Heart Valve Society
Mitral Tricuspid Valve Database

FORM 1A | HOSPITALIZATION

Version 3.0 (21-11-2024)

Age at surgery _____ Sex at birth _____ Mitral Tricuspid ID _____

Gender _____ Patient ID *local hospital* _____

PREOPERATIVE

If there was a preoperative ECHO and/or MRI conducted, please fill in "ECHO/MRI repeated measurements form"

Main hemodynamic lesion
□ Mitral regurgitation □ Tricuspid regurgitation
□ Mitral stenosis □ Tricuspid stenosis

Endocarditis ○ No ○ Yes, active ○ Yes, non-active

Height and Weight _____ cm _____ kg

NYHA class ○ I ○ II ○ III ○ IV

CCS class IV ○ No ○ Yes

LVEF ○ Good (>50%) ○ Poor (21%-30%)
○ Moderate (31%-50%) ○ Very poor (20% or less)

History of hospitalization for heart failure (<12 months) ○ No ○ Yes

Previous cardiac intervention ○ No □ Yes, open surgery □ Yes, catheter based
If yes, number of cardiac open surgeries: _____
If yes, number of previous catheter-based procedures: _____

Type of previous cardiac open surgery
□ Mitral valve repair □ Aortic valve repair
□ Mitral valve replacement □ Aortic valve replacement
□ Tricuspid valve repair □ CABG
□ Tricuspid valve replacement □ Other

Type of previous catheter-based procedures
□ Mitral valve repair □ Aortic valve repair
□ Mitral valve replacement □ Aortic valve replacement
□ Tricuspid valve repair □ Other
□ Tricuspid valve replacement

Clinical Frailty Scale _____

STS score _____ %

Arterial Hypertension ○ No ○ Yes

COPD ○ No ○ Yes

Smoker ○ No ○ Yes ○ Previous smoker (>1 month)

Diabetes ○ None ○ Yes, no treatment ○ Yes, oral treatment
○ Yes, subcutaneous (non-insulin)
○ Yes, insulin dependent

Dialysis dependency ○ No ○ Yes

Malignancy ○ No ○ Yes ○ Status post

Poor mobility ○ No ○ Yes

History of a stroke ○ No ○ Yes

Extracardiac arteriopathy ○ No ○ Yes

Coronary artery disease (CAD) ○ No ○ Yes

Localization CAD □ Left main disease □ LAD
□ LCx □ RCA

Recent (<90d) MI ○ No ○ Yes

Localization recent MI □ Anterior □ Lateral □ Inferior
□ Posterior □ NSTEMI

Troponin T (ng/l) _____

NT-proBNP (ng/l) _____

Critical state ○ No ○ Yes

Definition of critical state □ CPR (cardiac massage) □ Invasive ventilation
□ VT/VF □ Anuria or oliguria
□ Inotropes/Intra-aortic balloon pump

Creatin (mg/dl) _____

Hemoglobin (mmol/L) _____

Total bilirubin (mg/dl) _____

Serum albumin (g/dl) _____

Serum AST (U/L) _____

Serum ALT (U/L) _____

Ascites ○ No ○ Yes

Pulmonary Hypertension ○ None/ mild PA systolic pressure (≤30 mmHg)
○ Moderate PA systolic pressure (31-55 mm Hg)
○ Severe PA systolic pressure (>55mmHg)

Rhythm ○ Sinus ○ Atrium Flutter ○ Paced
○ Atrium fibrillation ○ Other, _____

Cardiac rhythm therapy □ None □ Pacemaker □ ICD □ CRT

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 1B | HOSPITALIZATION

Version 3.0 (21-11-2024)

Age at surgery _____ Sex at birth _____ Mitral Tricuspid ID _____

Gender _____ Patient ID *local hospital* _____

Connective tissue disease (CTD) ○ No ○ Yes ○ Unknown

Type of CTD ○ Marfan syndrome ○ Ehlers-Danlos Syndrome (EDS) ○ Loeys-Dietz Syndrome ○ Osteogenesis Imperfecta ○ Stickler Syndrome ○ Pseudoxanthoma Elasticum ○ Turner Syndrome ○ Systemic Lupus Erythematosus (SLE) ○ Rheumatoid Arthritis (RA) ○ Ankylosing Spondylitis (bechterew's disease) ○ Neurofibromatosis ○ Cystic Fibrosis ○ Scleroderma ○ Other,

Diuretics □ none □ Loop diuretics □ MRA diuretics □ Other

Urgency of operation ○ Elective ○ Urgent ○ Emergency ○ Salvage

Intention to repair mitral valve ○ No ○ Yes ○ Uncertain

Intention to repair tricuspid valve ○ No ○ Yes ○ Uncertain

OPERATIVE

If there was a preoperative ECHO conducted, please fill in "ECHO repeated measurements form"

Periprocedural information

Date of surgery/intervention _____

Age at surgery/intervention _____

Surgeon code _____

Type of surgery ○ Mitral ○ Tricuspid ○ Combined

Is there a proctor? ○ No ○ Yes

Initial access ○ Full sternotomy ○ Partial sternotomy ○ Mini-thoracotomy ○ Transcatheter ○ Other

MIS access ○ Direct view ○ 3D endoscopic ○ Robotic ○ Other

Type of trans-catheter access ○ Transapical ○ Transaxillary ○ Transfemoral ○ Transaortic ○ Subclavian ○ Transiliac ○ Transcarotid ○ Transcaval ○ Other

Conversion of access during procedure ○ None ○ Full sternotomy ○ Partial sternotomy ○ Mini-thoracotomy

