



**PATIENT**

Avery Moffett

**SPECIES**

Canine

**BREED**

Border Collie X

**SEX**

Spayed Female

**AGE**

6 Years

**WEIGHT**

69

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Maggiulli

**HOSPITAL NAME**

Willamette VH

**REFERRING VET**

Dr. Maggiulli

**INVOICE**

46174

**DATE**

3/25/23

**PRESENTING CLINICAL SIGNS**

O was laying with pt on bed last night around 7 PM after pt came in from outside, noticed both eyes had inflamed 3rd eye lid. O does not believe pt would have gotten into anything out of the ordinary, unsure of cause. Pt lethargic around 7 pm. Pt ate dinner last night but refused breakfast this morning. O gave pt a Benadryl around 8 PM yesterday, no improvement of inflammation. O did mentioned that pt and other dog in household had a "cold" a few weeks ago (thick green ocular discharge- no other symptoms) that improved on its own after 3-4 days.

Abnormal PE/Chem/CBC/UA Results: CBC- HC T48%, Retic HGB 20.8, WBC 1.69, NEU 0.51, LYMP 0.56, EOS 0.02, EPOC-HCT 52%, GLU 134, NSF CHEM 17- NSF

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (7.7 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, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (6.7 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, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

**Adrenal Glands**

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

The left adrenal gland is normal in size (0.61 cm at the cranial pole and 0.69 cm the caudal pole), shape and contour. Corticomedullary structure is unremarkable. 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**

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.



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**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 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 (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 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 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**

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

There is no apparent lymphadenopathy noted in these images.

There is no evidence of heart base or pericardial pathology noted in these images at this time. If cardiac function evaluation is desired a full echocardiogram is recommended.

**ULTRASONOGRAPHIC FINDINGS**

- **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 FIP, 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.
- Otherwise, this is an unremarkable/normal abdomen.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is not an ultrasonographically visible explanation for this patient's reported neutropenia. Differentials include infiltrative neoplasia or infectious disease or potentially immune mediated disease. Recommendations include:

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.

Comprehensive infectious disease testing is recommended. If a diagnosis is not obtained, bone marrow cytology +/- core biopsy should be considered.

Additionally, given the subtle kidney changes, 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, +/- testing for Leptospirosis.



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In the meantime, broad-spectrum antibiotics in addition to supportive/symptomatic medical management are recommended, given the marked neutropenia.

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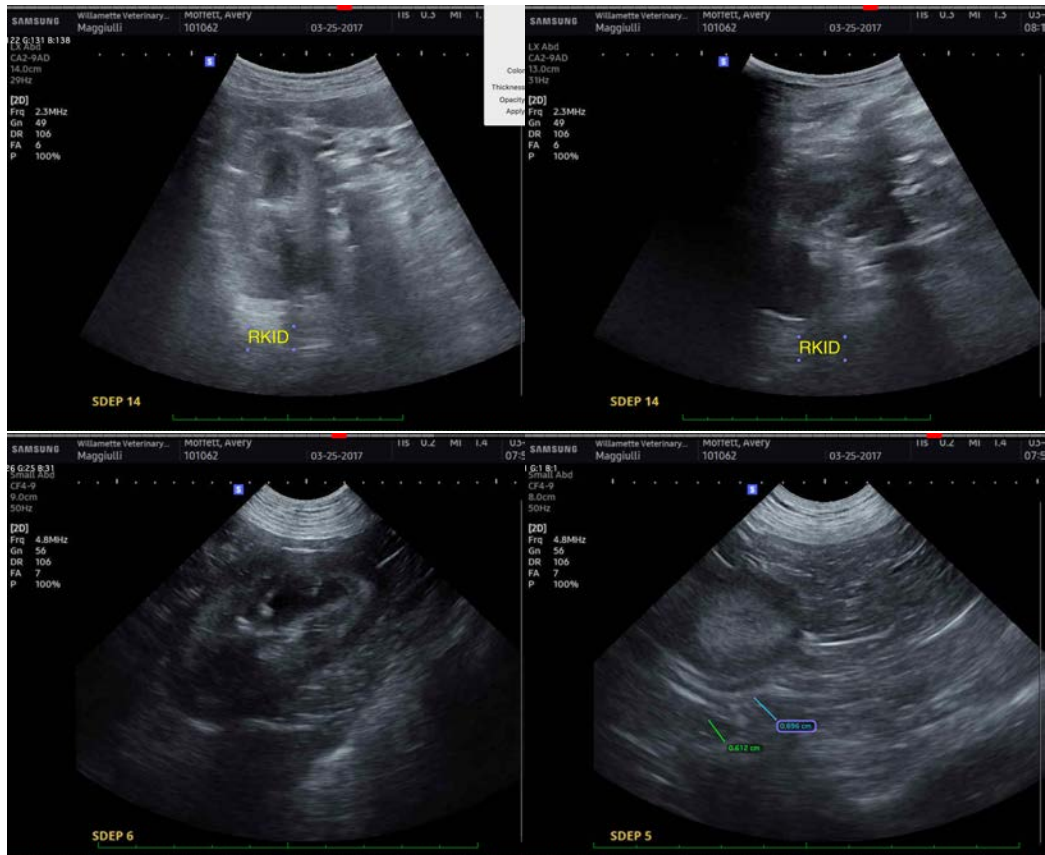
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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