



**PATIENT PRESENTING CLINICAL SIGNS**

Gracie Leinhard Chronic skin issues/severe wt loss/vomiting/not eating as much/coughing. Medication: Pred 30mg SID, Pepcid 20mg S-BID, Benadryl 100mg BID Omeprazole 40mg SID, Fluids SQ 500-1000mL S- BID as needed

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

**BREED *Cardiac Presentation***

Bernese Mtn Dog

The subjective echocardiogram in this patient demonstrated normal **left atrial** size, based LA/AO ratio. The **left ventricle** presented overtly normal thicknesses with maintained subjective linear contour without evidence of LV dilation or restriction. The **myocardium** presented subjective normal echogenicity without evidence of fibrotic or ischemic disease. **Contractility** of the ventricular walls was subjectively adequate without evidence of LV systolic dysfunction. The **right atrium** and auricle revealed subjective normal size, structure and content. No overt evidence of masses was noted. The **right ventricle** was of subjective normal size (~1/3 diameter of LV), with normal myocardial echogenicity and free wall thickness. No visible **pericardial** or free pleura fluid was noted. The **pericardial and extra-cardiac regions**, as well as the pericardial lung, were free of overt or visualized pathology including no obvious evidence of peripheral pulmonary nodules or overt mass lesions.

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**AGE**

2012

**WEIGHT**

92.8

***Urinary System***

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm 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.

**INTERPRETED BY**

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 DVM, DABVP  
 (Canine and Feline)

No evidence of medial Iliac or sublumbar lymphadenopathy/masses.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 7.3 cm in length. The right kidney measured 7.2 cm in length.

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
 ARDMS/RVT

**HOSPITAL NAME**

Leighton AH

***Adrenal Glands***

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 3.0 cm length x 0.55 cm width at the caudal pole. The right adrenal gland was mildly prominent in size exhibited mild irregular parenchyma without evidence of mineralization. The right adrenal gland measured 2.2 cm length x 0.81 cm width at the caudal pole.

**REFERRING VET**

Dr. Mriss

***Spleen***

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The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The

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**PATIENT**

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parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

**Liver/ Gallbladder**

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The liver exhibited moderate to possible marked enlargement. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with minor, nondependent gallbladder debris. The cystic and common bile ducts were normal. No evidence of gallbladder or peripheral gallbladder inflammation was noted.

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Transdiaphragmatic view revealed comet tail lung pattern, which is echogenic sound wave interface with microconsolidations within the caudal lung field. The lung field should not be visualized by sonogram unless pathology is present. Chest radiographs are recommended to rule out alveolar/lung disease such as neoplasia, thromboembolic disease, chronic inflammatory disease with microconsolidation.

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**Gastrointestinal**

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The stomach presented intact yet subjective mild thickened wall layering. The ventral gastric body wall width measured 0.8 cm. Mild to moderate ingesta exhibiting mild progressive distal acoustic shadowing was present in the stomach.

The small intestine presented intact yet subjective segmental to generalized mildly prominent wall layering owing to propensity for mildly prominent segmental to generalized mucosa. The small intestinal wall width measured 0.3-0.4 cm.

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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**

No overt evidence of lymphadenopathy, omental masses, or evidence of peritoneal free fluid was present.

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**ULTRASONOGRAPHIC FINDINGS**

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- Intact yet mildly thickened stomach containing mild to moderate gastric ingesta
- Intact yet subjective mild segmental to generalized prominent small bowel walls
- Hepatomegaly
- Transdiaphragmatic comet tail artifact
- Overtly normal cardiac structure and function



**PATIENT**

- Mildly prominent to irregular right adrenal gland - nonspecific

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The gastrointestinal presentation was nonspecific with potential considerations including underlying inflammatory etiologies such as IBD, although potential for infiltrative gastrointestinal neoplasia is possible. Potentially, current Prednisone use may be masking gastrointestinal mural changes.

Canine

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Likewise, the hepatic presentation may indicate metabolic, reactive, vacuolar, or potential inflammatory hepatopathy although the possibility of occult infiltrative hepatic neoplasia cannot be excluded. Screening ultrasound guided FNA cytology is warranted. Correlation with hepatic enzyme assessment, if not recently done, is suggested.

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Three-view chest radiographs are recommended. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Assessment of systemic BP for evidence of hypertension, which may allude to an emerging right adrenal neoplastic criteria may be considered although the right adrenal gland may indicate benign age-related or adenomatous change.

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Pending additional diagnostics, and if no evidence of thoracic or hepatic neoplasia criteria, endoscopic gastrointestinal biopsies may be considered.

