



**PATIENT**

Callie Sholes

**SPECIES**

Canine

**BREED**

Australian Shepherd

**SEX**

FS

**AGE**

11 yr

**WEIGHT**

13.5 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Patti Mayfield DVM

**HOSPITAL NAME**

East Bend Animal  
Hospital

**REFERRING VET**

Dr. Pupich

**INVOICE**

11019ag

**DATE**

07/02/2022

**PRESENTING CLINICAL SIGNS**

History: Metastasis check of soft tissue sarcoma on right front shoulder. Assessment of liver due to hepatomegaly/elevated ALP/ALT Assessment of adrenal glands and kidneys due to persistent proteinuria Primary Problem(s): 1) Soft tissue sarcoma 2) elevated liver enzymes 3) hepatomegaly 4) Proteinuria Pertinent Medical History: Owners are interested in pursuing surgical removal of mass if no metastasis noted. Concerned for hepatopathy vs metastasis. Also concerned for possible hyperadrenocorticism vs glomerular disease vs inflammatory with persistent proteinuria (no further diagnostics done at this point).

Abnormal PE/Chem/CBC/UA Results: PE: ~ 4 cm3 SQ firm mass in the R shoulder region. Additional firm swelling encompassing the proximal R medial thigh, which may be infiltrative lipoma. Mild periodontal disease. Lenticular sclerosis OU. Overweight. Dull coat. Diagnostic Tests Performed/Results: 1.) FNA of mass: --Spindle cell proliferation compatible with sarcoma 2.) CBC/Chem/UA: -- ALT: 225 U/L -- ALP: 3782 U/L --GGT: 20 U/L 3.) Thoracic rads negative for metastasis, but hepatomegaly noted. 4.) UPC: elevated --URINE PRO/CREAT RATIO 0.8

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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

Normal size and margination was 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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 4.7 cm in length. The right kidney measured 5.4 cm in length.

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.53 cm width at the caudal pole and 0.46 cm width at the cranial pole.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.56 cm width at the caudal pole.

No evidence of adrenomegaly or tumors was noted.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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, neoplastic, or benign parenchyma changes were not noted.

**Liver**

An irregular nodular to lobulated mixed echogenic mass occupying the majority of the subjective left and mid liver extending into the area of the gallbladder was present measuring approximately 9 cm in



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diameter. The hepatic parenchyma not involved with the masse exhibited normal echogenicity with moderate coarse echotexture. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

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**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.

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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.

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

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**Pancreas**

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

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**Free Abdomen**

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

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**ULTRASONOGRAPHIC FINDINGS**

- Mixed echogenic nodular liver mass
- Mild chronic renal changes
- Sonographically normal bilateral adrenal glands

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Although sampling is required for further assessment the liver mass is consistent with neoplastic criteria which may include primary hepatic neoplasia with potential for hepatic metastasis given the history of soft tissue sarcoma. Assuming normal clotting status, an ultrasound guided FNA of the mass could be considered for screening cytology. Complete resection of the mass is highly questionable given involvement of more than one liver lobe and extension into the area of the gallbladder.

Hepatosupportive medications including Denamarin and Ursodiol could be considered. Continued monitoring of the UPC level would be reasonable.

