

## Data dictionary for the Cardiac Sub-study Case Report Form

Section	Question	Description
1.2A	Known Ischemic Heart Disease (IHD)	<p>Any previous self-reported or documented history (recent or remote) of an ischemic heart disease. Please respond “yes”, “no” or “not available (N/A)”. In addition, if “yes”, please indicate if the patient has received any of the following treatment(s) (select all that apply):</p> <ul style="list-style-type: none"> <li>• PCI (Percutaneous Coronary Intervention)</li> <li>• CABG (Coronary Artery Bypass Grafts)</li> <li>• Medical Management only</li> </ul>
1.2B	Known Angina	<p>Any previous self-reported or documented history (recent or remote) of angina symptoms (or anginal equivalent).</p> <p>Please respond “yes”, “no” or “not available (N/A)”.</p> <p>Anginal severity to be categorized using the Canadian Cardiovascular Society (CCS) anginal score:</p> <p>CCS 1 = Angina only with strenuous exertion (Presence of angina during strenuous, rapid, or prolonged ordinary activity (walking or climbing the stairs)</p> <p>CCS 2 = Angina with moderate exertion (Slight limitation of ordinary activities when they are performed rapidly, after meals, in cold, in wind, under emotional stress, during the first few hours after waking up, but also walking uphill, climbing more than one flight of ordinary stairs at a normal pace and in normal conditions)</p> <p>CCS 3 = Angina with mild exertion (Having difficulties walking one or two blocks or climbing one flight of stairs at normal pace and conditions)</p> <p>CCS 4 = Angina at rest.</p>
1.2C	Known CHF (Congestive Heart Failure)	<p>Any previous self-reported or documented history (recent or remote) of heart failure (HF) symptoms.</p> <p>Please respond “yes”, “no” or “not available (N/A)”</p> <p>HF symptoms to be classified using the New York Heart Association (NYHA) Score:</p>

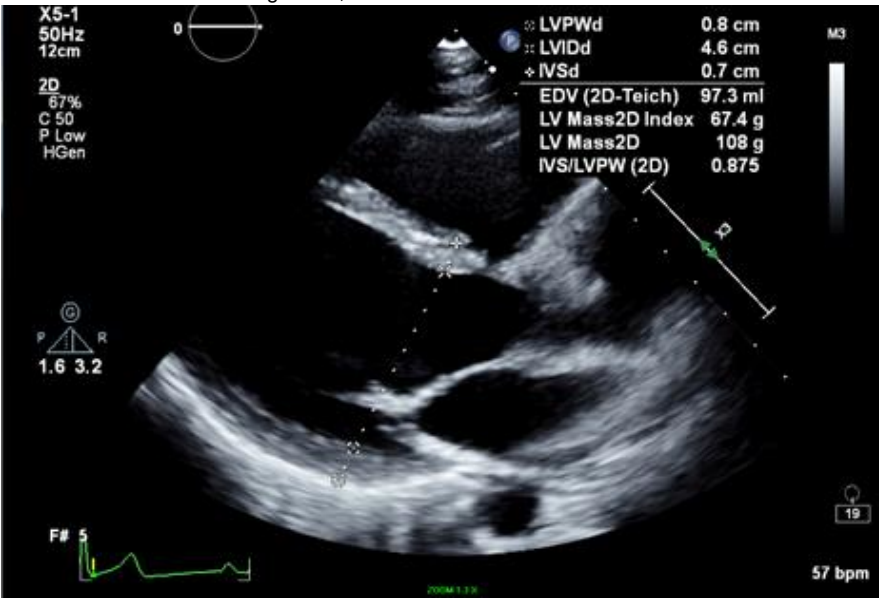
		<p>NYHA 1 = No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath).</p> <p>NYHA 2 = Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath).</p> <p>NYHA 3 = Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea.)</p> <p>NYHA 4 = Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases.</p>
1.2D	Known arrhythmia	<p>Any previous self-reported or documented history (recent or remote) of any cardiac arrhythmia. Within this section, please specify if the primary rhythm issue was atrial or ventricular (or both if that applies).</p> <p>Please respond “yes”, “no” or “not available (N/A)”</p> <p>If yes (select all that apply):</p> <ul style="list-style-type: none"> <li>● Atrial fibrillation (AF)</li> <li>● Atrial flutter (AFL)</li> <li>● Supra-ventricular tachycardia (SVT)</li> <li>● Sick sinus syndrome (SSS)</li> <li>● Advanced or Complete AV block/Complete heart block</li> <li>● Sustained VT (&gt;10 beats)</li> <li>● Ventricular fibrillation (VF)</li> <li>● Torsades de Pointe</li> </ul>
1.2E	Previously Implanted Cardiac Device	<p>Any previous self-reported or documented history (recent or remote) of any permanent cardiac device implantation.</p> <p>Please respond “yes”, “no” or “not available (N/A)”</p> <p>If “yes: (select all that apply):</p> <ul style="list-style-type: none"> <li>● Permanent Pacemaker (PPM):</li> <li>● Implanted Cardiac Defibrillator (ICD)</li> <li>● Cardiac resynchronisation therapy (CRT)</li> </ul>
1.2F	Previous cardiac transplant	<p>Any previous self-reported or documented history (recent or remote) of an orthotopic cardiac transplantation.</p> <p>Please respond “yes”, “no” or “not available (N/A)”</p>

