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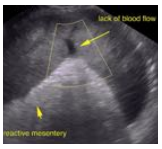
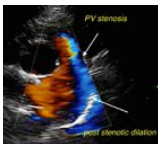
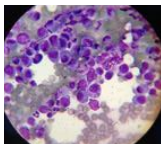
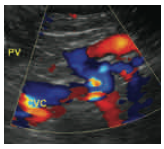

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1-800-838-4268 info@sonopath.com

**PATIENT**
Macy Riker

**SPECIES**
Canine

**BREED**
Basset Hound

**SEX**
Spayed Female

**AGE**
14 years

**WEIGHT**
58 lbs

**INTERPRETED BY**
Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**
Kelly Vazquez , CVT

**HOSPITAL NAME**
Marsh Hospital

**REFERRING VET**
Dr. Milwicki

**INVOICE**
99962

**DATE**
4/26/22

## PRESENTING CLINICAL SIGNS

Heart murmur, patient needs lumpectomy - penduculated soft mass from left ear area.
Abnormal PE/Chem/CBC/UA Results: WNL.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. The LA max measurement is best representative of this patient regarding left atrial measurements. Chamber volumes and echogenicity were normal. Complete filling of the left atrium was noted on color flow assessment. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. 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.

| 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 | 5.0 | | 1.0 | 1.2 | 31 | 59 | 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 | | | | |
| PATIENT | 134 | 1.58 | 0.94 | 58 lbs | 5.2 max | 3.93 | |

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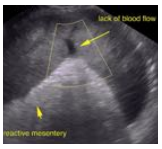
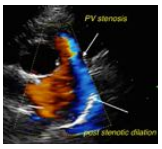
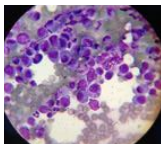
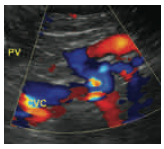

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## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. Occasional cortical cyst was noted in the kidneys. The right kidney measured 7.0 cm. The left kidney measured 7.03 cm.

### *Adrenal Glands*

The right **adrenal gland** comprised a 3.67 x 2.48 cm mass that was encapsulated. A benign lesion is possible. However, pheochromocytoma or adenocarcinoma is possible. The left adrenal gland was at the upper limits of normal and measured 2.14 x 0.91 cm at the caudal pole and 0.72 cm at the cranial pole.

### *Spleen*

The **spleen** revealed expansive, mixed, hypoechoic 3.2 x 2.7 cm mass at the mid cranial body after the splenic fold. There was no evidence of metastatic disease.

### *Liver*

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder was echogenic with some debris and sand.

### *Gastrointestinal*

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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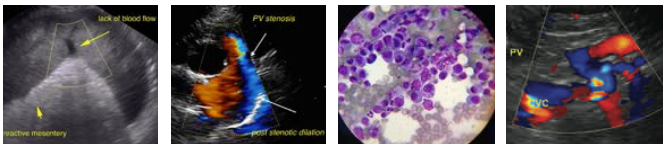

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## *Pancreas*

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.

## ULTRASONOGRAPHIC FINDINGS

Early stage B2 valvular disease.

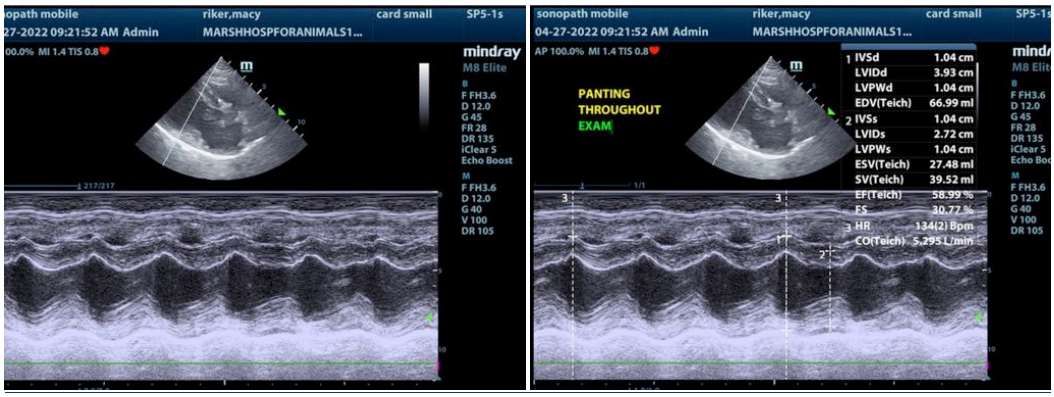
Splenic mass. Emerging round cell neoplasia. Hemangiosarcoma or pronounced hyperplasia is possible.

