

## PATIENT PRESENTING CLINICAL SIGNS

Chaos Blaydoe

History: Pt presented on 12-4-22 w/ reported increased respiratory efforts and cough. Heart medication started. Returned 12-18-22, reports breathing hasn't improved - heart rate slightly increased. CBC/Chem and radiographs performed

## SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: ALP - 182, no other abnormalities with in the CBC or Chem Heart Rate and Respiratory Rates HR 134; RR 42 Blood Pressure Measurements None performed Current Medications Furosemide 20 PO q 24 hours

## BREED

Pitbull Cross

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated severe volume overload in all four chambers with tachyarrhythmia, mitral and tricuspid insufficiency. Trace pericardial effusion was also noted. Contractility was non-compensatory for valvular disease, which is consistent with myocardial insufficiency. Tachyarrhythmia was noted.

## SEX

Neutered male

## AGE

10 years

## WEIGHT

71.4 lbs

## INTERPRETED BY

Eric Lindquist, DMV,  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Sara Hansen

## HOSPITAL NAME

Paws AH

## REFERRING VET

Dr. Johnson

## DATE

12/27/22

## Invoice

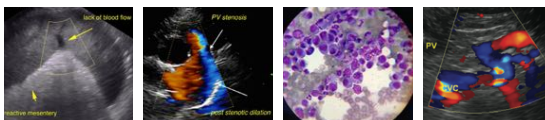
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CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.0		> 3.0	2.8	39	68	0.26
CANINE CARDIAC PARAMETERS	HR (BPM)	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	BELOW	BELOW	BELOW	BELOW
PATIENT	130-150	1.2	0.8	71.4 ;bs	8.77	6.63	

## 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.



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The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 6.4 cm. The right kidney measured 6.47 cm.

**Adrenal Glands**

The left **adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.64 x 0.63 cm at the caudal pole and 0.65 cm at the cranial pole. The region of the right adrenal gland was unremarkable.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**Liver**

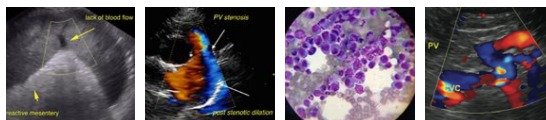
The **hepatic** parenchyma was uniform. Passive congestion was noted with dilated hepatic veins and secondary ascites. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident.

**Gastrointestinal**

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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.



**PATIENT** *Free Abdomen*

Chaos Blaydoe A moderate amount of free fluid was noted in the abdomen.

**SPECIES** **ULTRASONOGRAPHIC FINDINGS**

Canine Ascites owing to passive congestion.

**BREED** Age related abdominal changes.

Pitbull Cross DCM parameters are not present; therefore, this is left and right sided failure owing to mitral and tricuspid insufficiency with secondary myocardial insufficiency.

**SEX** Stage D1 valvular disease.

Neutered male

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**AGE** I recommend cage rest with Quadrotherapy with Pimobendan at 0.3 mg/kg b.i.d., Lasix at 2-4 mg/kg b.i.d., Spironolactone at 1-2 mg/kg b.i.d. and ace inhibitor at 0.5 mg/kg s.i.d. progressing to b.i.d. STAT EKG is indicated. Sildenafil can be considered at 1 mg/kg b.i.d. up titrating over the next 2 weeks to 0.5 mg/kg b.i.d. The patient is at high risk for sudden death. 24 hour cardiology care is ideal. Recheck echocardiogram in 10-14 days to refine therapeutic protocol assuming the patient is able to stabilize.

**WEIGHT** Oxygen therapy and Torbutrol or similar opioid can be considered to calm if necessary to reduce oxygen necessity.