1.2G	Mechanical circulatory support device in situ at time of being hospitalised (ie. Left ventricular assist device (LVAD))	Any current or self-reported or documented history (recent or remote) of a left ventricular assist device (LVAD) implantation.  Please respond “yes”, “no” or “not available (N/A)”
1.2H	Congenital heart disease	Any previous self-reported or documented history of congenital heart defect that has or has not undergone percutaneous or surgical intervention. This would include (though not limited to) atrial septal defects, ventricular septal defects, Tetralogy of Fallot, ventricular malformation, aortic coarctation, etc...)  Please respond “yes”, “no” or “not available (N/A)”
1.2I	Pre-existing Cardiomyopathy	Any previous self-reported or documented history (recent or remote) of ischemic or non-ischemic cardiomyopathy.  Please respond “yes”, “no” or “not available (N/A)”  If “yes”, specify from list: <ul style="list-style-type: none"> <li>● Dilated Cardiomyopathy (DCM) <ul style="list-style-type: none"> <li>○ Familial</li> <li>○ Idiopathic</li> </ul> </li> <li>● Hypertrophic Cardiomyopathy (HCM)</li> <li>● Ischemic Cardiomyopathy (ICM)</li> <li>● Peripartum Cardiomyopathy (PPCM)</li> <li>● Infiltrative Cardiomyopathy (Hemochromatosis, Sarcoidosis, Amyloidosis)</li> <li>● Arrhythmogenic right ventricular Cardiomyopathy (ARVC)</li> <li>● Metabolic Cardiomyopathy (Fabry’s)Post-infectious cardiomyopathy (Chagas)</li> <li>● Others</li> </ul>
1.2J	Presence of Prosthetic valve	Any previous self-reported or documented history (recent or remote) of any prosthetic valve implantation/replacement  Please respond “yes”, “no” or “not available (N/A)”  a) If “yes”, specify from list, please specify the location of prosthetic valve <ul style="list-style-type: none"> <li>● Aorta</li> <li>● Tricuspid</li> </ul>

		<ul style="list-style-type: none"> <li>• Mitral</li> <li>• Pulmonary</li> </ul> <p>b) If “yes”, specify from list, valve type currently in situ (if both types present at present select both)</p> <ul style="list-style-type: none"> <li>• Mechanical</li> <li>• Bioprosthetic</li> </ul>
1.3	Has the patient been diagnosed with an Acute Coronary Syndrome (ACS) in the last six (6) months	<p>Any previous self-reported or documented history of either a ST-elevation myocardial infarction (STEMI) or non-ST-elevation myocardial infarction (NSTEMI) in the preceding 6 months prior to admission. Unstable angina is not included in this study definition.</p> <p>Please respond “yes”, “no” or “not available (N/A)”</p>
2.1a	AMI occurring during this illness (may be at another centre if patient subsequently transferred)	<p>STEMI: ST elevation MI NSTEMI: non-ST elevation MI</p> <p>If yes - angiogram performed - select either Invasive arterial angiography or CT coronary angiogram</p>
2.1b	Date of MI	enter date in format DD/MM/YYYY
2.1c	Intervention for AMI (only if yes to 2.1a)	<p>Please select yes to all options that apply or not available. If coronary angiography was performed, please specify whether progressed to PCI: percutaneous coronary intervention – ie. coronary stent or balloon angioplasty CABG refers to a surgical coronary bypass grafting. Thrombolytic refers to use of any appropriate medication to lyse coronary thrombus ie. streptokinase/alteplase etc Antiplatelet therapy refers to aspirin, clopidogrel, ticagrelor etc not to NSAIDs used for pain alone such as ibuprofen</p>
2.2a	Diagnosis of Myocarditis	<p>If ECHO diagnosis made, please circle yes and ensure details of the ECHO are documented in section 4.1 If alternative scans were performed, please select from the dropdown: MRI/MPS/CT If Myocardial Biopsy performed, please indicate whether SARS-CoV2 was detected? If Biomarker evidence corroborated myocardial injury -select the parameter tested at time diagnosis was made</p>

2.2b	Date of Diagnosis of Myocarditis (if yes to 2.2a)	Only enter date in format DD/MM/YYYY
2.2c	Diagnosis of Takotsubo Cardiomyopathy	Diagnosis made by a cardiologist reviewing echocardiographic images  Ensure that the data from the Echo is completed in section 4.1
2.2d	Date of Diagnosis of Takotsubo Cardiomyopathy (only if yes to 2.2c)	Only enter date in format DD/MM/YYYY
2.3a	New Cardiac Arrhythmia requiring Treatment (beyond electrolyte replacement)	Please select arrhythmia from the list provided : must have been sufficiently severe to have required pharmacological therapy (e.g. Amiodarone) ± electrical treatment - cardioversion ± pacing - temporary or permanent
2.3b	Date of onset cardiac arrhythmia (only if yes to 2.3a)	Only enter date in format DD/MM/YYYY
2.3c	Management of Arrhythmia (only if yes to 2.3a)	Select as many as apply MCS- complete in section 3.1b
2.4a	Cardiac arrest	Sudden and unexpected cessation of cardiac activity with no normal breathing and no signs of circulation
2.4b	Number of cardiac arrests throughout hospitalization	Absolute number of cardiac arrests as defined in 2.4a
2.4c	Date of <b>First</b> Cardiac Arrest (only if yes to 2.4a)	Only enter date in format DD/MM/YYYY Please only provide for the <b>first Cardiac arrest</b> experienced

