



**PATIENT PRESENTING CLINICAL SIGNS**

Larry Deesare  
11 yo MN Puggle unregulated diabetic elevated ALP

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine  
**Urinary System**

**BREED**  
Puggle  
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.

**SEX**  
Neutered Male  
The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

**AGE**  
11 Years  
The left kidney has a normal shape and size (5.85 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.

**WEIGHT**  
25 Pounds  
The right kidney has a normal shape and size (6.35 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 0.85 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. 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. There is an ill-defined hypoechoic nodule visualized within the parenchyma, measuring 0.74 cm in diameter.

**Liver**

The liver is large with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a somewhat ill-defined, isoechoic and irregular mass effect visualized in the caudal aspect of the liver, just dorsal to the stomach in the sagittal view.

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 mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

**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.

**INTERPRETED BY**

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**IMAGING PERFORMED BY**

Dr. Elaina Petrone

**HOSPITAL NAME**

Long Branch AH

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**INVOICE**

41827

**DATE**

10/5/22



**PATIENT**

Larry Deesare

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. Jejunum wall measures 0.34 cm. Duodenum wall measures 0.44 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**SPECIES**

Canine

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.

**BREED**

Puggle

***Pancreas***

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.

**SEX**

Neutered Male

***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.

**AGE**

11 Years

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

25 Pounds

- Hypoechoic nodule in the spleen – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Large hyperechoic liver with isoechoic mass effect – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. Findings are most consistent with a diabetic hepatopathy. The lesion observed in the liver is subtle and isoechoic, likely most consistent with a primary hepatic mass.
- Mild 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.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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There is an isoechoic, slightly irregular mass effect in the caudal aspect of the liver. This would be most consistent with a primary hepatic mass and may be an incidental finding at this time. Consider a fine needle aspirate of this area. I would recommend trying to optimally regulate this patient's diabetes before considering surgical removal, as these tend to be slow growing mass lesions. That being said, I cannot definitively determine if this is a hepatoma, carcinoma, etc., so close monitoring is warranted.

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

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Additionally, there is a hypoechoic nodule in the spleen. Options moving forward would include a fine needle aspirate of this lesion, continued monitoring with ultrasound, or splenectomy.

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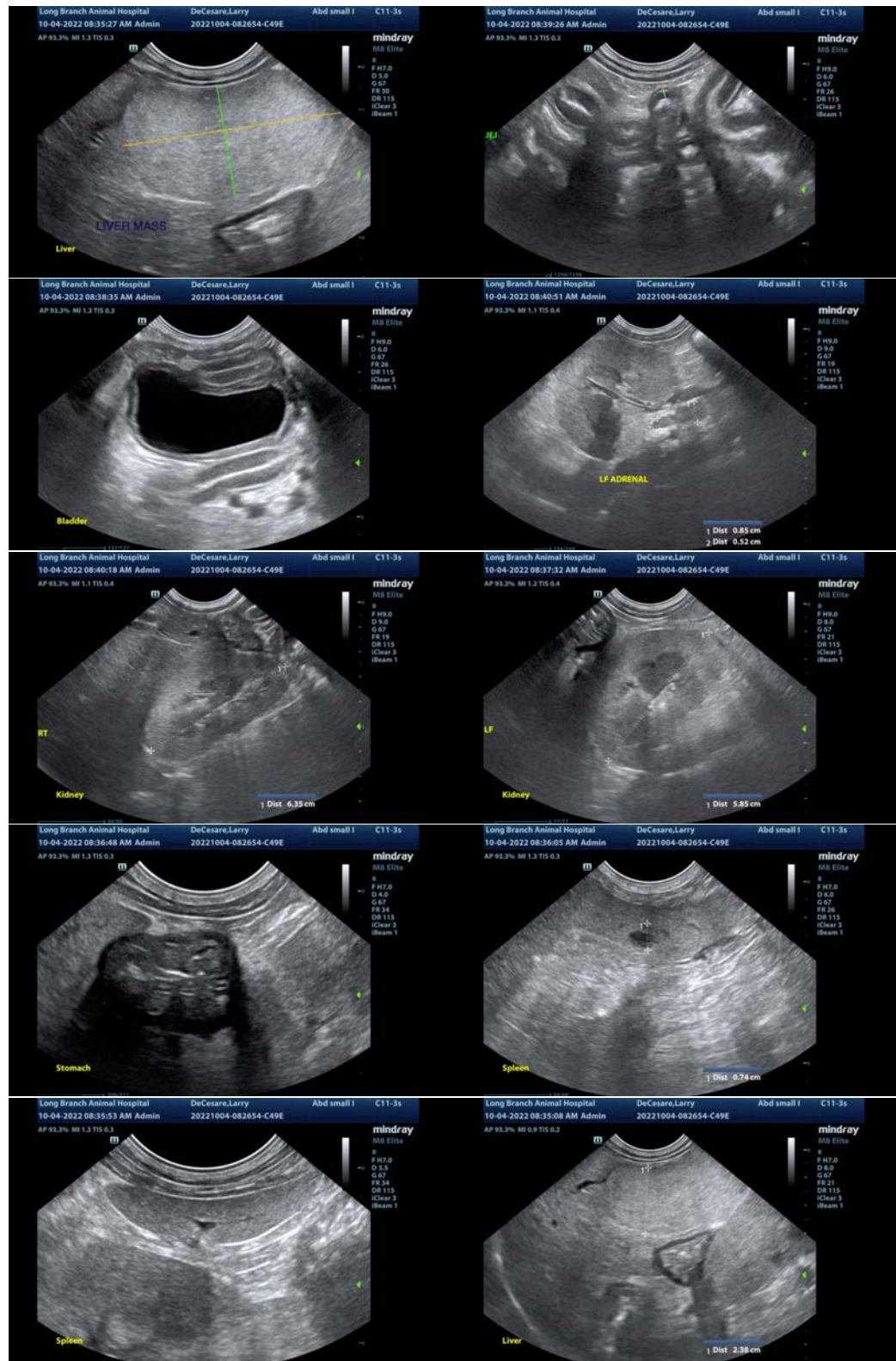
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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