


**PATIENT PRESENTING CLINICAL SIGNS**

Lucy Roberts

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Intact Female

**AGE**

5 Years

**WEIGHT**

25.4 kg

History: Lucy is a 5 yo F/I Retriever who presented for evaluation of ~ 12-24 hours of vomiting and acute lethargy. No Diarrhea has been noted. Client has noticed that she has been losing weight and increasingly hyporexic x 2 weeks. She has always been a picky eater and very lean, however. There are no known ingested noxious, toxic, or foreign substances. Lucy had an estrus cycle ~ 2 months ago. When asked if vaginal discharge has been present, client is uncertain, as Lucy has always licked at her vulva. However, no known urinary incontinence.

Abnormal PE/Chem/CBC/UA Results: Obtunded, painful. MM's are pale pink and slightly delayed CRT, mild ptialism. Tachycardia. Splinting and severe abdominal pain. Thready pulses. Mucopurulent vaginal discharge. Clients authorized ER care at time of triage; 1.) IV catheter placed 2.) Methadone 0.3 mg/kg IV (7.6 mg) 3.) Cerenia 1 mg/kg (25 mg) IV 4.) CBC: Normocytic, normochromic, non-regenerative anemia, HCT: 29% (37-61), RBC: 4.44 M/uL (5.65-8.87), HGB: 10.8 g/dL (13-20); reticulocytes: 4.0 K/uL (10-110) Normal WBC, mild lymphopenia, 910/uL (1050-5100) 5.) CHEM: BUN: 117 mg/dl (7-27) Creat: 8.4 mg/dL (0.5-1.8) PHOS: 10.2 mg/dL (2.5-6.8) K: 3.3 mmol/L (3.5-5.8) CHOL: 414 mg/dL (110-320) 6.) AFAST: A focal region of ascites with mixed echogenic area of consolidation measuring ~ 2 cm x 5 cm, potentially consistent with abscess or mass is noted in the left caudal retroperitoneal region. Upon following this region, it is possible this is the left uterine horn and cystic changes near the ovary. Additional hyperechoic and consolidated changes are appreciated in the region of the R uterine horn. Bilateral kidneys have profound loss of corticomedullary distinction, and irregular serosal surfaces. No obvious FB or SI dilation/perforation identified. Spleen and Liver appear normal. Urinary bladder is small with anechoic urine. Scant ascites. 7.) US-guided FNA of the cystic/anechoic region: sheets of PMN's with both intracellular and free bacteria; both rods and cocci 8.) Sample saved on culturette (sterile) 9.) Norm R bolus 200 mL, then @ 80 mL/hr + 20 mEq/L KCl 10.) UA (cysto): UA (cysto): straw, USG: 1.014, pH: 6.5, proteinuria 500 mg/dL, No significant pyuria, no hematuria, no bacteriuria, no casts or crystals noted 11.) Unasyn 30 mg/kg IV TID (762 mg)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**
**INTERPRETED BY**

 R. McKenzie Daniel,  
 DVM, DABVP  
 (Canine and Feline)

**IMAGING PERFORMED BY**

Patti Mayfield, DVM

**HOSPITAL NAME**

Emergency VH

**REFERRING VET**

Patti Mayfield, DVM

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**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Both kidneys were mildly subnormal in size for this breed. Asymmetrical margination was present. Nonhomogeneous cortical hypertrophy was noted with marked loss of corticomedullary border demarcation and reduced medullary volume. Subjective subnormal vascularity noted. Bilateral pyelectasia was present. The left kidney measured 6.5 cm in length. The right kidney measured 6.7 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.67 cm width at the caudal pole and 0.67 cm width at the cranial pole.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.80 cm width at the caudal pole.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The



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splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver**

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The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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The gallbladder was non distended in size with mild nondependent yet nonorganized gallbladder debris. The cystic duct and common bile ducts were normal without evidence of dilation.

**Gastrointestinal**

**SEX**

Intact Female

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild retained anechoic fluid was present.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

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Normal visible colon wall layers were present with apparent formed feces in lumen.

**Pancreas**

**WEIGHT**

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The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

**Free Abdomen**

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Small pockets of intermittent scant free fluid were present.

