



**PATIENT**

Osa Bago

**SPECIES**

Canine

**BREED**

Pug

**SEX**

FS

**AGE**

7

**WEIGHT**

8.2kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Belan

**HOSPITAL NAME**

Fish Creek Animal  
Hospital

**REFERRING VET**

Dr. Malaguti

**INVOICE**

13698ag

**DATE**

05/03/2023

**PRESENTING CLINICAL SIGNS**

PU PD since having anOVH 2-3 weeks ago. Now lethargic and comatose Suspect Diabetes

Abnormal PE/Chem/CBC/UA Results: Chronic anemia with stress neutrophilia. PCV 16 and receiving a blood transfusion Blood glucose 35 . Bleed ketones high but fructosamine low.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with mild non-dependent particulate sediment. The sediment may indicate cellular debris / protein, crystalline debris, lipid, or mucus. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Prominent non-homogenous to mixed echogenic uterine remnant measuring ~ 2.0 cm in diameter was present dorsal to the urinary bladder.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 5.3 cm in length. The right kidney measured 5.5 cm in length.

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.43 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.42 cm width at the caudal pole.

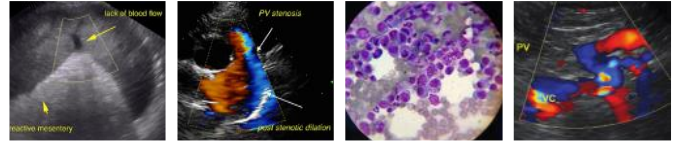
**Spleen**

The spleen exhibited normal to possible mild subnormal size with a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver/Gallbladder**

The liver was subjectively enlarged in size with symmetrical mildly rounded capsule contour and generalized mild non-uniform increased parenchymal echogenicity. Intermittent discretely hypoechoic nodules were present, an example measured 1.1 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with moderate non-organized hyperechoic debris. The cystic and common bile ducts were normal.

**Gastrointestinal**



**PATIENT**  
Osa Bago

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild non-shadowing variably echogenic ingesta with no signs of ileus, obstruction or foreign material.

**SPECIES**  
Canine

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

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

**BREED**  
*Pancreas*

Pug

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

**SEX**  
*Free Abdomen*

FS

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

- AGE**  
7
- Prominent non-homogenous/mixed echogenic uterine remnant dorsal to the urinary bladder.
  - Sonographically unremarkable volume contracted spleen.
  - Mild urinary bladder sediment.
  - Gallbladder debris (non-mucocele).
  - Hepatomegaly exhibiting non-homogenous hyperechoic to discretely nodular parenchyma.
  - Heterogenous pancreas.
  - Mild retained gastric ingesta, sonographically unremarkable small bowel.
- WEIGHT**  
8.2kg

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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

The prominent uterine remnant may indicate involuting retained uterine tissue given recent OVH with potential for mild uterine remnant suture reaction and/pr possible emerging uterine stump granuloma. Pending patient stabilization and additional diagnostics, sonographic reassessment of the prominent uterine remnant is recommended for further clarification with concurrent monitoring for evidence of vaginal discharge.

**IMAGING PERFORMED BY**  
Dr. Belan

The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.

**HOSPITAL NAME**  
Fish Creek Animal Hospital

A definitive cause of the patient's anemia was not obvious within the abdominal cavity.

Potential diabetic hepatopathy if suspect diabetes is confirmed. Occult infiltrative hepatic neoplasia, lipidosis, vacuolar hepatic changes, inflammatory/immune mediated hepatopathy, cholestasis or other hepatopathy are all potentials.

**REFERRING VET**  
Dr. Malaguti

Subjectively the bilateral adrenal glands were not overtly consistent with adrenomegaly or primary adrenal disease.

**INVOICE**  
13698ag

For an additional charge, internal medicine consult can be utilized through 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>

