



**PATIENT PRESENTING CLINICAL SIGNS**

Oso Costillo Labored breathing, mild inappetence. 3.5cm splenic nodule noted by prev. vet. WBC 24k, ALT 800, ALKP >2400, LDDS pending

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

American Bulldog

**SEX**

Neutered male

**AGE**

14 years

**WEIGHT**

102 lbs

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Complete filling of the left atrium was noted on color flow assessment. Doppler indicated measurable insufficiency. 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). There were no obvious masses. However, a small right auricular mass cannot be completely ruled out. Occasional arrhythmia was noted.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

North Warren AH

**REFERRING VET**

Dr. Corrado

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	5.1		1.32	1.44	44	76	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	177	1.64	1.03	102 lbs	5.7	4.21	

**INVOICE**

95590

**DATE**

1/27/22



**PATIENT** **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Oso Costillo

**Urinary System**

**SPECIES**

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 was noted. Ureteral papillae were normal.

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**SEX**

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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 this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. A hypoechoic nodule was noted in the cranial pole of the right kidney measuring 1.15 cm. The right kidney measured 8.13 cm. The left kidney measured 7.55 cm.

**AGE**

14 years

**Adrenal Glands**

**WEIGHT**

102 lbs

The right **adrenal gland** was heterogenous, nodular and mildly irregular measuring 3.52 x 1.52 cm at the cranial pole and 1.08 cm at the caudal pole. The left adrenal gland was also nodular and slightly mineralized measuring 3.07 x 0.87 cm at the cranial pole and 0.97 cm at the caudal pole.

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**Spleen**

The **spleen** revealed multi-focal, hypoechoic nodular changes. The cranial body of the spleen revealed a mass that measured 2.53 cm.

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Shari Reffi, CVT

**Liver**

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The **liver** was enlarged, heterogenous and nodular, non-disruptive at this time. The gallbladder and common bile duct were unremarkable.

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**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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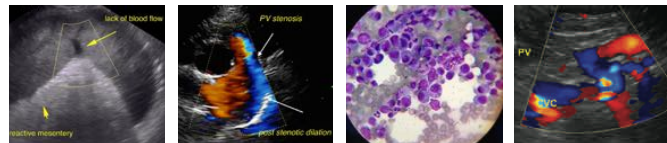
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**Pancreas**

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The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.



**PATIENT**

Oso Costillo

**ULTRASONOGRAPHIC FINDINGS**

Mitral insufficiency and left atrial enlargement.

**SPECIES**

No evidence of tamponade.

Canine

Multiple splenic masses.

**BREED**

Enlarged, heterogeneous, nodular liver.

American Bulldog

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SEX**

There are multiple potential causes of the respiratory issues in this patient. Treatment for left atrial enlargement with increased Lasix and adding Spironolactone at 1-2 mg/kg b.i.d. can be considered; however, I am concerned for an emerging metastatic neoplastic process given the splenic mass and nodules. Ultrasound-guided FNA of the splenic mass and liver is warranted. However, three view chest radiographs +/- chest CT would be ideal. As I do not believe that the cardiac presentation is the whole reason for the labored breathing as it is fairly well contained; however, persistent left atrial enlargement is present. There was no overt right auricular mass is seen. Guarded prognosis.

