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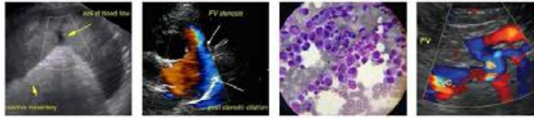

PAWS
Portable Animal Western Sonography, Inc.
IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

PATIENT

Sophie Springgate

SPECIES

Canine

BREED

Silver Lab Retriever

SEX

Spayed Female

AGE

13 Years

WEIGHT

78 Pounds

INTERPRETED BY

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

IMAGING BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

MountainView AH

REFERRING VET

Dr. Sarah Kalivoda

INVOICE

39294

DATE

7/7/22

PRESENTING CLINICAL SIGNS

SEDATION: torb first 3/4 study and added medetomidine to obtain adrneal images and better images of pancreas** attached report- ~~Anemia, sudden deterioration in energy, tense abdomen. Concern for intra abdominal tumor (hemangiosarcoma), pancreatitis or GB mucocele MEDS: Yu nnan Biao yao 2 capsules TID Amantadine, Gabapentin, Vetprophen, dasaquin, Proin Abnormal PE/Chem/CBC/UA Results: Previous US results: Minor potential for emerging left adrenal neoplastic nodule, i.e., adenocarcinoma or pheochromocytoma, LABS: anemia Elevated ALKP, Lipase, Amylase (numbers not provided)

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 is irregular and measures 6.43 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 is irregular and measures 6.9 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.

Adrenal Glands

The left adrenal gland is large in size measuring 0.75 cm at the cranial pole, 1.06 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is somewhat abnormal in appearance in that there is a large hyperechoic nodule in the caudal pole measuring approximately 0.95 cm x 0.88 cm (previous measurement 12/20/21 was 1.0 cm x 0.64 cm). There is no obvious evidence of vascular invasion.

The right adrenal gland is normal in size measuring 0.64 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 large with rounded margins. It is heterogeneous with occasional ill-defined, hypoechoic nodules, one of which measures 0.69 cm in diameter. The blood flow through the hilus and splenic parenchyma appears normal.

Liver

The liver is large in size, and normal in 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 are numerous ill-defined hypoechoic nodules throughout the parenchyma. One such nodule measures 1.8 cm in diameter.

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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 <0.7cm 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 large and hypoechoic to surrounding mesentery. There is an area of tissue medial to the spleen in the region of the left limb of the pancreas, where the tissue is surrounded by severely hyperechoic mesentery, and the suspected pancreatic tissue is hypoechoic with concern for a possible emerging abscess/fluid filled lesion. The pancreas in this region creates somewhat of a mass effect measuring 4.6 cm x 4.31 cm. There is evidence of regional mesenteric inflammation. Consistent with moderate to severe pancreatitis.

Free Abdomen

There is scant free abdominal fluid. There is a moderate mesenteric lymphadenopathy present with mesenteric lymph nodes measuring 0.79, 0.92 cm. The omentum is severely inflamed, particularly around the left limb of the pancreas.

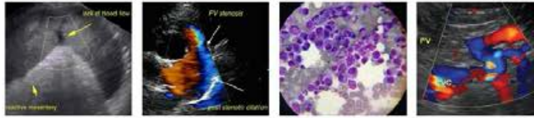
Other

A subcutaneous mass is visualized measuring 2.92 cm. Recommend fine needle aspirate.

ULTRASONOGRAPHIC FINDINGS

- Hyperechoic nodule in the caudal pole of the left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other. This lesion appears relatively stable from previous measurements.

- Large, mottled spleen with hypoechoic nodules – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.



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- Hypoechoic pancreas surrounded by hyperechoic mesentery with a focal area in the left limb, concerning for an early abscess/fluid filled lesion – The pancreatic changes are most consistent with severe 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.

- Large, heterogeneous liver with ill-defined hypoechoic nodules – 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pancreas appears inflamed and there is a focal region near the left limb that is almost mass like, hypoechoic, and surrounded by hyperechoic mesentery. The center of this lesion appears almost anechoic, as if starting to form an abscess or fluid filled lesion. Recommend aggressive medical management for pancreatitis and continued monitoring of this area. A fine needle aspirate of this region could be considered. If fluid is obtained, recommend aerobic and anaerobic cultures. If an abscess is forming, installation of Baytril could be considered.

The nodule previously reported in the left adrenal gland is visualized on today's exam and appears relatively stable. Recommend continued monitoring of the blood pressure and this lesion.

The spleen remains large with a hypoechoic nodule. Consider a fine needle aspirate.

Additionally, the liver is large and heterogeneous with a severe ALP elevation. You could consider a liver function test and a fine needle aspirate, and screening for a cortisol excess, which could be secondary to the left adrenal nodule. These are my recommendations for evaluation of an adrenal nodule:

- 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 or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)

- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma

- If no symptoms of cushings are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).

- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

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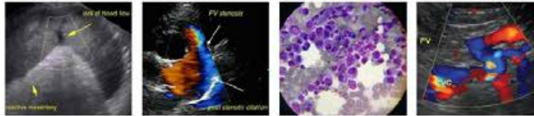

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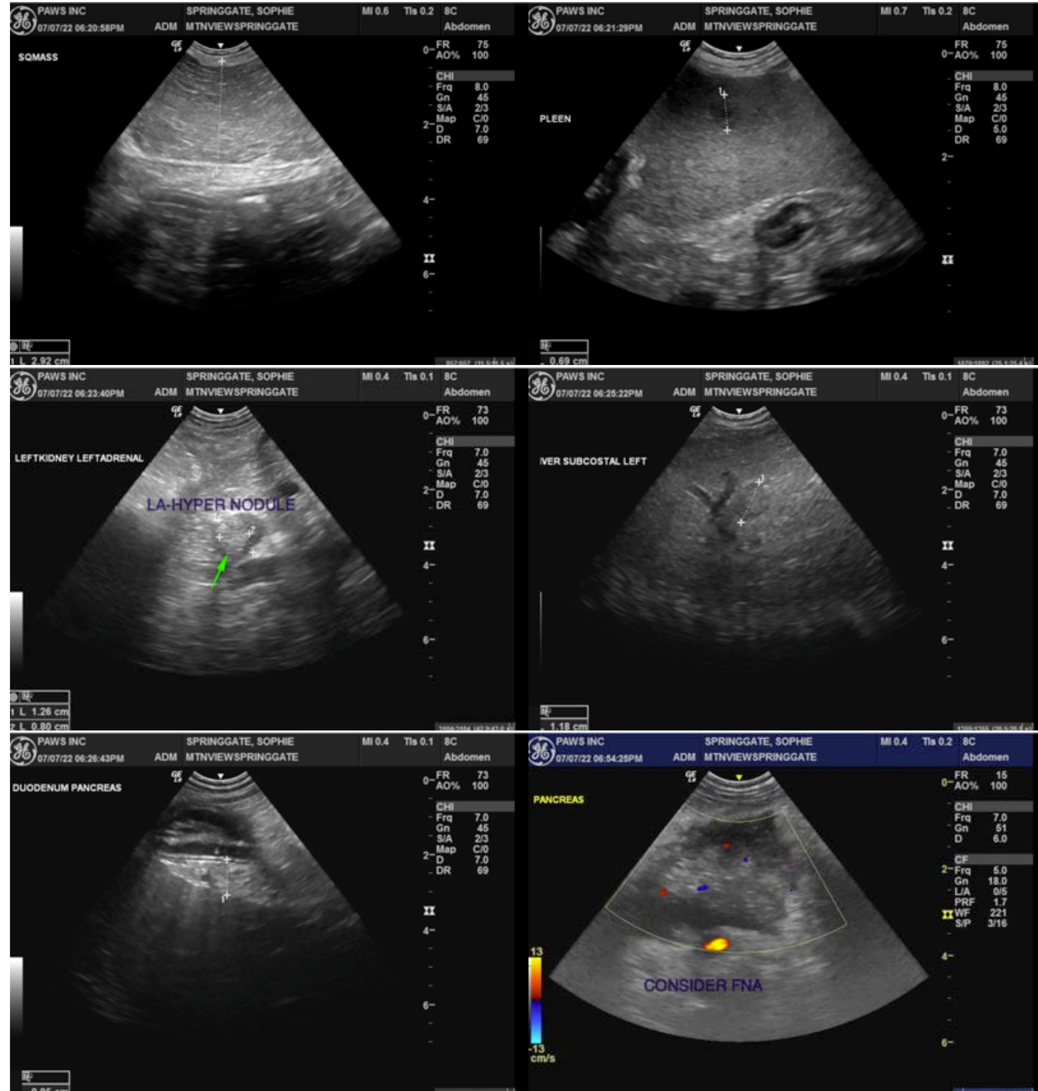
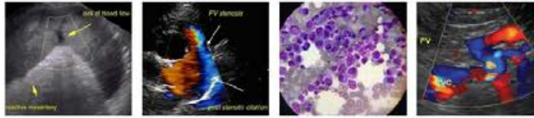
The left adrenal gland is clearly relatively stable and should be further worked up when this pet is feeling much better.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.





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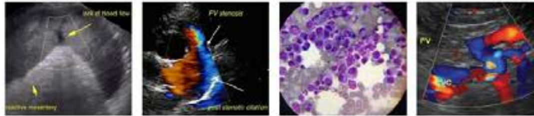

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
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