



**PATIENT**

Razzle Antoine

**SPECIES**

Canine

**BREED**

Jack Russell mix

**SEX**

Male, neutered

**AGE**

12 Yrs.

**WEIGHT**

14.15 kg.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(*Small Animal Internal  
Medicine*)

**IMAGING  
PERFORMED BY**

Dr. Van Nieuwal

**HOSPITAL NAME**

Animal Emergency  
Hospital of Volusia

**REFERRING VET**

Dr. Van Nieuwal

**INVOICE**

14098

**DATE**

10/18/22

**PRESENTING CLINICAL SIGNS**

P was lethargic and PU/PD since last Monday; on Thursday stopped eating and started vomiting. P seen at SARVEC last PM and diagnosed with DKA and pancreatitis. UA showed no UTI. Slight liver elevations.

No imaging done.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The prostate is not definitively visualized due to its pelvic location.

The left kidney is normal size (5.15 cm in length) with an irregular shape. The cortex is variably thickened and there is moderate loss of corticomedullary distinction. Cortical infarcts are observed at the caudal pole. Mild pyelectasia is present (0.27 cm in the longitudinal plane). There is no evidence of nephroliths or hydroureter.

The right kidney is normal size (5.98 cm in length) with an irregular shape. The cortex is variably thickened with a moderate loss of corticomedullary distinction. A cortical infarct is observed at the caudal pole. Mild pyelectasia is present (0.20 cm) in the longitudinal plane. There is no evidence of nephroliths or hydroureter.

*Adrenal Glands*

The left adrenal gland is normal size (0.82 cm at cranial pole) (0.68 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is mildly enlarged (1.37 cm at cranial pole) (1.00 cm at caudal pole); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

*Spleen*

The spleen is normal in size (0.95 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

*Liver*

The liver is subjectively prominent in size with normal curvilinear peripheral contours. The parenchyma is hyperechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A large amount of aggregated echogenic suspended sludge in a partially stellate pattern is observed within the lumen. The cystic and common bile ducts are normal/not seen.



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***Gastrointestinal***

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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

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***Pancreas***

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The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely hyperechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

**SEX**

Male, neutered

***Free Abdomen***

**AGE**

12 Yrs.

There is no evidence of free fluid. The abdominal lymph nodes are normal/not visible.

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

14.15 kg.

**Primary Findings:**

- The gallbladder changes are consistent with an emerging mucocele.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

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**Secondary Findings:**

- The hepatic parenchymal changes are non-specific and may be secondary to vacuolar hepatopathy (i.e., due to diabetes mellitus), regenerative nodular hyperplasia, inflammatory disease, hepatotoxicosis (i.e., copper) or other hepatopathy. Correlation with the patient's liver values is recommended.
- Mild right adrenomegaly. This finding likely represents early hyperplastic change.
- Bilateral, degenerative renal changes with cortical infarcts and pyelectasia.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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- Given the diagnosis of diabetic ketoacidosis and the sonographic renal changes, a urine culture and sensitivity is recommended, as many new diabetics have occult urinary tract infections.
- Given the recent history of vomiting, consider a cPLI to further evaluate for pancreatitis.
- Symptomatic care for diabetic ketoacidosis is recommended including fluid therapy, regular insulin, gastric protectants, antiemetics and other supportive measures.
- Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) at 10-15 mg/kg once a day is recommended. Serial sonographic monitoring (e.g., every 4-6 weeks) of the gall bladder is recommended to assess for progression to a fully-formed mucocele.

