



**PATIENT**

Luna Goldberg

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

3 Years

**WEIGHT**

4.6 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Lindsay Powell

**HOSPITAL NAME**

Hershey AEC

**REFERRING VET**

Dr. Leann Murphy

**INVOICE**

23057

**DATE**

6/25/23

**PRESENTING CLINICAL SIGNS**

History: Diagnosed with renal disease at less than 1 year of age. Renal values have been monitored quarterly with no significant changes. Bloodwork at rdvm in march showed bun: 43 and creat 2.8 Presented to ER for vomiting multiple times in 24 hour period, lethargy and decreased appetite Exam Mild to moderate abdominal discomfort, right kidney palpates small Urine culture pending, hospitalized currently on iv fluids, gastroprotectants and cerenia, started oral veraflox

Abnormal PE/Chem/CBC/UA Results: CBC: PCV 35, suspected nucleated RBCs, otherwise unremarkable Chem: Creat 5.2, BN 73, ALT 288 UA: USG 1.012 (isosthenuria), RBC >50/hpf, WBC 1/hpf Abdominal radiographs, radiologist interpretation (Renal asymmetry with the right being small, and both kidneys being mildly irregularly marginated is consistent with the reported renal disease, Scant effusion/steatitis in the retroperitoneal space and/or adjacent to the kidney, pancreas and spleen on the VD—consider inflammatory effusions such as pyelonephritis or pancreatitis most likely)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder** revealed sand accumulation up to 1.7 cm. The bladder was overdistended with a minor amount of free fluid. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The **left kidney** revealed pericapsular inflammatory pattern. Pyelectasia (0.37 cm) was noted in the left kidney. Slight subcapsular fluid accumulation and peripheral inflammation were noted.

The **right kidney** revealed similar changes as the left kidney. Pyelectasia in the right kidney measured 0.65 cm. Subcapsular fluid accumulation was also noted. The right kidney was subnormal in size, measuring 2.4 cm. Cortical infarcts were noted.

Both kidneys presented moderate degenerative changes.

**Adrenal Glands**

The regions of the **adrenal glands** revealed no evident pathology.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

**Gastrointestinal**



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Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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DSH

**ULTRASONOGRAPHIC FINDINGS**

**SEX**

Spayed Female

- Urinary bladder sand
- Renal dystrophy with pyelectasia and subacute on chronic inflammation pattern with slight pericapsular and subcapsular fluid.

**AGE**

3 Years

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

This type of kidney presentation occurs typically after passage of calculi or post-obstructive scenarios. Given the bladder sand, the patient is likely passing calculi from the kidneys to the bladder or was distally obstructed and now the kidneys have secondary changes to them with infarcts and active inflammation. I recommend 72hr IV fluid protocol, stabilization of the azotemia and eventual cystotomy, sand analysis and culture. I do recommend sonogram just prior to surgery to ensure the sand has not dissolved under medical management given that this is a female. The kidneys appear approximately 40-50% compromised. This patient has likely been undergoing similar episodes in the past.

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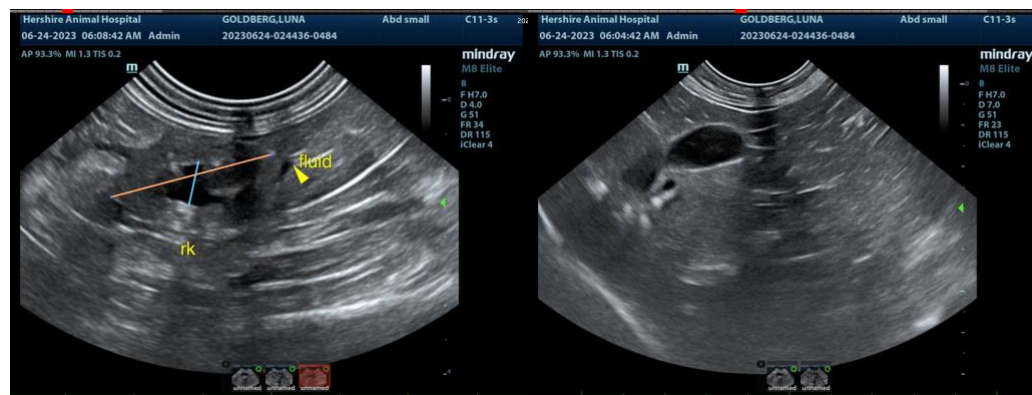
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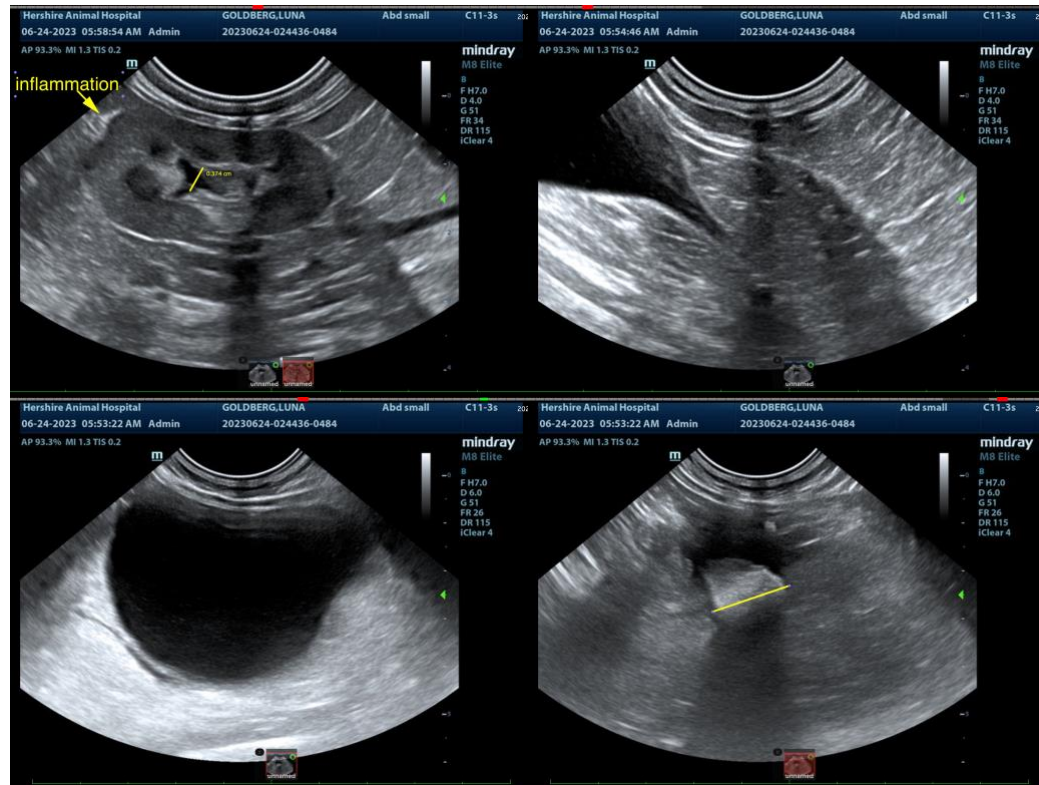
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
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