


**PATIENT PRESENTING CLINICAL SIGNS**

**Karma Allison** History: Pulmonary effusion on rads. Distended abdomen, tense on palpation. Not defecating currently.. Started Furosemide last night.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: Bloodwork all WNL except abnormal CPLi.

Canine

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

PitBull

**SEX**

FS

**AGE**

10 years

**WEIGHT**

67.8 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	<1.3	28-40	40-100	<0.6
PATIENT				1.3	40.8	74.6	0.25
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	151	1.7	1.5		3.6	3.7	

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Dog & Cat Clinic of  
 Niagara

**REFERRING VET**

Dr. Haidy

**INVOICE**

10574ag

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**Cardiac Presentation**

Moderate volume pericardial effusion with associated diastolic collapse of the right atrial free wall consistent with cardiac tamponade was present. The LV internal diameter as well as the LV function is adequate, the LA is normal in diameter. The right ventricle was overtly normal in diameter. Subjective normal LVOT and RVOT systolic laminar flow with overtly normal outflow velocities was observed. An obvious mass/lesion noted in the area of the heart base or associated with the right atrium or auricle was not definitively present. Probable concurrent mild volume pleural effusion likely.

**Urinary System**

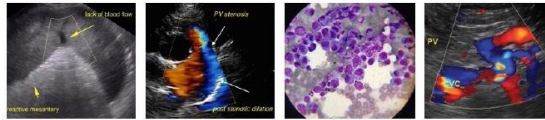
The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of 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 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 6.5 cm in length. The right kidney measured 6.8 cm in length.

The area of the aortic trifurcation was free of pathology.



<b>PATIENT</b>	<b>Adrenal Glands</b>
Karma Allison	The left adrenal gland was indistinctly visualized yet was without overt pathology subjectively measuring 0.66 cm width at the caudal pole. The right adrenal gland was not definitively visualized.
<b>SPECIES</b>	<b>Spleen</b>
Canine	The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present with several small hyperechoic benign myelolipomas noted within the medial parenchyma adjacent to the hilus. 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 parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.
<b>BREED</b>	
PitBull	
<b>SEX</b>	<b>Liver</b>
FS	The liver was subjectively enlarged in size with normal structure and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. Mild evidence of hepatic vein congestion was present most notable at the hepatic vein/ caudal vena cava junction. The caudal vena cava exhibited minor prominent size measuring 1.5 cm in width at the level of the liver with no evidence of thrombosis. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
<b>AGE</b>	
10 years	
<b>WEIGHT</b>	<b>Gastrointestinal</b>
67.8 pounds	The stomach was indistinctly visualized with potential for minor retained ingesta/chyme.  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.
<b>INTERPRETED BY</b>	Normal visible colon wall layers were present with apparent formed feces in lumen.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	<b>Pancreas</b>
<b>IMAGING PERFORMED BY</b>	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
Crystal Hill	<b>Free Abdomen</b>
<b>HOSPITAL NAME</b>	Significant volume peritoneal free fluid was present with generalized reactive mesentery. No evidence of omental masses or lymphadenopathy.
Dog & Cat Clinic of Niagara	
<b>REFERRING VET</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
Dr. Haidy	<ul style="list-style-type: none"> <li>• Moderate volume pericardial effusion with secondary cardiac tamponade</li> <li>• Hepatomegaly exhibiting subjective mild vascular congestion-likely congestive hepatomegaly</li> <li>• Severe volume ascites with concurrent pleural effusion</li> </ul>
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<b>DATE</b>	<b>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</b>
05/11/2022	The cause of the patient's clinical signs and pleural/peritoneal free fluid is most consistent with cardiac tamponade due to pericardial effusion. An obvious cause of the pericardial effusion was not definitively evident with idiopathic, inflammatory/infectious or neoplastic etiologies possible. Concern