Neutered male

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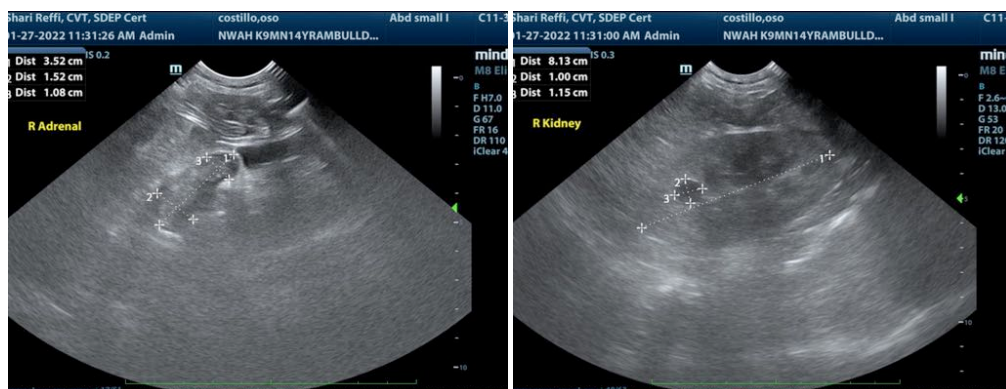
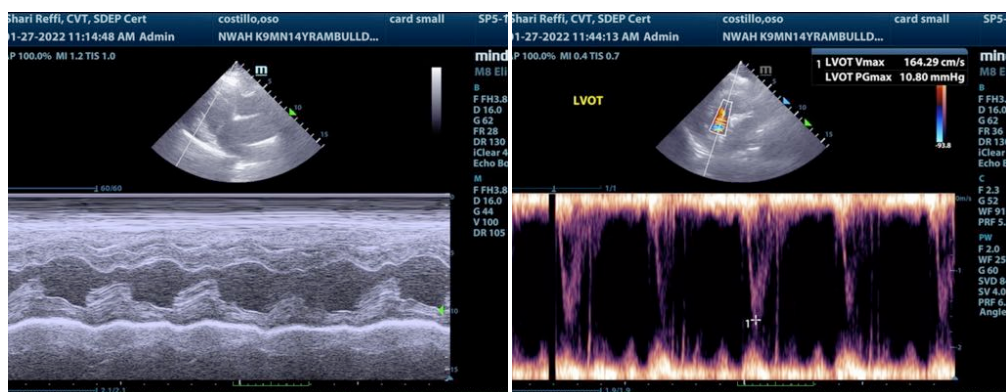
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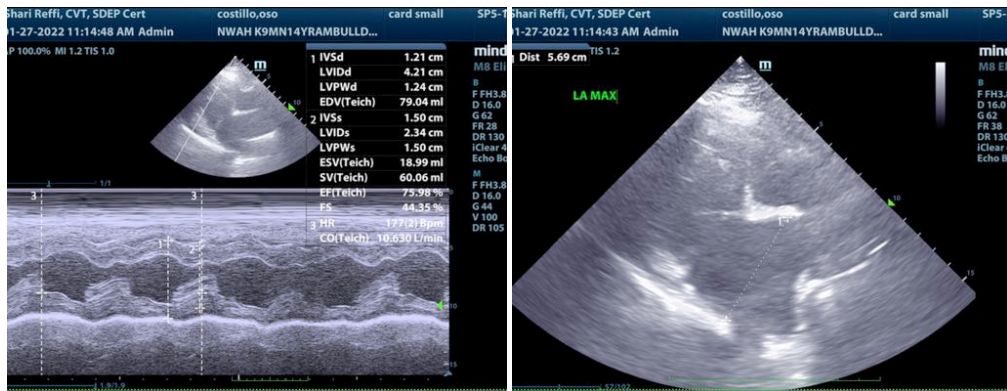
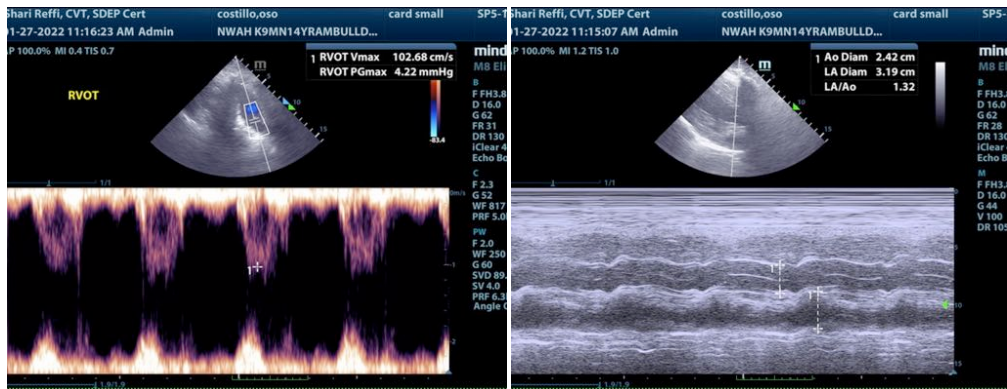
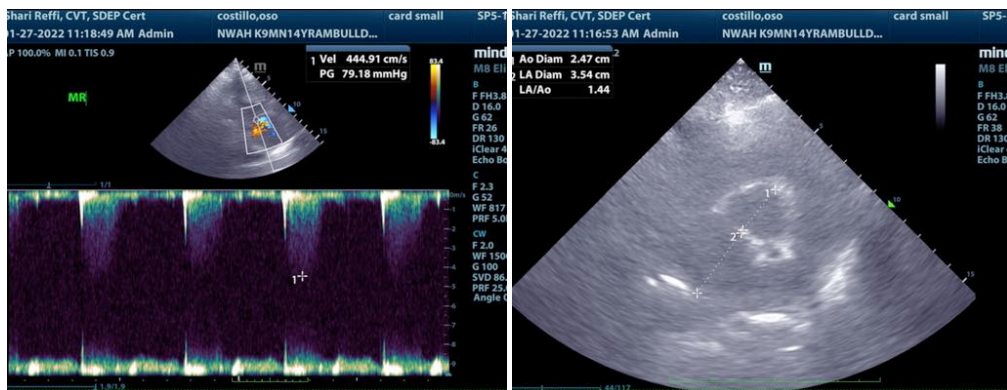
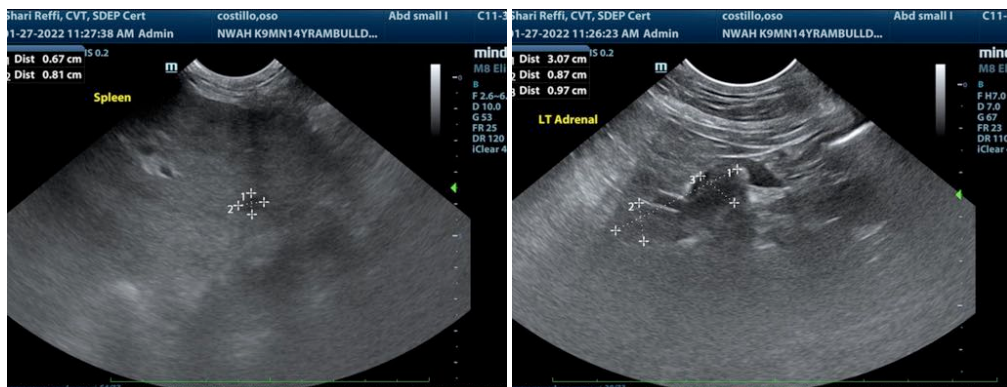
