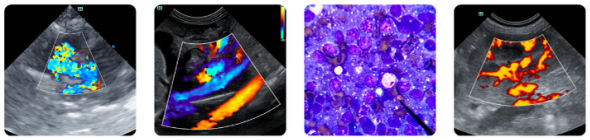

PATIENT

Tuke Alexander

SPECIES

Canine

BREED

Australian Blue Heeler Mix

SEX

Female Spayed

AGE

4 yrs

WEIGHT

27.6

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ackmann

HOSPITAL NAME

Buffalo VC

REFERRING VET

Dr. Liebers

INVOICE

12921

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12/12/25

PRESENTING CLINICAL SIGNS

History: Increased respiratory effort/tachypnea for 2-3 days, chronic history of pancreatitis and intermittent vomiting, diarrhea, hyporexia, and weight loss.

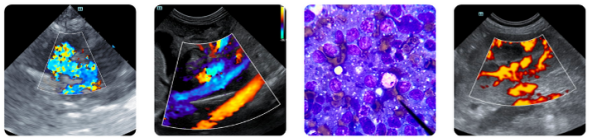
Abnormal PE/Chem/CBC/UA Results: Increased respiratory effort, distended abdomen, pale MM, dehydration. Temperature 105 *F. Trads: large mass vs. severe perihilar edema, abd rads: decreased serosal detail. CBC/chem/lytes: RBC 5.42, hem 35.1, hemoglob 12.7, WBC 47.15, neut 38.24, suspect bands, mono 4.46, BUN 4, ca 7.6, alb 2.0, glob 5.0. cPL: 99

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE CARDIAC PARAMETERS	**MR VMAX** (m/s)	**TR VMAX** (m/s)	**LA/AO** (M-Mode)	**LA/AO** (Heart Base; Swe)	**FS** (%)	**EF** (%)	**EPSS** (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	--	1.3	36	68	0.3
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**LAD** LA MAX 4 Chamber	**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	1.4	1.1	--	3.0	3.0	--

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 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.



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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 were noted.

No obvious pathology in the area of the uterine remnant.

Normal size and margination was 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 6.1 cm in length. The right kidney measured 6.4 cm in length.

Adrenal Glands

The left and right adrenal glands were not definitively visualized owing to peri adrenal omental artifact and lymphadenopathy.

Spleen

The spleen was enlarged in size with rounded capsule contour and expansive to irregular, hypoechoic to non-homogeneous mass present measuring ~3.2 cm in diameter.

Liver

The liver was subjective mildly enlarged in size with normal vascular volume. 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 mild, non-organized, echogenic, nonmineralized biliary sludge. No evidence of gallbladder wall edema present. The cystic duct and common bile ducts were normal without evidence of dilation.

Gastrointestinal

The stomach presented thickened hypoechoic wall with indistinct mural detail. The lumen of the stomach was empty without retained ingesta, fluid or foriegn material.

The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. The mucosa exhibited mild decreased echogenicity with occasional mucosal speckling. A segmental to diffuse ileus pattern consisting of mild fluid accumulation in the intestinal lumen was present without obstruction or foreign material.

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

Pancreas

The area of the pancreas was indistinctly visualized owing to increased peripancreatic omental artifact.

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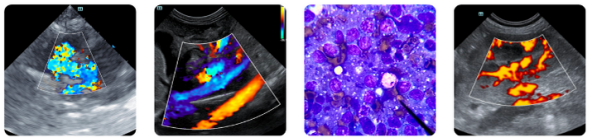

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Free Abdomen

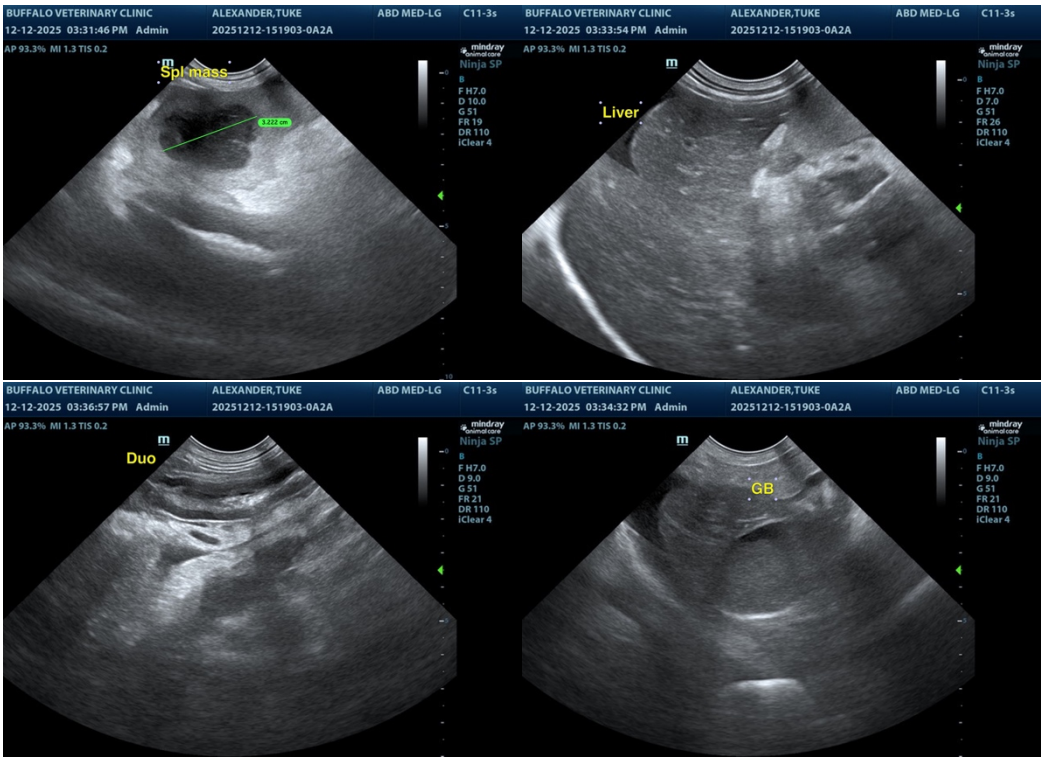
Several irregular hypoechoic to swollen mesenteric lymph nodes were present with an example measuring 5.8 cm x 3.4 cm and exhibiting width: length ratio >0.5. Generalized non-homogeneous indistinctly nodular hyperechoic omentum and moderate volume peritoneal effusion present.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Multicentric abdominal neoplastic pattern involving the spleen, mesentery/mesenteric lymph nodes and potentially the liver and gastrointestinal tract – multicentric lymphoma, sarcoma or other possible