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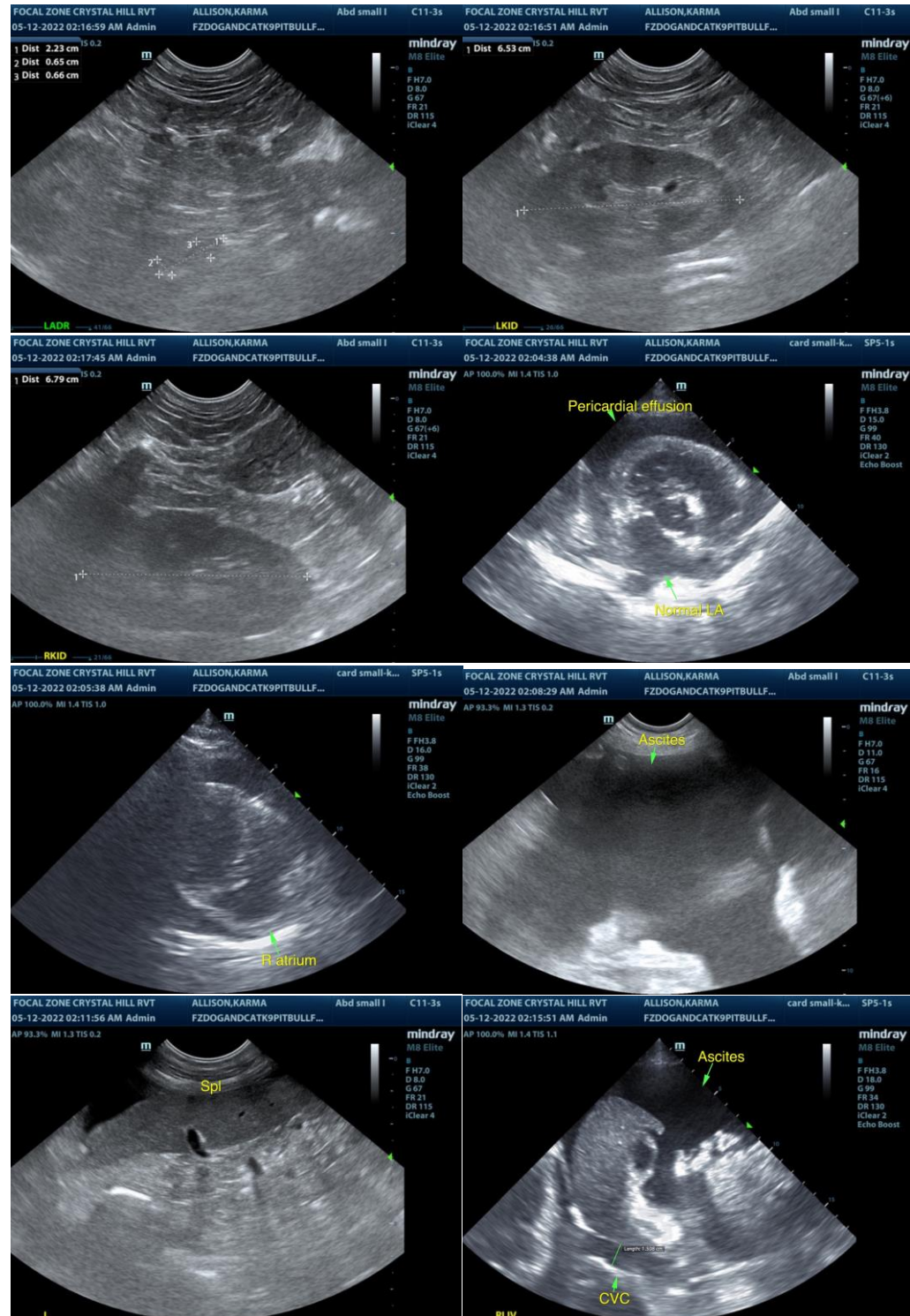
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for non-visualized neoplastic process which at times is not overtly evident with ultrasound may be considered a top differential diagnosis especially if hemorrhagic pericardial effusion is present. Further assessment may include abdominocentesis for peritoneal effusion analysis and correlation of effusion consistent with right sided heart disease. Referral for emergency pericardiocentesis is likely ideal and recommended if possible. A very guarded prognosis is indicated for this patient.





