



**PATIENT**

Cool Chang

**SPECIES**

Canine

**BREED**

West Highland  
Terrier

**SEX**

MN

**AGE**

15 years

**WEIGHT**

21.4 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING  
PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Animal General on  
Hudson

**REFERRING VET**

Dr. Stefanie Lang

**INVOICE**

17176

**DATE**

6/28/23

**PRESENTING CLINICAL SIGNS**

History of elevated liver enzymes, ALP, ALT, and also GGT. No signs of liver disease or Cushing's disease. Current meds: Denamarin - no improvement of ALT/ALP.

Abnormal PE/Chem/CBC/UA Results: ALT 189, ALP 2133, GGT 47.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. No evidence of mineral or calculi was noted. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.85 cm in diameter.

No evidence of pathology in the area of the aortic trifurcation.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Left kidney small cortical cyst was present. The left kidney measured 5.5 cm in length. The right kidney measured 5.2 cm in length.

**Adrenal Glands**

The bilateral adrenal glands were borderline to mildly prominent in size based on caudal pole width measurement in light of body weight. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. No adrenal tumors were noted. The left adrenal gland measured 2.1 cm length x 0.68 cm width at the caudal pole. The right adrenal gland measured 1.6 cm length x 0.65 cm width at the caudal pole.

**Spleen**

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Multifocal, well-defined, symmetrical, hyperechoic nodules were present throughout the cranial to caudal parenchyma. An example measured 1.4 cm diameter. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. Hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

**Liver/ Gallbladder**

The liver exhibited generalized enlargement with primarily normal parenchyma echogenicity exhibiting mild to moderate coarse echotexture and minor hepatic parenchymal remodeling. Within the ventral caudal aspect of the mid to left liver, a moderately sized nonhomogeneous to cystic mass measuring ~6.0-7.0 cm diameter was present. The mass appeared to extend caudally into the cranial



**PATIENT**

Cool Chang

abdomen. The gallbladder was non-distended in size containing primarily anechoic content with mild gallbladder sediment. The cystic and common bile ducts were normal.

**SPECIES**

Canine

***Gastrointestinal***

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

**BREED**

West Highland  
Terrier

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

**SEX**

MN

Normal visible colon wall layers were present with apparent formed feces in lumen.

**AGE**

15 years

***Pancreas***

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, consistent with age-related pancreatic changes and incidental. No signs of active inflammation or neoplasia.

**WEIGHT**

21.4 lbs.

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

- Hepatomegaly with ventrocaudal nonhomogeneous to cystic mass
- Mild gallbladder sediment (non-mucocele)
- Chronic renal changes with left kidney cortical cyst
- Benign splenic nodules - consistent with benign myelolipomas
- Bilateral borderline to mild prominent adrenal glands - nonspecific, suspect mild adenomatous change, no adrenal tumor

**IMAGING  
PERFORMED BY**

Kelly Vazquez

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**HOSPITAL NAME**

Animal General on  
Hudson

The hepatic mass was nonspecific with both benign and neoplastic etiologies possible. Assuming normal clotting status, FNA cytology of the mass is recommended for potential further clarification. Surgical or core biopsy of the hepatic mass is likely required for a definitive diagnosis. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial.

**REFERRING VET**

Dr. Stefanie Lang

Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

**INVOICE**

17176

**DATE**

6/28/23



**PATIENT**

Cool Chang

**SPECIES**

Canine

**BREED**

West Highland Terrier

**SEX**

MN

**AGE**

15 years

**WEIGHT**

21.4 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Animal General on  
Hudson