2.4d	Location of Cardiac arrest	Select one, best fit.
2.5a	Sustained ROSC (in relation to 2.4a)	Sustained ROSC = return of circulation persisting >20minutes as per AHA/ILCOR/ERC etc. if yes to 2.4a
2.5b	POST ROSC Management: therapies instituted after sustained return of spontaneous circulation	Hypothermia: Temperature range 32-38 Celsius degrees acceptable Note: VA-ECMO refers to ECMO initiated <b>after ROSC</b> , ECMO cannulation before ROSC equates to ECPR
2.5c	Neuroimaging performed post ROSC? (any of CT Brain/MRI/Cerebral angiography/HMPAO SPECT)	Major CNS abnormality is any significant pathology determined by reporting radiologist ie. intracerebral haemorrhage, cerebral oedema, hypoxic ischaemic brain injury
2.5d	Cerebral Performance Category	Acceptable values 1-5 or NA See link for descriptions of each category  <a href="https://www.azdhs.gov/documents/preparedness/emergency-medical-services-trauma-system/save-hearts-az-registry-education/cerebral-performance-categories-scale.pdf">https://www.azdhs.gov/documents/preparedness/emergency-medical-services-trauma-system/save-hearts-az-registry-education/cerebral-performance-categories-scale.pdf</a>
2.6	Diagnosis of Other Cardiac complications (all that apply)	Select from the list provided all that apply. In the case of 'ischaemic complication' this is a complication determined to have arisen from myocardial ischaemic ie. an ischaemic ventricular septal defect (VSD) would be included; a pre-existing VSD or a traumatic LV rupture would not.
2.7	Cardiogenic Shock diagnosed during ICU admission	Select yes or no.  Cardiogenic Shock as defined by persistent hypotension, SBP <90 mmHg or MAP <65 mmHg and at least one of the following: -Severe reduction in cardiac output/index -Adequate or elevated filling pressures -Evidence of end organ failure
2.8	Mechanical circulatory support during ICU stays (main CRF will provide ECMO data)	Was an intra-aortic balloon pump/counter-pulsation device inserted? -Insertion/explant date MM/DD/YYYY Impella device inserted? (any of 2.5, CP,5.0, LD, 5.5, RP) - Date on insertion/explant MM/DD/YYYY

3.1	Most recent Echocardiogram (echo) before index admission	This refers to the last echo performed prior to the admission for COVID-19 - this could have been several days prior to admission or up to 1 year prior.						
3.1.a	Left ventricular measures	Provide all measurements in centimetres. These measurements can be done on-cart or off-cart (ie. On the scanning machine or on a dedicated analysis software platform).						
3.1.a.i	Interventricular septal width (cm)	<p>Provide all measurements in centimetres. Measured in the parasternal long-axis view at end diastole.</p> <p><b>Normal Values</b></p> <table border="1" data-bbox="706 766 1580 917"> <thead> <tr> <th>Linear method</th> <th>Women</th> <th>Men</th> </tr> </thead> <tbody> <tr> <td>Interventricular septal width (cm)</td> <td>0.6-0.9</td> <td>0.6-1.0</td> </tr> </tbody> </table> <p>*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.</p> 	Linear method	Women	Men	Interventricular septal width (cm)	0.6-0.9	0.6-1.0
Linear method	Women	Men						
Interventricular septal width (cm)	0.6-0.9	0.6-1.0						
3.1.a.ii	Left ventricular end diastolic diameter (cm)	<p>Provide all measurements in centimetres. Measured in the parasternal long-axis view at end diastole.</p> <p><b>Normal Values</b></p> <table border="1" data-bbox="706 1791 1580 1854"> <thead> <tr> <th>Linear method</th> <th>Women</th> <th>Men</th> </tr> </thead> <tbody> <tr> <td>Left ventricular end diastolic diameter (cm)</td> <td></td> <td></td> </tr> </tbody> </table>	Linear method	Women	Men	Left ventricular end diastolic diameter (cm)		
Linear method	Women	Men						
Left ventricular end diastolic diameter (cm)								

Left ventricular end diastolic diameter (cm)

45 ± 3.6

50.2 ± 4.1

\*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.



3.1.a.iii

Posterior wall width (cm)

Provide all measurements in centimetres.

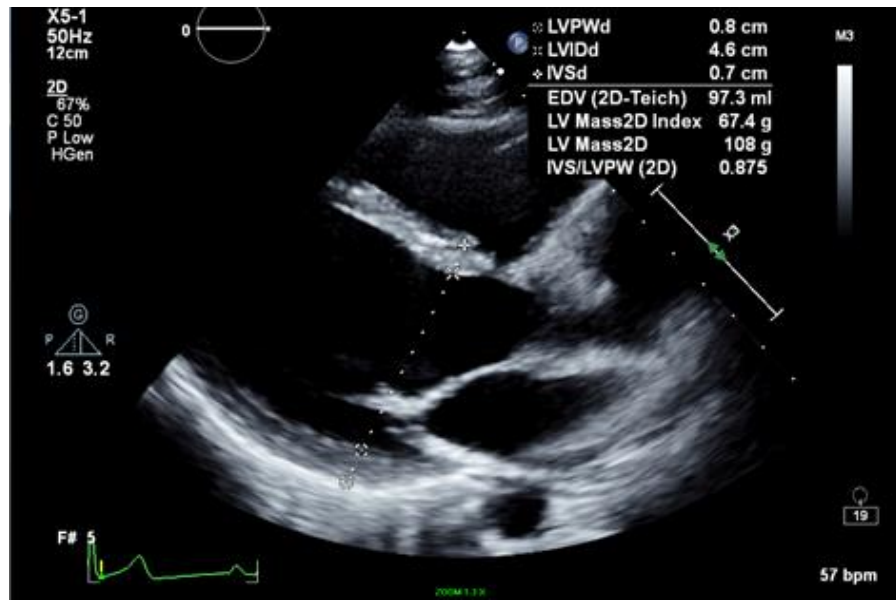
Measured in the parasternal long-axis view at end diastole

**Normal Values**

Linear method	Women	Men
Posterior wall width(cm)	0.6-0.9	0.6-1.0

\*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.





