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Clinical Sonography & Telecytology
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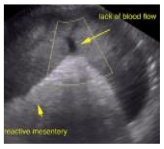
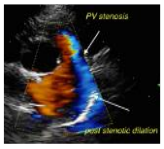
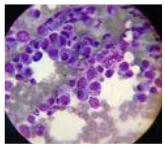
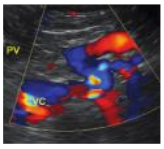




SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Blue Maniar

SPECIES
Canine

BREED
Lab

SEX
MN

AGE
12

WEIGHT
113

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

IMAGING PERFORMED BY
Jenn

HOSPITAL NAME
Rockaway AH

REFERRING VET
Dr. Maniar

INVOICE
15103

DATE
10/6/22

PRESENTING CLINICAL SIGNS

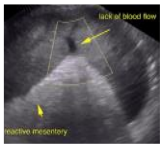
PU/PD , having regurg, guttural sounds recently elevated ALP, obese , has several SQ masses

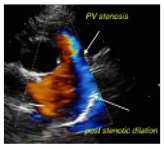
ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

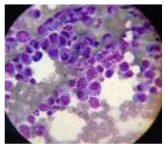
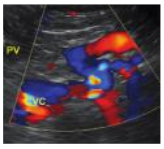
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT				1.28	35.4	68.3	0.3
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**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	140	1.0	0.83		5.0	4.8	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. No evidence of valvular prolapse or chordae tendinea rupture. Doppler indicated moderate eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity with evidence of minor myocardial remodeling, yet without evidence of 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 or chamber overload. **Tricuspid** valvular assessment demonstrated concurrent mild thickening with mild TR on Doppler. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.





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Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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.

No overt pathology was noted in the area of the residual prostate.

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 8.0 cm in length. The right kidney measured 8.5 cm in length.

Adrenal Glands

The left and right adrenal glands were indistinctly visualized owing to patient size and conformation. No overt evidence of pathology, i.e., adrenomegaly or tumors. The left adrenal gland subjectively measured 0.93 width at the caudal pole and 0.80 cm width at the cranial pole. The right adrenal gland subjectively measured 1.0 cm width at the caudal pole.

Spleen

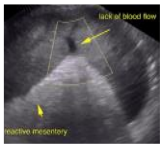
A mild to moderately expansive, primarily homogeneous splenic mass was present with hyperechoic periphery resulting in mild distortion of the lateral and medial capsule, yet without evidence of parenchymal escape or evidence of perisplenic or peritoneal free fluid. The mass measured approximately 5.0 cm in diameter. The non-affected spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis.

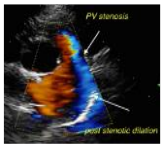
Liver/ Gallbladder

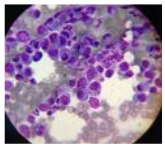
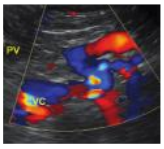
The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mild gallbladder debris. The cystic and common bile ducts were normal. No evidence of gallbladder or peripheral gallbladder inflammatory criteria was noted.

Gastrointestinal

The visualized gastric walls were sonographically normal. The lumen of the stomach contained mild ingesta exhibiting subtle to focal progressive distal acoustic shadowing. No evidence of mechanical pyloric outflow obstruction was noted.





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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.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Compensated chronic mitral and tricuspid valve disease
- Nonspecific splenic mass - hyperplasia, hematopoiesis, granuloma, infection / splenitis, neoplasia, sarcoma, round cell neoplasia, or other, possible
- Mild hepatic parenchymal remodeling - subjective benign vacuolar hepatopathy pattern
- Overtly normal gastrointestinal tract with mild gastric ingesta
- Mild chronic renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The lack of left atrial enlargement indicates that the risk of current and future complications secondary to mitral valve insufficiency is relatively low. No evidence of clinical pulmonary hypertension was noted. No indication for cardiac medications, given this presentation. However, serial sonographic monitoring is required for further prognosis. Recheck echocardiogram is recommended in 6 months, sooner if clinical signs arise. No anesthetic contraindications are evident.

