

Supplementary Table 1. Intraoperative details.

Mitral valve replacement (n= 52)	
Prosthetic valve types	
Medtronic Mosaic ^a	20 (38.5)
Perimount Magna ^b	10 (19.2)
St. Jude Medical Regent ^c	22 (42.3)
Prosthesis size (mm)	
27	6 (11.5)
29	21 (40.4)
31	16 (30.8)
33	9 (17.3)
Mitral valve repair (n=97)	
Prosthetic ring annuloplasty	86 (88.7)
Carbomedics Annuloflex ^d	1 (1.2)
Medtronic CG Future ^a	1 (1.2)
Memo 3D ^e	4 (4.6)
Physio ^b	80 (93.0)

^aMedtronic, Minneapolis, MN, USA; ^bEdwards Lifesciences, Irvine, CA, USA; ^cSt. Jude Medical, Little Canada, MN, USA; ^dCarbomedics, Austin, TX, USA; ^eLivaNova Group, Milan, Italy.

Supplementary Table 2.

Results of the univariable Cox regression analyses.

	All time mortality			Mortality within 1 year after surgery (pre-landmark)			Mortality beyond 1 year after surgery (post-landmark)		
	HR	95% CI	P-value	HR	95% CI	P-value	HR	95% CI	P-value
MV replacement	1.730	0.986-3.034	0.056	1.354	0.647-2.835	0.422	2.441	1.033-5.766	0.042
Age (years)	1.047	1.021-1.074	0.000	1.042	1.007-1.077	0.018	1.054	1.014-1.096	0.008
Gender (female)	0.906	0.483-1.697	0.757	0.826	0.353-1.934	0.660	1.017	0.400-2.584	0.972
Renal impairment									
CC <50 mmol/min	2.141	1.171-3.913	0.013	1.947	0.843-4.499	0.119	2.380	0.997-5.678	0.051
Dialysis	5.202	2.143-12.631	0.000	6.475	2.297-18.252	0.000	2.365	0.295-18.969	0.418
Hypertension	1.097	0.628-1.919	0.745	1.079	0.509-2.284	0.843	1.121	0.485-2.595	0.789
Chronic lung disease	2.468	1.200-5.074	0.014	2.208	0.842-5.789	0.107	2.876	0.973-8.505	0.056
Diabetes mellitus	1.428	0.698-2.934	0.332	1.277	0.487-3.347	0.619	1.665	0.565-4.905	0.355
Symptomatic MR	1.646	0.948-2.858	0.077	1.440	0.688-3.015	0.334	1.954	0.854-4.470	0.113
Atrial fibrillation	1.758	0.871-3.547	0.115	1.930	0.824-4.519	0.130	1.460	0.418-5.102	0.553
Impaired LV function	1.653	0.877-3.116	0.120	2.472	1.167-5.239	0.018	0.623	0.145-2.667	0.525
Previous cardiac surgery	2.543	1.402-4.613	0.002	2.472	1.148-5.322	0.021	2.655	1.035-6.812	0.042
Peripheral embolism	0.934	0.498-1.752	0.832	1.253	0.570-2.751	0.575	0.594	0.201-1.750	0.344
<i>Staphylococcus Aureus</i> infection	1.501	0.769-2.930	0.234	1.591	0.679-3.725	0.285	1.371	0.463-4.065	0.569
Underlying MV disease	0.821	0.455-1.481	0.513	0.831	0.378-1.825	0.644	0.809	0.332-1.971	0.641
Aortic valve surgery	1.538	0.889-2.660	0.124	1.528	0.735-3.178	0.256	1.550	0.679-3.539	0.298
Tricuspid valve surgery	1.521	0.792-2.918	0.208	1.615	0.715-3.648	0.249	1.370	0.459-4.093	0.573
CABG	2.258	1.046-4.873	0.038	1.904	0.726-4.993	0.190	3.208	0.893-11.526	0.074
Annulus infection	2.332	1.164-4.675	0.017	2.468	1.053-5.783	0.038	2.091	0.619-7.068	0.235
Urgent surgery	1.907	0.859-4.236	0.113	1.974	0.686-5.677	0.207	1.825	0.540-6.166	0.333
Preoperative AV block de novo	5.335	2.085-13.649	<0.001	7.540	2.847-19.967	0.000	0.048	0.000-2.1×10 ⁶	0.736

Abbreviations: AV: atrioventricular; CABG: coronary artery bypass grafting; CI: confidence interval; CPB: cardiopulmonary bypass; HR: hazard ratio; LV: left ventricle; MV: mitral valve; MR: mitral regurgitation.

Supplementary Table 3.

Results of the multivariable Cox regression analyses.

