

**PATIENT**

Tuxedo Benisch

**SPECIES**

Canine

**BREED**

Standard Poodle

**SEX**

NM

**AGE**

12 years

**WEIGHT**

46 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sarah Pender, CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Joe Westerhof

**INVOICE**

14531

**DATE**

8/9/22

**PRESENTING CLINICAL SIGNS**

Not eating well for awhile, now can only eat very small amount and vomits it back up. Ate last night at 5:30pm and vomited it right back up. Drank some water and vomited in middle of the night. NPO since. Lethargic Hx of bladder stones and cystotomy a year ago. GDV 6/16/18 had surgery and was tacked at that time.

Abnormal PE/Chem/CBC/UA Results: CBC/Chem unremarkable

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder was normal in size and tone containing anechoic urine with mild, non-dependent mineral to small calculi. A solitary, small, polyploid-like mass lesion appearing to originate from the mid ventral urinary bladder wall extending mildly into the urinary bladder lumen measuring 1.3 cm x 1.1 cm was present. No overt evidence of mineralization associated with the small polyploid-like mass lesion was noted. The urethra exhibited normal structure and tone to a depth of 3.0 cm.

The residual prostate was free of pathology.

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. No evidence of pelvic dilation was present. The left kidney measured 5.7 cm in length. The right kidney measured 5.5 cm in length.

**Adrenal Glands**

The left adrenal gland was mildly prominent to enlarged in size exhibiting asymmetrical capsule contour, yet maintained capsule integrity. Nonhomogeneous, nonmineralized left adrenal parenchyma was present. The left adrenal gland measured 2.1 cm length x 1.1 cm width at the cranial pole and 0.70 cm width at the caudal pole.

The right adrenal gland was enlarged in size yet maintained primarily symmetrical intact capsule with nonhomogeneous, nonmineralized parenchyma. The right adrenal gland measured 3.3 cm length x 2.2 cm width at the cranial pole and 1.1 cm width at the caudal pole. No obvious vascular invasion associated with either the left or right adrenal gland was noted.

**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 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.

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***Liver/ Gallbladder***

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. 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. The cystic and common bile ducts were normal.

***Gastrointestinal***

The stomach was moderately distended with retained non shadowing echogenic fluid and chyme. The fundus and gastric body walls appeared to be sonographically unremarkable with intact yet thickened walls present in the antrum and pylorus. No overt evidence of mechanical pyloric outflow obstruction, yet this potential, given the gastric distention, cannot be excluded. The pylorus wall width measured up to 0.82 cm.

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. The duodenum wall measured 0.52 cm width. The jejunum wall measured 0.46 cm width.

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

***Pancreas***

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

- Mild dependent urinary bladder mineral / small calculi with solitary mid ventral small polyploid-like mass lesion
- Mild chronic renal changes
- Bilateral variable adrenomegaly more prominent in the right adrenal gland with potential right adrenal mass
- Fluid distended stomach with intact yet thickened antrum / pyloric walls
- Sonographically unremarkable small bowel

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The polyploid-like mass lesion is nonspecific and may indicate focal cystitis, although the potential for emerging neoplastic criteria, i.e., transitional cell carcinoma, could be possible. Cytospin cytology of free catch urine sample to assess for atypical transitional cells, urine culture and sensitivity +/- screening BRAF Assay could be considered.



