



PATIENT PRESENTING CLINICAL SIGNS

Batiatus Margaca

Presented on 9-7-22 for yearly examination and vaccines, but O has noticed that pt has been having decreased appetite. Diagnostics evaluation was done including abdominal radiographs and soft tissue opacity was noticed on the mid-abdomen. Abdominal ultrasound was done to further evaluate.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: PE: Palpated a mass on cranial abdomen. Abdominal rads: soft tissue opacity on the cranial abdomen. BW: CHEM: K 2.7 mmol/L (3.5 - 5.8) rest wnl CBC: RBC 4.86 M/ μ L (5.65 - 8.87) HCT 31.4% (37.3 - 61.7) HGB 10.9 g/dL (13.1 - 20.5) WBC 28.13 K/ μ L (5.05 - 16.76) NEU * 0.95 K/ μ L (2.95 - 11.64) LYM * 23.07 K/ μ L 1.05 - 5.10 MONO * 4.11 K/ μ L 0.16 - 1.12 EOS 0.00 K/ μ L 0.06 - 1.23

BREED

Lab X

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

Neutered Male

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

AGE

11 Years

Prostate is normal in size, echotexture and echogenicity for a neutered male.

WEIGHT

61 Pounds

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 7.2 cm. The right kidney measures 6.3 cm. Small cortical cysts noted bilaterally.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

The right adrenal gland is normal in size (0.47 cm at the cranial pole and 0.61 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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Dr. Ferrer

The left adrenal gland is normal in size (0.73 cm at the cranial pole and 0.79 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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Spleen

The spleen contains a 2.5 cm in diameter hypoechoic mass in the mid body, and a second larger 6-8 cm, primarily hypoechoic but mixed heterogeneous mass at the tail of the spleen, both of which disrupt the capsule.

REFERRING VET

Dr. Carrasquillo

Liver

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas. (See other.)

Pancreas

The area of the pancreas contains irregular hyperechoic pancreatic remodeling.

Free Abdomen

A small amount of anechoic free fluid is noted within the abdomen.

The medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

Mesenteric lymph nodes are enlarged with swollen irregular capsular contour and loss of normal length to width ratio (rounded in shape). Nodes are hypoechoic with loss of normal parenchymal detail.

A 2.0 cm diameter hypoechoic mass is noted near the ileocecolic junction, which appears to be an enlarged mesenteric lymph node. However, a bowel mass cannot be definitively ruled out.

No appreciable pericardial fluid noted in these images.

PRIMARY FINDINGS

- **Primarily hypoechoic but mixed splenic masses** – concerning for infiltrative neoplasia such as round cell neoplasia versus other. Benign and malignant splenic lesions can look similar and cannot be differentiated without tissue sampling. Given this patient's CBC changes (if accurate), an abscess or necrotic lesion, etc. are also considered possible.
- **Inflammatory bowel disease (IBD) pattern** – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma.
- **Hypoechoic hepatomegaly** – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- **Aggressive mesenteric lymph nodes** – most consistent with infiltrative round cell or metastatic neoplasia. A benign aggressive inflammatory response cannot be ruled out without tissue sampling +/- culture.

SECONDARY FINDINGS

- **Gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial



PATIENT

abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

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- Urinary bladder debris

SPECIES

Canine

- Age related kidney changes
- **Hyperechoic pancreas** – This finding is suggestive of pancreatic fibrosis, possibly secondary to chronic pancreatitis. A TLI is recommended to rule out exocrine pancreatic insufficiency (EPI), especially if clinical signs (weight loss, diarrhea, etc.) are present.

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Lab X

- Small amount of free abdominal fluid

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SEX

Neutered Male

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

AGE

11 Years

Sampling of this patient’s abdominal fluid, if possible, as well as a fine needle aspirate of the enlarged lymph nodes +/- the liver and even the splenic masses could be considered if patient’s coagulation status is appropriate, with the goal of ruling infiltrative round cell neoplasia that may be able to be managed without surgery.

WEIGHT

61 Pounds

However, if diagnosis of round cell neoplasia is not diagnosed cytologically, an exploratory laparotomy for planned splenectomy as well as biopsies of the GI tract, lymph nodes, and/or any additional pathology may be necessary to definitively diagnose and therefore manage this patient’s infiltrative disease.

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In the meantime, confirmation of the reported neutropenia is recommended followed by supportive/symptomatic medical management of this patient’s clinical signs, including addressing the hypokalemia as well as broad-spectrum antibiotics if the neutropenia is real.

