

## PATIENT

Carli Betz

## SPECIES

Canine

## BREED

Maltese

## SEX

Spayed Female

## AGE

11 Years

## WEIGHT

8.0

## INTERPRETED BY

Beth Johnson, DVM  
DACVIM

## IMAGING PERFORMED BY

Jessica Green

## HOSPITAL NAME

Stanglein Veterinary  
Clinic

## REFERRING VET

Erin Rothrock, DVM

## INVOICE

74999

## DATE

5/6/26

## PRESENTING CLINICAL SIGNS

Patient has been evaluated 2-3 times over the last 5 days for restlessness and arching back following eating. Owner reports patients seems uncomfortable but no obvious back pain or other abnormalities noted on any exams performed in this time period.

Current Meds: Metronidazole, cerenia, famotidine, buprenorphine PRN

Abnormal PE/Chem/CBC/UA Results: BW: moderate hyperproteinemia and hyperglobulinemia (TP 8.9 g/dL, globs 5.0 g/dL), moderate elevation of ALKP (1950 U/L) RADS: Moderate hepatomegaly, radiographs 5/4 concerning for possible constipation but seemed to be resolved with soft stool in colon 5/5; fluid filled small intestines

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with a moderate amount of echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are bilaterally irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. No mineral is observed. Left kidney is small-normal at 3.29 cm. Right kidney is small-normal at 3.45 cm. Mild pyelectasia is present in the right kidney. Additionally, A hyperechoic band parallel to the corticomedullary border is present bilaterally.

### Adrenal Glands

The right adrenal gland is normal in size (0.40 cm at cranial pole and 0.47 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.43 cm at cranial pole and 0.49 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

### 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.

### Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is moderately heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.



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## *Gastrointestinal*

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. 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.

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

## *Pancreas*

The pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

## *Free Abdomen*

There is no visible free peritoneal effusion noted in these images.

There is no apparent pathologic lymphadenopathy noted in these images.

## ULTRASONOGRAPHIC FINDINGS

- Emerging mucocele – 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. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.
- Moderately heterogenous liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Moderate bilateral chronic kidney disease changes with bilateral medullary rim sign - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.
- Moderate amount of echogenic urinary bladder debris.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.



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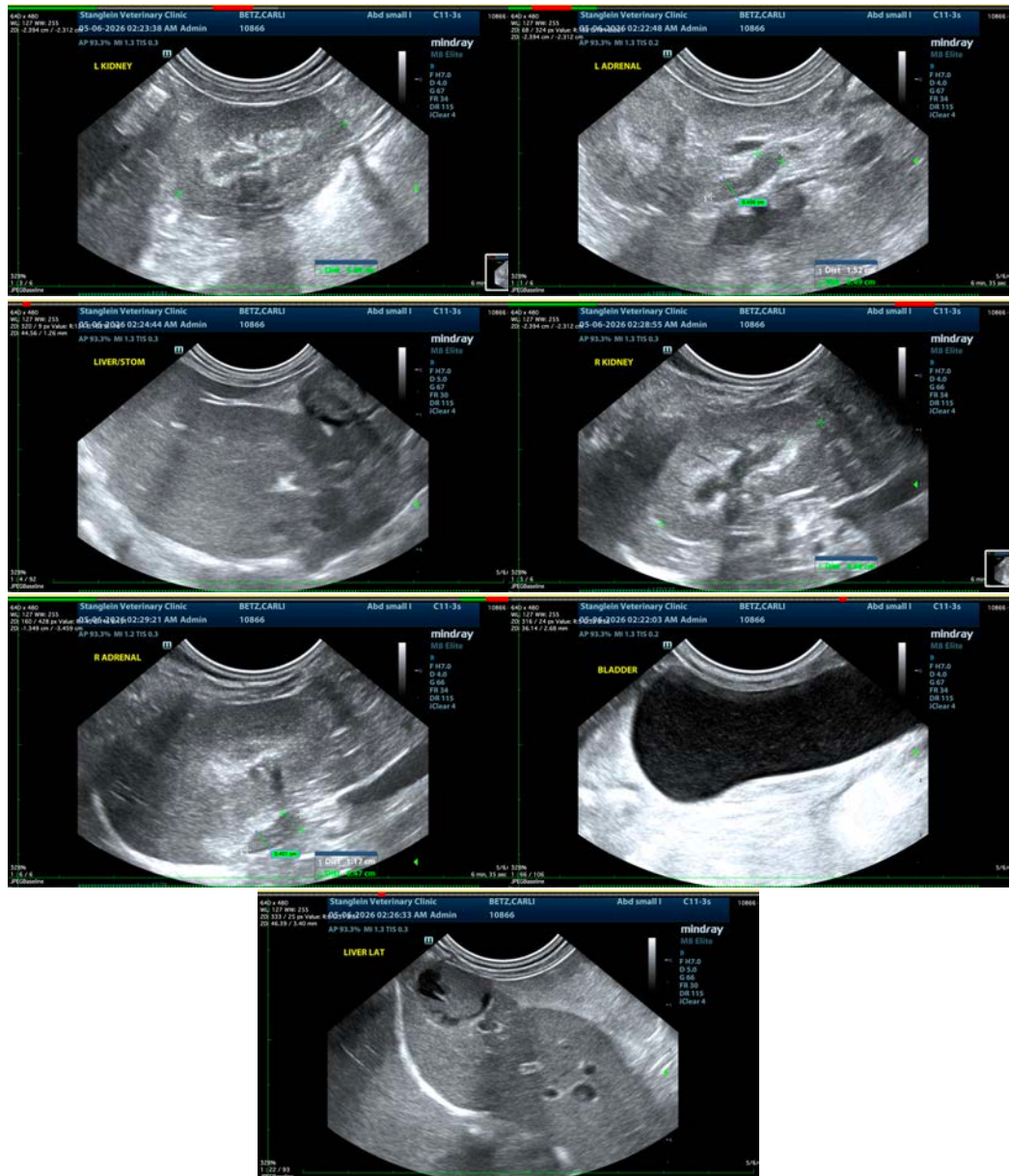
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The emerging gallbladder mucocele could potentially be causing abdominal pain and warrant further intervention, especially if the abdominal pain can be localized cranially and/or there is any concurrent nausea, decreased appetite, etc. Having said that, this could be an unrelated finding as well, with discomfort or pain from another source non-visible at this time. Therefore, continued evaluation including orthopedic, neurologic, spinal, etc. is still recommended.





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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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