



**PATIENT PRESENTING CLINICAL SIGNS**

Cindy Buchanan very dull mentally  
regurgiting

**SPECIES** Acute vomiting  
Gastric distention, concern for outflow obstruction

Canine Hypoglycemia - corrected  
Hypotension  
Suspect pancreatic/gastric disease

**BREED** Heart murmur  
Previous hx of partial pancreatectomy due to nodule pancreas, biopsy came back benign

Beagle

**SEX** ALKP 480 U/L  
AMYL 402 U/L  
K 3.2 mmol/L

Spayed Female

**AGE** RBC 4.92  
HCT 32.3 %  
HGB 11.8 g/dL  
RETIC-HGB 19.0

9 Years WBC 18.37  
NEU 13.34  
MONO 2.92

**WEIGHT** Cerenia 1mg/kg IV q24 (due at 11pm) Protonix 1mg/kg IV q12 Ondansetron 0.5mg/kg IV q12  
Buprenorphine 0.01mg/kg IV q8

16 kg

**INTERPRETED BY ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

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

**Urinary System**

The urinary bladder, trigone, and pelvic urethra are 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. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

**IMAGING PERFORMED BY**

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The left kidney presented normal size (5.83 cm in length); normal shape and smooth peripheral margins. The cortex is mildly thickened with mild to moderate loss of corticomedullary distinction. A 1.09 cm cortical cyst is observed at the caudal pole. Severe pyelectasia/hydronephrosis is present (1.30 cm in the longitudinal plane). Hydroureter is present (0.67 cm in diameter at the proximal aspect). The ureter is dilated for several centimeters, after which it tapers and is no longer visible, approximately mid abdomen. There is no evidence of nephroliths. Renal vasculature is normal.

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The right kidney presented normal size (5.53 cm in length); normal shape and smooth peripheral margins. The cortex is mildly thickened and hyperechoic and there is mild to moderate loss of corticomedullary distinction. Moderate pyelectasia is present (0.75 cm in the longitudinal plane). There is no evidence of nephroliths, infarcts, or hydroureter. Renal vasculature is normal.

**REFERRING VET**

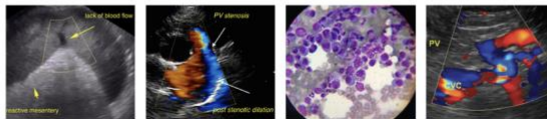
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**INVOICE Adrenal Glands**

37529 The left adrenal gland is enlarged size (0.97 cm at cranial pole) (0.89 cm at caudal pole) (2.55 cm in length); slightly irregular shape; mildly heterogeneous parenchyma with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

**DATE**

5/9/22



**PATIENT**

Cindy Buchanan The left adrenal gland is enlarged size (1.22 cm at cranial pole) (1.11 cm at caudal pole) (3.0 cm in length); slightly irregular shape; mildly heterogeneous parenchyma with loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

**SPECIES**

**Spleen**

Canine

Previously splenectomized.

**BREED**

Beagle

**Liver**

The liver is subjectively prominent to enlarged with slightly swollen peripheral contours. The parenchyma is hypoechoic relative to the right renal cortex and is slightly mottled in appearance. A 1.05 cm hyperechoic to slightly heterogeneous nodule is observed in the region of the right medial lobe. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1:1.

**SEX**

Spayed Female

The gall bladder lumen is moderately distended. The wall is thickened up to 0.35 cm, hyperechoic, and slightly irregular. A small to moderate amount of aggregated echogenic to mineralized, partially dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen. The duodenal papilla is visible and is normal.

**AGE**

9 Years

**Gastrointestinal**

**WEIGHT**

16 kg

The gastric lumen is moderately to severely fluid distended and hypomotile. The fluid within the gastric lumen contains suspended echogenic debris. A nasogastric tube is also visible within the lumen. The gastric wall is mildly to moderately thickened up to 0.92 cm with apparent retention of the normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is diffusely thickened (0.47 cm). Discreet masses are not identified. The colonic wall is normal. The lumen of the descending colon contains shadowing fecal material. There is no evidence of an obstructive pattern.

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**Pancreas**

The right limb of the pancreas is visible/prominent with minimal deviation from the normal peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat and is subtly mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

**IMAGING  
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**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

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**PRIMARY FINDINGS**

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- Gastric ileus. The gastric wall thickening could be consistent with an inflammatory process (i.e., gastritis) or emerging neoplasia. An inflammatory process is favored.
- The pancreatic changes are most consistent with age related remodeling. There is no evidence of recurrence of the pancreatic mass.
- The gallbladder wall changes could be consistent with cholecystitis and/or benign age-related hyperplasia. Correlation with clinical findings is recommended.

