



PATIENT

Hudson Ball

SPECIES

Feline

BREED

Domestic Longhair

SEX

Neutered male

AGE

17 years

WEIGHT

9.4 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Edgewood AC

REFERRING VET

Dr. Kimball

DATE

12/2/21

Invoice

94292

PRESENTING CLINICAL SIGNS

History: Early CRF detected about 1yr ago. Currently losing weight. Two episodes of nystagmus last week. No other abnormalities Current Medications He was taking 12ng calcitriol q24h. Owner stopped after nystagmus noted
Abnormal PE/Chem/CBC/UA Results: BUN 35, Creatinine- 2.2, Calcium- 11.8, ionized Calcium-1.42

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. 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. Slight pyelectasia was noted. The left kidney was subnormal in size and measured 2.3 cm. Blood flow to the kidneys appeared to be subnormal on color flow assessment. The right kidney measured 2.6 cm. Blood flow was subnormal.

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 0.38 cm. The right adrenal gland measured 0.28 cm.

Spleen

The **spleen** in this patient was uniform, yet volume contracted. Hydration status should be assessed.

Liver

The **liver** revealed multi-focal, lobar biliary calculi. This occupied the majority of the liver. Some biliary ectasia was noted within the hepatic parenchyma owing to regional lobar congestion. Coarse architecture was noted in the liver with increased portal markings. The gallbladder was mildly over distended with dependent sand. The common bile duct was dilated as was the pancreatic duct. The last 1.0 cm of the common bile duct at the level of the pancreatic duct revealed sand accumulation just prior to the duodenal papilla. The duodenal papilla was visualized. There was no overt calculus obstruction at this time. However, passage of calculi is likely a historical issue in this patient.



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Gastrointestinal

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The **gastrointestinal tract** revealed minor variable thickening and echogenic submucosal changes most consistent with low grade end result of chronic GI disease such as IBD and may be related to malassimilation of nutrients if any weight loss is present. No obvious neoplastic patterns were noted and luminal content as unremarkable.

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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 subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC FINDINGS

Chronic degenerative renal changes with multi-focal, lobar biliary calculi and chronic common bile duct dilation. There was no overt obstruction was noted at this time.

Gallbladder sand.

End stage interstitial nephrosis renal pattern. Some prerenal disease may be contributing to the current presentation given the pancreatic and hepatic presentation.

Age related pancreatic changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

72 hour IV fluid protocol and assessment for any pain on subxiphoid palpation is recommended to assess for concurrent pancreatic discomfort. If the patient can be stabilized from an azotemia standpoint surgical intervention with common bile duct lavage would be optimal; however, it is debatable in intervention given the chronic renal changes. Blood pressure measurements should be assessed as underlying hypertension may be a secondary sequelae from the chronic renal disease.

For an additional charge an internal medicine consult can be utilized through [Sonopath.com](http://sonopath.com). You can select the internal medicine drop down at <http://spa.sonopath.com/>.

