



**PATIENT**

Buddy Duncan

**SPECIES**

Canine

**BREED**

Labrador Retriever Mix

**SEX**

Neutered Male

**AGE**

12 Years

**WEIGHT**

52.4 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Westwood Regional  
VH

**REFERRING VET**

Dr. Taylor McConnell

**INVOICE**

17793

**DATE**

10/17/22

**PRESENTING CLINICAL SIGNS**

History: Patient presents for vomiting and diarrhea. Current meds: metronidazole.

Abnormal PE/Chem/CBC/UA Results: BUN 28, ALT 166, ALP 833.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

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

Left kidney is normal is size (5.94 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal is size (5.36 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**Adrenal Glands**

Left adrenal gland is normal in size (2.7 cm long x 0.54 cm at cranial pole and 0.56 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (2.2 cm long x 0.63 cm at cranial pole and 0.69 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). An approximately 1.0 cm x 0.4 cm hypoechoic nodule was noted in the area of the tail of the spleen that results in a slight capsular bulge. Splenic vasculature appears normal.

**Liver**

Liver is diffusely heterogenous in appearance, characterized by multiple poorly defined hypoechoic nodules within an otherwise hyperechoic parenchyma. However, the mid caudal liver is focally markedly more nodular in appearance with an undulating scalloped contour, characterized by coalescing hypoechoic nodules of varying sizes. The mid caudal area is surrounded by enhanced hyperechoic fat and mesentery and a scant amount of anechoic free fluid. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**Gastrointestinal**



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The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

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Neutered Male

***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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***Free Abdomen***

There is no apparent lymphadenopathy. A scant amount of anechoic free fluid is noted around the mid caudal liver, as noted above.

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**ULTRASONOGRAPHIC FINDINGS**

- Diffusely heterogenous Liver– These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia. In the mid caudal liver, nodular Liver - This finding is concerning for infiltrative disease such as round cell neoplasia or metastatic neoplasia. Benign disease (nodular hyperplasia) cannot be ruled out but is considered less likely. Surrounding hyperechoic enhanced fat and scant amount of free fluid is suggestive of a focal inflammatory reaction/peritonitis around the focally nodular portion of the liver.
- Hypo to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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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.

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A fine needle aspirate of the focally nodular inflamed portion of the liver is recommended if patient coagulation status is appropriate. Cytologic evaluation is recommended, as is culture and sensitivity if indicated based on cytology results. If a diagnosis is not obtained cytologically, a liver biopsy is recommended.

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In the meantime, supportive/symptomatic medical management of the gastrointestinal signs with antiemetics, gastroprotectants, a probiotic, as well as pain medication if indicated and broad spectrum antibiotics could be considered empirically.

