



## PATIENT

Angel Milroy

## PRESENTING CLINICAL SIGNS

## SPECIES

Feline

Need heavy sedation- Seen recently for senior wellness exam. Losing weight per owner. Eating/drinking normally. No coughing, sneezing, vomiting, or diarrhea. Eats variety of dry food and Fancy Feast wet.

## BREED

Calico

Abnormal PE/Chem/CBC/UA Results: General Appearance: Quiet, alert and responsive, thin Hydration: Slightly dehydrated Abdomen: Painful upon palpation of abdomen, too painful to assess for masses. Musculoskeletal: Muscle atrophy especially hind end and paralumbar area, pain when extending hips BUN 46 (16-37) Calcium 12.5 (8.2-11.2) Anion gap 26 (12-25) ALT 351 (27-158) AST 157 (16-67) ALP 384 (12-59) Total bilirubin 1.5 (0-0.3) Bilirubin unconjugated 0.8 (0-0.2) Bilirubin conjugated 0.7 (0-0.2) Cholesterol 400 (91-305) "Still has elevated liver enzymes and bilirubin. Calcium is now even more elevated. Discussed with owner (husband), liver disease vs. lymphoma or other neoplasia. Rec Abdo US"

## SEX

Spayed Female

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### AGE

15 Years

#### *Urinary System*

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

### WEIGHT

6.2 Pounds

The left kidney has a normal shape and size (3.46 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

## INTERPRETED BY

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The right kidney has a normal shape and size (2.65 cm) with a small cortical cyst measuring 0.30 cm and a non-obstructive nephrolith measuring 0.19 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

## IMAGING BY

Loetitia Saint-Jacques,  
LVT

#### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.42 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

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FourPaws AC

The right adrenal gland is normal in size measuring 0.32 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

## REFERRING VET

Dr. Sue Lester

#### *Spleen*

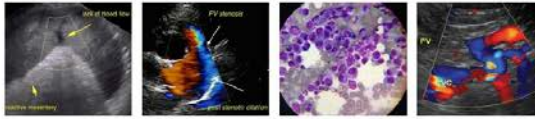
The spleen is large (1.0 cm in width at the level of the hilus) and hypoechoic. The splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

## INVOICE

42390

## DATE

10/26/22



## PATIENT

Angel Milroy **Liver**

## SPECIES

Feline

## BREED

Calico

## SEX

Spayed Female

## AGE

15 Years

## WEIGHT

6.2 Pounds

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MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

## IMAGING BY

Loetitia Saint-Jacques,  
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The liver is large and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is an ill-defined hyperechoic nodule visualized within the parenchyma measuring 0.55 cm (a previous hyperechoic nodule in the liver measured 0.71 cm x 0.50 cm).

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile duct appear tortuous and somewhat dilated. They measure at 0.34 cm on today's exam (bile duct dilation measured at 0.50 cm on previous exam 2/2022).

### **Gastrointestinal**

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.13-0.38cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### **Pancreas**

The pancreas is hypoechoic, mottled, and prominent. There is a small cystic structure in the left limb of the pancreas measuring 0.35 cm (this measured 0.36 cm in the previous ultrasound 2/2022). There is no evidence of regional mesenteric inflammation or fluid.

### **Free Abdomen**

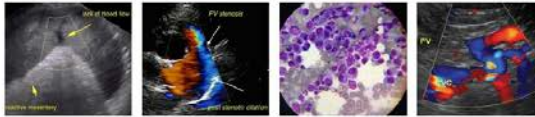
There is a small to moderate amount of free abdominal fluid. There is a cranial abdominal lymph node measuring 1.62 cm x 0.79 cm (I believe the previous measurement was 1.41 cm x 1.1 cm). A mesenteric lymph node measured 0.50 cm, and there were other prominent mesenteric lymph nodes. The omentum is generally hyperechoic.

### **Other**

A brief view of the heart was submitted. No significant pericardial effusion was seen.

## ULTRASONOGRAPHIC FINDINGS

- Large, hypoechoic spleen – Findings are concerning for possible infiltrative disease, congestion, other. Consider a fine needle aspirate.
- Hypoechoic, mottled pancreas with a cystic structure – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation. The cystic



## PATIENT

Angel Milroy structure appears stable from the previous exam.

## SPECIES

Feline

- Large, irregular, heterogeneous liver – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidoses or other hepatopathy.

## BREED

Calico

- Dilated, tortuous bile duct – Dilation of the common bile duct could be consistent with a functional obstruction (i.e. primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (ie. choledocholith, bile duct tumor, pancreatic disease, other). This appears stable from the previous exam.

