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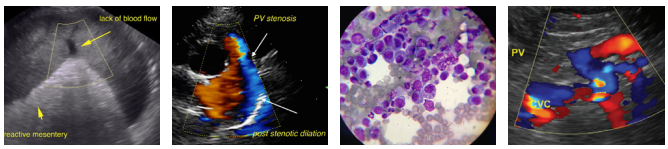

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1-800-838-4268 info@sonopath.com

PATIENT

Cookie Paysour

SPECIES

Canine

BREED

Golden Retriever X

SEX

Spayed Female

AGE

11 Years

WEIGHT

100 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Hadley Harris

HOSPITAL NAME

TotalBond VH

REFERRING VET

Dr. Hadley Harris

INVOICE

35754

DATE

2/18/22

PRESENTING CLINICAL SIGNS

Cookie has a long history of sensitivity to medications (anything.....), profound osteoarthritis/weakness in back legs but in last 6 months is weak overall and lethargic. Historically, Cookie has had some protracted bouts of diarrhea and gi issues but all managed over time with removal of medications and careful diet. Recent: progressive weakness and lethargy over 6 months. Witnessed to have first ever grand mal seizure on 2/2/22. Due to poor history of anesthesia recovery, owner opted not to pursue MRI etc Cookie was started on pred 10 mg once daily and prescribed Keppra. She received 2 days of pred (felt much better and more active) but then began vomiting. Pred was stopped but vomiting has continued and progressed to worsen. Now not keeping anything down. Vomits what looks like full meal even 7 hours post eating. bloodwork: chronic progressing elevation of ALP. Recent labs have also shown mature neutrophilic leukocytosis (31,000). labs in 11/21 also showed hyponatremia, mild elevated PSL, hypoglycemia, UPC of 1.4 elevated Recheck of labs (at our sister hospital) showed resolution of all of these abnormalities other than the ALP and neutrophilic leukocytosis. UPC was 0.8 at recheck. Urine crea/cortisol ratio was well normal at 7 (norm < 26) making hyperadrenocorticism unlikely.

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 left kidney has a normal shape and size (7.85 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 (7.7 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.94 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.

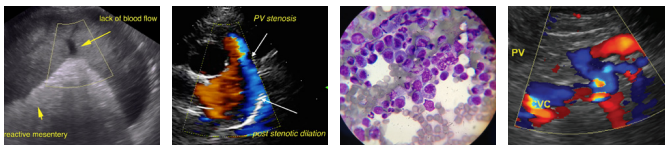
There is a mass in the area of the right adrenal gland. It is large and hypoechoic, measuring >4.3 cm x 3.6 cm. It is surrounded by hyperechoic mesentery and focal peritonitis. There is no visible free fluid in the area.

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 subjectively normal 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. No focal nodules or cystic lesions are observed.



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The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of 0.55 cm 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 0.4 cm. Jejunum wall measured 0.2, 0.29 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 mildly thickened. The wall measured 0.48 cm. 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 normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any significant free fluid, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. There is focal peritonitis in the area around the suspected right adrenal mass.

ULTRASONOGRAPHIC FINDINGS

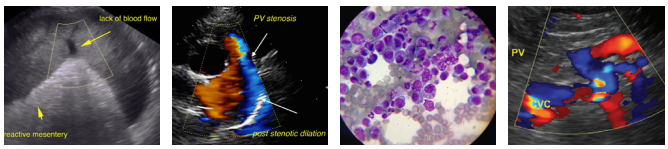
- Large mass effect in the area of the right adrenal gland – most consistent with right adrenal mass and surrounding inflammation. No free fluid is visualized. There is concern for vascular invasion, but none is directly visualized. Right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

- Heterogeneous liver – 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.

- Mildly thickened colon wall – The significance of this is unclear, as it could represent an artifact or mild colitis. A mass effect is thought less likely.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large mass effect medial to the right kidney. This mass effect is surrounded by inflamed omentum, and is most consistent with a large adrenal mass. While no direct vascular invasion is visualized, the inflammation and size of this dog makes detail of the structure difficult. Based on size and inflammation present, there would be concern for possible vascular invasion.



