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Clinical Sonography & Telecytology
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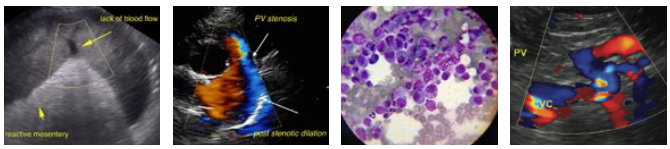

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1-800-838-4268 info@sonopath.com

PATIENT
Dunkin Melnick

SPECIES
Canine

BREED
King Charles Cavalier

SEX
Male

AGE
12 years

WEIGHT
18 lbs

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Jessica Miller, RDMS

HOSPITAL NAME
Marsh AH

REFERRING VET
Dr. Milwicki

INVOICE
42757

DATE
11/29/22

PRESENTING CLINICAL SIGNS

History: Recheck B2 Valvular disease Current Meds: vetmedin, enalapril
Abnormal PE/Chem/CBC/UA Results: UA: 1.033

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient presented mild, persistent, chronic left atrial enlargement with mitral valve insufficiency and complete filling of the left atrium with mitral valve prolapse. LA enlargement was present in two separate measurements, yet normal in the third. Prolapse of the anterior mitral valve leaflet was noted. Contractility, left ventricular internal diameter, right atrium and right ventricle were all unremarkable. No pericardial or pleural effusion was noted.

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	6.36	2.0	1.6	1.44	45	77	0.1
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	BELOW	BELOW	BELOW	BELOW
PATIENT	149	1.51	1.02	18 lbs	4.42 max	3.9	

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

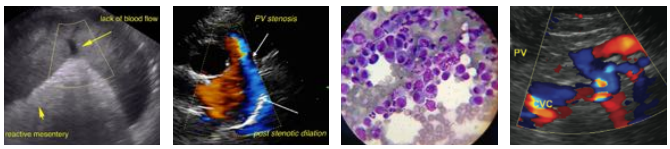
Urinary System

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 was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The testicles were imaged and found to be uniform.

The **prostate** was uniformly enlarged with lobar swelling appeared to impinge upon the urethra and mildly deviate the descending colon. The prostatic tissue was hyperechoic containing focal areas of decreased echogenicity. The prostate measured 2.94 cm.

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



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echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 5.72 cm. The left kidney measured 5.44 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 1.61 x 1.05 cm at the cranial pole and 0.39 cm at the caudal pole. The left adrenal gland measured 1.9 x 0.48 cm at the caudal pole and 0.35 cm at the cranial pole.

Spleen

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 was noted.

Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Gastrointestinal

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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.

Pancreas

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.

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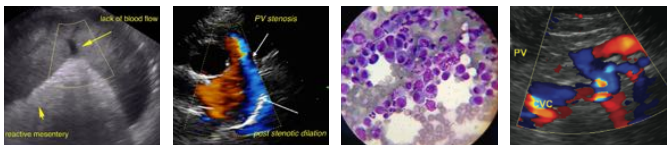

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ULTRASONOGRAPHIC FINDINGS

Stable mitral insufficiency with chronic left atrial enlargement.

BPH prostate.

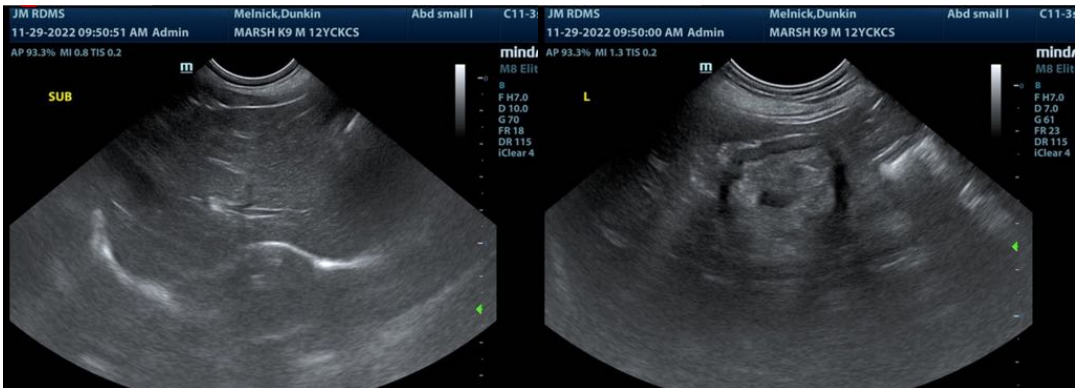
Partially full stomach.

