



**PATIENT**

Gigi Dalling

**SPECIES**

Canine

**BREED**

Pit Bull

**SEX**

Spayed Female

**AGE**

8 Years

**WEIGHT**

60 Pounds

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING PERFORMED BY**

Dr. Linda Grau

**HOSPITAL NAME**

Fredon AH

**REFERRING VET**

Dr. Linda Grau

**INVOICE**

39316

**DATE**

7/8/22

**PRESENTING CLINICAL SIGNS**

recent inappetence and diarrhea, treated with metronidazole, still not eating, malaise  
Abnormal PE/Chem/CBC/UA Results: unremarkable exam, BUN 83, Creat 5.8, ALT 294, Alkphos 557, Phos 9.2, UA pending, rads suggested grossly thickened stomach wall

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is not fully distended, thereby making it difficult to accurately measure wall thickness. However, the wall is mildly irregular in numerous regions. Its contents are primarily anechoic, except for a very small amount of free floating sediment. No abnormalities are noted with the trigone. There is no evidence of sediment, cystoliths, polyps or a mass.

**Kidneys**

The **left** kidney appears within normal limits in size. The capsule is smooth. The cortex is hyperechoic, i.e., it is isoechoic to the spleen. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. Mineralizations of the diverticulae and pelvis are present. A very small diverticular nephrolith is suspected based on acoustic shadowing. There is no evidence of pyelectasia. Blood flow is, subjectively, mildly decreased. The surrounding mesentery is very mildly hyperechoic.

The **right** kidney measures approximately 6.93 cm. The capsule is smooth. The cortex is hyperechoic, i.e., it is isoechoic to the liver, which is also hyperechoic compared to normal. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. Mineralizations of the diverticulae and pelvis are present. There is no evidence of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is very mildly hyperechoic.

**Aortic bifurcation/trifurcation**

No abnormalities observed.

**Adrenal Glands**

The **left** adrenal gland measures 0.50 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right** adrenal gland measures 0.65 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

**Spleen**

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

**Liver**

The liver is displaced caudally in the abdomen by the enlarged hepatic lymph node (LN). A scant amount of anechoic ascites is observed between the LN and the liver. As the liver is evaluated further, a small amount of anechoic fluid is noted between liver lobes. The mesentery surrounding the lymph node and liver are markedly hyperechoic.



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The liver is not overtly enlarged. Its borders are smooth, but mildly rounded. It is diffusely hyperechoic and heterogeneous with a granular echotexture, in addition to hypoechoic nodules of variable size (1.2 cm in diameter x 1.4 cm in length) and pinpoint hyperechoic foci dispersed throughout the parenchyma. The medial aspect of the liver (facing the stomach) has a similar appearance to the hepatic LN, i.e. it appears mildly cystic.

**SPECIES**

Canine

The **gallbladder** wall is mildly thickened (2.6 mm). It is within normal limits in echogenicity, however, the wall becomes mildly hyperechoic as it extends into the cystic duct. A small amount of echogenic material is present within the GB. There is no evidence of edema surrounding the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

**BREED**

Pit Bull

**Gastrointestinal**

**SEX**

Spayed Female

The stomach is not well visualized due to the presence of the lymph node. The small portion visualized has a large amount of gas within the lumen, thereby affecting the quality of the exam. The portion of the gastric wall evaluated does not show abnormalities in thickness or definition of layering. Peristalsis cannot be evaluated properly.

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8 Years

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved, however, the mesentery surrounding a few segments of bowel in the left cranial quadrant is hyperechoic. Abnormally dilated loops of bowel are not observed.

**WEIGHT**

60 Pounds

Gas is present within the transverse colon.

The colonic wall is not thickened and mural detail is considered normal.

**Pancreas**

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

The **left limb** is mildly to moderately hypoechoic, with rounded, but relatively smooth contours. The surrounding mesentery is mildly to moderately hyperechoic. Mild pancreatitis cannot be excluded. Overt signs of neoplasia are not noted.

The **right limb** is not well visualized, however, the omentum in the region is severely hyperechoic.

**IMAGING PERFORMED BY**

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**Other**

**Lymph nodes**

**HOSPITAL NAME**

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A severely enlarged hepatic lymph node is present dorsal to the liver. It measures 4.5 cm in diameter x 7.6 cm in length. The hilus and blood vessels are very well preserved. Its contours are smooth. It is echogenic, and relatively homogeneous. It is moderately heterogeneous at the pole facing medially (towards the stomach), i.e. it is hypoechoic and has a cystic appearance.

**Abdominal effusion**

**REFERRING VET**

Dr. Linda Grau

A scant amount of anechoic effusion is observed between the hepatic LN and the liver, in addition to a small amount of anechoic fluid between liver lobes.