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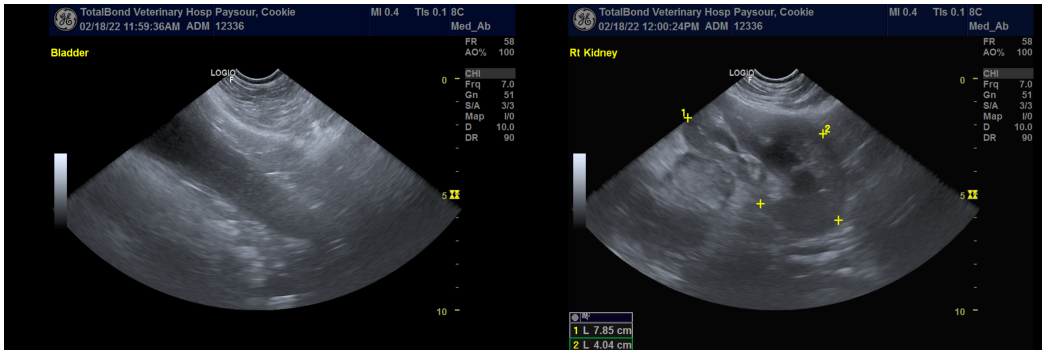
These masses can be benign or malignant and can secrete hormones or be non-active. Based on the irregular appearance of this mass a cancerous process is considered more likely. Options moving forward include:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- Recommend 3-view thoracic radiographs.
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.
- If no symptoms of cushings are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.
- Be sure to check the pelvic limbs for femoral pulses, as if there is vascular invasion, sometimes you can see pelvic limb weakness due to infarction.

The liver is somewhat heterogeneous. This is a non-specific finding and I suspect secondary to the adrenal mass.

The significance of the mildly thickened colon is unknown. This could be artifactual due to a tangential image or could represent inflammation. It is likely that a colonoscopy would be necessary to further evaluate this area.



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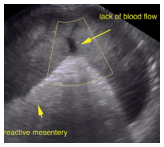

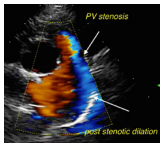

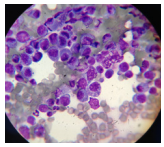
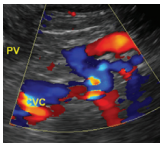

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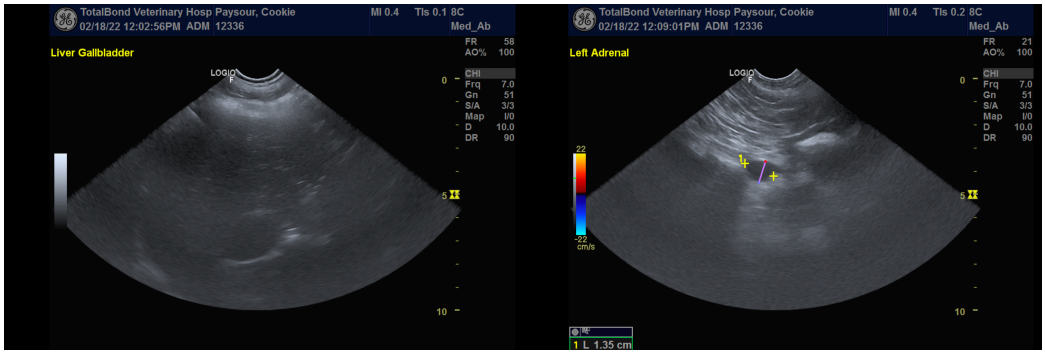

