



## PATIENT

Pippa Pagel

## SPECIES

Canine

## BREED

Australian Shepherd

## SEX

Spayed female

## AGE

4 years

## WEIGHT

33.4 lbs

## INTERPRETED BY

Eric Lindquist, DMV,  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Sara Hansen

## HOSPITAL NAME

Amazon Park AC

## REFERRING VET

Dr. Heyward

## DATE

2/13/23

## Invoice

42763

## PRESENTING CLINICAL SIGNS

**History:** Presented as second opinion following suspicion of broken tooth causing diarrhea ( first clinic recommended ozone enemas) Weight loss, profuse orange watery diarrhea ( negative fecal per Idexx), peripheral lymphadenopathy and HUGE tonsils noted at dental, and low grade fever 103+ . Diet had been raw, and some concern expressed for infectious disease causing GI signs. M1 was found to have fractured root and was extracted. With post procedure Baytril and Amoxi, there was some initial improvement. Owner force fed and dog acts painful if fed more than 2 oz at a time. More improvement occurred with change to doxycycline and mirtazipine, and fenbendazole due to owner observed tapeworms ( presumed Taenia) . Anorexia persists, the diarrhea almost resolved during 2 week total doxycycline, but is now soft formed.. Patient is quite thin.. BCS 2 to 3 ( prior weight 45 lb), anorexia, palpable cranial left and "mass' believed to be head of spleen. The peripheral lymphadenopathy has resolved; tonsils much reduced in size with rt about twice normal size and the left perhaps 3 x They had been large enough to barely allow breathing swallowing food and the endotracheal tube. Anorexia persists

**Abnormal PE/Chem/CBC/UA Results:** Current Medications Doxycycline 100mg and Cerenia 24mg

## 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 residual prostate was mildly heterogenous and slightly irregular measuring 2.03 x 1.85 cm.

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. The left kidney measured 7.72 cm.

### Adrenal Glands

The right adrenal gland was uniform and measured 1.83 x 0.86 cm at the cranial pole and 0.43 cm at the caudal pole. The left adrenal gland was slightly heterogenous and irregular at the cranial pole measuring 1.05 cm and 0.55 cm at the caudal pole and 2.19 cm in length.

### Spleen

The **spleen** was enlarged with scalloping contour with micronodular changes. There is a strong concern for infiltrative disease.



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## Liver

The **liver** was enlarged with increased portal markings. The contour was swollen and irregular. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.

## 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.

## Pancreas

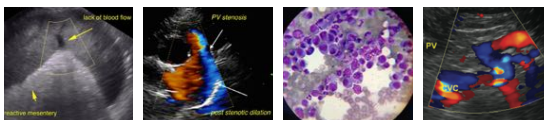
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

## Free Abdomen

Slight free fluid was noted between the spleen and liver.

## ULTRASONOGRAPHIC EXAMINATION OF THE THORAX

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. Undifferentiated, hypoechoic coalescing masses were noted in the cranial mediastinum. This was visible from the right and left approaches. Some cystic component was also present. The masses measured up to 5.7 cm and is likely owing to a cluster of lymph nodes.



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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			1.0	1.03	45	90	NM
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	80	1.4	1.06	33.4 lbs	2.94	2.6	

### ULTRASONOGRAPHIC FINDINGS

Splenohepatomegaly. Strong concern for infiltrative disease/round cell neoplasia.

Cranial mediastinal masses, consistent with round cell neoplasia.

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### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the cranial mediastinum, spleen and liver should be diagnostic. This is likely round cell neoplasia. Prognosis is very guarded depending on definitive cytology and potential responsiveness to chemotherapy.

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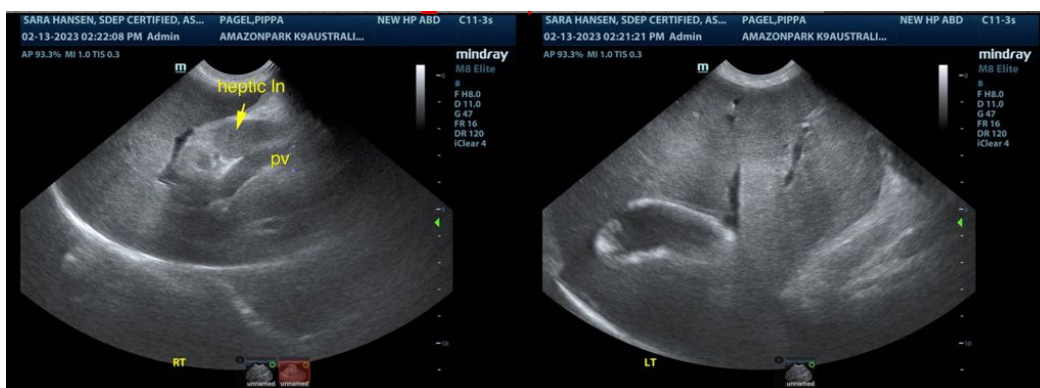
Dr. Heyward

