

PATIENT PRESENTING CLINICAL SIGNS

Rugar Mallett
Owner reports that p's tumor located on lower abdomen has increased in size, that abdomen is more enlarged than normal. P has had some lethargy off and on this past week, o also states that p had some labored breathing. some vomiting.

SPECIES

Canine
Abnormal PE/Chem/CBC/UA Results: dorsal spine prominent, thin; QAR, BCS 2/5; abd palp very heavy, organ enlargement? Lymph node changes. Current Medications N/A

BREED

Catahoula

SEX

Neutered Male

AGE

11 Years

WEIGHT

72 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

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	<1.6	28-40	40-100	<0.6
PATIENT			1.01	1.2	32	61	0.53
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	BELOW	BELOW	BELOW	BELOW
PATIENT		1.0	0.88		3.4	3.9	

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

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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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. 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). Non-cardiogenic pleural effusion noted.

Urinary System

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



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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.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight pinpoint mineralizations noted in the right kidney. The right kidney measured 8.1 cm. The left kidney measured 8.38 cm.

Adrenal Glands

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 right adrenal gland measured 3.62 cm x 1.82 cm at the cranial pole and 1.01 cm at the caudal pole. The left adrenal gland measured 3.17 cm x 0.70 cm at the caudal pole and 0.63 cm at the cranial pole.

Spleen

The **spleen** presented scalloping irregular contour. Heterogeneous parenchyma.

Liver

The **liver** was largely uniform. However, occasional hypoechoic nodules noted. Hepatic veins were not dilated. The gallbladder and common bile duct were unremarkable.

Gastrointestinal

The **gastrointestinal tract** was floating in the ascites. The gastrointestinal tract, per se, was unremarkable. However, coalescing omental changes were noted enveloping the upper gastrointestinal tract.

Pancreas

The pancreas was fairly uniform. However, minor heterogeneous changes were noted.

Free Abdomen

Large amount of echogenic ascites noted in this patient.

ULTRASONOGRAPHIC FINDINGS

- Dual cavity echogenic ascites
- Irregular spleen
- Hypoechoic hepatic nodules
- Minor heterogeneous pancreas
- Ascites
- Age related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Strong concern for dual cavity neoplasia/lymphomatosis or similar. Abdominocentesis and cytospin with immediate slide preparation of the free fluid indicated. FNA of the spleen indicated. I'm assuming