Anesthesia ○ General ○ Local

Mitral valve Disease ○ None ○ Myxomatous degeneration / prolapse ○ Rheumatic ○ Ischemic - acute, post infarction (MI <= 21 da ○ Ischemic - chronic (MI > 21 days) ○ Non-ischemic Cardiomyopathy ○ Endocarditis ○ Hypertrophic Obstructive Cardiomyopathy (HOCM) ○ Tumor, Carcinoid ○ Tumor, Carcinoid ○ Tumor, Carcinoid ○ Tumor, Myxoma ○ Tumor, Papillary fibroelastoma ○ Tumor, Other ○ Carcinoid ○ Trauma ○ Congenital ○ Pure annular dilatation ○ Reoperation - Failure of previous MV repair or replacement ○ Mixed Etiology, _____ ○ Other, _____

Cusp Analysis MV

	PML *(posterior mitral leaflet)*	AML *(anterior mitral leaflet)*
Normal	○ No ○ Yes	○ No ○ Yes
□ Prolapse	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Perforation	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Calcification	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Vegetation	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Tenting	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Retraction	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Tethering	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Other,	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3

Intention to repair MV ○ No ○ Yes ○ Uncertain

If no, for what reason? _____

AML length (mm) _____

MV annulus diameter (antero posterior) (mm) _____

Tricuspid valve disease ○ None ○ Secondary ○ Degenerative ○ Secondary and degenerative combined ○ Rheumatic ○ Endocarditis ○ Trauma ○ Congenital ○ Papillary muscle rupture ○ PM-related damage ○ Other

Cusp Analysis TV

	Tricuspid valve		
Normal	○ No ○ Yes		
□ Prolapse	□ anterior	□ posterior	□ septal
□ Perforation	□ anterior	□ posterior	□ septal
□ Calcification	□ anterior	□ posterior	□ septal
□ Vegetation	□ anterior	□ posterior	□ septal
□ Tenting	□ anterior	□ posterior	□ septal
□ Retraction	□ anterior	□ posterior	□ septal
□ Tethering	□ anterior	□ posterior	□ septal
□ Other,	□ anterior	□ posterior	□ septal

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 1C | HOSPITALIZATION

Version 3.0 (21-11-2024)

Age at surgery _____ Sex at birth _____ Mitral Tricuspid ID _____

Gender _____ Patient ID *local hospital* _____

TV annulus max diameter
Septal-lateral (mm) _____

Antero-posterior (mm) _____

Comments cusp analysis: _____

Intention to repair TV ○ No ○ Yes ○ Uncertain
If no, for what reason? _____

Type of MV intervention

□ Surgical MV repair □ Transcatheter MV repair
□ Surgical MV replacement □ Transcatheter MV replacement

Was the valve replacement the initial procedure? ○ No ○ Yes

Type of surgical MV repair

□ Annuloplasty □ Subannular (adjunct) repair
□ Leaflet repair □ Other, _____

Type of surgical MV annuloplasty ○ None ○ Partial ring ○ Complete ring

Model

○ Medtronic SIMUFORM ○ Corcym Memo 4D ○ LivaNova MEMO 4D
○ Medtronic SimuPlus ○ Corcym Memo 3D ○ LivaNova MEMO 3D RECHORD
○ Medtronic CG FUTURE ○ Corcym annuloflex ○ LivaNova MEMO 3D
○ Medtronic Profile 3D ○ Corcym annuloflo ○ LivaNova Annulofolex
○ Edwards Fysio flex ○ Braille 2088 ○ LivaNova Annuloflo
○ Edwards Physio II ○ Braille 2158
○ Other, _____ Size (mm) _____

AML- Type of leaflet repair □ Leaflet augmentation □ Resection □ Edge-to-edge repair
□ Artificial chordae technique □ Other, _____

AML-Patch type In MV repair ○ None ○ Autologous pericardium glutaraldehyde)
○ Fresh autologous pericardium
○ Xeno pericardium (gluteraldehyde)
○ Other Patch Materials----------○ CardioCel
○ CorMatrix
○ PTFE
○ Other, _____

AML- Type of resection □ Quadrangular Resection (Q2) □ Triangular Resection
□ Sliding plasty

AML- Artificial chordae technique ○ Freehand ○ Premeasured

PML- Type of leaflet repair □ Leaflet augmentation □ Resection □ Edge-to-edge repair
□ Artificial chordae technique □ Other, _____

PML-Patch type In MV repair ○ None ○ Autologous pericardium glutaraldehyde)
○ Fresh autologous pericardium
○ Xeno pericardium (gluteraldehyde)
○ Other Patch Materials----------○ CardioCel
○ CorMatrix
○ PTFE
○ Other, _____

PML- Type of resection □ Quadrangular Resection (Q2) □ Triangular Resection
□ Sliding plasty

PML- Artificial chordae technique ○ Freehand ○ Premeasured

Location of surgical edge-to-edge repair
□ A1-P1 □ A2-P2 □ A3-P3 □ Commissure

Type of surgical MV replacement
○ Mechanical prosthesis ○ Biological prosthesis

Chordal-sparing MV replacement ○ None ○ PML ○ AML ○ Bileaflet

Mechanical Brand ○ Abbott SJM ○ Livanova Carbomedics
○ Medtronic Hall ○ Cryolife ON-X
○ Other, _____

Bioprosthesis Brand ○ CE Perimount ○ CE Magna/Magna Ease
○ Medtronic Hancock ○ Medtronic Mosaic
○ St jude Abbott Epic ○ Other, _____