Initial screening FNA cytology of the mass could be considered, assuming normal clotting status. No overt evidence of regional metastasis, if the splenic mass Is neoplastic. Screening BP, as well as full CBC/Chemistry Panel and Urinalysis, with potential renal staging to include screening C/S and baseline UPC level, given the PU/PD, is recommended.

Assuming no evidence of pathology on three view chest radiographs, splenectomy with gross inspection of the liver, gastrointestinal tract, and left and right adrenal area may be considered. Gastroprotectant protocol, as well as possible bland or hydrolyzed diet trial if clinical concern for mild gastritis / esophagitis, may prove beneficial.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

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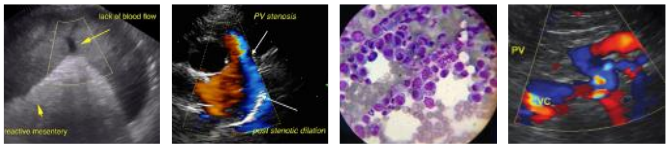

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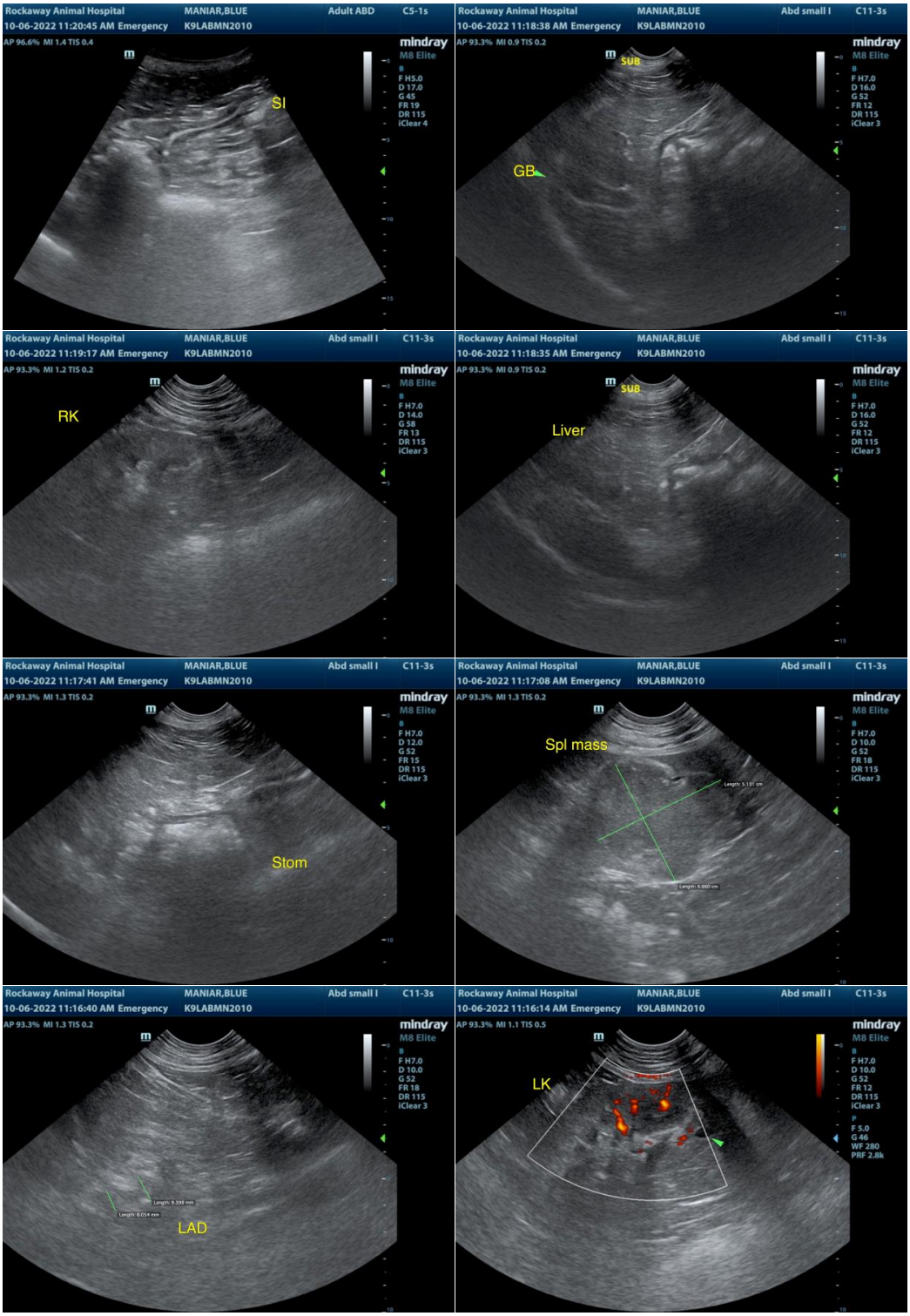

