



Datasets
 The STST National Adult Cardiac Surgical Database

*The Society of Thoracic Surgeons of Thailand
 National Adult Cardiac Surgical Database*

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Appendices

Patient identification & demographics

Hospital name Patient name
 Consultant name-surname Patient surname
 Surgeon name-surname Date of birth [dd/mm/yyyy]
 Anesthetist name-surname Patient gender 1. Male 2. Female
 Hospital number Patient domicile
 Patient identification number

Admission details

Date of admission [dd/mm/yyyy]
 Payer 1. Universal coverage 2. Social security 3. Civil servants
 4. Self payment 5. Private 6. Others

Cardiac History

Angina status pre-surgery CCS (No sign)
 CCS1 (No limitation of physical activity)
 CCS2 (Slight limitation of ordinary physical activity)
 CCS3 (Marked limitation of ordinary physical activity)
 CCS4 (Symptoms at rest or minimal activity)
 Dyspnea status pre-surgery NYHA I NYHA II NYHA III NYHA IV
 Number of previous MIs None One Two or more Unknown
 Interval between surgery and last MI
 No previous MI MI <6 Hours MI 6-24 Hours
 MI 1-7 days MI 8-21 days MI 22-90 days
 MI >90 days

Previous Investigation

Previous PCI No PCI
 PCI <24 hrs before surgery
 PCI >24 hrs before surgery, same admission
 PCI >24 hrs before surgery, previous admission
 Date of last PCI [dd/mm/yyyy]
 Previous cardiac, vascular or thoracic surgical interventions
 None carotid endarterectomy/stenting
 CABG other peripheral vascular
 Valve
 Congenital cardiac
 Other cardiac
 Asc. Aorta / Aortic arch
 Desc. Aorta / Abd. aorta
 Other thoracic
 Date of last cardiac operation [dd/mm/yyyy]

Risk Factors for the Acquisition of Coronary Disease

Diabetic management > Not diabetic Diet Oral Therapy Insulin
 Cigarette smoking history Never smoke Ex-smoker Current smoker
 Hypertension No hypertension
 Treated or BP >140/90 on one occasion prior to admission
 Unknown
 Hypercholesterolemia No Yes Unknown

Remark Choose only one choice
 Can choose more than one choice



Additional Medical History and Risk Factors

Renal disease at the time of surgery

- No renal disease
- Dialysis: Acute renal failure, onset within 6 week of cardiac surgery
- Dialysis: Chronic renal failure, more than 6 weeks prior to cardiac surgery
- Functioning transplant
- Creatinine >2.0 mg

History of pulmonary disease

- No
- COPD/Emphysema
- Asthma
- TB

History of neurological disease

- No history of neurological disease
- TIA or RIND
- CVA with full recovery
- CVA with residual deficit

Significant carotid stenosis >50%

- Yes
- No

Neurologic dysfunction (Euroscore)

- Yes
- No

Peripheral vascular disease

- Yes
- No

Pre-operative heart rhythm

- Sinus rhythm
- Atrial fibrillation
- VT / VF
- Complete heart block / paced
- Other abnormal rhythm

Cardiac Investigation

Left or right heart catheterization

- Never
- This admission
- Previous admission

Date of catheterization [dd/mm/yyyy]

Extent of coronary artery disease

- No vessel with >50% diameter stenosis
- One vessel with >50% diameter stenosis
- Two vessels with >50% diameter stenosis
- Three vessels with >50% diameter stenosis
- Not investigated

Left main stem disease

- No LMS disease/LMS disease ≤50% diameter stenosis
- LMS disease >50% diameter stenosis
- Not investigated

Ejection fraction (value if known)

.....

Ejection fraction category

- Good (>49%)
- Fair (30-49%)
- Poor (30%)
- Not measured

PA systolic if known

.....

LVEDP (mmHg)

AV gradient if known

.....

Mean PAWP/LA (mmHg)

Preoperative status and support

IV nitrates/Heparin of any kind

- No
- Until operation
- Within one week

IV inotropes prior to anesthesia

- No
- Yes

Ventilated

- No
- Yes

Cardiogenic shock

- No
- Yes

Operation

Date and time of operation [dd/mm/yyyy]

Operative urgency

- Elective
- Urgent
- Emergency
- salvage

Number of previous heart operations

Procedures Classified by group

Cardiac procedures

- CABG alone
- CABG & other
- Valve alone
- Valve & other
- CABG & valve
- CABG & valve & other
- Other

Other cardiac procedures

- None
- LV aneurysmectomy
- Cardiac trauma
- Acquired VSD
- Cardiac transplant
- Atrial myxoma
- Epicardial pacemaker
- ASD closure
- Pericardiectomy
- Pulmonary embolectomy
- Other procedure for congenital condition
- Pulmonary transplant
- Other procedure not listed above

