AGE**

10yr

**WEIGHT**

19lb

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

Sarah Pender CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Joy

**INVOICE**

12305ag

**DATE**

11/28/2022

**PRESENTING CLINICAL SIGNS**

Concerned about uncontrolled diabetes. On vetsulin. Started patient at 4u BID of Vetsulin. O immediately started increasing the dose based on his (non-recommended) home testing. Had told o to call for dose change if no change of water consumption in 5-7 days. By the time the owner called for advice, he was giving 15-20u BID. Suspected cushing's based on elevated ALP and lack of response to insulin. Low dose dex suppression test WNL. Opted for ultrasound to look for mass, etc.

Abnormal PE/Chem/CBC/UA Results: Low dose dexamethasone - pre 1.8, 4hr 0.2, 8hr 0.5. On 10/31/22 glucose was over 400 and ALP too high to read. Urine with glucosuria, SG- 1.035. No specific concerns on CBC. Abdomen distended, but pt has been obese most of it's life.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder was mildly subnormal in size owing to lack of urine distention. The trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 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 were 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 mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.5 cm in length. The right kidney measured 5.5 cm in length.

The area of the aortic trifurcation was free of pathology.

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

**Adrenal Glands**

The left adrenal gland was mildly prominent in size with asymmetric contour and irregular non-homogeneous parenchyma. The left adrenal gland measured 0.78 cm width at the caudal pole and 0.66 cm width at the cranial pole.

The right adrenal gland was mildly prominent in size and contour with asymmetric contour and irregular non-homogeneous parenchyma. The right adrenal gland measured 0.54 cm width at the caudal pole and 0.50 cm width at the cranial pole.

No evidence of adrenal mineralization or adrenal tumors was present.

**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 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. Intermittent well demarcated mildly hyperechoic intraparenchymal nodules were present.

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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 primarily anechoic luminal content and mild non-dependent echogenic debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

**SPECIES**

Canine

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

**BREED**

Dachshund

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Generalized non-specific mucosal speckling was present. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. Normal visible colon wall layers were present with apparent formed feces in lumen.

**SEX**

MN

**Pancreas**

The pancreas was mildly prominent in size exhibiting mild non-uniform hyperechoic parenchyma.

**AGE**

10yr

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**WEIGHT**

19lb

**ULTRASONOGRAPHIC FINDINGS**

- Mild irregular borderline prominent bilateral adrenal glands-no adrenal tumors
- Mild chronic renal changes
- Hepatopathy with parenchymal remodeling and benign intraparenchymal nodules-vacuolar, metabolic, reactive (diabetic) hepatopathy with suspected intermittent benign nodular to regenerative hyperplasia or small lipogranuloma likely
- Minor gallbladder debris (non-mucocele)
- Mildly prominent non-homogenous hyperechoic pancreas
- Generalized non-specific small intestinal mucosal speckling

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A urine C/S on a sterile urine sample given the glucosuria is recommended. If strong clinical concern for Cushing's syndrome, ACTH stim suggested in light of diabetes. Assuming normal clotting status and using a 25g needle, a hepatic FNA for screening cytology could be considered for further assessment primarily to assess for evidence of inflammatory criteria. Potential for pancreatitis may be suspected if evidence of cranial abdominal or subxiphoid discomfort on palpation. Correlation with a spec cPL or a GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

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No overt evidence of intra-abdominal neoplastic criteria was present.

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Hepatosupportive medications such as Denamarin or Vitamin E as well as Ursodiol may prove beneficial.

