



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT** Max Boyer last Wednesday started throwing up. Sunday he stopped eating and hasn't really eaten anything since. went back to reg vet Thursday and did blood work and fluids and anti nausea meds. seems to be kind of lethargic and shakes, and O also noted his face seems slightly swelled on left side. not known to eat things that he shouldn't. P is icteric on presentation.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: CBC: WBC: 25.92 NEU: 22.77 CHEM/LYTES: CHOL: >450 ALT>>> ALP:>>> GGT: 43 T-bil 4.1 Cl: 99

**BREED**

Pug X

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

Neutered Male

The urinary bladder is moderately 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.

**AGE**

7.5 Years

The right kidney is normal in size (4.13 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.

**WEIGHT**

14.8 kg

The left kidney is normal in size (4.88 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**

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

The area of the right adrenal gland is examined without evident pathology.

The left adrenal gland is normal in size (1.14 m x 0.27 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**IMAGING PERFORMED BY**

Dr. Laura de Cordon

**Spleen**

The 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

**HOSPITAL NAME**

Mason Dixon Animal  
Emergency Hospital

**Liver**

Liver is normal to subjectively small in size with slightly undulating or scalloped capsular contour or margins. Parenchyma is diffusely heterogenous with increased portal markings and coarse architecture. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**REFERRING VET**

Dr. Laura de Cordon

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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 suspicion of a non-shadowing cholecystolith, non-obstructive. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**Gastrointestinal**

**DATE**

9/25/22

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.



**PATIENT**

Max Boyer

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.

**SPECIES**

Canine

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

**Pancreas**

**BREED**

Pug X

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

**Free Abdomen**

**SEX**

Neutered Male

A very scant amount of anechoic free fluid is noted in the cranial abdomen, primarily around the spleen.

There is no apparent lymphadenopathy noted in these images.

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

7.5 Years

- **Chronic inflammatory hepatopathy pattern** – An obvious cause for the reported increased liver enzymes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, infiltrative neoplasia (considered unlikely), etc. cannot be definitively ruled out.

**WEIGHT**

14.8 kg

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

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- **Chronic active pancreatitis** – Acute on chronic flare up cannot be ruled out but appears mild if so.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**HOSPITAL NAME**

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Testing for Leptospirosis is recommended if not recently evaluated.

A quantitative PLI is recommended if not recently evaluated.

In the meantime, medical management of pancreatitis/hepatitis with antiemetics, gastroprotectants, appetite stimulants or nutritional support as needed, pain management (if indicated based on physical exam), broad-spectrum antibiotics, hepatic nutraceuticals, and fluid therapy is recommended.

**REFERRING VET**

Dr. Laura de Cordon

If clinical signs and/or liver enzymes do not improve, liver sampling in the form of a fine needle aspirate and/or liver biopsy may be necessary to definitively diagnose and therefore manage this patient's underlying disease.

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**PATIENT**

Max Boyer

**SPECIES**

Canine

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Pug X

**SEX**

Neutered Male

**AGE**

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**HOSPITAL NAME**

Mason Dixon Animal  
Emergency Hospital

**REFERRING VET**

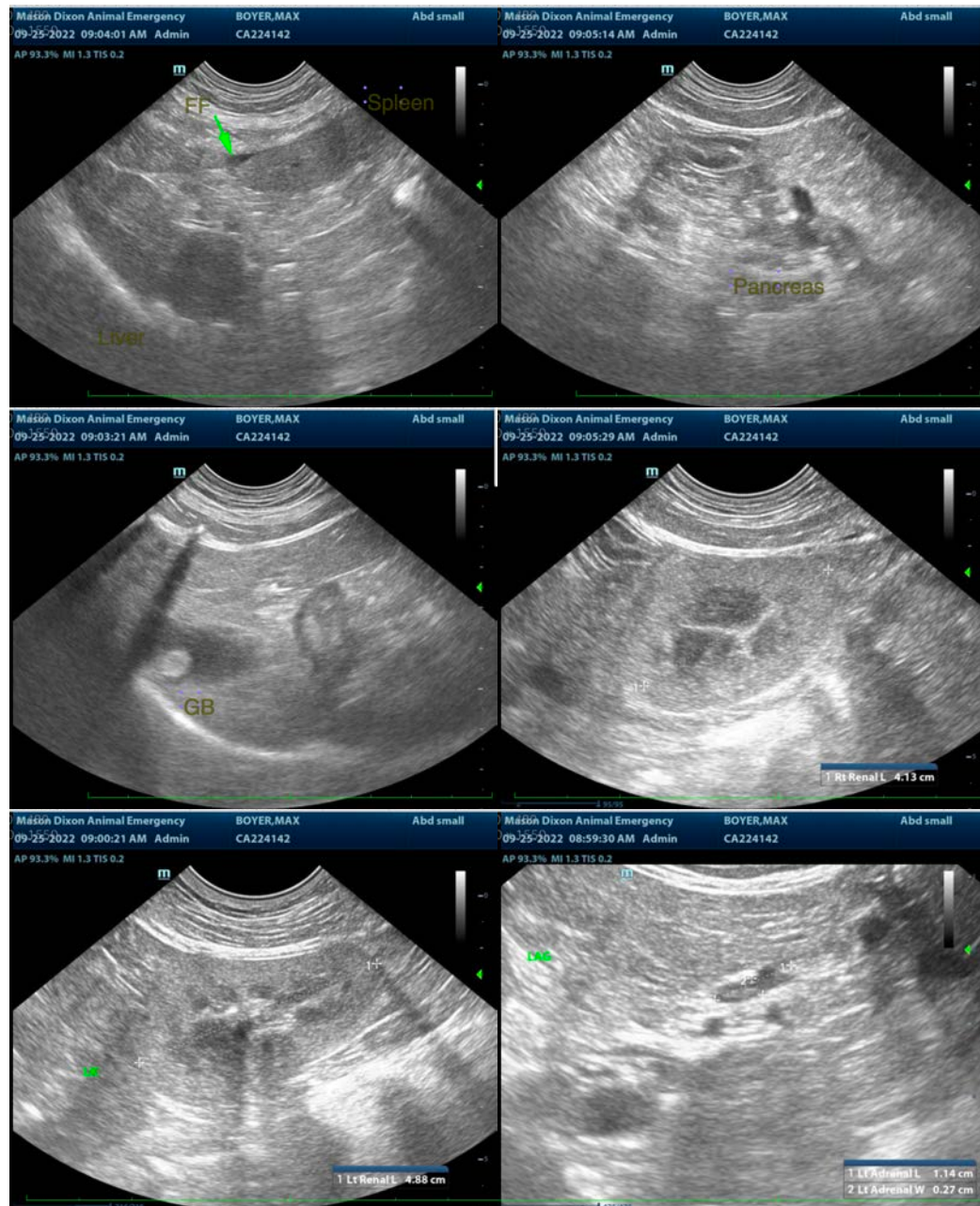
Dr. Laura de Cordon

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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.

**Beth Johnson, DVM, DACVIM**

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