



**PATIENT**

Luna McKenzie

**SPECIES**

Canine

**BREED**

Great Dane

**SEX**

Female, spayed

**AGE**

7 Yrs.

**WEIGHT**

54 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

Queensway AH

**REFERRING VET**

Dr. Bilinsky

**INVOICE**

12804

**DATE**

1/10/22

**PRESENTING CLINICAL SIGNS**

History: Distended, fluid filled belly and unable to differentiate anything on radiographs. Concerned re: liver? mass?

Abnormal PE/Chem/CBC/UA Results: Hypoproteinemia and elevated liver enzymes. Rads were not diagnostic due to fluid volume.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**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.

The left kidney is normal size (7.65 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal size (7.22 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

**Adrenal Glands**

The adrenal glands are not definitively visualized due to the severe ascites.

**Spleen**

The spleen is normal in size (2.30 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 normal in size with slightly irregular peripheral contours. The parenchyma is hypoechoic 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. Luminal contents are mostly anechoic. The cystic and common bile ducts are normal/not seen.

**Gastrointestinal**

The stomach is not visualized in its entirety due to the ascites. In the visible portion, the gastric wall is normal in thickness with a normal layering pattern. The gastric lumen is not overtly distended. The small intestinal lumen is not dilated. The small intestinal wall is normal to mildly thickened (up to 0.55 cm) with a normal layering pattern. There is evidence of mucosal striations in some segments. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.


**PATIENT**
***Pancreas***

Luna McKenzie

The pancreas is somewhat obscured by the ascites. In the visualized portions, no obvious pathology is seen.

**SPECIES**
***Free Abdomen***

Canine

A large amount of free fluid is present. The mesentery throughout the abdomen is hyperechoic. The abdominal lymph nodes are normal/not visible.

**BREED**
***Other***

Great Dane

A brief evaluation of the thorax reveals evidence of pleural effusion.

**SEX**
**ULTRASONOGRAPHIC FINDINGS**

Female, spayed

**Primary Findings:**
**AGE**

- The clinical history and sonographic changes are suggestive of a protein-losing enteropathy. Differentials include lymphangiectasia, inflammatory bowel disease, infectious/parasitic disease or infiltrative neoplasia (i.e., lymphoma).
- The ascites may be secondary to low oncotic pressure, depending on the degree of hypoalbuminemia. Other possibilities include increased vascular permeability or increased hydrostatic pressure.

7 Yrs.

**WEIGHT**

54 kg

**INTERPRETED BY**
**Secondary Findings:**

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

- The hepatic parenchymal changes are non-specific and could be secondary to benign age-related process (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy). Alternatively, a more pathologic hepatopathy (i.e., inflammatory disease, cirrhosis) may be present.
- Minor non-specific age-related renal changes.

**IMAGING PERFORMED BY**

Crystal Hill, RVT

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**
**HOSPITAL NAME**

Queensway AH

- Given the elevated liver enzymes, pre- and post-prandial serum bile acids are recommended to assess hepatic function.
- Given the hypoproteinemia, consider the following:
  1. UPC
  2. A fecal evaluation for ova/Giardia
  3. A resting cortisol level to screen for hypoadrenocorticism. If resting cortisol level is < 2.0 mcg/dL, an ACTH stimulation test is recommended
  4. Malabsorption panel including serum cobalamin, folate, TLI and PLI

