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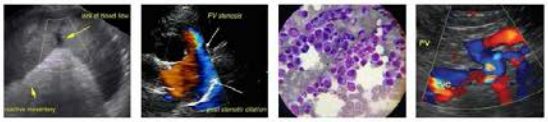

IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Lucy Girl Ayres

SPECIES

Canine

BREED

ACD

SEX

Spayed Female

AGE

13 Years 8 Months

WEIGHT

46.5 Pounds

INTERPRETED BY

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

IMAGING BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

Monte Vista AH

REFERRING VET

Dr. Elyse Math

INVOICE

38778

DATE

6/16/22

PRESENTING CLINICAL SIGNS

Gave 0.1mg/kg IV butorphanol- abdomen still tense and seems painful, had gelatinous soft stool during scan- 6/9/2022-Patient is still azotemic at creatinine of 3.5 and BUN 58 after hospitalization on IVF. ALP is still elevated at 358. Urine culture showed no growth 6/7/2022-Azotemia, suspect UTI vs. other (infectious (tick borne, lepto, pyelo), inflammatory, neoplasia) cranial organomegaly, mild elevation ALP—r/o hepatopathy vs. neoplasia vs. other history of diarrhea, hyporexia Recheck labs creatinine 3.3 (4), BUN 47 (69), ALP 357 (396) was seen initialy for bloody diarrhea, vomiting bile, anorexia

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 (5.8 cm). Overall echogenicity is slightly hyperechoic with poor 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 (6.36 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is a large mass effect that appears visible in the region of the renal pelvis. This is hyperechoic and irregular, measuring >2.32 cm x 3.23 cm. It appears to be extending down into the ureter, and there is evidence of pyelectasia within the kidney. In the vessels near the right kidney, there is soft tissue density, most concerning for thrombi, which could be a result of the left adrenal mass or this renal mass.

Adrenal Glands

The left adrenal gland is large in size measuring 2.56 cm at the cranial pole, 1.22 cm at the caudal pole, and 4.56 cm in length. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance in that there is a hypoechoic, irregular mass effect that appears to be arising from the cranial pole of the left adrenal gland. This mass lesion measures >2.04 cm x 2.39 cm, and there is concern for possible vascular invasion in that there is soft tissue density visualized within the associated vena cava and possibly left renal vein. This soft tissue could represent tumor or thrombus.

The right adrenal gland is normal in size measuring 0.44 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.

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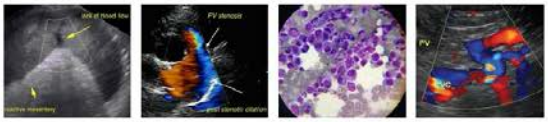

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Liver

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. There is an ill-defined hyperechoic nodule visualized measuring 0.97 cm in diameter.

The gallbladder was not clearly visualized. I suspect the gallbladder is either filled with isoechoic sludge, or aplastic.

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 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

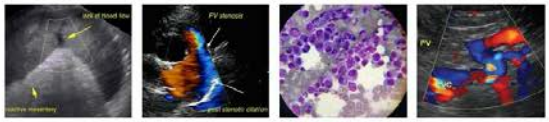
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

A brief view of the heart was submitted. No significant pericardial effusion was seen.

ULTRASONOGRAPHIC FINDINGS

- Mass effect evident at the cranial pole of the left adrenal gland with suspected vascular invasion – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Right renal mass with suspected invasion into the ureter and possible vascular involvement.
- 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.

- Soft tissue density associated with the large vessels near the left adrenal mass, also visible at the level of the right kidney – suspicious for invasion into the caudal vena cava, with possible mass effect and thrombi within the vessels.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a mass effect extending from the cranial pole of the left adrenal gland. This lesion is somewhat irregular and amorphous. In this area, there is soft tissue density within the caudal vena cava and renal vein. This is suspicious for vascular invasion and mass effect or thrombi within these vessels.

Additionally, there is a mass effect in the renal pelvis of the right kidney. There is concern that this may be growing down into the ureter, and there is some evidence of pyelectasia within the kidney. There is evidence of soft tissue density within the vessels at the level of the right kidney. I suspect this a thrombus secondary to the left adrenal mass lesion, but invasion from the right renal mass is also possible.

These findings are very concerning, as is the azotemia reported. It is difficult to determine the source of the thrombus. A contrast CT scan is strongly recommended to further investigate the area and try to determine if this is a possible surgical case. Because of the high potential for metastasis, I would also recommended a CT scan of the thoracic cavity to look for possible pulmonary metastasis.

A pheochromocytoma is the most likely differential for the left adrenal nodule. Recommend a blood pressure evaluation +/- catecholamine levels.

