

ANNEX III.

This document has been modified from Badano LP, Posteraro A, Salustri A, Astarita C, Mantero A, Erlicher A on behalf of the Italian Society of Cardiovascular Echocardiography (SIEC). Minimal dataset ecocardiografico.

www.anmco.it/download/pdf/aree/elenco/informativa/MDS_Ecocardiografia.pdf.

It contains a proposal for statements to be used to report morphological findings in a structured computerize echo reporting system. Items in “Description” column are mutually exclusive. Items in “Finding” and “Values” columns can have a multiple selection.

CARDIOVASCULAR STRUCTURE	DESCRIPTION	FINDING	VALUES
Left Ventricle	Normal		
	Abnormal	Dilation	Absent
			Mild
			Moderate
		Severe	
	Hypertrophy	Absent	
		Concentric	
		Eccentric	
		Concentric remodeling	
		Localized hypertrophy	Basal anterior septum
			Anterior and inferior septum
			Interventricular septum and free wall
			Anterior-kateral wall
			Inferior septum
			Apical
	Dynamic obstruction	Absent	
		In the outflow tract	
		Mid-ventricular	
	Systolic function	Normal	
		Mildly decreased	
		Moderately decreased	
		Severely decreased	
	Diastolic filling	Normal	
		Impaired relaxation	
		Pseudonormal	
		Restrictive	
		Elevated left atrial pressure	
		Elevated left ventricular end-diastolic pressure	
	Dyssynchrony	Absent	
		Present	
	Regional wall motion	Normal	
			Wall motion abnormalities (opens bull-eye for scoring wall motion – 16 segments)
			Diffusely hypokinetic (it scores 2 on all segments in the bull-eye)
			Diffusely hyperkinetic
			Not assessed
			Cannot be assessed
		Myocardial perfusion	Normal
			Perfusion abnormalities (opens bull-eye for scoring myocardial perfusion – 17 segments)
		Mass	Absent

			Flat (mural)
			Protrudine fixed
			Protruding mobile
			Free floating thrombus
			Apical location
			Basal location
			Septal location
			Lateral location
			Intramyocardic
		Falei tendons	Absent
			Present
		Pseudoaneurysm	Posterior
			Inferior
			Lateral
			Anterior
		Heart transplant	Bicaval technique
			Shumway technique
	Not assessed		
	Not recorded		
	Free comment		
Interventricular septum	Abnormal	Hypertrophy	Localized at basal anterior segment
			Localized at anterior and inferior
		Abnormal septal motion	Consistent with left bundle branch block
			Consistent with postoperative status
			Consistent with right ventricular pace-maker
			Sovraccarico ventricolo destro
			Due to pre-excitation
			Flattened in diastole (D shaped left vnetricle) consistent with right ventricular volume overload
			Flattened in sistole consistent with right ventricular pressure overload
			Septal "bounce" consistent with constrictive physiology
		Defect	Absent
			Muscular apical
			Muscular basal
			Membranous infracristal
			Infundibular supracristal
			Iinlet
			Multiple
		Shunt	Left-to right
			Right-to-left
			Bidirectional
	Normal		
	Not assessed		
	Not recorded		
	Free text		
Mitral valve			
	Normal		
	Native abnormal	Low-flow morphology	
		Previous commissurotomy	
		Doming	
		Annulus	Posterior calcification
			Diffuse calcification
			Dilated

			Thickenend
			Anterior abscess
			Posterior abscess
			Fistula
		Leaflet Coaptation	Normal
			Loss of coaptation
		Leftet apposition	Normal
			Symmetric malapposition
			Posterior leaflet asymmetric malapposition
			Anterior leaflet asymmetric malapposition
		Anteriore leaflet	Thickened
			Calcific
			Decreased mobility
			Systolic posterior movement
			Immobile
			Increased excursione
			Systolic anterior motion
			A2 prolapse
			A1 prolapse
			A3 prolapse
			Vegetation
			Elongated
			Flail
			Coaptation point loss
			Systolic tethering
			Fluttering
			Cleft
		Posterior leaflet	Thickened
			Calcific
			Decreased mobility
			Systolic posterior movement
			Immobile
			Increased escursione
			P2 prolapse
			P1 prolapse
			P3 prolapse
			Vegetation
			Elongated
			Flail
			Coaptation point loss
			Systolic tethering
			Fluttering
			Cleft
		Commissures	Free
			Medial commessure fusion
			Lateral commessure fusion
		Vegetation	Absent
			Calcified
			Partially calcified
			More echodense than myocardium
			Less echodense than pericardium
			Fixed
			Mobile
			Peduncolated
			Prolapsing