Type of surgical MV replacement
○ Mechanical prosthesis ○ Biological prosthesis

Chordal-sparing MV replacement ○ None ○ PML ○ AML ○ Bileaflet

Mechanical Brand ○ Abbott SJM ○ Livanova Carbomedics
○ Medtronic Hall ○ Cryolife ON-X
○ Other, _____

Bioprosthesis Brand ○ CE Perimount ○ CE Magna/Magna Ease
○ Medtronic Hancock ○ Medtronic Mosaic
○ St jude Abbott Epic ○ Other, _____

Prosthesis size (mm) _____

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 1D | HOSPITALIZATION

Version 3.0 (21-11-2024)

Age at surgery | Sex at birth | Mitral Tricuspid ID

Gender | Patient ID *local hospital*

Type of transcatheter MV repair

○ Direct annuloplasty ○ Coronary sinus device ○ Edge-to-Edge
○ Annuloplasty + Edge-to-Edge ○ Other,

Transcatheter Brand ○ Abbott SJM ○ Edwards Pascal
○ Edwards Cardioband ○ Carillon
○ Other,

Type of transcatheter MV replacement

Access site- TMVR ○ Transapical ○ Transseptal ○ Other

Bioprosthesis Brand- TMVR ○ Tendyne ○ Tiara ○ CardiAQ
○ Intrepid ○ HighLife ○ Milipede
○ Other,

Bioprosthesis size- TMVR (mm)

Type of TV surgery

□ Surgical TV repair □ Transcatheter TV repair
□ Surgical TV replacement □ Transcatheter TV replacement

Was the valve replacement the initial procedure? ○ No ○ Yes

Type of surgical TV repair

□ Ring annuloplasty □ Suture Annuloplasty (De Vega)
□ Leaflet repair □ Suture Annuloplasty (Kay)
□ Other,

Type of surgical TV annuloplasty ○ None ○ Partial ring ○ Complete ring

Model ○ Medtronic SimuPlus ○ Edwards Cosgrove-Edwards
○ Medtronic Contour 3D ○ Edwards Physio tricuspid
○ Medtronic Tri-Ad™ 2.0 Adams ○ Edwards MC3
○ Corcym Sovering ○ Corcym annuloflo
○LivaNova Annuloflex ○ Labcor STAR
○ Other, Size (mm)

Type of surgical TV replacement

○ Mechanical prosthesis ○ Biological prosthesis

Mechanical Brand ○ Abbott SJM ○ Livanova Carbomedics
○ Medtronic Hall ○ Cryolife ON-X
○ Other,

Bioprosthesis Brand ○ CE Perimount ○ CE Magna/Magna Ease
○ Medtronic Hancock ○ Medtronic Mosaic
○ St jude Abbott Epic ○ Other,

Prosthesis size (mm)

Type of transcatheter TV repair

○ Edge-to-Edge ○ Annuloplasty ○ Other,

Transcatheter Brand ○ Abbott MitraClip ○ Edwards Pascal
○ Edwards Cardioband ○ Other,

Type of transcatheter TV replacement

Access site- TTVR ○ Transapical ○ Femoral ○ Jugular ○ Other

Bioprosthesis brand- TTVR

Bioprosthesis size (mm) - TTVR

Additional procedures performed ○ No ○ Yes

Simultaneous MAZE ○ No ○ Yes

Type of MAZE ○ PV box only ○ PV separate
○ Left sided MAZE ○ Biatrial MAZE

Simultaneous LAA closure ○ No ○ Yes

Simultaneous aortic valve □ None □ Mechanical AV replacement
□ Biological AV replacement □ AV repair
□ Other

Simultaneous CABG ○ None ○ 1x CABG ○ 2x CABG
○ 3x CABG ○ >3x CABG

Simultaneous aorta □ None □ Aortic root
□ Ascending aorta □ Aortic arch

Other additional procedures performed ○ No ○ Yes,

Duration first crossclamping (min)

Duration first cardiopulmonary bypass (min)

More than one clamp session needed ○ No ○ Yes

If yes, fill in the "Additional Clamp Session repeated measurement form"

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 1E | HOSPITALIZATION

Version 3.0 (21-11-2024)

Age at surgery _____ Sex at birth _____ Mitral Tricuspid ID _____

Gender _____ Patient ID *local hospital* _____

POSTOPERATIVE (COMPLICATIONS)

If there was a postoperative ECHO and/or MRI conducted, please fill in "ECHO/MRI repeated measurements form"

MV or TV related reintervention □ No □ Yes, MV □ Yes, TV

If yes, fill in the "Reintervention Form"

Reexploration ○ No ○ Yes, date: _____

Bleeding ○ No ○ Type I ○ Type II ○ Type III ○ Type IV
If yes, date: _____

Mediastinitis ○ No ○ Yes, date: _____

Non-cerebral embolic event ○ No ○ Yes, date: _____

Stroke ○ No ○ IS ○ ICH ○ TIA ○ Other, _____
If yes, date: _____

PM Implantation ○ No ○ Yes----------○ AV Block ○ Other
If yes, date: _____

MV/TV thrombosis □ No □ Yes, MV, date: _____ □ Yes, TV, date: _____

Periprocedural Myocardial infarction ○ No ○ Yes

Postoperative LCOS ○ No ○ Yes

AKIN (mg/dl) _____
Highest postoperative creatinine value

Mechanical Ventilation >48 hours ○ No ○ Yes

Transfusion ○ No ○ Yes, number of packed cells:
If yes, date: _____

Vascular Complication ○ No ○ Yes, major ○ Yes, minor
If yes, date: _____

Other cardiac Reintervention ○ No ○ Yes, date: _____

Other complication ○ No ○ Yes, _____

Status at Discharge

Length of ICU stay (days): _____

Status at Discharge ○ Death, mortality date: _____
○ Alive, discharge date: _____