3.1.a.iv

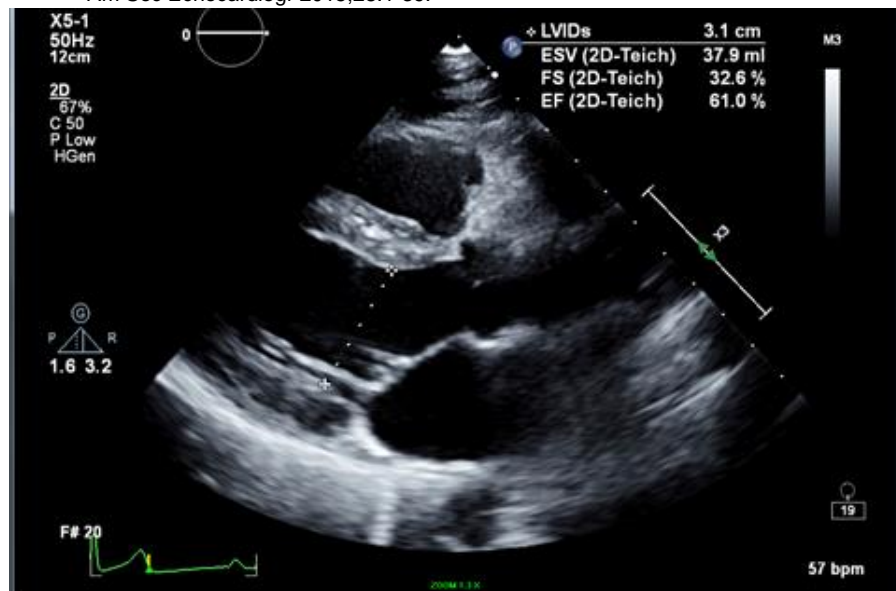
Left ventricular end systolic diameter (cm)

Provide all measurements in centimetres.  
Measured in the parasternal long-axis view at end systole

**Normal Values**

Linear method	Women	Men
Left ventricular end systolic diameter (cm)	28.2 ± 3.3	32.4 ± 3.7

\*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.



3.1.a.v

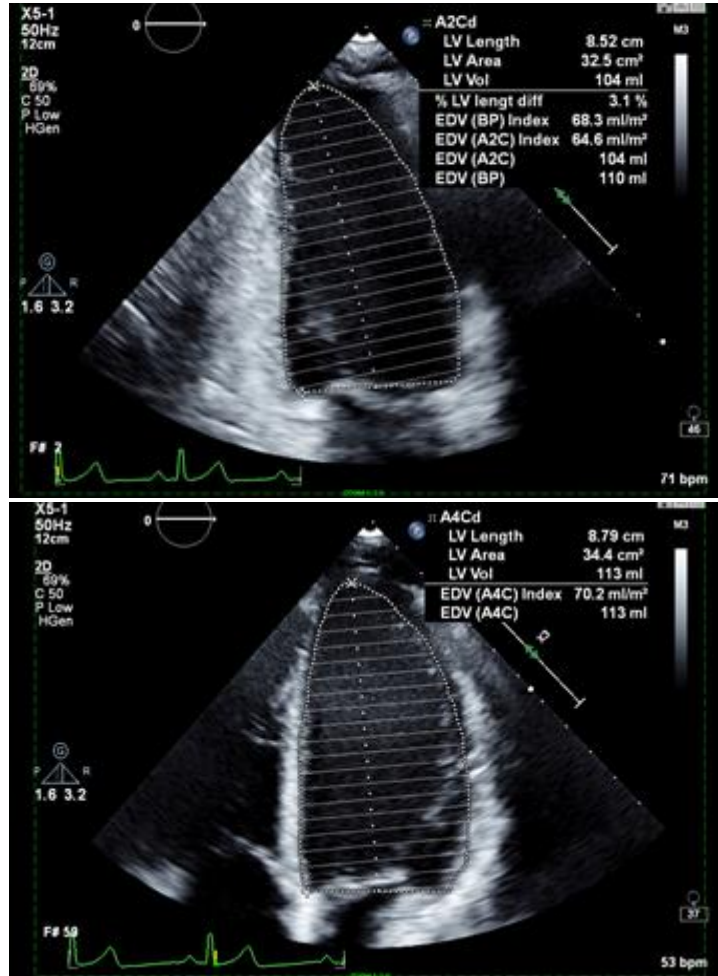
Left ventricular end diastolic volume (ml/m<sup>2</sup>) (Biplane)

Provide all measurements in millilitres/metres squared. Measured in the apical 4 chamber at end diastole and the apical 2 chamber at end diastole and averaged. This is an indexed value to body surface area (BSA- calculated with patient's height (in cm) and weight (in kg)).

**Normal Values**

Linear method	Women	Men
Indexed Left ventricular end diastolic volume (ml/m <sup>2</sup> )	29-61	34-74

\*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.