	Free text		
	Bioprosthetic valve	Model	(Custom list)
		Size	17-mm
			18-mm
			19-mm
			20-mm
			21-mm
			22-mm
			23-mm
			24-mm
			25-mm
			26-mm
			27-mm
			28-mm
			29-mm
			30-mm
			31-mm
			32-mm
			33-mm
		Function	Normofunctioning
			Mild dysfunction
			Moderate dysfunction
			Severe dysfunction
		Morphology	Normal
			Cusp thickening
			Dehiscence
			Cusp calcification
			Limited cusp mobility
			Cusp fracture/perforation
			Thrombosis
			Vegetation
		Periprosthetic regurgitation	Absent
			Mild
			Moderate
			Severe
	Free text		
	Mechanical prosthesis	Model	(Custom list)
		Size	17-mm
			18-mm
			19-mm
			20-mm
			21-mm
			22-mm
			23-mm
			24-mm
			25-mm
			26-mm
			27-mm
			28-mm
			29-mm
			30-mm
			31-mm
			32-mm
			33-mm
		Function	Normofunctioning
			Mild dysfunction

			Moderate dysfunction
			Severe dysfunction
		Morphology	Normal
			Rocking
			Dehiscence
			Limited excursion of one leaflet
			Limited excursion of both leaflets
			Leaflet fracture/migration
			Both leaflets fracture/migration
			Pannus
			Thrombosis
			Vegetation(s)
			Fistula
		Periprosthetic regurgitation	Absent
			Mild
			Moderate
			Severe
	Free text		
	Not assessed		
	Not recorded		
Subvalvular apparatus	Abnormal	Chordae	Elongated (anterior leaflet)
			Elongated (posterior leaflet)
			Ruptured (anterior leaflet)
			Ruptured (posterior leaflet)
			Thickened
			Calcified
			Fused
			Shortened
			Vegetations
			Systolic anterior motion
			Anormally inserted
		Posterior-medial papillary muscle	Hypertrophic
			Fibrouss
			Calcified
			Complete rupture
			Partila rupture
			Anomalous insertion
		Anterior-lateral papillary muscle	Hypertrophic
			Fibrouss
			Calcified
			Complete rupture
			Partial rupture
			Anomalous insertion
	Normal		
	Not assessed		
	Not recorded		
	Free text		
Aortic valve			
	Normal		
	Native abnormal	Diffuse thickening	
		Focal thickening	
		Reduced mobility	
		Calcifications	Absent
			Small and isolated
			Multiple and large
			Diffuse

		Bicuspid	
		Vegetations	Absent
			Non coronary cusp
			Right coronary cusp
			Left coronary cusp
			Calcified
			Partially calcified
			More echogenic than myocardium
			Less echogenic than myocardium
			Nonmobile
			Peduncolated
			Peduncolated and mobile
			Prolapsing
		Retraction	Non coronary cusp
			Right coronary cusp
			Left coronary cusp
		Dislocation	Non coronary cusp
			Right coronary cusp
			Left coronary cusp
		Perforation	Non coronary cusp
			Right coronary cusp
			Left coronary cusp
		Prolapse	Non coronary cusp
			Right coronary cusp
			Left coronary cusp
		Commissures	Free
			Fused
		Monocuspid	
		Quadricuspid	
	Bioprosthetic valve	(see mitral valve)	(see mitral valve)
	Mechanical prosthesis	(see mitral valve)	(see mitral valve)
	Not assessed		
	Not recorded		
	Free text		
Left atrium			
	Normal		
	Abnormal	Dilatation	Absent
			Mild
			Moderate
			Severe
		Consistent with heart transplantattion	
		Mass	Absent
			Flat (mural)
			Protruding
			Peduncolated nonmobile
			Peduncolated mobile
			Free floating
			Superior location