Other thoracic and vascular procedures

- None
- Aorta or peripheral vascular
- Carotid endarterectomy
- Other Thoracic



Graft Procedure Data	Graft 1	Graft 2	Graft 3	Graft 4	Graft 5	Graft 6
Graft site 1. Prox.RCA 2. Mid RCA 3. Dist RCA 4. RCA-PDA 5. RCA-LV 6. LMS 7. Prox LAD 8. Mid LAD 9. Dis LAD 10. Diag1 11. Diag 2 12. ProxCx 13. OM1 14. OM2 15. Intermediate 16. Dist LCX 17. Cx-PDA						
Graft conduit 1. Pedicle LIMA 2. Pedicle RIMA 3. Pedicle RGEA 4. Free LIMA 5. Free RIMA 6. Free RGEA 7. Radial artery 8. Long SV 9. Short SV 10. Cephalic 11. Other artery 12. Other Vein						
Anastomosis 1. End to side 2. Side to side						
Number of distal coronary anastomosis						

Valve Procedure Data	Aortic valve	Mitral valve	Tricuspid valve	Pulmonary v.
Haemodynamic pathology	<input type="checkbox"/> None <input type="checkbox"/> Regurgitation <input type="checkbox"/> Stenosis <input type="checkbox"/> Mixed	<input type="checkbox"/> None <input type="checkbox"/> Regurgitation <input type="checkbox"/> Stenosis <input type="checkbox"/> Mixed	<input type="checkbox"/> None <input type="checkbox"/> Regurgitation <input type="checkbox"/> Stenosis <input type="checkbox"/> Mixed	<input type="checkbox"/> None <input type="checkbox"/> Regurgitation <input type="checkbox"/> Stenosis <input type="checkbox"/> Mixed
Explant valve type	<input type="checkbox"/> None <input type="checkbox"/> Native valve <input type="checkbox"/> Mechanical <input type="checkbox"/> Biological <input type="checkbox"/> Homograft <input type="checkbox"/> Autograft <input type="checkbox"/> Ring	<input type="checkbox"/> None <input type="checkbox"/> Native valve <input type="checkbox"/> Mechanical <input type="checkbox"/> Biological <input type="checkbox"/> Homograft <input type="checkbox"/> Autograft <input type="checkbox"/> Ring	<input type="checkbox"/> None <input type="checkbox"/> Native valve <input type="checkbox"/> Mechanical <input type="checkbox"/> Biological <input type="checkbox"/> Homograft <input type="checkbox"/> Autograft <input type="checkbox"/> Ring	<input type="checkbox"/> None <input type="checkbox"/> Native valve <input type="checkbox"/> Mechanical <input type="checkbox"/> Biological <input type="checkbox"/> Homograft <input type="checkbox"/> Autograft <input type="checkbox"/> Ring
Native valve pathology	1. Congenital 2. Degenerative valve 3. Active endocarditis 4. Previous endocarditis 5. Rheumatic 6. Annuloaortic ectasia 7. Calcific degeneration 8. Ischaemic 9. Functional 10. Other native valve patho.	1. Congenital 2. Degenerative valve 3. Active endocarditis 4. Previous endocarditis 5. Rheumatic 6. Annuloaortic ectasia 7. Calcific degeneration 8. Ischaemic 9. Functional 10. Other native valve patho.	1. Congenital 2. Degenerative valve 3. Active endocarditis 4. Previous endocarditis 5. Rheumatic 6. Annuloaortic ectasia 7. Calcific degeneration 8. Ischaemic 9. Functional 10. Other native valve patho.	1. Congenital 2. Degenerative valve 3. Active endocarditis 4. Previous endocarditis 5. Rheumatic 6. Annuloaortic ectasia 7. Calcific degeneration 8. Ischaemic 9. Functional 10. Other native valve patho.
Other native valve pathology				
Reason for repeat valve surgery	<input type="radio"/> None <input type="radio"/> Thrombosis ingrowths of tissue valve <input type="radio"/> Dehiscence <input type="radio"/> Embolism <input type="radio"/> Infection <input type="radio"/> Intrinsic valve failure <input type="radio"/> Haemolysis <input type="radio"/> Other	<input type="radio"/> None <input type="radio"/> Thrombosis ingrowths of tissue valve <input type="radio"/> Dehiscence <input type="radio"/> Embolism <input type="radio"/> Infection <input type="radio"/> Intrinsic valve failure <input type="radio"/> Haemolysis <input type="radio"/> Other	<input type="radio"/> None <input type="radio"/> Thrombosis ingrowths of tissue valve <input type="radio"/> Dehiscence <input type="radio"/> Embolism <input type="radio"/> Infection <input type="radio"/> Intrinsic valve failure <input type="radio"/> Haemolysis <input type="radio"/> Other	<input type="radio"/> None <input type="radio"/> Thrombosis ingrowths of tissue valve <input type="radio"/> Dehiscence <input type="radio"/> Embolism <input type="radio"/> Infection <input type="radio"/> Intrinsic valve failure <input type="radio"/> Haemolysis <input type="radio"/> Other
Other reason for repeat valve surgery				
Valve procedure	<input type="radio"/> Replacement <input type="radio"/> Repair <input type="radio"/> None	<input type="radio"/> Replacement <input type="radio"/> Repair <input type="radio"/> None	<input type="radio"/> Replacement <input type="radio"/> Repair <input type="radio"/> None	<input type="radio"/> Replacement <input type="radio"/> Repair <input type="radio"/> None
Implant type	<input type="radio"/> Mechanical <input type="radio"/> Biological <input type="radio"/> Homograft <input type="radio"/> Autograft <input type="radio"/> Ring <input type="radio"/> None	<input type="radio"/> Mechanical <input type="radio"/> Biological <input type="radio"/> Homograft <input type="radio"/> Autograft <input type="radio"/> Ring <input type="radio"/> None	<input type="radio"/> Mechanical <input type="radio"/> Biological <input type="radio"/> Homograft <input type="radio"/> Autograft <input type="radio"/> Ring <input type="radio"/> None	<input type="radio"/> Mechanical <input type="radio"/> Biological <input type="radio"/> Homograft <input type="radio"/> Autograft <input type="radio"/> Ring <input type="radio"/> None
Implant prosthesis (heart valve registry code)				
Valve or ring size/mm				
Number of valves replaced/repaired.....				



