

PATIENT PRESENTING CLINICAL SIGNS

Beanie Mims History: 3-day history of vomiting, diarrhea, inappetence. Prior history of elevated ALP. Ultrasound 2 years ago unremarkable.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine **Urinary System**

The urinary bladder is mildly to moderately distended. The wall is diffusely thickened (up to 0.54 cm) with a slightly irregular mucosal surface. A small to moderate amount of mostly gravity-dependent echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2-3 cm, are normal.

BREED

Labrador Retr

The prostate is normal in size (1.02 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

SEX

Neutered Male

The left kidney is normal in size (7.26 cm in length) with a slightly irregular shape. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, or hydroureter. Renal perfusion appears reduced.

AGE

15 years

The right kidney is normal in size (6.44 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal perfusion appears slightly reduced.

WEIGHT

NP

Adrenal Glands

The left adrenal gland is normal in size (0.34 cm at cranial pole) (0.44 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM (*Small
Animal Internal Medicine*)

The right adrenal gland is in normal size (1.12 cm at cranial pole) (0.67 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

IMAGING PERFORMED BY

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Spleen

The spleen is subjectively normal in size (1.70 cm in width at the level of the hilus) with normal curvilinear peripheral contours. The parenchyma is subjectively hypoechoic with a coarse echotexture. A few small ill-defined myelolipomas are observed in the region of the hilus. It is otherwise homogenous in appearance. Splenic vasculature is normal with no evidence of thrombosis.

HOSPITAL NAME

Trinity Island VC

Liver

The liver is subjectively enlarged with slightly irregular caudal contour. The parenchyma is hyperechoic relative to the spleen and mildly heterogenous and mottled in appearance. A 4.12 cm hyperechoic-to-heterogenous slightly cavitated mass is observed on the left side, at the caudal aspect. In addition, a 1.61 cm hyperechoic nodule is also seen deep on the left side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

REFERRING VET

Kristi Oldham, DVM

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of suspended echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

INVOICE

12615

DATE

4.1.23

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

Pancreas

The base and right limb are enlarged with irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat and edematous in appearance. The pancreatic duct is not overtly dilated. Surrounding mesentery is hyperechoic to saponified.

Free Abdomen

The mesentery in the cranial to midabdominal is hyperechoic. Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The pancreatic changes are consistent with moderate to severe pancreatitis with regional peritonitis.
- Left cavitated liver mass. Neoplasia (i.e., adenoma, adenocarcinoma, hemangiosarcoma, round cell tumor) is suspected with a lower possibility of benign process (i.e., focal inflammatory process, regenerative nodule, granuloma, other). The diffuse hepatic parenchymal changes could be consistent with inflammatory disease (i.e., bacterial cholangiohepatitis, chronic hepatitis) hepatotoxicosis (i.e., copper), regenerative nodular hyperplasia, vacuolar hepatopathy, Leptospirosis, or some combination thereof. The hyperechoic hepatic nodule trends toward the benign (i.e., regenerative nodule), focus of lymphoid hyperplasia, with a lower possibility of emerging neoplasia.
- Bilateral nonspecific chronic renal changes

