



**PATIENT PRESENTING CLINICAL SIGNS**

Olivia Carpio  
History: Vomiting after eating, increased frequency of urination. On Gabapentin, Metronidazole, Ursodial, Clavamox, Zentonic and Prednisone. Confirmed with owner that dog was fasted since midnight the night before the scan. Last ultrasound with us 2/26/21

**SPECIES** Abnormal PE/Chem/CBC/UA Results: Increased neuts, increased ALP. U/A WBCs 15/hpf, RBCs 2/hpf, Protein trace, Sp. Grav 1.020

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED** *Urinary System*

Canine  
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.

**SEX**

Female, spayed

The left kidney is normal in size (4.52 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few non-obstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

**AGE**

14 yrs.

The right kidney is normal size (4.76 cm in length) with a normal shape, smooth peripheral margins and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Several non-obstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

**WEIGHT**

22.2 lbs.

*Adrenal Glands*

**INTERPRETED BY**

The left adrenal gland is normal size (0.46 cm at cranial pole) (0.42 cm at caudal pole) (1.30 cm in length); 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.

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

The right adrenal gland is normal size (0.83 cm at cranial pole) (0.63 cm at caudal pole) (1.81 cm in length); 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.

**IMAGING PERFORMED BY**

Crystal Hill

*Spleen*

**HOSPITAL NAME**

Dog and Cat Clinic of  
Niagara

The spleen is normal in size (1.39 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A few small myelolipomas are visualized in the region of the hilus. Splenic vasculature is normal.

**REFERRING VET**

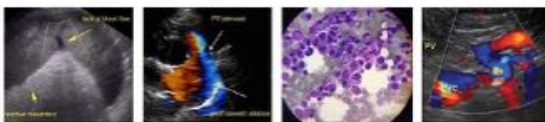
Dr. Aziz

*Liver*

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gallbladder is of normal contours and contains some dependent echogenic debris. The wall is normal in thickness. No choleliths are observed. The cystic and common bile ducts are normal.

*Gastrointestinal*

**DATE**



**PATIENT**

Olivia Carpino

**SPECIES**

Canine

**BREED**

Canine

**SEX**

Female, spayed

**AGE**

14 yrs.

**WEIGHT**

22.2 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Dog and Cat Clinic of  
Niagara

**REFERRING VET**

Dr. Aziz

**DATE**

The gastric lumen is mildly to moderately distended with varying sized hypoechoic shadowing bodies. The gastric wall is normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with gas and 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.

**Pancreas**

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

**Free Abdomen**

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

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

- The gastric luminal contents may represent normal ingesta (i.e., kibble) or foreign material (less likely). If the patient was fasted for the study, delayed gastric emptying would be a consideration.

**Secondary Findings:**

- Suspected benign diffuse hepatopathy (i.e., idiopathic vacuolar hepatopathy and/or regenerative nodular hyperplasia).
- Bilateral chronic renal changes with non-obstructive nephrolithiasis. Changes are similar to the previous sonogram.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Consider a 12 hour fast with repeat abdominal imaging at the end of the fasting period to reassess the gastric luminal contents.
- Other diagnostic/therapeutic considerations include the following:
  1. A fecal evaluation for ova/Giardia
  2. Thoracic radiographs to assess for occult esophageal disease.
  3. Malabsorption panel including serum cobalamin, folate, TLI and PLI.
  4. A resting cortisol level to screen for hypoadrenocorticism. If resting cortisol level is < 2.0 mcg/dL, an ACTH stimulation test is recommended
  5. If the vomiting is chronic and/or intermittent, consider a 6 week hypoallergenic diet trial +/- GI biopsies (i.e., endoscopic or surgical).
- Given the presence of pyuria and proteinuria, a urine culture and sensitivity +/- UPC (if culture is negative) are recommended.



**PATIENT**

Olivia Carpino

**SPECIES**

Canine

**BREED**

Canine

**SEX**

Female, spayed

**AGE**

14 yrs.

