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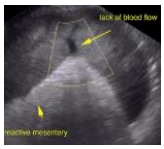
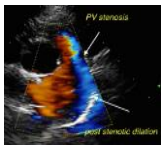
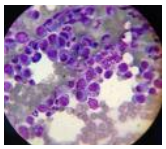
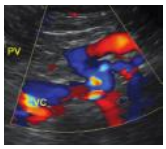





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Hemi Bond

SPECIES

Canine

BREED

Boxer

SEX

MN

AGE

6 yr

WEIGHT

75.5 lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Amanda Lacey-Crook

HOSPITAL NAME

Rivers Edge Pet Medical Center

REFERRING VET

Dr. Flanagan

INVOICE

10989ag

DATE

06/27/2022

PRESENTING CLINICAL SIGNS

History: Patient presented abdominal bloat on saturday5/25/22. Took radiographs and did Chem 17 blood work. Patient has history of vomiting after eating and drinking quickly but never been a serious issue.

Abnormal PE/Chem/CBC/UA Results: See attached labwork - MCV: 74.7% high, MCH: 27% high, RETIC: 233.3, MPV 14.2%, PDW: 21.5% See attached radiographs - Patient is full of gastric material, Enlarged heart, VHS 16.5. Radiograph of abdomen is clouded and not clear of spleen, liver and intestines

ULTRASONOGRAPHIC EXAMINATION OF THE HEART AND ABDOMEN

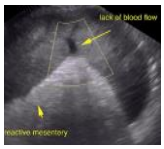
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT			NM	1.3	19	40.6	0.5
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**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				
PATIENT	NM		1.2		4.0	3.6	

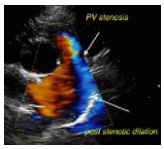
Cardiac Presentation

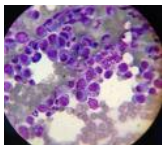
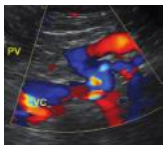
The echocardiogram in this patient demonstrated normal left atrial size based on 3 separate methods of LA evaluation. The cranial and caudal mitral valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The left ventricle presented thicknesses 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 subnormal as 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. No overt arrhythmogenic disease.

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or





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sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 7.0 cm in length. The right kidney measured 7.5 cm in length.

The area of the aortic trifurcation was free of pathology.

No overt pathology in the area of the residual prostate.

Adrenal Glands

The left and right adrenal glands were not visualized owing to regional periadrenal omental artifact and peritoneal free fluid.

Spleen

The spleen exhibited potential for generalized enlargement possibly owing to sedation and maintained symmetrical capsule contour and a finely textured and homogenous parenchyma. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. 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 strongly shadowing gastric ingesta.

The small intestine presented primarily intact wall layering with 1:3 muscularis/mucosa ratio. A focal segment of unspecified intestine located in the mid abdomen and within the unspecified mid abdominal mass exhibited prominent wall layering with indistinct wall layer detail. This segment of intestine measured 0.42 cm in width.

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

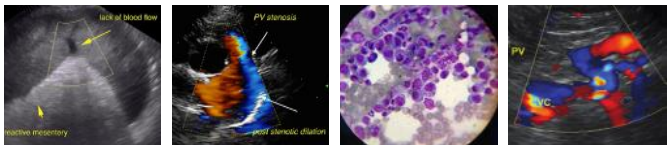
Pancreas

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 was evident.

Free Abdomen

Moderate volume peritoneal free fluid exhibiting mild echogenic changes suggestive of some degree of cellularity.

An unspecified irregular nonhomogeneous mass was present in the mid abdomen medial caudal to the right kidney. This mass measured approximately 8-9 cm in diameter. Regional nonuniform to mixed



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echogenic mesentery was noted around the mass along with intermittent spherical appearing nodular lesions which may indicate regional mesenteric metastasis or lymphadenopathy. An example of a nodular lesion measured 2.4 cm in diameter.

