



**PATIENT**

Cooper Owens

**SPECIES**

Canine

**BREED**

Shar Pei Mix

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

64 lbs

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Reyes

**HOSPITAL NAME**

Mobile Vet Ultrasound

**REFERRING VET**

Dr. Beltran

**INVOICE**

95482

**DATE**

1/25/22

**PRESENTING CLINICAL SIGNS**

Hematuria for the past several months, concern about bladder mass  
Abnormal PE/Chem/CBC/UA Results: Alkp: 1538. UA: Alt: 206 SG: 1.016 GGT: 26 Blood: 3+ Chol: 469 Prot: 3+ Trig: 225 WBC: 10 Amy: 2438 RBC: 100 Lip: 290 Trans: moderate epit: moderate

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is moderately distended with anechoic contents. There is a solitary, broad based lesion on the dorsal wall measuring 3.0 cm long and protruding into the lumen 1.3 cm. The mass is irregular in shape, heterogenous in both echotexture and echogenicity. The mass contains mineral foci. No involvement of the trigone or proximal urethra is noted.

The prostate is subjectively mildly enlarged for a neutered dog measuring 1.8 cm thick. The parenchyma is diffusely homogenous and relatively hypoechoic. Normal margins are noted as symmetrical bilobed shape is maintained. Mineral is present within the parenchyma.

Left kidney is normal in size (6.3 cm), shape and echogenicity. It has smooth peripheral margination and appropriate corticomedullary distinction. There is no pyelectasia noted. No mineral is observed.

Right kidney is normal in size (6.9 cm), shape and echogenicity. It has smooth peripheral margination and appropriate corticomedullary distinction. There is no pyelectasia noted. No mineral is observed.

**Adrenal Glands**

Left adrenal gland is normal in size (2.2 cm long x 0.88 cm at cranial pole and 0.76 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable.

The area of the right adrenal gland is evaluated without evident pathology. However, specific measurements cannot be obtained from these images.

**Spleen**

Spleen is normal in size with normal smooth margins. Parenchyma is normal in echogenicity and echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal. \*\*\*See the assessment \*\*\*\*

**Liver**

Liver is subjectively normal in size. Margins are sharp and smooth. It has normal homogenous echotexture and normal echogenicity. A 10-11 cm, round, mostly solid, hyperechoic mass with an anechoic center was noted in the caudal aspect of the left liver. A second 3.0 cm, hypoechoic, solid mass sits in the liver near the larger mass. Visible vasculature appears normal. Gallbladder is mildly distended with anechoic contents. The wall is smooth without visible thickening. There is no evidence of common bile duct dilation.



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**Gastrointestinal**

The visible gastric wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm). The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). There are no luminal contents noted within small intestines.

Colon is normal in wall thickness (< 0.2 cm) and layering.

**Pancreas**

Pancreas has normal homogenous echotexture and is normal in echogenicity and smooth margination. There is no evidence of peri-pancreatic inflammation.

**Free Abdomen**

Lymph nodes are normal with no observed enlargement.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- Bladder mass on the dorsal wall of the urinary bladder. Concerning for infiltrative neoplasia such as transitional cell carcinoma versus other. However, this is an atypical location for transitional cell carcinoma and given the concurrently mildly enlarged, but normal shaped prostate, inflammatory disease/cystitis may be secondary to mineral combined with chronic prostatitis cannot be ruled out.
- A 10.0 cm liver mass either attached to or combined with a second 3.0 cm caudal left liver mass. Differentials include metastatic disease especially given the suspicion of infiltrative neoplasia in the body versus unrelated primary hepatocellular carcinoma versus infiltrative round cell neoplasia versus sarcoma although sarcoma is less likely. As the appearance of liver neoplasia can vary, benign nodular hyperplasia is possible, but considered less likely.
- Full visualization of the head of the spleen is obscured. Therefore, a small attachment to the head of the spleen or concurrent lesion on the head of the spleen cannot be definitively ruled out; however, it is less likely.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

