



PATIENT PRESENTING CLINICAL SIGNS

Malina Torrao

History: respiratory distress, pleural effusion; hx of hyperthyroidism . 115 ml transudate-like fluid aspirated from thorax. not on any meds

SPECIES

Abnormal PE/Chem/CBC/UA Results: GGT 191, glu 172, lymphocytes 0.53

Feline

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Domestic Shorthair

The echocardiogram in this patient presented normal septal and free wall thicknesses with hypocontractility. Volume overload was noted in the left atrium with smoke. Pericardial and pleural effusion was noted consistent with left-sided heart failure. 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).

SEX

Spayed female

AGE

15 years

WEIGHT

7.9 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Diane McFadden, RVT

HOSPITAL NAME

Newton VH

REFERRING VET

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INVOICE

42035

DATE

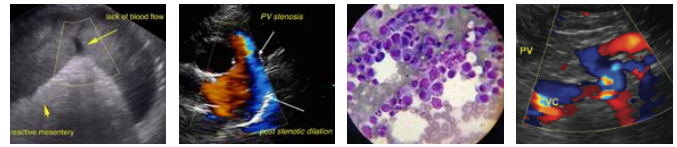
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FELINE CARDIAC PARAMETERS	BODY WEIGHT	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	7.9 lbs	238	0.43	1.5	0.39	22	48
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART 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	2.5	2.04	1.3	1.0	0.7	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							

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 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



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and no evidence of pelvic dilation was present. Slight mineralization was noted in the kidneys. The right kidney measured 3.44 cm. The left kidney measured 3.95 cm.

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Adrenal Glands

Both **adrenal glands** were 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 0.4 cm.

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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.

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Liver

The **liver** revealed multi-centric polycystic changes and remodeling with coarse architecture. This is most consistent with cystadenomas or polycystic liver disease. The gallbladder was unremarkable.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

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.

IMAGING PERFORMED BY

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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.

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ULTRASONOGRAPHIC FINDINGS

Left-sided heart failure with pleural effusion.

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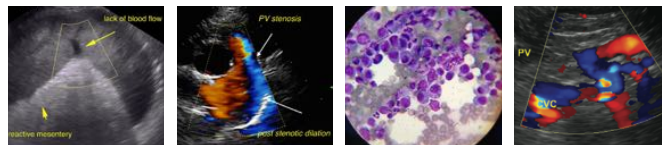
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Minor pericardial effusion.

Unclassified cardiomyopathy with left-sided failure.

Polycystic cystadenomatous liver.

Age related renal changes.



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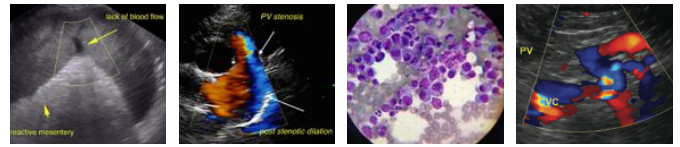
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend primary treatment for left-sided failure and heart failure in this patient with Pimobendan off label at 0.3 mg/kg b.i.d., Lasix 12.5 mg b.i.d. diminishing to 6.25 mg b.i.d. as the respiratory rate normalizes. Target respiratory rate is less than 25/minute. Ace inhibitor is indicated at 0.5 mg/kg s.i.d., Plavix therapy is also indicated. A recheck echocardiogram is recommended in 2 weeks if the patient is able to survive the current crisis. Blood pressure measurements, BUN, creatinine and body temperature should all be monitored carefully. The prognosis is very guarded.





