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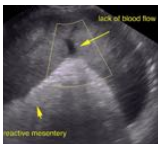

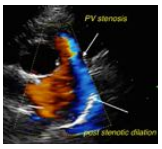

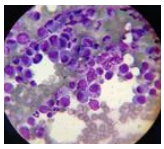
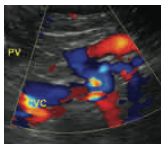

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1-800-838-4268 info@sonopath.com

PATIENT

Stella Yegendorf

SPECIES

Canine

BREED

Yorkshire Terrier Cross

SEX

Female

AGE

13 years

WEIGHT

6.3 kgs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Gumley

HOSPITAL NAME

Cedarview AH

REFERRING VET

Dr. Gumley

INVOICE

92657

DATE

10/21/21

PRESENTING CLINICAL SIGNS

Previously seen at another clinic and diagnosed with congestive heart failure, placed on furosemide and pimobendan. Not eating well, PU/PD, tense abdomen, pendulous. Echo showed hypertrophic symmetric left ventricle, normal left atrium, no aortic stenosis; normal blood pressures at time of echo. Right adrenal area mass located on abdominal imaging. Urine sp gr = 1.012.
Abnormal PE/Chem/CBC/UA Results: CBC normal Chemistries (Sept 2021) ess normal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is not clearly visualized.

The left kidney is not clearly visualized.

The right kidney has a normal shape and size (3.86cm). 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. Mild pyelectasia was noted and measured 0.12 cm. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is not clearly visualized.

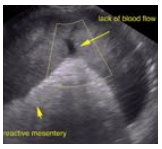
The right adrenal gland is large in size measuring 1.2 cm at the cranial pole, 1.2 cm at the caudal pole with a length of 2.1 cm. The right adrenal gland is in its normal location between the cranial aspect of the right kidney and the caudal vena cava. The right adrenal gland is irregular in shape and indistinct with additional, surrounding, abnormal tissue that is representative of either expansile growth of the mass or adjacent lymph nodes. There is no overt evidence of vascular invasion visualized, but is thought possible based on the appearance of the mass.

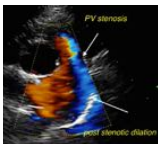
Spleen

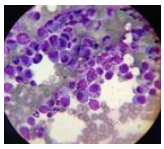
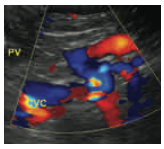
The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

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. The gallbladder lumen is moderately distended. The wall of the gallbladder 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.





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Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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 uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. The duodenum measured 0.31 cm with mild mucosal speckling. The jejunum measured 0.27 cm. Bowel loops follow a typical curvilinear path with distinct wall layering. 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. 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 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.

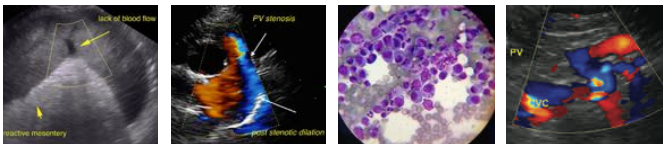
ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Large, irregular right sided adrenal mass. Right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Heterogenous 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.

SECONDARY FINDINGS:

- Moderate gallbladder sludge. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Mild gastric distension with ingesta. Correlate findings with feeding history. If the patient is adequately fasted consider differentials as delayed gastric emptying or a partial obstruction (seems very unlikely).
- Subjectively thickened small intestine with mucosal speckling. Bright mucosal speckling has



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been proposed to represent dilated lacteals or focal accumulation of mucus, cellular debris etc.. in the mucosal crypts of the small intestine.

- Prominent, mottled pancreas. The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

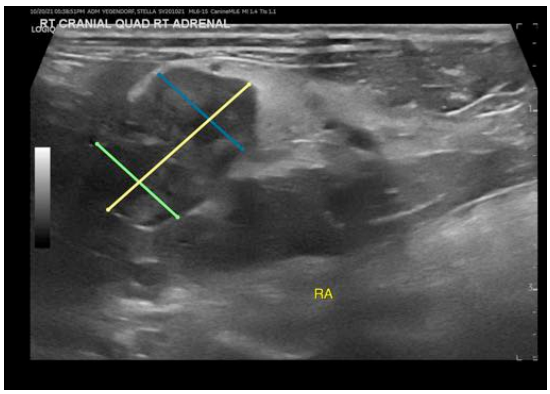
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is mass present involving the right adrenal gland. This mass is irregular and relatively large. I do not see evidence of clear vascular invasion, but this is still possible. 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 Cushing's 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 Cushing's 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
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.
- If no symptoms of Cushing's 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.

