

**PATIENT**

Harper Klinzing

**SPECIES**

Canine

**BREED**

Wheaten Terrier

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

39.2 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kathleen Byrnes

**HOSPITAL NAME**

Monroe Road Animal  
 Hospital

**REFERRING VET**

Dr. Widay

**INVOICE**

15946

**DATE**

05/08/26

**PRESENTING CLINICAL SIGNS**

P presented for echo due to new murmur and elevated proBNP 1442. No clinical signs at home

**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 2.0 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (5.09 cm). Overall echogenicity is slightly hyperechoic with mildly reduced 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. Occasional small cortical cysts are visualized.

The right kidney has a normal shape and size (5.53 cm). Overall echogenicity is slightly hyperechoic with decreased 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. Numerous cortical cysts are visualized.

*Adrenal Glands*

The left adrenal gland is normal in size measuring 0.67 cm at the cranial pole and 0.79 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 1.72 cm at the cranial pole and 0.68 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.

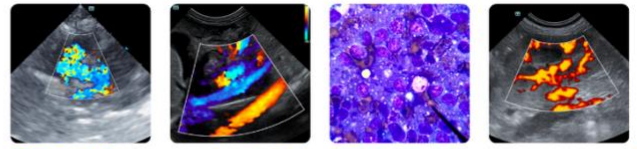
*Spleen*

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. The spleen measured 1.34 cm.

*Liver*

The liver is large in size, with normal echogenicity and irregular peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous large expansile hypoechoic mass lesions, the largest of which is in the caudal aspect of the liver ventral to the gallbladder measuring 3.75 cm in diameter. Another hypoechoic lesion measures 1.44 cm. Additionally, there are numerous hyperechoic nodules and masses, the largest of which is in the right caudal dorsal liver abutting the great vessels, measuring 4.19 cm x 5.76 cm.

The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris and some areas have early mucosal stranding and organization of the debris into an



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early mucocele. There is a large amount of primarily non-organized echogenic debris present as well. There is no evidence of bile duct dilation.

***Gastrointestinal***

The stomach contains a large amount of fluid. It measures at a normal thickness of <0.7 cm 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 to moderate 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 duodenum measured as normal (0.41 cm in wall thickness) and the jejunum measured as normal (0.30 cm). Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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.

**ULTRASONOGRAPHIC FINDINGS**

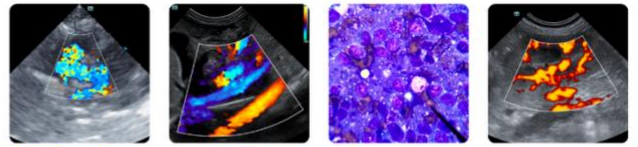
- Large heterogenous liver with numerous large expansile hypoechoic masses and nodules and hyperechoic masses and nodules- findings are concerning possible metastatic lesions. A benign process is possible.
- Age-related changes visualized associated with both kidneys.
- Large gallbladder debris visualized with early mucosal stranding at the periphery- findings are most consistent with a developing mucocele.
- Large fluid distended stomach and mildly fluid distended small intestine- findings are most consistent with a postprandial patient. Ileus is an alternate differential.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The liver is very abnormal with too numerous to count large expansile hypo- and hyperechoic masses and nodules. Recommend a fine needle aspirate of representative samples for cytologic evaluation.

The gallbladder has a large amount of debris with some early mucosal stranding suggestive of a developing mucocele. Recommend starting ursodiol therapy and close continued monitoring.

If cytology is not diagnostic, ultimately biopsies of the liver may be warranted.



