



PATIENT

Josie Ellis

SPECIES

Canine

BREED

Bouvier

SEX

Intact Female

AGE

5 Years

WEIGHT

71.8 Pounds

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Willakenzie AC

REFERRING VET

Dr. Fischer

DATE

12/2/22

Invoice

18934

PRESENTING CLINICAL SIGNS

History: Presented for lethargy and soft stools Hx of lethargy, hyporexia, pyrexia Radiographic Findings Poor serosal detail, gas distended small intestines Primary Question/Differential to Be Answered in This Exam Cause of soft stools, inappetence

Abnormal PE/Chem/CBC/UA Results: Albumin 2.2 Past labs (11/17): albumin 2.6, globulin 4.4

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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	--	2.0	1.0	--	30	--	0.2
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	80	1.30	.70	--	--	4.5	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease.

Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. Trivial tricuspid insufficiency was noted. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness.

Pulmonary outflow tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio).



PATIENT Pleural effusion was noted through the diaphragm and intercostal approaches. Multifocal hypoechoic lymph node masses were noted in the thorax with variable lung consolidation and heterogenous pleura.
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SPECIES *Urinary System*

Canine
The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized, and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

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The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 7.44 cm. The left kidney measured 7.44 cm.

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Adrenal Glands

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Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.8 cm x 0.79 cm at the caudal pole and 0.87 cm at the cranial pole. The right adrenal gland measured 2.44 cm x 0.94 cm at the caudal pole and 0.68 cm at the cranial pole.

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Spleen

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The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

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Liver

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The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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Gastrointestinal

DATE

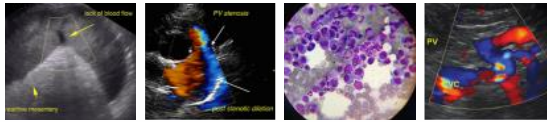
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The upper **gastrointestinal tract** revealed a minor amount of stasis and variable distal small intestinal thickening with reactive mesentery. Occasional small lymph node enlargement was noted.

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Pancreas

The right limb of the **pancreas** was heterogeneous, hypoechoic and irregular.



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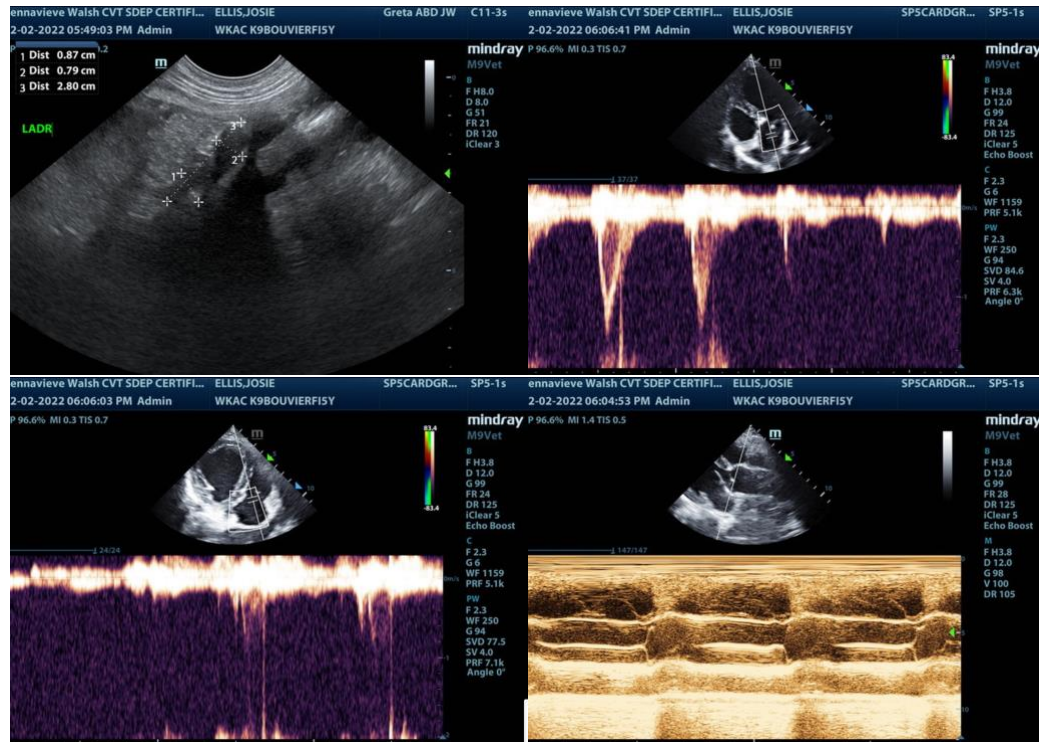
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ULTRASONOGRAPHIC FINDINGS