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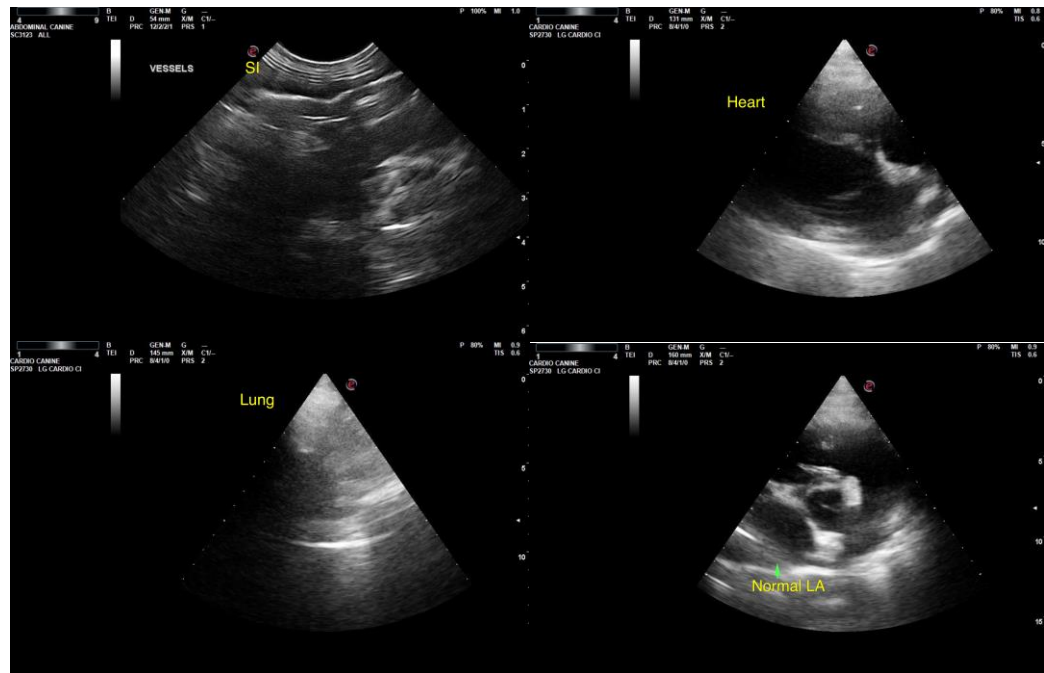
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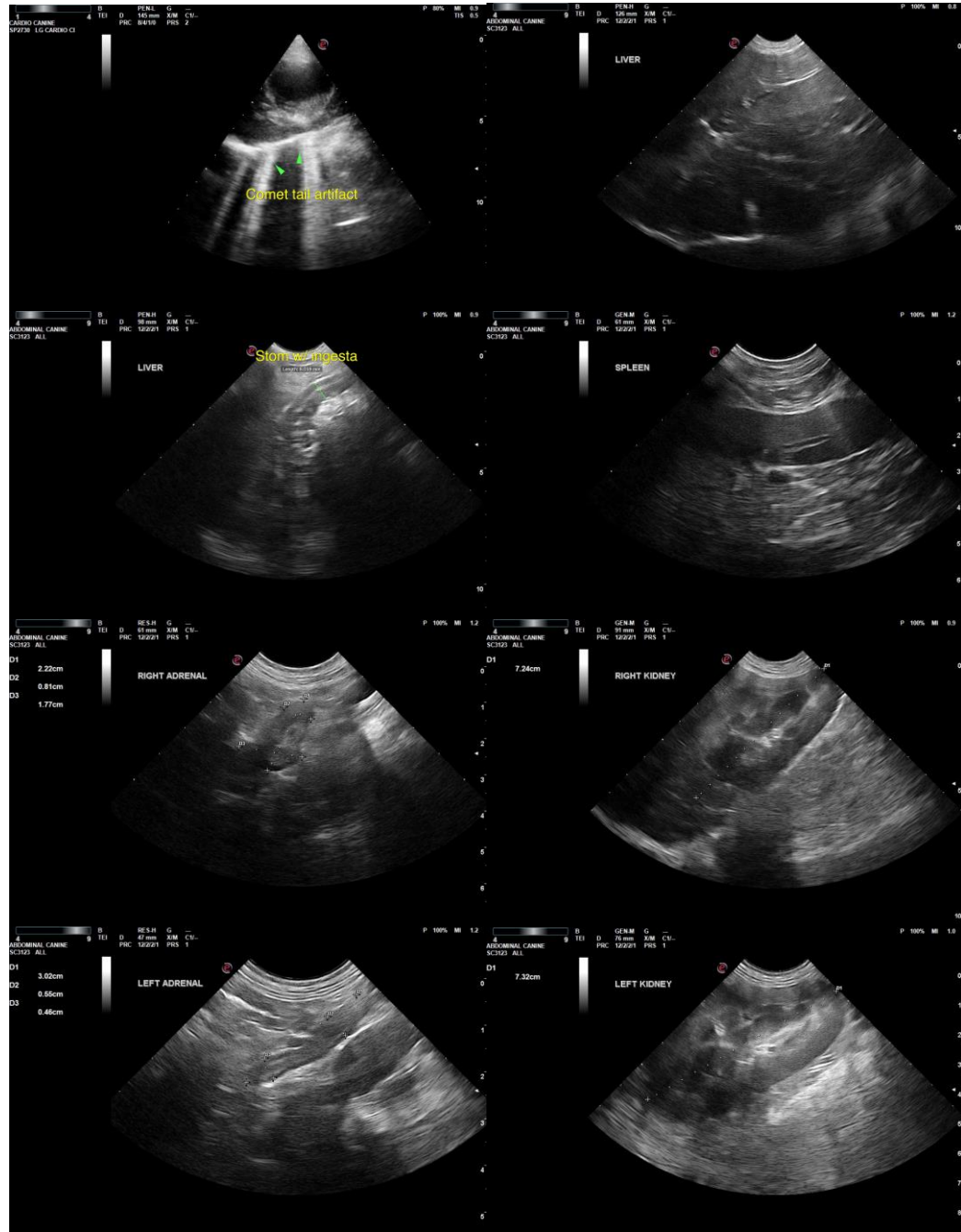
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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