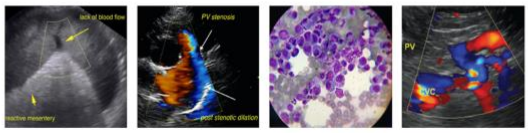




**PATIENT**

Wille Mannicci

**SPECIES**

Canine

**BREED**

Pug Mix

**SEX**

Neutered Male

**AGE**

2010

**WEIGHT**

36.4

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT
ARDMS/RVT

**HOSPITAL NAME**

LeHigh Valley (Bath)

**REFERRING VET**

Dr. Tan

**INVOICE**

20388

**DATE**

1/5/23

## PRESENTING CLINICAL SIGNS

History: PU/PD, ADR, weight loss, decreased appetite.
Labs: WBC 14.0, hematocrit 40.7, calcium 12.0, Albumin 2.4, ALP 178, urine spec grav 1.012, Neg protein and glucose,

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of – cm exhibited normal thickness and tone. Anechoic urine was present in the lumen. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted. Minor dependent luminal mineral was present. Potential passage of mineral from the kidneys, into the bladder is possible, Urine culture and sensitivity could be considered.

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.5 cm in length. The right kidney measured 5.4 cm in length. Bilateral cortical infarcts were noted. Pinpoint to focal medullary mineral was noted.

### *Adrenal Glands*

The left adrenal gland was not definitively visualized.

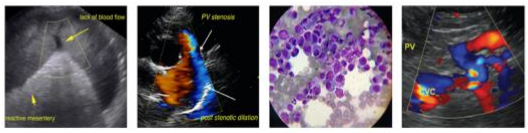
The right adrenal gland was indistinctly visualized owing to isoechoic to nonhomogenous parenchyma compared to adjacent omentum, subjectively measuring 2.5 cm length x 0.63 cm at the caudal pole in width.

### *Spleen*

The spleen exhibited primarily finely textured parenchyma which was heterogenous and mildly hypoechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease. Intermittent pinpoint hyperechoic splenic foci were noted, which may indicate pinpoint splenic microinfarction, fibrosis or mineralization. No splenic masses were noted.

### *Liver*

A large expansive irregular nonhomogenous mass, appearing to arise from the mid to caudal aspect of the medial to left liver, extending caudally into the level of the mid abdomen was noted, measuring at least 12.0 cm in diameter. The liver mass appeared to directly efface the cranial medial spleen, yet without overt or definitive splenic origin or invasion. The liver parenchyma not involved with the mass exhibited overall normal echogenicity with mild to moderate coarse echotexture.





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The gallbladder was non-distended in size containing anechoic content. The common bile duct was not definitively visualized without overt evidence of posthepatic obstruction.

### *Gastrointestinal*

The stomach was indistinctly visualized, owing to potential possible displacement secondary to the caudally expansive liver mass.

The visualized segments of small intestine exhibited intact wall layering and maintained 1:3 muscularis to mucosa ratio without evidence of mechanical/metabolic intestinal ileus.

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

### *Pancreas*

The pancreas was not definitively visualized owing to increased peripancreatic omental artifact and caudally expansive liver mass.

### *Free Abdomen*

Regional mildly hyperechoic omentum was noted, surrounding the liver mass. Minor volume peritoneal free fluid was noted in the left lateral abdomen adjacent to the spleen. No overt lymphadenopathy was noted.

## ULTRASONOGRAPHIC FINDINGS

- Large, caudally expansive liver mass
- Mild heterogenous to hypoechoic spleen, exhibiting pinpoint hyperechoic foci- subjectively benign
- Bilateral chronic renal changes with cortical infarcts and medullary mineralization
- Minor peritoneal free fluid

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although cytology is required for further assessment and possible definitive diagnosis, the liver mass is sonographically consistent with neoplastic criteria. Further assessment may include, assuming normal clotting status, FNA cytology of the liver mass +/- screening splenic cytology, using a 25-guage needle, as well as three view chest radiographs. No overt evidence of gastrointestinal pathology as a contributing factor, although potential for gastric displacement secondary to the liver mass is suspected. Given the size of the liver mass and likely involvement of more than one liver lobe, surgical options are likely precluded. Further assessment may include abdominal CT. As needed empirical gastrointestinal supportive care is suggested.

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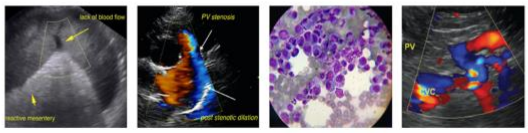

