



**PATIENT**

Hines Rhan

**SPECIES**

Canine

**BREED**

JRT Mix

**SEX**

Neutered Male

**AGE**

14 Years

**WEIGHT**

12.4 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Erin Wicks

**HOSPITAL NAME**

Shores VEC

**REFERRING VET**

Dr. Law

**INVOICE**

17491

**DATE**

9/30/22

**PRESENTING CLINICAL SIGNS**

History: Presented at our hospital for Monday started now eating well, went to RDVM on 9/26 and placed on cerenia and entyce. Still not eating well so went back to RDVM today and did bloodwork and is in kidney failure Previous Health Concerns: diabetic since 2018 and arthritis and blind Current Medications: nov N 9 units BID, gabapentin 50mg BID, cerenia 16mg 1 SID Appetite/When did they eat last: ate today but not eating well

Abnormal PE/Chem/CBC/UA Results: Rdm bloodwork: HGB 19.2; MCV 76.5; BUN > 140; CREA 2.6; Pi 7.8; Ca 13.1; TP 7.8; ALB 4.2; GLU 259; CHOL > 450; ALT 141; ALP 747; GGT 23; tbili 1.1; Na 139; K 3.0

**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 pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The **kidneys** revealed moderate degenerative changes with interstitial nephrosis pattern with cortical cysts and remodeling. Pyelectasia was noted. The right kidney measured 6.57 cm. The left kidney measured 5.26 cm.

**Adrenal Glands**

The **left adrenal gland** was significantly enlarged, nodular, expansive and irregular. The left adrenal gland measured 3.53 cm x 1.57 cm at the cranial pole and 1.17 cm at the caudal pole.

The **right adrenal gland** measured the upper limits of normal size, measuring 1.2 cm at the cranial pole and 0.8 cm at the caudal pole.

**Spleen**

The **spleen** was normal size and relatively normal contour with multifocal hyperechoic areas of mineralization. This is a benign change; however, can be related to Cushing's disease or other endocrinopathies.

**Liver**

The **liver** was uniformly swollen. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia. This is a mild change.

**Gastrointestinal**

The **gastrointestinal tract** presented considerable gastric artifact due to the presence of ingesta. This did not permit thorough evaluation of portions of the gastric and upper intestinal structure. No overt abnormality was seen in the visualized tissue, however. This is consistent with a post-prandial presentation within a few hours of mealtime. If the prandial temporal interval does not fit the case



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history, and the patient presents a history of post-prandial vomiting, this could indicate a delayed upper gastrointestinal outflow due to primary or secondary pyloric hypertrophy, upper GI infiltrative disease, motor deficits, or a non-visualized foreign body. A prudent approach would be to rescan this patient at 24 hour NPO status to further review the non-visible regions if stomach primarily as well as assess any delayed outflow issue.

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## 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.

## SEX

Neutered Male

- Enlarged adrenals, particularly the left, concern for pheochromocytoma versus carcinoma
- Acute on chronic renal failure
- Unremarkable liver with minor excessive gallbladder debris
- Full stomach
- Mineralized spleen

## AGE

14 Years

## ULTRASONOGRAPHIC FINDINGS

### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## WEIGHT

12.4 kg

Leptospirosis titers is warranted. Serial blood pressures warranted. If hypertension is present, then urine catecholamine is indicated owing to the left adrenal. If the patient appears Cushingoid, the argument could be made both for pituitary dependent or left adrenal dependent Cushings. Prognosis is very guarded. Aggressive treatment for renal failure is indicated with further diagnostics necessary. FNA of the liver is indicated, if the bilirubin elevation is persistent.

