



PATIENT

Po Fyfe

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

15 Years

WEIGHT

8.39 kg

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Sarah Barthelmy

HOSPITAL NAME

Glamorgan AC

REFERRING VET

Dr. Macaulay

INVOICE

43628

DATE

6/30/23

PRESENTING CLINICAL SIGNS

Developed ascites about 1 year ago. It was drained and abdominal ultrasound performed. No echo at that time. Ascites has continued to develop and been drained but has now become more dramatic.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		NM	0.88	1.3	1.0	45	81
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/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	>4.0	3.0	2.75		0.54	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							

Cardiac Presentation

The cardiac presentation presented severe volume overload in the left and right atria with concentric left ventricular hypertrophy. Mitral insufficiency noted. Tricuspid insufficiency noted at 1.80. Velocity is likely underestimated, as left and right-sided failure are present. Pericardial effusion noted owing to left-side failure. Pleural effusion also noted.

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.

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 this age patient. Medullary structure differed distinctly from that of the cortex. Pelvic and corticomedullary mineralization noted in both kidneys. The left kidney measured 3.53 cm with slight pyelectasia noted. The right kidney measured 3.77 cm.

Adrenal Glands

The regions of the **adrenal glands** were unremarkable.



PATIENT *Spleen*

Po Fyfe
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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The **liver** was enlarged, parenchyma was uniform. Dilated hepatic veins noted. The gallbladder presented a minor amount of dependent debris.

SEX *Gastrointestinal*

Neutered Male
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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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

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Free Abdomen

Large amount of ascites noted.

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ULTRASONOGRAPHIC FINDINGS

- End stage hypertrophic cardiomyopathy phenotype with left- and right-sided failure
- Enlarged liver with dilated hepatic veins
- Large amount of ascites owing to passive congestion
- Moderate degenerative renal changes with mineralization and pyelectasia
- Age related pancreatic changes

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommend cage rest, oxygen therapy, heat support to maintain body temperature >98.0, Lasix at 12.5 mg BID, monitoring BUN, creatinine, USG, blood pressures, and hydration. Plavix therapy also indicated. Pimobendan off-label at 0.3 mg/kg BID indicated. ACE inhibitor warranted at 0.5 mg/kg SID. However, this patient is at high risk for sudden death. Nutraceuticals would be indicated. Recheck echocardiogram if the patient survives this immediate episode over the next 5-10 days depending upon clinical progression. Prognosis is very guarded to poor.

