



PATIENT

Lola Higgins

SPECIES

Canine

BREED

Bearded Collie

SEX

Spayed Female

AGE

15 Years

WEIGHT

43.8 Pounds

INTERPRETED BY

Tam Mengine, DVM,
DABVP (canine/feline
practice)

**IMAGING
PERFORMED BY**

Kelly Vazquez

HOSPITAL NAME

Westwood Regional
VH

REFERRING VET

Dr. Hartwick

INVOICE

20262

DATE

12/26/22

PRESENTING CLINICAL SIGNS

History: Patient presents for vomiting, diarrhea, and elevated liver enzymes.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine, and luminal sediment is not present. The bladder wall is focally thickened and there are irregularities to the mucosal surface. The ureteral papillae, trigone and pelvic urethra are of normal appearance, and the ureters are not visible (normal). No masses or calculi are noted. Urethra visualized to 3.0 cm

Both kidneys are hyperechoic and exhibit mildly decreased cortico-medullary differentiation. There is no evidence of nephrolithiasis, mineralization, pyelectasia or hydronephrosis. The proximal ureters are not visible (normal). The left kidney is 5.9 cm in length. The right kidney is 5.8 cm in length.

Adrenal Glands

The adrenal glands are both identified in their normal locations. Both glands are enlarged, with the left measuring 2.8 cm x 1.7 cm at the cranial pole and 6.0 mm at the caudal pole, and the right measuring 1.2 cm in height at the cranial pole and 6.7 mm at the caudal pole. They are of hyperechoic echogenicity with normal phrenic vasculature. There is no evidence of vascular invasion noted.

Spleen

The spleen is of appropriate size and has a normal, homogenous parenchyma with a smooth, continuous capsular surface. The splenic vasculature is normal with no evidence of congestion or thrombosis, and blood flow through the splenic hilus appears normal.

Liver

The liver is of appropriate size and shape, with sharp borders and a mildly coarse parenchymal echotexture that is hypoechoic to the spleen. There is a 9.5 cm x 10.7 cm isoechoic mass originating from the right caudal liver. There is also a 3.8 cm x 4.6 cm hypoechoic region within the cranial body of the liver. The portal and hepatic vasculature are of normal size and appearance with no evidence of congestion or thrombosis.

The gallbladder is moderately distended with anechoic contents and a small amount of freely moveable echogenic sludge. The wall was thin and continuous with no focal lesions. The cystic and common bile ducts are normal / not visible.

Gastrointestinal

The stomach is empty. The gastric wall is 4.7 mm with normal deviations due to rugal folds and exhibits appropriate wall layering. The pylorus is of normal appearance.

The small bowel has focal changes to the normal 1:3 muscularis to mucosa ratio. Wall measurements are focally increased up to 6.7 mm for jejunum and 4.5 mm for duodenum. Overall wall layering is preserved. Intestinal motility appears normal.

The visible portions of the colon are of normal thickness, up to 1.7 mm, with intact wall layering. The ileocecal junction is visualized and appears normal.

Pancreas



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The areas of the limbs and body of the pancreas are isoechoic to the surrounding mesenteric fat, with normal capsular appearance. There is no evidence of peripancreatic inflammation. The pancreatic duct appears normal.

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Free Abdomen

There is no evidence of free fluid within the peritoneal cavity. The omentum and intra-abdominal fat are of appropriate echogenicity. Enlarged abdominal lymph nodes are not observed. The aortic trifurcation has normal blood flow with no evidence of thrombosis.

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

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- A large liver mass, with a smaller mass region within the liver parenchyma
- Bilaterally enlarged adrenals, with a mass effect on the cranial lobe of the left adrenal
- Focally thickened small bowel, which may be consistent with either inflammation or early round cell neoplasia

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Secondary Findings

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- Chronic renal changes
- Mildly thickened and irregular bladder wall, consistent with cystitis

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

It is likely that the changes noted in the small intestine are responsible for the vomiting and diarrhea noted, although the liver mass may also contribute to this if it is a malignancy. Fine needle aspirate of both the affected region of the small intestine, and the liver mass are recommended for a definitive diagnosis. Three view chest radiographs are also recommended.

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The changes to the kidneys and urinary bladder are of uncertain significance and should be correlated with clinical signs and lab values on blood work and urinalysis.

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The changes in both adrenal glands could be consistent with a benign adenoma, adenocarcinoma, pheochromocytoma or hyperplastic change. Given the size of the cranial pole on the left adrenal, malignancy is a concern. Recommendations include:

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- Three-view chest radiographs to screen for metastasis
- Blood pressure measurement to screen for pheochromocytoma
- If signs of Cushing's disease are present, then adrenal function testing (either a low-dose dex-suppression test or ACTH stimulation test) is recommended

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- Measurement of urine catecholamine metabolites can help to identify a pheochromocytoma. Availability of this testing has been variable but may currently be available from Marshfield Laboratories or Idexx Laboratories.

