

PATIENT

Sky Study

PRESENTING CLINICAL SIGNS

Presented 1.6 - distended abdomen, large amount of free abdominal fluid, large liver
 Medication: Lasix 25mg (tapering dose), metronidazole

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART and LIMITED ABDOMEN

BREED

Pitbull

SEX

FS

AGE

2016

WEIGHT

68

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO M-mode	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	<2.0	--	2.6	15	32	1.0
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	LAD LA MAX 4 Chamber	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	--	1.6	1.2	68	5.0	5.6	--

INTERPRETED BY

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

Cardiac Presentation

Severe left ventricular dilation with diminished systolic function. Increased EPSS and LV sphericity with decreased LV wall thickness. Severe left atrium enlargement. The mitral valve appears mildly thickened with no obvious prolapse and secondary significant eccentric MR on Doppler. The tricuspid valve appears mildly thickened. Moderate right atrium and ventricular dilation. Tricuspid valve regurgitation with velocity < 2 m/s. The aortic valve is normal with normal measured outflow velocity, no overt AI. Normal pulmonic valve with normal measured outflow velocity, no overt PI. No obvious pericardial or pleural effusion. No evidence of cardiac tumors. Significant tachycardia was present.

IMAGING PERFORMED BY

Rebekah Jakum, CVT
 ARDMS/RVT

Urinary System

Normal size and margination were 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.

HOSPITAL NAME

Littletown Veterinary Hospital

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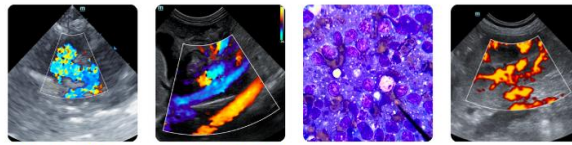
Spleen

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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

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hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease. No visualized masses or nodules were present.

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Liver/Gallbladder

SPECIES

Brief limited abdomen exam revealed enlarged non-homogenous nodular liver with evidence of prominent hepatic vasculature consistent with congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The common bile duct was not visualized.

Canine

Gastrointestinal

BREED

The visualized segments of gastrointestinal tract appeared sonographically normal.

Pitbull

Free Abdomen

SEX

Moderate to significant volume ascites.

FS

ULTRASONOGRAPHIC FINDINGS

Primary

AGE

- Severe cardiomyopathy with concurrent tachyarrhythmia
- Mitral valve and tricuspid valve insufficiency
- Enlarged non-homogenous nodular to congested liver
- Moderate to significant volume ascites
- Sonographically normal spleen

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

INTERPRETED BY

The severe cardiomyopathy may be primary in nature i.e. DCM like cardiomyopathy or progressive to end-stage chronic valvular disease with potential secondary cardiomyopathy owing to taurine deficiency, hypothyroidism, myocarditis, tachycardia-induced cardiomyopathy or potential infiltrative disease such as lymphoma. Regardless of classification the degree of left chamber enlargement predisposes to left-sided congestion while the right cardiomyopathy, tachyarrhythmia and potentially TR predispose to right-sided congestion as evidenced by hepatic congestion and ascites.

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IMAGING PERFORMED BY

Consider referral for 24 hour supportive care if not possible. Hospitalization with rate control and diuretic therapy pending ECG assessment is indicated. Pending stabilization Pimobendan 0.3 mg/kg BID, Lasix/ spironolactone combination both 1 to 2 mg/kg BID in conjunction with rate control, ACE inhibitor 0.5 mg/kg SID if systemic BP is greater than 130 is warranted.

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An unfavorable long-term prognosis is indicated as this patient remains at significantly increased risk for progressive CHF, malignant arrhythmia, pulmonary hypertension or sudden death. Potential for concurrent or separate primary hepatic parenchymal pathology i.e. neoplasia, inflammation, vacuolar changes, etc. cannot be excluded.

