



**PATIENT**

Jake Bolling

**SPECIES**

Canine

**BREED**

Golden Retriever Mix

**SEX**

Neutered Male

**AGE**

10 Years

**WEIGHT**

30 kg

**INTERPRETED BY**

Andrea Nicastro, DMV,  
Diplomate DACVIM  
(Small Animal  
Internal Medicine)

**IMAGING PERFORMED BY**

Patti Mayfield, DVM

**HOSPITAL NAME**

Bend AESC

**REFERRING VET**

Gordon Bunting, DVM

**INVOICE**

13335

**DATE**

1/9/22

**PRESENTING CLINICAL SIGNS**

History: dog prev history of splenectomy for non-malignant splenic mass per owner and gastropexy. Doing well at home. Vomited once en route to Bend- moderate amt frank blood noted and mucus. Initially planned on monitoring at home with sucralfate PO then dog vomited second time- multiple large piles of frank bloody vomitus- owner elected to admit for additional dx workup no known exposure to NSAID or other meds. Dogs off leash in undeveloped lot at home but no known anticoagulant rodenticide exposure. Dog has history of bone ingestion / knuckle bone from other dog- no prior hx of hematemesis with ingestion.

Abnormal PE/Chem/CBC/UA Results: PE: Ambulatory, alert. No murmur appreciated. Pulses adequate. Abdomen non-distended and non-painful. No palpable masses. Mild muscle atrophy over the topline of the head and paraspinal region. DIAGNOSTICS: - Coag panel- PT / PTT - normal range - CBC- RBC 3.04 (5.65-), HCT 19 (37.3-), hGB 6.5 (13.1-), retic HGB 19.5 (22.3-), WBC 19.71 (-16.76), Neu 12.43 (-11.64), Mon 2.25 (-1.12), Baso 0.13 (-0.1) PCV 24 % TS 6.2 g/dL - CHEM- BUN 44 (-27), Phos 7.2 (-6.8), ALB 2.1 (2.2-), ALT 310 (-125), ALKP 239 (-212), GGT 15 (-11) CHOL 148, tBIL 0.3 (-0.9) - radiographs- right lateral and VD abdomen- reduced abdominal detail in cranial abdomen with suspect cranial abdominal mass/ hepaatic enlargement - abdominal US- gastric wall- did not appreciate any clear gastric wall lesions or tumors. Stomach small. liver- hepatic enlargement with diffuse generalized changes suggestive of infiltrative (lymphoma? ) disease **\*\*ASSESSMENT\*\*** - hematemesis - general rule outs - gastric foreign body, gastric neoplasia, coagulopathy, GI ulceration (addisons, renal disease, liver disease, gastrinoma, MCT, NSAID therapy, etc) bloodwork supportive of chronic GI bleed +/- non-regenerative anemia concern. No clear indication of FB, coagulopathy, addisons, renal or toxicity concern. Unable to rule out MCT, possible gastrinoma, or lymphoma concern. liver ultrasound suggestive of infiltrative disease (lymphoma concern) but need fine needle aspirate or other sampling (biopsy) to confirm. **\*\*PLAN\*\*** rx dex dom 0.125 mg/ torb 5 mg IV for sedation to allow for ultrasound exam rx cerenia 30 mg IV D/c to owner rx sucralfate 1 gm- 1 tab po tid for GI ulceration rx omeprazole 20 mg- 1 cap po bid X 10 days #20 bland diet at home- recommend follow-up with rDVM or eclinic for continuing care as able. Next step serial evaluation of cbc/chem +/- FNA of liver for evaluation of infiltrative disease

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is not definitively visualized due to its pelvic location.

The left kidney presented normal size (7.46 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney presented normal size (7.12 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.



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**Adrenal Glands**

The left adrenal gland is normal size (0.46 cm at cranial pole) (0.51 cm at caudal pole) (2.73 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.95 cm at cranial pole) (0.47 cm at caudal pole) (2.17 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

Previously splenectomized.

**Liver**

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is isoechoic relative to the right renal cortex and diffusely mottled and slightly heterogeneous in appearance. Several small cysts are observed throughout the organ, the largest measuring 0.97 cm in diameter. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1:1.