**DATE**  
05/03/2023



**PATIENT**

Osa Bago

**SPECIES**

Canine

**BREED**

Pug

**SEX**

FS

**AGE**

7

**WEIGHT**

8.2kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Belan

**HOSPITAL NAME**

Fish Creek Animal  
Hospital

**REFERRING VET**

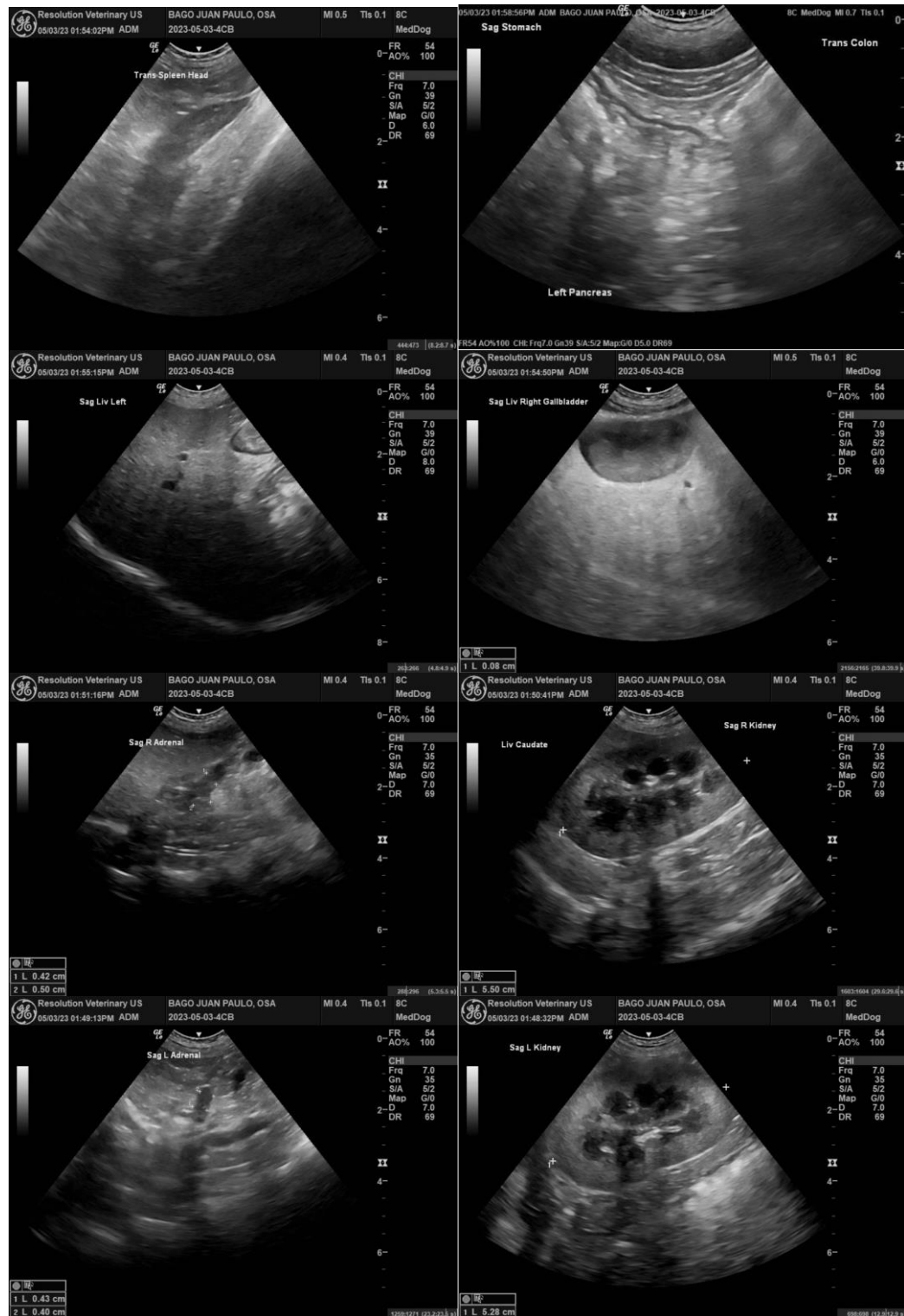
Dr. Malaguti

**INVOICE**

13698ag

**DATE**

05/03/2023





**PATIENT**

Osa Bago

**SPECIES**

Canine

**BREED**

Pug

**SEX**

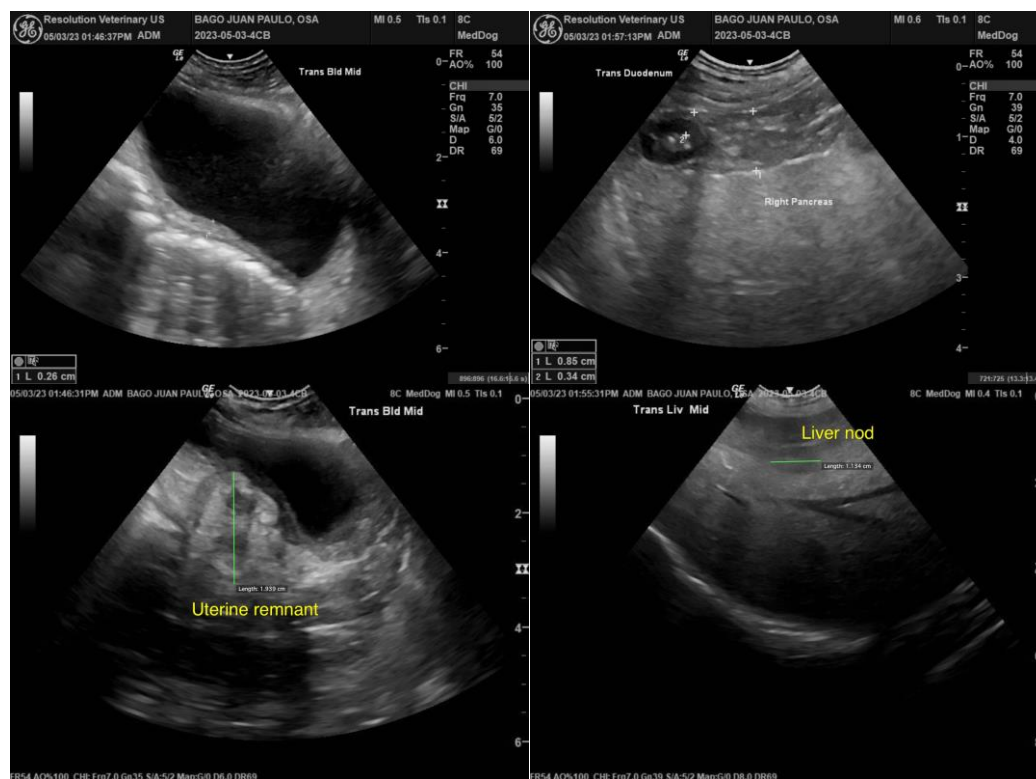
FS

**AGE**

7

**WEIGHT**

8.2kg



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.

**INTERPRETED BY**

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

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.

**IMAGING PERFORMED BY**

Dr. Belan

**HOSPITAL NAME**

Fish Creek Animal  
Hospital

**REFERRING VET**

Dr. Malaguti

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)  
[mac.daniel@sonopath.com](mailto:mac.daniel@sonopath.com)

**INVOICE**

13698ag

**DATE**

05/03/2023