



PATIENT PRESENTING CLINICAL SIGNS

Charlie Mauriello Patient presents for follow-up echo to stage progression of B2 valvular disease with enlarged left atrium and left ventricle. Current meds: Pimobendan 5 mg quad tabs BID 3/4 tab.
 Abnormal PE/Chem/CBC/UA Results: Alk. Phos. 147 (12/1/21). U/A: trace protein 1/5/22, USG 1.043.

SPECIES

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

BREED

Cavalier King Charles Spaniel

SEX

Neutered male

AGE

11 ½ years

WEIGHT

33 lbs

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swedish)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.5	1.3	1.3	1.52	40	NM	0.32
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC	(BPM)	VMAX (m/s)	MAX (m/s)	kg	2D long axis Base view	Avg; 2D and m-mode short axis	Avg; 2D and m-mode short axis
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	88	1.49	0.92	15	4.62	4.59	2.75

Adapted from June Boon, Veterinary Echocardiography, 1998
 Sisson D et al. JVIM 1991; 5: 232, and Jacobs et al. Am J Vet Res 1985; 46:1705

INTERPRETED BY

Lisa Carioto, DVM,
 DVSc, Diplomate
 ACVIM

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Ramapo Valley AH

REFERRING VET

Dr. Duhr

INVOICE

31071

DATE

6/16/22

Echocardiographic findings

Mitral valve

- Thickening and irregularity of both leaflets. Mild (posterior) to moderate (septal) myxomatous degeneration.
- Mild to moderate prolapse of both leaflets.
- Marked mitral regurgitation.
- Mild left auricular enlargement.
- Very mild rounding of the interventricular septum, i.e. left ventricular enlargement is present
- LA: Ao ratio: High normal
- LA normalized for BW (LAN = 1.83); moderate to marked enlargement
- LVIDd normalized for BW (LVIDND = 2.1); moderate to marked enlargement
- LVIDs normalized for BW (LVIDNs = 1.17); within normal limits (WNL), but high normal

Aortic valve

- No abnormalities



PATIENT	<ul style="list-style-type: none"> No aortic insufficiency
Charlie Mauriello	<i>Tricuspid valve</i>
SPECIES	<ul style="list-style-type: none"> Mild Thickening and irregularity (septal leaflet), consistent with myxomatous degeneration
Canine	<ul style="list-style-type: none"> No prolapse of posterior leaflet
BREED	<ul style="list-style-type: none"> Mild tricuspid regurgitation. No right ventricular or atrial enlargement.
Cavalier King Charles Spaniel	<i>Pulmonic valve</i>
SEX	<ul style="list-style-type: none"> No abnormalities
Neutered male	<ul style="list-style-type: none"> Trivial pulmonary insufficiency
AGE	<ul style="list-style-type: none"> Main pulmonary artery within normal limits. Pulmonary artery - bifurcation, no abnormalities.
11 ½ years	<i>Other</i>
WEIGHT	<ul style="list-style-type: none"> No signs of pericardial or pleural effusion No evidence of pulmonary edema. No obvious signs of a mass.
33 lbs	<ul style="list-style-type: none"> The endocardium and areas of the myocardium of the left ventricular free wall are hyperechoic (right parasternal, short axis view)
INTERPRETED BY	
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	
IMAGING PERFORMED BY	ULTRASONOGRAPHIC FINDINGS
Kelly Vazquez, CVT	<ul style="list-style-type: none"> Myxomatous degeneration of the mitral (moderate) and tricuspid (mild) valves, ACVIM stage B2 (advanced disease). Moderate to severe left atrial and left ventricular enlargement are present. The left ventricle is at the high end of the normal reference range in systole, suggestive of more exuberant work. Today's results have progressed compared to Charlie's previous exam. This may be due to actual progression of Charlie's disease or perhaps he had not received his medication prior to the echocardiogram.
HOSPITAL NAME	<ul style="list-style-type: none"> Spironolactone is suggested to decrease myocardial fibrosis.
Ramapo Valley AH	<ul style="list-style-type: none"> Additional medication may be required if Charlie is demonstrating other clinical signs of heart disease (see below).
REFERRING VET	
Dr. Duhr	
INVOICE	
31071	INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
DATE	Suggestions/recommendations include:
6/16/22	<ul style="list-style-type: none"> Evaluation of blood pressure