The gall bladder lumen is moderately distended. The wall is hyperechoic to mineralized, slightly thickened and irregular. A moderate amount of echogenic to mineralized gravity dependent debris/sand is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**Gastrointestinal**

The gastric lumen is minimally distended with fluid. The gastric wall in the region of the fundus is mildly thickened (up to 0.62 cm) with retention of the normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

**Pancreas**

The right limb of the pancreas is visible/prominent with minimal deviation from the normal peripheral contours. The parenchyma is slightly hypoechoic relative to the surrounding omental fat and subtly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated. There is no evidence of peripancreatic effusion.

**Free Abdomen**

There is no evidence of free fluid. A 1.04 cm gastric lymph node is visualized.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- Nonspecific diffuse hepatopathy. Differentials include inflammatory/immune mediated disease, infiltrative neoplasia (i.e., lymphoma), hepatotoxicosis, other hepatopathy +/- concurrent, benign age-related change (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy).



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- Porcelain gallbladder. This finding is common with cholecystitis. However, in rare instances, biliary carcinoma may develop. Mineralized gallbladder debris- incidental.

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## Secondary Findings

- The pancreatic changes may be a normal variant for this patient or could be consistent with mild, chronic pancreatitis. Correlation with clinical findings is recommended.
- Bilateral age-related renal changes

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Golden Retriever Mix

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## SEX

Neutered Male

- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive, a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation may be necessary to get a definitive diagnosis. Leptospirosis testing (i.e., blood and urine PCR, serology) is also recommended. While awaiting test results, consider empirical treatment for cholangiohepatitis/Leptospirosis (i.e., amoxicillin clavulanic acid, Denamarin) and continued supportive care for GI ulceration.

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- To further assess for causes of hematemesis, consider an upper GI endoscopy with biopsies +/- serum gastrin levels to assess for gastrinoma.
- Three-view thoracic radiographs should be performed prior to any anesthetic event.