**REFERRING VET**

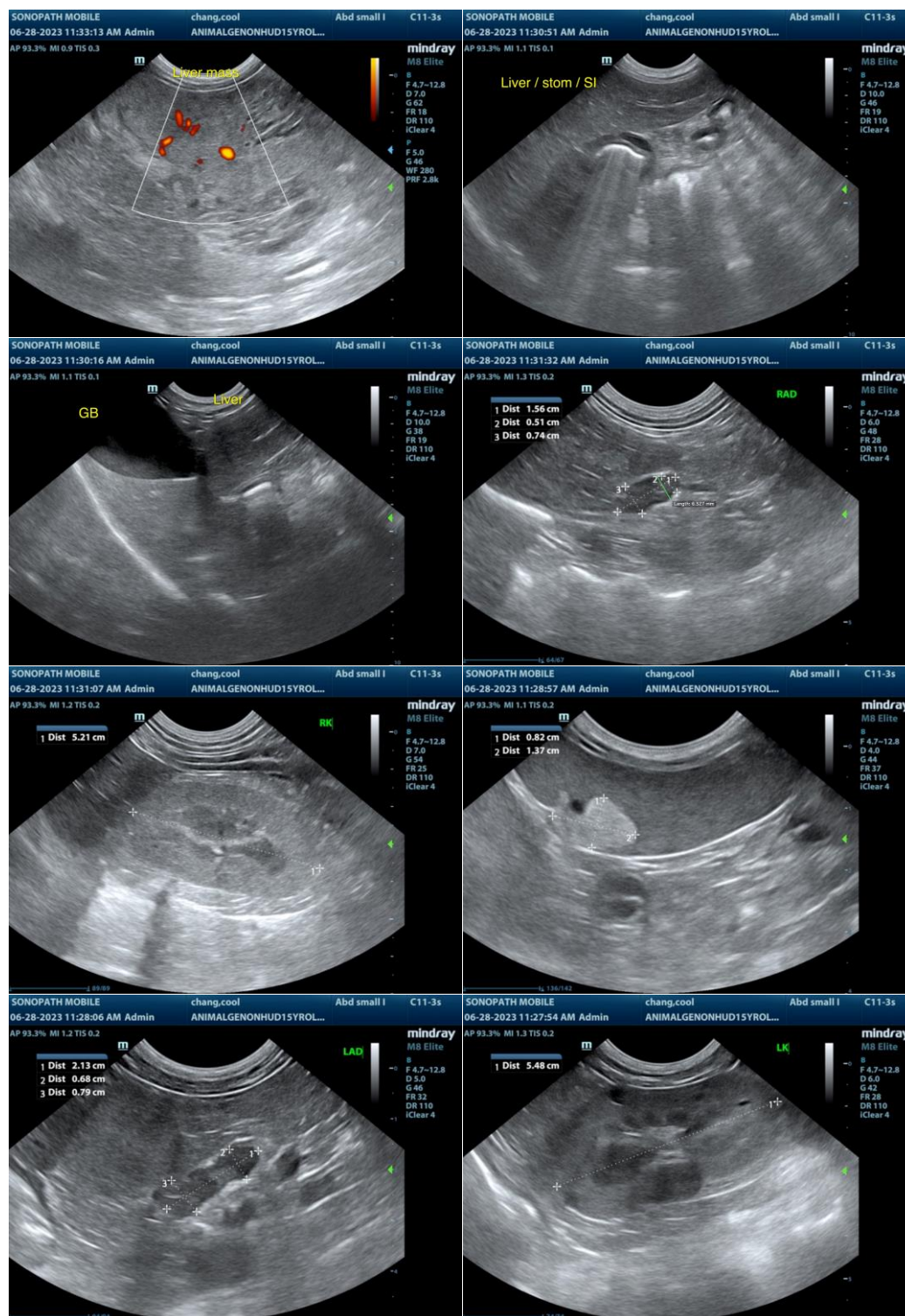
Dr. Stefanie Lang

**INVOICE**

17176

**DATE**

6/28/23





**PATIENT**

Cool Chang

**SPECIES**

Canine

**BREED**

West Highland  
Terrier

**SEX**

MN

**AGE**

15 years

**WEIGHT**

21.4 lbs.



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.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)**  
[info@sonopath.com](mailto:info@sonopath.com)

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Animal General on  
Hudson

**REFERRING VET**

Dr. Stefanie Lang

**INVOICE**

17176

**DATE**

6/28/23