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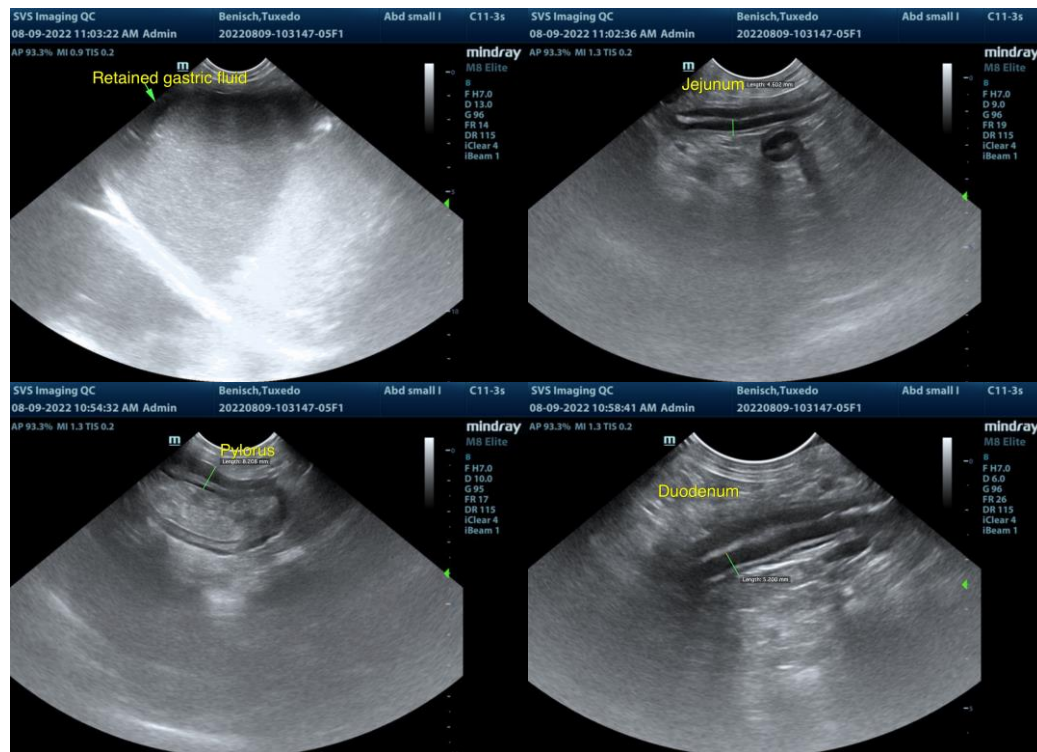
Considerations for the adrenal gland may include adenomatous change or benign hyperplasia, with potential for emerging neoplastic criteria, specifically in the right adrenal gland, such as pheochromocytoma, adenocarcinoma, or other. Screening blood pressure to assess for evidence of hypertension, which may allude to a right adrenal pheochromocytoma, is recommended. Adrenal hyperfunction is considered unlikely, given the lack of reported clinical signs and normal chemistry panel, as well as overtly normal hepatic presentation.

Sonographically, the thickened yet intact antrum and pylorus walls may suggest gastritis. The possibility of emerging infiltrative process in the area of the antrum and pylorus cannot be definitively excluded. Some degree of delayed gastric emptying or outflow obstruction in light of gastric retained fluid and chyme could be possible.

Given this presentation, endoscopy for further assessment and potential for biopsies is recommended. Alternatively, exploratory laparotomy for gross inspection of the pyloric outflow and upper duodenum with potential for biopsies could be considered if persistent evidence of gastric distention or stasis.

Sonographic monitoring of the right adrenal gland, stomach, and polyploid-like mass lesion in the urinary bladder for evidence of progression would be a more conservative approach. Empirically, some or all of the following protocol could be considered.

A clinical trial of **Zithromax** (Dogs: 5-10 mg/kg p.o. q24h. May increase dosing interval to q48h after 3-5 days of treatment), **Metronidazole** (10-20 mg/kg p.o. b.i.d.), **Pepcid** (0.5-1 mg/kg s.i.d.) and **Sucralfate** (0.5-2 g/dog PO) or **Omeprazole** (1 mg/kg p.o. s.i.d.) over the next 3 weeks along with a **novel-protein or hydrolyzed diet** with slurry feeding b.i.d./t.i.d. over the next 2-4 days and then increase to canned diet bid. Dry food should be avoided over the next 4 weeks. A recheck sonogram to assess GI improvement or progression would be ideal in 4 weeks.



