



## PATIENT

Jinx Strauss

## SPECIES

Feline

## BREED

DSH

## SEX

Feline

## AGE

7 Months

## WEIGHT

7 Pounds

## PRESENTING CLINICAL SIGNS

History: Patient presented for blood-tinged vomiting for 48hrs; on exam temp 103.8 - grade 2-3/6 L apical heart murmur. No current meds.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
<b>NORMAL PARAMETER</b>	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
<b>PATIENT</b>	--	260	0.54	1.45	0.54	51	86
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
<b>NORMAL PARAMETER</b>	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
<b>PATIENT</b>	--	1.2	--	1.89	1.00	NM	
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Andover AH

## REFERRING VET

Dr. Bihlear

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## DATE

1/9/23

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The mitral valve was thickened with poor apposition with clubbed tips to the leaflets, consistent with primary dysplasia, compensated at this time. Mitral insufficiency was noted (5.0 m/s). The **left ventricle** presented normal 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 and angles 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 and kinetics. 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 or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

## 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 were noted. Ureteral papillae were normal.



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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 right kidney measured 3.5 cm. The left kidney measured 3.19 cm.

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**Adrenal Glands**

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The **right 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 right adrenal gland measured 0.3 cm. The left adrenal gland measured 0.29 cm.

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The **left adrenal gland** revealed no evident pathology.

**Spleen**

**AGE**

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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 were noted.

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**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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**Gastrointestinal**

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Examination of the **gastrointestinal tract** revealed an unremarkable stomach and small intestine regarding structure. There were minor areas of luminal fluid noted. There was no evidence of obstructive pattern. Curvilinear patterns were retained throughout the gastrointestinal tract. Areas of hyperperistalsis were noted. This is consistent with response to irritation. The colon was fluid filled in this patient.

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**Pancreas**

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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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**Free Abdomen**

The mesenteric **lymph nodes** presented normal length to width ratio with slight, swollen contour. There was no loss of parenchymal detail. This is most consistent with reactive lymphadenitis or lymphatic hyperplasia.

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**ULTRASONOGRAPHIC FINDINGS**



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- Primary mitral valve dysplasia, compensated at this time
- Gastroenteritis presentation with reactive mesenteric lymph nodes

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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No overt contraindication to anesthetic procedure if necessary, however, proactive antibiotic therapy to avoid potential endocarditis may be appropriate. Treatment for enterotoxins, parasites and dietary indiscretion/dietary intolerance all indicated. No overt contraindication to fluid therapy. If clinical signs persist, ultrasound guided FNA of the mesenteric lymph nodes with cytology and culture is indicated. Enterotoxins are likely playing a role. Salmonella is a possibility, if the patient is a hunter.

