



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT** Thelma Lang  
**SPECIES** Elevated SDMA, Chronic rhinitis, Chronic kidney disease IRIS stage 2. Left pupil is larger than right. Increase in vomiting, howling, hearing loss, urinating outside litterbox, on dog bed, generally around the house for 2 months. Pancreatitis.

**Feline** Abnormal PE/Chem/CBC/UA Results: Abnormal PE: Left heart base cardiac murmur, I/VI, systolic, left base. Generalized muscle atrophy. Pale pink gums. Small kidneys. Dehydrated. More opacity in left lens.  
**BREED** CHEM/CBC: (8/12/23) Reticulocyte Hemoglobin 14.0 (15.3 - 22.9 pg), WBC 20.9 (3.9 - 19.0 K/μL), Neutrophils 17.577 (2.62 - 15.17 K/μL), Monocytes 0.627 (0.04 - 0.53 K/μL), SDMA 35 (0 - 14 μg/dL),  
**DMH** BUN 41 (16 - 37 mg/dL), Albumin 2.5 (2.6 - 3.9 g/dL), Spec fPL 5.5 (0.0 - 4.4 μg/L). UA: clear urine, SG 1.018, pH 6.0

**SEX** **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Spayed Female

**Urinary System**

**AGE** 16 Years 1 Month  
**WEIGHT** 6.48  
**INTERPRETED BY** Eric Lindquist, DMV  
 DABVP, Cert. IVUSS  
 The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The **kidneys** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. Corticomedullary definition was nebulous and the ratio favored the cortex slightly. The ureters were not visible and assumed to be normal. These changes are most consistent with chronic interstitial nephritis yet infiltrative disease could not be entirely ruled out without biopsy though neoplasia is not suspected. Cortical infarct noted in the cranial pole of the right kidney, stable, no evidence of active inflammation. The right kidney measured 3.15 cm. The left kidney measured 3.24 cm.

**Adrenal Glands**

The **left adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 0.32 cm.

The region of the **right adrenal gland** was unremarkable.

**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 from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of

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Dr. Leon Anderson

**INVOICE**

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Eric Lindquist, DMV

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**IMAGING PERFORMED BY**

Kaitlyn McDaniel

**HOSPITAL NAME**

Elizabeth AH

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congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

**Gastrointestinal**

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.

**Pancreas**

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

**ULTRASONOGRAPHIC FINDINGS**

- Non-specific geriatric abdominal changes with chronic interstitial nephrosis pattern

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

72-hour IV fluid protocol warranted to correct azotemia. GI protectant protocol indicated. No evidence of neoplasia. Prognosis is guarded depending upon response to therapy.





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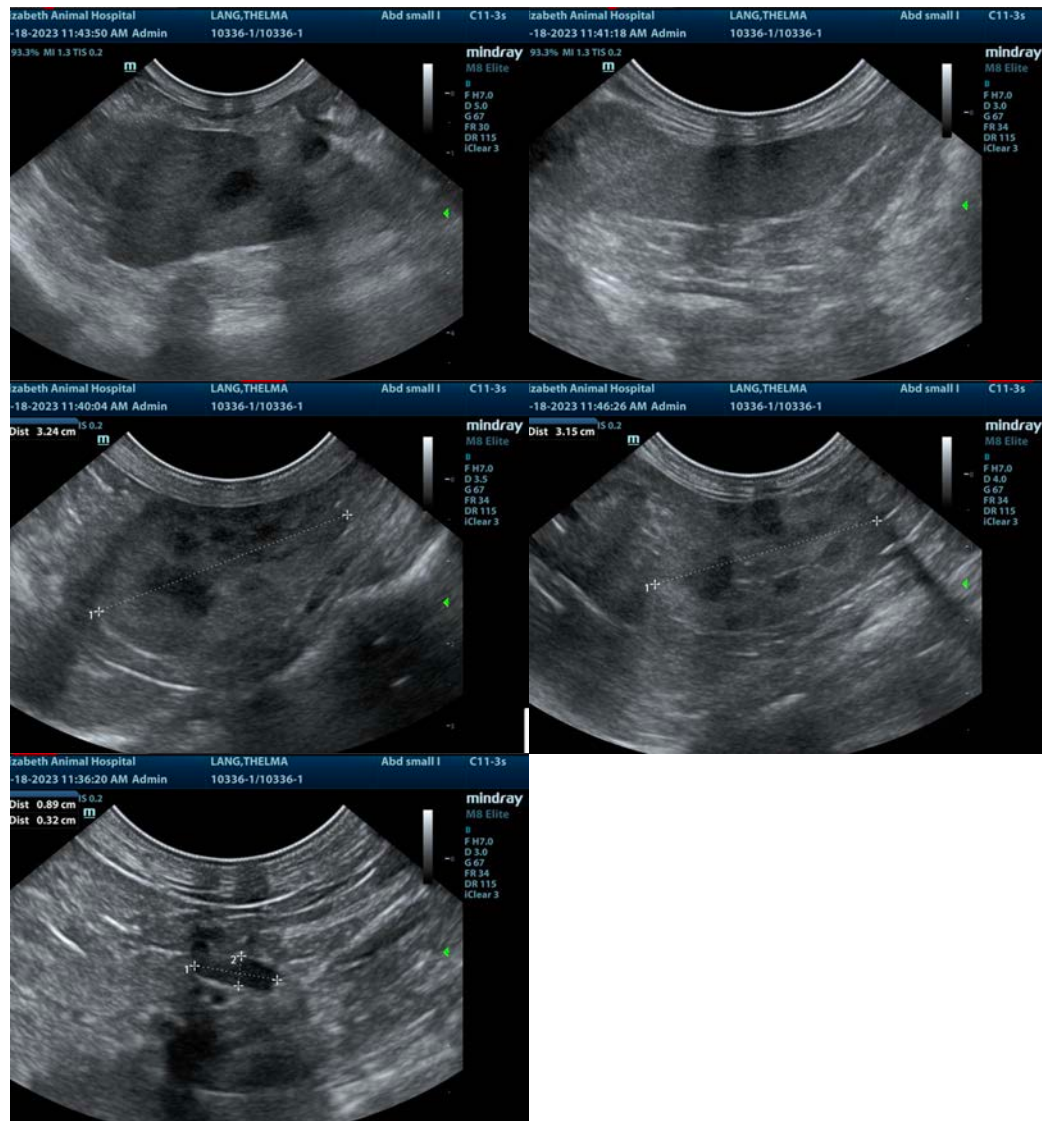
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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