



PATIENT

Marsha Berk

SPECIES

Canine

BREED

Black Labrador

SEX

Spayed Female

AGE

12 Years

WEIGHT

70.4 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Kevin Moon, DVM

HOSPITAL NAME

Shiloh Vet Hospital

REFERRING VET

Colleen Andrews, DVM

INVOICE

39349

DATE

7/8/22

PRESENTING CLINICAL SIGNS

Elevated liver values on pre-surgical bloodwork for TPLO
Abnormal PE/Chem/CBC/UA Results: ALT (SGPT) 123 IU/L (12-118) Alk Phosphatase 511 IU/L (5-131) with pre-op BW, p also had a UTI, so USG and UPC are inaccurate

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is mildly to moderately distended with anechoic contents. Apical urinary bladder wall is diffusely thick. Along the ventral wall there is a 0.7 cm long x 0.2 cm thick accumulation of what appears to be sand and mineral debris, with a similar appearing accumulation of what appears to be debris along the dorsal wall that is 0.5 cm x 0.25 cm thick. Tissue nodules/infiltrative disease cannot be ruled out, but is less likely than accumulated debris. Mucosa is hyperechoic and irregular. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

The right kidney is normal in size (6.6 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 or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

The left kidney is normal in size (6.6 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 or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

Adrenal Glands

The right adrenal gland is unable to be visualized in these images.

The left adrenal gland is normal in size (0.75 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Well demarcated, hyperechoic, homogeneous nodules are also present. Splenic vasculature appears normal.

Liver

The liver is subjectively enlarged with mildly irregular margins. Parenchyma is mottled by multifocal discrete hypoechoic nodules of varying sizes "moth-eaten". Visible vasculature and biliary tree appear normal without distension or congestion.

The 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 no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent



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with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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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 mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

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

Pancreas

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The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

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There is no evidence of free peritoneal effusion noted in these images.

Prominent hypoechoic mid abdominal lymph nodes are noted.

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Medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

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- Nodular Liver - This finding is concerning for infiltrative disease such as round cell neoplasia or metastatic neoplasia. Benign disease (nodular hyperplasia) cannot be ruled out but is considered less likely.
- Splenic micronodular hyperplasia – This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.
- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are less likely.
- Urinary bladder debris including mineral densities and sand accumulated along the wall – Irregular tissue nodules can't be ruled out, but are considered less likely.
- Medullary Rim Sign - of unknown clinical significance and can be a normal variant. Medullary rim sign(s) should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc.

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- 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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- Reactive medial iliac lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the aggressive appearance of the liver lesions, recommendations include a fine needle aspirate of the liver if patient’s coagulation status is appropriate, prior to proceeding with surgery.

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Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

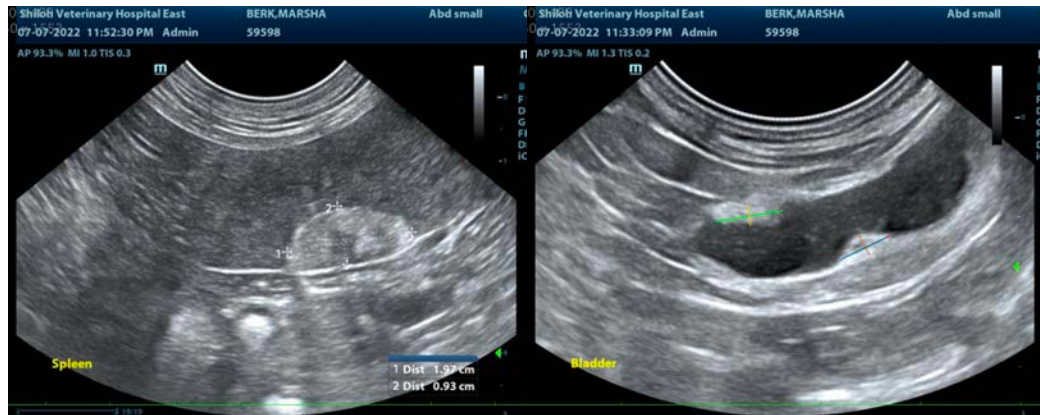
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Management of the reported urinary tract infection is recommended with monitoring of the urinary bladder wall changes for improvement upon resolution of the reported infection.

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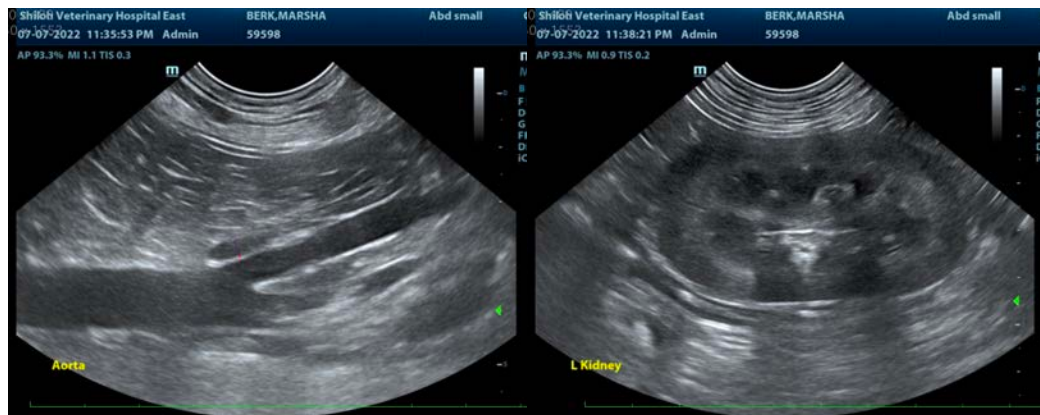


