



**PATIENT**

Brenner Keef

**SPECIES**

Canine

**BREED**

Labrador X

**SEX**

MN

**AGE**

9 years

**WEIGHT**

80 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Santa Clara AH

**REFERRING VET**

Dr. Brasted - Maki

**INVOICE**

16511

**DATE**

4/5/23

**PRESENTING CLINICAL SIGNS**

Bleeding splenic tumor  
Abnormal PE/Chem/CBC/UA Results: Radiographic Findings None performed

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was free of pathology.

No overt medial Iliac or sublumbar lymphadenopathy/masses were noted.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 6.7 cm in length. The right kidney measured 7.0 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.64 cm width at the caudal pole. The area of the right adrenal gland was free of overt pathology.

**Spleen**

A moderately sized, irregular, nonhomogeneous, cavitated splenic mass with secondary asymmetrical capsule expansion and disruption was present and measured 8.0 cm in diameter. The parenchyma of the mass was heterogeneous to mixed echogenic with areas of cavitation. The non-affected spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Regional omental inflammation was present around the mass.

**Liver/ Gallbladder**

The liver exhibited subjective mild enlargement yet maintained a symmetrical capsule contour with primarily homogeneous hepatic parenchyma exhibiting mild coarse echotexture. Normal hepatic vascular volume was noted. Several discrete nondisruptive nonhomogeneous hepatic intraparenchymal nodules were visualized. An example measured 1.4 - 2.0 cm in diameter. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.



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***Gastrointestinal***

Brenner Keef

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

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

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***Pancreas***

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

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***Free Abdomen***

Moderate volume peritoneal effusion exhibiting mild effusion echogenic changes, suggestive of effusion cellularity, was present. Generalized primarily uniform hyperechoic omentum was noted. No overt or visualized omental lymphadenopathy was noted.

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Rapid view of the heart revealed no overt evidence of cardiac tumors in the area of the right atrium / auricle. No overt pericardial effusion was noted. Subjective volume contracted heart was noted.

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**ULTRASONOGRAPHIC FINDINGS**

- Nonhomogeneous cavitated splenic mass - most suggestive of malignant neoplastic criteria such as sarcoma or other, benign pathologies are possible yet thought less likely
- Nonspecific yet highly suspicious intermittent liver nodules
- Peritoneal effusion - consistent with probable hemoabdomen
- Volume contracted heart

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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Although potential for benign hepatic nodules i.e., hyperplasia, hematopoiesis, granulomas, etc., concern for hepatic metastasis, given the likelihood of malignant splenic neoplasia, is warranted.

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Assuming no evidence of pathology on three-view chest radiographs and without overt evidence of cardiac metastasis, splenectomy with gross inspection of the perisplenic omentum, liver, and liver biopsies, assuming the patient is stabilized, with potential for blood transfusion depending upon hematocrit level could be considered with oncology consult and potential chemotherapeutic intervention. However, given the primary concern for malignant splenic neoplasia with hepatic metastasis, unfortunately, an unfavorable long-term prognosis is likely indicated.