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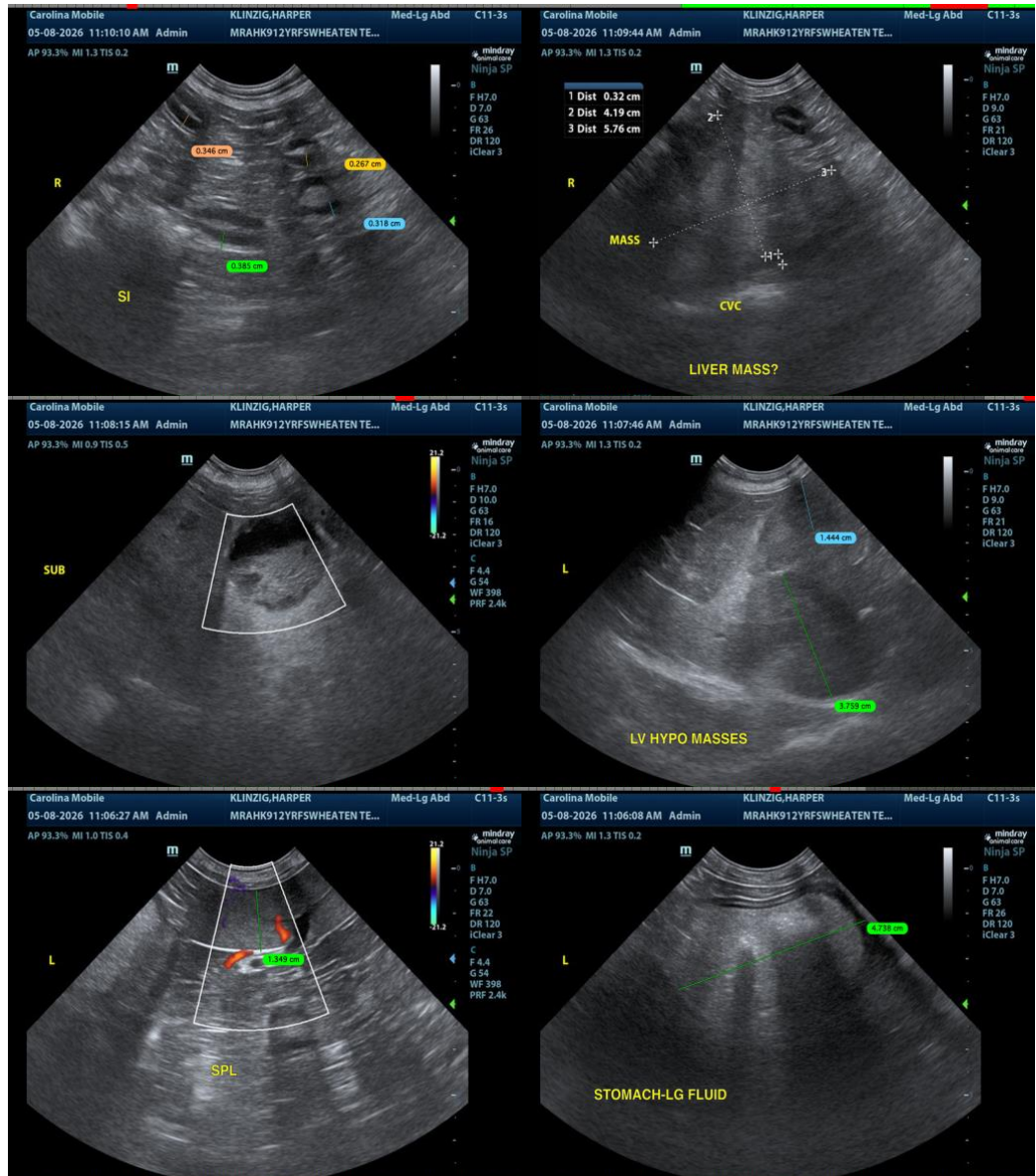
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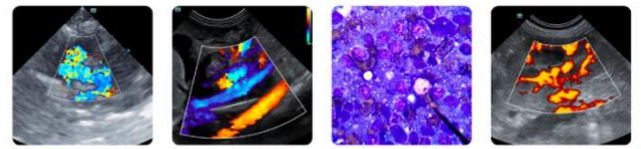
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