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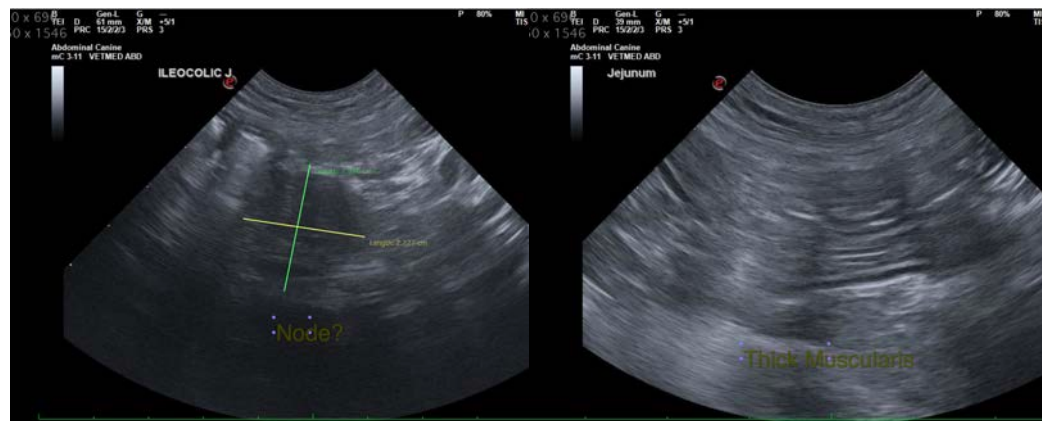
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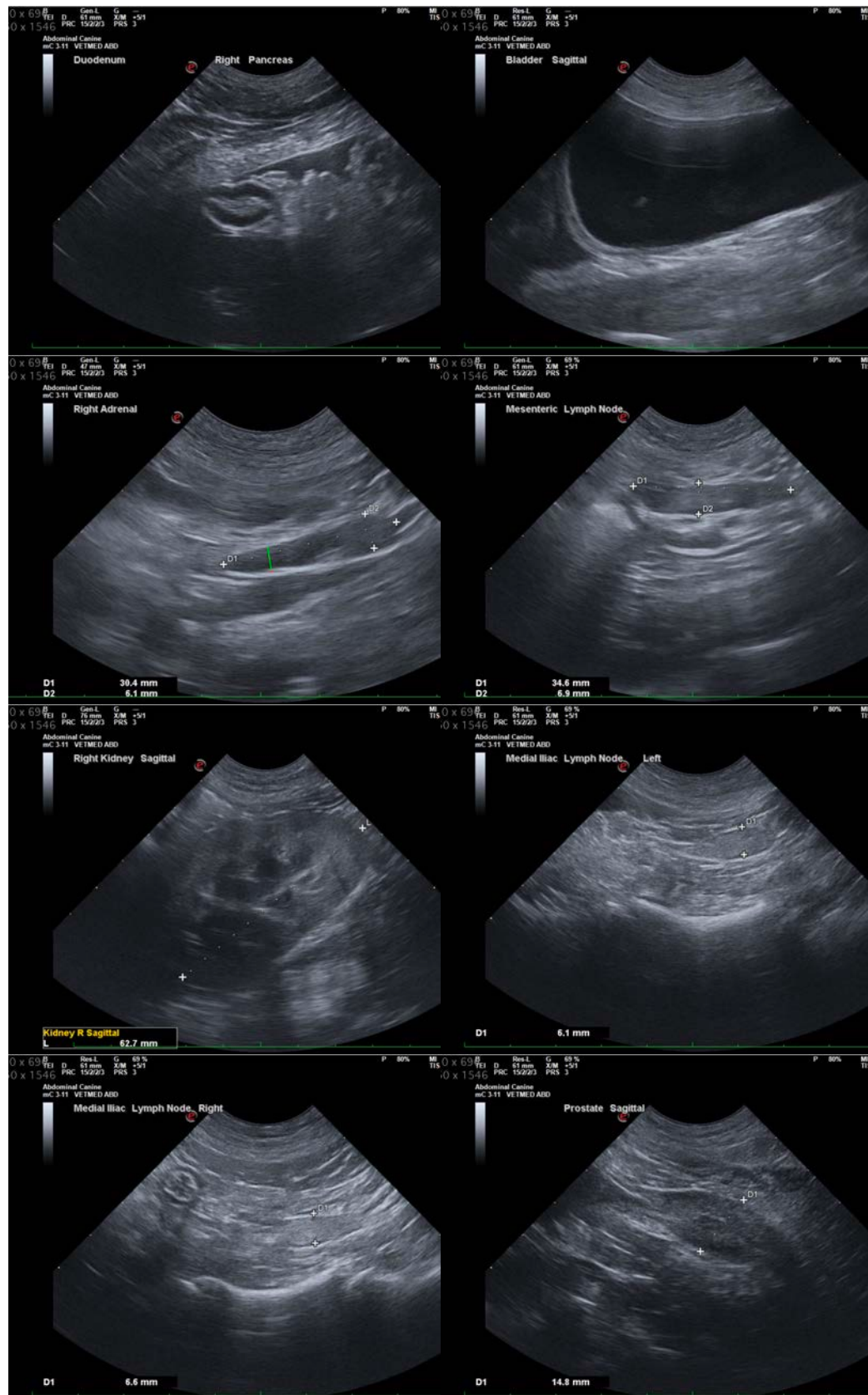