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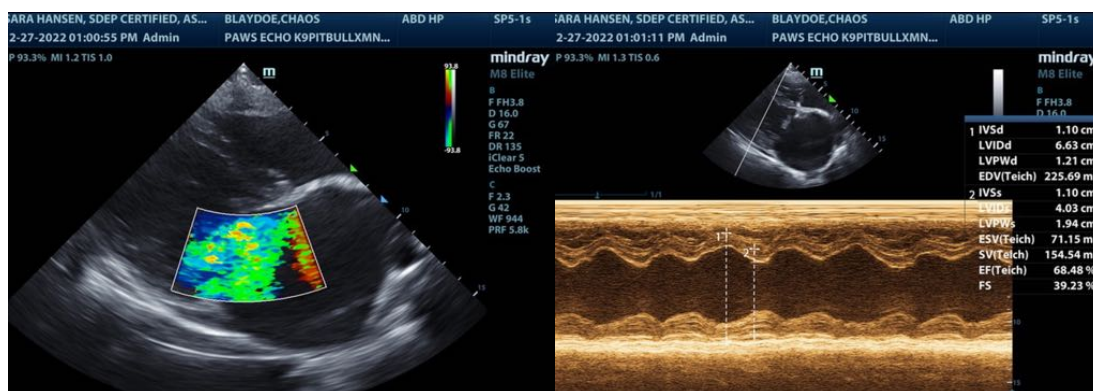
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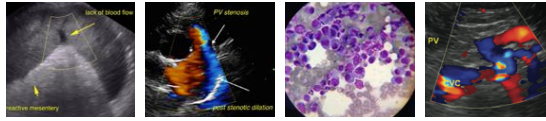
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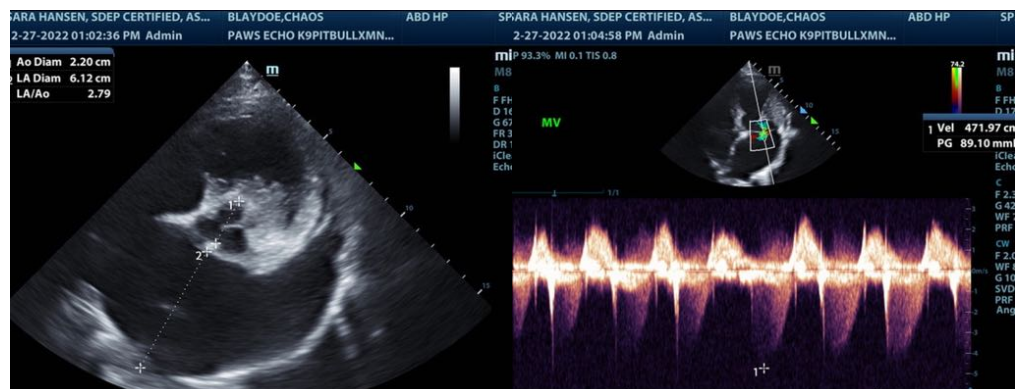
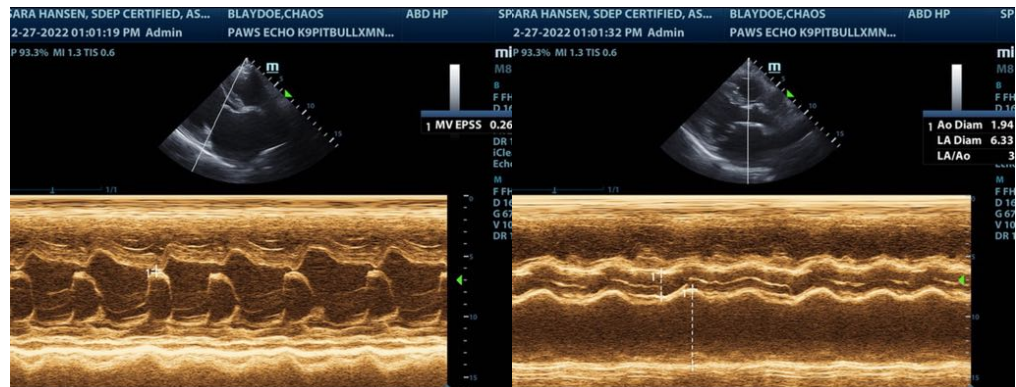
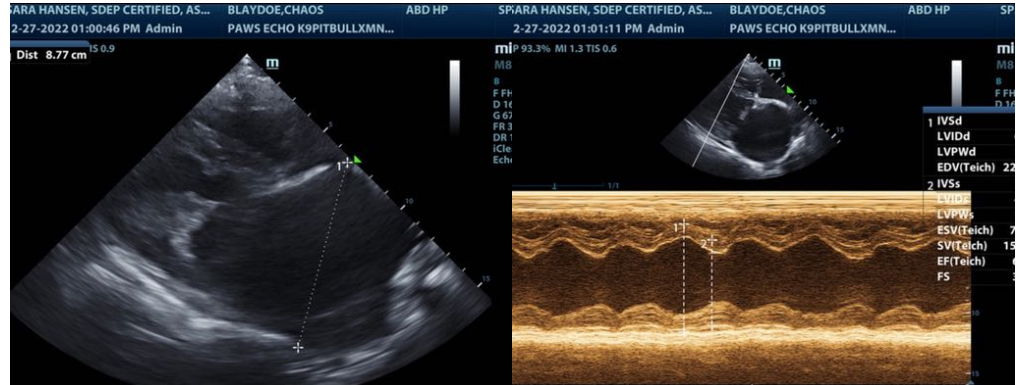
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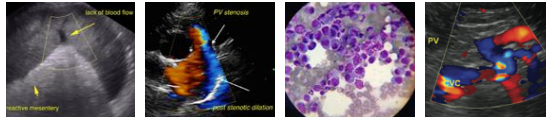
