

**PATIENT**

Zoe Beacock

**SPECIES**

Canine

**BREED**

Border Collie Mix

**SEX**

Spayed Female

**AGE**

13y

**WEIGHT**

37lbs

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Loetitia Saint-Jacques,  
LVT

**HOSPITAL NAME**

Four Paws Animal  
Clinic

**REFERRING VET**

Dr. Susan Lester

**INVOICE**

10160

**DATE**

4/5/2023

**PRESENTING CLINICAL SIGNS**

Recheck echo needing anesthesia for dental- Increased water intake and appetite- MEDS; gabapnetin, benadryl and CBD oils-

Abnormal PE/Chem/CBC/UA Results: BUN 32, ALT 236, ALP 300

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**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.

The left kidney has a normal shape and size (5.12 cm). Overall echogenicity is normal with adequate 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.

The right kidney has a normal shape and size (5.0 cm). Overall echogenicity is normal with adequate 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.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.45 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.

The right adrenal gland is normal in size measuring 0.47 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.

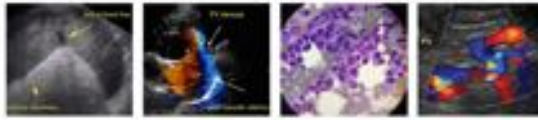
**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and 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.

**Liver**

The liver is large in size, and irregular in shape. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a hyperechoic mixed echogenicity mass effect visualized within the parenchyma on the left side measuring 4.66 cm x 4.55 cm. On the right side there is an ill-defined slightly hyperechoic bulge "mass effect" measuring 3.97 cm x 5.75 cm. Additionally, there are two hypoechoic smaller mass effects/nodules visualized measuring 3.96 cm and 5.58 cm in diameter.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.



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## *Gastrointestinal*

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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 jejunum measured as normal (0.38 cm.) 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 area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

## *Free Abdomen*

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

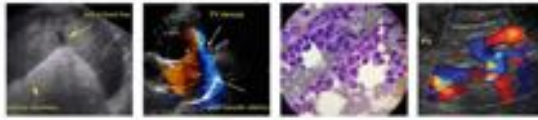
## PRIMARY FINDINGS

- Large heterogenous liver with hyper and hypoechoic mass effects.
- Moderate gallbladder debris. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

These large nodules/mass effects could represent benign or neoplastic processes. I would not be surprised if some of these are very large regenerative nodules, possibly primary hepatic mass lesions etc. If that is the case the lesions could be slow growing and behave relatively benignly. There is also a chance because there are multiple lesions present that this is a more aggressive process and represents metastatic neoplasia. Options moving forward would include a fine needle aspirate of the mass lesions which have a window for sampling. Additionally, you could consider a contrast CT scan, which could better evaluate distribution size etc. and a liver function test to determine if the elevations in liver enzymes are clinically concerning.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.



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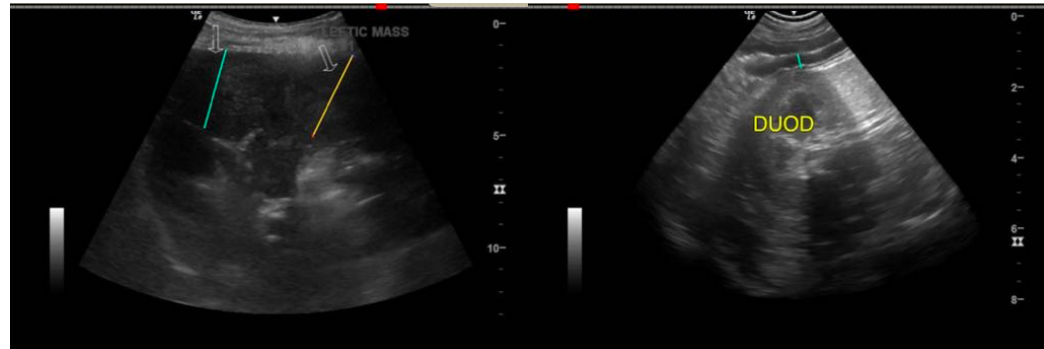
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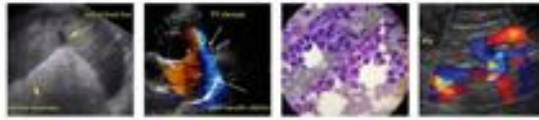
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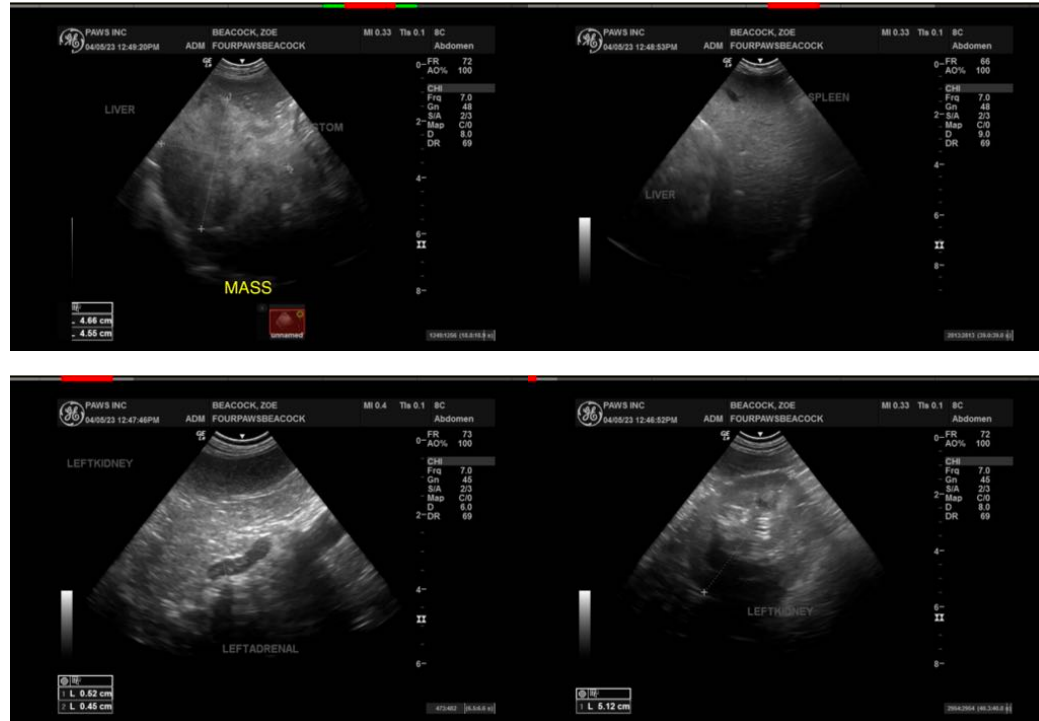
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com