

**PATIENT**

Simba Budelier

**SPECIES**

Canine

**BREED**

Pomeranian/mix

**SEX**

MN

**AGE**

10 years

**WEIGHT**

19.8 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kim Liedberg

**HOSPITAL NAME**

SVS Imaging WI

**REFERRING VET**

Dr. Bloss

**INVOICE**

13635

**DATE**

4/7/22

**PRESENTING CLINICAL SIGNS**

Hx of eosinophilic pneumonitis controlled with SID fluticasone inhaler and diabetes. Small group of stones in bladder. 1 week history of vomiting/diarrhea. Hospitalized on IV fluids, cefazolin, metronidazole, sucralfate, cerenia, ondanteron for 3 days. Vomiting has resolved but diarrhea still present. Possible R adrenal mass seen on in house ultrasound.  
Abnormal PE/Chem/CBC/UA Results: CBC/profile/UA WNL ALB 2.1 Ca 8.7 ALK 271 Glu 412

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder was normal in size and tone containing primarily anechoic urine with minor nonobstructive mineral primarily in the area of the urinary bladder neck and potential mildly in the proximal urethra. No evidence of inflammatory or neoplastic criteria was noted. The urethra was normal in structure and tone to a depth of 2.0 cm.

No overt pathology was noted in the area of the residual prostate.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Focal areas of nonobstructive medullary mineral were present in both kidneys. A small cortical cyst was present in the right kidney. No evidence of pelvic dilation was present. The left kidney measured 4.7 cm in length. The right kidney measured 5.6 cm in length.

**Adrenal Glands**

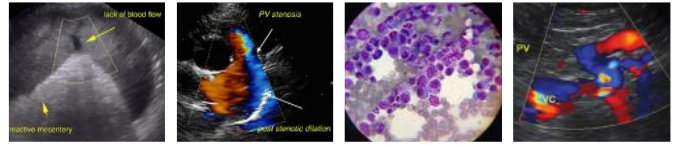
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.72 cm width at the caudal pole and 0.58 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.84 cm width at the caudal pole and 0.64 cm width at the cranial pole.

**Spleen**

The spleen exhibited subjective mild enlargement with evidence of nonspecific splenic folding. Intermittent well-demarcated, nondisruptive, hyperechoic splenic nodules were present primarily in the medial parenchyma adjacent to the hilus.

**Liver/ Gallbladder**

The liver presented potentially mildly enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. Intermittent similar-appearing, well-demarcated, hyperechoic intraparenchymal nodules were noted in the liver. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mild gallbladder debris. The gallbladder was otherwise normal. The cystic and common bile ducts were normal.



**PATIENT**

Simba Budelier

**SPECIES**

Canine

**BREED**

Pomeranian/mix

**SEX**

MN

**AGE**

10 years

**WEIGHT**

19.8 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kim Liedberg

**HOSPITAL NAME**

SVS Imaging WI

**REFERRING VET**

Dr. Bloss

**INVOICE**

13635

**DATE**

4/7/22

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. Minor retained non-shadowing ingesta / chyme was present.

The small intestine presented intact wall layering and primarily maintained a 1:3 muscularis/mucosa ratio with segmental propensity for mildly prominent duodenojejunal mucosa along with segmental duodenojejunal mucosal speckling. The duodenum wall width measured 0.48 cm. The jejunum wall width measured 0.42 cm. Subtle evidence of peri intestinal reactive mesentery was noted.

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

**Pancreas**

The left limb, right limb, and base of the pancreas presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present with mild variable parenchymal swelling and mild peripancreatic reactivity / inflammation. No overt evidence of neoplasia.

**Free Abdomen**

No overt lymphadenopathy was present. Very scant pockets of free fluid were noted in the cranial abdomen around the caudal liver margins.

**ULTRASONOGRAPHIC FINDINGS**

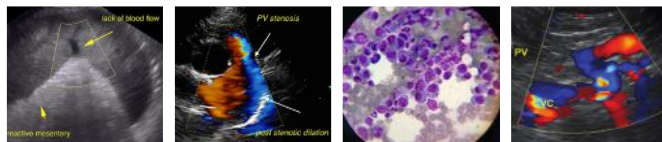
- Mild nonobstructive urinary bladder mineral
- Bilateral mild chronic renal changes with nonobstructive medullary mineral
- Subjective mild hepatosplenomegaly with hyperechoic subjectively benign hepatosplenic nodules
- Mild gallbladder debris (non-mucocele)
- Mild active to chronic active pancreatitis
- Gastroenterocolitis pattern with segmental nonspecific duodenojejunal mucosal speckling - possible inflammatory bowel

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

This patient may be passing small amounts of mineral from the kidneys into the urinary bladder. Full urinary workup including urinalysis and culture and sensitivity on a sterile urine sample is suggested.

