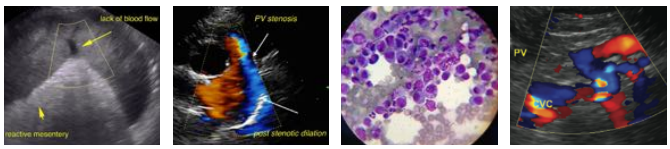
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Murdoch McPherson

SPECIES

Canine

BREED

Golden Retriever

SEX

Neutered male

AGE

7 years

WEIGHT

65.4 lbs

INTERPRETED BY

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

IMAGING PERFORMED BY

Kelly Vazquez , CVT

HOSPITAL NAME

Midland Park VH

REFERRING VET

Dr. Shokoff

INVOICE

42759

DATE

2/13/23

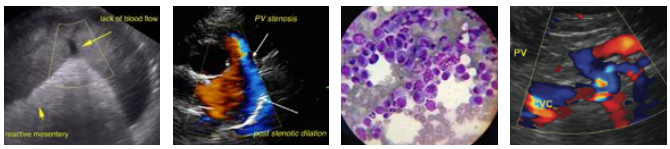
PRESENTING CLINICAL SIGNS

History: Patient presents for weight loss, progressive lethargy, severe splenomegaly on palpation. Rapid read rads revealed hepatomegaly. No current meds.
Abnormal PE/Chem/CBC/UA Results: Albumin 2.0, A/G ratio 0.6, ALT 9, GGT 27, calcium 8.2, amylase 1,853, WBC 11.2, RBC 4.0, HGB 9.7, HCT 33, MCV 81, neutrophils 34,428, lymphocytes 146,772.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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). An extensive, hypoechoic 5.8 cm, complex mass is noted in the right cranial thorax. The left thorax revealed a 5.7 cm mass. This is of similar echotexture. There is no peripheral air entrapment noted in the tissue.

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.03	35	90	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		1.0	1.06	65.4 lbs	2.94 max	2.6	



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ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** and visible pelvic urethra were unremarkable for the level of repletion presented. The urine, however, did present some mildly echogenic debris consistent with mucous, exfoliated cells from renal or bladder origin, and/or blood clots as these echogenic changes can all present similarly. This is often related to urinary tract infection but may represent simple evidence of exfoliated debris or sterile inflammation. Cystocentesis, urinalysis, +/- culture would be recommended to rule out and define any UTI.

The **left kidney** in this patient are enlarged and measured 7.3 cm on the left with loss of corticomedullary definition. Multi-focal, hypoechoic nodular change was noted in the renal cortices. The right kidney revealed similar changes to the left with coarse renal cortical echotexture.

Adrenal Glands

The right adrenal gland was uniform and measured 2.84 x 0.95 cm at the cranial pole and 0.73 cm at the caudal pole. The left adrenal gland was uniform and measured 3.0 x 0.47 cm caudal pole and 0.48 cm at the cranial pole.

Spleen

The **spleen** revealed subtle, granular appearance and mild enlargement. The spleen was folded upon itself with scalloping contour.

Liver

The **liver** was enlarged and fairly uniform with swollen, irregular contour. The gallbladder was echogenic with a minor amount of sand. The hepatic veins were not dilated. There was no evidence of passive congestion. However, the portal vein was enlarged. The hepatic lymph nodes were also enlarged.

Gastrointestinal

The **gastrointestinal tract** was unremarkable. The curvilinear patterns were respected. Regional lymph nodes were also enlarged and measured up to 2.0 cm.

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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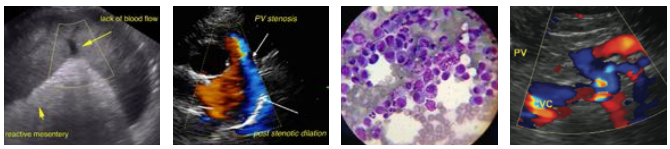

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Free Abdomen

A mild amount of echogenic ascites was noted in the abdomen.

ULTRASONOGRAPHIC FINDINGS

Multiple thoracic masses, not involving the heart, likely of lymph node origin.