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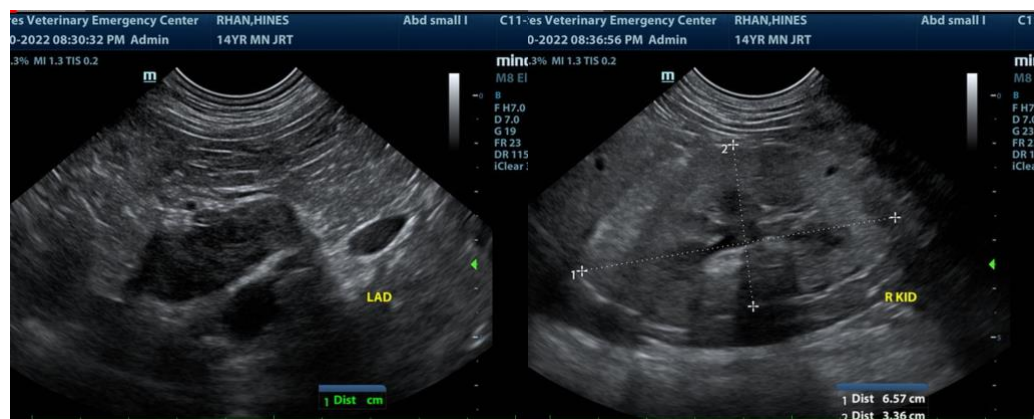
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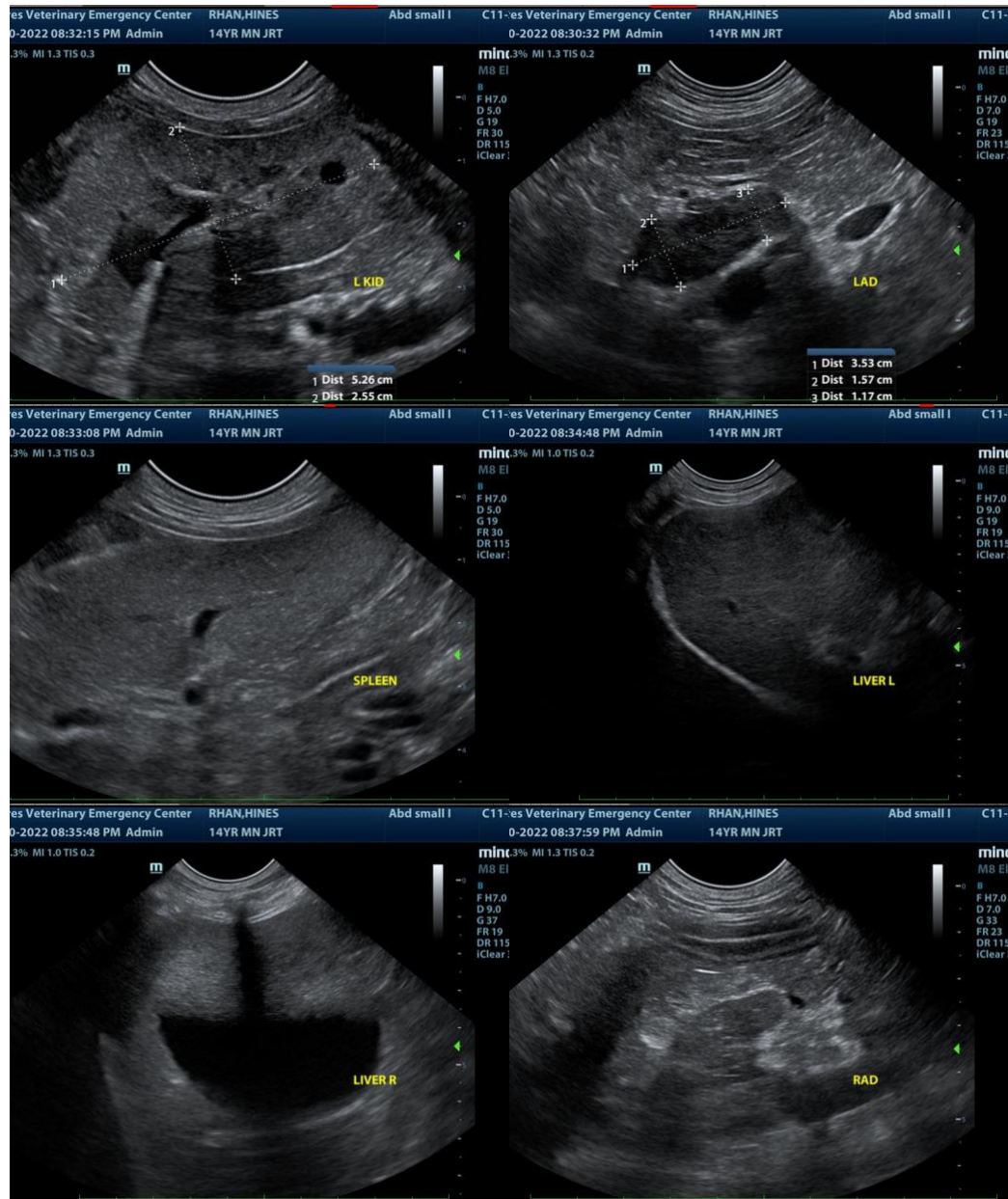
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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