Cause of Death ○ Valve related ○ Other cardiac ○ Non cardiac ○ Sudden, unexplained death

Comment cause of death: _____

Discharge destination ○ Home ○ Convalescence / nursing home ○ Paced ○ Another unit within the same hospital ○ Another hospital ○ Other

Rhythm ○ Sinus ○ Atrium Flutter ○ Paced ○ Atrium fibrillation ○ Other

Antiplatelets ○ No ○ Yes----------□ Aspirin □ Clopidogrel □ Prasugrel □Ticagrelol □ Other

Oral anticoag. ○ No ○ Yes----------○ VKA ○ DOACs ○ Other, _____

Heart Valve Society
Mitral Tricuspid Valve
Database

FORM 2A | ECHO

Version 3.0 (21-11-2024)

Age at surgery | Sex at birth | Mitral Tricuspid ID

Gender | Patient ID *local hospital*

ECHO

Date:

	Pre-operative (TTE)	Intra-operative pre-procedural (TEE)	Intra-operative post-procedural (TEE) Repair	Intra-operative post-procedural (TEE) Replacement	At discharge (TTE)	During follow-up (TTE)
EF (%)						
LVEF (grade) [1] 1. Good; 2. Moderate; 3. Poor; 4. Very poor						
LVEDD (mm)						
LVESD (mm)						
LV sphericity index						
LVEDV (ml)						
LVESV (ml)						
Mitral valve regurgitation [2] Grade 0 / 1 / 2 / 3 / 4						
Carpentier mode Type I / II / IIIa /IIIb						
MR EROA (mm^2)						
MR Regurgitant Volume (ml)						
MR Tenting height (mm)						
MR Tenting area (cm2)						
MR AML length (mm)						
MR AML angle (°)						
MR PML angle (°)						
MR coaptation length (mm)						
MV anteroposterior annulus (mm)						
MV intercommissural annulus (mm)						
MV Peak gradient (mmHg)						
MV Mean gradient (mmHg)						

ECHO table will continue on the next page.

Heart Valve Society
Mitral Tricuspid Valve
Database

FORM 2B | ECHO

Version 3.0 (21-11-2024)

Age at surgery | Sex at birth | Mitral Tricuspid ID

Gender | Patient ID *local hospital*

	Pre-operative (TTE)	Intra-operative pre-procedural (TEE)	Intra-operative post-procedural (TEE) Repair	Intra-operative post-procedural (TEE) Replacement	At discharge (TTE)	During follow-up (TTE)
Tricuspid valve regurgitation [3] Grade 0 / 1 / 2 / 3						
TR EROA (mm^2)						
Tricuspid valve stenosis None or Trivial/ Clinically significant						
TV Peak gradient (mmHg)						
TV Mean gradient (mmHg)						
TV Anteroposterior annulus (mm)						
TV Septolateral annulus (mm)						
TV Tenting height (mm)						
RA diameter (mm)						
RA volume (ml)						
TAPSE (mm)						
TV S-TDI (mm)						
RVEDD basal (mm)						
RVEDD mid-cavity (mm)						
RVEF (grade) [1] 1. Good; 2. Moderate; 3. Poor; 4. Very poor						
PAP syst (mmHg)						
Aortic valve regurgitation [4] Grade 0 / 1 / 2 / 3 / 4						
AV Peak gradient (mmHg)						

Footnotes:

1. If the EF was not measured, one of the following grades should be filled in for LVEF and RVEF:
Grade 1: Good > 50%; Grade 2: Moderate 31%-50%; Grade 3: Poor 21%-30%; Grade 4: Very poor ≤ 20%.

2. The grade of mitral valve regurgitation should be one of the following categories:
Grade 0 none or trivial; Grade 1 mild: VC < 3 mm, EROA < 20 mm2, RVol < 30ml; Grade 2 mild to moderate: EROA 20-29 mm2, RVol 30-44 ml; Grade 3 moderate to severe: EROA 30-39 mm2, RVol 45-59 ml; Grade 4 severe: VC ≥ 7 mm, EROA ≥ 40 mm2, RVol ≥ 60 ml.

3. The grade of tricuspid valve regurgitation should be one of the following categories:
Grade 0: None or trivial; Grade 1: Mild - VC < 3 mm, EROA < 20 mm2, RVol < 30ml; Grade 2: Moderate - VC 3.0-6.9 mm, EROA 20-39 mm2, RVol 30-45ml; Grade 3: Severe - VC ≥ 7mm, EROA ≥ 40 mm2, RVol ≥ 45 ml.

4. The grade of aortic valve regurgitation should be one of the following categories:
Grade 0: none or trivial; Grade 1: mild: VC < 3 mm, EROA < 10 mm2, RVol < 30ml; Grade 2: mild to moderate: EROA 10-19 mm2, RVol 30-44 ml Grade 3: moderate to severe: EROA 20-29 mm2, RVol 45-59 ml; Grade 4: severe: VC > 6 mm, EROA ≥ 30 mm2, RVol ≥ 60 ml.