**Other**

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The uterine body and left and right uterine horns exhibited prominent size and thickened appearance with multifocal subjective cystic mural changes. The cystic changes were primarily thinly walled, containing anechoic fluid. Uterine body measured 1.6 cm in width. An example of cyst, associated with the uterus measured 1.5 cm in diameter. Subtle evidence of periuterine reactive mesentery was present.

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The left and right ovaries were subjectively visualized, exhibiting suspect cystic changes. The right ovary measured 2.0 cm. The left ovary measured 1.5 cm in diameter, respectively.

No overt lymphadenopathy.

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**ULTRASONOGRAPHIC FINDINGS**

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- Thickened to cystic appearing uterus, suspect concurrent cystic ovaries- cystic endometrial hyperplasia, endometritis with emerging pyometra possible. No evidence of uterine neoplastic criteria, which is thought less likely.

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- Bilateral marked chronic nephropathy with mild pyelectasia- congenital renal dysplasia with potential advanced chronic nonspecific nephritis (i.e., interstitial nephritis, pyelonephritis or other nephropathy). Congenital renal dysplasia is suspected given the young age of the patient.

- Uremic gastritis pattern with mild gastric hypomotility



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- Minor gallbladder debris- incidental and likely secondary to fasting

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Diuresis protocol with monitoring of urine output and body weight, in an attempt to stabilize renal parameters recommended. However, potential for end-stage chronic renal disease or nephropathy possible, given the sonographic presentation of the bilateral kidneys. Prognosis would be dependent upon renal response. Urine culture and sensitivity and baseline UPC levels could be considered for additional renal staging. If renal function can be appropriately stabilized, ovariohysterectomy would be recommended. Renal biopsy would be required for a definitive diagnosis yet may potentially further exasperate renal dysfunction. Very guarded prognosis.

