



PATIENT PRESENTING CLINICAL SIGNS

PATIENT Rocket Mazza has arthritis, was managed on NSAIDs which caused renal insufficiency. Since then no NSAIDs were given. recently he's panting more and coughing O was not sure if it's due to the arthritis pain or some other issues meds: furosemide 40mg BID, buprenorphine 0.01mg/kg PO TID - BID

SPECIES Abnormal PE/Chem/CBC/UA Results: CBC – platelet 561, otherwise unremarkable. Chem – BUN 12.6, Crea 130, ALT 158, ALP 724, TBili 24.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

BREED

Shep X

SEX

Neutered Male

AGE

16 Years

WEIGHT

35 kg

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			1.0	1.1	54	86	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	BELOW	BELOW	BELOW	BELOW
PATIENT	147	1.6	1.3		3.8	3.6	

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Downtown AH

REFERRING VET

Dr. Ahn

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5/20/22

Cardiac Presentation

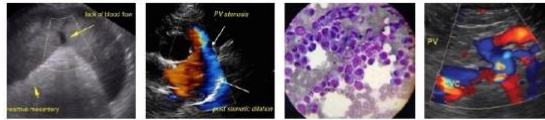
The echocardiogram in this patient demonstrated normal **left atrial** size and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No dilation due to heartworm disease, cuor pulmonale, stenosis, or pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window.

Urinary System

The urinary bladder exhibited mild distention with urine. The urinary bladder walls appear to exhibit previously noted subjective mild ventral apical and dorsal thickening. Ventral apical urinary bladder wall measured 0.61 cm. No overt evidence of neoplastic criteria. Mild anechoic urine present. No sediment or calculi.



PATIENT	The residual prostate exhibited normal size and contour. Subtle heterogeneous parenchyma was noted, which, although non-specific, likely indicates benign or age related residual prostatic parenchymal changes. No evidence of neoplastic criteria.
Rocket Mazza	
SPECIES	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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.3 cm. The right kidney measured 7.0 cm.
Canine	
BREED	Adrenal Glands
Shep X	The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 2.3 cm length x 0.79 cm at the caudal pole. The right adrenal gland measured 2.6 cm length x 1.0 cm at the caudal pole.
SEX	Spleen
Neutered Male	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 hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.
AGE	Liver
16 Years	The liver exhibited mild to potential moderate enlargement. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. No masses or nodules noted. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
WEIGHT	Gastrointestinal
35 kg	The stomach presented intact wall layering with a normal wall layer ratio. Minor retained ingesta/chyme present.
INTERPRETED BY	HOSPITAL NAME
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	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.
IMAGING PERFORMED BY	Normal visible colon wall layers were present with apparent formed feces in lumen.
Kelly Reschny	Pancreas
HOSPITAL NAME	The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.
Downtown AH	Free Abdomen
REFERRING VET	No omental masses, lymphadenopathy or peritoneal effusion.
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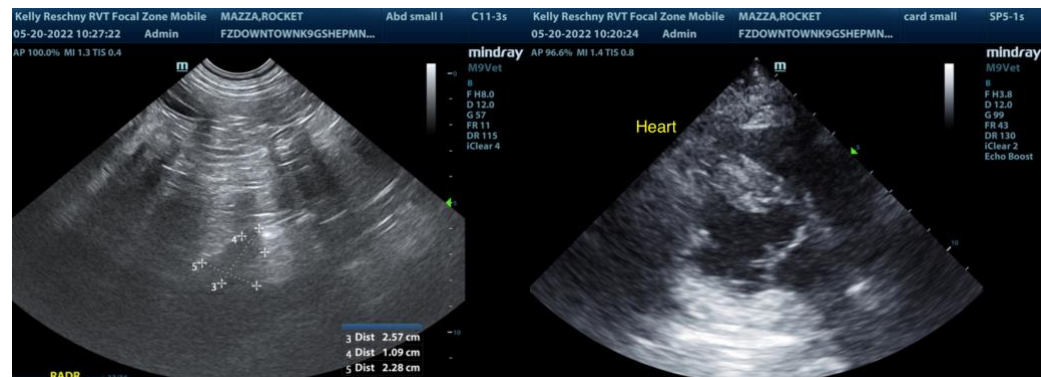
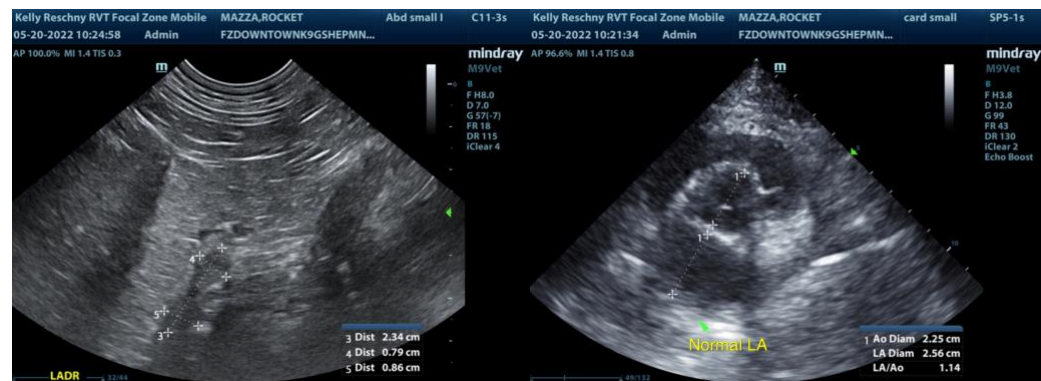
ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function for age with minor myocardial remodeling
- Hepatopathy – subjectively benign.
- Mild chronic renal changes
- Possible mild cystitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of structural or functional cardiomyopathy, including no clinical issues such as LV systolic dysfunction, left or right heart chamber enlargement, evidence of clinical pulmonary hypertension, or overt pericardial disease in the visible window. The cardiac presentation was not overtly consistent with a cardiogenic cause of the panting and coughing. Consideration for primary lower airway disease or potential non-cardiogenic edema may be indicated. No indication for cardiac medications.