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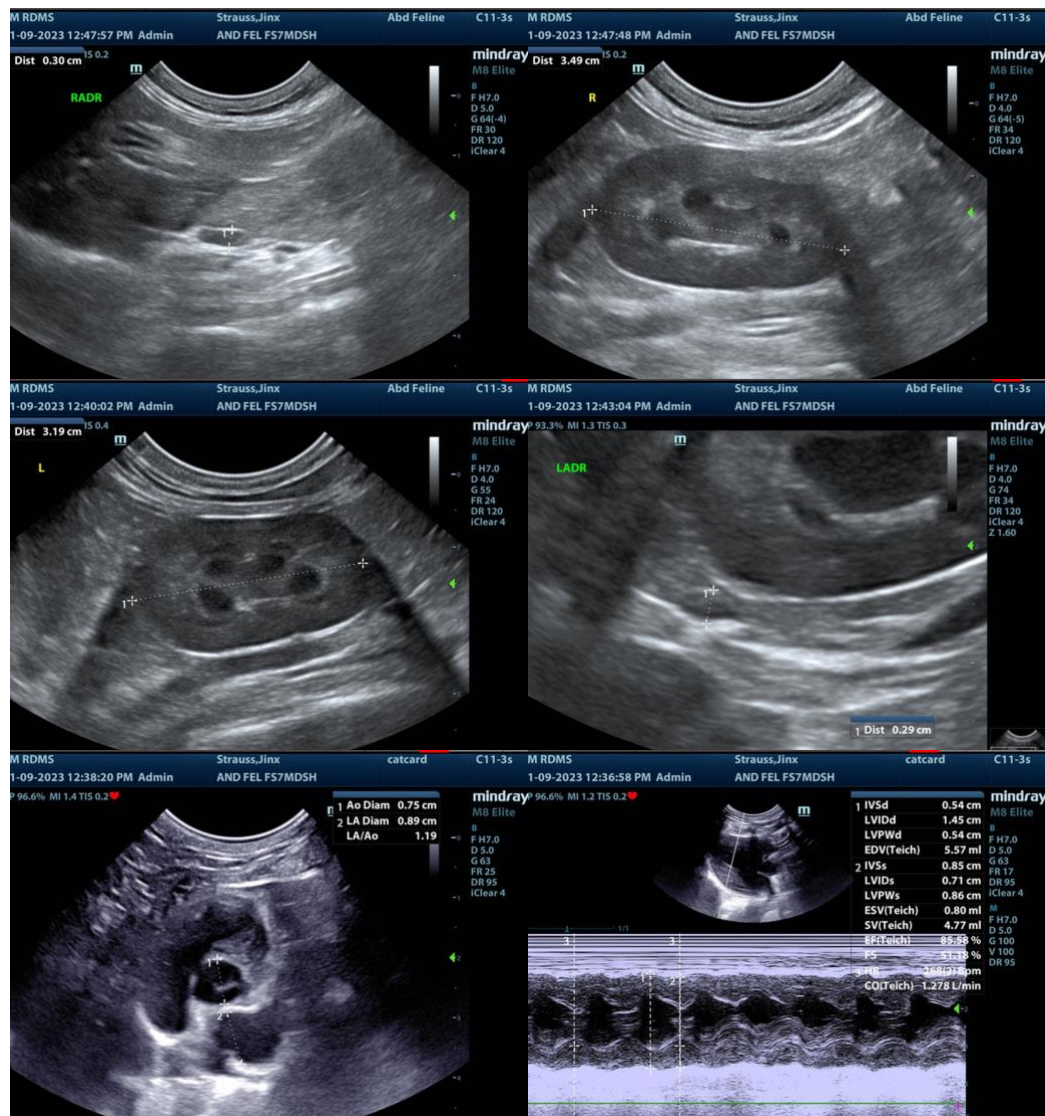
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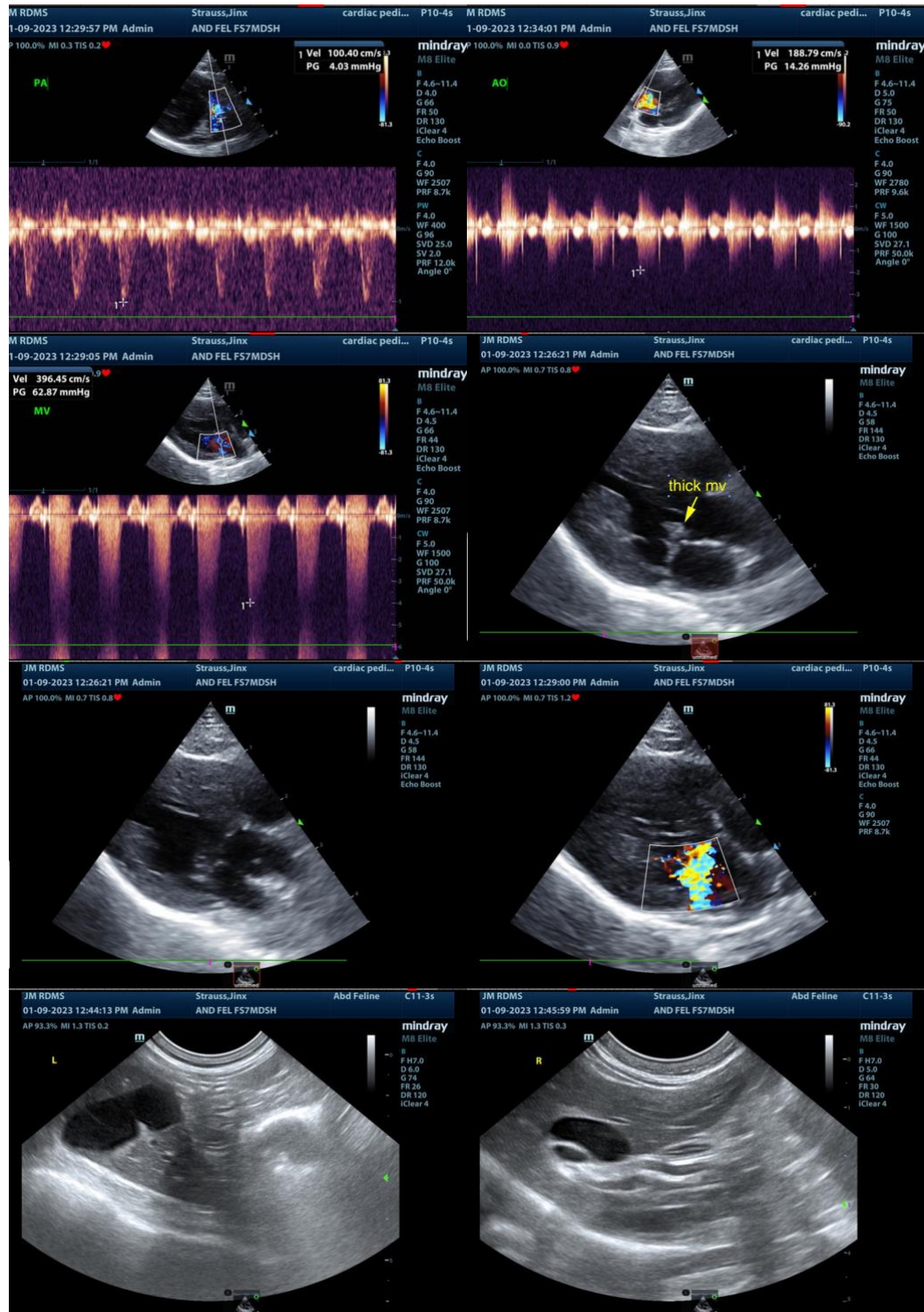
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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