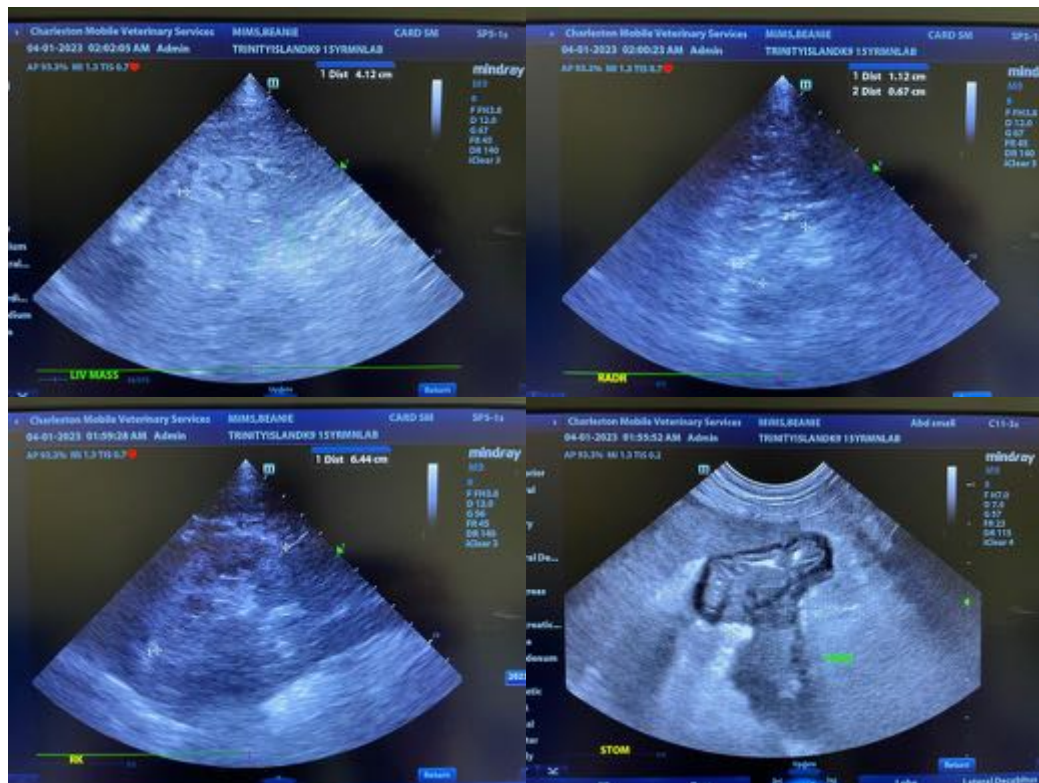
Secondary Findings

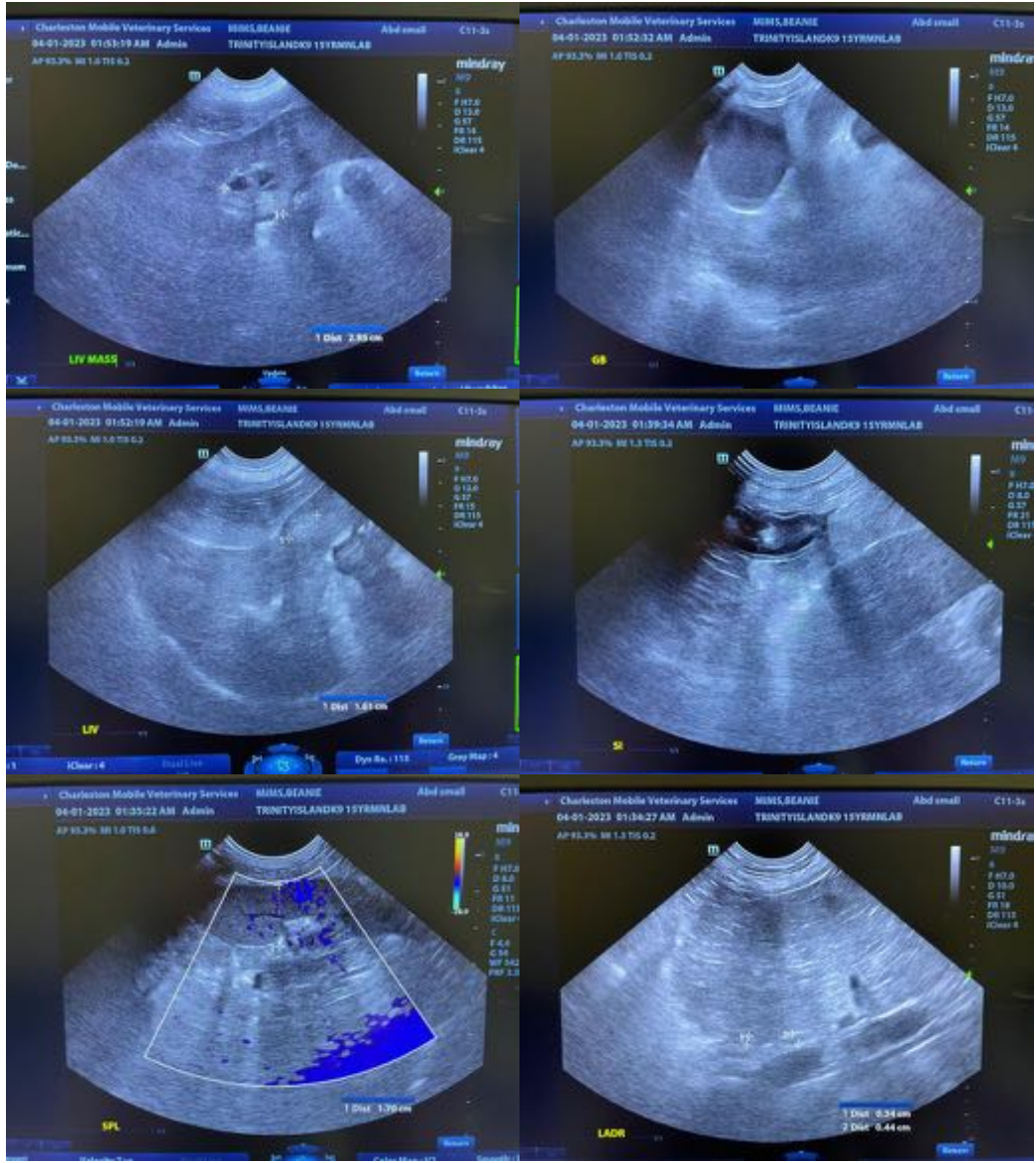
- Gall bladder debris – non-mucocele
- The urinary bladder wall changes may be artifactual due to lack of full repletion, or may be secondary to cystitis. Correlation with the patient's clinical history is recommended.