PATIENT	pimobendan (Vetmedin) 5 mg/tablet; Continue treatment at ¾ of a tablet PO every 12 hours.
Charlie Mauriello	
SPECIES	<ul style="list-style-type: none"> • spironolactone 0.5-1 mg/kg PO every 24 hours for 3 days, then every 12 hours thereafter.
Canine	
BREED	<ul style="list-style-type: none"> • Monitoring of the resting (sleeping) respiratory rate (RRR) is highly recommended once a day. The RRR should NOT EXCEED 30 breaths per minute (bpm). If the respiratory rate is greater than 30 bpm, <u>or</u> if there is a gradual increase (over a day or two) toward 30 bpm, the patient should be evaluated immediately for congestive heart failure and the appropriate treatment initiated.
Cavalier King Charles Spaniel	
SEX	<ul style="list-style-type: none"> • Other clinical signs clients should monitor for include coughing (particularly at night), fatigue, lethargy, decreased exercise tolerance (i.e., not being able to walk for as long before becoming tired, or “running out of breath” while playing, or going up and down stairs, as well as syncope (collapsing or fainting spells). Restlessness, or agitation during the night, or being unable to find a comfortable position to sleep are also very common clinical signs.
Neutered male	
AGE	<ul style="list-style-type: none"> • Moderate salt restriction is suggested (between 0.4-0.5 grams/1000 kcal of food). Monitor salt content in treats.
11 ½ years	
WEIGHT	<ul style="list-style-type: none"> • Omega-3 fatty acids may be helpful (EPA = 40 mg/kg/day and DHA = 25 mg/kg/day); gradual up-titration of the dose is suggested to decrease risk of gastrointestinal effects. However, they should not be introduced at the same time as pimobendan.
33 lbs	
INTERPRETED BY	<ul style="list-style-type: none"> • Blood work PCV/TS, renal profile, SDMA and arterial blood pressure, are recommended 10-14 days after initiation of spironolactone
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	
IMAGING PERFORMED BY	<ul style="list-style-type: none"> • Blood work, CBC, serum biochemical profile, including a SDMA, and arterial blood pressure, are suggested at least twice a year to monitor renal parameters. If cost prohibitive, a PCV/TS may be performed instead of a full CBC.
Kelly Vazquez, CVT	
HOSPITAL NAME	<ul style="list-style-type: none"> • Re-evaluation of an echocardiogram is suggested in 6 to 8 months, or sooner depending on clinical signs.
Ramapo Valley AH	