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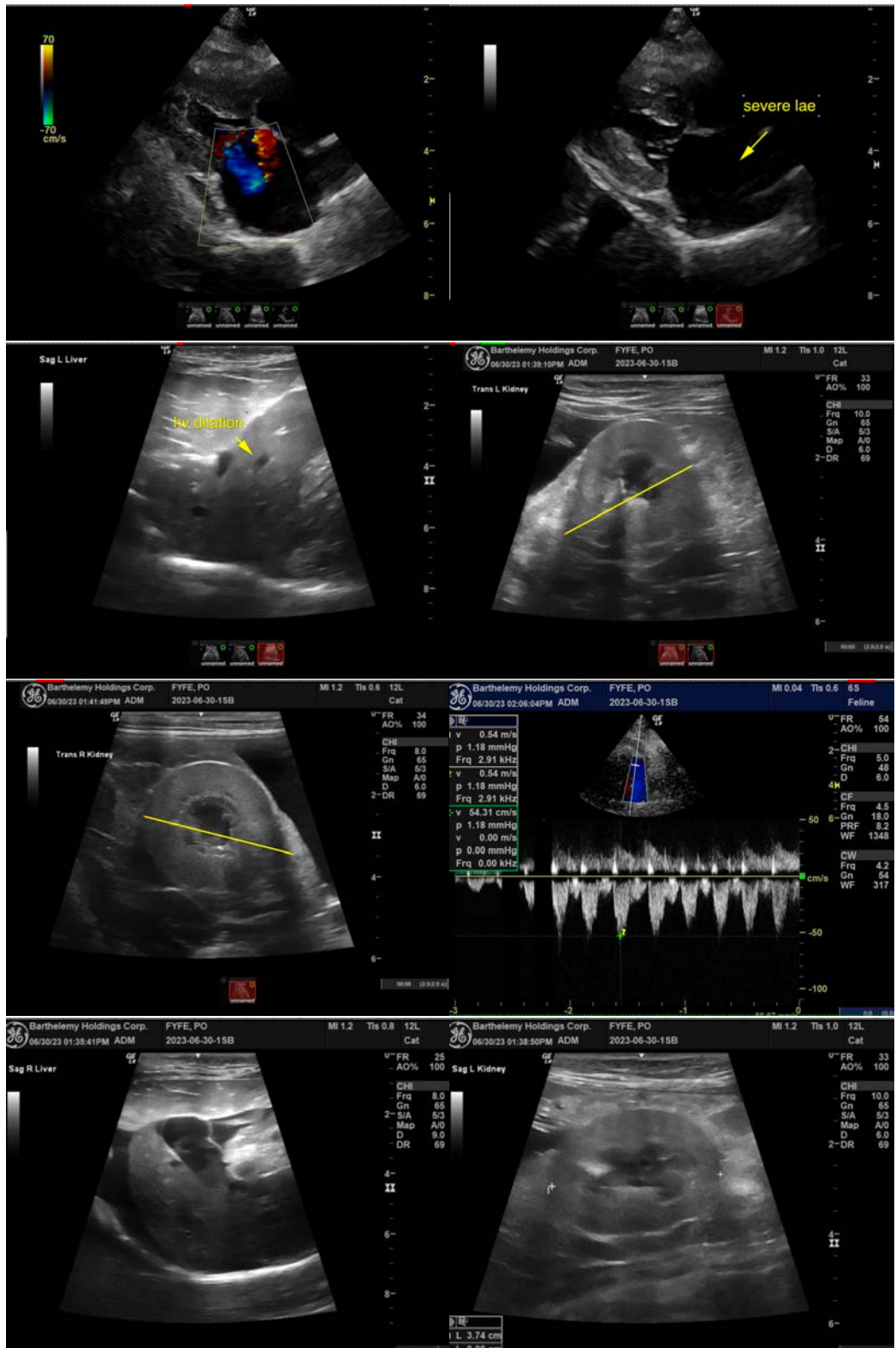
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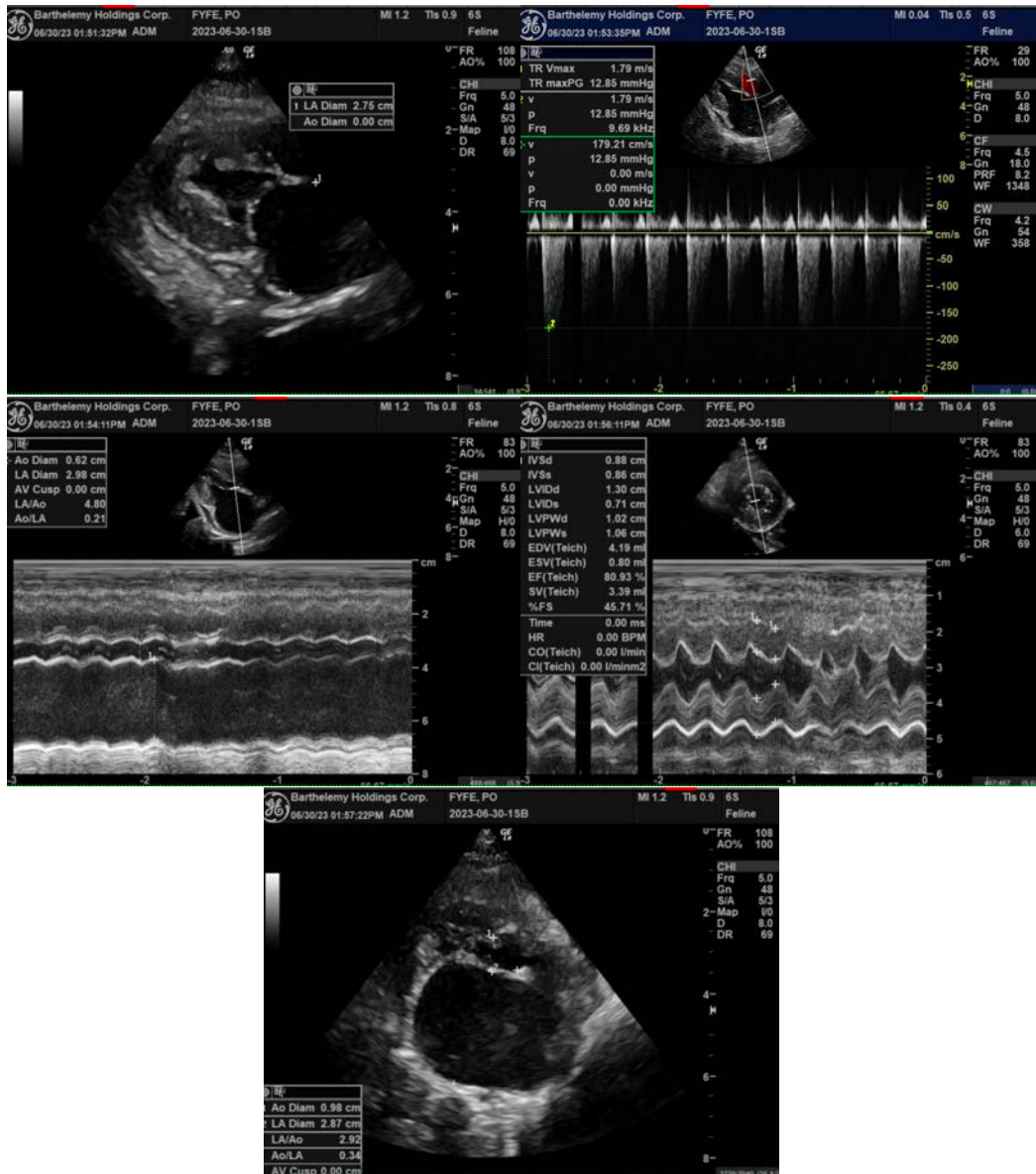
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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