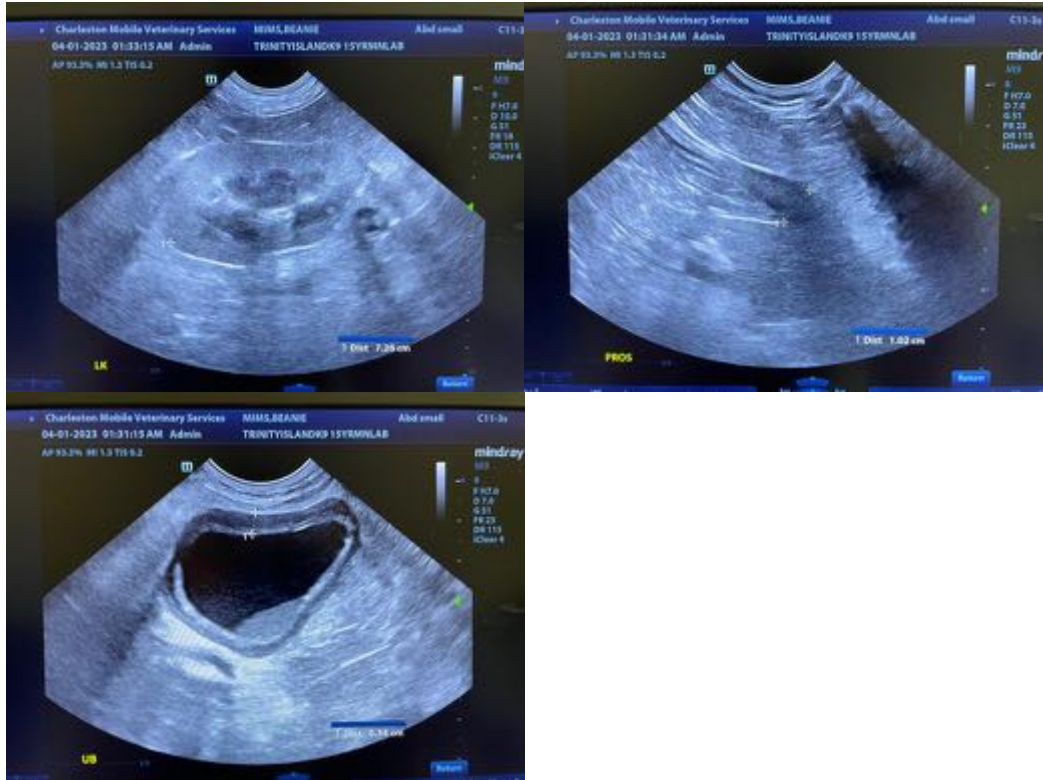
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Supportive care for pancreatitis is recommended including IV fluid therapy, gastric protectants, antiemetics, pain medication as needed, +/- fresh frozen plasma. Also consider empirical treatment for bacterial cholangiohepatitis (i.e., amoxicillin-clavulanic acid and hepatic antioxidants) with serial monitoring of the patient's liver values to assess for improvement.
- Consider three-view thoracic radiographs to assess cardiopulmonary status.

- Given the urinary bladder changes, a urine culture and sensitivity should be considered.
- Consider Leptospirosis testing (i.e., blood and urine PCR, serology).
- If the patient's clinical status can be stabilized, consider removal of the hepatic mass, along with biopsies of other liver lobes. An abdominal CT scan would be useful in in presurgical planning.







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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