A solitary mildly prominent to enlarged medial iliac lymph node was present. The lymph node was essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). The lymph node measured 2 cm x 0.9 cm.

ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure with LV hypocontractility-patient variant, athletic state, systemic disease and hypothyroidism can present in this manner. DCM criteria is not met
- Undifferentiated irregular mid abdominal mass
- Regional associated nonuniform mesentery with possible regional mesenteric metastasis vs mesenteric lymphadenopathy
- Moderate volume peritoneal free fluid exhibiting mild echogenic changes-consistent with hemoabdomen
- Shadowing gastric ingesta-nonspecific, dense ingesta with potential of post prandial presentation, possibility of foreign material cannot be excluded

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The mid abdominal mass is most consistent with neoplastic criteria with potential undifferentiated to possible disseminated sarcoma considered a top differential diagnosis. Subjectively this case appears to be nonsurgical given high potential for regional omental seeding, mesenteric metastasis or metastatic lymphadenopathy. Ultrasound guided FNA of the mass +/- cytospin cytology of the peritoneal free fluid could be considered for further assessment. If additional clarification is indicated, an abdominal CT could be considered however unfortunately a likely unfavorable prognosis is indicated.

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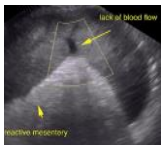
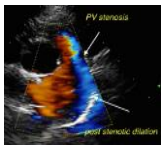
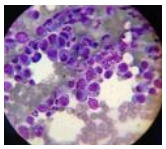
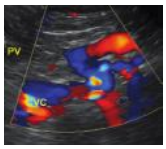

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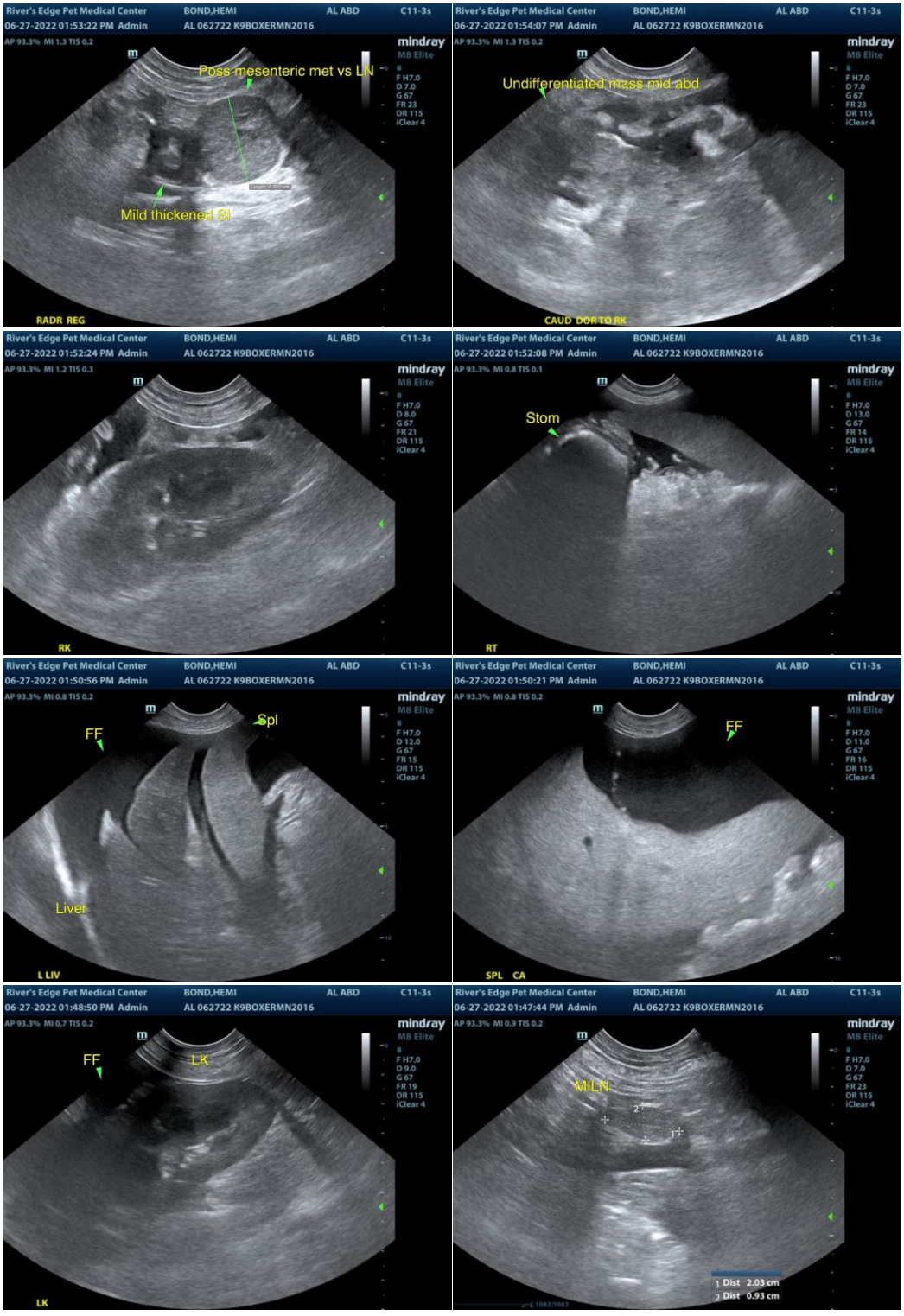

