

**PATIENT PRESENTING CLINICAL SIGNS**

**Calli Holcombe**  
**SPECIES** Canine  
**BREED** Australian Shephard  
**SEX** Spayed Female  
**AGE** 10y  
**WEIGHT** 47.5lbs

History: Chief Concern/Provisional Diagnosis: IRIS Stage 3 renal disease (unexpected find on lab work) Proteinuria Azotemia - Hyperphosphatemia Hypercalcemia Murmur - new on exam as of 2/1 2-3/6, no history of cough/exercise intolerance Vomiting - Ranula - improved Vomiting, anorexia, possible pancreatitis - vomiting previously on antibiotics according to owner, decreased appetite over the last 5 days and after initiation of treatments yesterday. History / Physical Findings: P presented 2/1 for possible anal gland infection/blood in stool. Ran senior labs at that time, O noted increased thirst and urination. R AG had bloody discharge, started p on Clavamox pending lab work. Got results 2/6 - O dropped p off for IVF's and starting therapy yesterday. Noted hypertension and also started therapy for that on 2/6. P was vomiting on antibiotics per o. Current Therapy and Medications: Restart IVs @70mL/hr (3mL/kg/hr) in hospital today. P received about 450mL IV Plasmalyte during day yesterday. No SQF's added due to hypertension and heart murmur. Check BP 3 times today ~200 this am first check Benazepril 5mog PO AM Cerenia 24mg PO AM Start Carafate 1g PO TID, Start Omeprazole 20mg PO BID Butorphanol 0.22mL IV Amlodipine 2.5mg PO PM @4pm (first dose yesterday at 4pm) Summary of Laboratory Abnormalities: Prior to fluids: BUN 80, Cre 3.4, SDMA 21, ALKP 794, AMYL 1256, Ca 12.2, Phos 8.0, HCT 46% TP 8.4, WBC 12.9k PLT 428K USG 1016, 2+ Protein, UPC 1.3 Hypertension - BP 180-200

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is minimally distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi. Full evaluation of the urinary bladder is not possible due to lack of urine distention.

The left kidney has a normal shape and size (6.78 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There evidence of mild pyelectasia measuring at 0.3 cm. No evidence of nephroliths, infarcts or hydroureter.

The right kidney has a normal shape and size (7.23 cm). Overall echogenicity is slightly hyperechoic with poor 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.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.47 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.

The right adrenal gland is normal in size measuring 0.72 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**Spleen**

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, LVT

**HOSPITAL NAME**

Desert Hills Animal Hospital

**REFERRING VET**

Dr. Robin Murray

**INVOICE**

10024

**DATE**

2/8/2023



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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. No focal parenchymal abnormalities are visualized.

**SPECIES**

**Liver**

Canine

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogeneous echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a somewhat poorly defined isoechoic mass effect associated with the caudal aspect of the liver measuring approximately 2.51 cm x 4.27 cm.

**BREED**

Australian Shephard

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

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**Gastrointestinal**

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The stomach contains minimal luminal contents. 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.

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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 (0.51 cm in wall thickness) and the jejunum measured as normal (0.37 cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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Medicine)

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of ascending colon are visualized with firm shadowing material most consistent with formed fecal material and fluid. In this region there is scant free abdominal fluid surrounding the colon and some inflammation. The descending colon appears empty with subjectively thickened wall measuring 0.62 cm and intact wall layering.

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**Pancreas**

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

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**Free Abdomen**

Evaluation of the peritoneal cavity did reveal scant free abdominal fluid in the region of the ascending colon. There are slightly prominent mesenteric lymph nodes visualized in cranial abdomen with pancreaticoduodenal lymph node measuring 0.8 cm in diameter and a cystic lymph node measuring 0.9 cm. The mesentery is generally of normal echogenicity but is slightly increased around the ascending colon.

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**PRIMARY FINDINGS**

- Decreased corticomedullary distinction in both kidneys with mild left sided pyelectasia. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.



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- Isoechoic mass effect associated with the liver. The significance of this lesion is unclear this could represent a prominent regenerative nodule or an early mass lesion. Consider a fine needle aspirate.
- Focal inflammation and discomfort around the ascending colon with subjective thickening of the descending colon. The significance of these findings is unclear correlate with clinical GI signs. Consider the possibility of constipation +/- colitis.