REFERRING VET

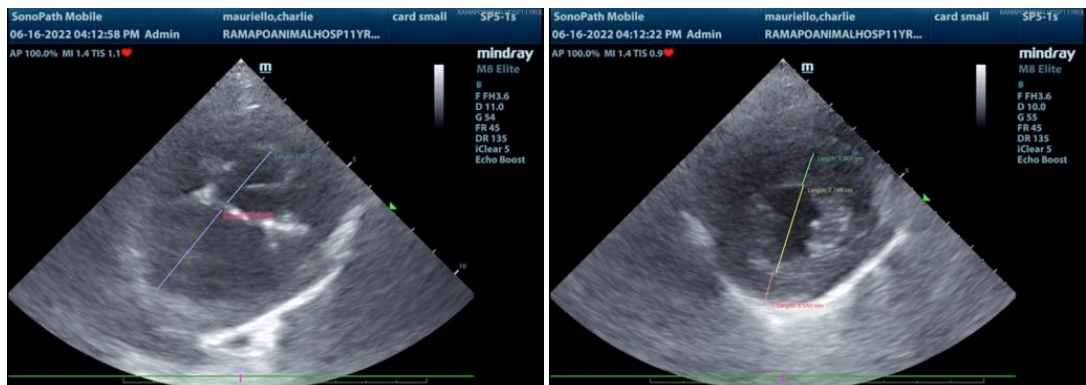
Dr. Duhr

INVOICE

31071

DATE

6/16/22





PATIENT

Charlie Mauriello

SPECIES

Canine

BREED

Cavalier King Charles Spaniel

SEX

Neutered male

AGE

11 ½ years

WEIGHT

33 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Kelly Vazquez, CVT

HOSPITAL NAME

Ramapo Valley AH

REFERRING VET

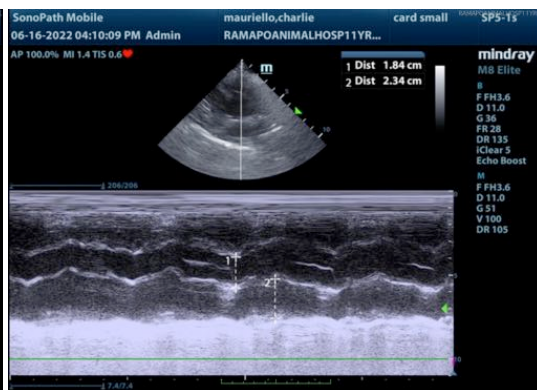
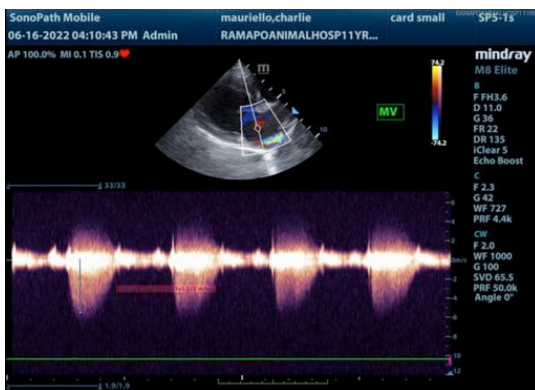
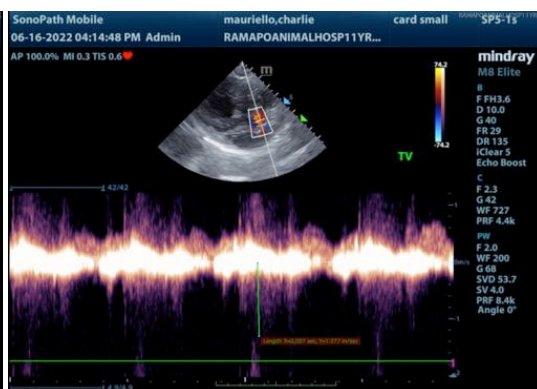
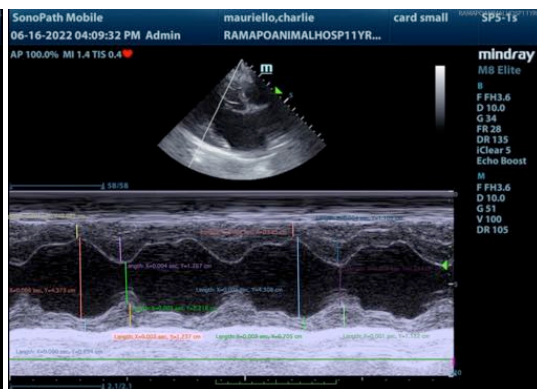
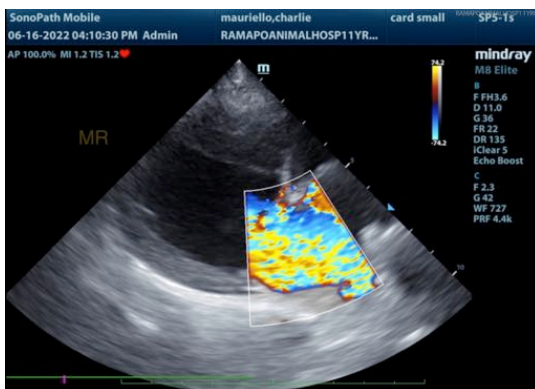
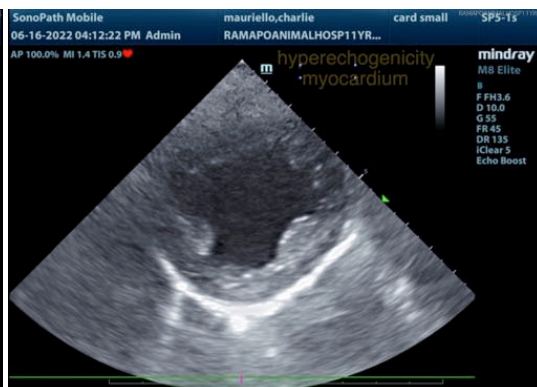
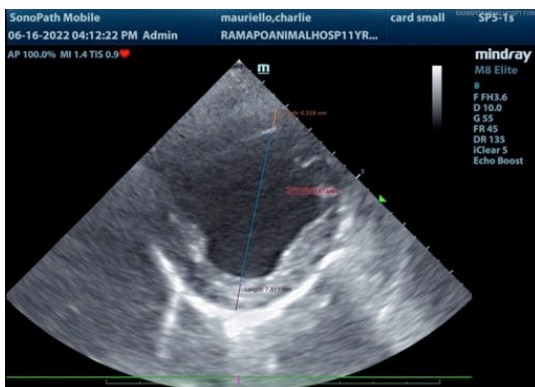
Dr. Duhr