Aortic procedure data

Appendices

Aortic procedure	Root	Ascending	Arch	Descending	Abdominal
	<input type="radio"/> Interposition tube graft <input type="radio"/> Tube graft + separate AVR <input type="radio"/> Root replacement with composite valve graft and coronary reimplantation <input type="radio"/> Rot replacement with preservation of native valve and coronary reimplantation <input type="radio"/> Homograft root replacement <input type="radio"/> Autograft root replacement (Ross procedure) <input type="radio"/> Sinus of valsalva repair <input type="radio"/> Reduction aortoplasty <input type="radio"/> Aortic patch graft <input type="radio"/> Endovascular stenting	<input type="radio"/> Interposition tube graft <input type="radio"/> Tube graft + separate AVR <input type="radio"/> Root replacement with composite valve graft and coronary reimplantation <input type="radio"/> Root replacement with preservation of native valve and coronary reimplantation <input type="radio"/> Homograft root replacement <input type="radio"/> Autograft root replacement (Ross procedure) <input type="radio"/> Sinus of valsalva repair <input type="radio"/> Reduction aortoplasty <input type="radio"/> Aortic patch graft <input type="radio"/> Endovascular stenting	<input type="radio"/> Interposition tube graft <input type="radio"/> Tube graft + separate AVR <input type="radio"/> Root replacement with composite valve graft and coronary reimplantation <input type="radio"/> Root replacement with preservation of native valve and coronary reimplantation <input type="radio"/> Homograft root replacement <input type="radio"/> Autograft root replacement (Ross procedure) <input type="radio"/> Sinus of valsalva repair <input type="radio"/> Reduction aortoplasty <input type="radio"/> Aortic patch graft <input type="radio"/> Endovascular stenting	<input type="radio"/> Interposition tube graft <input type="radio"/> Tube graft + separate AVR <input type="radio"/> Root replacement with composite valve graft and coronary reimplantation <input type="radio"/> Root replacement with preservation of native valve and coronary reimplantation <input type="radio"/> Homograft root replacement <input type="radio"/> Autograft root replacement (Ross procedure) <input type="radio"/> Sinus of valsalva repair <input type="radio"/> Reduction aortoplasty <input type="radio"/> Aortic patch graft <input type="radio"/> Endovascular stenting	<input type="radio"/> Interposition tube graft <input type="radio"/> Tube graft + separate AVR <input type="radio"/> Root replacement with composite valve graft and coronary reimplantation <input type="radio"/> Root replacement with preservation of native valve and coronary reimplantation <input type="radio"/> Homograft root replacement <input type="radio"/> Autograft root replacement (Ross procedure) <input type="radio"/> Sinus of valsalva repair <input type="radio"/> Reduction aortoplasty <input type="radio"/> Aortic patch graft <input type="radio"/> Endovascular stenting
Aortic Pathology***					
Number of Aortic					