Heart Valve Society
Mitral Tricuspid Valve
Database

FORM 3 | MRI

Version 3.0 (21-11-2024)

Age at surgery | Sex at birth | Mitral Tricuspid ID

Gender | Patient ID *local hospital*

MRI

Date:

	Pre-operative	At discharge	During follow-up
LVEF (%)			
LVEF (grade) [1] 1. Good; 2. Moderate; 3. Poor; 4. Very Poor.			
LVEDD (mm)			
LVESD (mm)			
LV sphericity index			
LVEDV (ml)			
LVESV (ml)			
LV T1 mapping (ms)			
LV ECV (%)			
LV LGE (%)			
LV LGE distribution[2] Grade 0 / 1 / 2 / 3			
LV LGE localization[3] Grade 0 / 1 / 2 / 3 / 4			
Scar mass (%)			
RVEF (%)			
Mitral regurgitation[4] Grade 0 / 1 / 2 / 3 / 4			
MV Tenting height (mm)			
MV Tenting area (cm^2)			
MV AML angle (°)			
MV PML angle (°)			
MV Coaptation length (mm)			
MV Annulus diameter (mm)			
Tricuspid regurgitation[5] Grade 0 / 1 / 2 / 3			

Footnotes:

1. If the EF was not measured, one of the following grades should be filled in for LVEF:
Grade 1: Good > 50%; Grade 2: Moderate 31%-50%; Grade 3: Poor 21%-30%; Grade 4: Very poor ≤ 20%.

2. The following grades should be filled in for LV LGE distribution:
Grade 0: None; Grade 1: Diffuse mid-wall; Grade 2: Regional non-transmural; Grade 3: Regional transmural.

3. The following grades should be filled in for LV LGE localization:
Grade 1: Anterior/Septal; Grade 2: Lateral; Grade 3: Posterior/Inferior; Grade 4: Isolated apical.

4. The grade of mitral valve regurgitation should be one of the following categories:
Grade 0 none or trivial; Grade 1 mild: VC < 3 mm, EROA < 20 mm2, RVol < 30ml; Grade 2 mild to moderate: EROA 20-29 mm2, RVol 30-44 ml; Grade 3 moderate to severe: EROA 30-39 mm2, RVol 45-59 ml; Grade 4 severe: VC ≥ 7 mm, EROA ≥ 40 mm2, RVol ≥ 60 ml.

5. The grade of tricuspid valve regurgitation should be one of the following categories:
Grade 0: None or trivial; Grade 1: Mild - VC < 3 mm, EROA < 20 mm2, RVol < 30ml; Grade 2: Moderate - VC 3.0-6.9 mm, EROA 20-39 mm2, RVol 30-45ml; Grade 3: Severe - VC ≥ 7mm, EROA ≥ 40 mm2, RVol ≥ 45 ml.

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 4 | FOLLOW-UP

Version 3.0 (21-11-2024)

Age at surgery _____ Sex at birth _____ Mitral Tricuspid ID _____

Gender _____ Patient ID *local hospital* _____

FOLLOW-UP

Status ○ Death ○ Alive ○ Lost to follow-up

Follow-up date _____

Routine follow-up

If there was an ECHO and/or MRI conducted, please fill in the "ECHO/MRI repeated measurements form"

NYHA class ○ I ○ II ○ III ○ IV

NT-proBNP (ng/L) _____

Rhythm ○ Sinus ○ Atrial Flutter ○ Paced ○ Atrium fibrillation ○ Other, _____

Childbirth ○ No ○ Yes, date: _____

Antiplatelets ○ No ○ Yes

Oral anticoag. ○ No ○ Yes----------○ VKA ○ DOACs ○ Other

Events since last follow-up

MV or TV related reintervention ○ No ○ Yes

If yes , please fill in the "Reintervention form".

<u>Other cardiac reoperation</u>

Other cardiac reoperation ○ No □ Yes, aortic valve □ Yes, pulmonary valve □ Yes, other reoperation

Cardiac reoperation date: _____

Complications since last follow-up

Endocarditis non operated □ No □ Yes, MV date: _____ □ Yes, TV date: _____

Thrombosis non operated □ No □ Yes, MV date: _____ □ Yes, TV date: _____

Non-cerebral embolic event ○ No ○ Yes, date: _____

Stroke ○ No ○ IS ○ ICH ○ TIA ○ Other, _____ If yes, date: _____

Bleeding ○ No ○ Type I ○ Type II ○ Type III ○ Type IV
if yes, date: _____

PM/CRT implantation ○ No ○ Yes, date: _____

VAD implantation ○ No ○ Yes, date: _____

Heart transplant ○ No ○ Yes, date: _____

Other complication ○ No ○ Yes, specify: _____ Date: _____

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 5A | ADDITIONAL CLAMP SESSION

Version 3.0 (21-11-2024)

Age at surgery | Sex at birth | Mitral Tricuspid ID

Gender | Patient ID *local hospital*

ADDITIONAL CLAMP SESSION

Clamp session number

Main reason for reintervention
o Regurgitation o Stenosis o Bleeding
o Ischemia o Paravalvular leak
o Suture dehiscence o Ring dehiscence
o Other,

Comments ACS:

Type of surgery/ intervention
o No mitral or tricuspid valve o Mitral valve (MV)
o Tricuspid valve (TV) o Combined

Access
o Full sternotomy o Partial sternotomy
o Mini-thoracotomy o Transcatheter o Other

MIS access
o Direct view o 3D endoscopic
o Robotic o Other

Type of trans-catheter access
o Transapical o Transaxillary o Transfemoral
o Transaortic o Subclavian o Transiliac
o Transcarotid o Transcavaln o Other

Anesthesia
o General o Local

Type of MV surgery
□ Surgical MV repair □ Transcatheter MV replacement
□ Surgical MV replacement

Type of surgical MV repair
□ Annuloplasty □ Subannular (adjunct) repair
□ Leaflet repair □ Other,