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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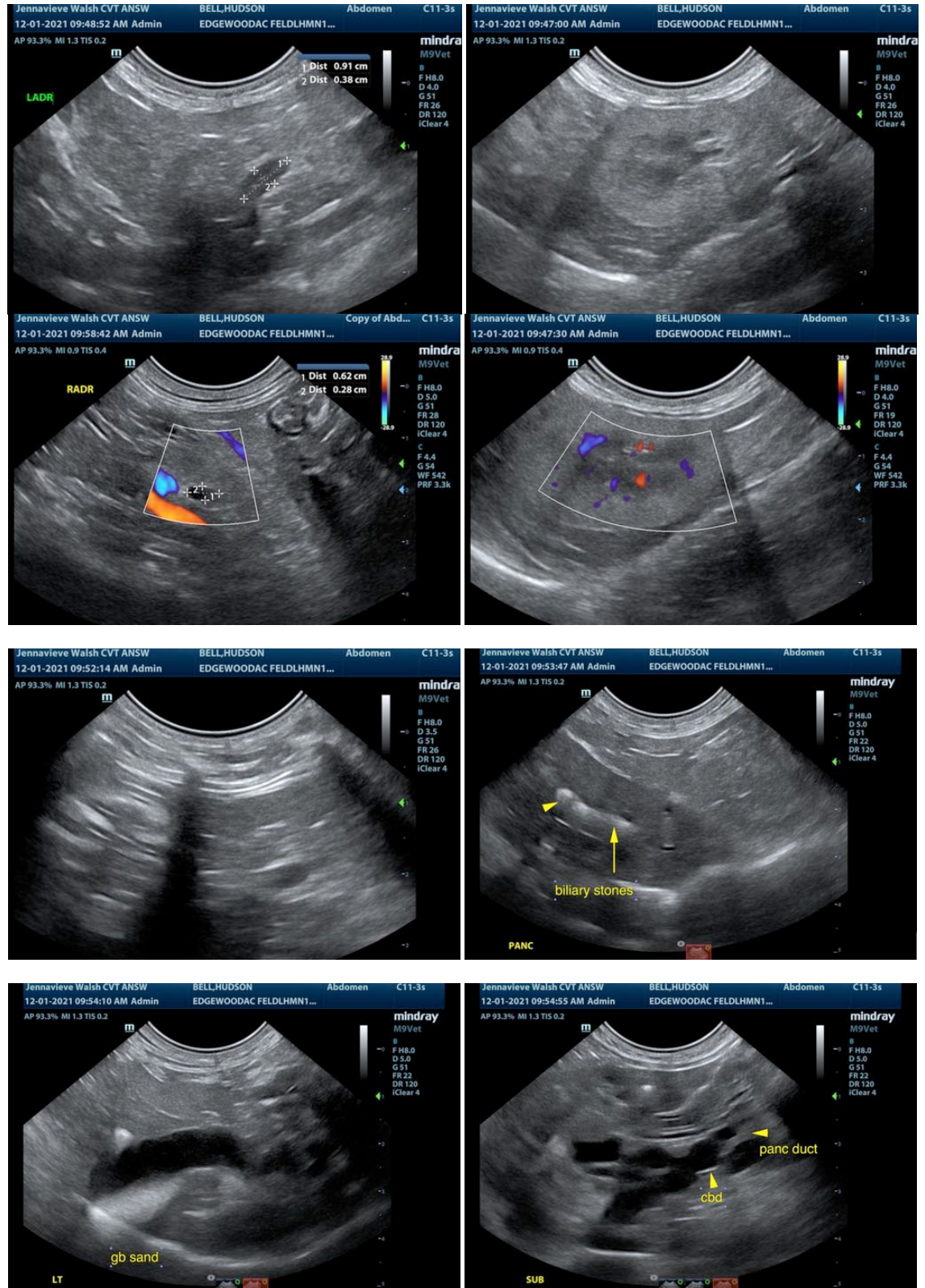
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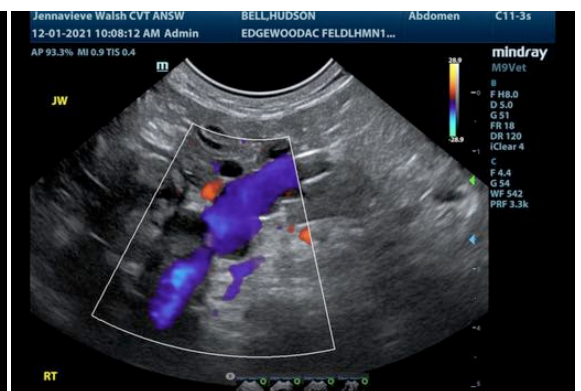
Dr. Kimball

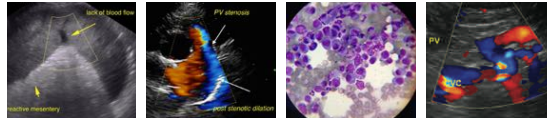
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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