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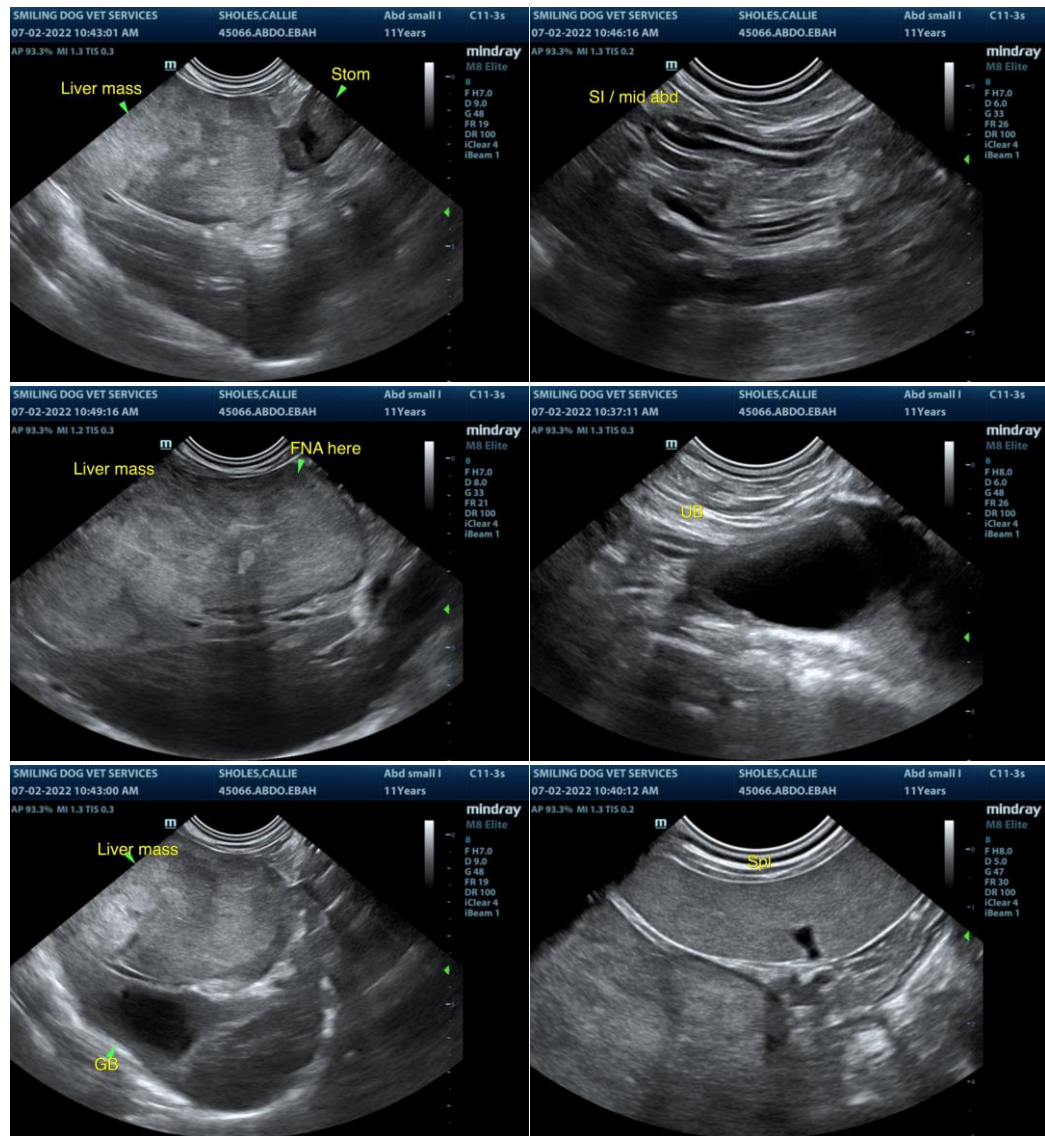
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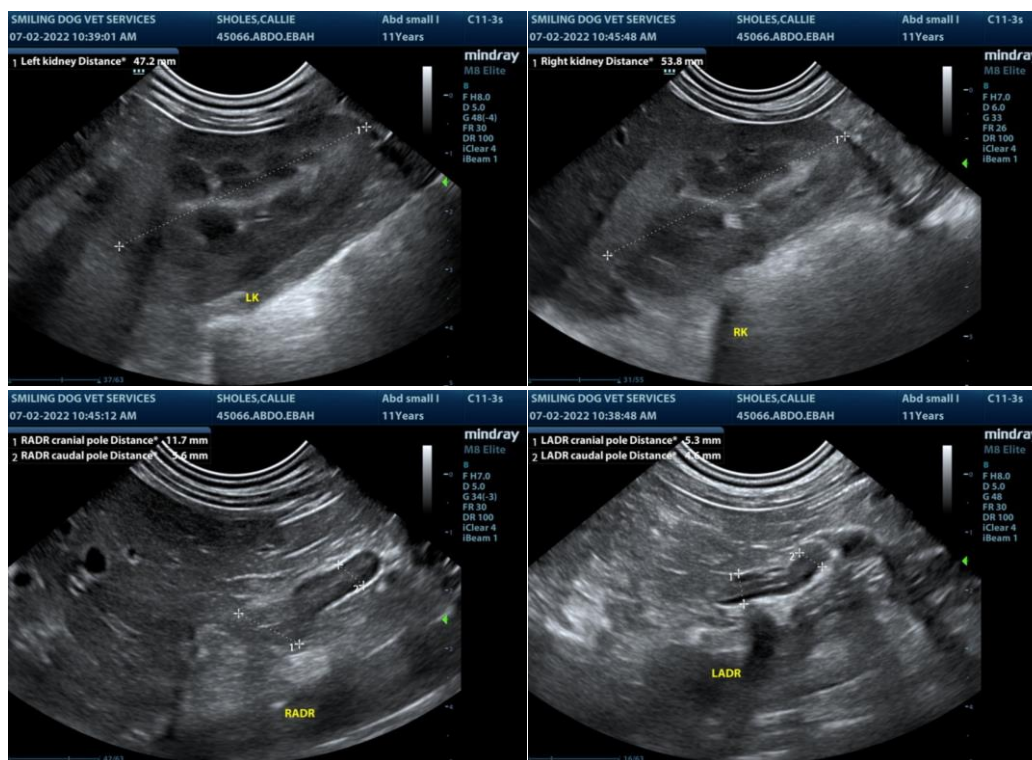
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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