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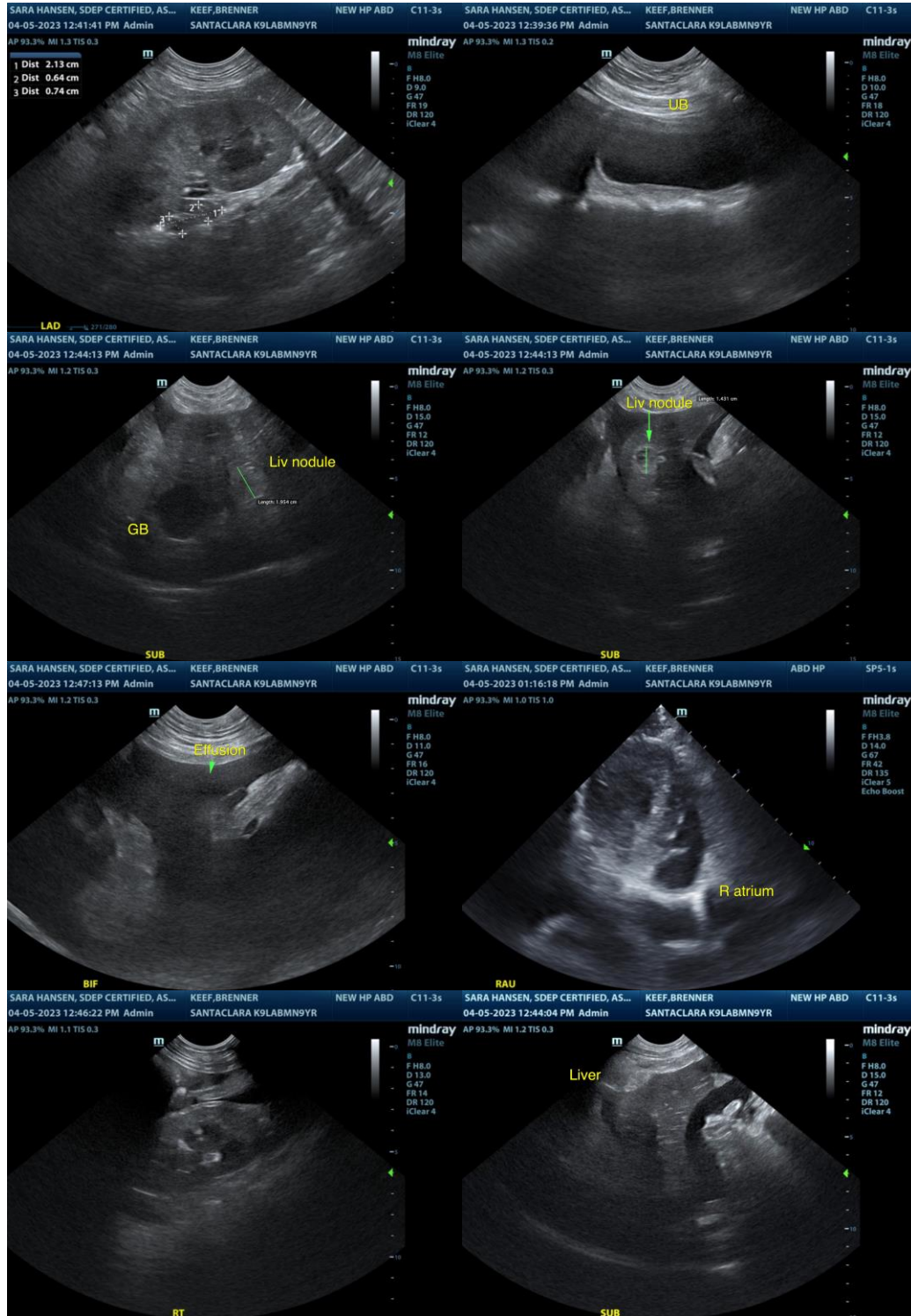
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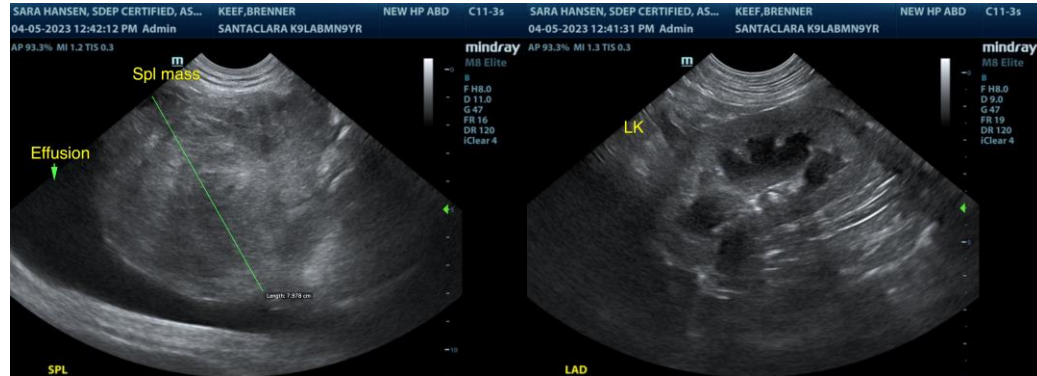
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
info@SonoPath.com