


**PATIENT**

Ziggy Davidoff

**PRESENTING CLINICAL SIGNS**

going to bathroom in house, fever of 105, anorexia, Lyme positive

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**
**BREED**

Husky X

**SEX**

Neutered Male

**AGE**

14 Years

**WEIGHT**

66.5 Pounds

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.3	38.7	72.4	0.35
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	1.2	NM		NM	3.1	

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. No evidence of endocarditis. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. No evidence of aortic endocarditis. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No dilation due to heartworm disease, cuor pulmonale, stenosis, or pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window.

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of – 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 were noted.

Normal size and margination was 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

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

Dr. Maniar

**INVOICE**

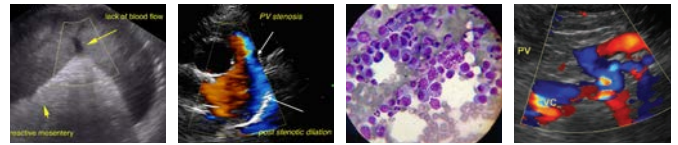
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<b>PATIENT</b>	loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 7.0 cm. The right kidney measured 7.3 cm.
Ziggy Davidoff	
<b>ADRENAL GLANDS</b>	
<b>SPECIES</b>	The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.0 cm length x 0.69 cm at the caudal pole. The right adrenal gland measured 2.8 cm length x 0.61 cm at the caudal pole.
Canine	
<b>BREED</b>	<b>Spleen</b>
Husky X	The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.
<b>SEX</b>	<b>Liver</b>
Neutered Male	The liver exhibited generalized enlargement with primarily symmetrical capsule contour and normal hepatic parenchyma echogenicity with mild to moderate coarse echotexture. A moderately sized cystic structure was noted in the mid to left liver, exhibiting potential for mild prominent to isoechoic peripheral wall, containing anechoic fluid with concurrent cellular component. This cystic structure measured approximately 5.6 cm in diameter. Concurrent intermittent thinly walled parenchymal cyst containing anechoic fluid was also noted adjacent to the gallbladder. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mildly prominent to echogenic walls along with moderate non-dependent yet non-organized luminal debris. The common bile duct was normal.
<b>AGE</b>	<b>Gastrointestinal</b>
14 Years	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.
<b>WEIGHT</b>	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.
66.5 Pounds	Normal visible colon wall layers were present with apparent formed feces in lumen.
<b>INTERPRETED BY</b>	<b>Pancreas</b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	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 was evident.
<b>IMAGING PERFORMED BY</b>	<b>Free Abdomen</b>
Jenn	No peritoneal masses, lymphadenopathy or effusion.
<b>HOSPITAL NAME</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
Rockaway AH	<ul style="list-style-type: none"> <li>• Overtly normal cardiac structure and function for age</li> <li>• Hepatomegaly with moderately sized mid to left cystic structure with concurrent cellular component – strong concern for hepatic abscess, necrosis, or potential necrotic mass or neoplasia, concurrent thinly walled parenchymal cyst.</li> <li>• Moderate gallbladder debris, potential for mild chronic cholecystitis.</li> <li>• Sonographically unremarkable urinary bladder</li> <li>• Mild chronic renal changes</li> </ul>
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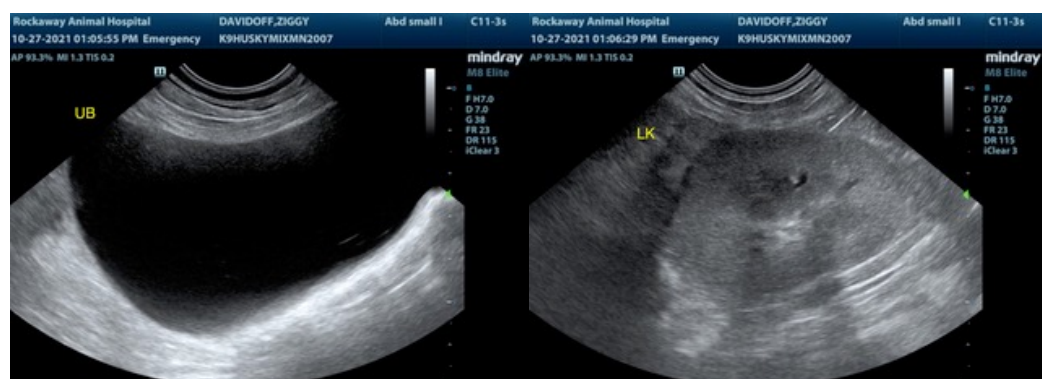
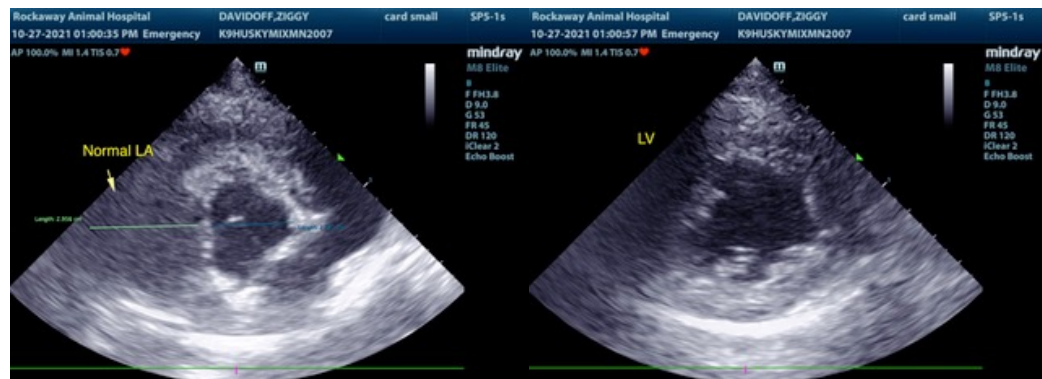
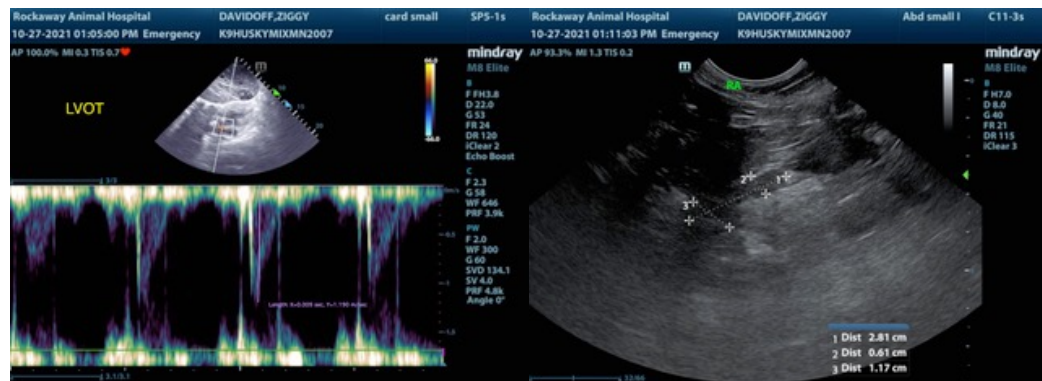
Rockaway AH