			Inferior location
			Lateral location
			Attaced to interatrial septum
			Into the appendage
			Catheter
		Spontaneous echo-contrast	Absent
			Mild
			Moderate
			Severe
		Cor triatriatum	
		Appendage	Normal
			Mildly enlarged
			Moderately enlarged
			Severely enlarged
			Plurilobated
			Reduced contractility
	Not assessed		
	Not recorded		
	Free text		
Right atrium			
	Normal		
	Abnormal	Dilatation	Absent
			Mild
			Moderate
			Severe
		Consistent with heart transplant	
		Mass	Absent
			Flat (mural)
			Protruding
			Peduncolated nonmobile
			Peduncolated mobile
			Free floating
			Superior location
			Inferior location
			Lateral location
			Attaced to interatrial septum
			Extending from vena cava
			Catheter
		Spontaneous echo-contrast	Absent
			Mild
			Moderate
			Severe
		Cor triatriatum	
		Prominent Eustachian valve	
		Prominent Chiari's network	
	Not assessed		
	Not recorded		
	Free text		
Aorta			
	Normal		
	Abnormal	Dilatation	Absent
			Aortic root
			Ascending aorta
			Arch

			Descending aorta
			Abdominal aorta
		Plaque	Not assessed
			I degree: absent
			II degree: diffuse intimal thickening
		Protruding atheroma <5 mm	Aortic root
			Aorta ascendente
			Ascending aorta
			Arch
			Descending aorta
		Protruding atheroma >5 mm	Aortic root
			Ascending aorta
			Arch
			Descending aorta
			Abdominal aorta
		Aneurysm	Absent
			Aortic root
			Ascendine aorta
			Arch
			Descending aorta
			Abdominal aorta
		Intramural hematoma	Aortic root
			Ascending aorta
			Arch
			Descending aorta
			Abdominal aorta
		Ulcer	Aortic root
			Ascending aorta
			Arch
			Descending aorta
			Abdominal aorta
		Calcifications on aortic wall	Absent
			Aortic root
			Ascending aorta
			Arch
			Descending aorta
	Prosthesis	Valvulated conduit	Model (customized)
			Size
		Prosthesis	Ascendine aorta
			Arch
			Descendin aorta
			Abdominal aorta
		Stent	Ascendine aorta
			Arch
			Descendin aorta
			Abdominal aorta
	Dissection	Stanford type A	
		Stanford type B	
		DeBakey type I	
		DeBakey type II	
		DeBakey type III	
		Entry site	Non definibile
			Aortic root
			Ascendine aorta
			Arch
			Descending aorta

		Exit point	Not visualized
			Ascendine aorta
			Arch
			Descending aorta
		False lumen	Open
			Contains thrombus
	Coarctation	Absent	
		Location	Proximal to the left subclavian artery
			Distall to the left subclavian artery
	Trasposition of the great arteries		
	Corrected trasposition of the great arteries		
	Not assessed		
	Not recorded		
	Free text		
Right ventricle			
	Normal		
	Abnormal	Dilatation	Absent
			Mild
			Moderate
			Severe
		Consistent with cor pulmonale	
		Consistent with right ventricular dysplasia	
		Hypertrophy	Absent
			Diffuse
		Wall motion	Normal
			Wall motion abnormalities (opens a right ventricular graphic scheme for scoring wall motion)
			Diffusely hypokinetic (it marks 2 on all segments of the right ventricular graphic scheme for scoring wall motion)
			Diffusely hyperkinetic
			Not assessed
			Not visualized
		Mass	Absent
			Flat/ mural
			Protruding nonmobile
			Protruding mobile
			Free floating
			Apical
			Basal
			Septal
			Lateral
			Intramyocardial
		Foreign bodies	Catheter
			Pace-maker wire
		Pump function	Normal
			Mildly reduced
			Moderately reduced
			Severely reduced
	Not assessed		
	Not recorded		
	Free text		
Tricuspid valve			