**SEX**

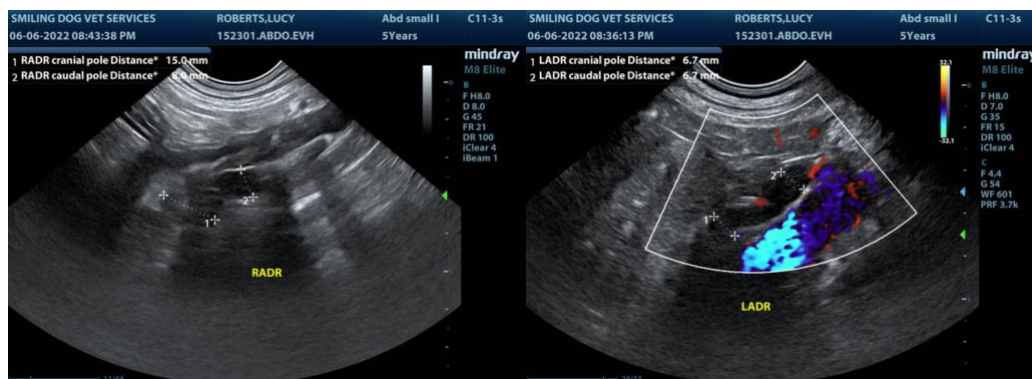
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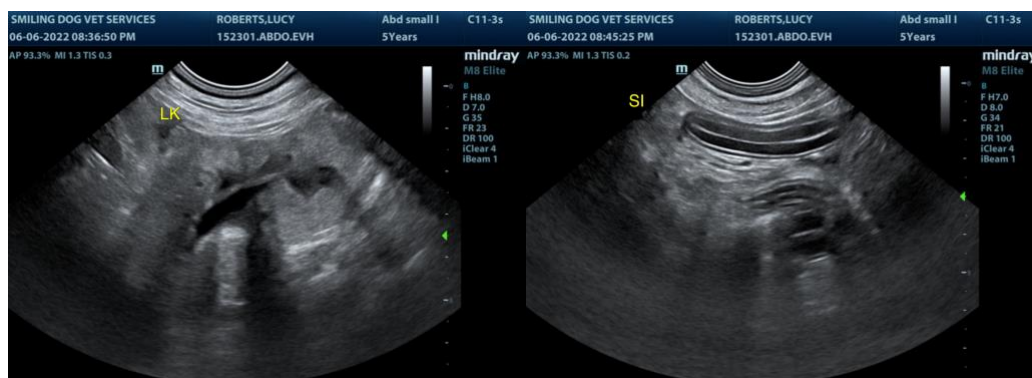
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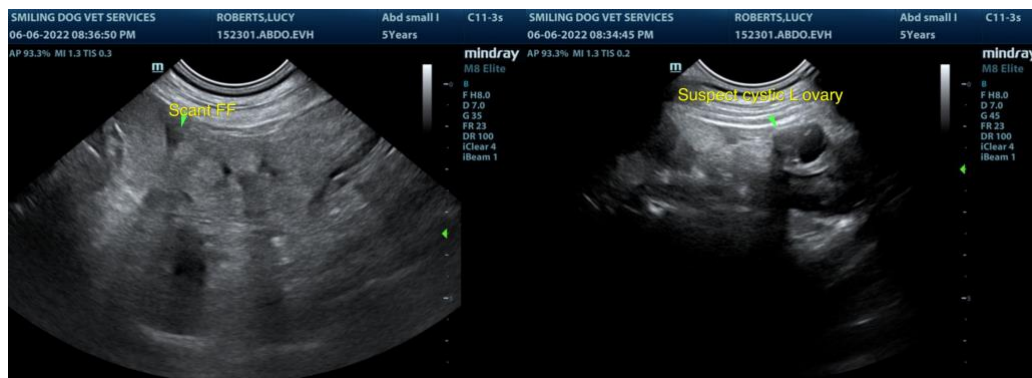
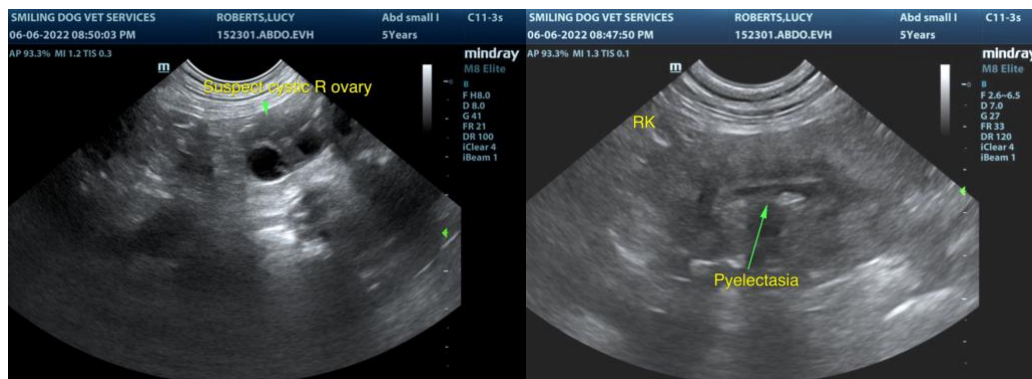
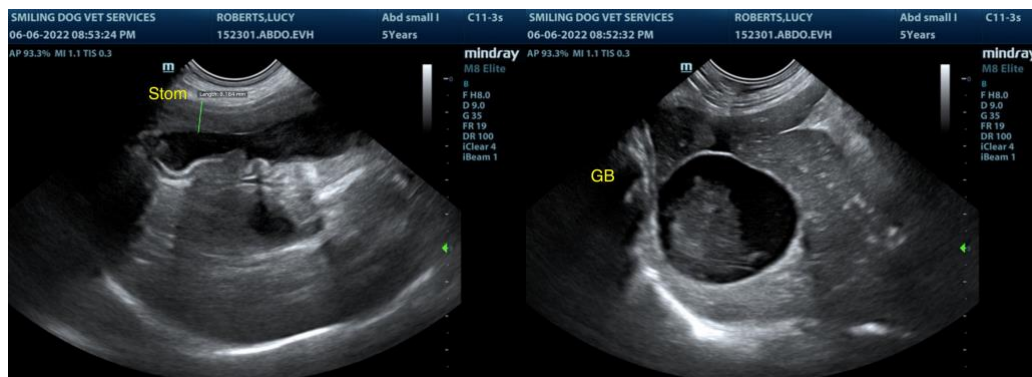
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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