

**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT** Jet Benzon  
**SPECIES** History \* 1d hx of RH lameness (refusal to rise/move per O), and anorexia since episode started.  
 Lethargic Working diagnosis Lameness - r/o trauma, inflammatory, infectious (no hx tick prevention), neoplastic - open ADR - r/o pain-related vs other sys dz

Canine  
**BREED** Abnormal PE/Chem/CBC/UA Results: CBC/Chem: creatinine too high to read, BUN 67 (?). Amylase elevated consistent w/ renal values, but no secondary values (no anemia, no hyperP, etc). Mildly reduced [plt] - r/o low vs spurious/clumping 4dx: lyme and anaplasma positive (ehrlichia + HW neg) UA dipstick: USG 1.018, 1+ bili, 2+ heme, 1+ protein.  
 Border Collie

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**SEX**

**Urinary System**

Spayed Female  
**AGE** 11 Years 4 Months  
 The urinary bladder is moderately distended with mildly echogenic urine. The Bladder wall is diffusely mildly thickened (0.36 cm), and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

**WEIGHT**

20.3 kg  
 The left kidney has a normal shape and size (6.08 cm) with mild periephric inflammation and fluid. Overall echogenicity is slightly hyperechoic with mildly reduced corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)  
 The right kidney has a normal shape and size (6.54 cm). Overall echogenicity is slightly hyperechoic with mildly reduced corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**IMAGING PERFORMED BY**

**Adrenal Glands**

Loetitia Saint-Jacques, LVT  
 The left adrenal gland is normal in size measuring 0.73 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

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 The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

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**Spleen**

Dr Stacy Michaelis  
 The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a small hypoechoic nodule visualized within the parenchyma measuring 0.38 cm.

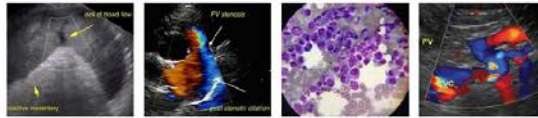
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**Liver**

46126  
 The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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**PATIENT**

Jet Benzon

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

**SPECIES**

Canine

**Gastrointestinal**

The stomach contains mild fluid/ingesta. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

**BREED**

Border Collie

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.)

**SEX**

Spayed Female

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**AGE**

11 Years 4 Months

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

**WEIGHT**

20.3 kg

**Pancreas**

The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques,  
LVT

**PRIMARY FINDINGS**

- Mildly reduced corticomedullary distinction in both kidneys and perinephric inflammation and fluid on the left side – The bilateral renal findings are consistent with age-related change. Possible differentials for focal inflammation could include trauma or infection (pyelonephritis, Leptospirosis, etc.).
- Mildly irregular urinary bladder wall with mildly echogenic urine – Recommend urinalysis and culture.
- Very small hypoechoic nodule visualized within the spleen – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

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**SECONDARY FINDINGS**

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.



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- Moderate gallbladder debris - The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

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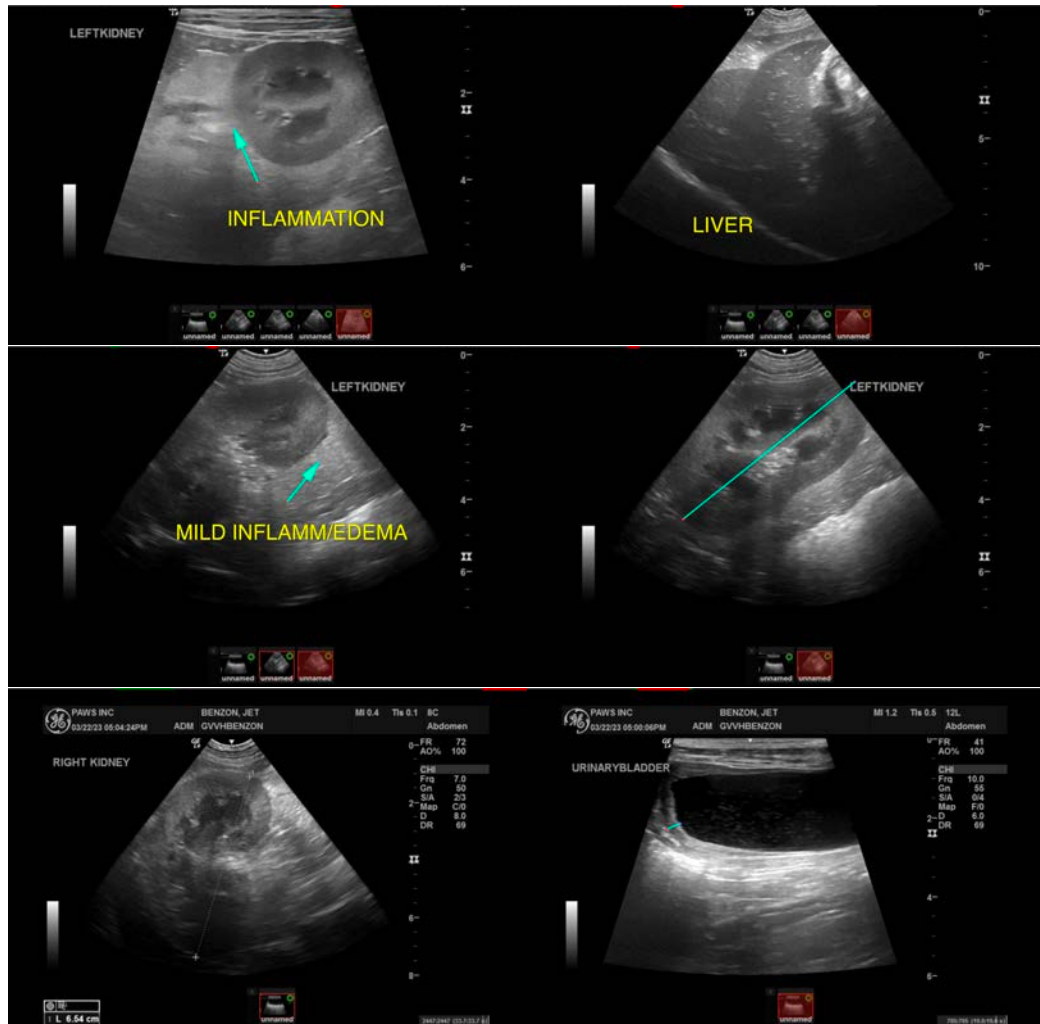
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The changes observed in the kidneys are relatively mild and likely age related. There is a small amount of fluid/edema and inflammation around the left kidney. The cause of this is uncertain. Consider screening for Leptospirosis and a urine culture, looking for any evidence of pyelonephritis. Could the lameness be due to possible trauma? As this could affect the kidney as well.

The remaining changes associated with the pancreas, gallbladder, and stomach are mild and likely incidental at this time. The nodule visualized associated with the spleen is very small. Recommend continued monitoring with ultrasound.





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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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