

**PATIENT**

Rice Aoude

SPECIES

Canine

BREED

Sheltie

SEX

MN

AGE

13 yr

WEIGHT

25 lb

INTERPRETED BYR. McKenzie Daniel,
DVM, DABVP (Canine
and Feline)**IMAGING
PERFORMED BY**
Amy Mayhew LVT**HOSPITAL NAME**

SVS Imaging Michigan

REFERRING VETWixom Family Pet
Practice**INVOICE**

10698ag

DATE

06/01/2022

PRESENTING CLINICAL SIGNS

History: Current Medications: Pimobendan 5mg PO BID; Enalapril 5mg PO BID; Denamarin 225mg SID PO; Deramaxx 5mg PO SID; gave Maropitant injection, cefovecin injection and SQ fluids, added in Entyce and Epakitin. Patient History: Not eating for 3 days, was vomiting food and now is just bile. Had diarrhea about a week ago, resolved with a bland diet. Lethargic, acts like he doesn't feel good. Resting respiratory rate is normal at home per owner. Elevated ALT, ALP and AST that past couple of years. Mitral and tricuspid chronic valvular degeneration diagnosed about 6 months ago.

Abnormal PE/Chem/CBC/UA Results: 7-8% dehydrated, uremic odor to breath, discomfort on cranial abdominal palpation but no distension or masses palpated. Grade 3-4/6 right and left sided heart murmur. Moderately firm subcutaneous mass right flank, unchanged per owner. Abnormal Blood and urine results: severe azotemia, BUN-130.9, Creat 3.6, PH 11.5; hepatopathy progressing, ALT 579, ALP >993, AST 74, GGT 16, Tbil 0.9, T4 low-0.65 (likely secondary). UA-USG 1.015, pyuria and cocci bacteruria **please see attached previous AUS, echo, and BW

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 5 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with mild particulate sediment which may indicate minor cellular debris/protein or crystalline debris or mucus. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.72 cm in diameter.

The area of the aortic trifurcation was free of pathology.

A visualized medial iliac lymph node exhibited normal width: length ratio and isoechoic parenchyma compared to adjacent omentum measuring 0.5 cm in diameter.

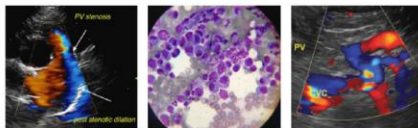
Normal renal size with asymmetrical margination was present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomedullary distinction was also present. Bilateral mild pyelectasia was observed. Small cortical cyst and pinpoint medullary mineral were observed. An example of left kidney cortical cyst measured 0.55 cm in diameter. The renal medullary volume was subjectively reduced. The left kidney measured 5.2 cm in length. The right kidney measured 5.6 cm in length.

Adrenal Glands

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.61 cm width in the cranial pole and 0.61 cm width in the caudal pole. The right adrenal gland measured 0.72 cm width in the cranial pole and 0.72 cm width in the caudal pole.

Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic

**PATIENT**

Rice Aoude

vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

SPECIES

Canine

Liver/ Gallbladder

The liver was enlarged exhibiting nonhomogeneous parenchyma with moderate coarse echotexture. Areas of suspected minor biliary tree dilation were present. No hepatic masses or nodules were noted.

BREED

Sheltie

The gallbladder was moderate to significantly distended in size with echogenic thickening of the gallbladder wall. There was biliary sludge that appeared to be non-mobile and organized. A stellate pattern to the organized biliary sludge was present. Evidence of mild pericholecystic omental inflammation was present. No evidence of pericholecystic free fluid was noted.

SEX

MN

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall measured 0.42 cm in width.

AGE

13 yr

The small intestine presented intact wall layering with segmental mildly prominent wall layering owing to segmental propensity for mildly prominent duodenojejunal mucosa. Minor duodenal corrugation was present in the upper to mid duodenum. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material. The duodenum wall measured 0.45 cm in width. The jejunum wall measured 0.43 cm in width.

WEIGHT

25 lb

Normal visible colon wall layers were present with apparent formed feces in lumen.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP (Canine
and Feline)

Pancreas

The pancreas presented mildly prominent in size with areas of mild capsule asymmetry. Heterogeneous to subtly hypoechoic parenchyma compared to the adjacent omental fat was noted.

**IMAGING
PERFORMED BY**
 Amy Mayhew LVT
Free Abdomen

A small pocket of scant free fluid noted adjacent to the lateral spleen. A probable focal prominent to mildly nonhomogeneous hepatic lymph node adjacent to the portal vein and dorsal to the right pancreatic limb was observed measuring 2.0 cm x 1.5 cm.