**REFERRING VET**

Dr. Bilinsky

**INVOICE**

12804

**DATE**

1/10/22



**PATIENT**

Luna McKenzie

**SPECIES**

Canine

**BREED**

Great Dane

**SEX**

Female, spayed

**AGE**

7 Yrs.

**WEIGHT**

54 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

Queensway AH

**REFERRING VET**

Dr. Bilinsky

**INVOICE**

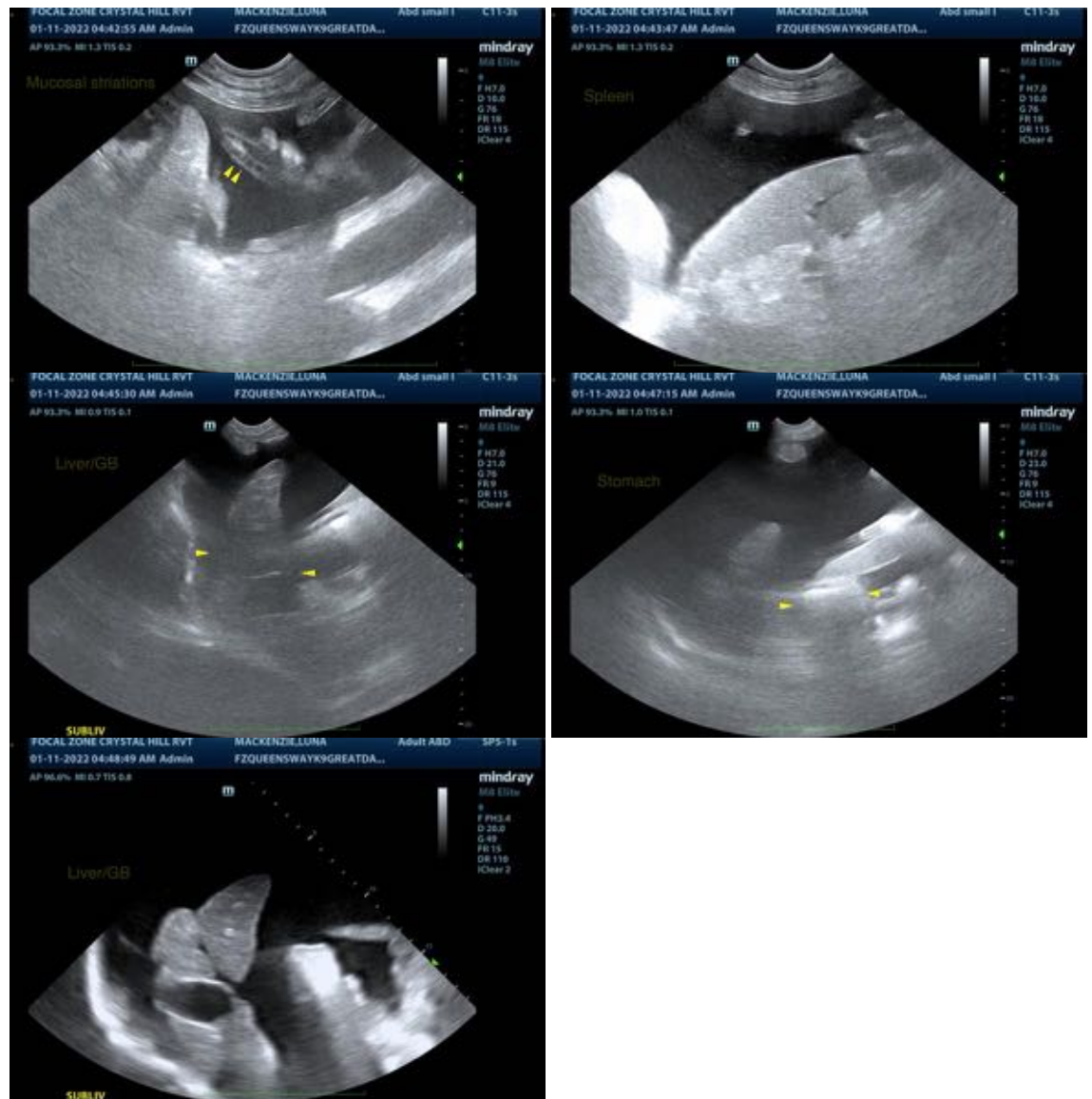
12804

**DATE**

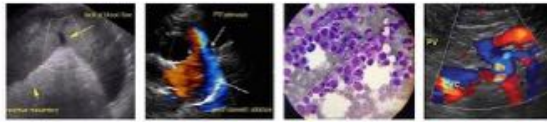
1/10/22

5. Ultimately, surgical hepatic and liver biopsies may be necessary to get a definitive diagnosis.

- Due to the concern about pleural effusion, three-view thoracic radiographs +/- a therapeutic thoracocentesis are recommended. Consider submission of the pleural and abdominal fluid for analysis and cytology. Also consider an echocardiogram, if warranted based on thoracic radiographs.



The information and recommendations provided are based on the images presented by the



**PATIENT**

Luna McKenzie

**referring veterinarian. 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.

**SPECIES**

Canine

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

**BREED**

Great Dane

Andrea.nicastro@sonopath.com

**SEX**

Female, spayed

**AGE**

7 Yrs.

**WEIGHT**

54 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

Queensway AH

**REFERRING VET**

Dr. Bilinsky

**INVOICE**

12804

**DATE**

1/10/22