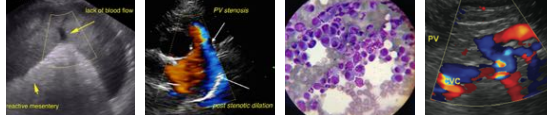
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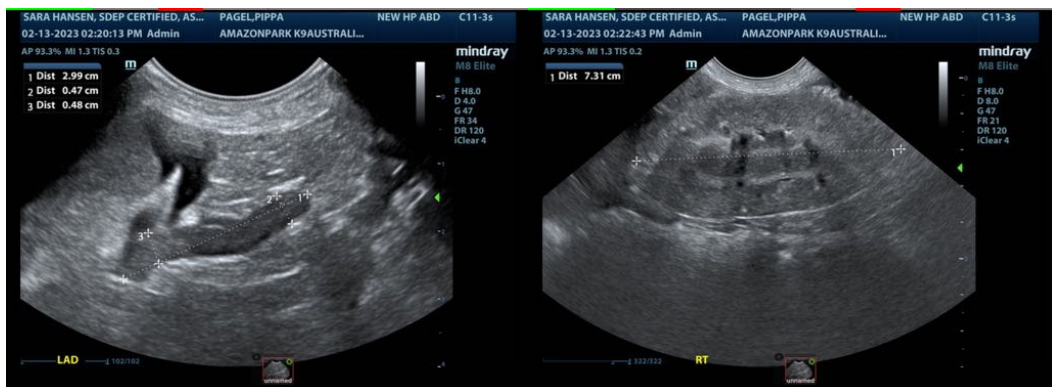
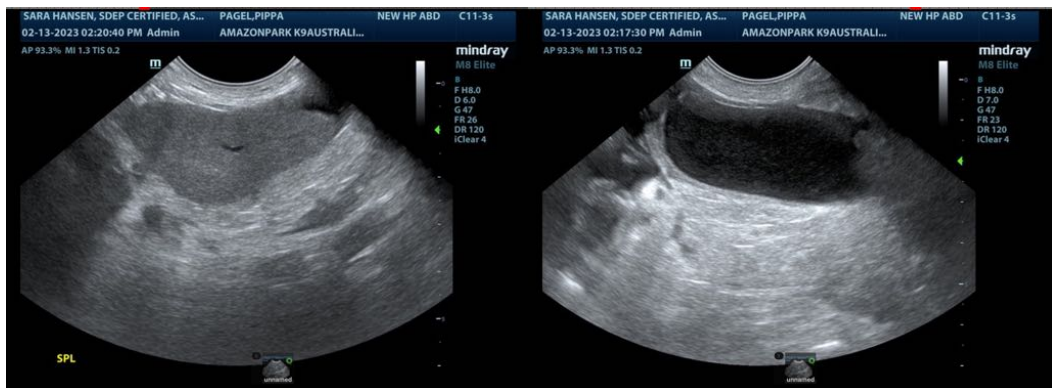
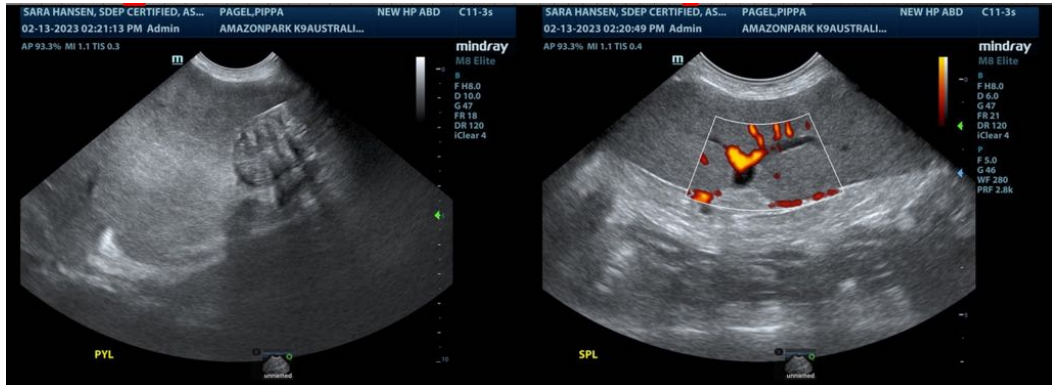
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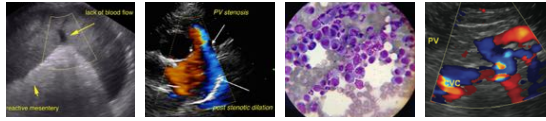
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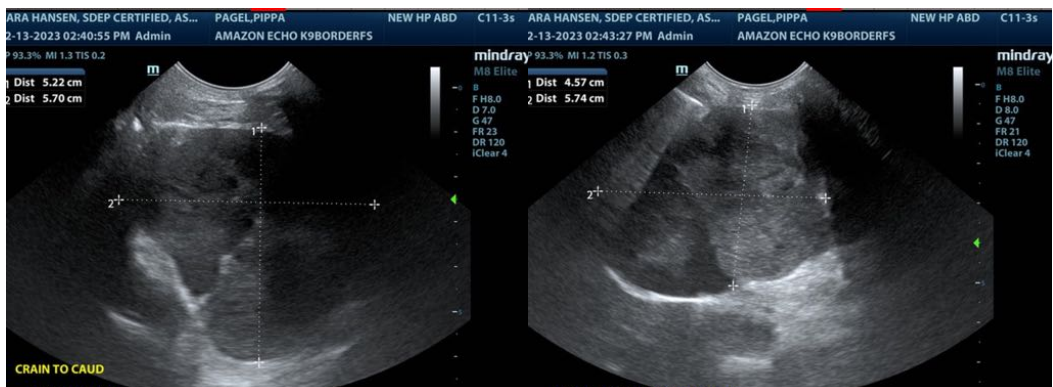