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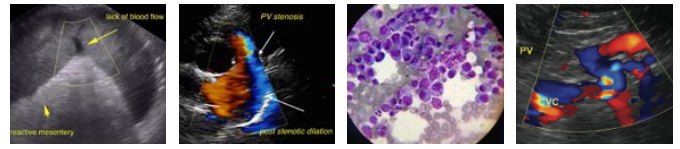
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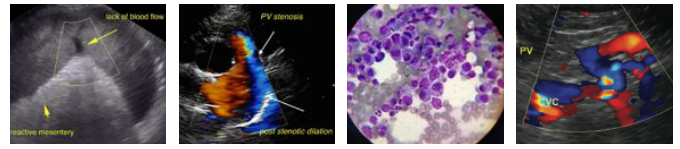
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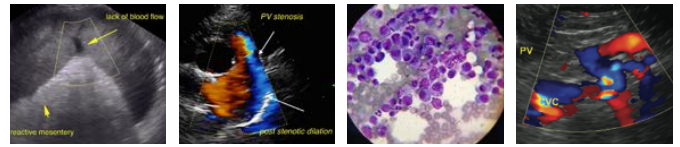
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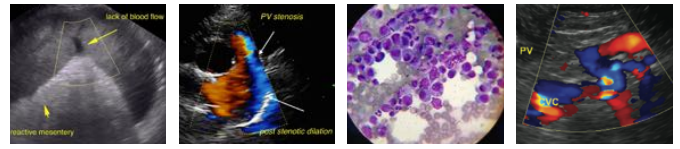
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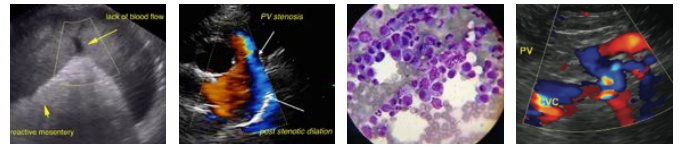
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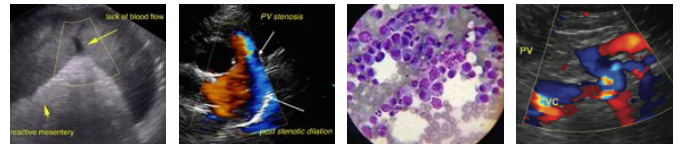
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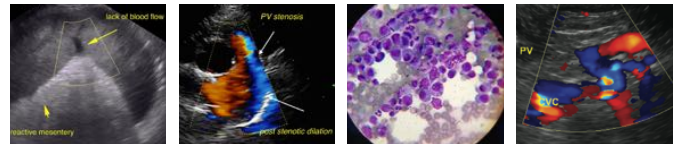
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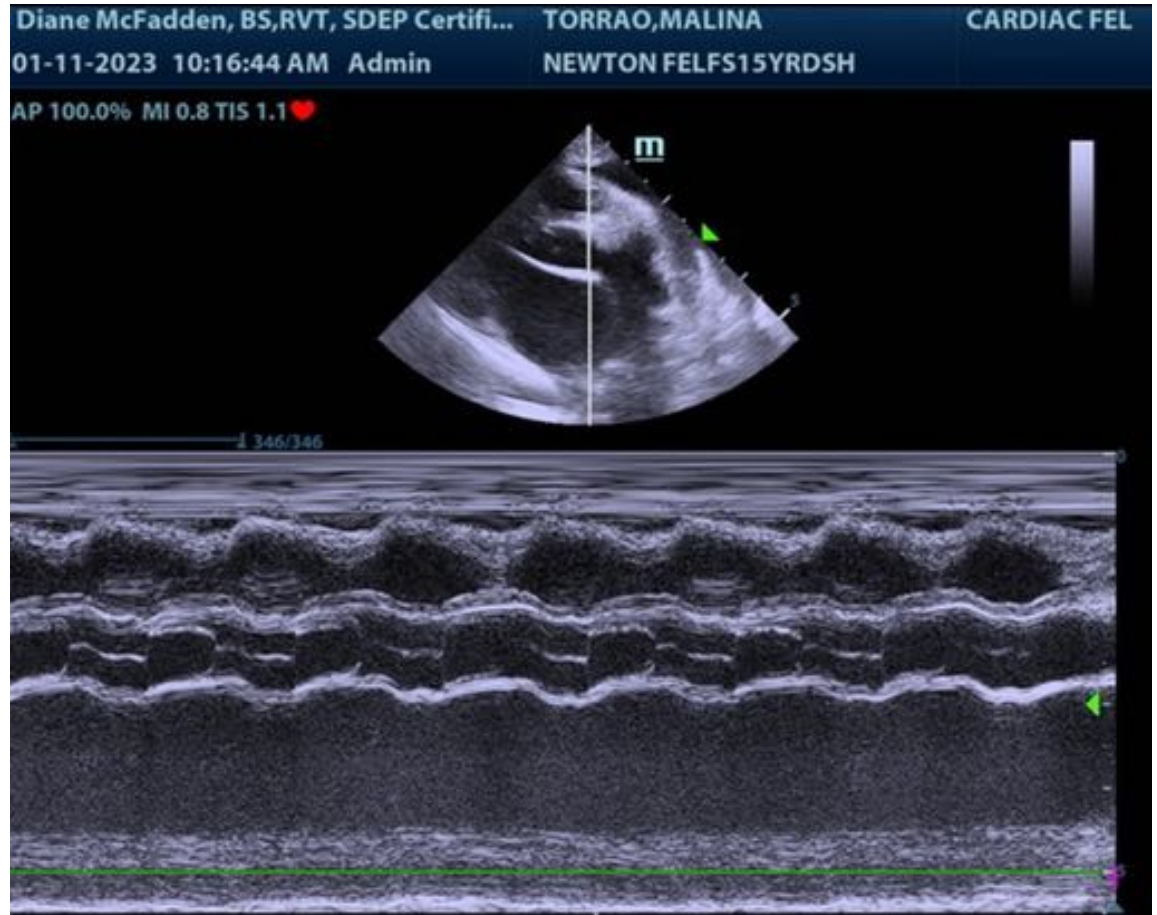
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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