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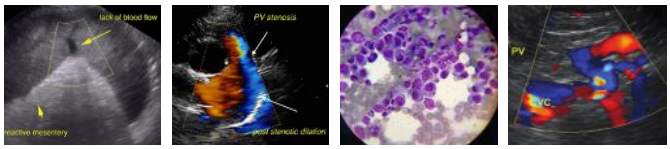

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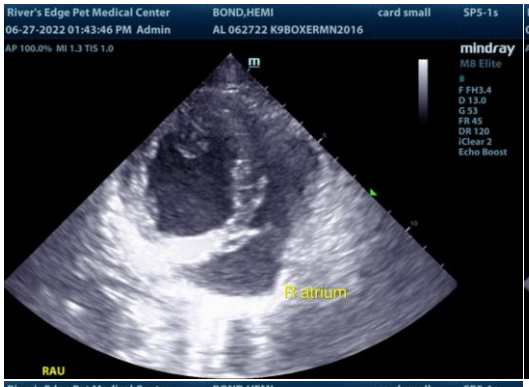

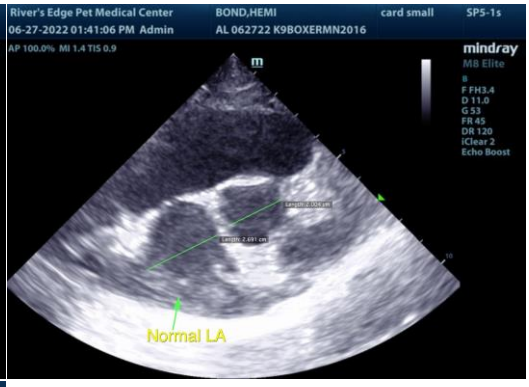

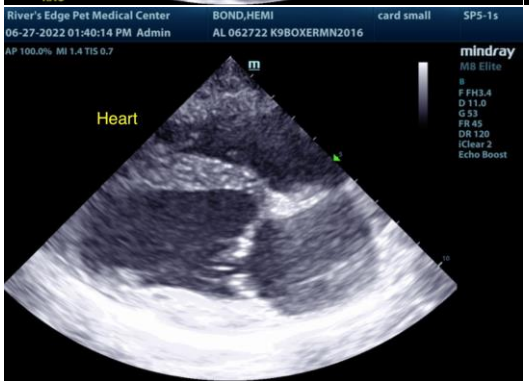

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

info@SonoPath.com