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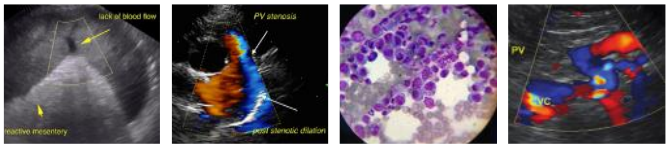

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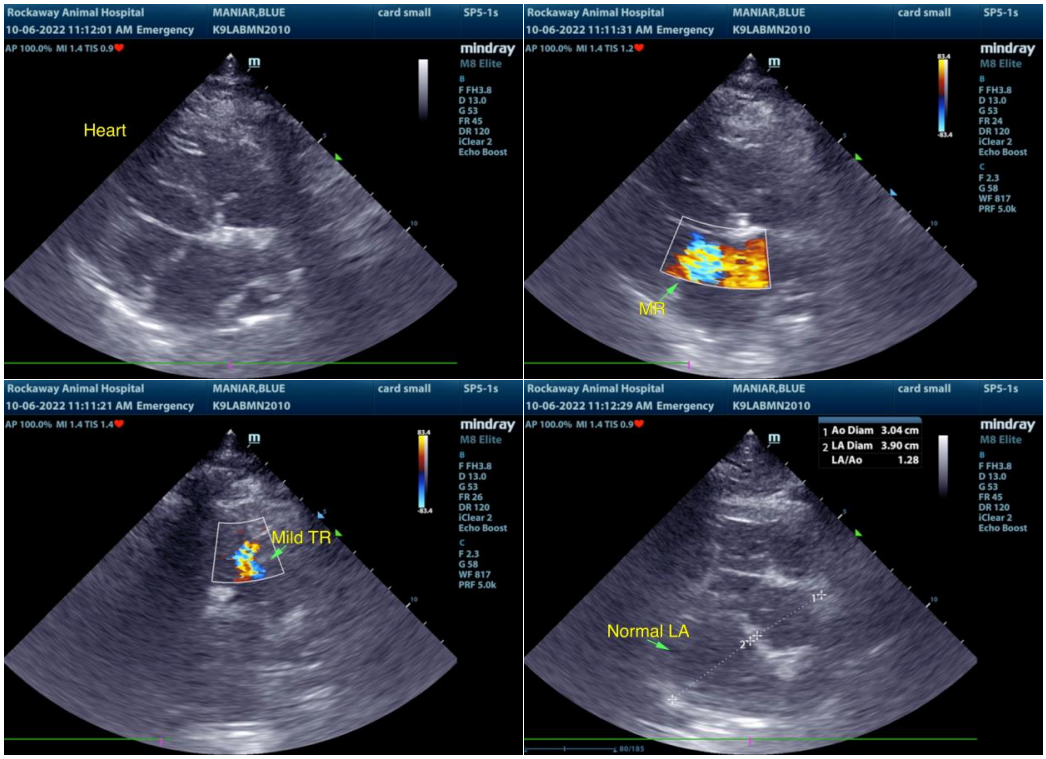

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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