3.1.a.vi

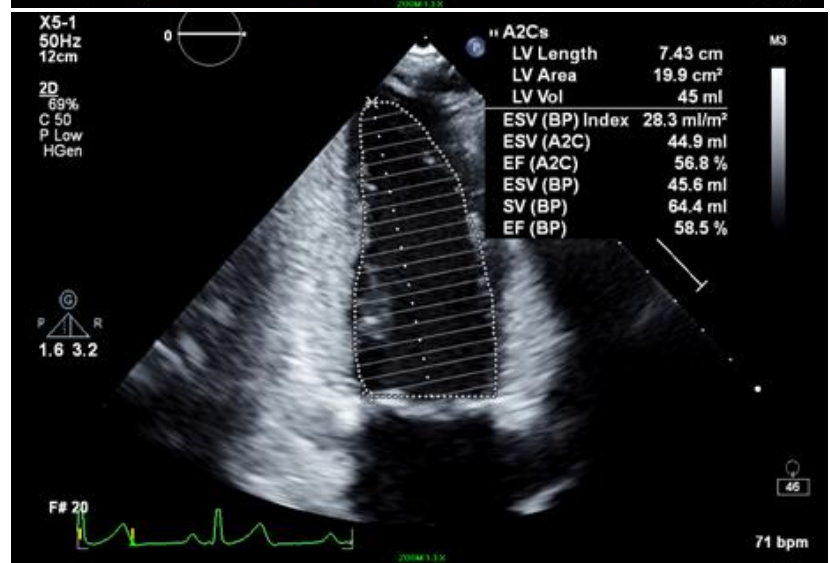
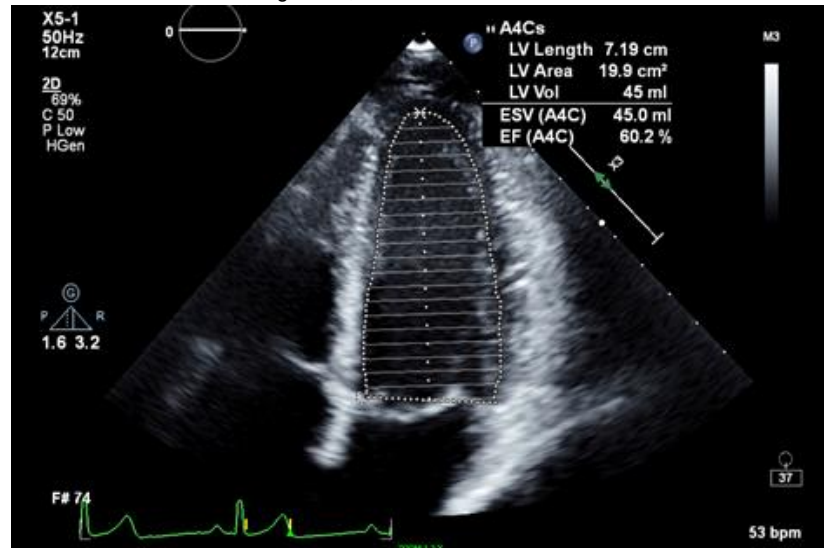
Indexed Left ventricular end systolic volume (ml/m<sup>2</sup>) (Biplane)

Provide all measurements in millilitres/metres squared. Measured in the apical 4 chamber at end diastole and the apical 2 chamber at end diastole and averaged. This is an indexed value to body surface area (BSA- calculated with patient's height (in cm) and weight (in kg)).

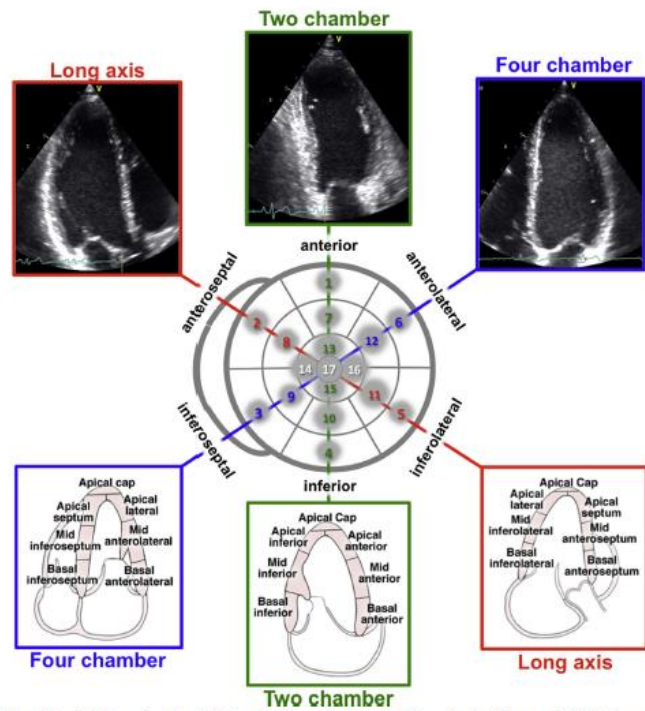
**Normal Values**

Linear method	Women	Men
Indexed Left ventricular end systolic volume (ml/m <sup>2</sup> )	8-24	11-31

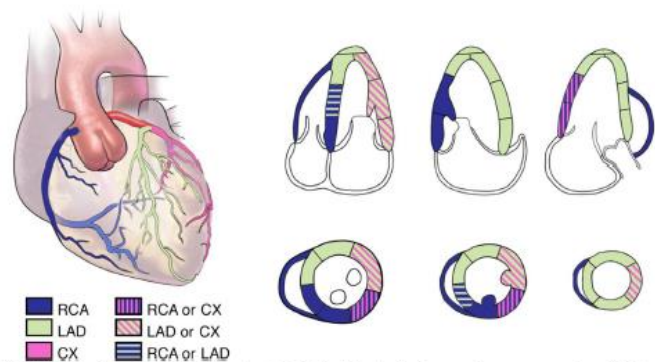
\*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.



