



**PATIENT**

Willow Last Resort  
Rescue

**SPECIES**

Canine

**BREED**

French Bulldog X

**SEX**

Female

**AGE**

2 Years

**WEIGHT**

19 Pounds

**PRESENTING CLINICAL SIGNS**

ascites, pleural effusion, occurred in Feb pet was hospitalized in the South spontaneously resolved and testing was normal at DVM Asities recurred last 2 weeks decreased energy Tachycardia on PE Current meds none.

Abnormal PE/Chem/CBC/UA Results: CBC WNL 4dx neg Albumin 2.1

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN**

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			NM	1.1	--	--	NM
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	--	--	--		--	--	

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

Dr. Gannon

**INVOICE**

37186

**DATE**

4/27/22

**Cardiac Presentation**

The cardiac presentation revealed severe tricuspid insufficiency. Right-sided volume overload noted and right-sided heart failure. The left heart is subnormal in size and volume owing to poor venous return. 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 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 4.91 cm. The left kidney measured 3.72 cm.

**Adrenal Glands**

The adrenal glands were not visualized.

**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



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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**

Passive congestion **liver** pattern noted with secondary ascites. The liver was uniform, no evident pathology other than the passive congestion.

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**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.

**SEX**

Female

**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.

**AGE**

2 Years

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

19 Pounds

- Right-sided volume overload and right-sided heart failure
- Tricuspid insufficiency
- Subnormal left heart size
- Pleural effusion
- Passive congestion liver pattern, unremarkable abdomen otherwise

**INTERPRETED BY**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

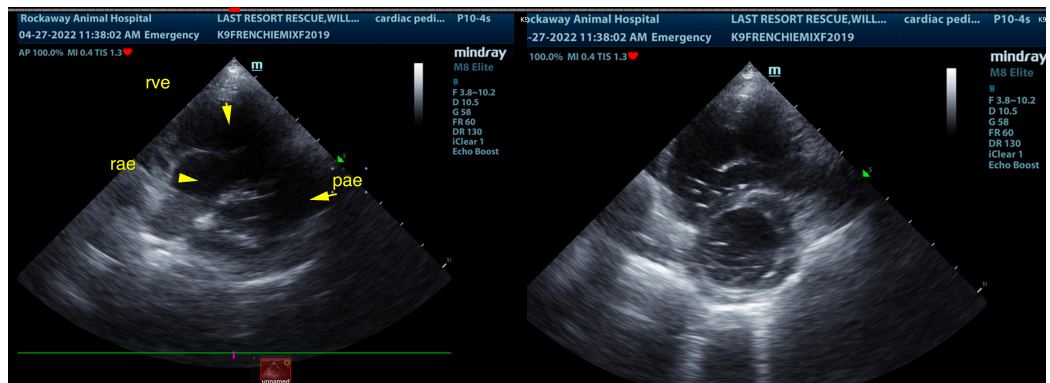
The right atrium was approximately 3 times the size of the left atrium. Exact cause is unclear, further imaging necessary. However, right-sided failure is the cause of the ascites, and likely the cause of pleural effusion. However, pleurocentesis and cytospin recommended to assess the thoracic fluid. Treatment for right-sided heart failure warranted. However, prognosis is guarded to poor. ACE inhibitor warranted at 0.5 mg/kg SID, Spironolactone at 1.2 mg/kg BID, Sildenafil 1.0 mg/kg BID. Primary lung disease with secondary right-sided failure is strong potential in this case. No visible heartworms noted in this patient. However, heartworm infestation in the deep pulmonary vasculature cannot be completely ruled out.

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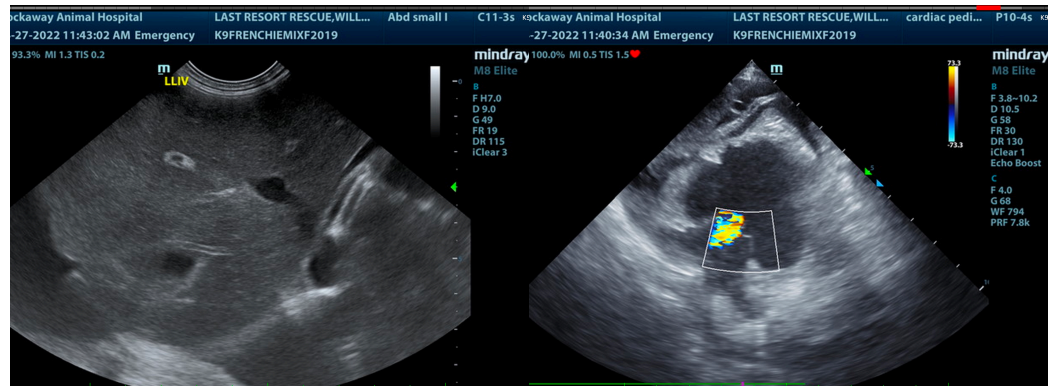
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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