Type of surgical MR annuloplasty
o None o Partial ring o Complete ring

Model
o Medtronic SIMUFORM o Corcym Memo 4D o LivaNova MEMO 4D
o Medtronic SimuPlus o Corcym Memo 3D o LivaNova MEMO 3D RECHORD
o Medtronic CG FUTURE o Corcym annuloflex o LivaNova MEMO 3D
o Medtronic Profile 3D o Corcym annuloflo o LivaNova Annulofolex
o Edwards Fysio flex o Braille 2088 o LivaNova Annuloflo
o Edwards Physio II o Braille 2158
o Other, Size (mm)

AML- Type of leaflet repair
□ Leaflet augmentation □ Resection □ Edge-to-edge repair
□ Artificial chordae technique □ Other,

AML-Patch type In MV repair
o None o Autologous pericardium glutaraldehyde)
o Fresh autologous pericardium
o Xeno pericardium (gluteraldehyde)
o Other Patch Materials----------o CardioCel
o CorMatrix
o PTFE
o Other,

AML- Type of resection
□ Quadrangular Resection (Q2) □ Triangular Resection
□ Sliding plasty

AML- Artificial chordae technique
o Freehand o Premeasured

PML- Type of leaflet repair
□ Leaflet augmentation □ Resection □ Edge-to-edge repair
□ Artificial chordae technique □ Other,

PML-Patch type In MV repair
o None o Autologous pericardium glutaraldehyde)
o Fresh autologous pericardium
o Xeno pericardium (gluteraldehyde)
o Other Patch Materials----------o CardioCel
o CorMatrix
o PTFE
o Other,

PML- Type of resection
□ Quadrangular Resection (Q2) □ Triangular Resection
□ Sliding plasty

PML- Artificial chordae technique
o Freehand o Premeasured

Location of surgical edge-to-edge repair
□ A1-P1 □ A2-P2 □ A3-P3 □ Commissure

Type of surgical MV replacement
o Mechanical prosthesis o Biological prosthesis

Chordal-sparing MV replacement
o None o PML o AML o Bileaflet

Mechanical Brand
o Abbott SJM o Livanova Carbomedics
o Medtronic Hall o Cryolife ON-X
o Other,

Bioprosthesis Brand
o CE Perimount o CE Magna/Magna Ease
o Medtronic Hancock o Medtronic Mosaic
o St jude Abbott Epic
o Other,

Prosthesis size (mm)

Heart Valve Society
Mitral Tricuspid Valve Database

Age at surgery | Sex at birth | Mitral Tricuspid ID

FORM 5B | ADDITIONAL CLAMP SESSION

Version 3.0 (21-11-2024)

Gender | Patient ID *local hospital*

Transcatheter MV replacement

Bioprosthesis Brand- TMVR
○ Tendyne ○ Tiara ○ CardiAQ
○ Intrepid ○ HighLife ○ Milipede
○ Other,

Bioprosthesis size- TMVR (mm)

Type of TV surgery
○ Surgical TV repair ○ Surgical TV replacement

Type of TV surgical repair
□ Leaflet repair □ Annuloplasty
□ Subbanular repair □ Other,

Type of surgical TV replacement
○ Mechanical prosthesis ○ Biological prosthesis

Mechanical Brand
○ Abbott SJM ○ Livanova Carbomedics
○ Medtronic Hall ○ Cryolife ON-X
○ Other,

Bioprosthesis Brand
○ CE Perimount ○ CE Magna/Magna Ease
○ Medtronic Hancock ○ Medtronic Mosaic
○ St jude Abbott Epic
○ Other,

Prosthesis size (mm)

Additional procedures performed ○ No ○ Yes

Simultaneous MAZE ○ No ○ Yes

Type of MAZE
○ PV box only ○ PV separate
○ Left sided MAZE ○ Biatrial MAZE

Simultaneous LAA closure ○ No ○ Yes

Simultaneous aortic valve
○ None □ Mechanical AV replacement
□ Biological AV replacement □ AV repair
□ Other

Simultaneous CABG ○ None ○ 1x CABG ○ 2x CABG ○ 3x CABG ○ >3x CABG

Simultaneous aorta
○ None ○ Aortic root
○ Ascending aorta ○ Aortic arch

Other additional procedures performed ○ No ○ Yes,

Duration first crossclamping (min)

Duration first cardiopulmonary bypass (min)

More than one clamp session needed ○ No ○ Yes
If yes, fill in another "Additional Clamp Session repeated measurement".

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 6A | REINTERVENTION

Version 3.0 (21-11-2024)

Age at surgery _____ Sex at birth _____ Mitral Tricuspid ID _____

Gender _____ Patient ID *local hospital* _____

REINTERVENTION

Date _____

Type of surgery ○ Mitral valve (MV) ○ Tricuspid Valve (TV) ○ Combined

Main reason for reintervention ○ Regurgitation ○ Stenosis ○ Endocarditis ○ Valve thrombosis ○ Other, _____

Tricuspid valve dysfunction ○ Structural ○ Non-structural

Mitral valve dysfunction ○ Structural ○ Non-structural

Surgeon code _____

Is there a proctor? ○ No ○ Yes

Initial access ○ Full sternotomy ○ Partial sternotomy ○ Mini-thoracotomy ○ Transcatheter ○ Other

MIS access ○ Direct view ○ 3D endoscopic ○ Robotic ○ Other

Conversion of access during procedure ○ None ○ Full sternotomy ○ Partial sternotomy ○ Mini-thoracotomy

Type of trans-catheter access ○ Transapical ○ Transaxillary ○ Transfemoral ○ Transaortic ○ Subclavian ○ Transiliac ○ Transcarotid ○ Transcaval ○ Other