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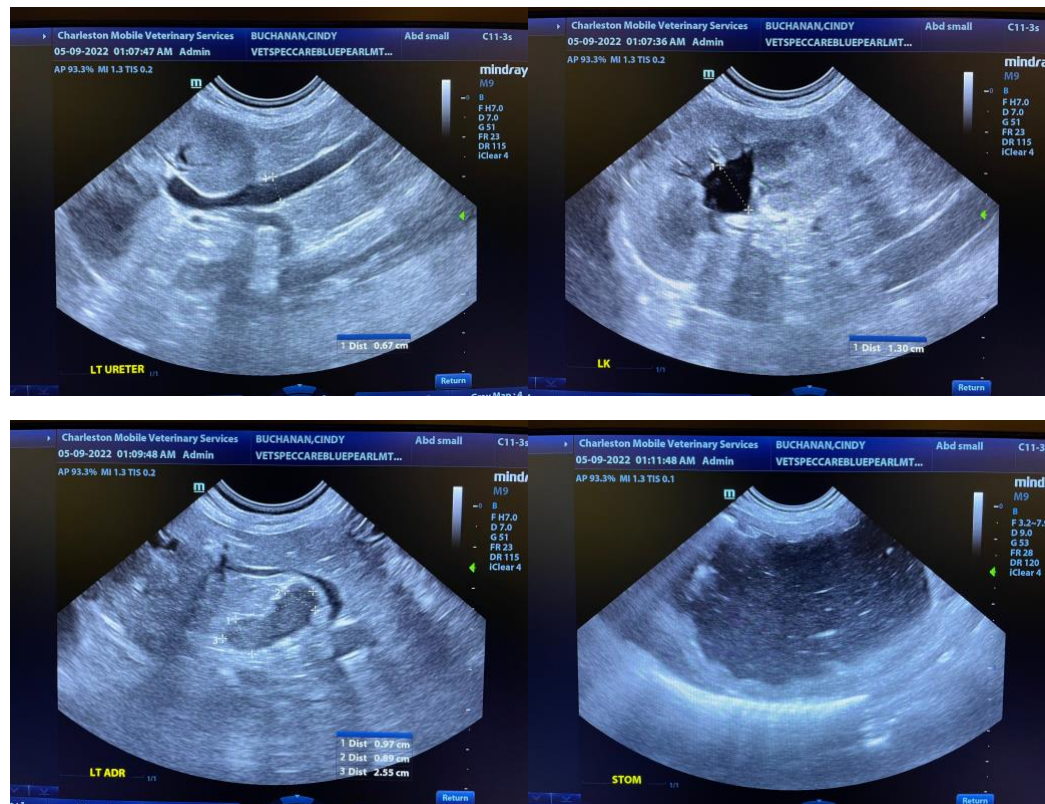
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**SECONDARY FINDINGS**

- The bilateral adrenomegaly is consistent with a previous diagnosis of pituitary-dependent hyperadrenocorticism.
- The hepatic parenchymal changes are non-specific and could be associated with benign age-related process (i.e., regenerative nodular hyperplasia, age related remodeling, and/or vacuolar hepatopathy). Alternatively, inflammatory disease or infiltrative neoplasia are possible. Correlation with the patient's liver values is recommended.
- The hyperechoic hepatic nodule trends towards the benign (i.e., regenerative nodule) with a lower possibility of emerging neoplasia.
- Bilateral age-related renal changes with left severe pyelectasia/hydronephrosis and hydroureter, which may be secondary to a stricture, small ureterolith (less likely), or small tumor. The right pyelectasia may be secondary to pyelonephritis and/or age related remodeling.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given the patient's apparent altered mental status and history of heart murmur, consider a full echocardiogram, baseline blood pressure measurement, thoracic radiographs (if not already performed) +/- EKG. Also consider a neurology consultation +/- brain MRI/CSF tap. Repeat baseline bloodwork including a CBC/Chem panel, T4, +/- D-dimers should be considered.