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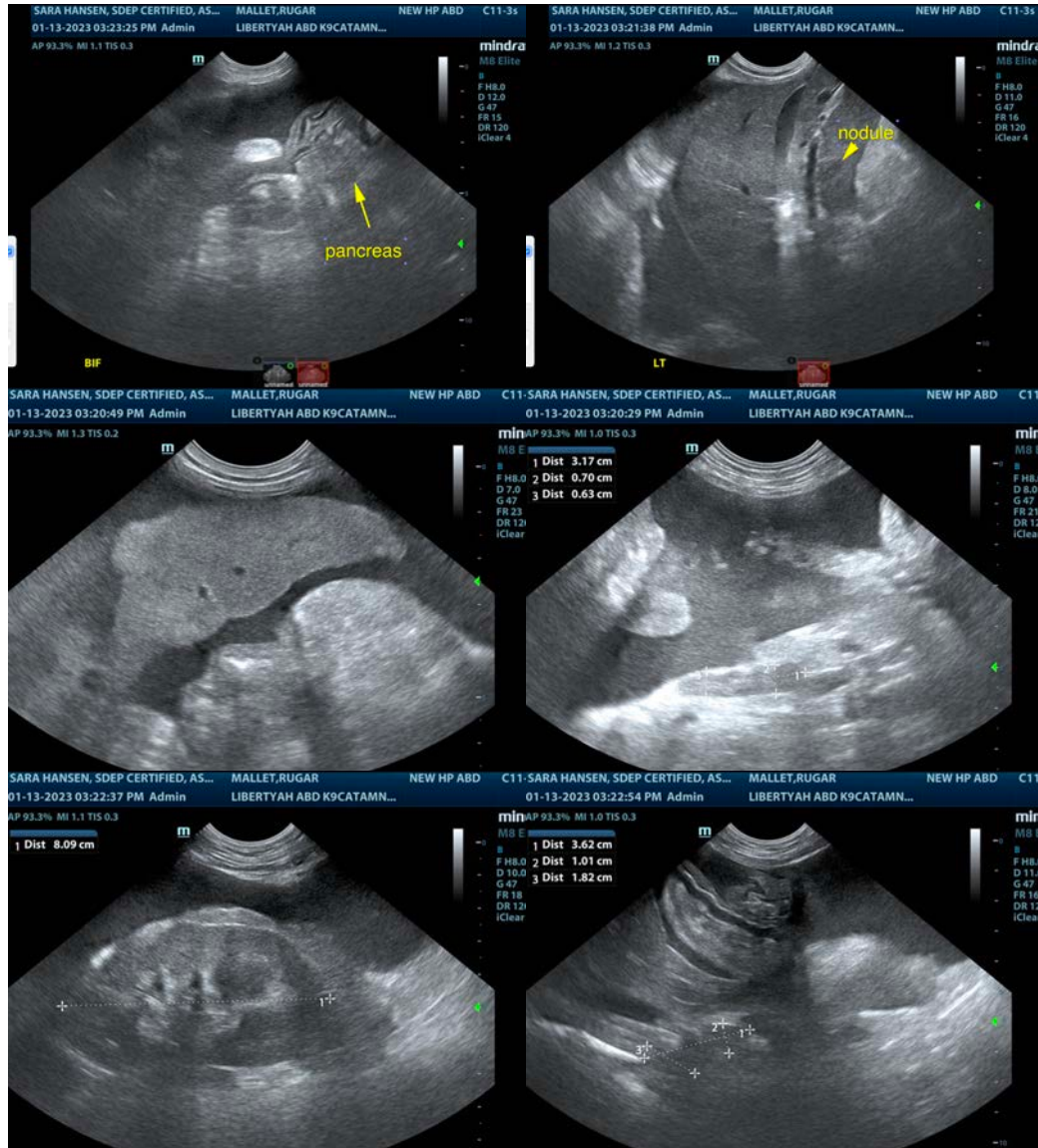
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that the albumin levels are normal or not < 1.5 , which would justify third spacing of fluid. However, presuming that is not the case, then I recommend focusing directly on the nature of the ascites in this patient with abdominocentesis and cytospin. Prognosis is extremely guarded to poor. The splenic contour would be most consistent with infiltrative disease. However, degenerative splenic changes, splenitis or reactive spleen are all technically possible.