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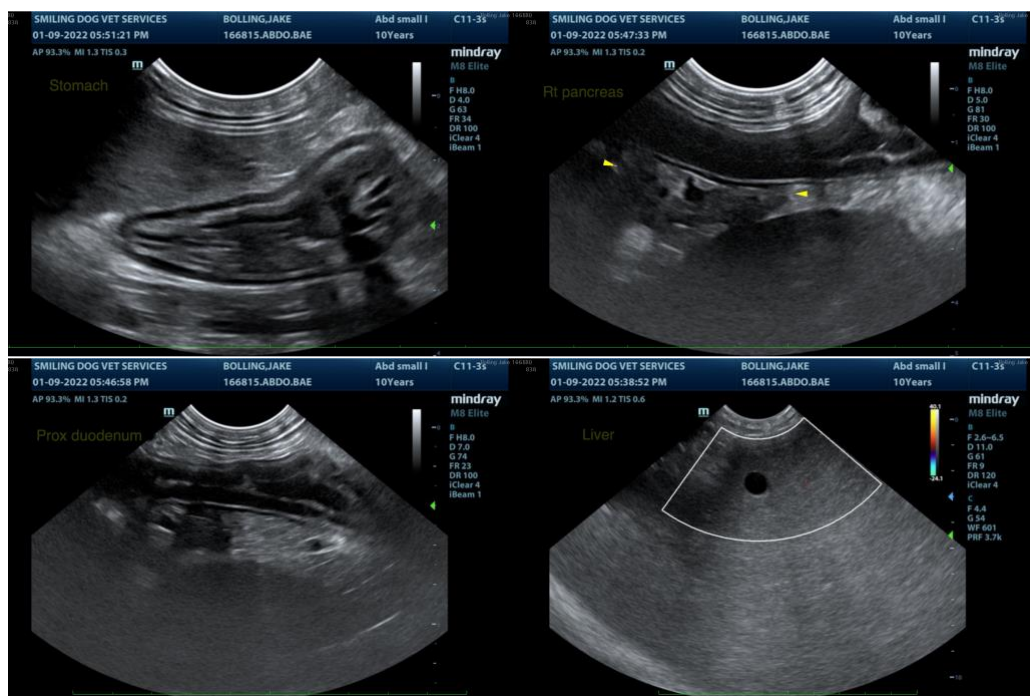
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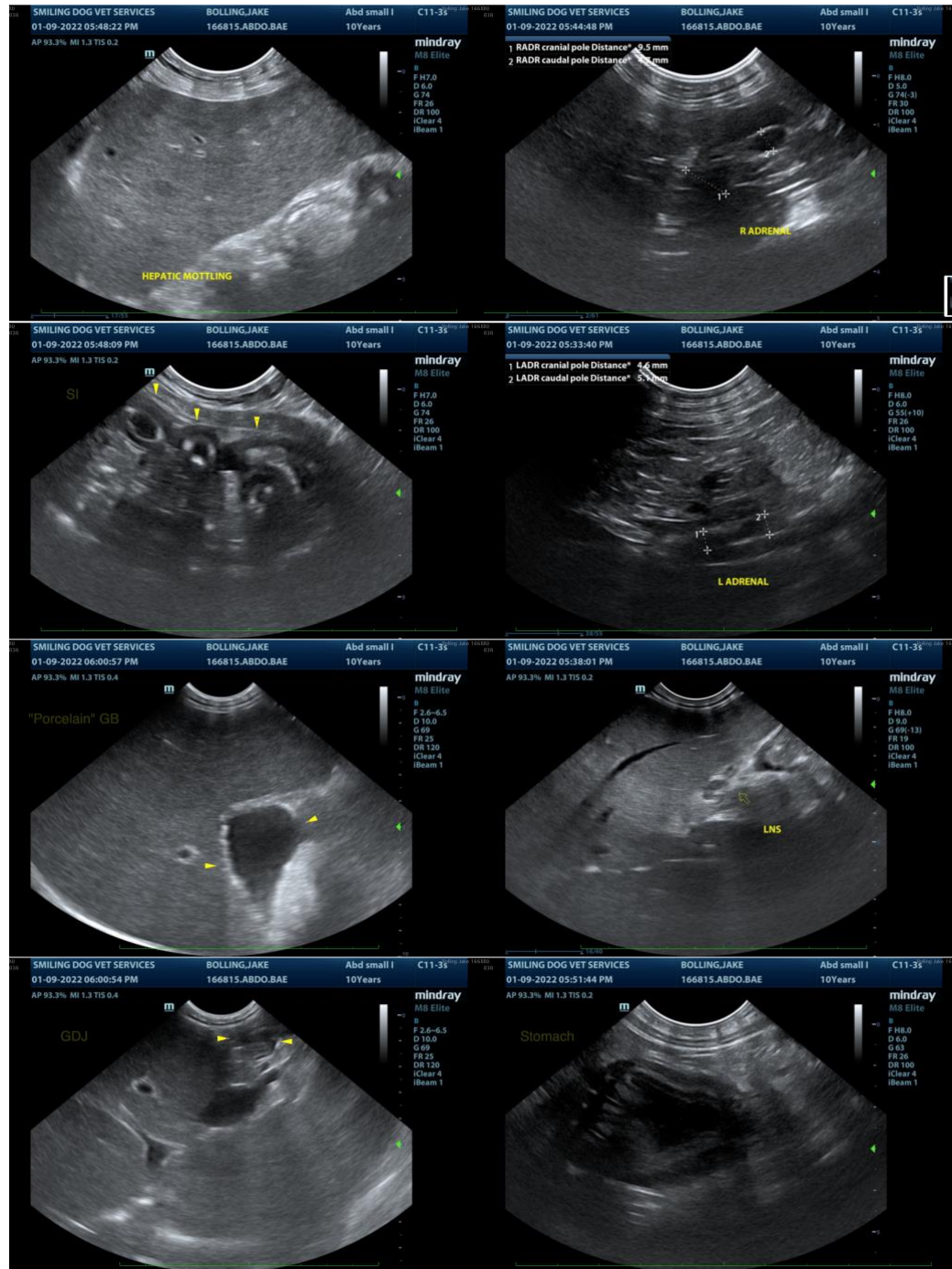
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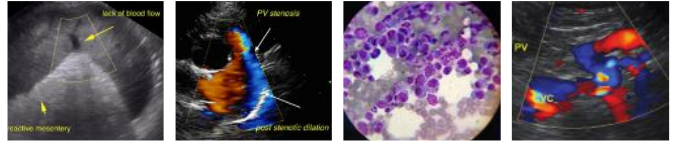
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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info@SonoPath.com

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