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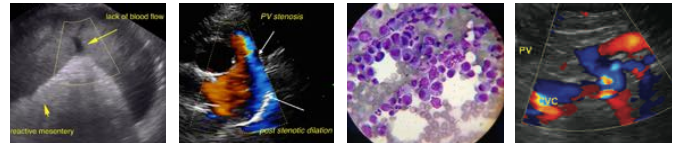
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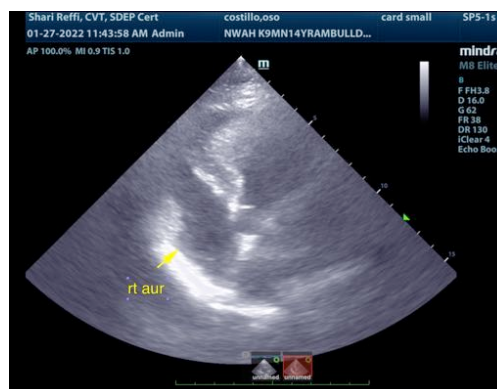
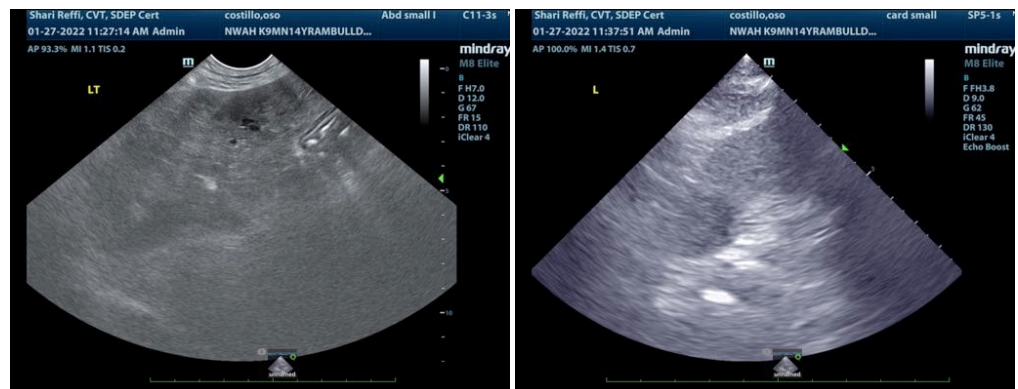
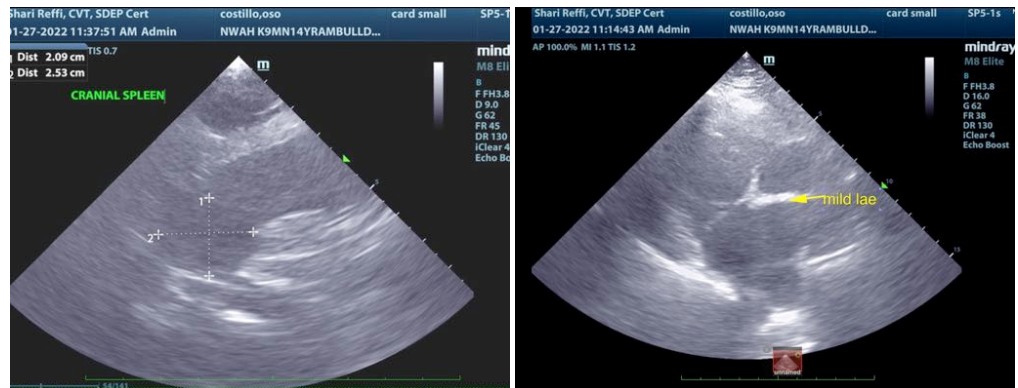
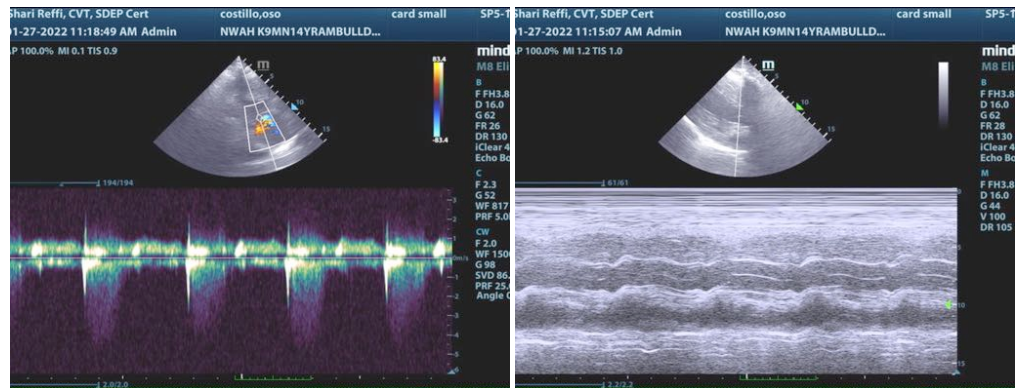
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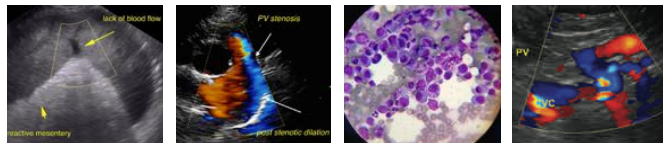
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**PATIENT**

Oso Costillo

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.

**SPECIES**

Canine

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.

**BREED**

American Bulldog

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

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