Right adrenal mass, appears resectable. Adenoma, adenocarcinoma, pheochromocytoma are all possible.

Geriatric abdomen.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Serial blood pressure measurements are warranted. If hypertension is present then urine catecholamine is warranted. Stage B2 valvular disease. Ursodiol therapy can be considered for long term management. However, the liver appears subjectively benign. I recommend stabilization of the heart with Pimobendan +/- ace inhibitor if systolic pressure is elevated > 160. However, splenectomy and right adrenalectomy would be ideal as well. Both of these lesions may be benign; however, there is potential for neoplasia in both organs. The splenic lesion is likely incidental, yet concerning given the capsular expansion noted. The patient has mild anesthetic risk at this time. I recommend cardiac treatment of the heart with a recheck of an echocardiogram and abdominal sonogram in 7-10 days to assess for any growth of the right adrenal or splenic lesion as well as reevaluation of blood pressure measurements +/- urine catecholamine.



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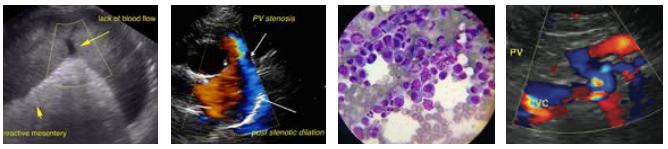

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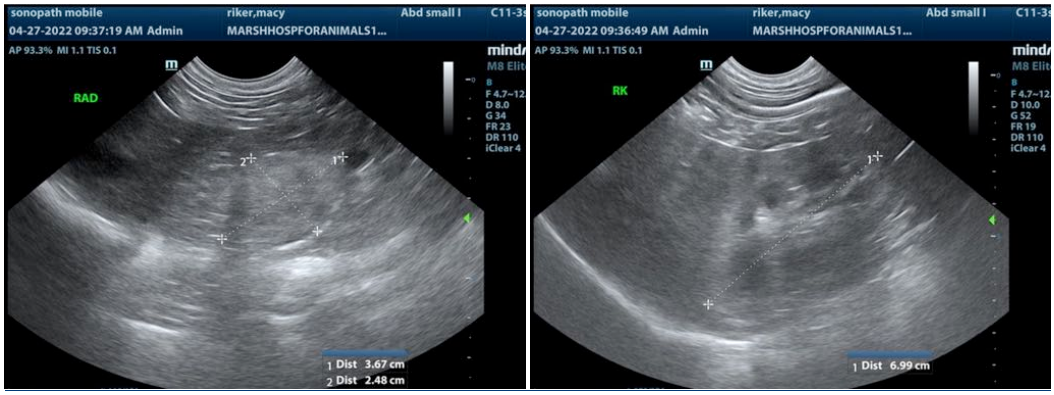


