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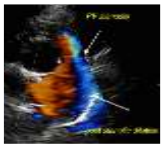
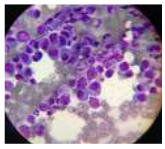
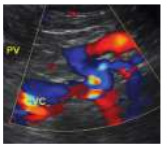

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Annie Johnston

SPECIES

Canine

BREED

Labrador Retriever

SEX

FS

AGE

13 years

WEIGHT

65.5 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Mildand Park VH

REFERRING VET

Dr. John Shokoff

INVOICE

13006

DATE

1/10/22

PRESENTING CLINICAL SIGNS

Narrow based mass on ear, suspect Mast cell tumor. Pre-anesthesia ECG revealed multicentric VPCs. Rads essentially normal. Echo to R/O cardiac disease, abdominal ultrasound to evaluate overall assessment for HSA. Current med: topical steroid on ear mass.
Abnormal PE/Chem/CBC/UA Results: CBC/Chem: NSF.

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			1.1	1.2	43	77.4	0.25
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	97	1.0	0.91		3.5	3.4	

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. Mild, primarily centralized insufficiency was present on color doppler assessment. 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). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window. Overt evidence of significant or consistent arrhythmogenic activity was not noted.

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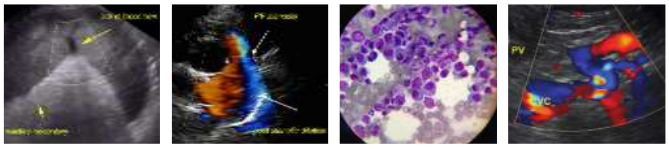

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Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the aortic trifurcation was free of pathology.

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. The left kidney measured 6.1 cm in length. The right kidney measured 7.4 cm in length.

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.51 cm width at the caudal pole and 0.51 cm width at the cranial pole. No overt pathology was noted in the area of the right adrenal gland.

Spleen

The spleen was normal in size and contour with mild generalized splenic parenchyma heterogeneity. No splenic masses or nodules were noted. Normal splenic vascularity was present.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. 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.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild to moderate, nonshadowing ingesta / chyme. This may Indicate recent meal ingestion. Some degree of gastric stasis could be considered if documented NPO or evidence of anorexia or vomiting.

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.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

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 were evident.

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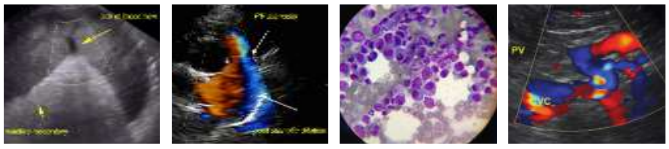

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Free Abdomen

No omental masses, lymphadenopathy or peritoneal effusion were present.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Overtly normal cardiac structure and function
- Mild, primarily centralized MV insufficiency
- Mild age-related kidneys
- Gastric ingesta / chyme
- Normal splenic size and contour exhibiting subtle generalized parenchyma heterogeneity

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No overt evidence of significant structural, functional, or arrhythmogenic cardiomyopathy was noted. No clinical Issues such as systolic dysfunction, left or right heart chamber enlargement, or evidence of clinical pulmonary hypertension were noted. The potential for arrhythmia, given the reported DPCs, cannot be definitively excluded, however. The hemodynamic effects of the mitral valve insufficiency appear to be insignificant at this time. Given the lack of left atrium enlargement, the overall risk for future complications based on the cardiac structure is considered low. No indication for cardiac medications for structure or functional cardiomyopathy. Recheck echocardiogram may be considered In 6-12 months, sooner if a persistent or progressive murmur is noted, or if clinical signs suggestive of left-sided heart disease develop.

Overall largely age-related abdomen without evidence of significant visceral pathology was present. No overt evidence of intraabdominal neoplasia or metastatic disease was noted.

No overt suspicion for splenic neoplastic criteria with suspected benign parenchymal changes suggestive of hematopoiesis or age-related parenchymal changes suspected. Assuming normal clotting status, further clarification may Include ultrasound guided FNA of the spleen for screening cytology primarily to ensure only benign changes are present and rule out the unlikely potential for neoplasia.