HOSPITAL NAME

SVS Imaging Michigan

ULTRASONOGRAPHIC FINDINGS**REFERRING VET**

Wixom Family Pet
Practice

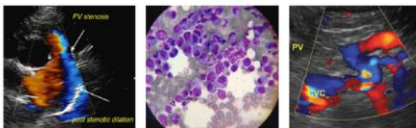
- Acute on chronic hepatopathy with probable minor areas of biliary tree dilation
- Mature gallbladder mucocele with mild peripheral inflammation
- Bilateral chronic nephropathy with cortical cysts
- Gastroenteritis pattern with mild upper to mid duodenal corrugation
- Heterogeneous to mildly hypoechoic pancreas-possible low grade to chronic pancreatitis vs age/patient variant
- Probable focal hepatic lymphadenopathy-hyperplasia or reactive lymphadenitis suspected. Hepatic lymphatic neoplastic criteria is considered less likely
- Mild urinary bladder sediment

INVOICE

10698ag

DATE

06/01/2022



PATIENT

Rice Aoude

SPECIES

Canine

BREED

Sheltie

SEX

MN

AGE

13 yr

WEIGHT

25 lb

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP (Canine
and Feline)

**IMAGING
PERFORMED BY**
Amy Mayhew LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

Wixom Family Pet
Practice

INVOICE

10698ag

DATE

06/01/2022

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

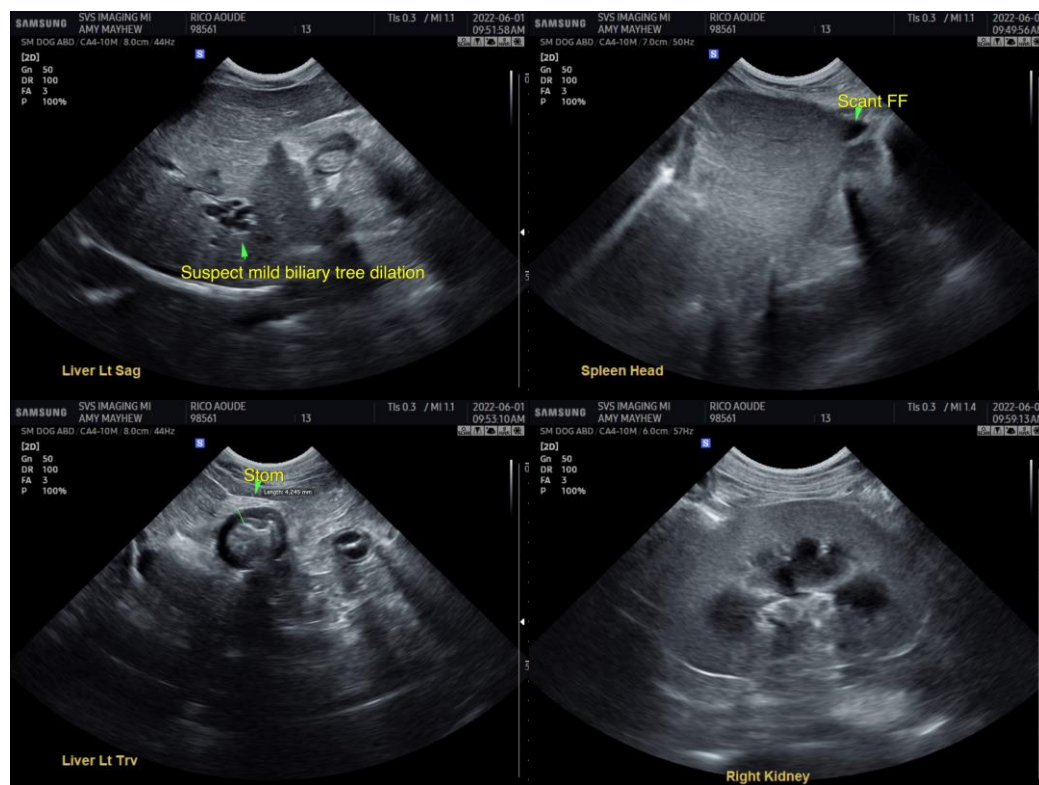
This is a complicated case.

Subjectively, the kidneys did not appear to be end stage with potential considerations including age related chronic renal disease, nonspecific acute on chronic nephritis or other nephropathy. Contributing factors to the patient's clinical signs may include the mature gallbladder mucocele with evidence of mild peripheral inflammation, chronic renal disease and underlying GI inflammation with potential for mild to low grade pancreatitis.

Hospitalization with appropriate diuresis protocol with monitoring of body weight, urine output and renal response is suggested with as needed GI and hepatic support. Urine C/S on sterile urine sample is recommended. If azotemia can be stabilized, cholecystectomy with hepatic biopsies assuming normal clotting status and no pathology on three view chest radiographs is likely indicated. Medical therapy for the gallbladder mucocele is suspected to be unrewarding.

A complicating factor regarding IVF administration may be the patient's cardiac disease and should be considered during treatment. If surgery is elected the following anesthetic protocol is suggested. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

A very guarded prognosis is indicated for this patient.