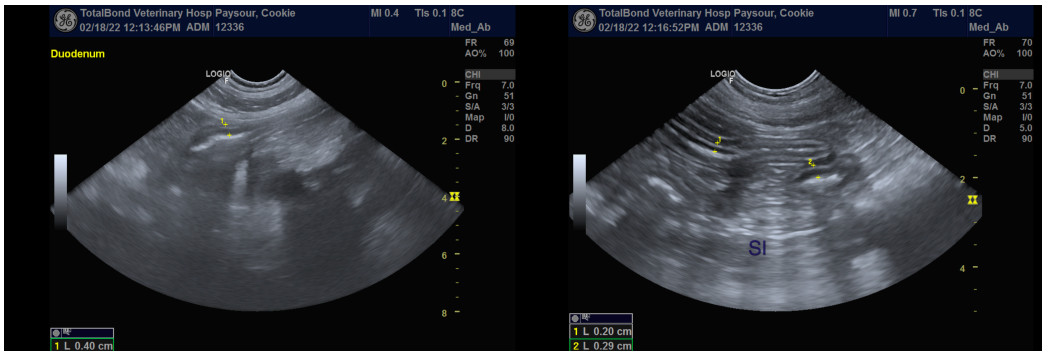

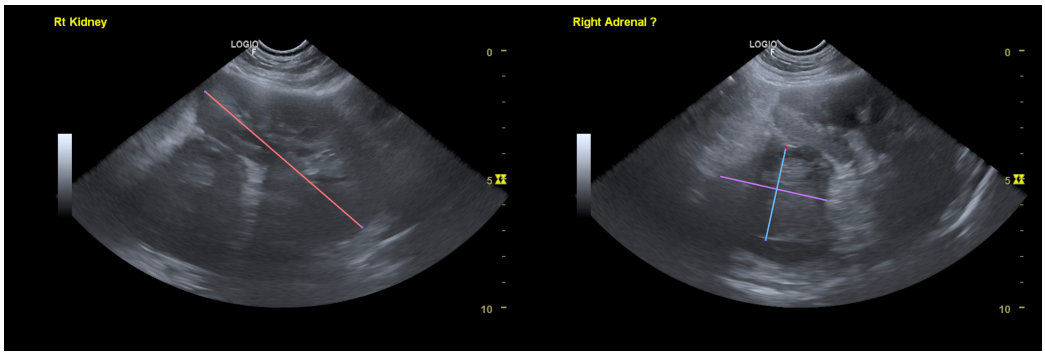

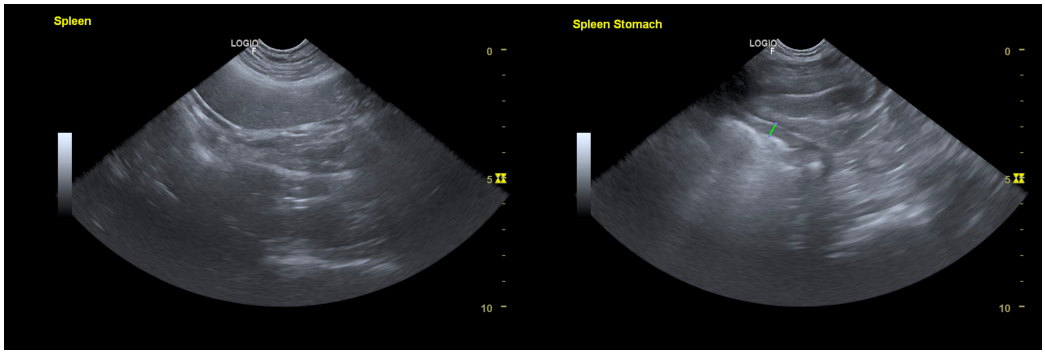

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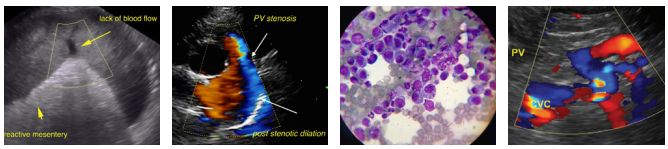

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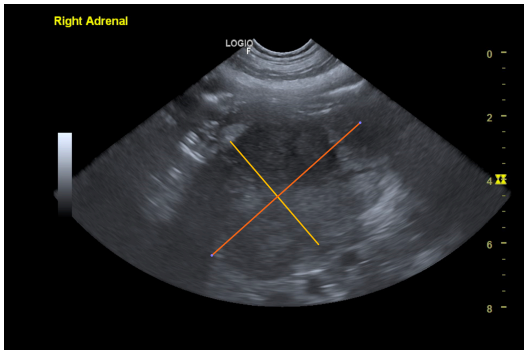

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com