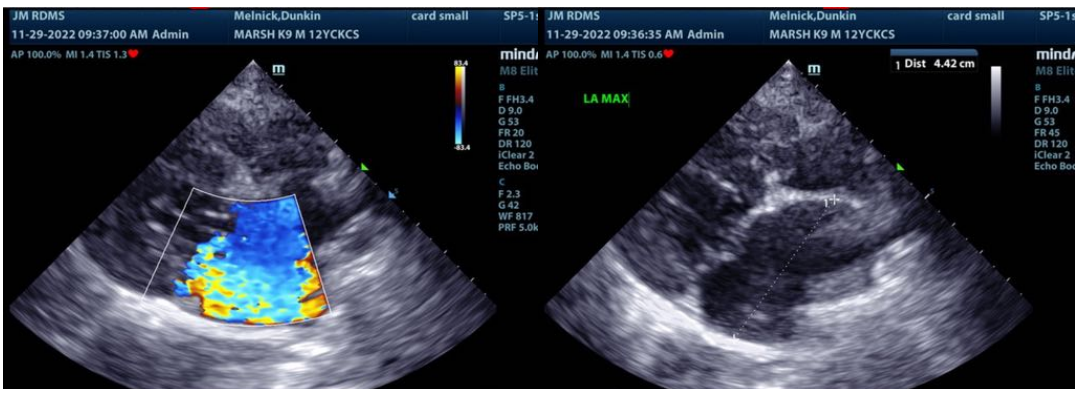
Age related renal and hepatic changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Adding Spironolactone can be considered in this patient at 1-2 mg/kg b.i.d. to work synergistically with the ace inhibitor. A recheck is recommended in 6 months or earlier if murmur grade increases or earlier if murmur grade increases.

The heart has some volume overload and is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 3-6 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary.





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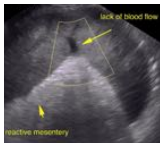
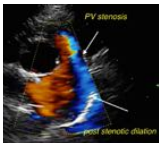
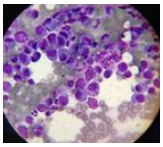
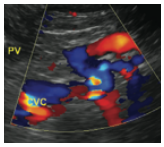

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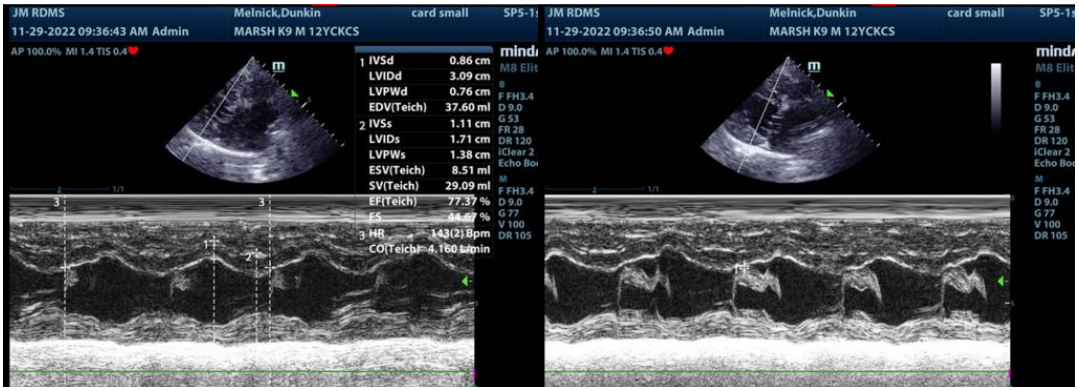

