



PATIENT PRESENTING CLINICAL SIGNS

Nala Biegger Progressively elevating ALT and AST. P is doing well at home.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine *Urinary System*

BREED The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is 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 3-4 cm, are normal.

Labrador Retriever mix

SEX The left kidney is normal size (6.90 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Female, spayed

AGE The right kidney is normal size (7.43 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

5/12/22

WEIGHT *Adrenal Glands*

The left adrenal gland is normal size (0.63 cm at cranial pole) (0.77 cm at caudal pole) (2.83 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.

52 lbs.

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (Small Animal Internal Medicine) The right adrenal gland is normal size (0.94 cm at cranial pole) (0.76 cm at caudal pole); 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.

IMAGING PERFORMED BY *Spleen*

Andrea Nicastro, DVM, Diplomate ACVIM (Small Animal Internal Medicine) The spleen is normal in size (1.90 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

HOSPITAL NAME *Liver*

Flowertown AH The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen and diffusely mottled and heterogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal.

REFERRING VET *Gastrointestinal*

Dr. Kline

INVOICE The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. 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

14082

DATE
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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 disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. 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

- Based on the patient's clinical history and sonographic liver changes, a chronic hepatopathy (i.e., chronic active hepatitis, bacterial cholangiohepatitis, copper hepatopathy, fibrosis, other) is suspected.
- There is the possibility of concurrent benign, age-related changes (i.e., regenerative nodular hyperplasia and/or vacuolar hepatopathy).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- In order to get a definitive diagnosis, a surgical biopsy with aerobic and anaerobic bile cultures and copper quantitation on hepatic tissue samples is recommended. A fine needle aspirate of the liver can be considered prior to biopsy, if clotting status is appropriate. However, cytologic evaluation of the liver is often not useful in assessing the structure of portal triads and therefore, may not be diagnostic in this scenario.
- If a more conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin +/- metronidazole). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.
- If biopsies and treatment are not pursued at this time, recheck of liver values is recommended in 3 months to assess for worsening liver values.



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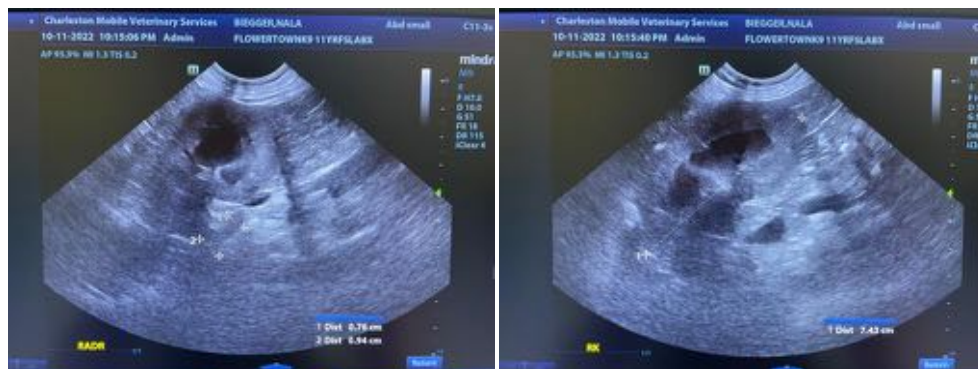
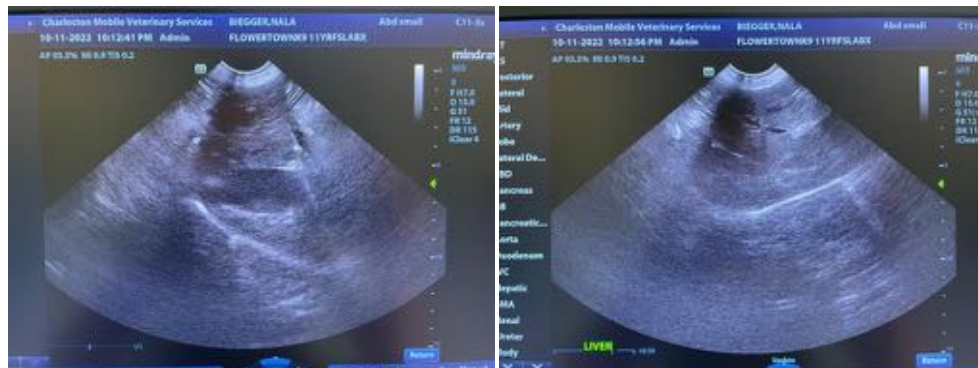
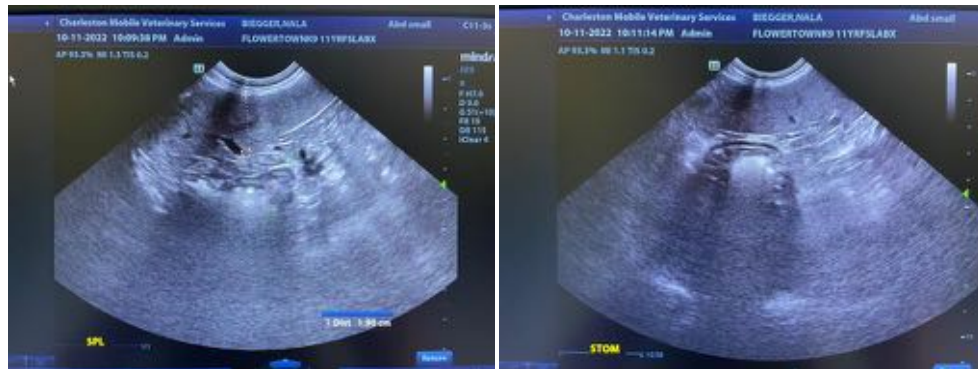
Dr. Kline

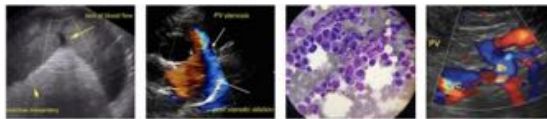
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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