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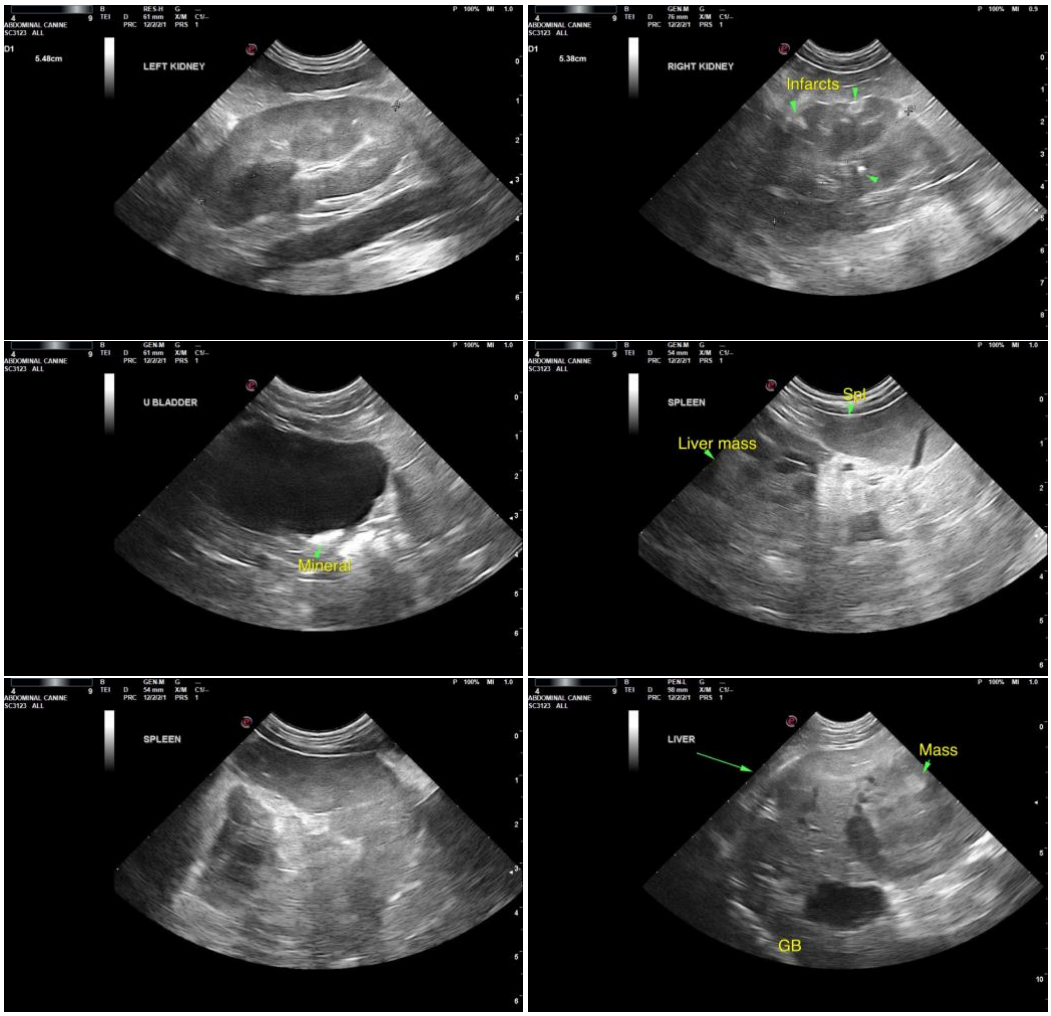

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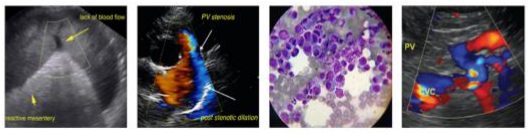

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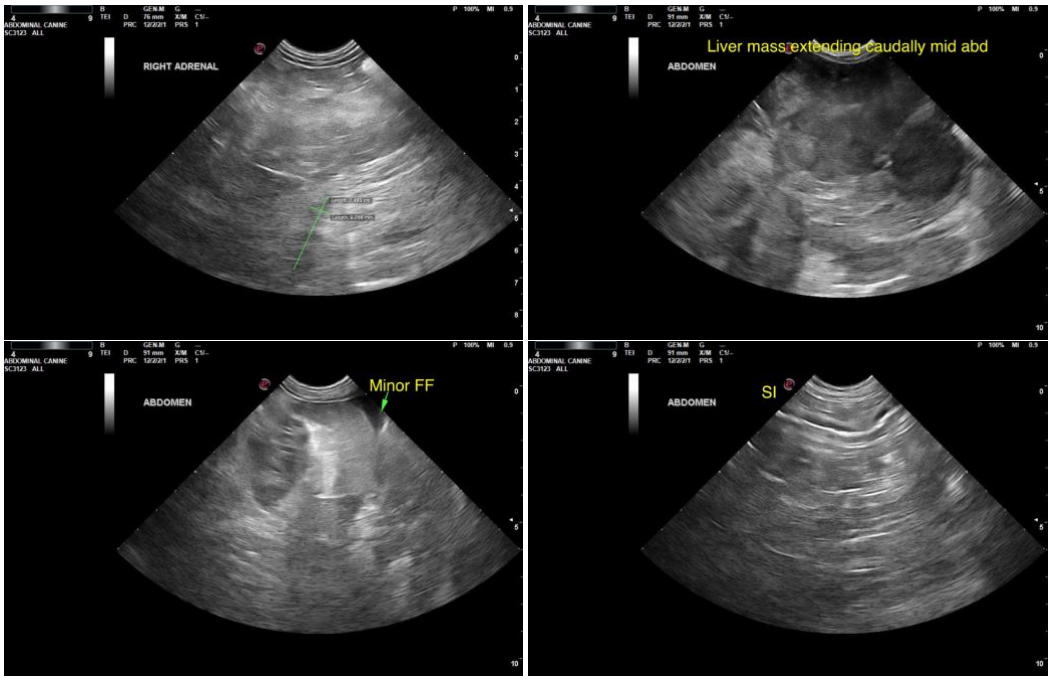


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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)**
**info@SonoPath.com**