



PATIENT

Kiwi Renzi

SPECIES

Canine

BREED

Papillion

SEX

Spayed Female

AGE

9 years

WEIGHT

4 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Carver

HOSPITAL NAME

Animal Emergency
Hospital Volusia

REFERRING VET

Dr. Carver

INVOICE

30839

DATE

6/6/22

PRESENTING CLINICAL SIGNS

History: Patient presented for V+ for the last few days and now V+ blood. P in hypovolemic shock on presentation. Severe azotemia, severe hypocalcemia (iCa = 0.4, BUN 384, Creat 15.6, P 46.2), liver values normal other than mildly elevated T.bili (1.5). CBC - neutropenia, hemoconcentration. U/A pending. CPL abnormal.

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** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex. The left kidney revealed slight pyelectasia. Both kidneys measured 4.5 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 right adrenal gland measured 0.8 cm at the cranial pole and 0.6 cm at the caudal pole. 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.

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 congestion was noted. The gallbladder was over distended with suspended, striating bile. Some biliary striations were mobile. However, this is most consistent with gallbladder mucocele.



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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. 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.

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ULTRASONOGRAPHIC FINDINGS

Age related renal and hepatic changes with gallbladder mucocele.

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Age related pancreatic changes, moderate.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of azotemia is unclear. Gallbladder mucocele could be responsible for the bilirubin elevations. However, it is odd that other liver enzymes are not elevated. Toxin exposure, Leptospirosis or similar should be considered. Subjectively the kidneys do not appear end stage. 72 hour IV fluid protocol, Ampicillin, Metronidazole and nutraceuticals as well as GI protectants are all indicated. Reassessment of the clinical status is recommended. Leptospirosis titers are indicated along with assessment for renal toxin. The bilirubin may be artifactual even though mucocele formation is evident. Ursodiol therapy is warranted. Recheck sonogram is recommended if the patient is able to overcome this immediate presentation. A recheck sonogram is recommended in a week. Guarded prognosis.

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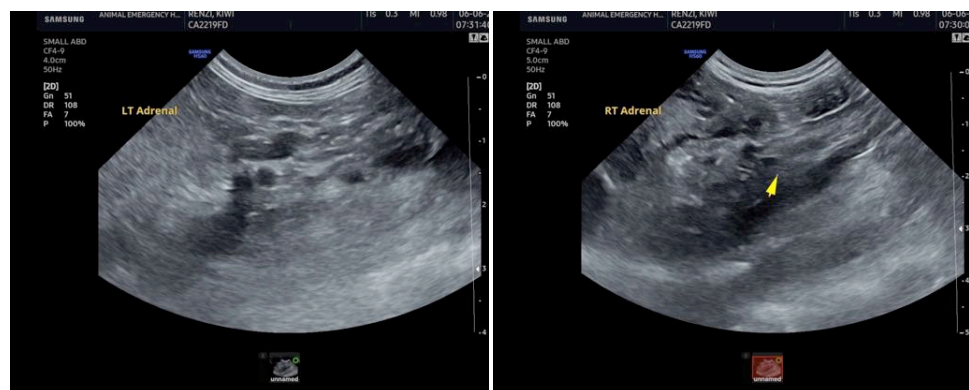
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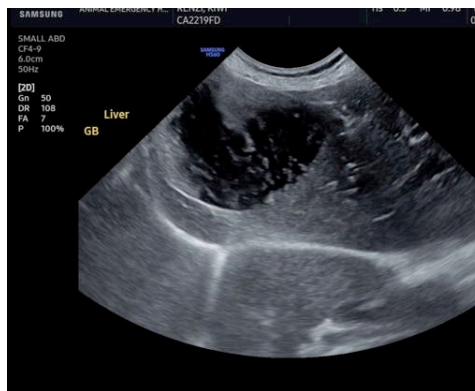
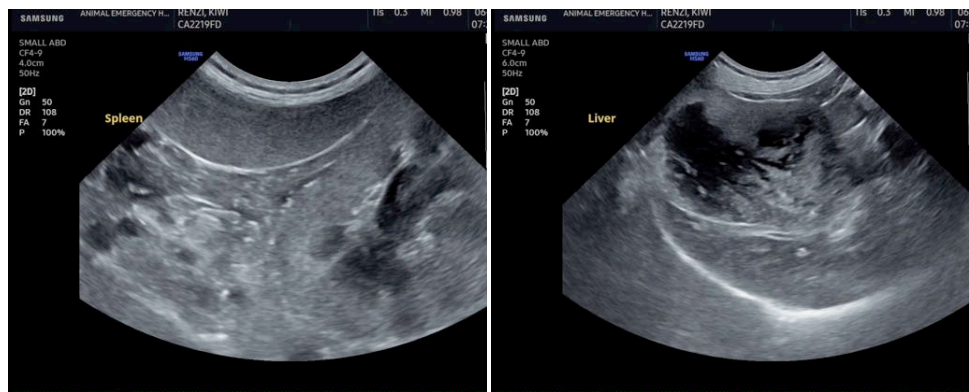
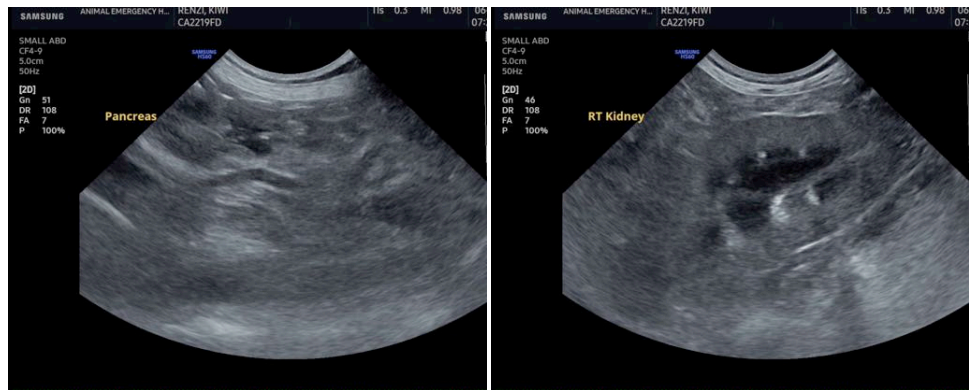
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.



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