## SEX

Spayed Female

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

- Small to moderate amount of free abdominal fluid

## AGE

15 Years

- Mild to moderate mesenteric lymphadenopathy – Differentials include inflammation, infection, and neoplasia. Recommend a fine needle aspirate if possible.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

### WEIGHT

6.2 Pounds

Today's exam appears relatively similar to the previous exam in 2/2022, although there has been some progression. The spleen appears larger and more hypoechoic and irregular. Recommend a fine needle aspirate of the spleen. Additionally, the liver is significantly abnormal with elevated values. If a fine needle aspirate has not been performed, this should be done, provided coagulation parameters are normal.

### INTERPRETED BY

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The changes observed in the pancreas, bile duct, and kidneys appear relatively stable.

The mesenteric lymphadenopathy is persistent and significant. If possible, consider a fine needle aspirate.

### IMAGING BY

Loetitia Saint-Jacques,  
LVT

If chest radiographs have not been performed in the past 6 months, recommend repeat 3-view thoracic radiographs.

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Given the significant liver enzyme elevation, if a cytology diagnosis cannot be obtained, consider obtaining liver biopsies. At that time, I would recommend sampling a lymph node, pancreas, and small intestine.

### REFERRING VET

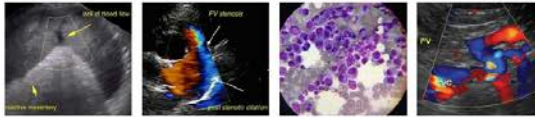
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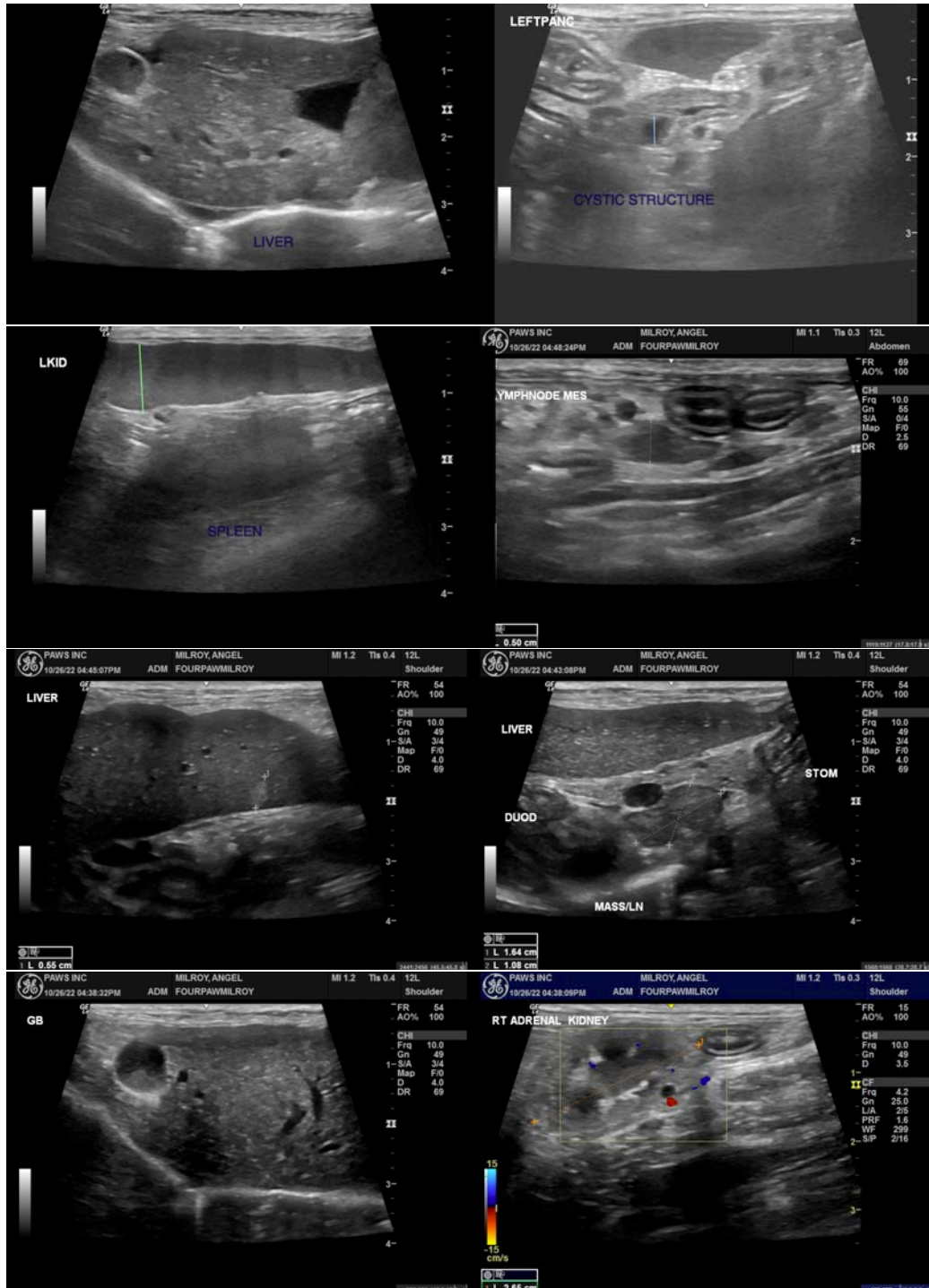
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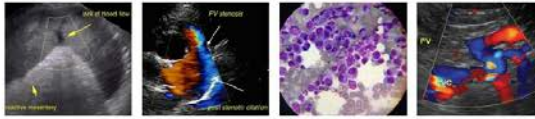
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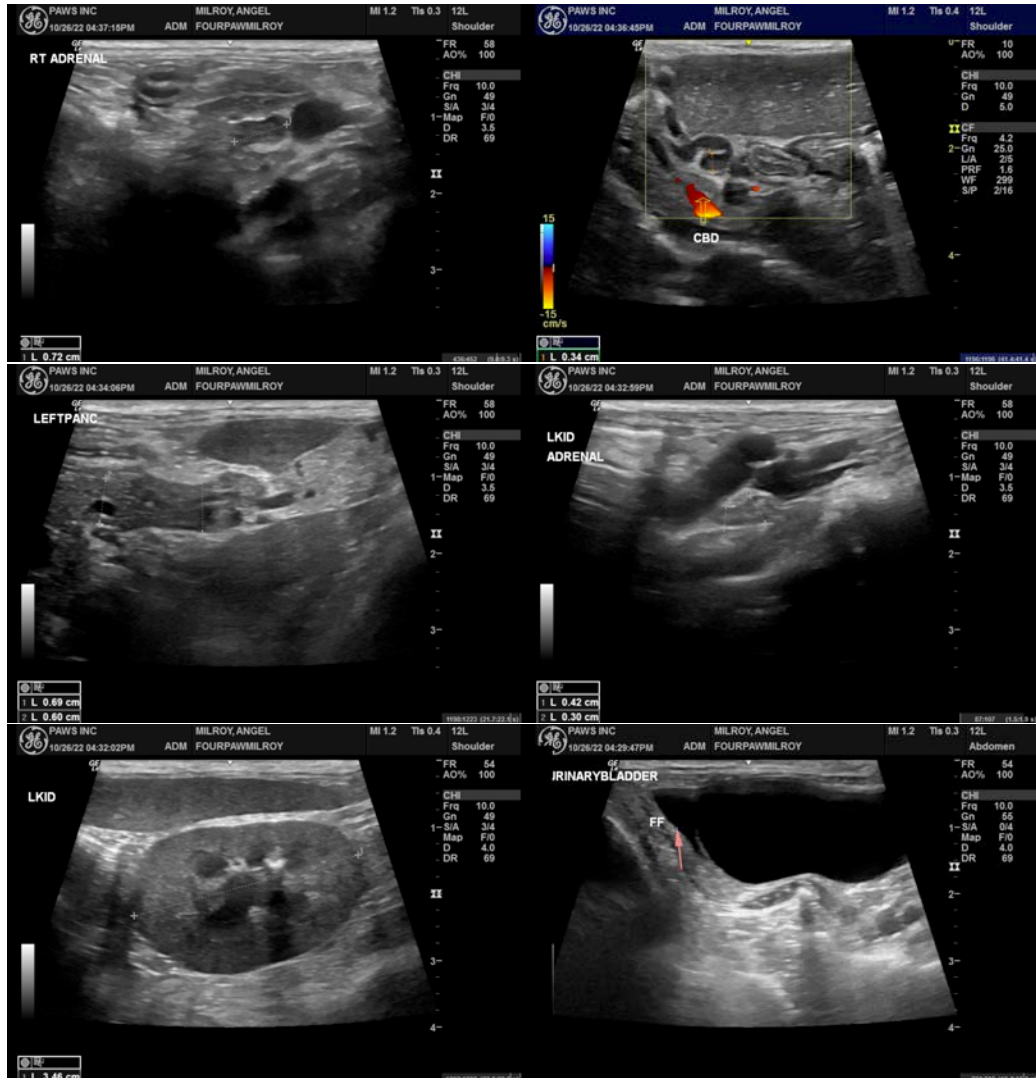
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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