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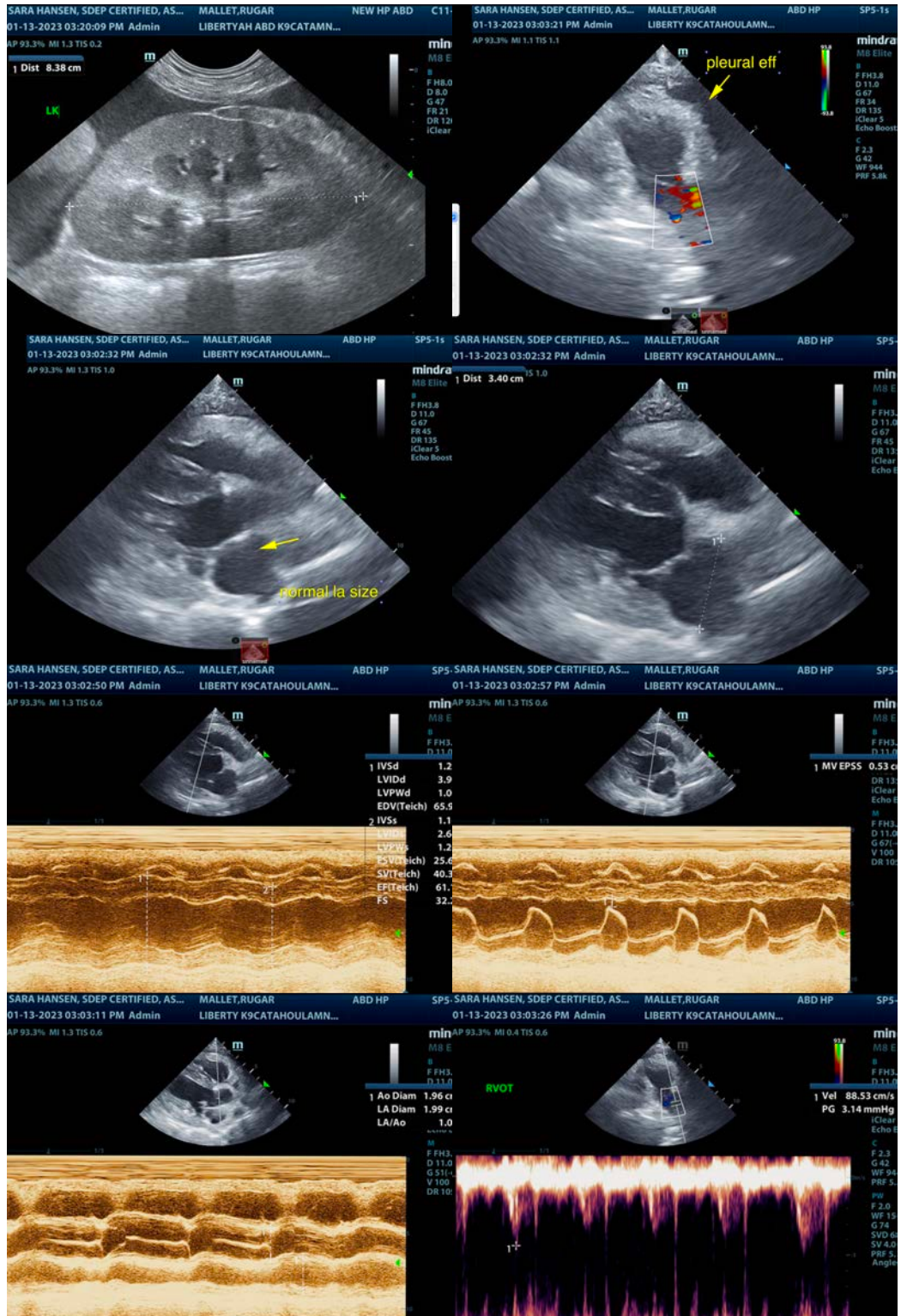
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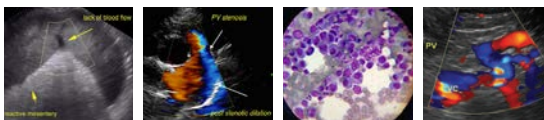
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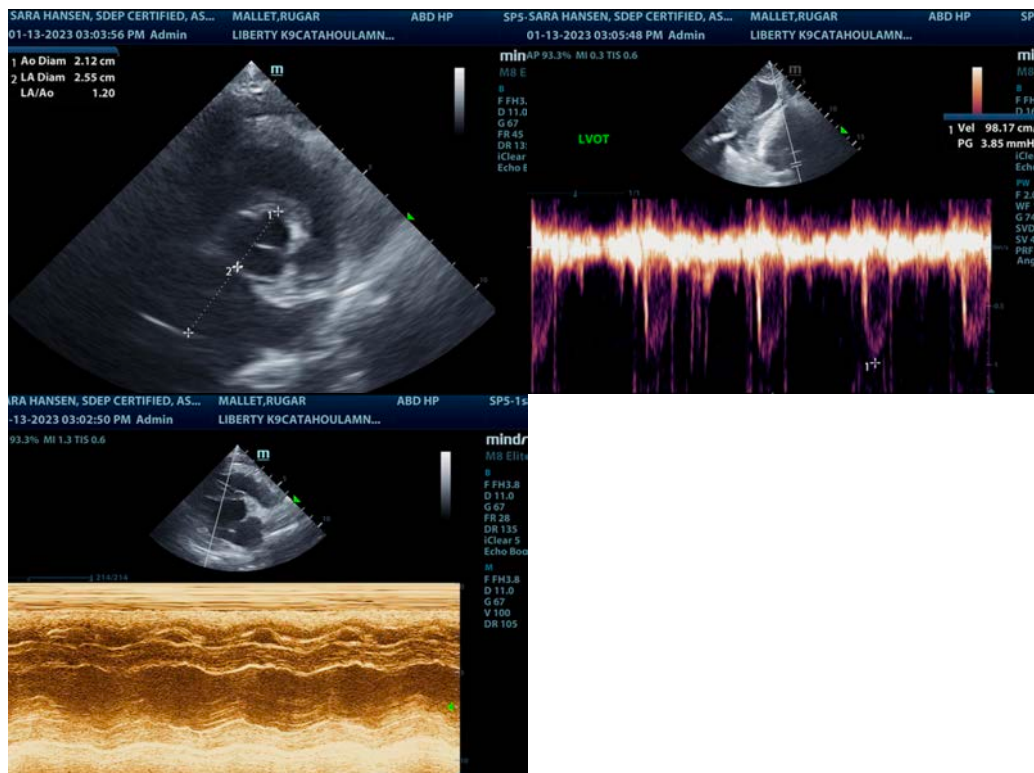
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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