



**PATIENT**

Finley Varner

**SPECIES**

Canine

**BREED**

Mastiff Cross

**SEX**

Spayed female

**AGE**

4 years

**WEIGHT**

29.4 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Erin Wicks

**HOSPITAL NAME**

Shores VEC

**REFERRING VET**

Dr. Slenbaker

**INVOICE**

32102

**DATE**

8/3/22

**PRESENTING CLINICAL SIGNS**

History: Presented at our hospital for not normally a nervous pee- just started from when a puppy, sensitive stomach normally vomits once every 2 weeks but now vomiting more, past 3 weeks vomiting more, O thought P was getting into deer food in neighbors yard, past 2 months only eating 1 meal a day, yesterday started peeing everywhere no bladder control at all, flinching, legs shaking- mostly back, standing up and falling over, sent here because of bloodwork looks like kidney failure Previous Health Concerns: urinary incontinence (leaks) Current Medications: proin, omeprazole- 6:30am, antibiotic shot (polflex), Cerenia, famotidine  
Abnormal PE/Chem/CBC/UA Results: Abdominal: tense on palpation 8/2 Bloodwork: T4 0.7 L, RBC 3.8 L, Hgb 10.8 L, HCT 31%L, MCV 82 H, MCH 28.5 H, PMN 57% L, Eos 13% H, BUN 114 H, Creat 7 H, Phosphorus 7 H, K+ 5.6 H, Na/K ratio 26 Holly Pike 8/2 UA: 1.013, 2+ protein, 2-3 WBC/hpf EPOC: BUN 102 H, Creat 6.75 H, HCT 28% L Cortisol: 5.9 PCV/TP: 29/7.2 Lepto witness test: negative

**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 was noted. Ureteral papillae were normal.

The **kidneys** presented a relatively uniform cortical hyperechogenicity when compared to the renal medulla, spleen and liver. No overt masses were noted. There was loss of corticomedullary definition noted in both kidneys. 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. Occasional cortical cyst was noted in the kidneys. The right kidney measured 6.1 cm. The left kidney measured 5.67 cm. Blood flow to the kidneys appeared to be adequate on color flow assessment.

**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 0.5 cm.

**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 was noted.



**PATIENT**

*Liver*

Finley Varner

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.

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**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.

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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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**ULTRASONOGRAPHIC FINDINGS**

**INTERPRETED BY**

Chronic interstitial nephrosis pattern.

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

Acute on chronic renal failure. Primary renal dysplasia.

**IMAGING PERFORMED BY**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Renal biopsy would be necessary for further definition. There is a potential of primary renal dysplasia. Subjectively the kidneys appeared near end stage. Underlying inciting cause can be many such as toxin exposure, infectious agents and immune mediated disease as well as primary dysplasia. 72-hour IV fluid protocol and treatment for infectious agents, blood pressure measurements and GI protectants are all indicated.

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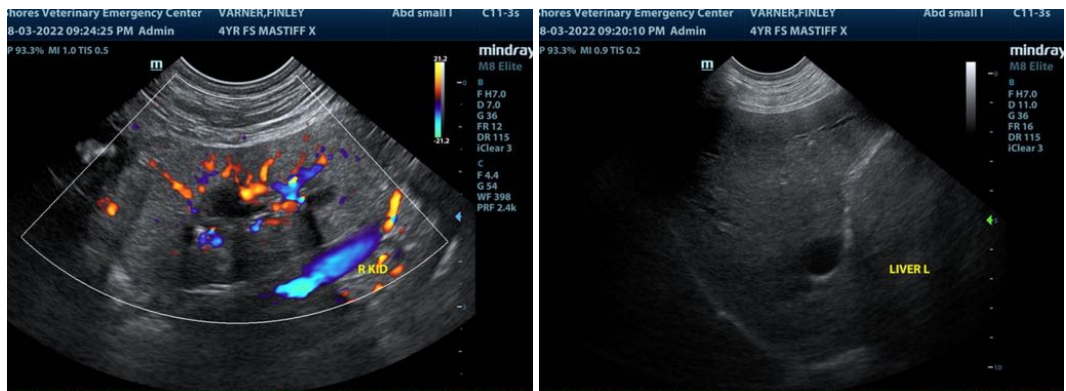
Dr. Slenbaker

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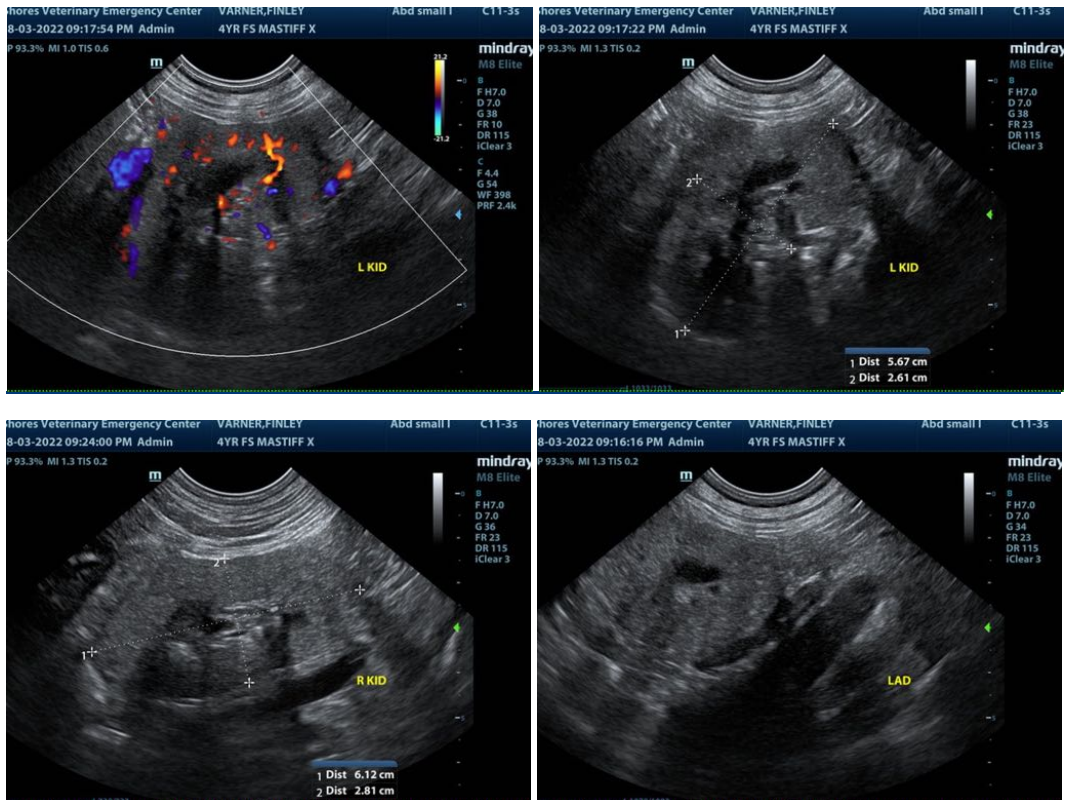
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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**  
info@SonoPath.com