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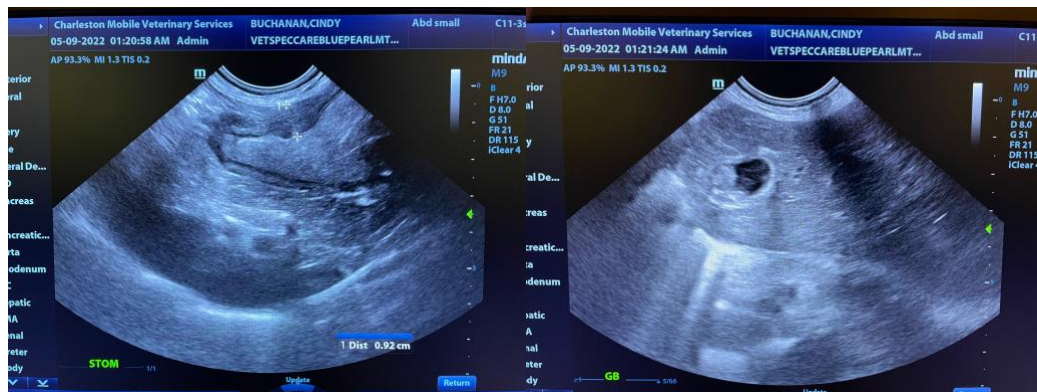
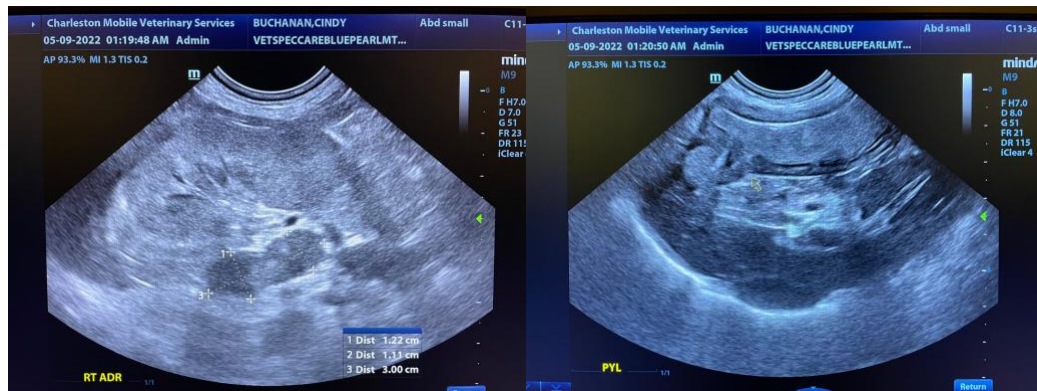
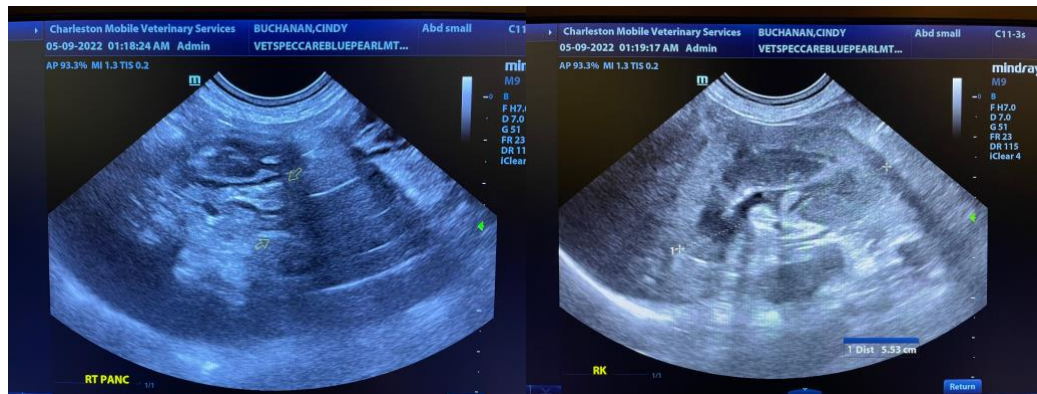
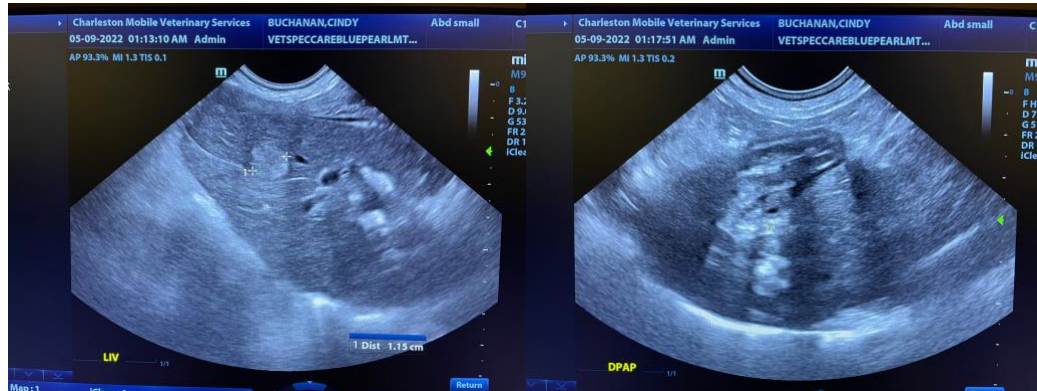
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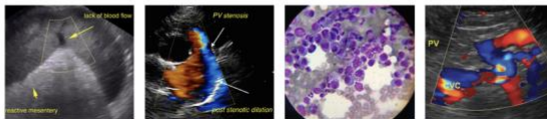
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
info@SonoPath.com