	All time mortality			Mortality within 1 year after surgery (pre-landmark)			Mortality beyond 1 year after surgery (post-landmark)		
	HR	95% CI	P-value	HR	95% CI	P-value	HR	95% CI	P-value
MV replacement	1.430	0.760-2.690	0.267	1.134	0.506-2.540	0.760	2.534	1.002-6.406	0.049
Age (years)	1.046	1.012-1.081	0.008	1.041	0.997-1.087	0.065	1.041	1.000-1.084	0.052
Gender (female)									
Renal impairment			0.020			0.005			
CC <50 mmol/min	1.064	0.513-2.206	0.868	1.069	0.402-2.844	0.894			
Dialysis	3.950	1.484-10.512	0.006	5.666	1.861-17.253	0.002			
Hypertension									
Chronic lung disease	2.923	1.345-6.351	0.007	2.568	0.945-6.974	0.064	2.477	0.777-7.894	0.125
Diabetes mellitus									
Symptomatic MR	1.769	0.992-3.154	0.053				1.875	0.792-4.434	0.153
Atrial fibrillation									
Impaired LV function	1.745	0.887-3.430	0.107	2.475	1.094-5.599	0.030			
Previous cardiac surgery							2.401	0.875-6.589	0.089
Peripheral embolism									
<i>Staphylococcus Aureus</i> infection									
Underlying MV disease									
Aortic valve surgery									
Tricuspid valve surgery									
CABG	2.192	0.960-5.003	0.062				3.449	0.920-12.919	0.066
Annulus infection	2.016	0.915-4.845	0.080						
Urgent surgery									
Preoperative AV block de novo	6.623	2.342-18.729	<0.001	8.371	2.802-25.003	<0.001			

Abbreviations: AV: atrioventricular; CABG: coronary artery bypass grafting; CI: confidence interval; CPB: cardiopulmonary bypass; HR: hazard ratio; LV: left ventricle; MV: mitral valve; MR: mitral regurgitation.

Supplementary Table 4:

Baseline patient characteristics of all patients included in the late phase analysis (post-landmark, beyond 1 year after surgery).

	Mitral Valve Repair (n=80)	Mitral Valve Replacement (n=40)	P-Value
Age (years)	55.5 ± 13.0	60.0 ± 13.1	0.073
Gender (female)	16 (20.0)	19 (47.5)	0.002
Renal impairment			
CC <50 mmol/l	34 (42.5)	20 (50.0)	0.445
Dialysis	2 (2.5)	2 (5.0)	0.600
Hypertension	30 (37.5)	14 (35.0)	0.789
Chronic lung disease	6 (7.5)	3 (7.5)	0.999
Diabetes mellitus	5 (6.3)	11 (27.5)	0.001
Symptomatic mitral regurgitation	26 (32.5)	12 (30.0)	0.781
Atrial fibrillation	12 (15.0)	4 (10)	0.448
Impaired left ventricular function	17 (21.3)	5 (12.5)	0.243
Previous cardiac surgery	16 (20.0)	4 (10.0)	0.166
Peripheral embolism	19 (23.8)	12 (30)	0.461
Causative microorganism			0.622
<i>Streptococcus</i> spp.	47 (58.8)	23 (57.5)	
<i>Staphylococcus Aureus</i>	11 (13.8)	7 (17.5)	
<i>Staphylococcus</i> spp. (other)	3 (3.8)	0 (0)	
<i>Enterococcus Faecalis</i>	8 (10.0)	6 (15.0)	
Other or culture negative	11 (13.8)	4 (10.0)	
Underlying mitral valve disease	22 (27.5)	20 (50.0)	0.025
Annular infection	3 (3.8)	8 (20.0)	0.007
Annular calcification	4 (5.1)	5 (12.5)	0.270
Concomitant surgery			
Aortic valve surgery	37 (46.3)	16 (40.0)	0.516
Tricuspid valve surgery	15 (18.8)	8 (20.0)	0.870
CABG	8 (10.0)	3 (7.5)	0.750
Aortic cross clamp time (min)	192 ± 91	193 ± 118	0.988
Cardiopulmonary bypass time (min)	242 ± 120	228 ± 87	0.539
Primary Indication for Surgery			0.130
Heart failure	4 (5.0)	6 (15.0)	
Uncontrolled Infection	21 (26.3)	8 (20.0)	
Prevention of Embolism	18 (22.5)	14 (35.0)	
Severe Mitral Regurgitation	32 (40.0)	11 (27.5)	
Severe Aortic Regurgitation	5 (6.3)	1 (2.5)	

Data are presented as n (%) or means ± standard deviations. Abbreviations: CABG: coronary artery bypass surgery; CC: creatinine clearance.