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

- UTI
- Dietary indiscretion/intolerance
- Pancreatitis

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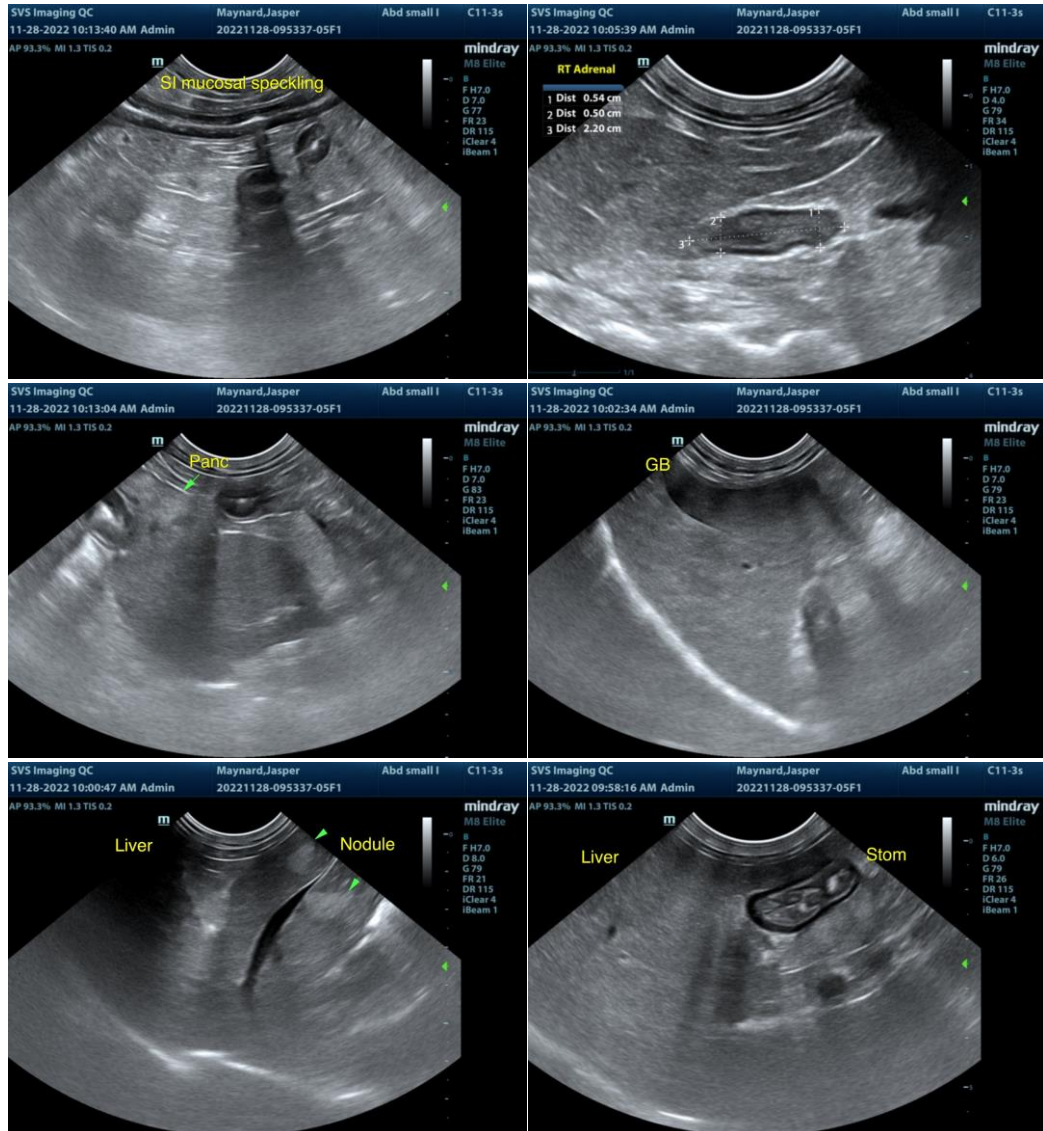
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- Hyperthyroidism/hypothyroidism
- Exogenous steroids (including topical eye meds)
- Cushing's
- Acromegaly
- Owner compliance
- Insulin quality issues
- Antibodies to insulin
- Underlying Neoplasia
- Diffuse liver disease