- Aortic pathology:**
- | | | | |
|----------------|-----------------|---------------|----------------|
| 1. Aneurysm | 2. Syphilis | 3. Dissection | 4. Transection |
| 5. Coarctation | 6. Atheromatous | 7. Marfans | 8. Mycotic |

Cardiopulmonary support

- Cardiopulmonary bypass No Yes
- Predominant myocardial protection Cardioplegia Non-cardioplegia
- Cardioplegia-solution Not applicable Blood Crystalloid
- Cardioplegia-Temperature Not applicable Warm Cold
- Cardioplegia-Infusion mode Not applicable Antegrade Retrograde Combine
- Cardioplegia-Timing Not applicable Continuous Intermittent
- Non-cardioplegia myocardial protection Not applicable
- Aortic cross-clamping with fibrillation
- Fibrillation with perfusion
- Cross-clamp with direct coronary perfusion
- Beating heart with cross-clamp
- Beating heart without cross-clamp
- Intra-aortic balloon pump used No Pre-op Intra-op Post-op
- Reason for IABP use Not applicable
- Hemodynamic instability
- Unstable angina
- CPB wean
- Prophylactic
- Body temperature during CPB Normothermia Mild Moderate Profound
- Cerebral protection Retrograde Antegrade None

Patient height in cm Patient weight in kg

Cumulative bypass time (min) Cumulative cross-clamp time (min)

Total circulatory arrest time (min)



Postoperative course

- Patient status of 30 days operation date NA Dead Alive
- Re-operation No reoperation
- required for bleeding or tamponade Sternal resuturing (sterile)
- for graft problems for deep sternal wound infection
- for valvular problems for other cardiac problems
- New-post-operative stroke No Transient Permanent
- Renal failure need dialysis No Yes
- Pulmonary complication No Yes
- GI complication No Yes
- New heart failure No Yes
- Periop MI No Yes
- Arrhythmias No Yes AF SVT
- Pericardial Effusion No Yes Fever No Yes
- Discharge destination Not applicable Home Other hospital Convalescence
- Patient status at discharge NA Alive Dead

Date of discharge/Date of death [dd/mm/yyyy] (must more than Date of admission**)

EuroSCORE** Additive..... Logistic.....

Heart valve registry code	
Bioprosthetic	Mechanical
B1 = Baxter Prima Plus Stentless Porcine	M1 = ATS
B2 = Baxter Prima Stentless Porcine	M2 = Medtronic Hall
B3 = Biocor Porcine	M3 = St. Jude Medical
B4 = Biocor Stentless Porcine	M4 = Carbomedics
B5 = Carbomedics PhotoFix Pericardial	M5 = Baxter Mira
B6 = Carpentier-Edwards Pericardial	M6 = Sorin Monoleaflet Allcarbon
B7 = Carpentier-Edwards Perimount Magna Pericardium	M7 = Lillehei-Kaster
B8 = Carpentier-Edwards Standard Porcine	M8 = Omniscience
B9 = Carpentier-Edwards Supra-Annular Porcine	M9 = OmniCarbon
B10 = Medtronic Freestyle Stentless Porcine	M10 = On-X
B11 = Medtronic Intact Porcine	M11 = Starr-Edwards Caged Ball
B12 = Medtronic Mosaic Porcine	M12 = not listed
B13 = Medtronic Mosaic Ultra	
B14 = St. Jude Medical Toronto SPV Stentless Porcine	
B15 = SJM Biocor Stented Valve	
B16 = SJM Biocor Stented Valve Supra	
B17 = SJM Epic Stented Valve	
B18 = SJM Epic Supra Stented Valve	
B19 = St. Jude Medical Bioimplant Porcine	
B00 = not listed	
Homograft	Ring
H1 = Aortic-Subcoronary	R1 = Carpentier-Edwards Classic
H2 = Aortic root/Cylinder	R2 = Carpentier-Edwards Physio
H3 = Mitral	R3 = Cosgrove
H4 = Pulmonic root	R4 = Medtronic Sculptor
H5 = Cryolife	R5 = Medtronic Duran
H6 = Lillehei-Kastor	R6 = Sorin Puig Messana
H7 = Medtronic Hall	R7 = Sorin (CarboMedics) Annuloflex
H8 = Red Cross	R8 = Sorin Memo 3D (Semi rigid)
H9 = Fresh/Antibiotic Preserved	R9 = St. Jude Medical Sequin
H10 = not listed	R10 = CA-ED Geoform ring
	R11 = IMR FTLogix ring
	R12 = Myxo ring
	R13 = CA-ED Tricuspid Classic ring
	R14 = CA-ED Mc Tricuspid ring
Autograft	
A1 = Pulmonic root	
777 = not otherwise specified	