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Assuming normal clotting status and using 25-gauge needle, further assessment may include splenic mass, accessible lymph node and +/- hepatic FNA cytology as well as effusion analysis cytology and +/- C/S if evidence of inflammatory effusion component. Unfortunately, unfavorable prognosis is indicated.



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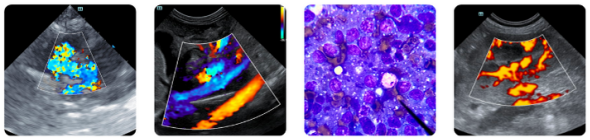

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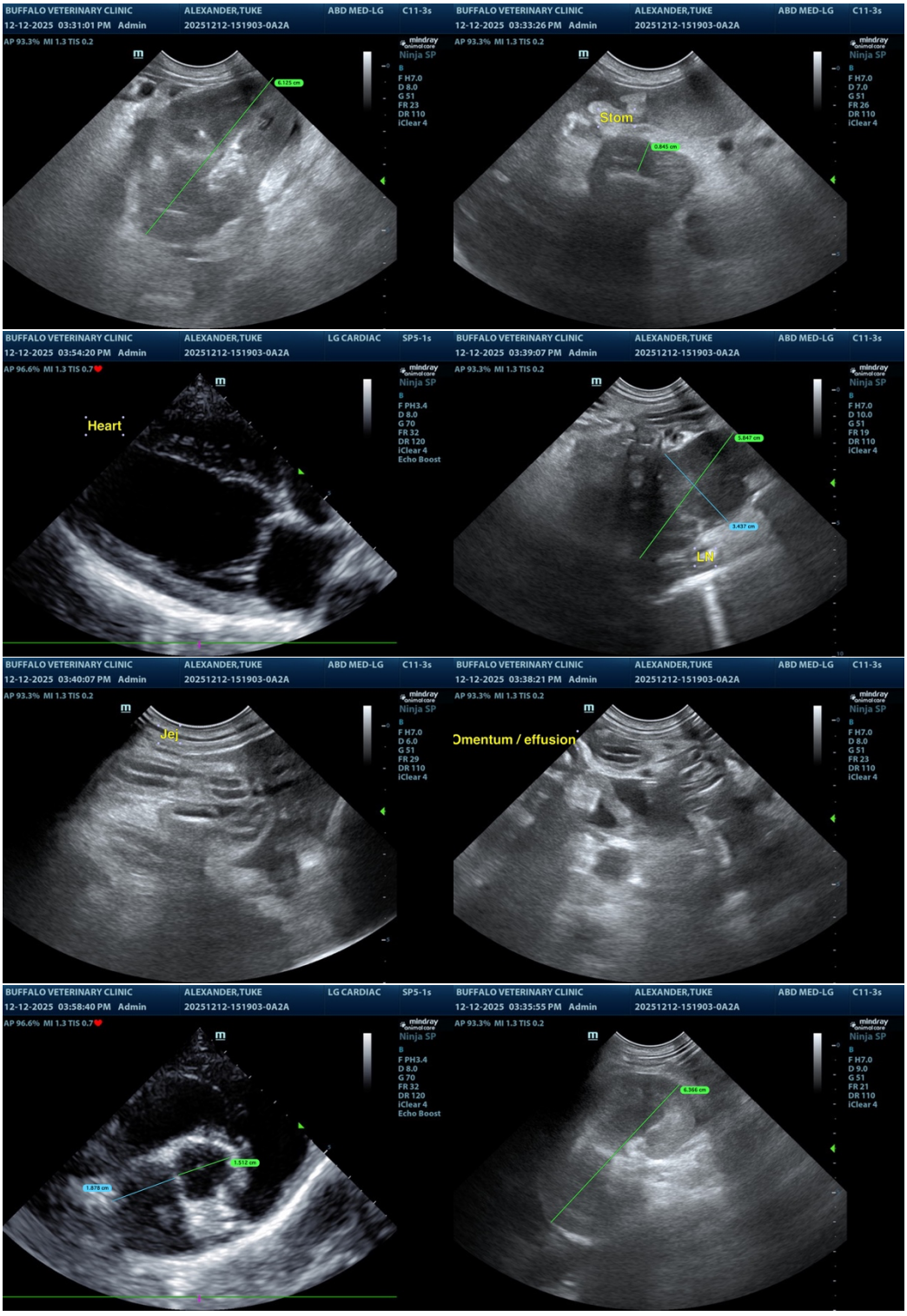

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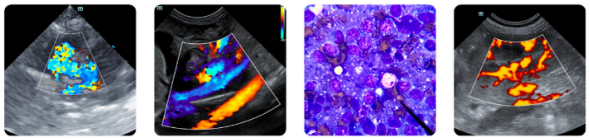

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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