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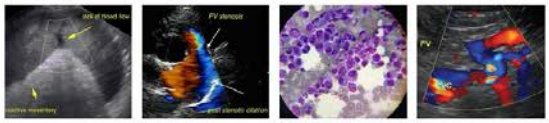


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Edelbrock Stone

SPECIES

Canine

BREED

Corgi

SEX

Neutered Male

AGE

12 Years

WEIGHT

27 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

MountainView AH

REFERRING VET

Dr. Sarah Kalivoda

INVOICE

26881

DATE

11/4/21

PRESENTING CLINICAL SIGNS

Chief Concern / Provisional Diagnosis: ~rule out insulinoma vs other Relevant Medical History and Physical Exam findings: ~Patient presented on 10/27 for episodes of seizure/tremors after having a dental procedure under anesthesia one week prior. On physical examination patient appeared BAR, however slighlty hypoglicemic. Rec additional bloodwork which showed hypoglycemia, decreased fructosamine, elevated insulin and increased insulin:glucose ration. Rec abdominal ultrasound to evaluate pancreas and r/o insulinoma ~~ Recent Diagnostics: Relevant Labratory Results / Abnormalities: ~ Glucose 33.0 (63.0 - 114.0 mg/dL) Insulin 99.7 (5.2 - 41.5 uIU/mL) Insulin: Glucose Ratio 394 (14 - 43 RATIO) Fructosamine 199 (177 - 314 µmol/L)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is normal/borderline large in size, measuring 1.2 cm and is normal in shape for this neutered male dog. The parenchyma is heterogeneous and the external margins are smooth.

The left kidney has a normal shape and size (5.7 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.69 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.66 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

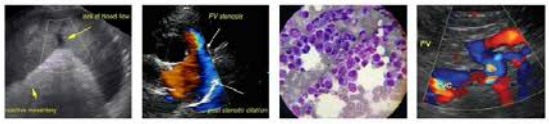
The right adrenal gland is normal in size measuring 0.57 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is large in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. A 0.71 cm hyperechoic nodule is visualized within the hepatic parenchyma.



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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measured 0.57 cm. Jejunum wall measured 0.28 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

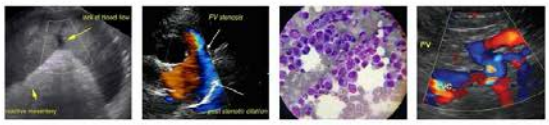
The pancreas is prominent and hypoechoic as compared to the surrounding isoechoic mesentery. This is particularly so in the right limb of the pancreas and the region of the right kidney. In this region, there is a hypoechoic nodule measuring 0.76 cm that appears to be associated with the pancreas. There is mild regional mesenteric inflammation.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a severe mesenteric lymphadenopathy visualized in the mid abdomen at the level of the umbilicus. There is a cluster of large lymph nodes/masses measuring 2.39 cm x 3.38 cm and 1.15 cm. Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of increased echogenicity around the lymph nodes and the area of the pancreas.

PRIMARY FINDINGS

- Hypoechoic nodule in the region of the right pancreas – suspicious for possible insulinoma based on the insulin/glucose ratio.
- Hypoechoic, abnormal pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with mild pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Severe mesenteric lymphadenopathy – The severe mesenteric lymphadenopathy is most concerning for a neoplastic process, although you can see significant lymphadenopathy in some cases of autoimmune/inflammatory disease, infectious disease(tick born disease-such as bartonella, fungal infections, etc. A fine needle aspirate with cytology is recommended for further evaluation. This is concerning for either a metastatic lesion or a primary lesion.
- Heterogeneous liver with hyperechoic nodule – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic



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hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