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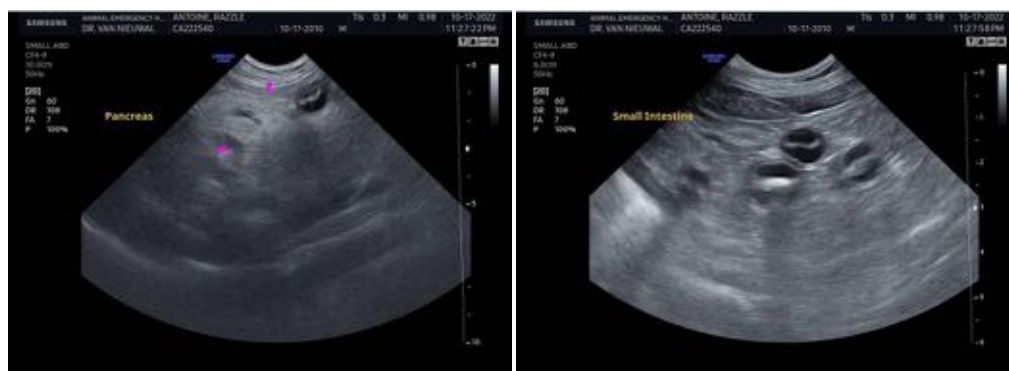
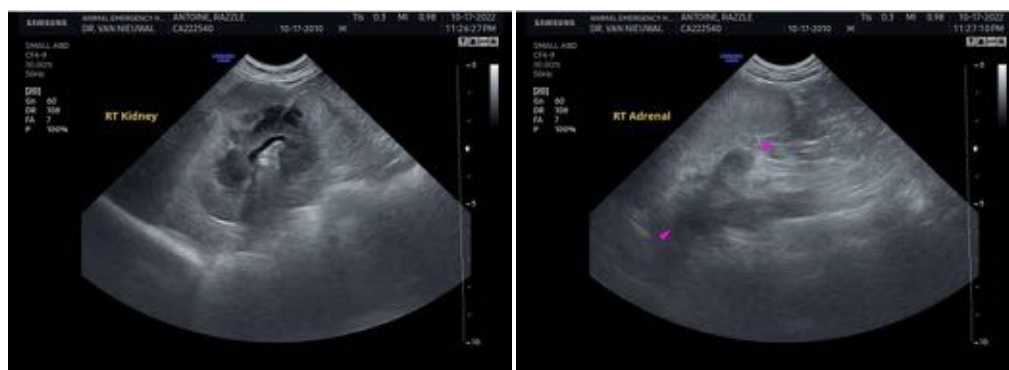
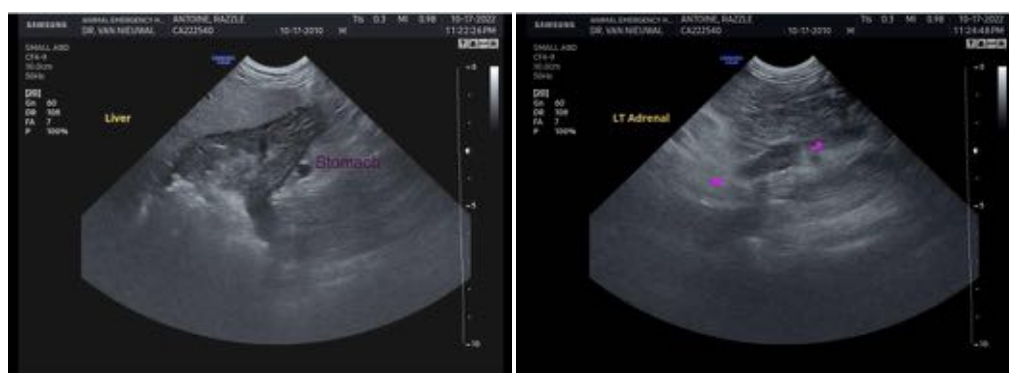
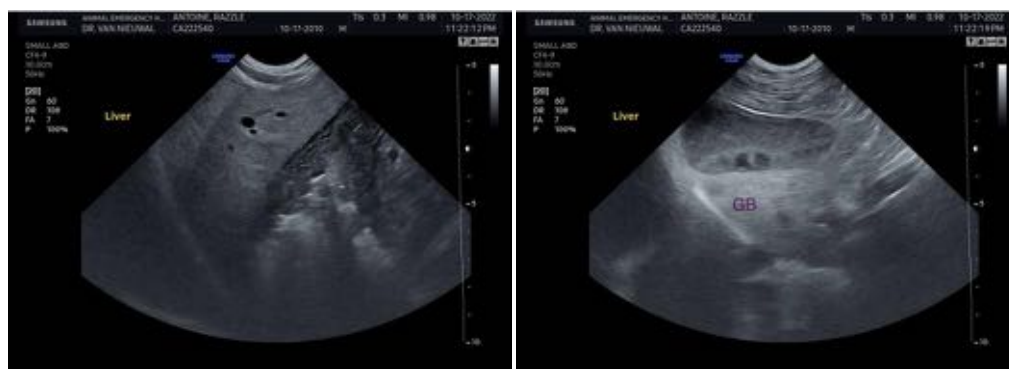
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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