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Clinical Sonography & Telecytology
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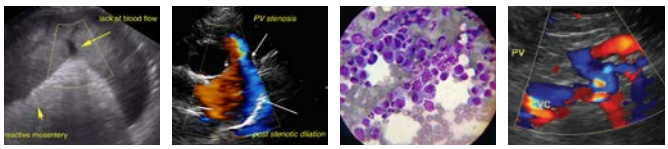


SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT

Patrick Baker

SPECIES

Canine

BREED

Dachshund

SEX

Neutered Male

AGE

15 Years

WEIGHT

26.1 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

LSJ

HOSPITAL NAME

Alpine Animal Hospital

REFERRING VET

Dr. Lindsay Sjloin

INVOICE

38486

DATE

6/7/22

PRESENTING CLINICAL SIGNS

Polyuria and polydipsia starting in April 2022. Weaker in the pelvic limbs. On Apoquel for allergies Physical exam findings: Multiple SQ masses, rotund belly, but soft. Moderate calculus. Weak in hind limbs. CPs WNL Abnormal CBC values: Mild thrombocytosis Abnormal Chemistry Values: BUN 87(9-31), Ca 12.8 (8.4-11.8), TP 8.0 (5.5-7.5), Alb 4.0 (2.7-3.9), ALP 731(5-160), ALT 330(18- 121), Chol 442 (131-345) Low Dose Dexamethasone test was inconclusive. pre 1.8, 4 hr post 0.4, 8 hr post 1.2 Abnormal UA Values: USG 1017. Prot 1+ Radiograph Findings(email radiographs if available): Reason for Ultrasound: Evaluate liver and adrenals for any concern. Cause of PU/PD? Cushings? Hepatopathy? Renal?

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 in size (0.82 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.92 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 (4.35 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/borderline large in size measuring 0.82 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.

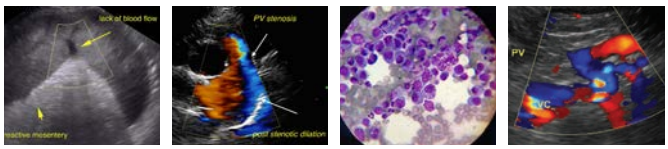
The right adrenal gland is normal/borderline in size measuring 0.79 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

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 with rounded margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. On the left side of the liver, there is a 1.93 cm x 3.13 cm hyperechoic mixed echogenicity nodule that appears to deviate the hepatic margin. Additionally, a smaller ill-defined, hypoechoic nodule is



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visualized at 0.82 cm. The liver is significantly heterogeneous and there are numerous ill-defined, patchy hypo- and hyperechoic nodules visualized.

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 moderate 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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 mottled compared to the surrounding isoechoic mesentery. Adjacent to the duodenum, there is anil-defined hypoechoic region of pancreas measuring approximately 0.55 cm in diameter, which could be consistent with an ill-defined hypoechoic pancreatic nodule.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

PRIMARY FINDINGS

- Borderline bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.

- Mottled, prominent pancreas with ill-defined hypoechoic nodule – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation. The nature of the hypoechoic lesion is unclear. Recommend continued monitoring and evaluation of a quantitative PLI level.

- Large, heterogeneous liver with numerous ill-defined hyper- and hypoechoic nodule and a larger hyperechoic nodule deviating the hepatic margins – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The hyperechoic nodule visualized could represent a benign lesion. Consider a fine needle aspirate or continued monitoring with ultrasound.

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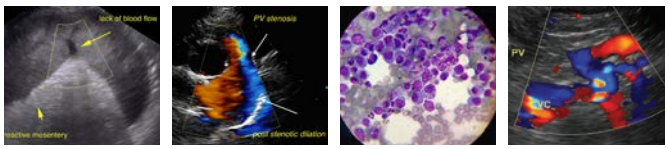