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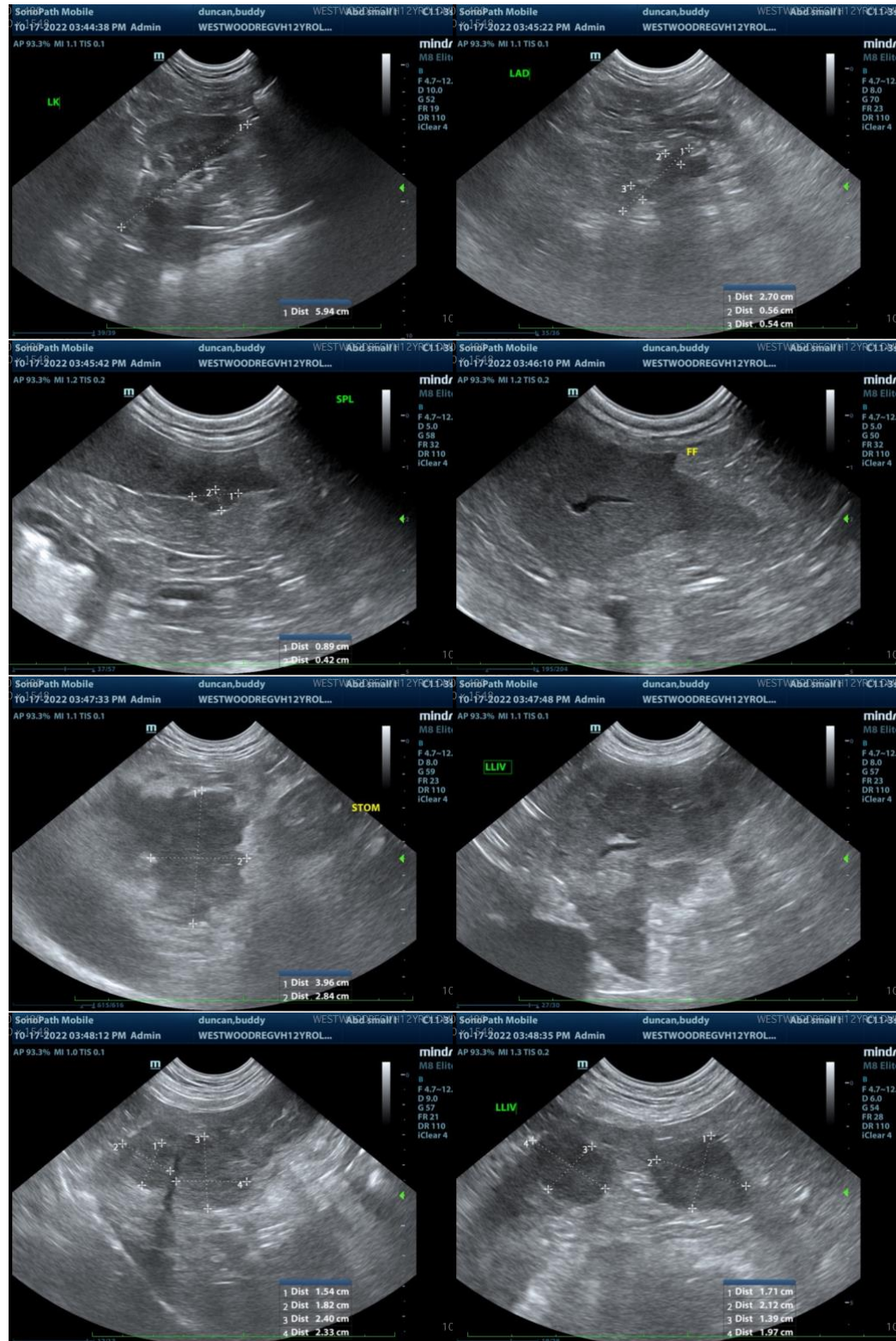
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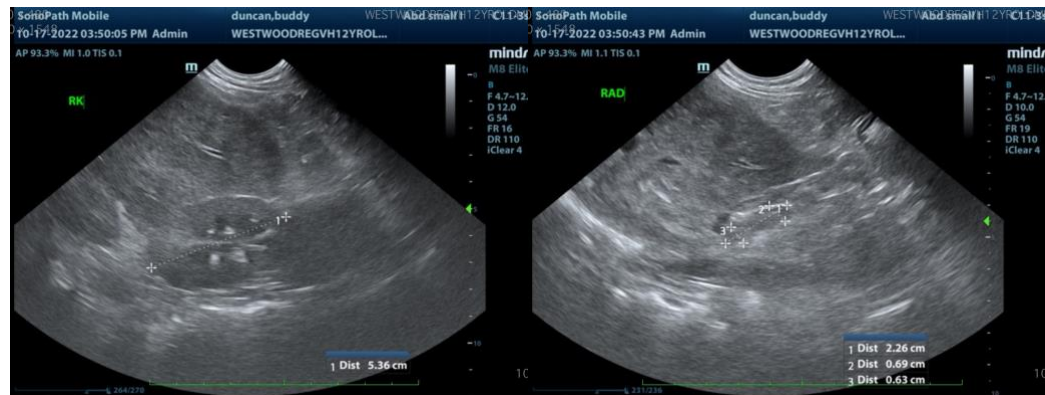
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM DACVIM**

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