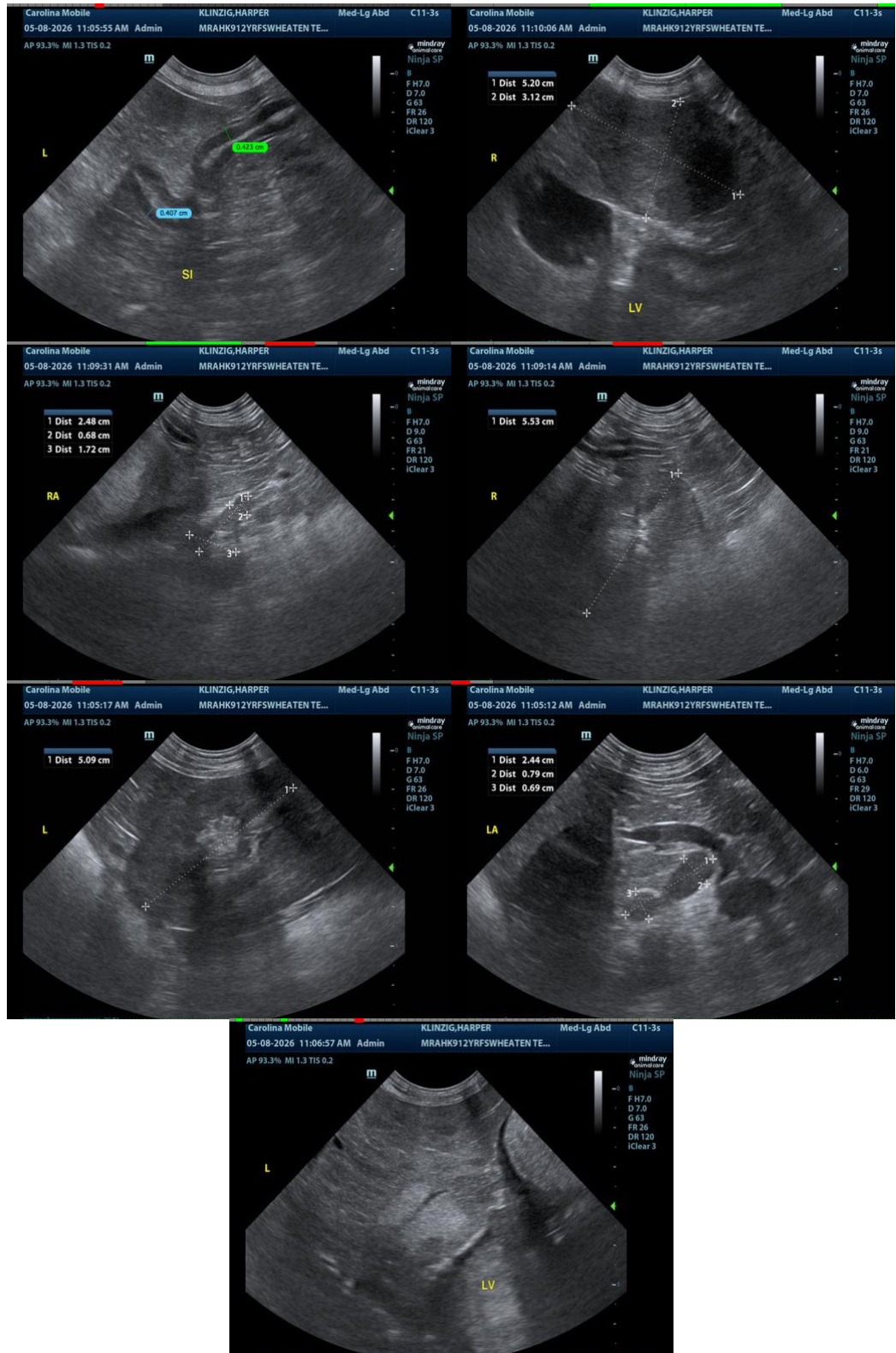
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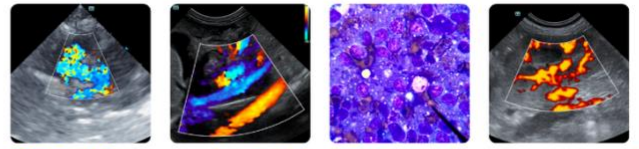
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

[info@sonopath.com](mailto:info@sonopath.com)