	Normal		
	Native abnormal	Chordal rupture	Anterior leaflet
			Posterior leaflet
			Septal leaflet
		Mixomatous	
		Vegetation	Absent
			On the anterior leaflet
			On the posterior leaflet
			On the septal leaflet
			Calcified
			Partially calcified
			More echogenic than myocardium
			Less echogenic than myocardium
			Immobile
			Peduncolated and non mobile
			Peduncolated and mobile
			Prolapsing
		Annulus dilatation	
		Prolapse	Anterior leaflet
			Posterior leaflet
			Septal leaflet
		Flail	Anterior leaflet
			Posterior leaflet
			Septal leaflet
		Fibrosis	Anterior leaflet
			Posterior leaflet
			Septal leaflet
		Calcification	Anterior leaflet
			Posterior leaflet
			Septal leaflet
		Restricted mobility	Anterior leaflet
			Posterior leaflet
			Septal leaflet
		Ebstein's anomaly	
		Atresia	
	Bioprosthetic valve	(see mitral bioprosthetic valve)	(see mitral bioprosthetic valve)
	Protesi meccanica	(see mitral mechanical prosthesis)	(see mitral mechanical prosthesis)
	Not assessed		
	Not recorded		
	Free text		
Interatrial septum			
	Abnormal	Foramen ovale	Patent
			Closed
		Closure device	Model (custom)
			Size
		Defect	Ostium secundum
			Ostium primum
			Sinus venosus (caval type)
			Sinus venosus (coronary type)
		Shunt	Absent
			Left-to-right
			Right-to-left

			Bidirectional
		Thickened	
		Aneurysm	
	Normal		
	Not assessed		
	Not recorded		
	Free text		
Inferior vena cava	Normal		
	Abnormal	Size	Dilated
			> 50% respiratory change in dimension
			< 50% respiratory change in dimension
			No respiratory change
			Dilatatio of hepatic veins
		Mass	Absent
			Present
			Infiltrating
		Foreign bodies	Catheter
			Pace-maker wire
	Not assessed		
	Not recorded		
	Free text		
Pericardium			
	Normal		
	Abnormal	Effusion	Small
			Moderate
			Large
		Location	Generalized
			Posterior
			Anterior
			Near right atrium
			Near left atrium
		Tamponade	Absent
			Present
		Thickening/calcification	Present
		Constriction	Absent
			Present
	Not assessed		
	Not recorded		
	Free text		
Pulmonic valve			
	Native abnormal	Thickened	
		Decreased excursion	
		Vegetation	Absent
			On the anterior cusp
			On the right posterior cusp
			On the left posterior cusp
			Calcific
			Partially calcified
			More echogenic than myocardium
			Less echogenic than myocardium
			Immobile
			Peduncolated and non mobile

			Peduncolated and mobile
			Prolapsing
		Doming	
	Bioprosthetic valve	(see mitral bioprosthetic valve)	(see mitral bioprosthetic valve)
	Mechanical prosthesis	(see mitral mechanical prosthesis)	(see mitral mechanical prosthesis)
	Normal		
	Not assessed		
	Not recorded		
	Free text		
Pulmonary veins			
	Normal		
	Abnormal	Dilation	Left upper
			Right upper
			Left lower
			Right lower
		Stenosis	Left upper
			Right upper
			Left lower
			Right lower
		Mass	Left upper
			Right upper
			Left lower
			Right lower
		Congenital anomalies	Left partial anomalous pulmonary venous return
			Right partial anomalous pulmonary venous return
			Hypoplasia
	Not assessed		
	Not recorded		
	Free text		
Pulmonary artery			
	Abnormal	Dilation	Mild
			Moderate
			Severe
		Mass	Main pulmonary artery
			Right pulmonary artery
			Left pulmonary artery
		Stenosis	Right pulmonary artery
			Left pulmonary artery
		Hypoplasia	
	Ductus arteriosus	Patent	
		Closed	
		Ductal dependence	Yes
		Ductal dependence	No
	Normal		
	Not assessed		
	Not recorded		
	Free text		