Anesthesia ○ General ○ Local

Mitral valve Disease ○ None ○ Myxomatous degeneration / prolapse ○ Rheumatic ○ Ischemic - acute, post infarction (MI <= 21 days) ○ Ischemic - chronic (MI > 21 days) ○ Non-ischemic Cardiomyopathy ○ Endocarditis ○ Hypertrophic Obstructive Cardiomyopathy (HOCM) ○ Tumor, Carcinoid ○ Tumor, Carcinoid ○ Tumor, Carcinoid ○ Tumor, Myxoma ○ Tumor, Papillary fibroelastoma ○ Tumor, Other ○ Carcinoid ○ Trauma ○ Congenital ○ Pure annular dilatation ○ Reoperation - Failure of previous MV repair or replacement ○ Mixed Etiology, _____ ○ Other, _____

Cusp Analysis MV

	PML *(posterior mitral leaflet)*	AML *(anterior mitral leaflet)*
Normal	○ No ○ Yes	○ No ○ Yes
□ Prolapse	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Perforation	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Calcification	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Vegetation	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Tenting	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Retraction	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Tethering	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3
□ Other,	□ P1 □ P2 □ P3	□ P1 □ P2 □ P3

Intention to repair MV? ○ No ○ Yes

If no, for what reason?

AML length (mm) _____

MV annulus diameter (antero-posterior) (mm) _____

Tricuspid valve disease ○ Secondary ○ Degenerative ○ Secondary and degenerative combined ○ Rheumatic ○ Endocarditis ○ Trauma ○ Congenital ○ Papillary muscle rupture ○ Reoperation - Failure of previous TV repair or replacement ○ PM-related damage ○ Other, _____

Cusp Analysis TV

	Tricuspid valve		
Normal	○ No ○ Yes		
□ Prolapse	□ anterior	□ posterior	□ septal
□ Perforation	□ anterior	□ posterior	□ septal
□ Calcification	□ anterior	□ posterior	□ septal
□ Vegetation	□ anterior	□ posterior	□ septal
□ Tenting	□ anterior	□ posterior	□ septal
□ Retraction	□ anterior	□ posterior	□ septal
□ Tethering	□ anterior	□ posterior	□ septal
□ Other,	□ anterior	□ posterior	□ septal

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 6B | REINTERVENTION

Version 3.0 (21-11-2024)

Age at surgery _____ Sex at birth _____ Mitral Tricuspid ID _____

Gender _____ Patient ID *local hospital* _____

TV annulus max diameter Septal-lateral (mm) _____

Antero-posterior (mm) _____

Comments: _____

Intention to repair TV ○ No ○ Yes ○ Uncertain

If no, for what reason? _____

Type of MV intervention

□ Surgical MV repair □ Transcatheter MV repair
□ Surgical MV replacement □ Transcatheter MV replacement

Was the valve replacement the initial procedure? ○ No ○ Yes

Type of surgical MV repair

□ Annuloplasty □ Subannular (adjunct) repair
□ Leaflet repair □ Other, _____

Type of surgical MV annuloplasty ○ None ○ Partial ring ○ Complete ring

Model

○ Medtronic SIMUFORM ○ Corcym Memo 4D ○ LivaNova MEMO 4D
○ Medtronic SimuPlus ○ Corcym Memo 3D ○ LivaNova MEMO 3D RECHORD
○ Medtronic CG FUTURE ○ Corcym annuloflex ○ LivaNova MEMO 3D
○ Medtronic Profile 3D ○ Corcym annuloflo ○ LivaNova Annulofolex
○ Edwards Fysio flex ○ Braille 2088 ○ LivaNova Annuloflo
○ Edwards Physio II ○ Braille 2158
○ Other, _____ Size (mm) _____

AML- Type of leaflet repair □ Leaflet augmentation □ Resection □ Edge-to-edge repair
□ Artificial chordae technique □ Other, _____

AML-Patch type In MV repair ○ None ○ Autologous pericardium glutaraldehyde)
○ Fresh autologous pericardium
○ Xeno pericardium (gluteraldehyde)
○ Other Patch Materials----------○ CardioCel
○ CorMatrix
○ PTFE
○ Other, _____

AML- Type of resection □ Quadrangular Resection (Q2) □ Triangular Resection
□ Sliding plasty

AML- Artificial chordae technique ○ Freehand ○ Premeasured

PML- Type of leaflet repair □ Leaflet augmentation □ Resection □ Edge-to-edge repair
□ Artificial chordae technique □ Other,

PML-Patch type In MV repair ○ None ○ Autologous pericardium glutaraldehyde)
○ Fresh autologous pericardium
○ Xeno pericardium (gluteraldehyde)
○ Other Patch Materials----------○ CardioCel
○ CorMatrix
○ PTFE
○ Other, _____

PML- Type of resection □ Quadrangular Resection (Q2) □ Triangular Resection
□ Sliding plasty

PML- Artificial chordae technique ○ Freehand ○ Premeasured

Location of surgical edge-to-edge repair
□ A1-P1 □ A2-P2 □ A3-P3 □ Commissure

Type of surgical MV replacement

○ Mechanical prosthesis ○ Biological prosthesis

Chordal-sparing MV replacement ○ None ○ PML ○ AML ○ Bileaflet

Mechanical Brand ○ Abbott SJM ○ Livanova Carbomedics
○ Medtronic Hall ○ Cryolife ON-X
○ Other, _____

Bioprosthesis Brand ○ CE Perimount ○ CE Magna/Magna Ease
○ Medtronic Hancock ○ Medtronic Mosaic
○ St jude Abbott Epic ○ Other, _____