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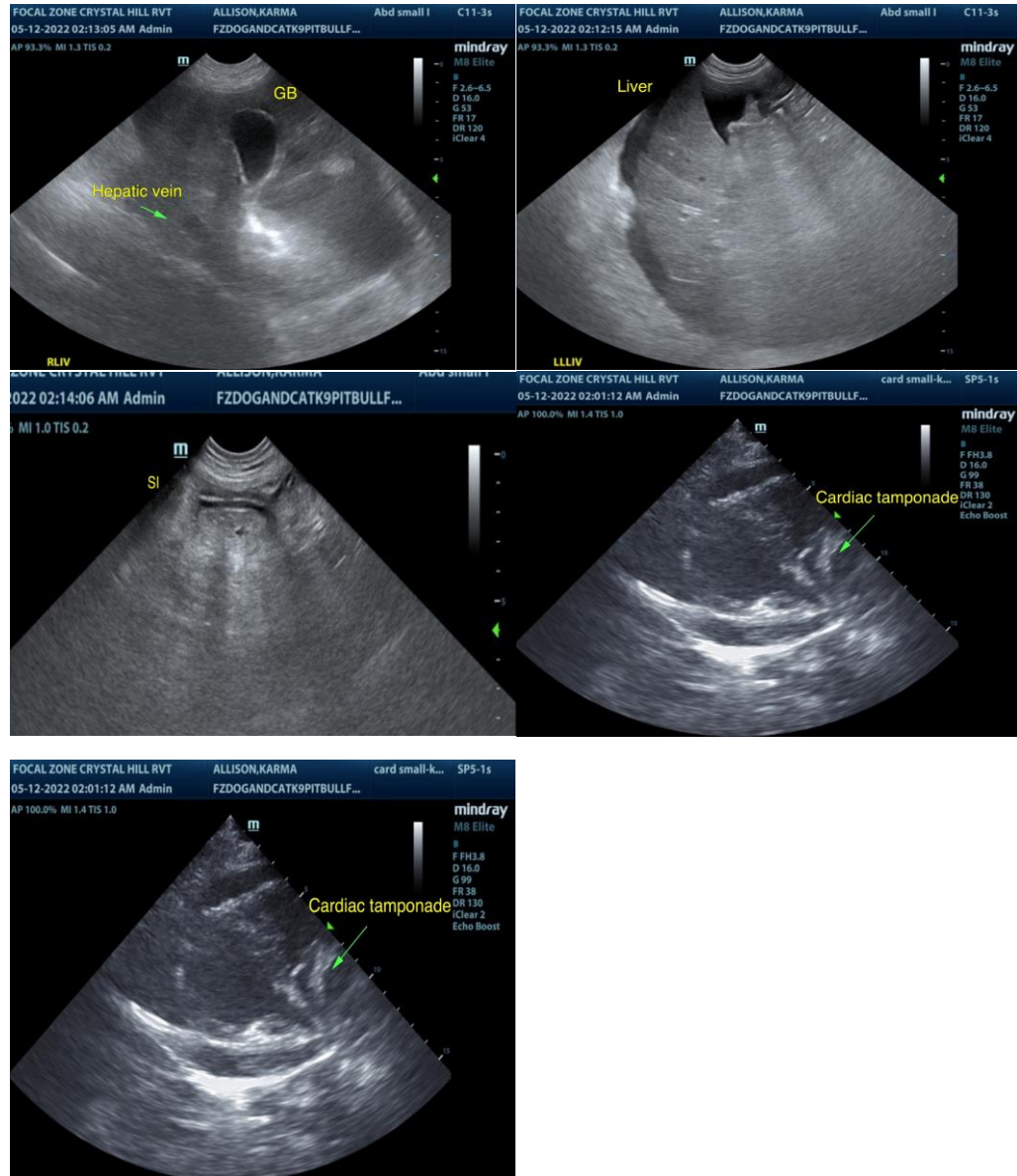
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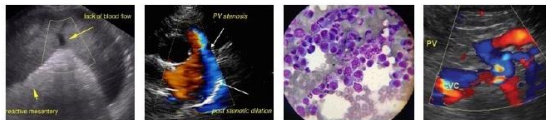


The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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



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