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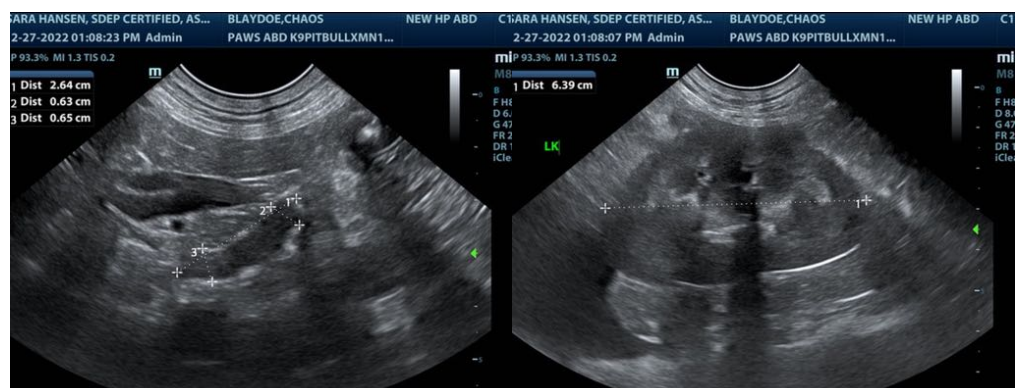
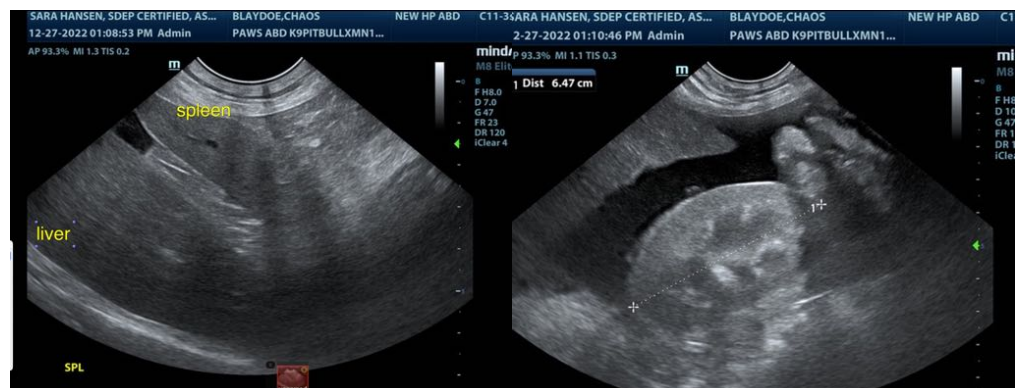
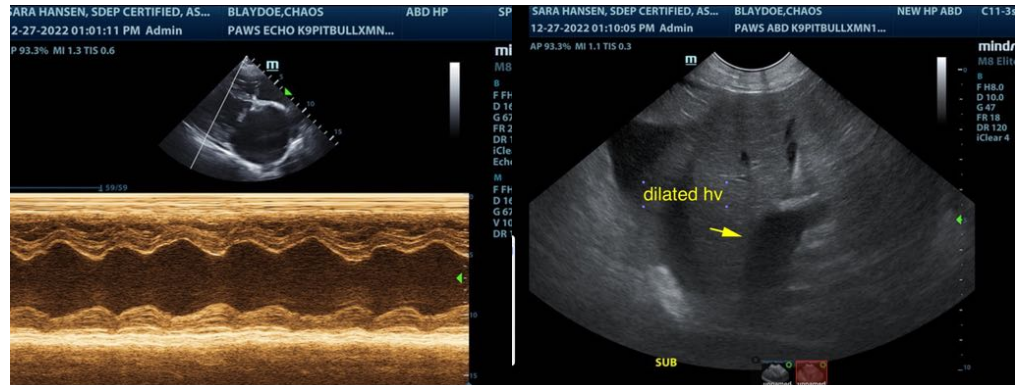
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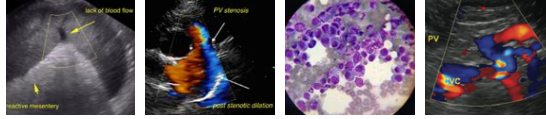
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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Eric.Lindquist@SonoPath.com

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