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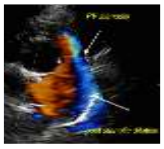
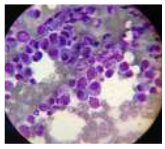
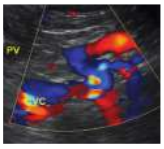

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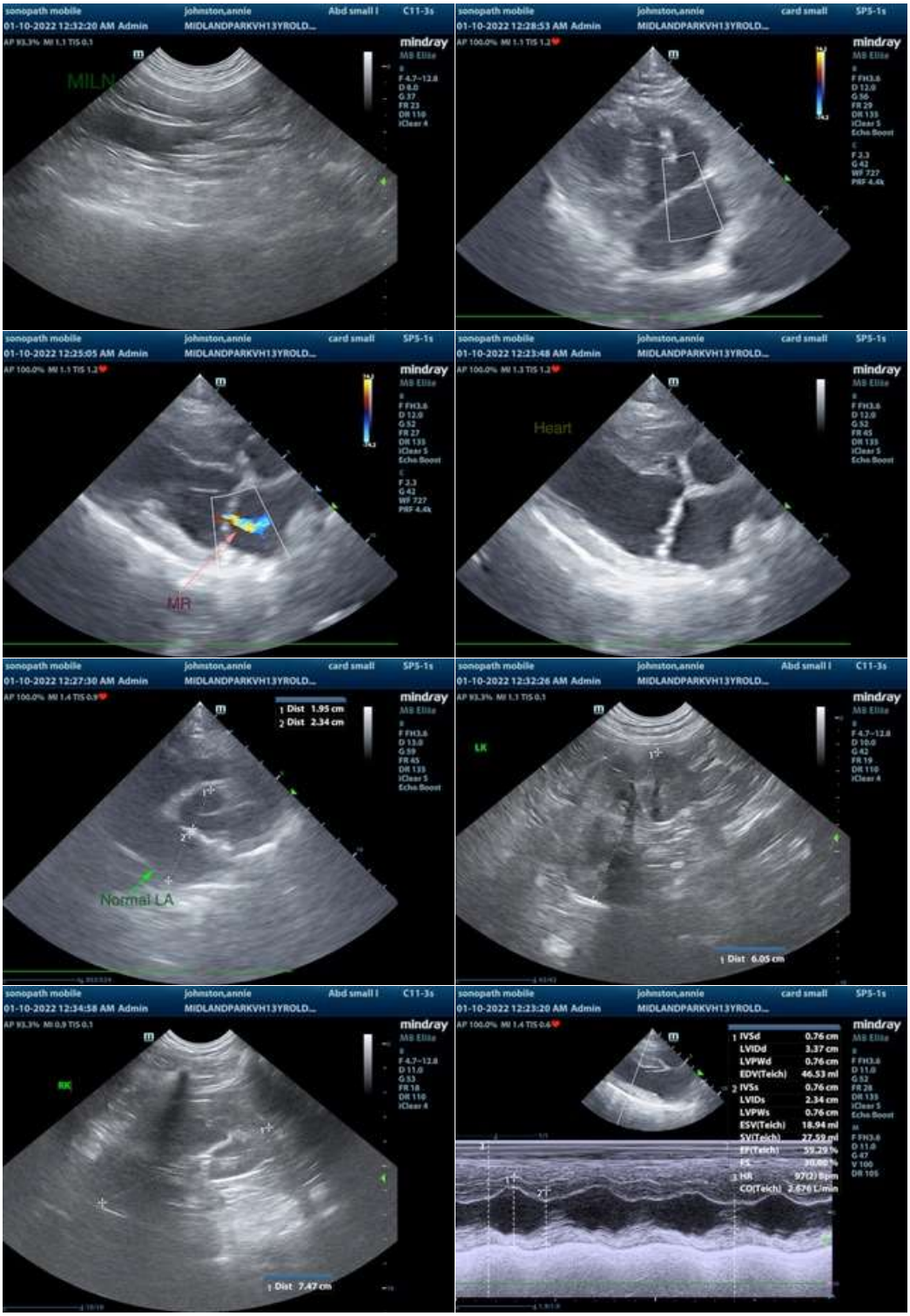

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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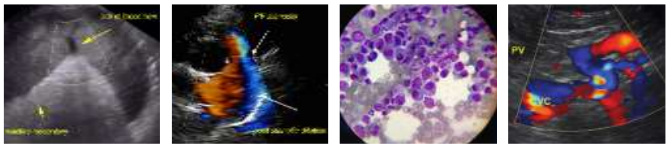

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Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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info@SonoPath.com