The hyperechoic hepatosplenic nodules are likely benign and suggestive of areas of nodular hyperplasia, or lipogranuloma / myelolipomas. No overt evidence of hepatosplenic neoplastic criteria which is thought less likely.

In patients with chronic gastrointestinal signs and in correlation with sonographic findings, mild active to chronic active pancreatitis, dysbiosis, dietary indiscretion / food hypersensitivity, or IBD are all possible. Further assessment may include fresh fecal analysis to rule out parasitic ova / Giardia, as well as a GI panel to include PLI/TLI/Cobalamin/Folate.



## PATIENT

Simba Budelier

Potential for emerging protein-losing enteropathy may be a consideration in this patient if persistent / progressive decreased albumin levels.

## SPECIES

Canine

## BREED

Pomeranian/mix

## SEX

MN

## AGE

10 years

## WEIGHT

19.8 lbs.

**OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitory effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:**

**Plasma** 10 mL / kilogram IV over 4 hours

Or **Human albumin** 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day

**And Colloids/Hetastarch**

10 to 20 mL per kilogram per day and dogs

10 to 15 mL per kilogram per day cats

(Can bolus first 1/3 of dose over 15 minutes)

& maintain on LRS maintenance otherwise.

**Metronidazole** (10-20 mg/kg po bid)

**Famotidine** 1 mg/kg lv 1m po dc Sid /bid

**Sucralfate** 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid

**Diet:** Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.

**Prednisone** or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m<sup>2</sup> Q 24-48 hours.

**Cobalamine** (B12) 250-1500 ug/dog weekly x 6 weeks.

**Calcium** supplementation if necessary.

**Aspirin** 0.5-1 mg/kg/day **or Clopidrel** (Plavix) 1-5 mg/kg/day.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Kim Liedberg