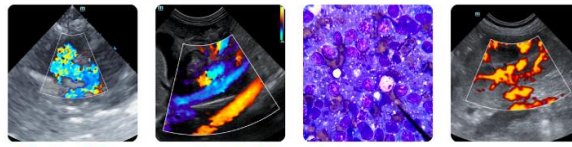
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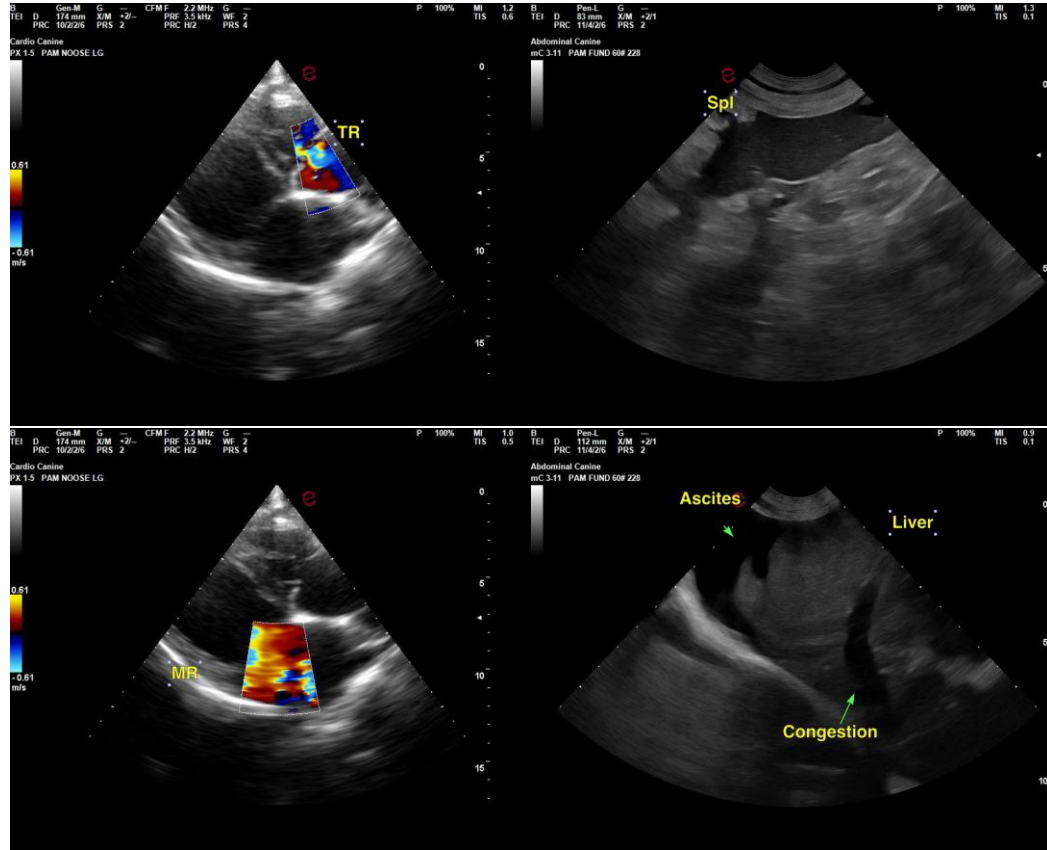
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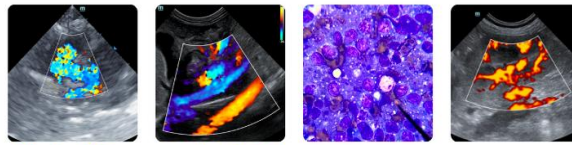
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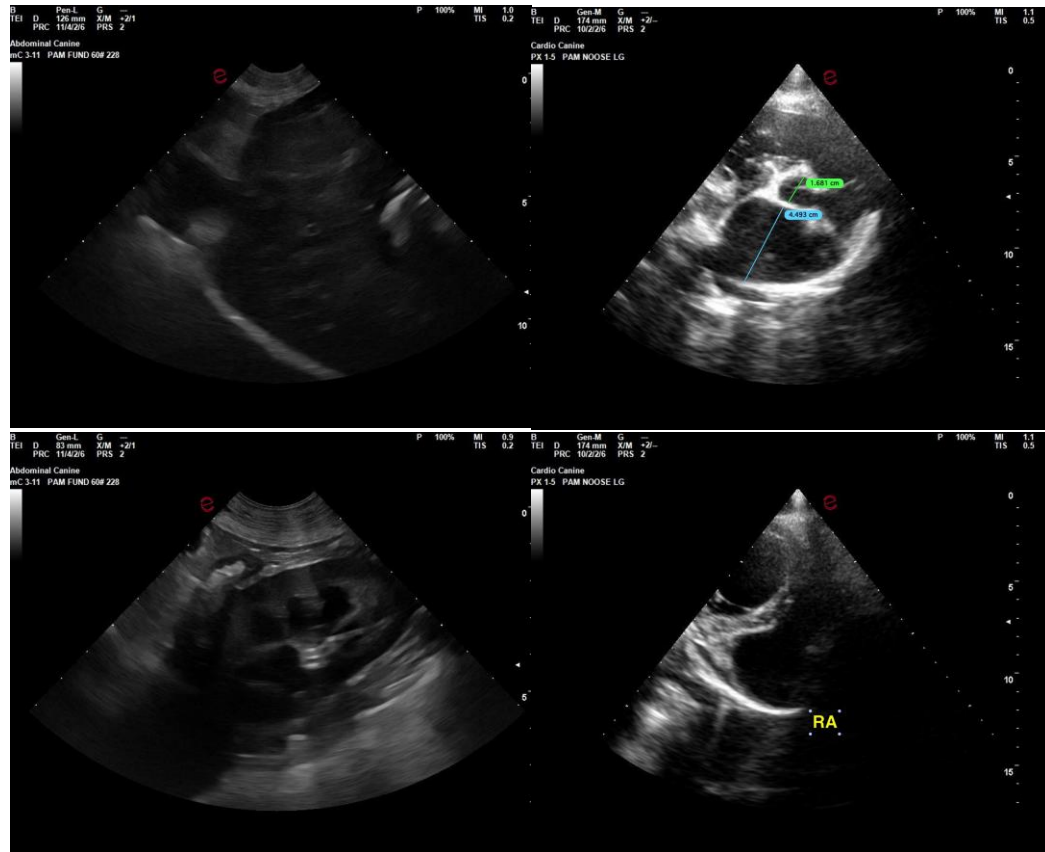
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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Rebekah Jakum, CVT
 ARDMS/RVT

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.

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