- Early infiltrative intestinal pattern with reactive mesentery
- Noncardiogenic pleural effusion
- Slight mesenteric lymphadenopathy
- Thoracic lymphadenopathy
- Heterogenous, hypoechoic and irregular pancreas

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Strong concern for multicentric round cell neoplasia in this patient. Pleurocentesis and cytospin with immediate slide preparation is recommended to assess for exfoliating neoplasia. Enteritis with lymphadenitis and other causes of noncardiogenic pleural effusion such as lung lobe torsion or pleuritis are possible yet less likely. Chest CT would be ideal. If accessible, full sedation ultrasound guided FNA of the tissue consolidations in the thorax would be indicated. Prognosis is very guarded to poor depending upon cytology results.





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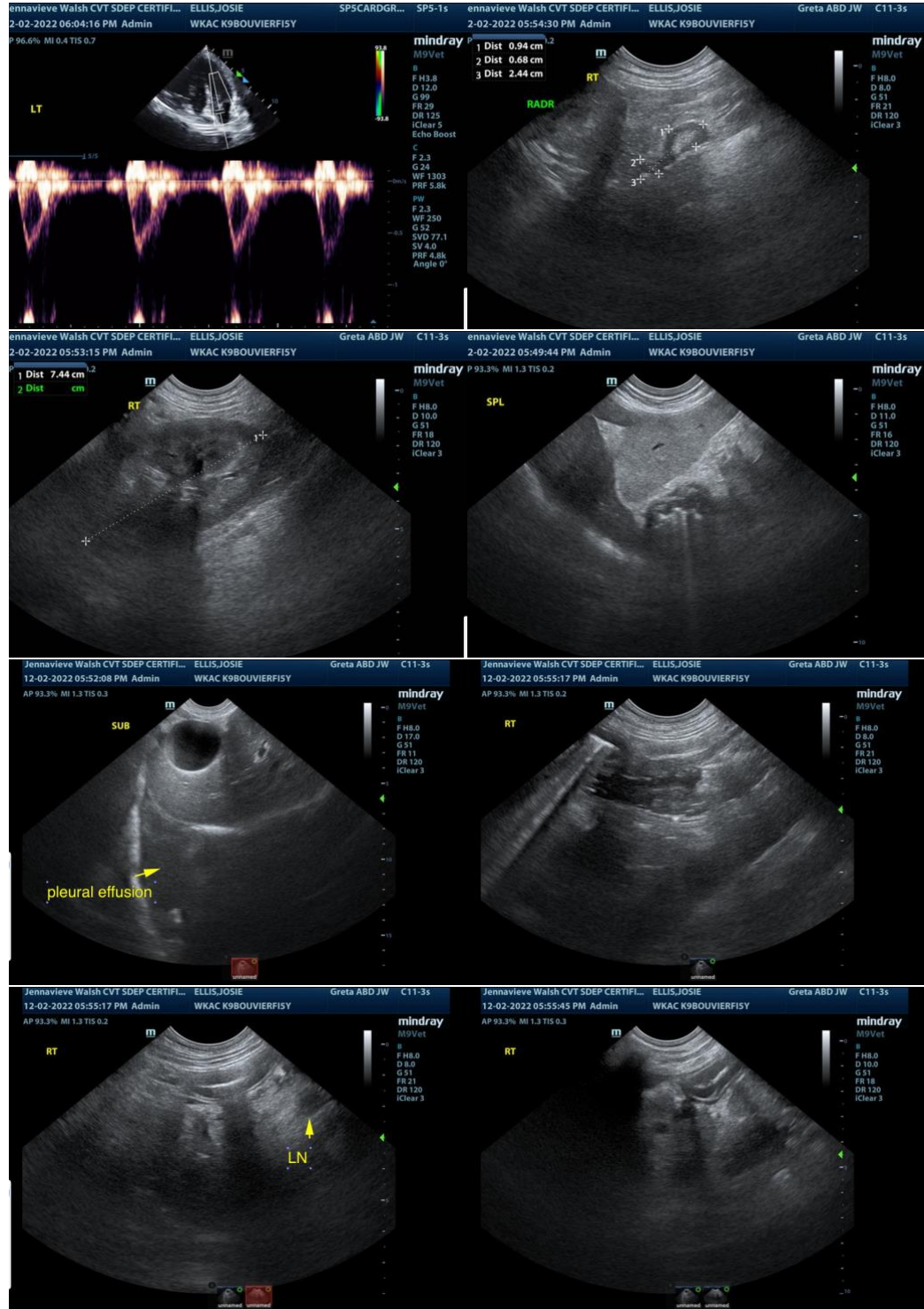
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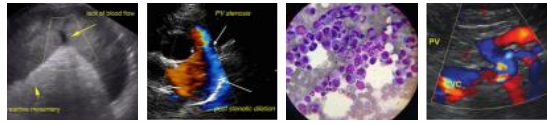
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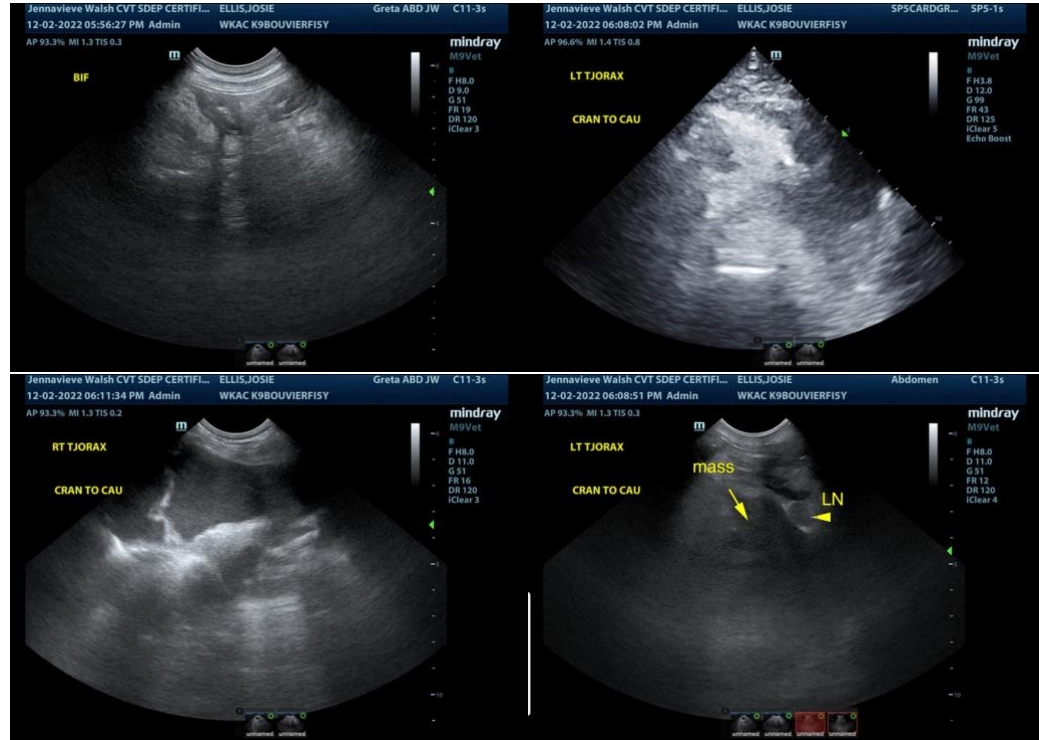
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

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