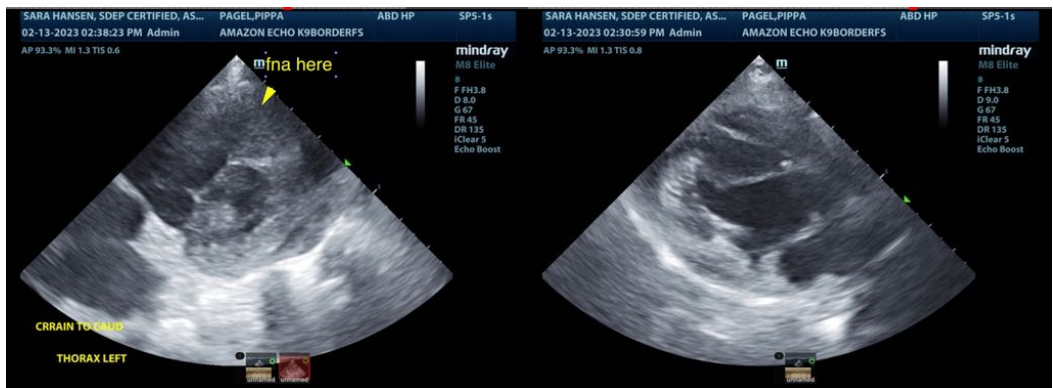
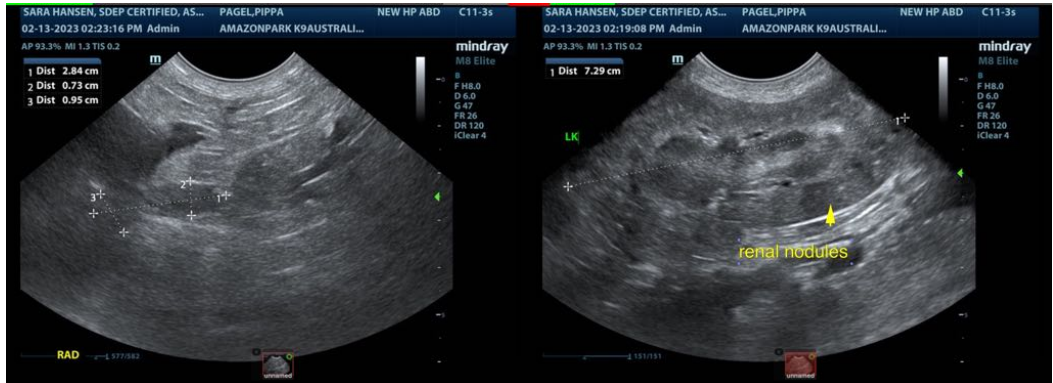
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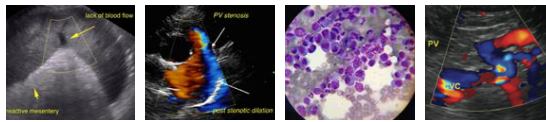
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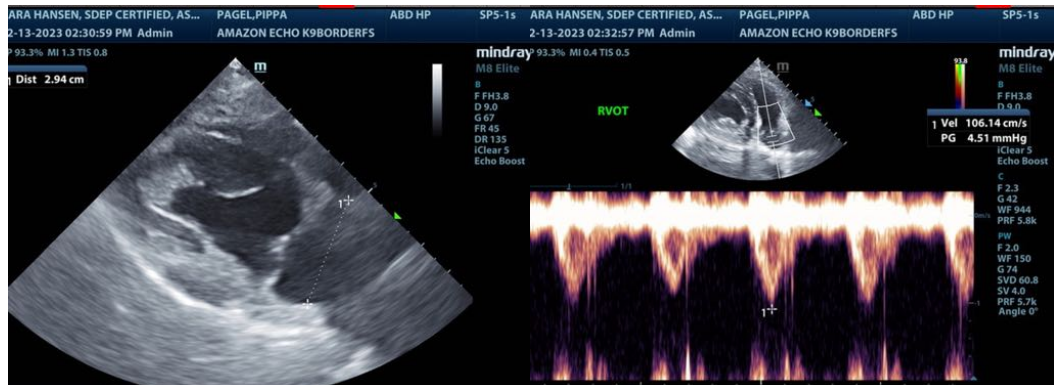
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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