Infiltrative hepatic pattern. Multi-focal, hepatic and cranial abdominal lymphadenopathy.

Probable renal and splenic involvement.

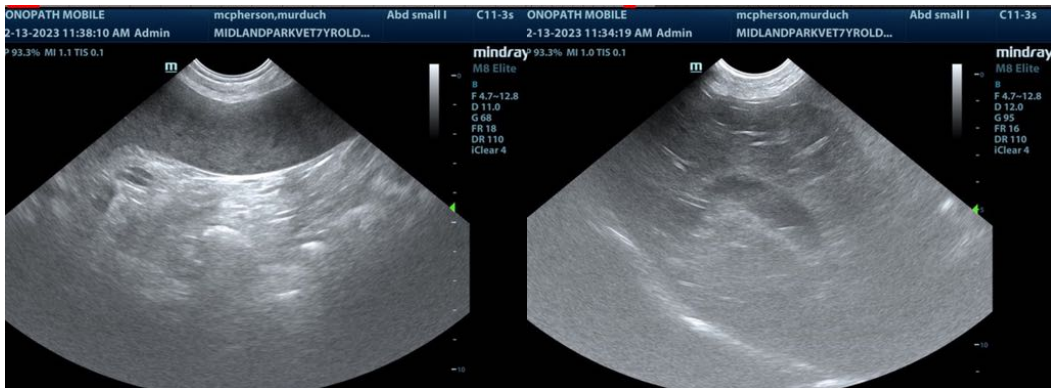
Secondary paraneoplastic ascites.

Multi-centric round cell neoplasia involving the thorax, liver +/- spleen +/- kidney and multiple lymph nodes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the thoracic masses is indicated for further definition. Chest CT is warranted for distribution. The masses impinged upon the heart, yet do not involve it and appear to move separately from the cardiac contractility of the heart. There was no evidence of thrombosis.

FNA of the liver is recommended with immediate chemotherapeutic intervention. Prognosis long term is poor given the extent of pathology.



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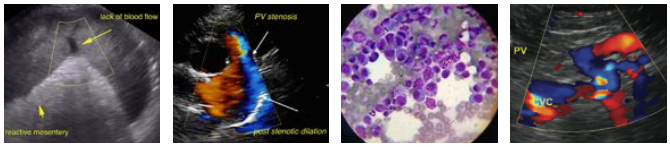

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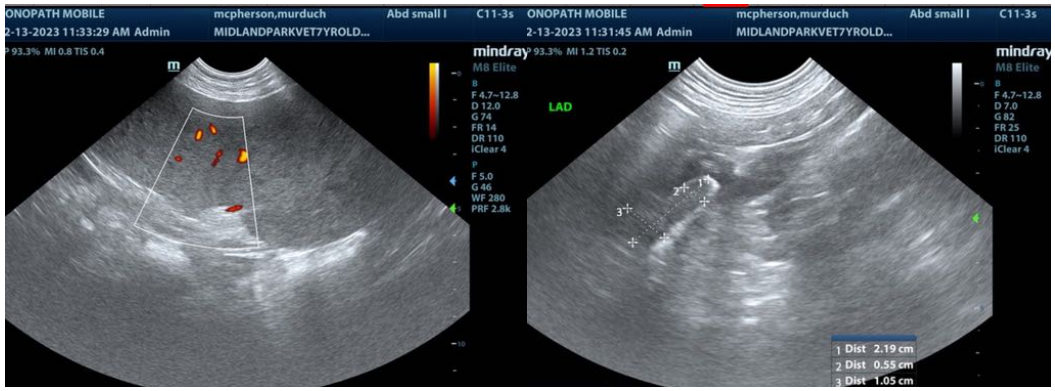