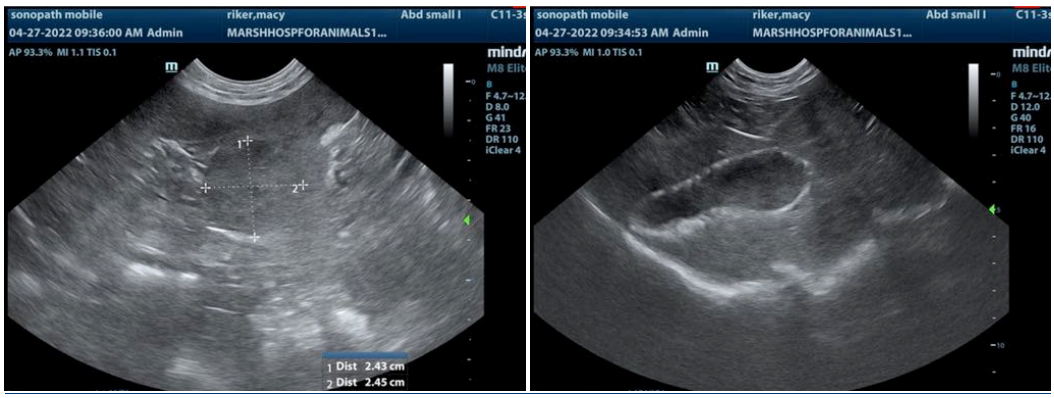


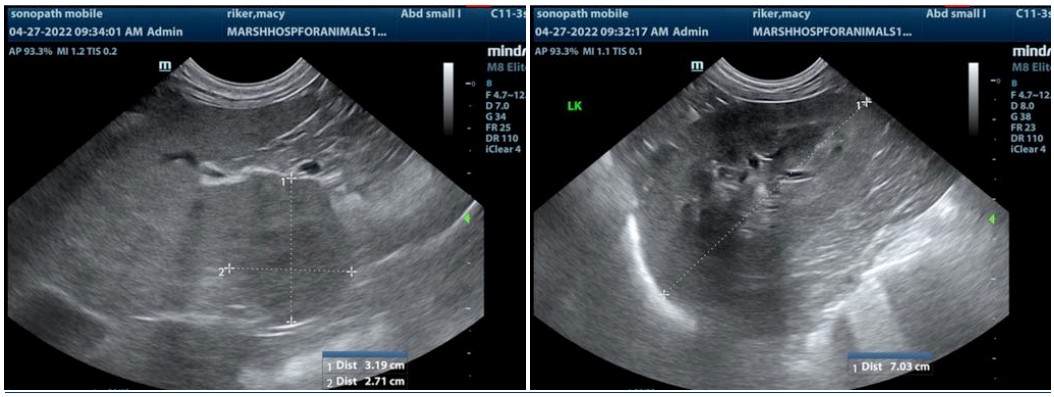


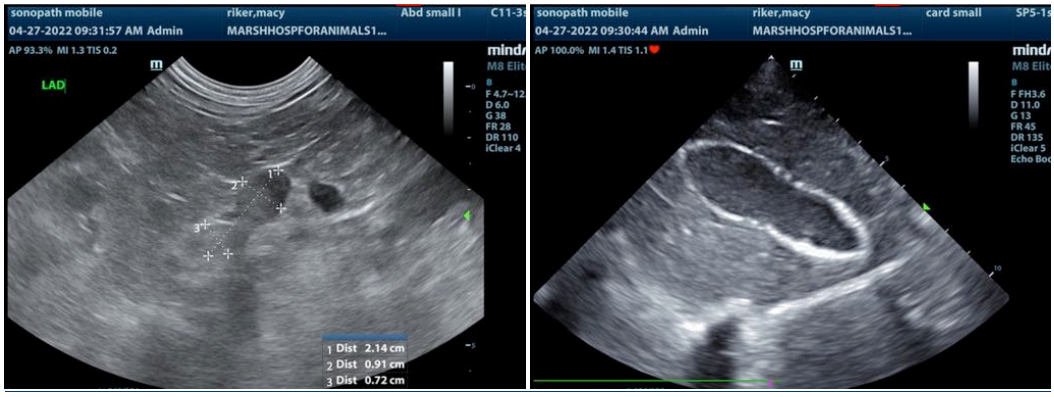

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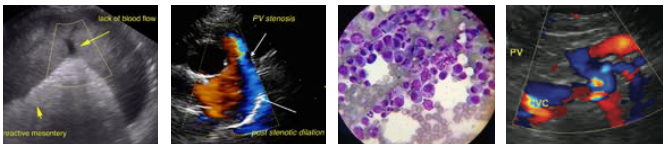

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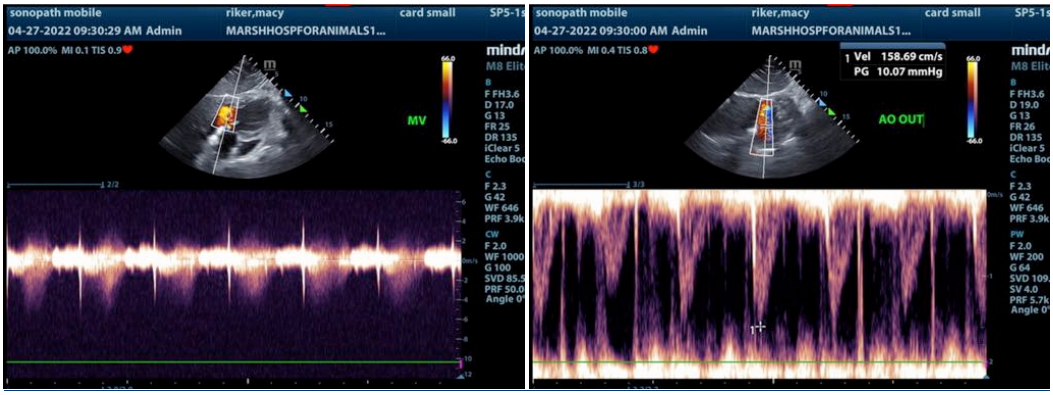