Prosthesis size (mm) _____

Type of transcatheter MV repair

○ Direct annuloplasty ○ Coronary sinus device ○ Edge-to-Edge
○ Annuloplasty + Edge-to-Edge ○ Other, _____

Transcatheter Brand ○ Abbott SJM ○ Edwards Pascal
○ Edwards Cardioband ○ Carillon
○ Other, _____

Type of transcatheter MV replacement

Access site- TMVR ○ Transapical ○ Transseptal ○ Other

Bioprosthesis Brand- TMVR ○ Tendyne ○ Tiara ○ CardiAQ
○ Intrepid ○ HighLife ○ Milipede
○ Other, _____

Bioprosthesis size TMVR (mm) _____

Heart Valve Society
Mitral Tricuspid Valve Database

FORM 6C | REINTERVENTION

Version 3.0 (21-11-2024)

Age at surgery | Sex at birth | Mitral Tricuspid ID

Gender | Patient ID *local hospital*

Type of TV surgery

□ Surgical TV repair
□ Surgical TV replacement
□ Transcatheter TV repair
□ Transcatheter TV replacement

Was the valve replacement the initial procedure? ○ No ○ Yes

Type of surgical TV repair

□ Ring annuloplasty
□ Leaflet repair
□ Other,
□ Suture Annuloplasty (De Vega)
□ Suture Annuloplasty (Kay)

Type of surgical TV annuloplasty ○ None ○ Partial ring ○ Complete ring

Model

○ Medtronic SimuPlus
○ Medtronic Contour 3D
○ Medtronic Tri-Ad™ 2.0 Adams
○ Corcym Sovering
○LivaNova Annuloflex
○ Other,
○ Edwards Cosgrove-Edwards
○ Edwards Physio tricuspid
○ Edwards MC3
○ Corcym annuloflo
○ Labcor STAR
Size (mm)

Type of surgical TV replacement

○ Mechanical prosthesis ○ Biological prosthesis

Mechanical Brand ○ Abbott SJM ○ Livanova Carbomedics ○ Medtronic Hall ○ Cryolife ON-X ○ Other,

Bioprosthesis Brand ○ CE Perimount ○ CE Magna/Magna Ease ○ Medtronic Hancock ○ Medtronic Mosaic ○ St jude Abbott Epic ○ Other,

Prosthesis size (mm)

Type of transcatheter TV repair

○ Edge-to-Edge ○ Annuloplasty ○ Other,

Transcatheter Brand ○ Abbott MitraClip ○ Edwards Pascal ○ Edwards Cardioband ○ Other,

Type of transcatheter TV replacement

Access site- TTVR ○ Transapical ○ Femoral ○ Jugular ○ Other

Bioprosthesis brand- TTVR

Bioprosthesis size (mm) - TTVR

Additional procedures performed ○ No ○ Yes

Simultaneous MAZE ○ No ○ Yes

Type of MAZE ○ PV box only ○ PV separate ○ Left sided MAZE ○ Biatrial MAZE

Simultaneous LAA closure ○ No ○ Yes

Simultaneous aortic Valve ○ AV repair ○ Mechanical AV replacement ○ Biological AV replacement ○ None ○ Other

Simultaneous aorta ○ None ○ Aortic root ○ Ascending aorta ○ Aortic arch

Other additional procedures performed ○ No ○ Yes,

Duration first aortic crossclamping

Duration first cardiopulmonary bypass

More than one clamp session needed ○ No ○ Yes

Main reason for clamp session ○ Regurgitation ○ Stenosis ○ Bleeding ○ Ischemia ○ Paravalvular leak ○ Suture dehiscence ○ Ring dehiscence ○ Other,

Age at surgery | Sex at birth | Mitral Tricuspid ID

Gender | Patient ID *local hospital*

EQ-5D-5L: Health Questionnaire

English version for UK

Under each heading, please tick the ONE box that best describes your health TODAY.

MOBILITY

- I have no problems in walking about ❑
- I have slight problems in walking about ❑
- I have moderate problems in walking about ❑
- I have severe problems in walking about ❑
- I am unable to walk about ❑

SELF-CARE

- I have no problems washing or dressing myself ❑
- I have slight problems washing or dressing myself ❑
- I have moderate problems washing or dressing myself ❑
- I have severe problems washing or dressing myself ❑
- I am unable to wash or dress myself ❑

USUAL ACTIVITIES *(e.g. work, study, housework, family or leisure activities)*

- I have no problems doing my usual activities ❑
- I have slight problems doing my usual activities ❑
- I have moderate problems doing my usual activities ❑
- I have severe problems doing my usual activities ❑
- I am unable to do my usual activities ❑

PAIN / DISCOMFORT

- I have no pain or discomfort ❑
- I have slight pain or discomfort ❑
- I have moderate pain or discomfort ❑
- I have severe pain or discomfort ❑
- I have extreme pain or discomfort ❑

ANXIETY / DEPRESSION

- I am not anxious or depressed ❑
- I am slightly anxious or depressed ❑
- I am moderately anxious or depressed ❑
- I am severely anxious or depressed ❑
- I am extremely anxious or depressed ❑

Age at surgery | Sex at birth | Mitral Tricuspid ID

FORM 7B | PATIENT-REPORTED OUTCOMES

Gender | Patient ID *local hospital*

Version 3.0 (21-11-2024)

- We would like to know how good or bad your health is TODAY.
- This scale is numbered from 0 to 100.
- 100 means the best health you can imagine.
  0 means the worst health you can imagine.
- Please mark an X on the scale to indicate how your health is TODAY.
- Now, write the number you marked on the scale in the box below.

YOUR HEALTH TODAY = ☐