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Assuming normal clotting status, ultrasound guided FNA or centesis of the moderately sized cystic structure in the mid to left liver for cytology +/- culture and sensitivity recommended. Correlation with full CBC/Chem panel and urinalysis (if not done) suggested. Urine culture and sensitivity (given the fever and inappropriate urination as well as UPC level in light of positive lyme test) recommended. Continued gastrointestinal support is recommended.



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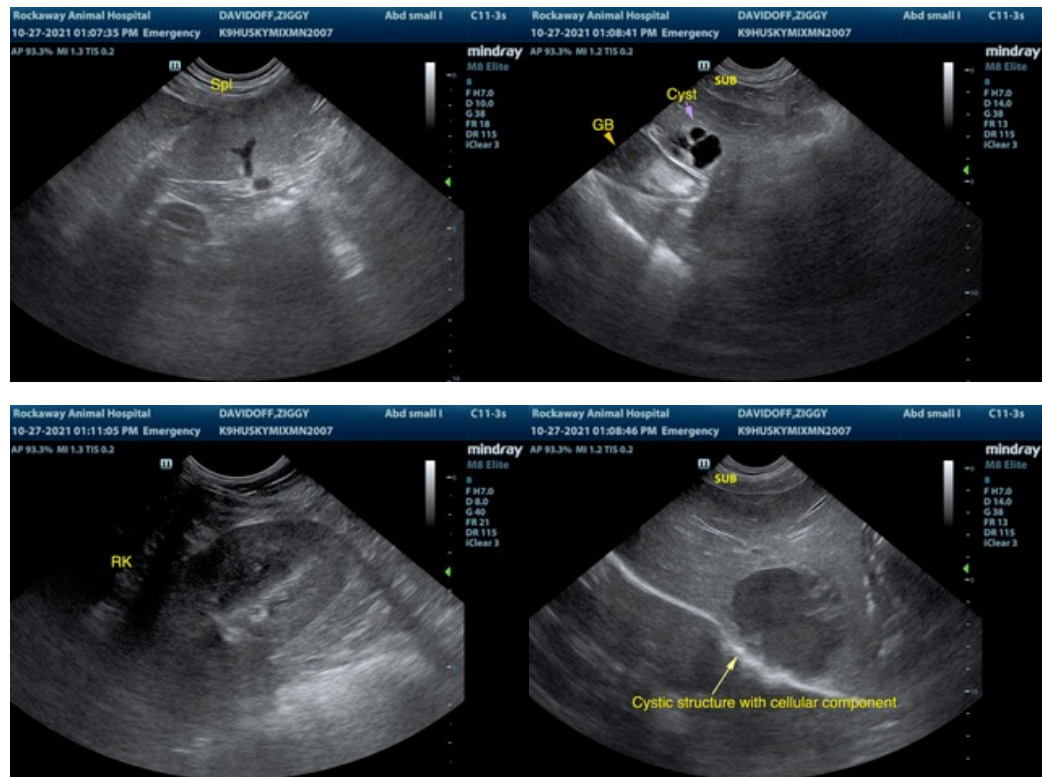
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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