I recommend color flow Doppler is possible of the urinary bladder wall mass to help determine tissue versus inflammatory/mineral debris. Other recommendations include a urinalysis with urine culture followed by submission of urine to look for BRAF gene mutation, which is associated with urinary bladder cancer. Pending results other diagnostics including a FNA of the bladder lesion +/- the prostate (with small risk of tumor seeding/trailing) or traumatic catheterization for further sampling. A FNA of the liver



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mass is recommended if the patient's coagulation status is appropriate. Three view thoracic radiographs are recommended to further assess cardiopulmonary status and look for evidence of metastatic disease.

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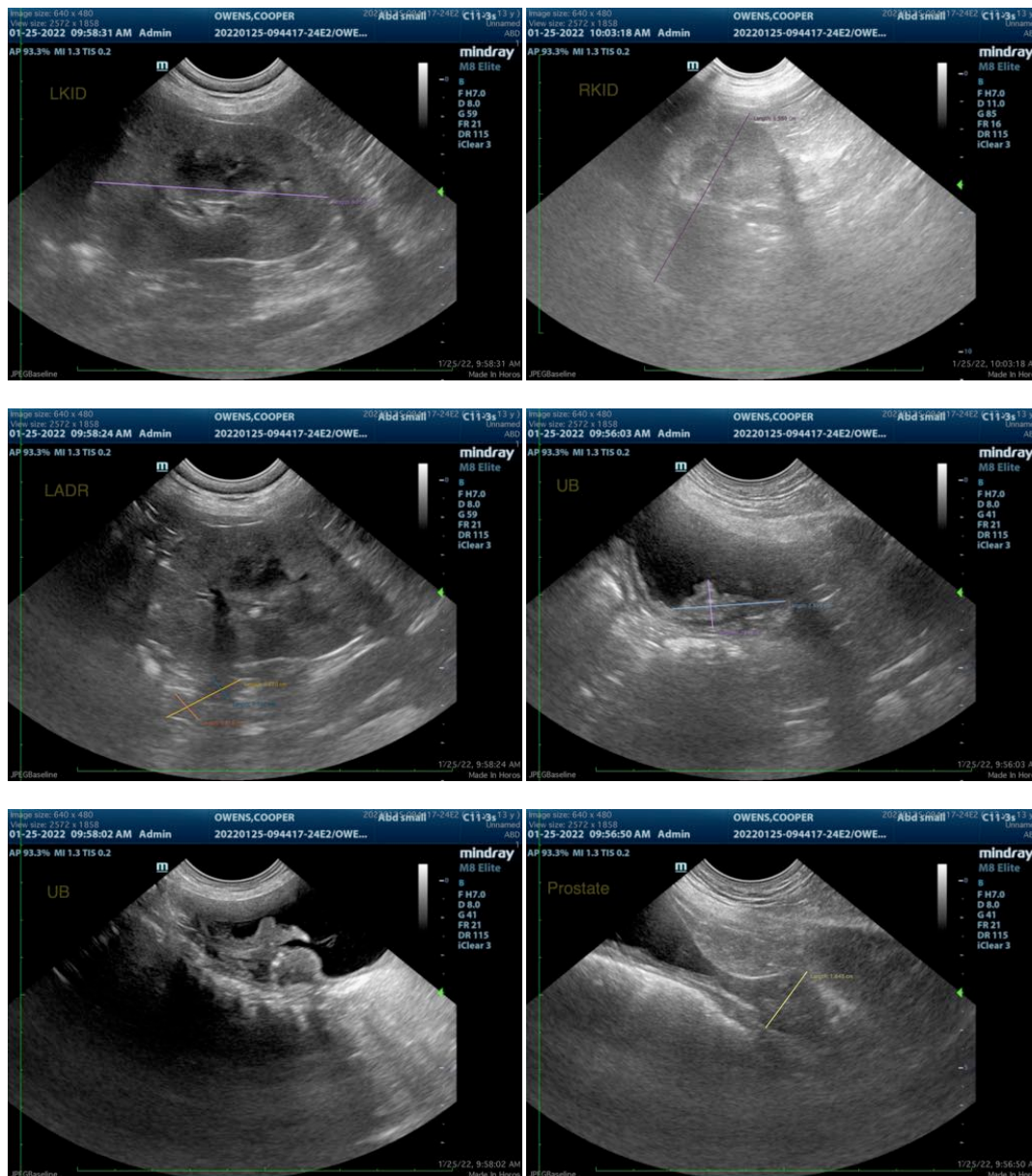
Dr. Beltran