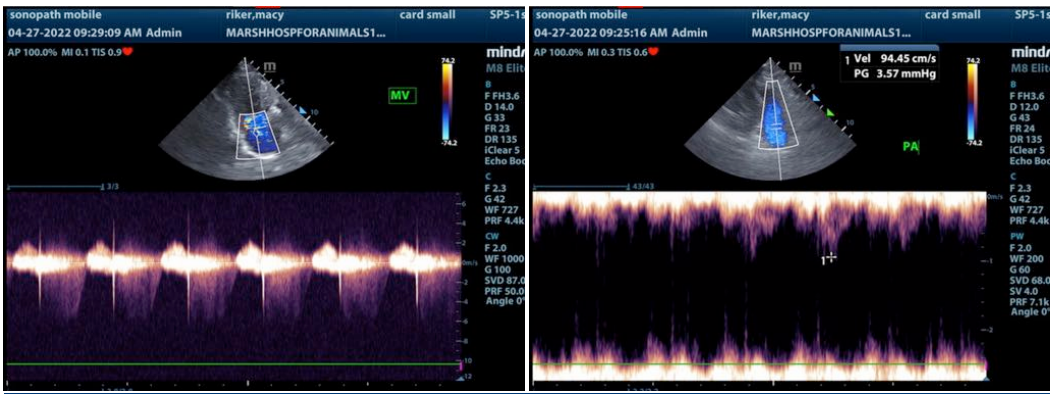


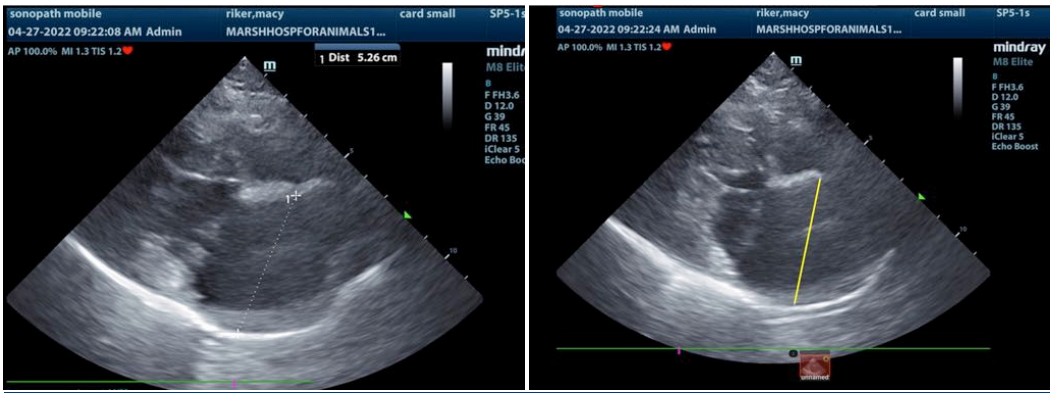


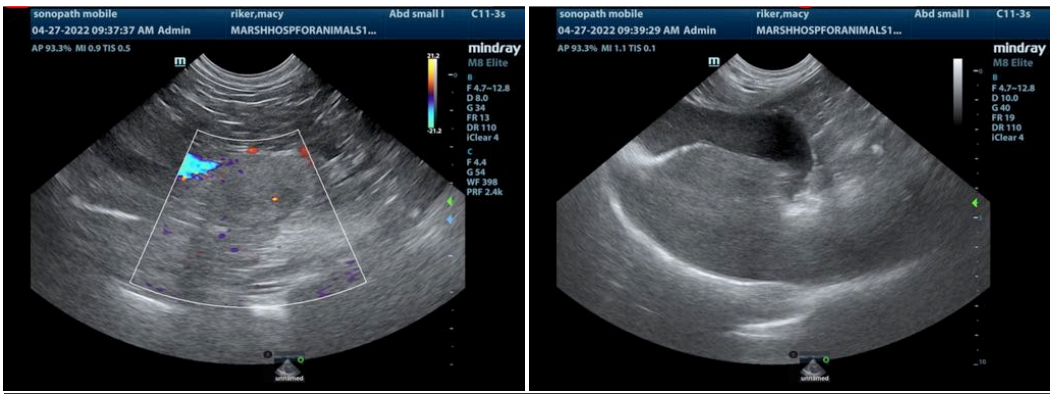

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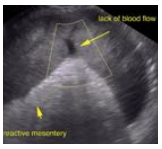

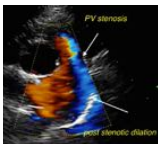

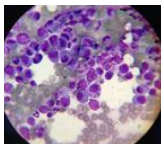
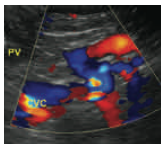


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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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