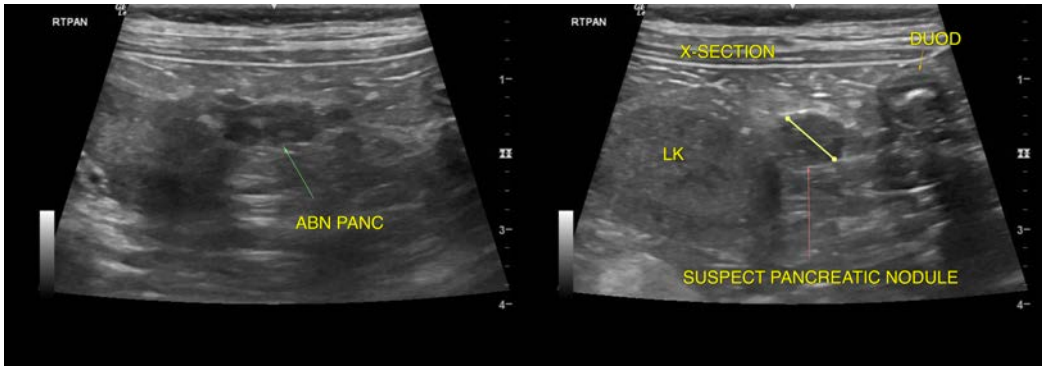
SECONDARY FINDINGS

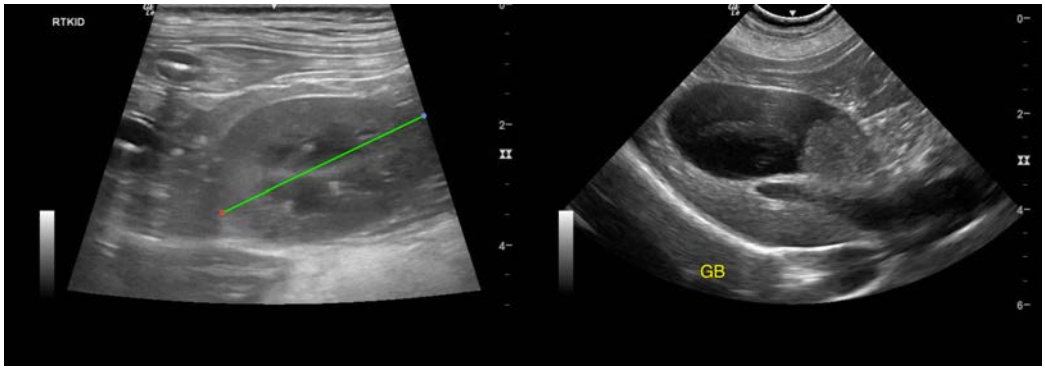
- Borderline large, mottled prostate – The significance of this is currently unclear. If neutered late in life, this could be consistent with previous prostatitis and fibrosis/remodeling.
- Mild gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Your reported findings of an elevated insulin level in the face of a low blood sugar are diagnostic for an insulinoma. I am suspicious that the hypoechoic nodule in the region of the right limb of the pancreas could be an insulinoma, but unfortunately there are other nodules/mass effects. I would consider a fine needle aspirate of both the nodule in the region of the pancreas and the abdominal lymph nodes. If these are suggestive of neoplastic neuroendocrine cells, then metastatic neoplasia is likely, and I would recommend consultation with a veterinary oncologist regarding options. These would include either chemotherapy or a combination of chemotherapy and surgery most likely. Recommend 3-view thoracic radiographs.

Additionally, a CT scan of the abdomen could be considered, which would obtain better detail in areas like the liver to look for other sites of metastasis.





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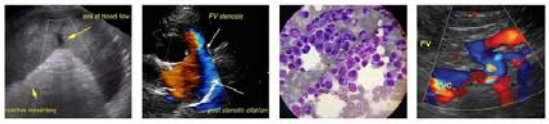

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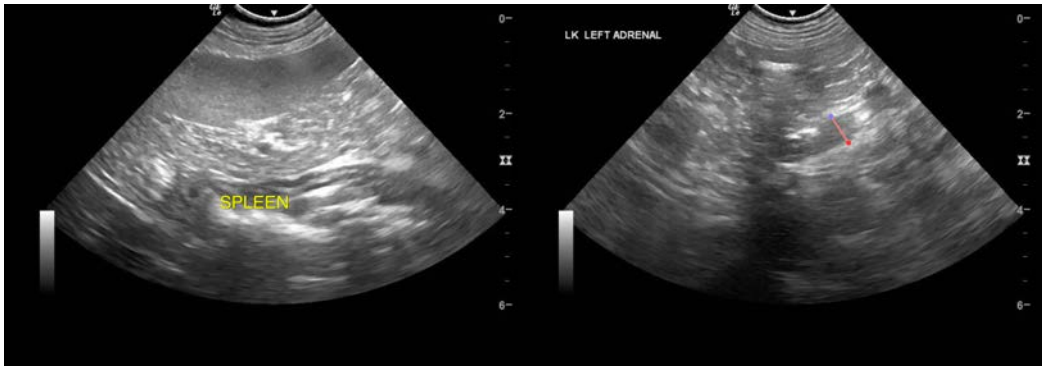