**ULTRASONOGRAPHIC FINDINGS**

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- **Lymph node:** Lymphadenitis due to an immune-mediated process, including an underlying infectious cause, cannot be excluded. That is, diseases other than neoplasia are possible.
- **Liver:** The hepatic changes are non-specific. Although hepatic neoplasia is possible (lymphoma), other diseases, e.g., an infectious disease (*Bartonella*, *Mycobacterium*, etc.), granulomatous or

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<b>PATIENT</b>	immune-mediated hepatitis, must also be considered. Some of the changes observed are likely due to nodular hyperplasia.
Gigi Dalling	
<b>SPECIES</b>	<ul style="list-style-type: none"> <li>• <b>Gallbladder:</b> Mild cholecystitis is possible, however, it is difficult to determine the degree of clinical significance.</li> </ul>
Canine	<ul style="list-style-type: none"> <li>• <b>Kidneys:</b> Although renal changes are consistent with <i>age related degeneration</i>, some of the abnormalities are suggestive of pyelonephritis. Another differential diagnosis for the changes observed is glomerulonephritis secondary to neoplasia.</li> </ul>
<b>BREED</b>	
Pit Bull	<ul style="list-style-type: none"> <li>• <b>Pancreas:</b> <i>Active pancreatitis</i> is suspected however it is likely secondary in nature.</li> <li>• <b>Ascites:</b> Ascites in Gigi's case may occur due to increased vascular permeability due to neoplasia, as well as lymphatic obstruction.</li> </ul>
<b>SEX</b>	
Spayed Female	<ul style="list-style-type: none"> <li>• <b>Gastrointestinal tract:</b> The stomach is not well visualized due to the presence of the lymph node. A component of Gigi's hyporexia/anorexia is likely due to compression of the stomach by the lymph node.</li> </ul>