3.1.a.vii	Left ventricular ejection fraction (%) (Simpson's Biplane)	<p>Provide all measurements in percentage. (Left ventricular end diastolic volume minus end systolic volume) divided by the left ventricular end diastolic volume will provide the ejection fraction.</p> <p><b>Normal Values</b></p> <table border="1" data-bbox="706 384 1581 533"> <tr> <td>Simpson's Biplane</td> <td>Women</td> <td>Men</td> </tr> <tr> <td>Left ventricular ejection fraction (%)</td> <td>64 ± 5</td> <td>62 ± 5</td> </tr> </table> <p><b>Table 4</b> Normal ranges and severity partition cutoff values for 2DE-derived LV EF and LA volume</p> <table border="1" data-bbox="706 604 1581 716"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">Male</th> <th colspan="4">Female</th> </tr> <tr> <th>Normal range</th> <th>Mildly abnormal</th> <th>Moderately abnormal</th> <th>Severely abnormal</th> <th>Normal range</th> <th>Mildly abnormal</th> <th>Moderately abnormal</th> <th>Severely abnormal</th> </tr> </thead> <tbody> <tr> <td>LV EF (%)</td> <td>52-72</td> <td>41-51</td> <td>30-40</td> <td>&lt;30</td> <td>54-74</td> <td>41-53</td> <td>30-40</td> <td>&lt;30</td> </tr> <tr> <td>Maximum LA volume/BSA (mL/m<sup>2</sup>)</td> <td>16-34</td> <td>35-41</td> <td>42-48</td> <td>&gt;48</td> <td>16-34</td> <td>35-41</td> <td>42-48</td> <td>&gt;48</td> </tr> </tbody> </table> <p>*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.</p>	Simpson's Biplane	Women	Men	Left ventricular ejection fraction (%)	64 ± 5	62 ± 5		Male				Female				Normal range	Mildly abnormal	Moderately abnormal	Severely abnormal	Normal range	Mildly abnormal	Moderately abnormal	Severely abnormal	LV EF (%)	52-72	41-51	30-40	<30	54-74	41-53	30-40	<30	Maximum LA volume/BSA (mL/m <sup>2</sup> )	16-34	35-41	42-48	>48	16-34	35-41	42-48	>48
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3.1.a.viii	Left ventricular global longitudinal strain (LVGLS) (%)	<p>Provide all measurements in percentage without negative sign as per most recent American Society of Echocardiography guidelines. Measured from left ventricular 4 chamber, 3 chamber and 2 chamber views on a dedicated on-cart or off-cart vendor specific or neutral software. Ensure this is performed by an experienced operator for strain.</p> <p><b>Normal Values</b></p> <table border="1" data-bbox="706 1073 1581 1192"> <tr> <td>Parameter</td> <td>Normal</td> </tr> <tr> <td>LVGLS (%)</td> <td>-19%</td> </tr> </table> <p>*Yingchoncharoen T, Agarwal S, Popovic ZB et al. Normal Ranges of Left Ventricular Strain: A Meta-analysis. J Am Soc Echocardiogr 2013;26:185-91.</p>	Parameter	Normal	LVGLS (%)	-19%																																					
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3.1.a.ix	Regional wall motion abnormalities	<p>Please note the presence or absence of regional wall motion abnormalities and select the quality of these wall motion abnormalities with all descriptions that apply.</p>																																									



**Figure 4** Orientation of apical four-chamber (A4C), apical two-chamber (A2C), and apical long-axis (ALX) views in relation to the bull's-eye display of the LV segments (center). Top panels show actual images, and bottom panels schematically depict the LV wall segments in each view.



**Figure 5** Typical distributions of the right coronary artery (RCA), the left anterior descending coronary artery (LAD), and the circumflex coronary artery (CX). The arterial distribution varies among patients. Some segments have variable coronary perfusion.

\*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.

3.1.b.i

Right ventricular basal diameter (cm)

Please define basal diameter in centimeters as per ASE chamber quantification guidelines.