## HOSPITAL NAME

SVS Imaging WI

## REFERRING VET

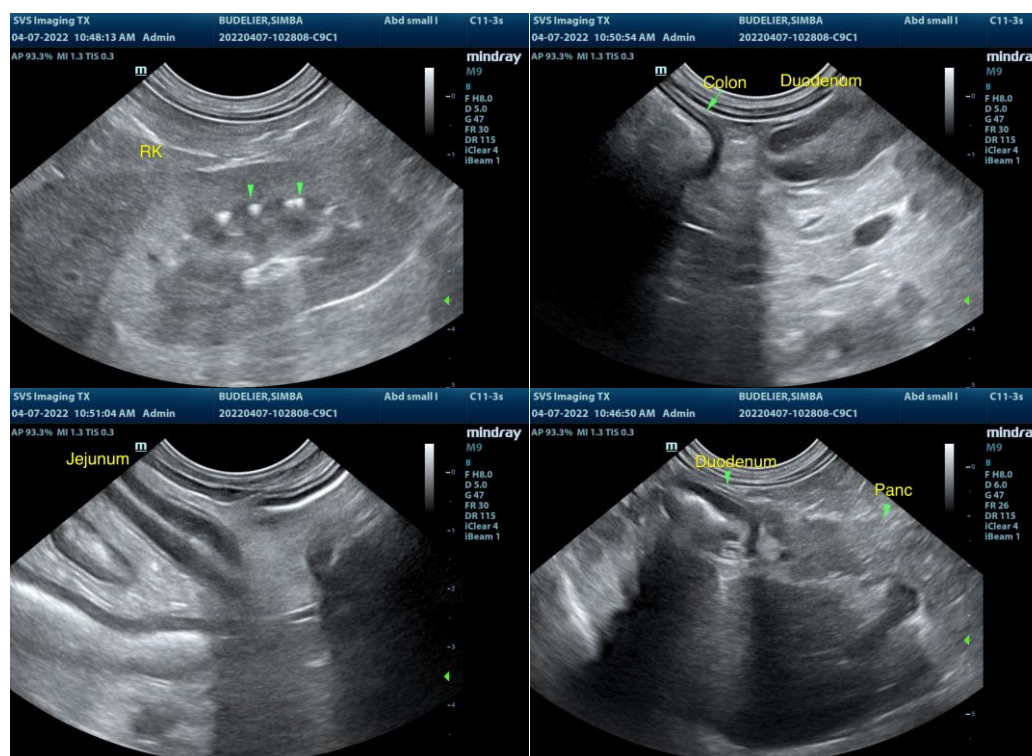
Dr. Bloss

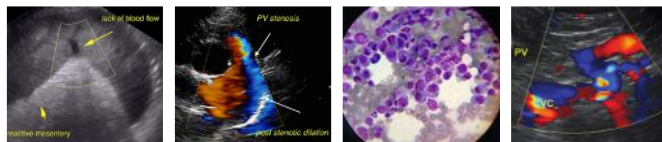
## INVOICE

13635

## DATE

4/7/22





**PATIENT**

Simba Budelier

**SPECIES**

Canine

**BREED**

Pomeranian/mix

**SEX**

MN

**AGE**

10 years

**WEIGHT**

19.8 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kim Liedberg

**HOSPITAL NAME**

SVS Imaging WI

**REFERRING VET**

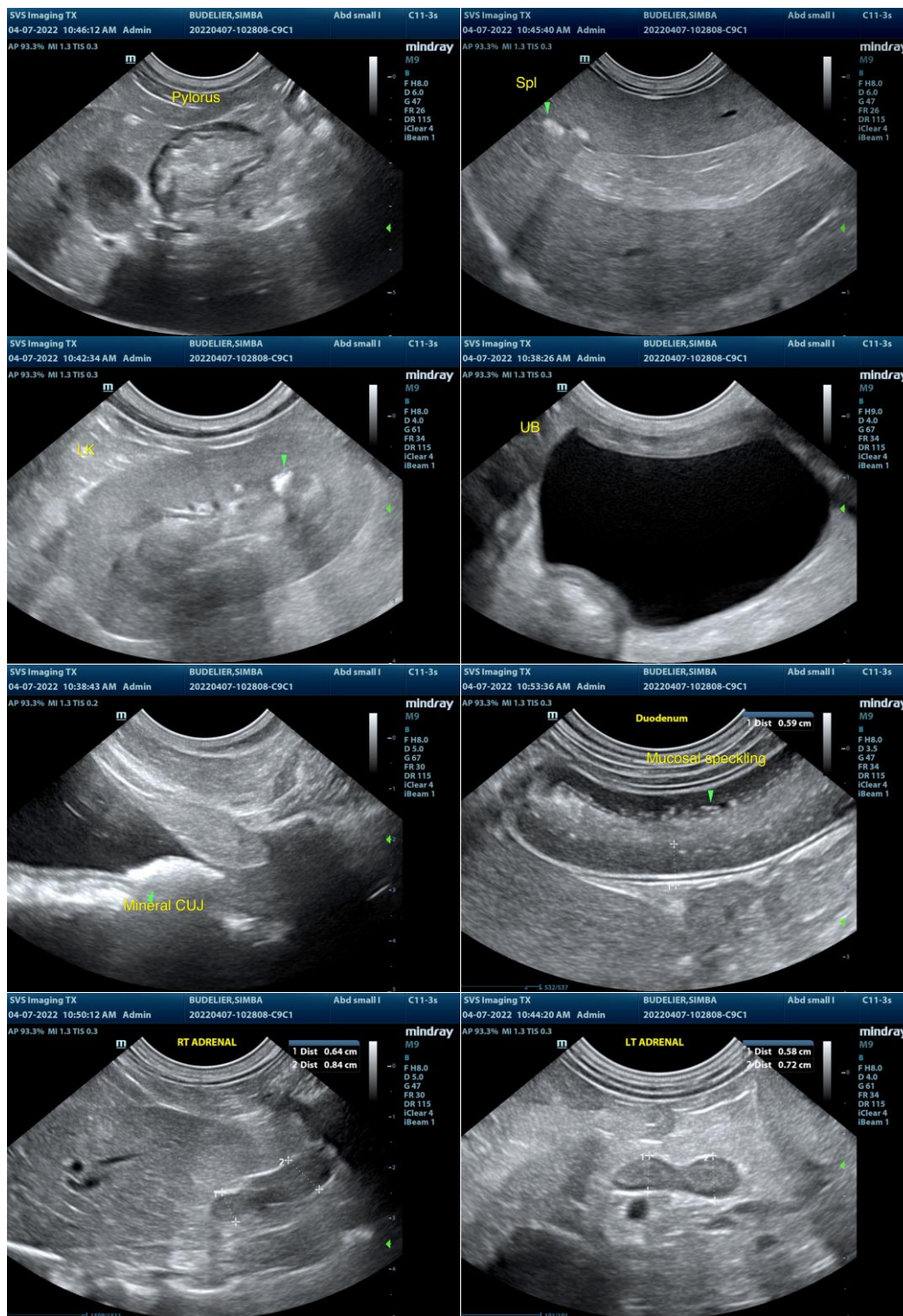
Dr. Bloss

**INVOICE**

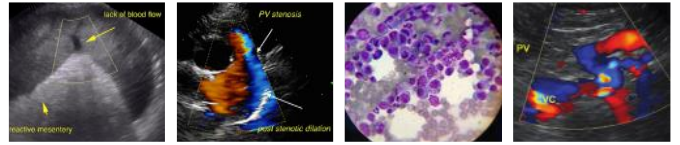
13635

**DATE**

4/7/22



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.



**PATIENT**

Simba Budelier

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**

Pomeranian/mix

**SEX**

MN

**AGE**

10 years

**WEIGHT**

19.8 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Kim Liedberg

**HOSPITAL NAME**

SVS Imaging WI

**REFERRING VET**

Dr. Bloss

**INVOICE**

13635

**DATE**

4/7/22