



**PATIENT**

Queen Bee Hoffman

**SPECIES**

Canine

**BREED**

Poodle Mix

**SEX**

FS

**AGE**

11 years

**WEIGHT**

10 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Bennett

**HOSPITAL NAME**

Wilvet South

**REFERRING VET**

Dr. Bennett

**INVOICE**

17249

**DATE**

7/15/23

**PRESENTING CLINICAL SIGNS**

Presented to rDVM 7/14 for 2 days inappetence, vomiting, & constipation. Presumptive DKA diagnosed on labs.

Abnormal PE/Chem/CBC/UA Results: rDVM blood work: Chem: ALKP 1732 H, ALT 102, BUN 76 H, Crea 3.9 H, Glu 554 H, Lipa 5873 H, Phos 11.1 H Lytes: Na 142 L, Cl 106 L, K 4.6 CBC: HCT 33.3% L, retic 6.2k L, Neut 11.98k H, rest WNL. SNAP cPL = Abnormal UA: USG 1.105, Pro 3+, Glu 4+, Ket 3+. Sediment: suspect non-hyaline casts. Wilvet South: 11pm: EPOC: pH 7.006, HCO3 16.3, BUN 79 H, Crea 4.28 H, Glu 443 H, HCT 24% L

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild non-dependent, particulate sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

No evidence of pathology in the area of the aortic trifurcation.

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. Pinpoint corticomedullary hyperechoic foci, suggestive of pinpoint mineralization with potential for corticomedullary microinfarction or fibrosis were noted. The left kidney measured 4.9 cm in length. The right kidney measured 5.2 cm in length.

**Adrenal Glands**

The caudal left adrenal gland was enlarged in size exhibiting nonhomogeneous potentially nodular parenchyma. The left adrenal gland measured 1.3 cm width at the caudal pole and 0.45 cm width at the cranial pole. The right adrenal gland was indistinctly visualized exhibiting subjective enlargement with capsule asymmetry and nonhomogeneous parenchyma. The right adrenal gland subjectively measured 1.0 cm width.

**Spleen**

The spleen exhibited 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 enlarged in size with symmetrical to mildly rounded hepatic capsule contour. Generalized nonhomogeneous parenchyma was noted exhibiting normal hepatic vascular volume and moderate coarse echotexture. Intermittent, nondisruptive, subtly hyperechoic hepatic nodules were



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noted with an example measuring 1.1 cm in diameter. The gallbladder was non-distended in size with anechoic content with mild, non-dependent, mildly congealed yet nonorganized, hyperechoic gallbladder sediment. No evidence of inflammatory criteria was noted. The cystic and common bile ducts were normal.

***Gastrointestinal***

The stomach presented intact wall layering with a normal wall layer ratio. Minor retained anechoic pyloric fluid was present with no evidence of obstruction or foreign material.

The small intestine presented intact wall layering and maintained a 1:3 muscularis/mucosa ratio with nonspecific mildly hyperechoic duodenojejunal mucosal speckling. No evidence of mechanical / metabolic ileus was noted.

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

***Pancreas***

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

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

- Urinary bladder sediment
- Nonspecific chronic renal changes
- Bilateral mildly irregular nonhomogeneous adrenomegaly
- Diabetic hepatopathy pattern with subjective benign nodules - nodules suggestive of hyperplasia or lipogranulomas
- Gallbladder sediment (non-mucocele)
- Heterogeneous / remodeled pancreas - no evidence of active pancreatitis. Patient / age-related variant, remodeling owing to previous inflammation, or chronic pancreatitis are possible.
- Gastroenteritis pattern

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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

Full adrenal workup with ACTH stimulation test, given the potential for diabetic ketoacidosis, as well as assessment of systemic BP for further assessment of the bilateral adrenal glands, are recommended.



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Assessment for evidence of cranial abdominal or subxiphoid discomfort on palpation, which may allude to chronic pancreatitis, is suggested.

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Empirical therapy for diabetic ketoacidosis with as-needed hepato-gastrointestinal and renal support and assessment of clinical response would be reasonable.

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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/>.

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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>