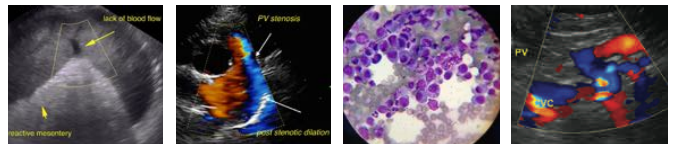
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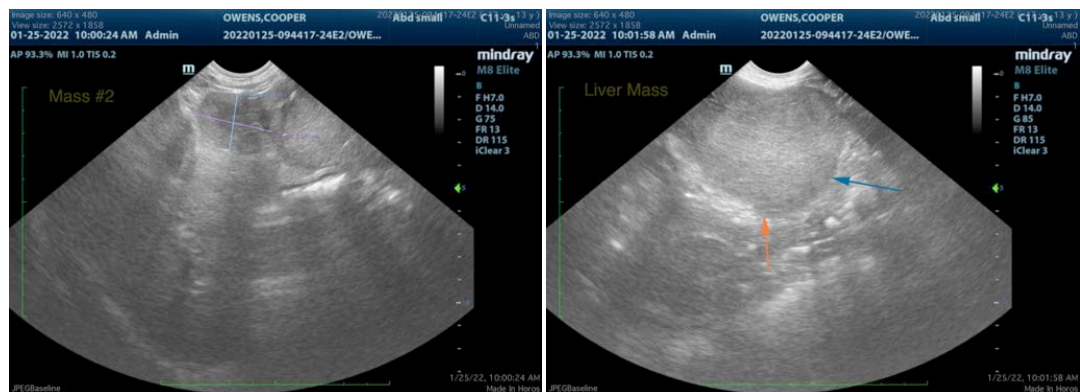
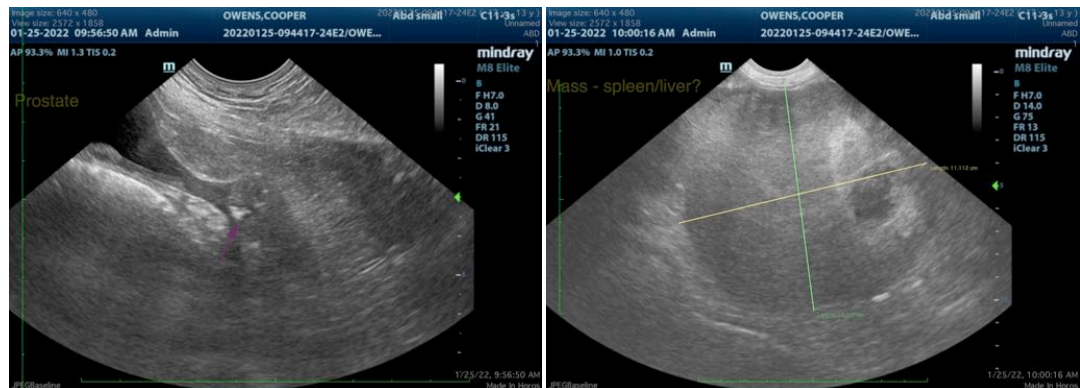
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

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