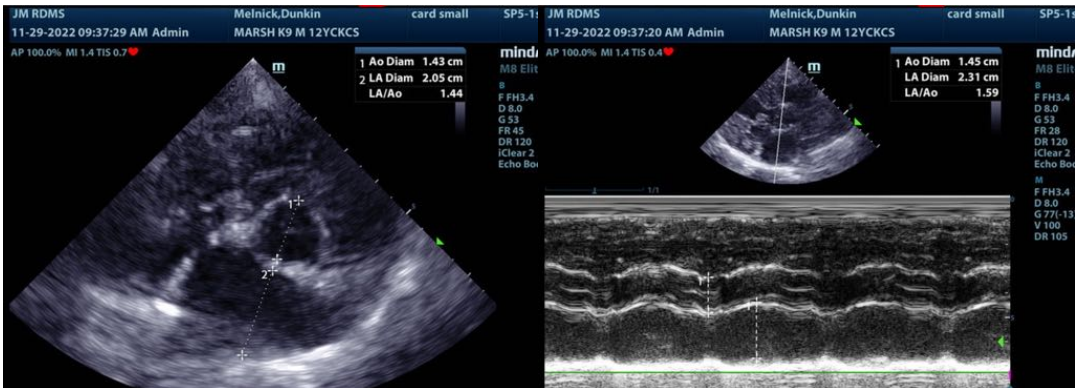

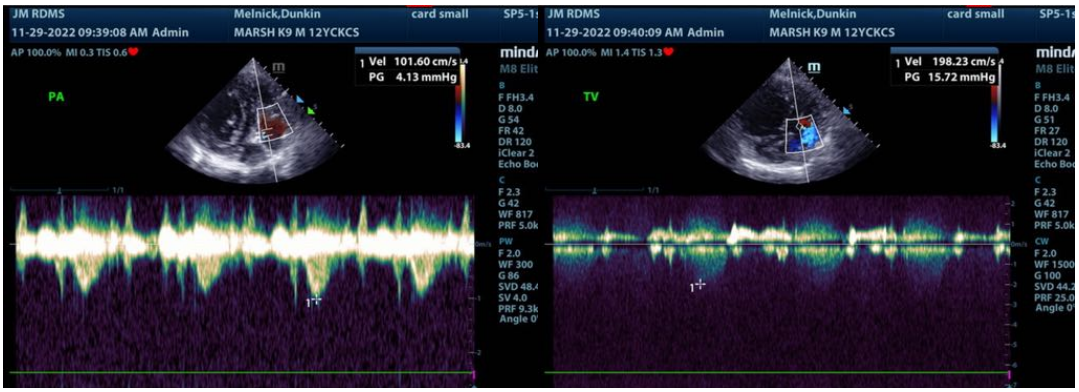

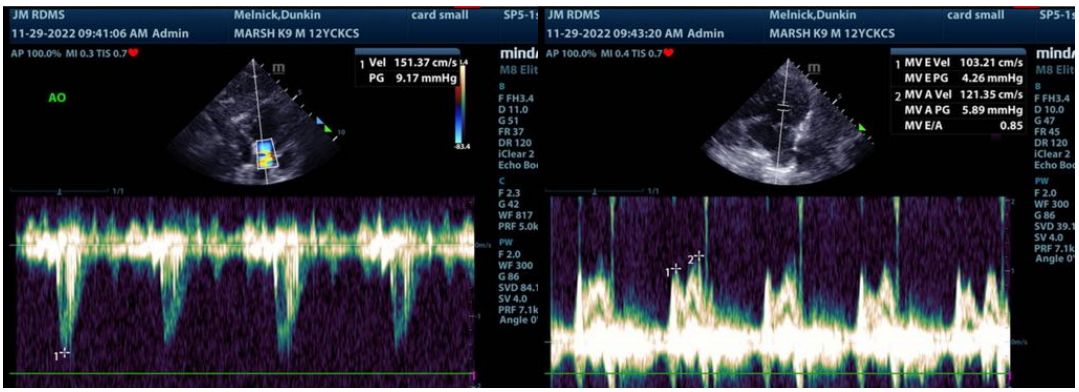

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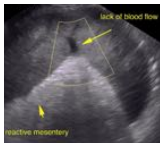
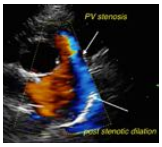
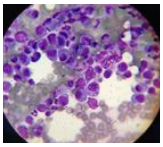
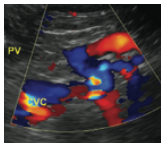