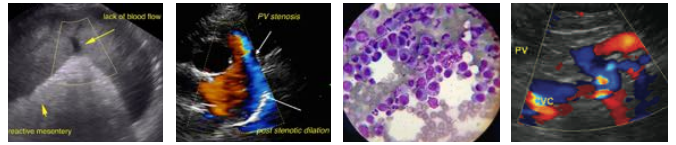
INVOICE

31071

DATE

6/16/22





PATIENT

Charlie Mauriello

SPECIES

Canine

BREED

Cavalier King
Charles Spaniel

SEX

Neutered male

AGE

11 ½ years

WEIGHT

33 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Kelly Vazquez, CVT

HOSPITAL NAME

Ramapo Valley AH

REFERRING VET

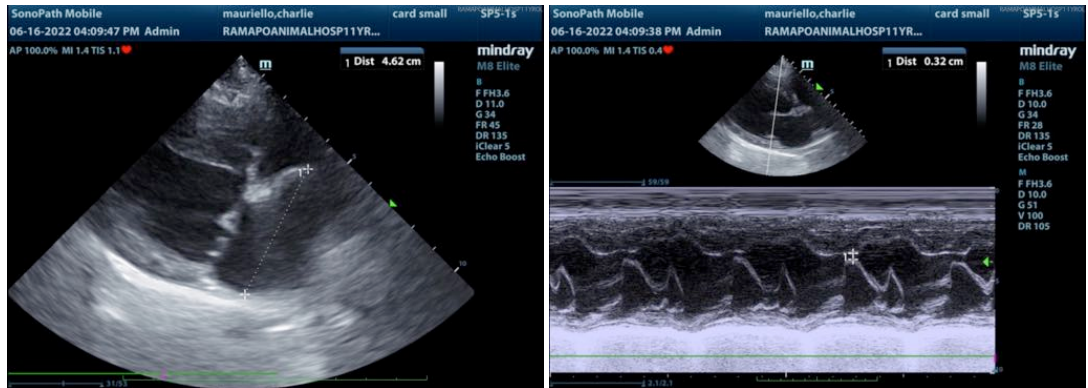
Dr. Duhr

INVOICE

31071

DATE

6/16/22



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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com