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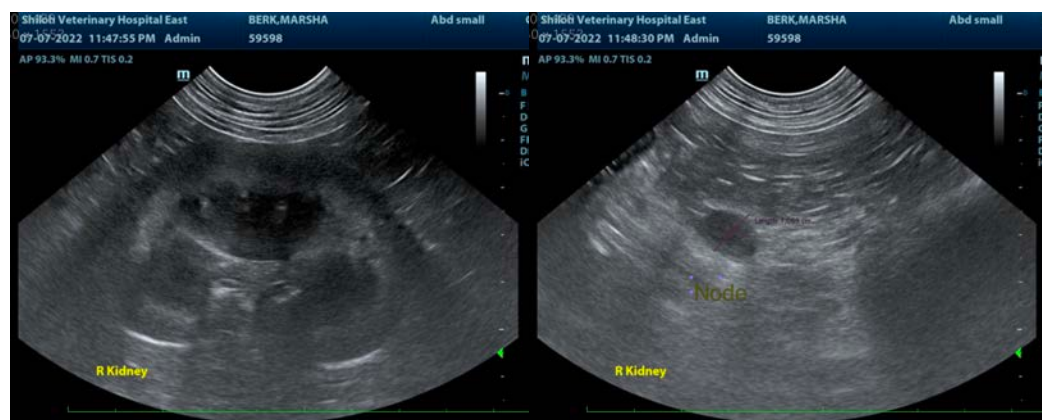
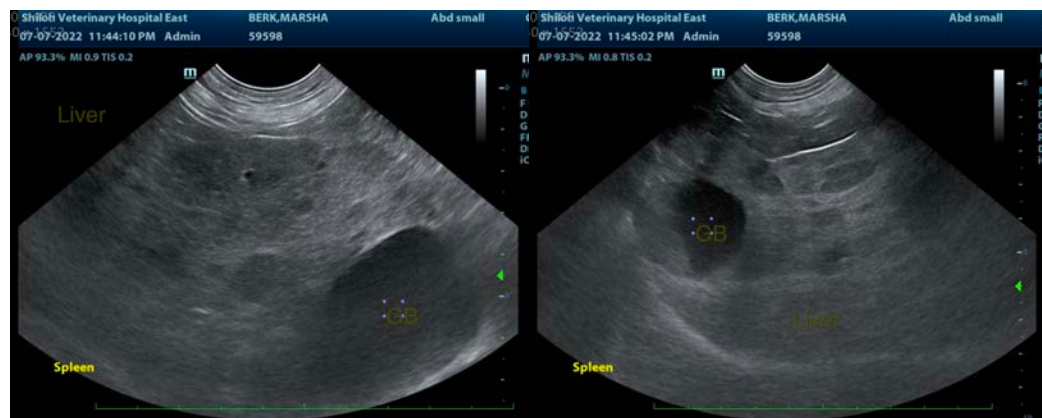
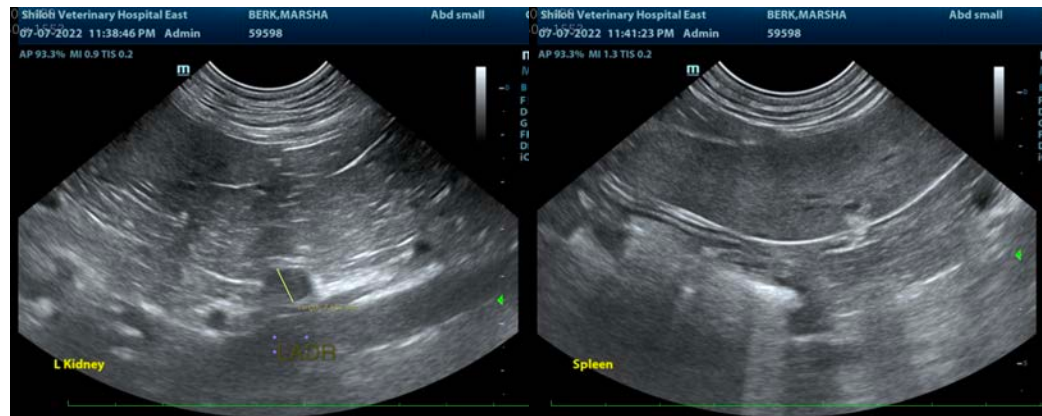
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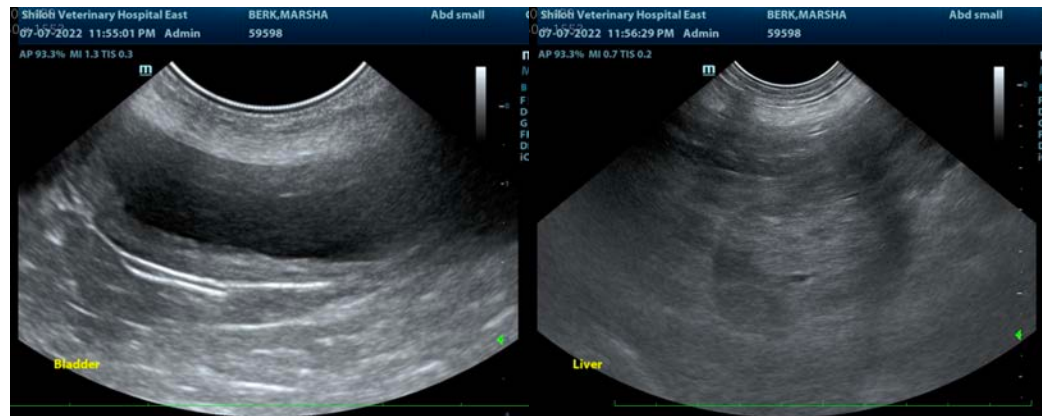
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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