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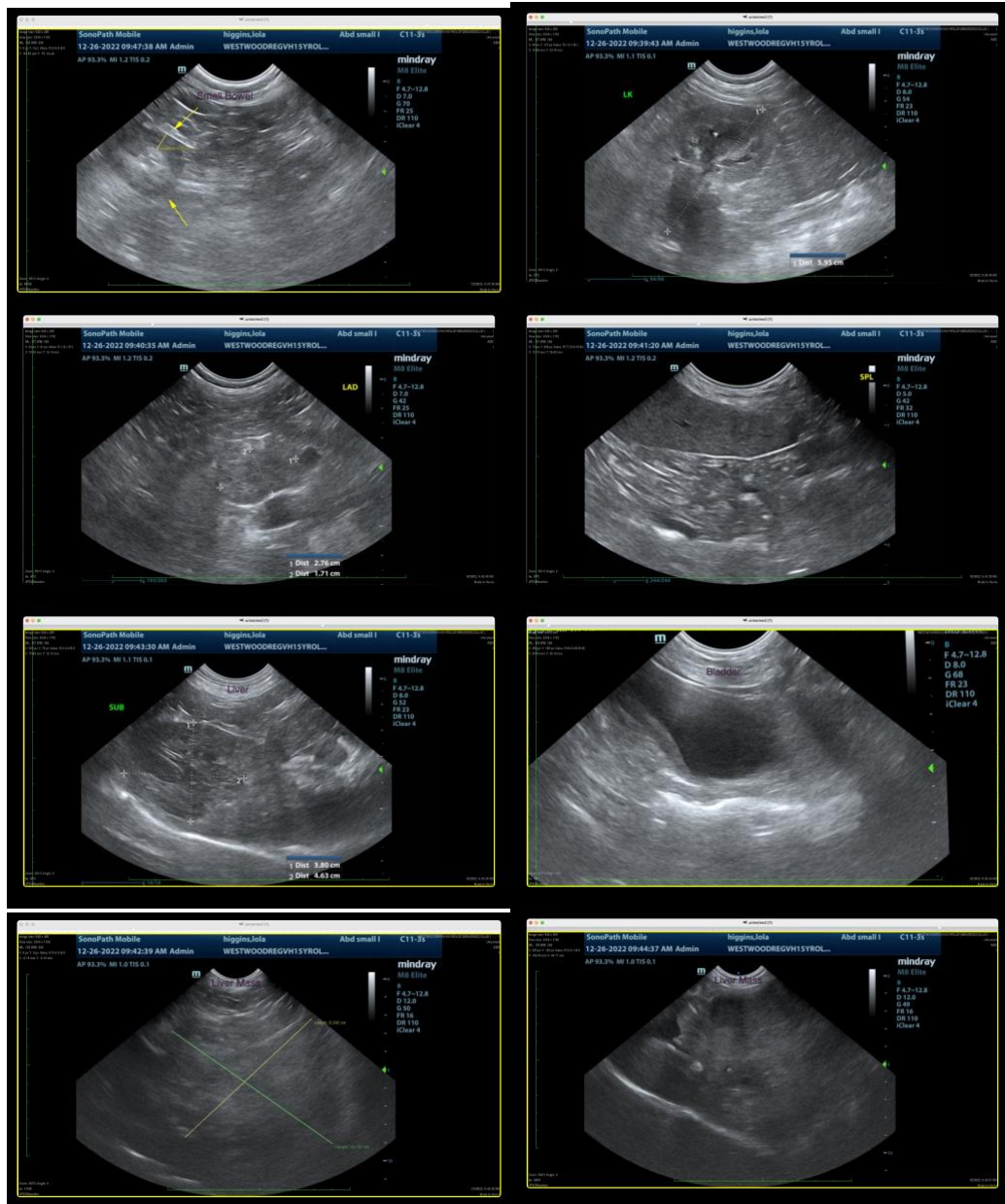
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- Fine needle aspiration with a 25G needle could be considered if a coagulation profile is normal.
- Further assessment via CT scan would also be warranted, especially if adrenalectomy is a consideration.



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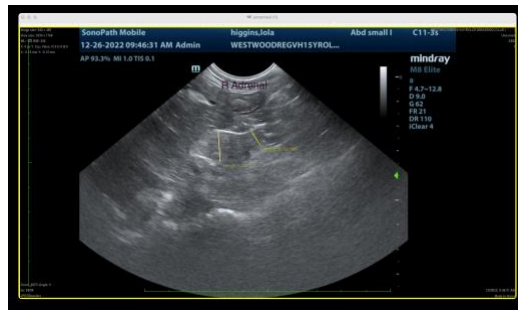
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Tam Mengine, DVM, DABVP (canine/feline practice) info@SonoPath.com