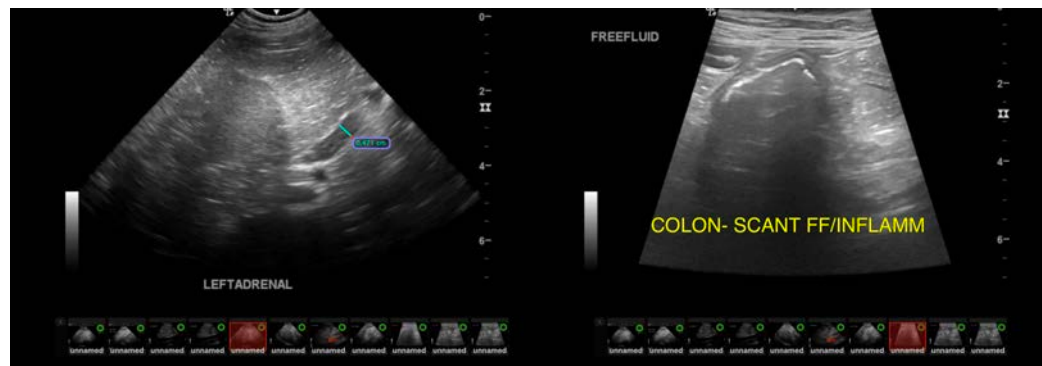
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

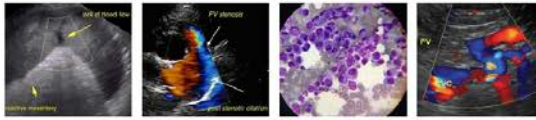
The changes in the kidneys are consistent with chronic progressive renal disease. Your current plan of diuresis, urine analysis, culture and blood pressure evaluation are appropriate. In addition to evaluation of proteinuria and treatment if indicated.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

There is an isoechoic mass effect associated with the liver this could represent a benign or early neoplastic lesion. If possible, consider a fine needle aspirate and continued monitoring with ultrasound. If renal disease stabilizes further evaluation/diagnostics can be considered.

The significance of the colonic lesions described is uncertain correlate this with clinical signs. If the patient is constipated, consider the possibility of stool softeners, and continued monitoring for symptoms of colitis etc. Correlate with abdominal radiographs and reevaluate if symptoms progress.





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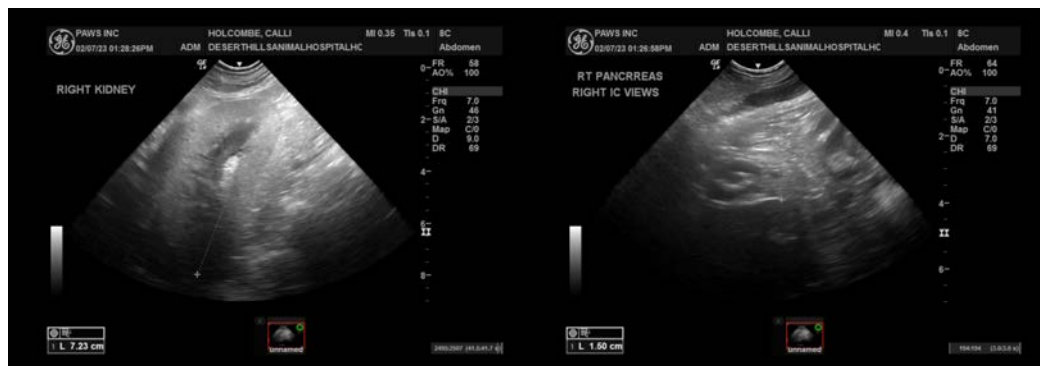
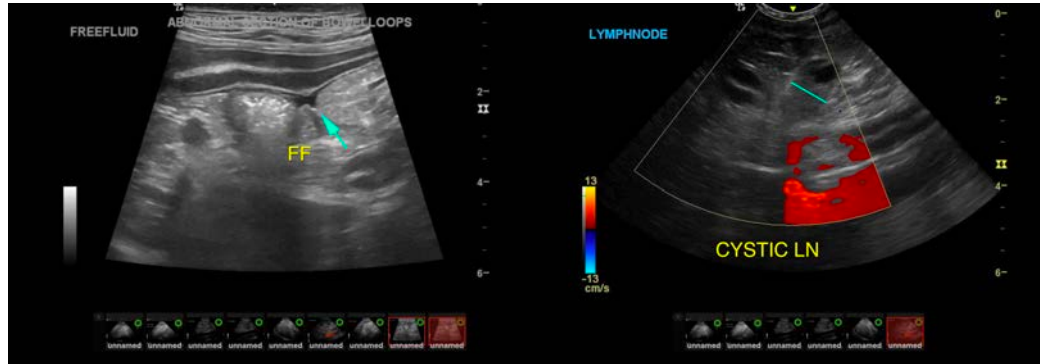
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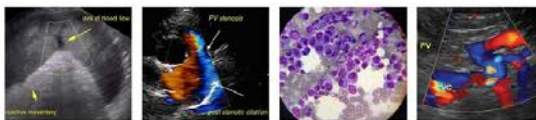
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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