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SECONDARY FINDINGS

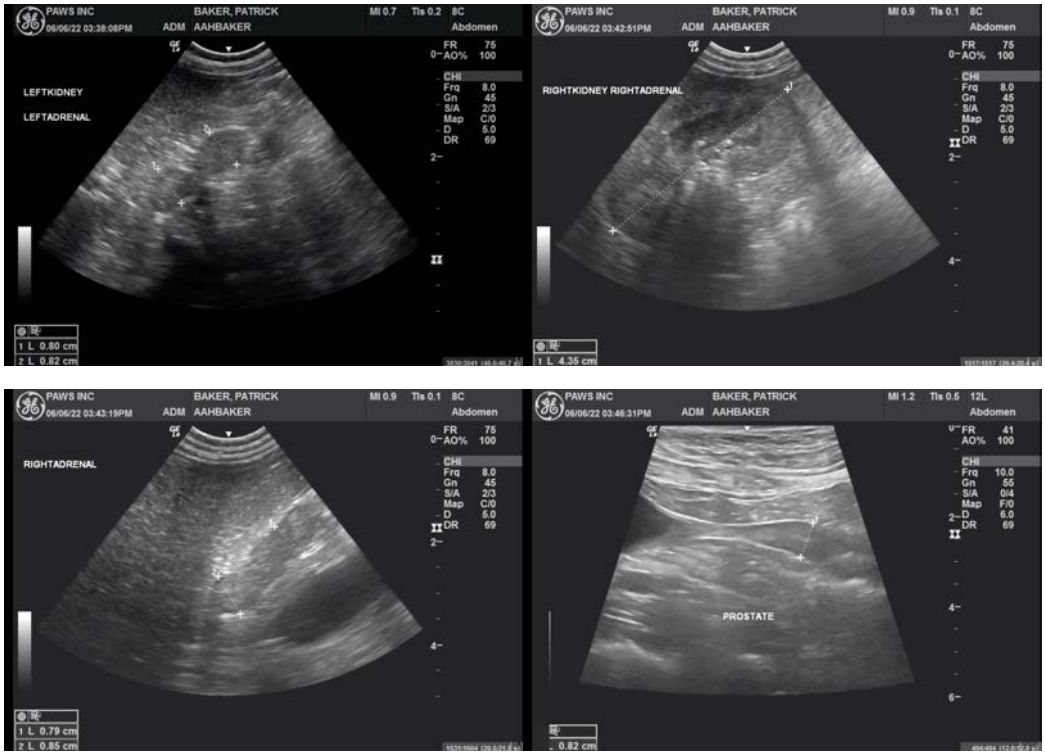
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The adrenal glands appear somewhat "plump" in appearance and could be consistent with PDH. If clinical signs are present and suspicion is very high, you could consider an adrenal panel to the University of Tennessee combined with an ACTH stimulation test to look for steroids other than cortisol that could be produced by the adrenal glands, causing Cushing's syndrome. Recommend blood pressure evaluation.

The pancreas is very mottled and prominent. These findings are likely most consistent with previous episodes of pancreatic inflammation. There is an ill-defined, hypoechoic lesion next to the duodenum, which could represent a nodule. I suspect this would be difficult to sample via fine needle aspirate, so continued monitoring is warranted (recheck ultrasound in approximately 2 months, sooner if there are concerns).

The liver is large and heterogeneous. This could be consistent with a vacuolar/steroid type hepatopathy. One of the larger hyperechoic nodules is a little bit more concerning, because it does deviate the margins of the liver somewhat. A fine needle aspirate of this could be considered, or you could continue to monitor it with abdominal ultrasound.



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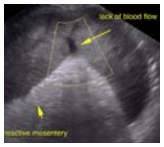
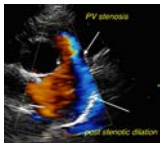
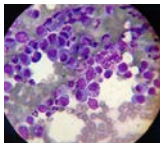
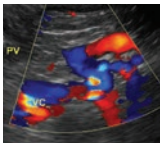

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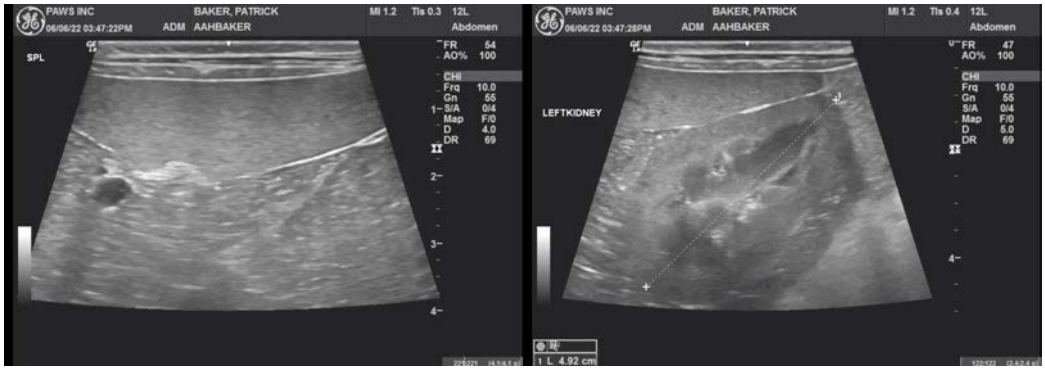