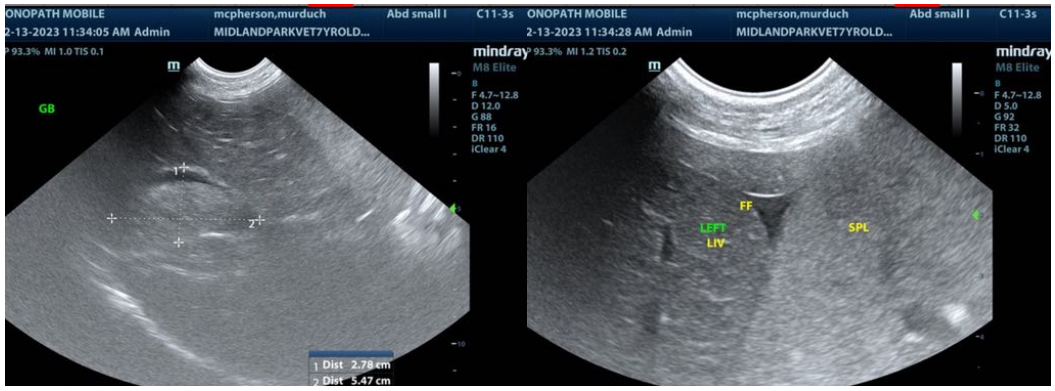

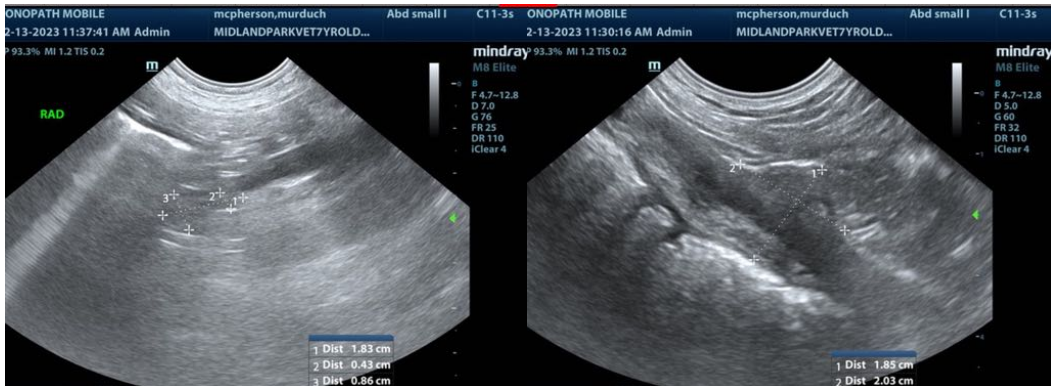

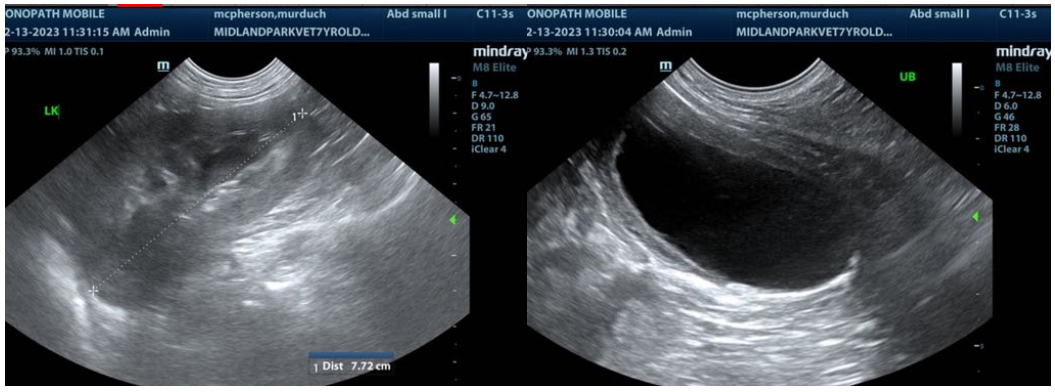

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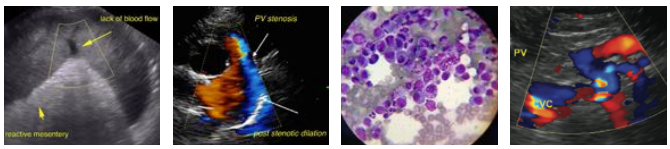

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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