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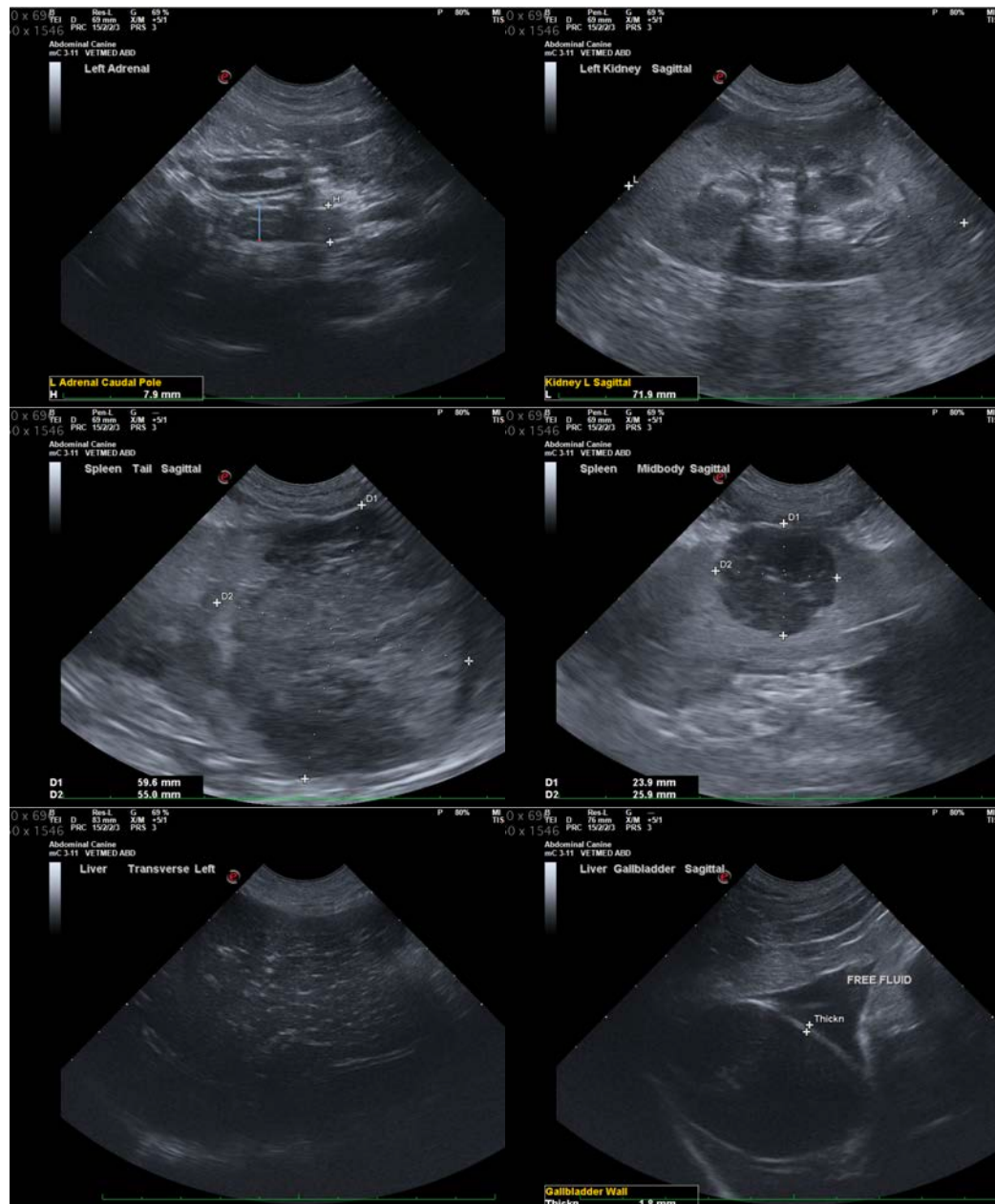
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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