**AGE**

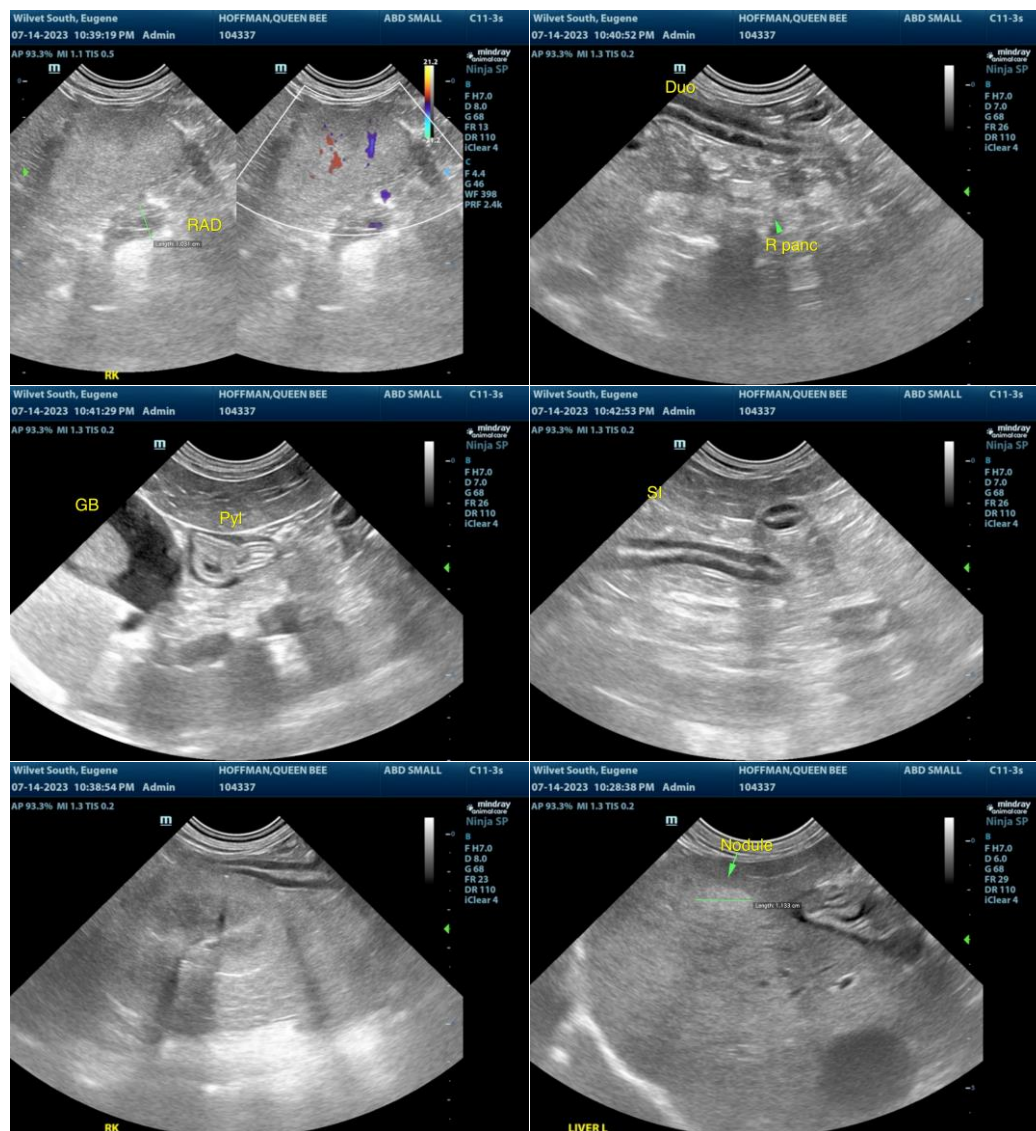
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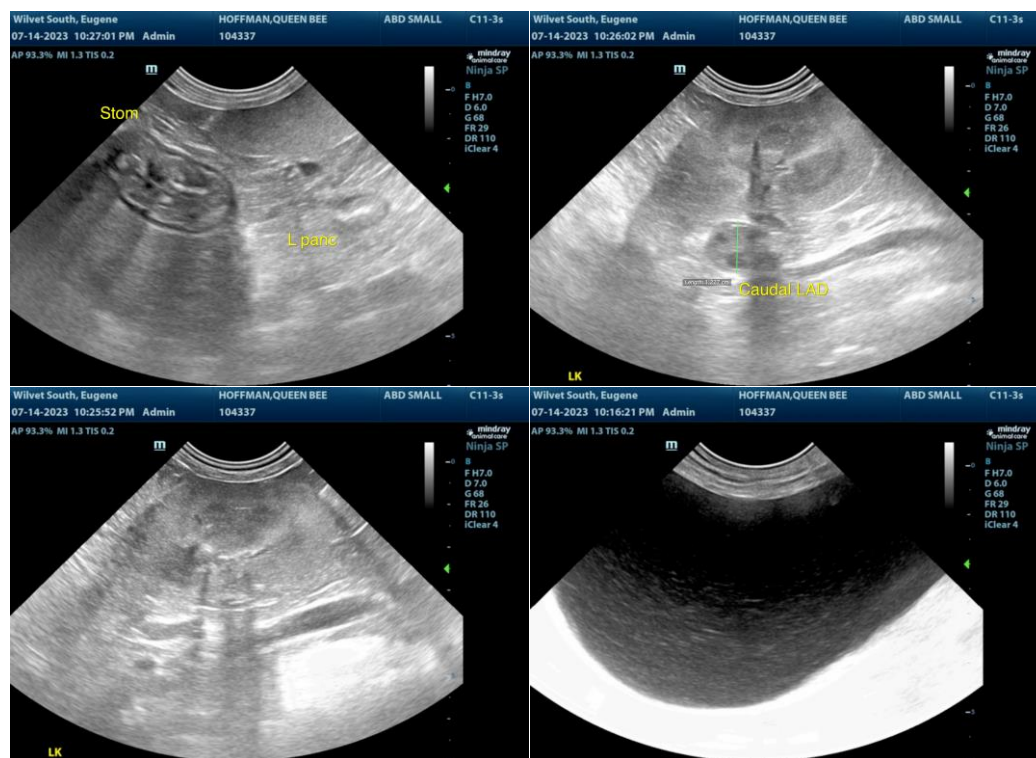
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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