



**PATIENT**

Fuzzy Miller

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered Male

**AGE**

7.5 Years

**WEIGHT**

15.8 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Meghan Myers DVM

**HOSPITAL NAME**

Hershire AH

**REFERRING VET**

Meghan Myers DVM

**INVOICE**

17643

**DATE**

10/10/22

**PRESENTING CLINICAL SIGNS**

History: initially presented beginning of August for ADR - BW ALP and ALT too high to read - started on supportive care metronidazole, amoxicillin and elura; improved clinically and end Aug ALP 1949, ALT 326 - continue amoxicillin and metronidazole; mid-September ALP 690, ALT 282 - pet doing well at home, discontinued amoxicillin and metronidazole and started denamarin; TODAY- ADR, has not eaten in 2 days, no vomiting ALP 1753, ALT 163, plt 89\* (flagged as clot- manual smear pending) Exam - temp 104.1, mm pink/tacky, CRT 2sec, grade 2-3/6 murmur, hepatomegaly - soft on palpation Current Medication - denamarin and cytopoint 9/12

Abnormal PE/Chem/CBC/UA Results: ALP 1753, ALT 163, plt 89\* (flagged as clot- manual smear pending) GGT and T.bili normal

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface. Enhanced hyperechoic fat and scant free fluid are noted around the urinary bladder.

The area of the prostate is examined without evident pathology.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of mineral or infarcts observed. The kidney measures 4.5 cm. The right kidney measures 4.1 cm. Pyelectasia is noted in the left kidney. The kidneys are surrounded by enhanced hyperechoic fat and free fluid.

**Adrenal Glands**

The area of the adrenal glands is examined without evident pathology.

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is markedly overdistended with echogenic septated debris. The debris is nondependent and mixed with cystic areas around the interior wall of the gallbladder. The integrity of the wall appears to be disrupted and the gallbladder is surrounded by markedly enhanced clumped hyperechoic mesentery and free fluid, concerning for a ruptured, potentially sealing over gallbladder mucocele.



**PATIENT**

Fuzzy Miller

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered Male

**AGE**

7.5 Years

**WEIGHT**

15.8 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Meghan Myers DVM

**HOSPITAL NAME**

Hershire AH

**REFERRING VET**

Meghan Myers DVM

**INVOICE**

17643

**DATE**

10/10/22

***Gastrointestinal***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

***Free Abdomen***

There is free fluid noted in the abdomen from cranial to caudal, as well as enhanced hyperechoic fat and mesentery, primarily around the gallbladder and liver area, but extending around both kidneys and to the urinary bladder.

**ULTRASONOGRAPHIC FINDINGS**

- Severely distended gallbladder mucocele with suspected gallbladder rupture and focal peritonitis
- Concurrent pyelonephritis could also be present given the combined urinary bladder debris, mild pyelectasia and enhanced perinephric fat, however, the evidence of inflammation could also be secondary to the severe peritonitis surrounding the gallbladder
- Hypoechoic hepatomegaly-This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

An exploratory laparotomy, as soon as possible, is recommended for planned cholecystectomy +/- concurrent liver biopsy given the concern for a ruptured gallbladder mucocele.