<b>AGE</b>	
8 Years	<ul style="list-style-type: none"> <li>• <b>Urinary bladder:</b> The sediment in the lumen of the urinary bladder is most likely clinically insignificant, however, pyelonephritis, cannot be excluded based on the renal findings.</li> </ul>
<b>WEIGHT</b>	<b><u>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</u></b>
60 Pounds	The following are suggested/recommended
<b>INTERPRETED BY</b>	Fine needle aspirates of the lymph node and liver.
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	A coagulation profile is recommended. If this is not possible, the risks should be discussed with the client and a dose of vitamin K (0.5 mg/kg SQ <i>at least</i> 30 minutes prior to the procedure) should be administered.
<b>IMAGING PERFORMED BY</b>	Analgesia (gabapentin, methadone)
Dr. Linda Grau	Anti-emetics (ondansetron, if others have not been successful)
<b>HOSPITAL NAME</b>	A urine culture and sensitivity to exclude pancreatitis
Fredon AH	Can wait for cytology results, but may require PCR testing for vector borne disease, <i>Leptospira</i> spp., <i>Bartonella</i> spp., <i>Mycobacterium</i> spp., etc.
<b>REFERRING VET</b>	Arterial blood pressure
Dr. Linda Grau	Treatment for pancreatitis and azotemia, i.e. analgesia, IV fluids
<b>INVOICE</b>	+/- IV antibiotics once urine for culture obtained to treat for possible pyelonephritis or bacterial cause of hepatitis
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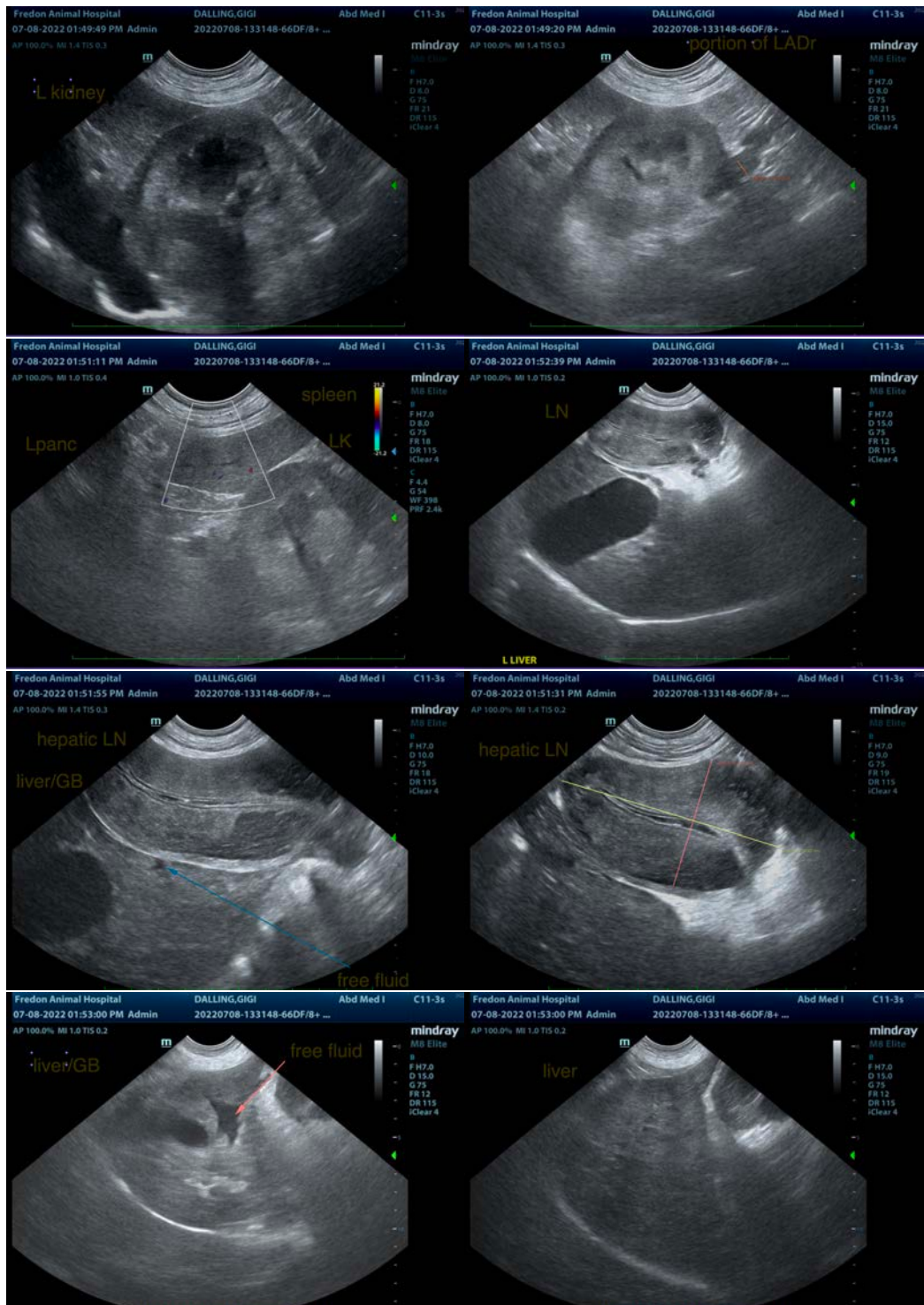
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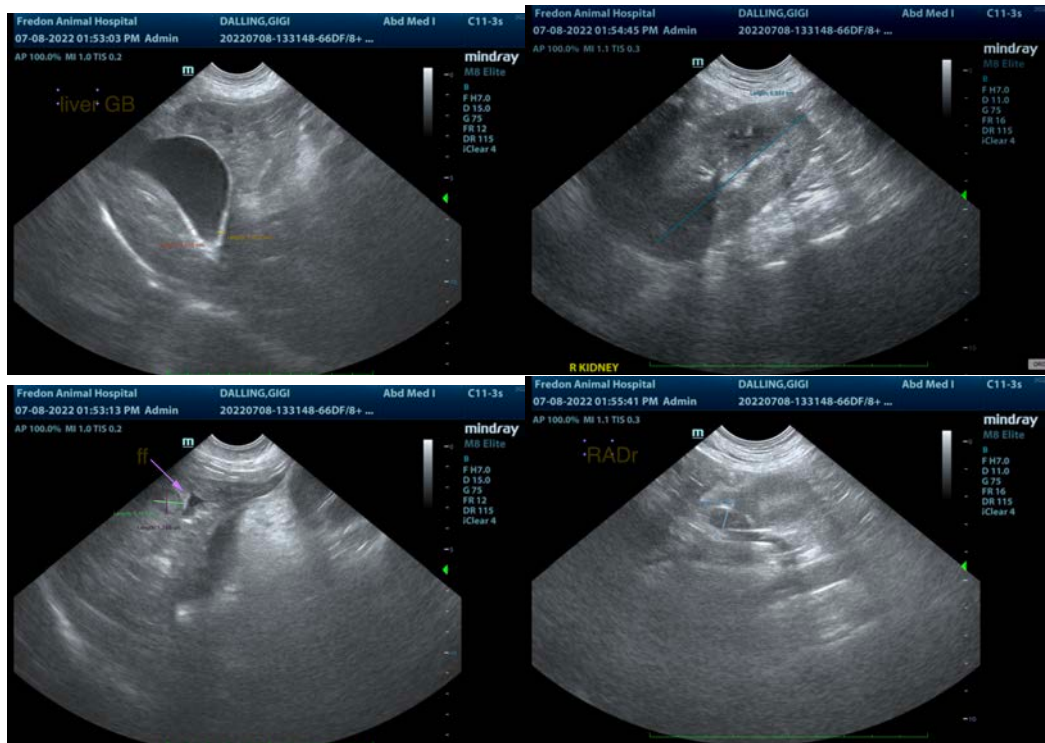
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Lisa Carioto, DVM, DVSc, Diplomate ACVIM**

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