



**PATIENT**

Oreo Metzler

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Neutered Male

**AGE**

24 Months

**WEIGHT**

10.5 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Erin Wicks

**HOSPITAL NAME**

Shores VEC

**REFERRING VET**

Dr. Moser

**INVOICE**

16527

**DATE**

7/8/22

**PRESENTING CLINICAL SIGNS**

History: Presented at our hospital as a transfer from RDVM. O was trying to get P set up for a dental cleaning, but blood work revealed elevated kidney enzymes. O stated P will intermittently eat meals, and was playing normally this morning. Previous Health Concerns: none reported Current Medications: none reported

Abnormal PE/Chem/CBC/UA Results: EPOC: bun 69 high, creat 4.49 high, hct 60 high Rdm Chem/CBC: HGB 20.7; HCT 58.6; BUN 73; CREA 4.2

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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 **kidneys** revealed diffuse hyperechoic cortical thickening and remodeling with slight renal pelvic dilation and slight mineralization. Some level of primary renal dystrophy and secondary degenerative changes are suspected. Renal biopsy would be necessary for further definition. However, the primary pattern is most consistent with interstitial nephrosis, which is nonspecific and may be induced by multiple factors, including leptospirosis or toxin exposure or other infectious agents. The right kidney measured 4.44 cm. The left kidney measured 3.84 cm.

**Adrenal Glands**

Both **adrenal glands** were 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 2.16 cm x 0.39 cm at the cranial pole and 0.44 cm at the caudal pole.

**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**

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



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demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

**Pancreas**

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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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Shih Tzu

**ULTRASONOGRAPHIC FINDINGS**

- Chronic interstitial nephrosis pattern, possible underlying primary renal dysplasia

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The kidneys are subjectively near end-stage. Renal biopsy is necessary for further definition. Prognosis is guarded to poor long-term depending upon response to therapy.

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For an additional charge, internal medicine consult can be utilized through SonoPath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

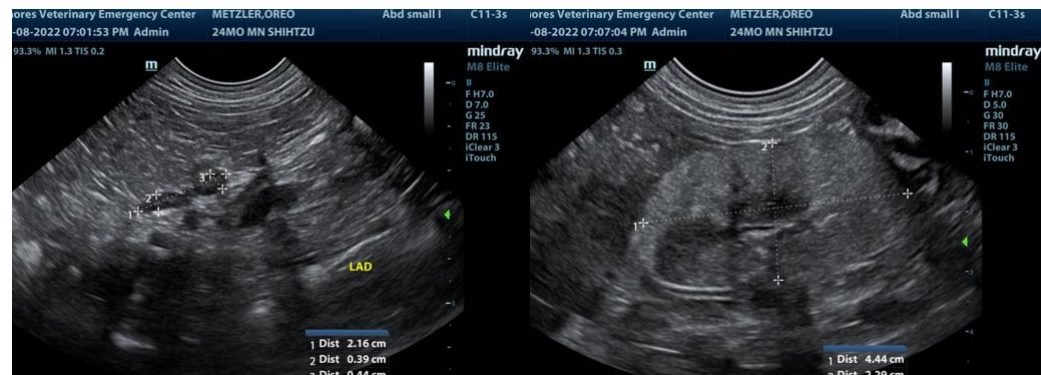
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One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

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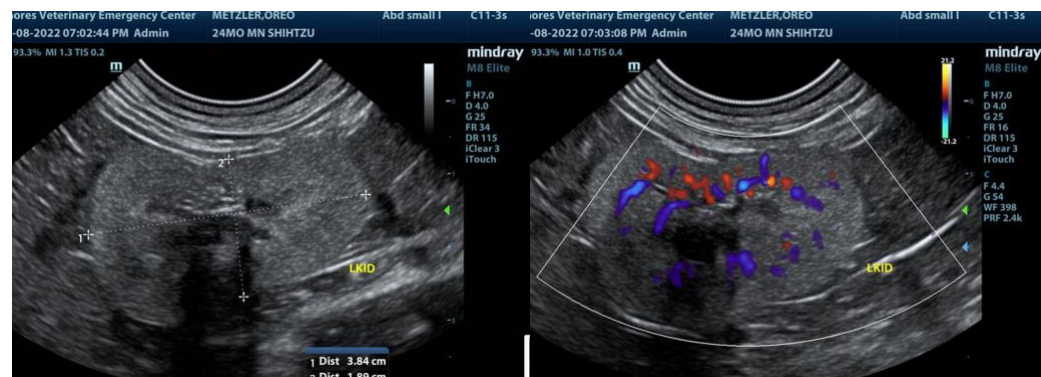


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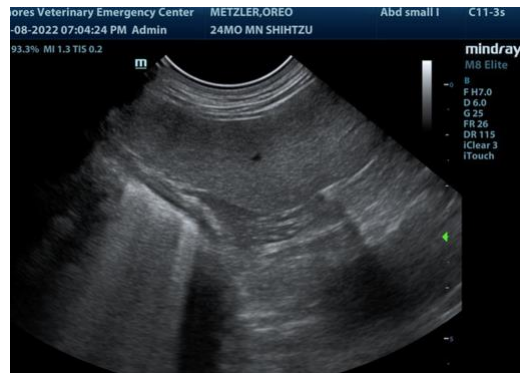
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
info@SonoPath.com