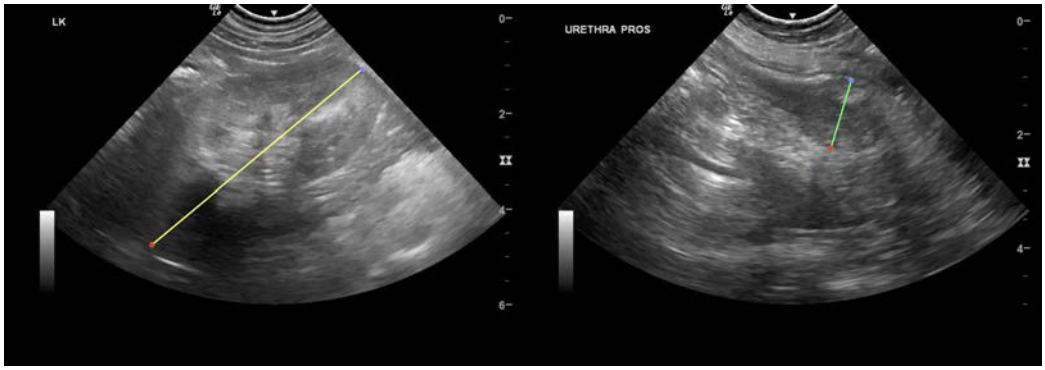

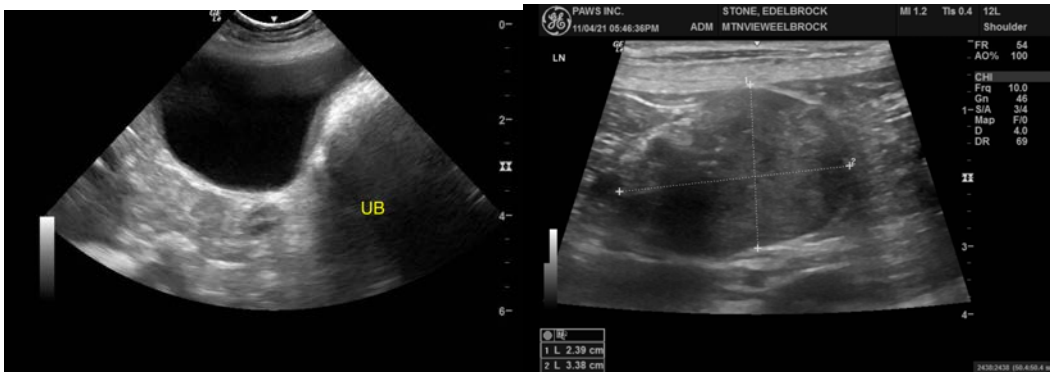

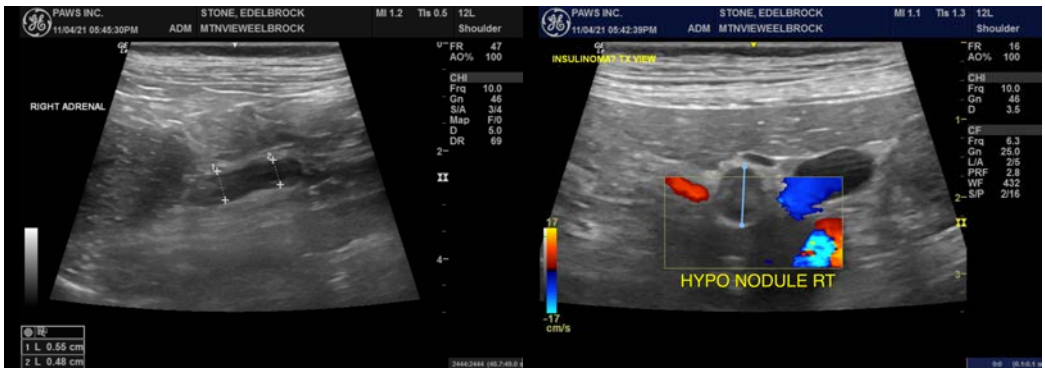

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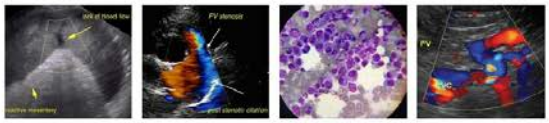

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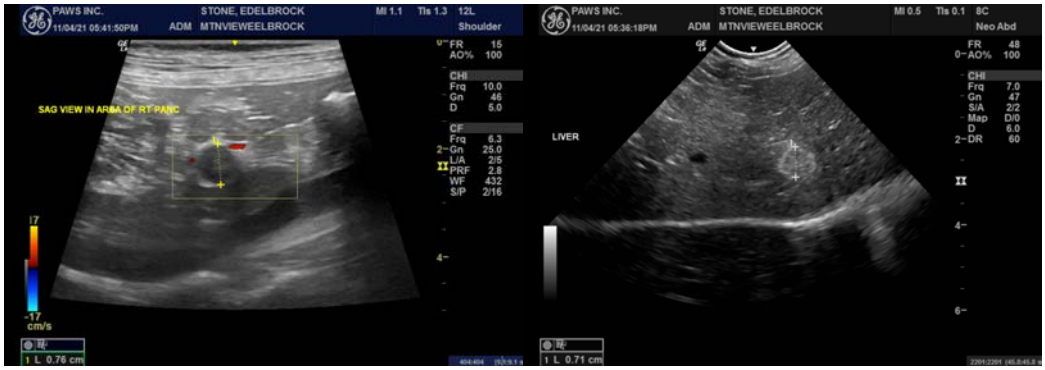

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com