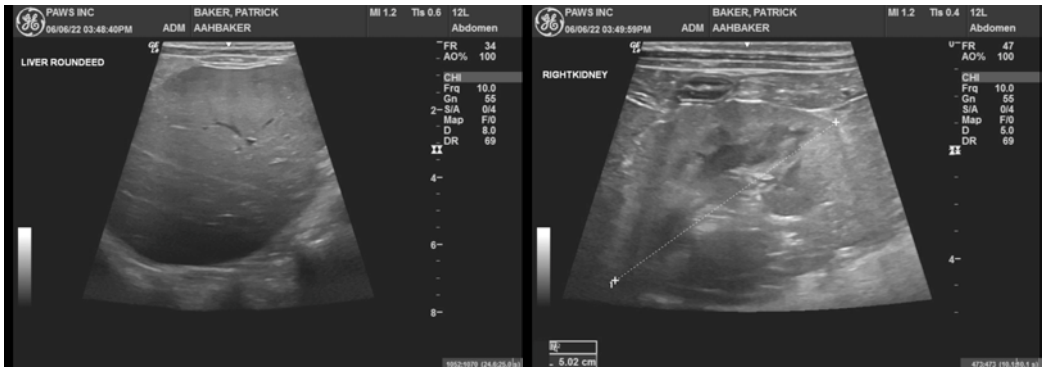

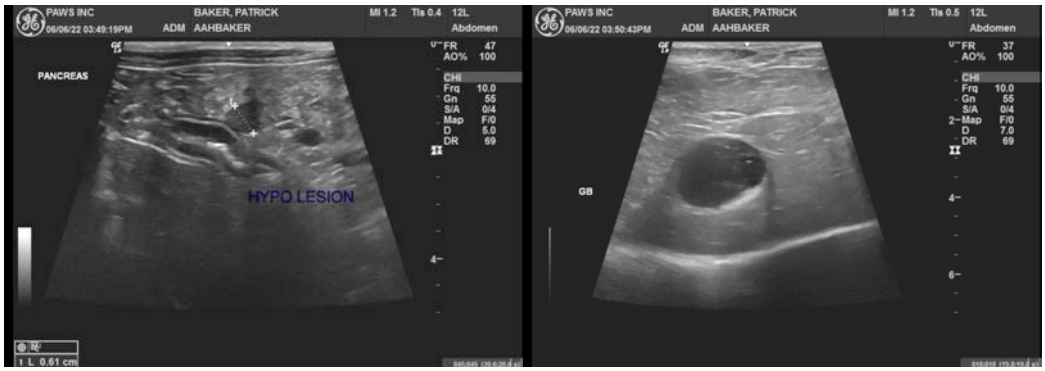

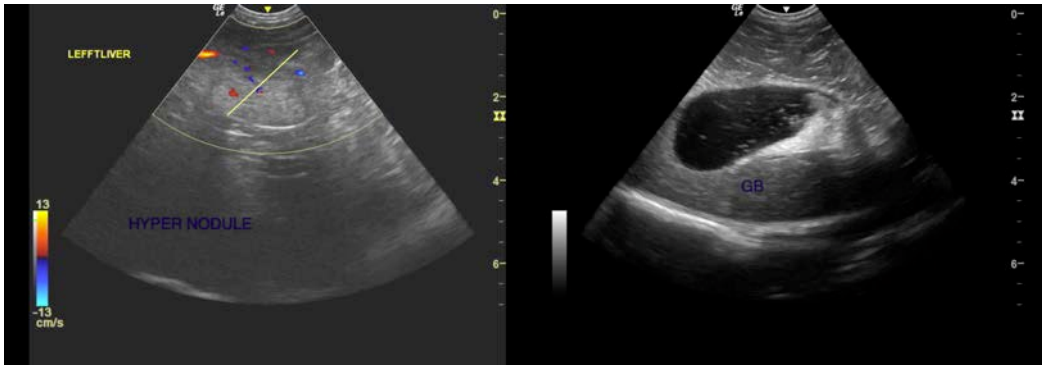

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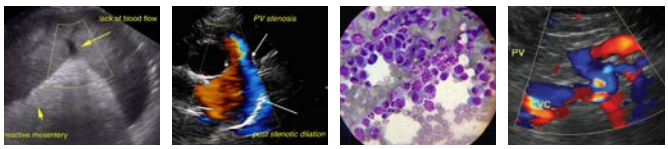

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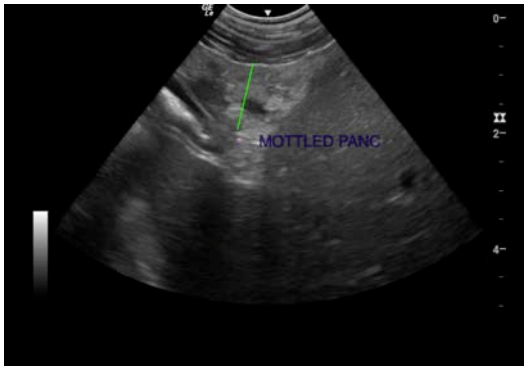

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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kathleen.sennello@sonopath.com