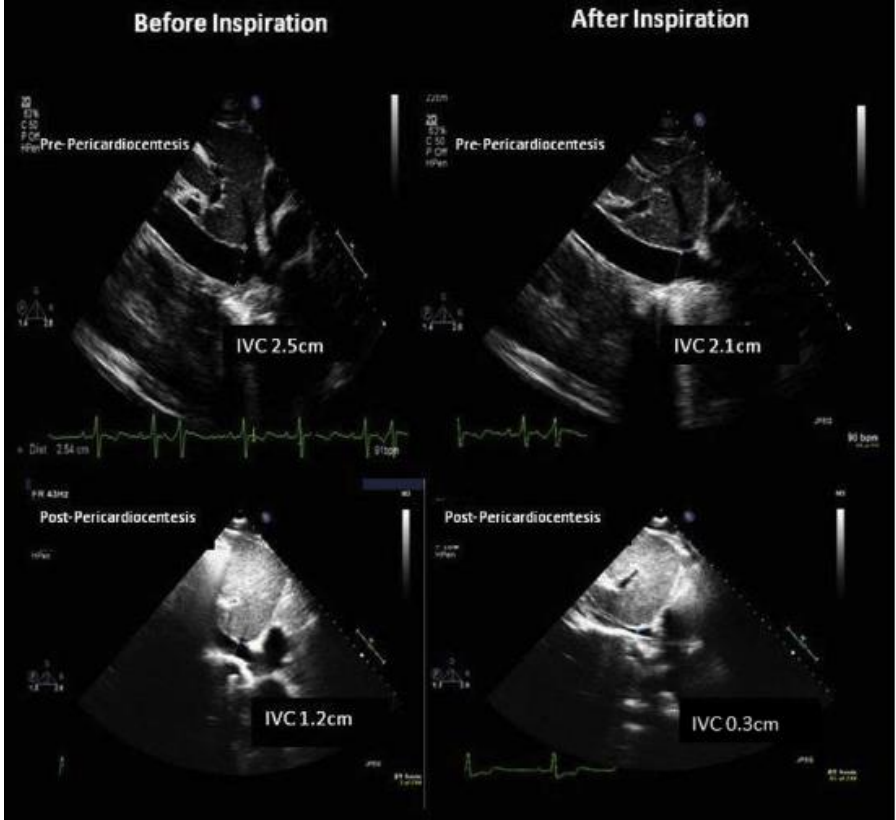
**Normal Values**

Linear measurement	Normal range
RV Basal diameter (cm)	2.5 - 4.1

\*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society

		of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.				
3.1.b.ii	Right ventricular mid chamber diameter (cm)	<p>Please define mid chamber diameter in centimeters as per ASE chamber quantification guidelines.</p> <p><b>Normal Values</b></p> <table border="1"> <thead> <tr> <th>Linear measurement</th> <th>Normal range</th> </tr> </thead> <tbody> <tr> <td>RV Mid diameter (cm)</td> <td>1.9 - 3.5</td> </tr> </tbody> </table> <p>*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.</p>	Linear measurement	Normal range	RV Mid diameter (cm)	1.9 - 3.5
Linear measurement	Normal range					
RV Mid diameter (cm)	1.9 - 3.5					
3.1.b.iii	Right ventricular fractional area change (RVFAC) (%)	<p>Please define right ventricular fractional area change in percentage as per ASE guidelines.</p> <p><b>Normal Values</b></p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Normal</th> </tr> </thead> <tbody> <tr> <td>RV FAC (%)</td> <td>&gt;35</td> </tr> </tbody> </table> <p>*Lang RM, Badano LP, Mor-Avi et al. Recommendations for cardiac chamber quantification by echocardiography in adults: an update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. J Am Soc Echocardiogr 2015;28:1-39.</p>	Parameter	Normal	RV FAC (%)	>35
Parameter	Normal					
RV FAC (%)	>35					
3.1.b.iv	Right ventricular free wall strain (RVLS) (%)	<p>Please define right ventricular free wall strain as per EACVI strain standardization guidelines - <a href="https://academic.oup.com/ehjcmaging/article/19/6/591/4955257">https://academic.oup.com/ehjcmaging/article/19/6/591/4955257</a>.</p>				
3.1.c	Presence of valvular abnormalities	Any detected regurgitation greater than mild or 1/4 severity. Any detected valvular stenosis greater than mild.				
3.1.d.i.	Aortic Stenosis Aortic Regurgitation	<p>Please assess valvular dysfunction as per the American Society of Echocardiography guidelines on valvular assessment: <a href="https://www.asecho.org/guidelines-search/">https://www.asecho.org/guidelines-search/</a></p> <p>And choose severity with:</p> <p>Grade 0 /4 = None</p> <p>Grade 1/4 = Mild</p> <p>Grade 2/4 to 3/4 = Moderate</p>				

		Grade 4/4 = Severe
3.1.d.ii.	Tricuspid stenosis Tricuspid regurgitation	Please assess valvular dysfunction as per the American Society of Echocardiography guidelines on valvular assessment: <a href="https://www.asecho.org/guidelines-search/">https://www.asecho.org/guidelines-search/</a> And choose severity with: Grade 0 /4 = None Grade 1/4 = Mild Grade 2/4 to 3/4 = Moderate Grade 4/4 = Severe
3.1.d.iii.	Mitral stenosis Mitral regurgitation	Please assess valvular dysfunction as per the American Society of Echocardiography guidelines on valvular assessment: <a href="https://www.asecho.org/guidelines-search/">https://www.asecho.org/guidelines-search/</a> And choose severity with: Grade 0 /4 = None Grade 1/4 = Mild Grade 2/4 to 3/4 = Moderate Grade 4/4 = Severe
3.1.d.iv.	Pulmonary regurgitation	Please assess valvular dysfunction as per the American Society of Echocardiography guidelines on valvular assessment: <a href="https://www.asecho.org/guidelines-search/">https://www.asecho.org/guidelines-search/</a> And choose severity with: Grade 0 /4 = None Grade 1/4 = Mild Grade 2/4 to 3/4 = Moderate Grade 4/4 = Severe
4.1.a.i - ix	Please refer to 3.1.a.i - ix	Please refer to 3.1.a.i - ix for explanations in corresponding values.
4.1.b.i-iii	Please refer to 3.1.b.i -iii	Please refer to 3.1.b.i -iii for explanations in corresponding values.