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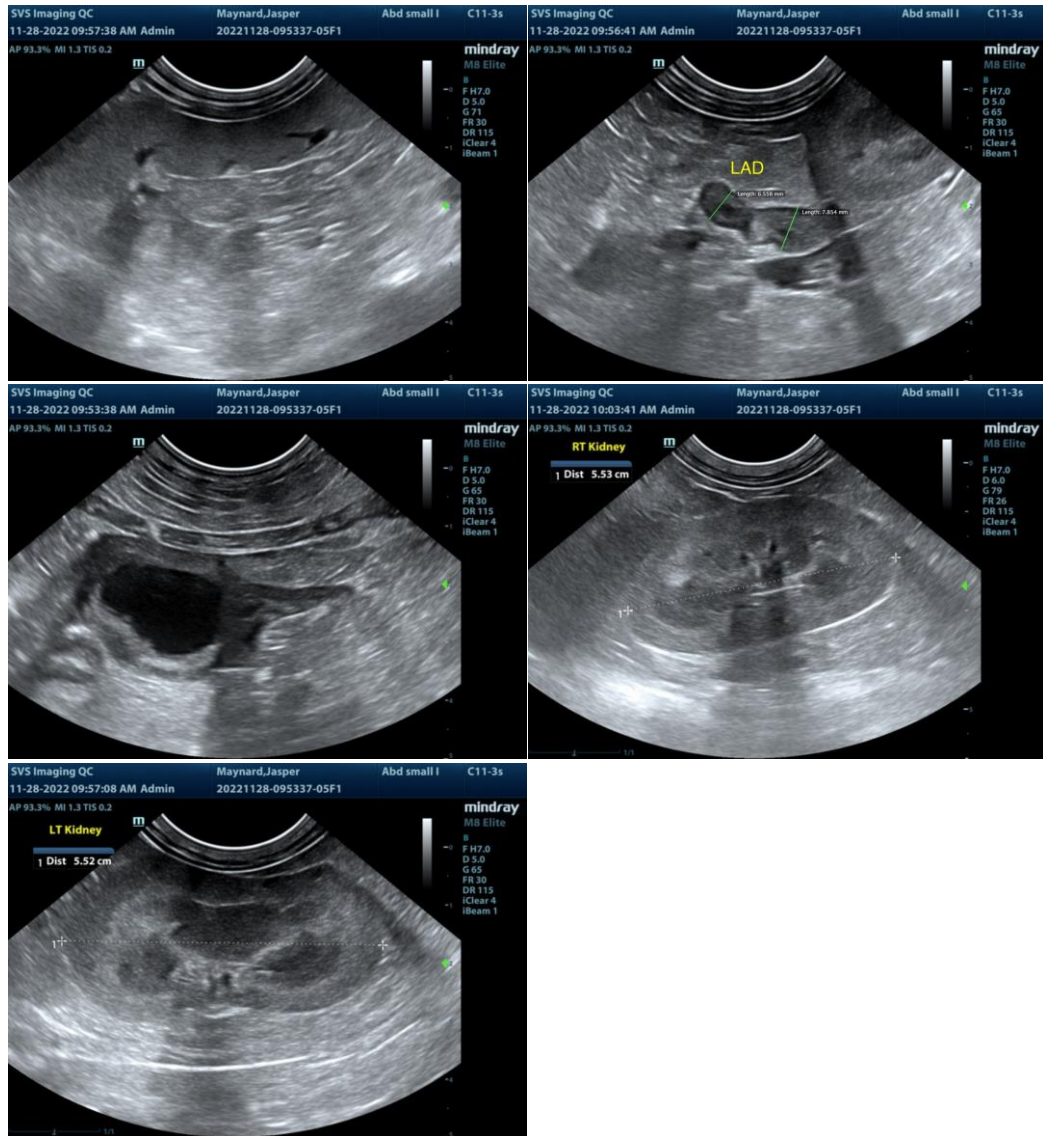
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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