**PATIENT**

Fuzzy Miller

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered Male

**AGE**

7.5 Years

**WEIGHT**

15.8 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Meghan Myers DVM

**HOSPITAL NAME**

Hershire AH

**REFERRING VET**

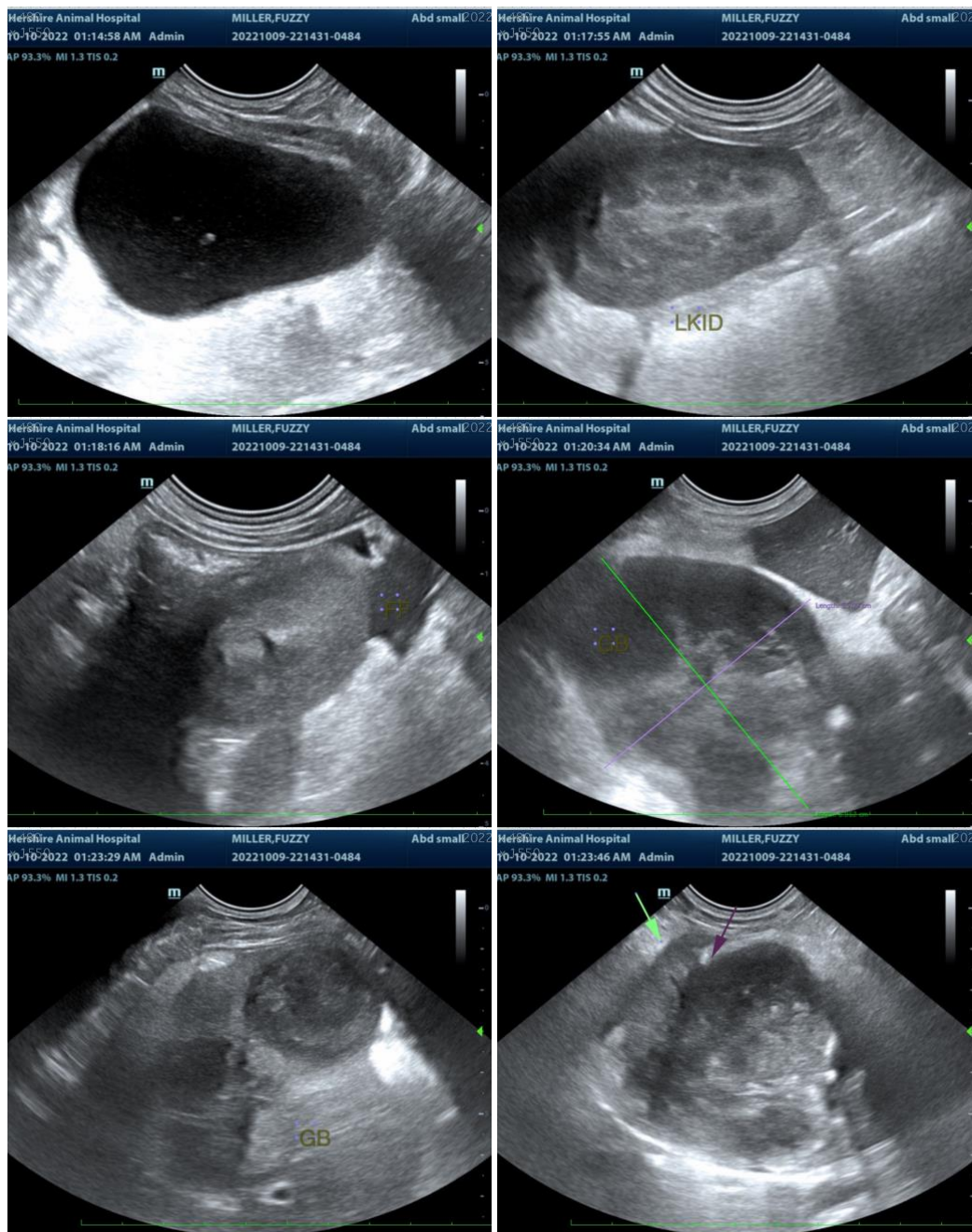
Meghan Myers DVM

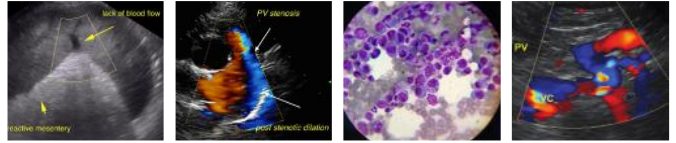
**INVOICE**

17643

**DATE**

10/10/22





**PATIENT**

Fuzzy Miller

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered Male

**AGE**

7.5 Years

**WEIGHT**

15.8 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING  
PERFORMED BY**

Meghan Myers DVM

**HOSPITAL NAME**

Hershire AH

**REFERRING VET**

Meghan Myers DVM

**INVOICE**

17643

**DATE**

10/10/22



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

**Beth Johnson, DVM DACVIM**

Beth.Johnson@SonoPath.com