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Clinical Sonography & Telectyology

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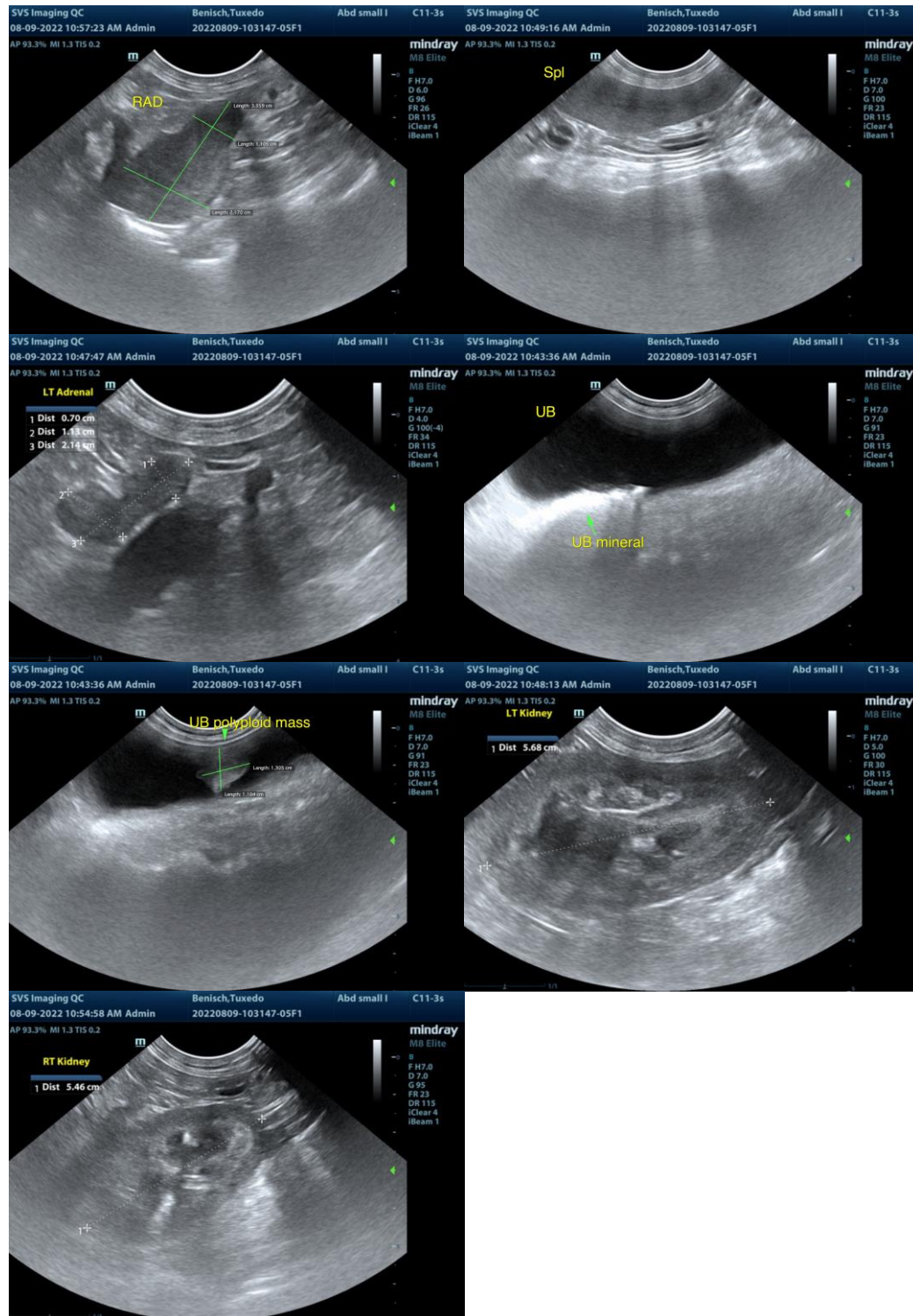
Dr. Joe Westerhof

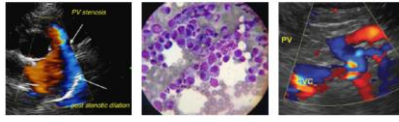
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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