PATIENT

Rice Aoude

SPECIES

Canine

BREED

Sheltie

SEX

MN

AGE

13 yr

WEIGHT

25 lb

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Amy Mayhew LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

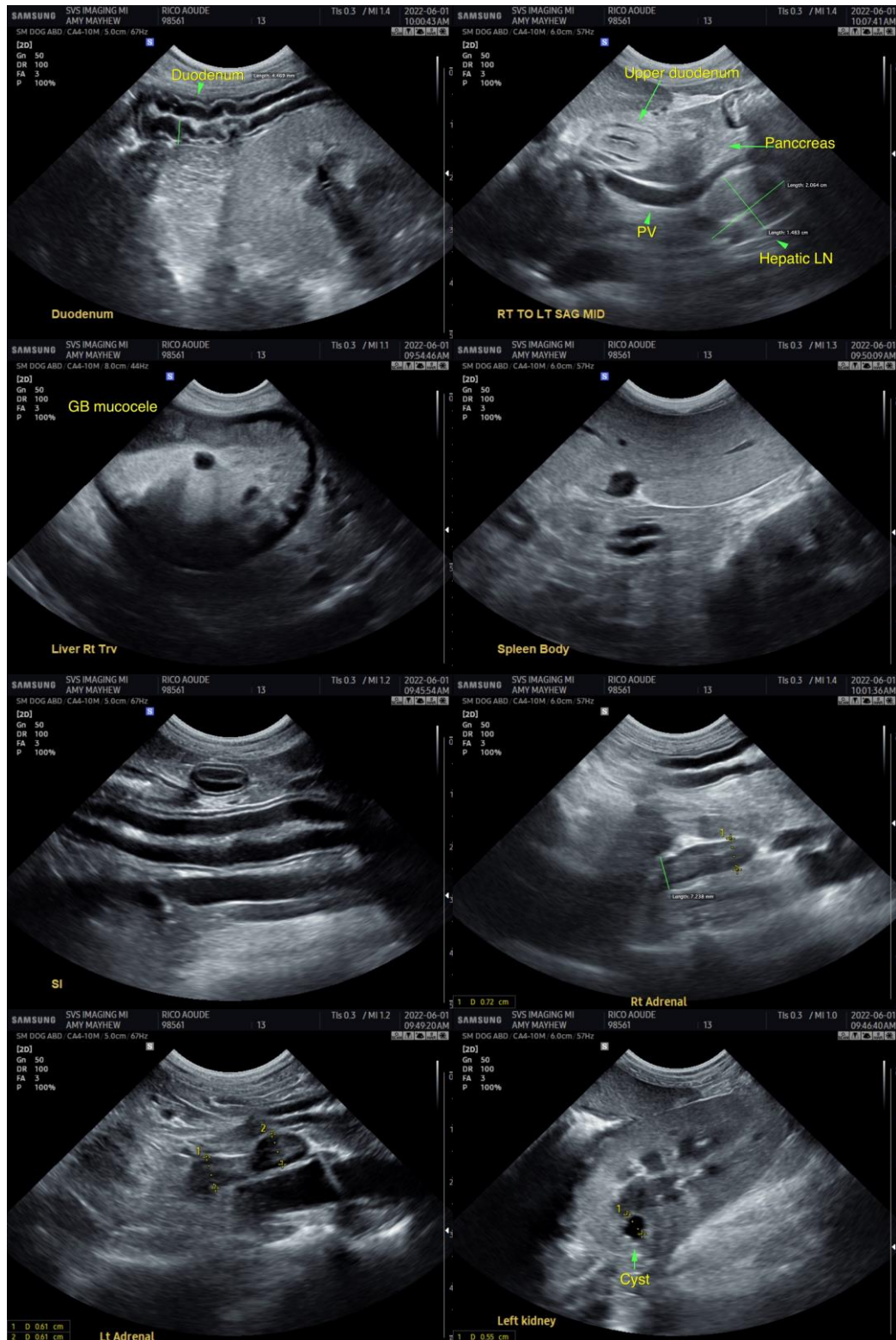
Wixom Family Pet Practice

INVOICE

10698ag

DATE

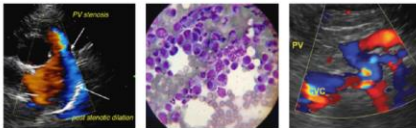
06/01/2022



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.

IMAGING PERFORMED BY

SVS Mobile Imaging MI 734-637-7711
svsimagingmi@gmail.com



EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Rice Aoude

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.

SPECIES

Canine

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com

BREED

Sheltie

SEX

MN

AGE

13 yr

WEIGHT

25 lb

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP (Canine
and Feline)

**IMAGING
PERFORMED BY**
Amy Mayhew LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

Wixom Family Pet
Practice

INVOICE

10698ag

DATE

06/01/2022