**WEIGHT**

22.2 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Crystal Hill

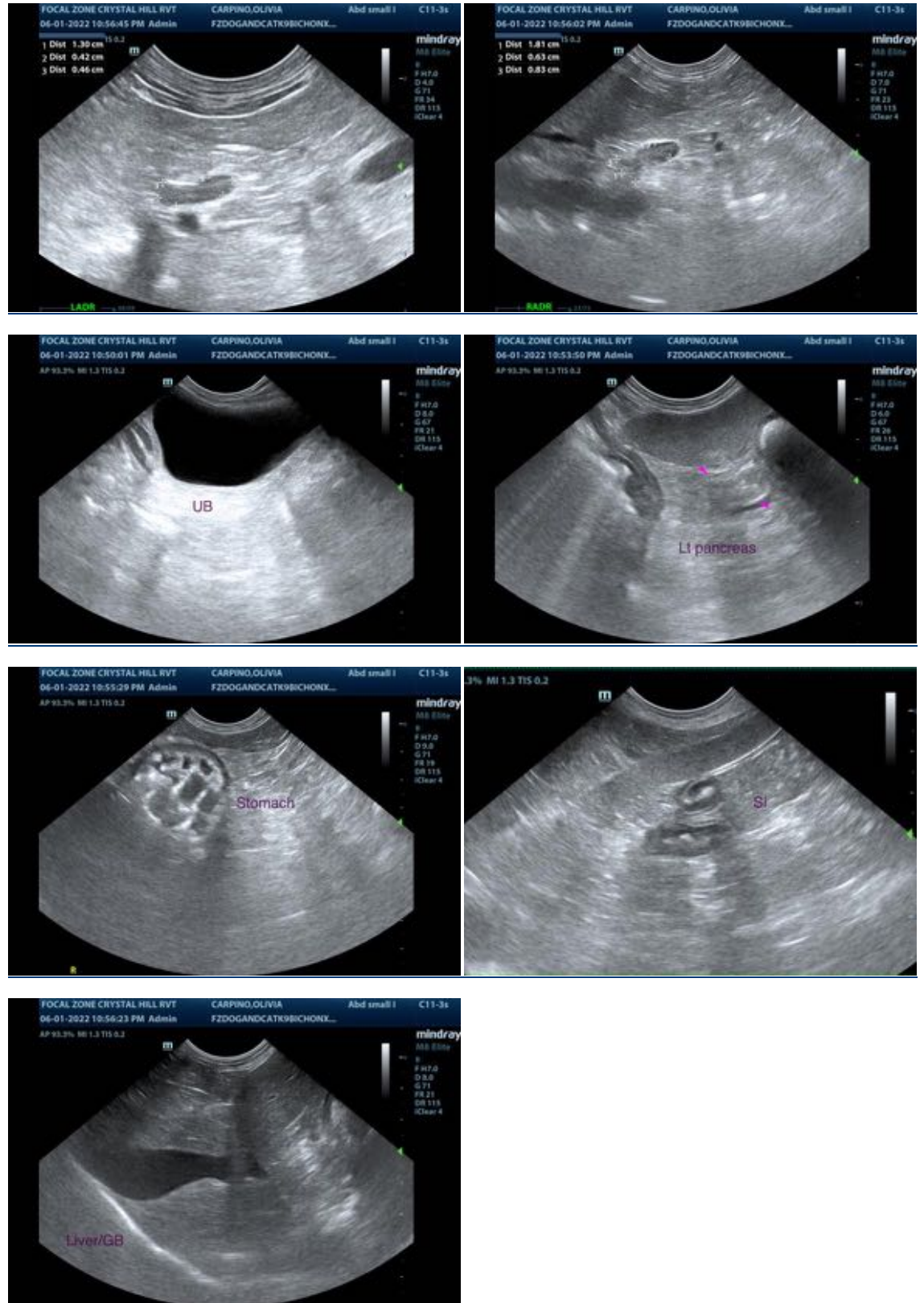
**HOSPITAL NAME**

Dog and Cat Clinic of  
Niagara

**REFERRING VET**

Dr. Aziz

**DATE**





**PATIENT**

Olivia Carpio

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.

**SPECIES**

Canine

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.

**BREED**

Canine

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

Andrea.nicastro@sonopath.com

**SEX**

Female, spayed

**AGE**

14 yrs.

**WEIGHT**

22.2 lbs.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Dog and Cat Clinic of  
Niagara

**REFERRING VET**

Dr. Aziz

**DATE**