The overall appearance of the liver was non-specific, yet consistent with chronic, likely benign hepatopathy. Considerations may include vacuolar hepatopathy, inflammatory disease, mild fibrosis, or other hepatopathy, with neoplasia considered a less likely differential diagnosis. Further assessment may include hepatic FNA (assuming normal clotting status) +/- Leptospiriosis titers/PCR, if potential exposure. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial. No evidence of primary intraabdominal neoplasia as a potential cause of pulmonary metastatic disease.





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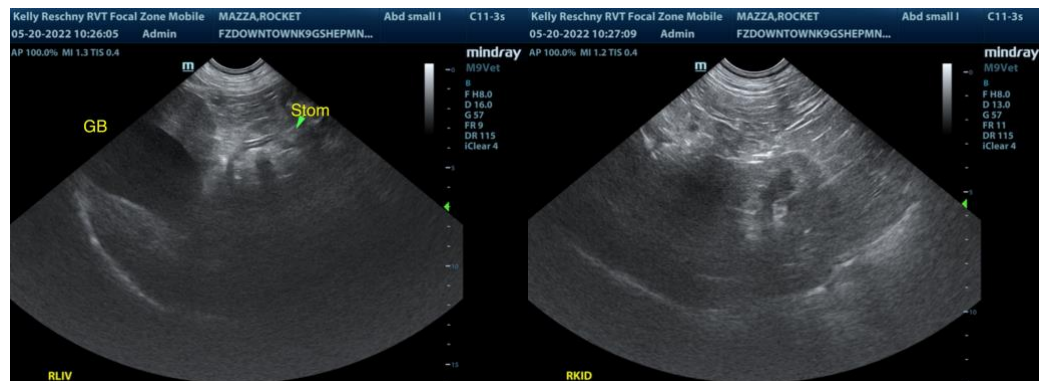
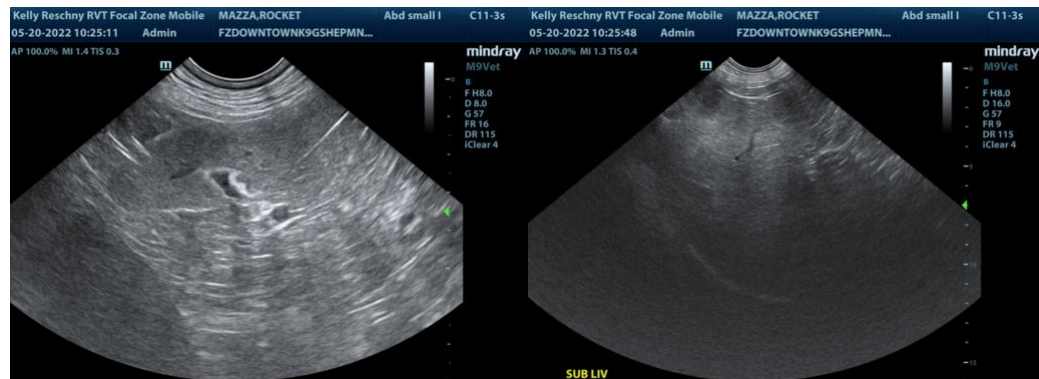
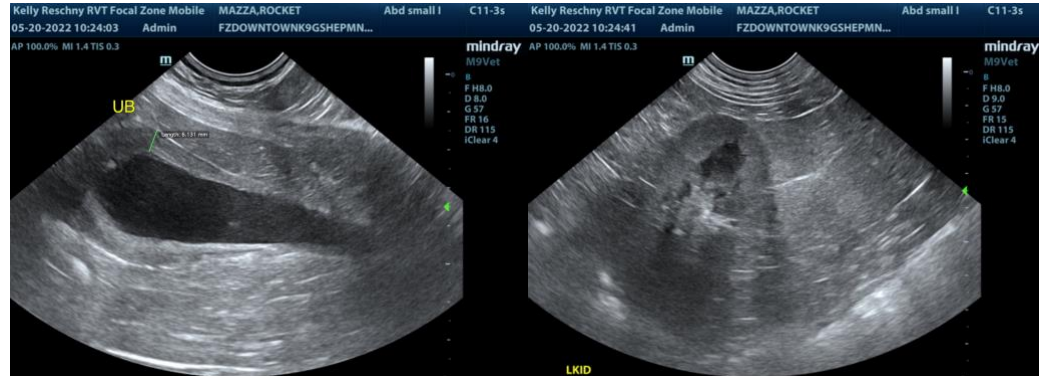
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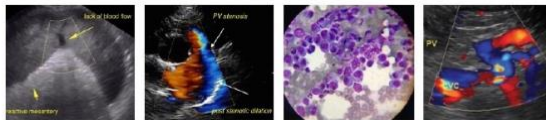
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PATIENT

Rocket Mazza

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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info@SonoPath.com

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