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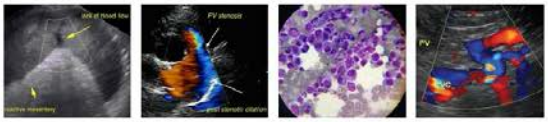

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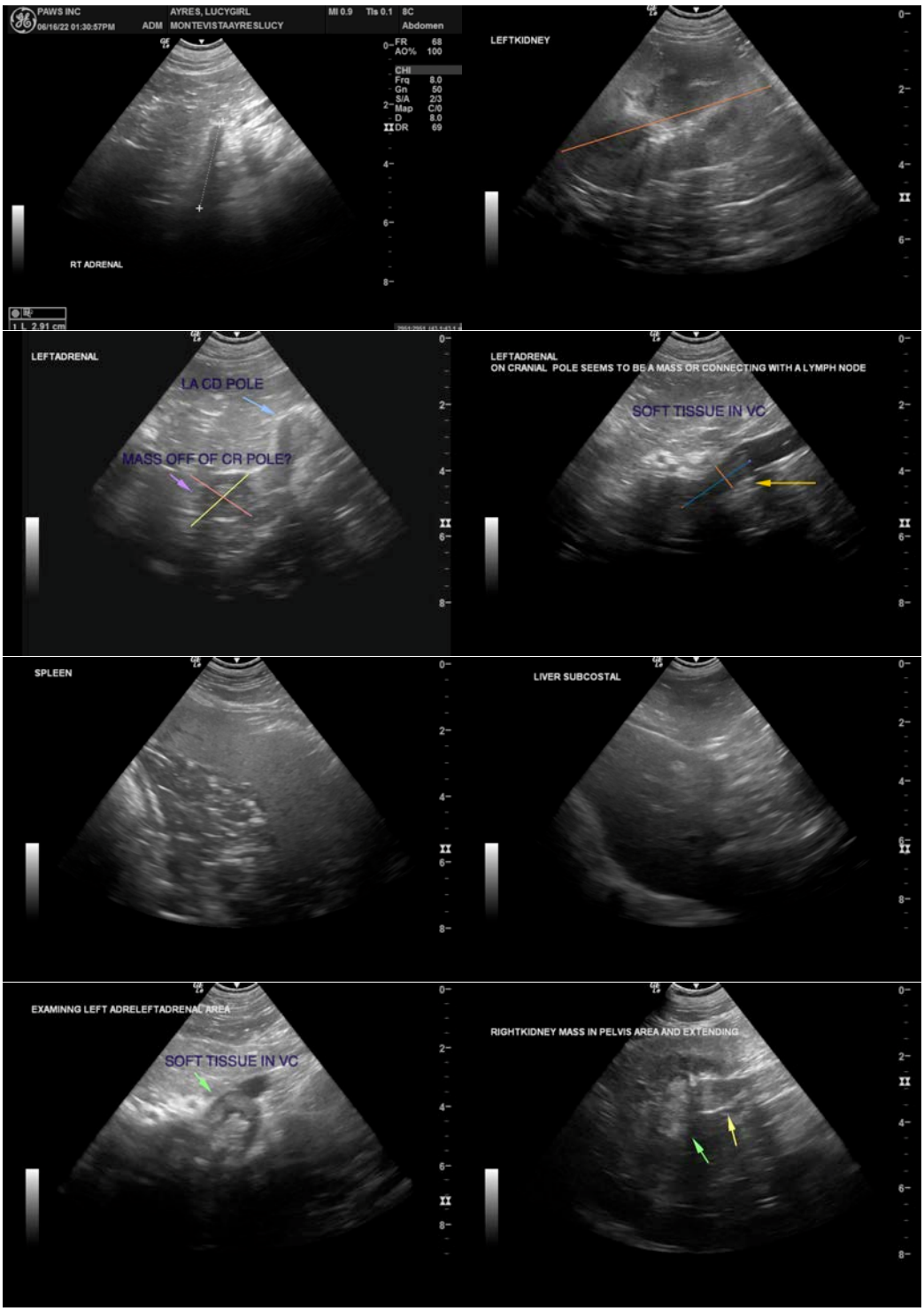

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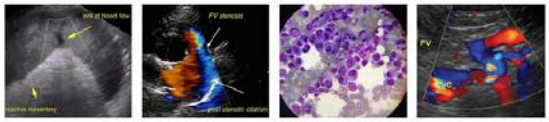

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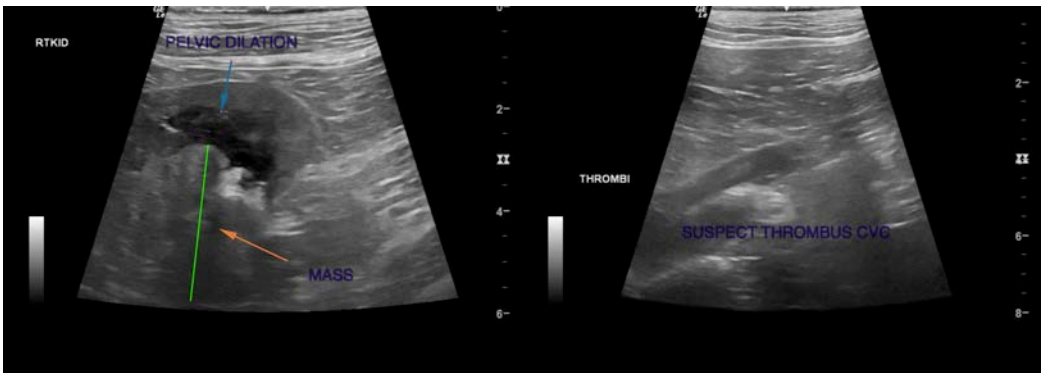

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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