4.1.b.iv	Tricuspid Regurgitant Jet Peak Velocity (TR V-Max)	Measure peak velocity point on a complete or near complete continuous wave Doppler signal. (m/sec)
4.1.b.v. 1 & 2	Inferior Vena Cava (IVC) - 1. Size and 2. Collapsibility on inspiration of >50%	 <p>Porter et al. J Am Soc Echocardiogr 2015;28;40-56.</p> <p>Measure IVC diameter at IVC Right Atrium junction</p> <p>Only use this parameter in non-ventilated patients.</p> <p>Size &lt; or = 2.1 cm; collapses &gt;50% during sniff = RAP 0–5 mm Hg</p> <p>Size &gt; 2.1 cm; collapses &gt;50% during sniff = 5–10 mm Hg</p> <p>Size &gt; 2.1; collapses &lt;50% during sniff = 10–20 mm Hg</p>



4.1.b.vi	Please refer to 3.1.b.iv	Please refer to 3.1.b.iv - for explanations in corresponding values.
4.1.e.i-iv	Please refer to 3.1.c.i-iv	Please refer to 3.1.d .i-iv - for explanations in corresponding values.
4.1.d	Pericardial effusion	Please only mention if effusion is greater than trivial/physiological and is measurable. If present, please document as mild or moderate in size. Tamponade physiology is to be chosen if the patient meets guideline criteria for significantly elevated intrapericardial pressures in the presence of a pericardial effusion - as per ASE definitions on pericardial disease.
4.1.e	Presence of mechanical circulatory device	This is defined as a mechanical circulatory device that was present at the time of echo. If this is a YES, please select one of the available options. Select 'others' if a different form of mechanical circulatory device was present that was not part of the options, if more than one is present, please select both (if possible), if this is not possible on the dashboard, please select the one that is visible most prominently.
4.2.a.i	Left ventricle - Size	This is a subjective description of the appearance of the left ventricle as POCUS scans in general do not have a standardised way of measuring volumes accurately and there are no standardised linear measurements to be performed on POCUS scanners that are vendor independent.
4.2.a.ii.	Left ventricle - wall thickness	This is a subjective assessment of the wall thickness on the parasternal long axis view in relation to the LV cavity size.
4.2.a.iii.	Left ventricle - function	This is a visual assessment of left ventricular ejection fraction with Normal >50%, Mild 50-40%, Moderate 40-30% and Severe <30%.

4.2.a.iv.	Left ventricle - regional wall motion abnormalities	Visual assessment of the presence or absence of any regional wall motion abnormalities.
4.2.b.i.	Right ventricle - Size	Visual assessment of right ventricular size compared to left ventricular size and overall whether it appears dilated or not.
4.2.b.ii.	Right ventricle - Function	Visual assessment of right ventricular longitudinal and radial contraction and subjective quantification across a normal, mild, or severe systolic dysfunction.
4.2.c.	Pericardial effusion	Circle absent if there is no effusion at all or trivial/physiological. If there is more than physiological but less than large (<1cm) then circle small and if larger than this circle large.
4.2.d.	Presence of moderate to severe valvular abnormalities	If presence of any of the below (4.2.d.i-v) defined significant valvular abnormalities on POCUS please circle YES and if not, then circle NO. If not defined at all on study, please circle N/A.
4.2.f.i.	Valves - Aortic stenosis Valves - Aortic Regurgitation	Valves - Aortic stenosis If the aortic valve appears to open normally with no significant turbulence in systole, then choose not suspected. If the aortic valve does not appear to open normally in systole, is heavily calcified and there is evidence of turbulence across the valve in systole then choose suspected.  Valves - Aortic Regurgitation If there is no colour flash over the aortic valve in diastole choose absent. If there is any colour flash in diastole that is brief and appearing to be <50% of the LVOT diameter choose mild and if there is significant colour during diastole especially >50% of LVOT diameter choose severe.

4.2.f.ii.	Valves - Tricuspid Stenosis Valves - Tricuspid Regurgitation	<p>Valves - Tricuspid Stenosis If the tricuspid valve appears to open normally with no significant turbulence in diastole, then choose not suspected. If the tricuspid valve does not appear to open normally in diastole, is heavily calcified and there is evidence of turbulence across the valve in diastole then choose suspected.</p> <p>Valves - Tricuspid Regurgitation If there is no colour flash over the tricuspid valve in systole choose absent. If there is any colour flash in systole that is brief and appearing to be brief and not taking up significant portion of RA and central choose mild and if there is significant colour during systole in RA, especially if eccentric with large jet width choose severe.</p>
4.2.f.iii.	Valves - Mitral Stenosis Valves - Mitral Regurgitation	<p>Valves - Mitral Stenosis If the mitral valve appears to open normally with no significant turbulence in diastole, then choose not suspected. If the mitral valve does not appear to open normally in diastole, is heavily calcified and there is evidence of turbulence across the valve in systole then choose suspected.</p> <p>Valves - Mitral Regurgitation If there is no colour flash over the mitral valve in systole choose absent. If there is any colour flash in systole that is brief and not taking up significant portion of LA and central choose mild, and if there is significant colour during systole, especially if eccentric with large jet width choose severe.</p>
4.2.f.iv.	Valves – Pulmonary regurgitation	<p>Valves – Pulmonary regurgitation If there is no colour flash over the pulmonary valve in diastole choose absent. If there is any colour flash in diastole that is brief and appearing to be &lt;50% of the PA diameter choose mild and if there is significant colour during diastole especially &gt;50% of PA diameter choose severe.</p>
5.0	NT-proBNP (n-terminal pro-hormone B-type natriuretic peptide)	<p>Enter value in pg/mL and date measured.</p> <p>Only values between 50 and 18 000 If &gt;1 value in 24 hours chose worst value</p>