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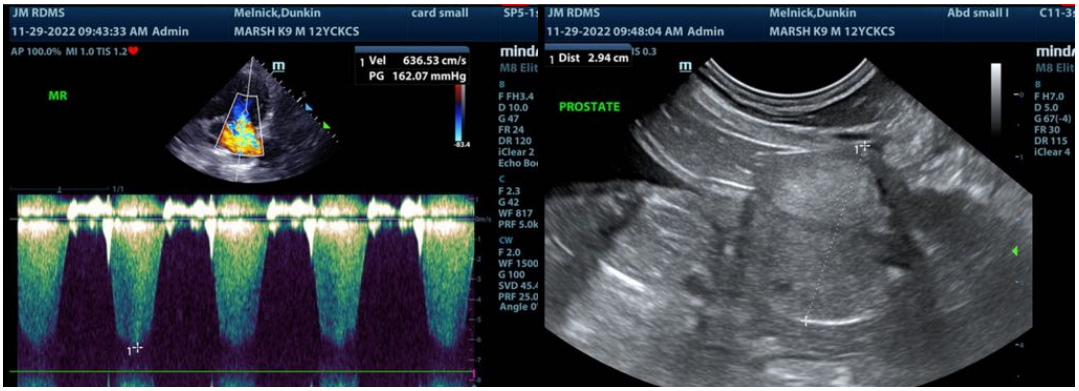

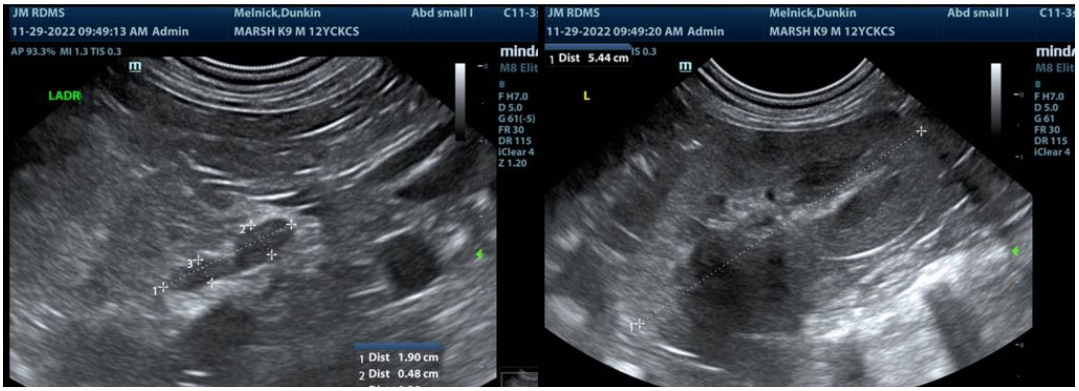

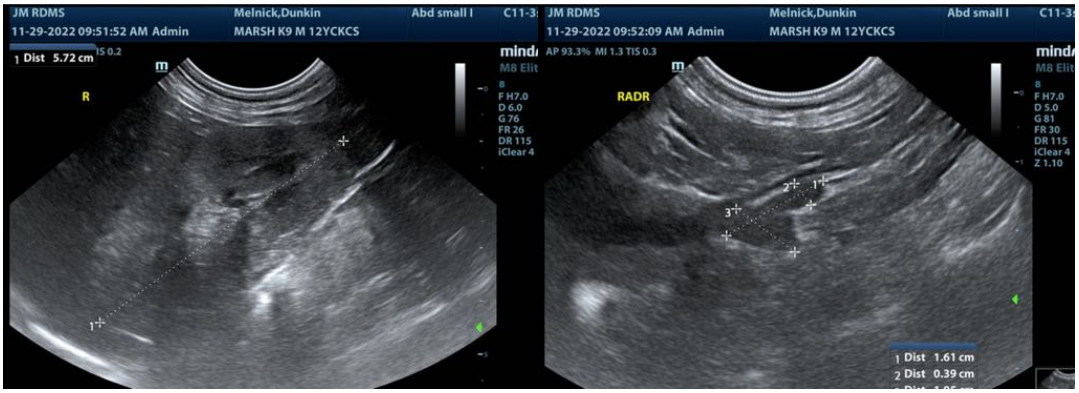

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@SonoPath.com