There appears to be some irregular tissue surrounding the adrenal mass. This could be evidence of an irregularity and expansion of the mass effect or could be abnormal tissues/enlarged lymph nodes in the area. CT scan would likely better delineate this.

The changes in the liver are likely age related and secondary to the adrenal mass reported. I recommend three view thoracic radiographs. I did not clearly visualize urinary bladder, left adrenal, left kidney or midabdomen in the scan. Please submit additional images if evaluation of these areas is desired.



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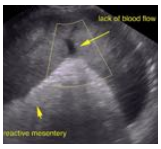
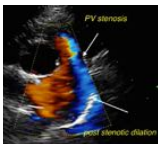
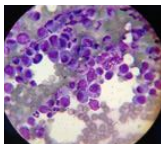
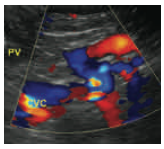

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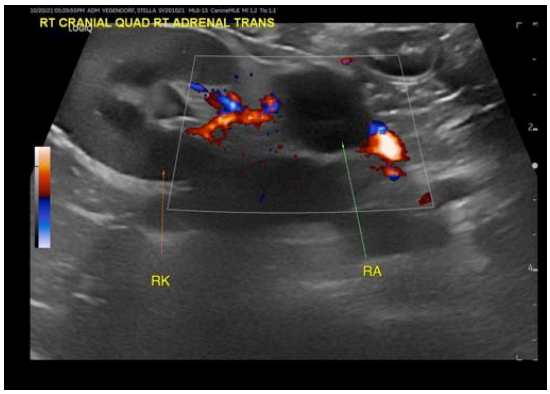

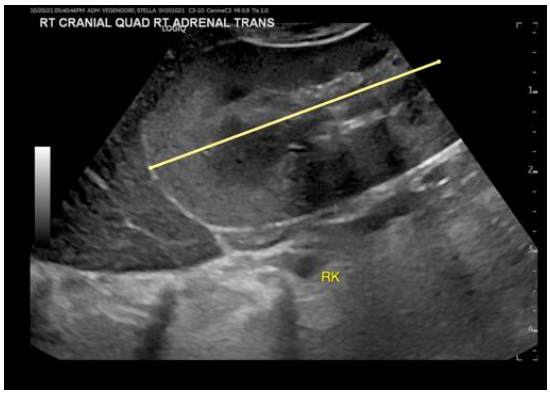

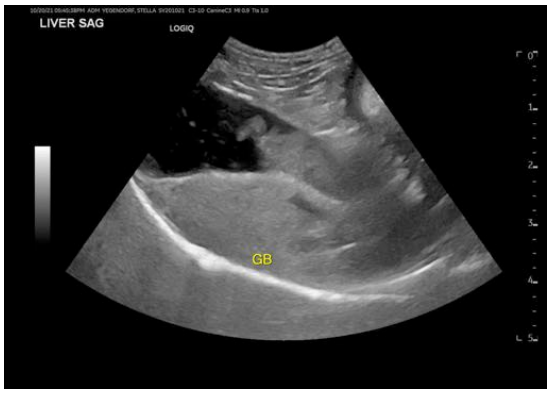

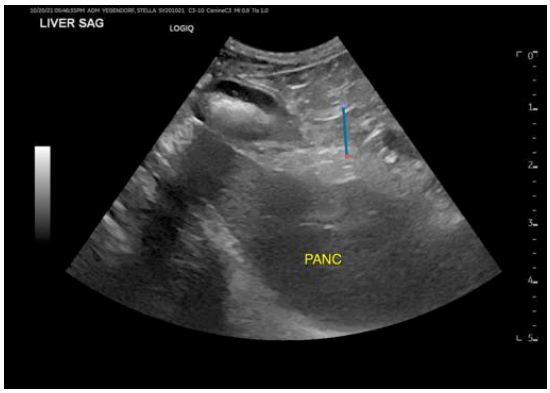

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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