

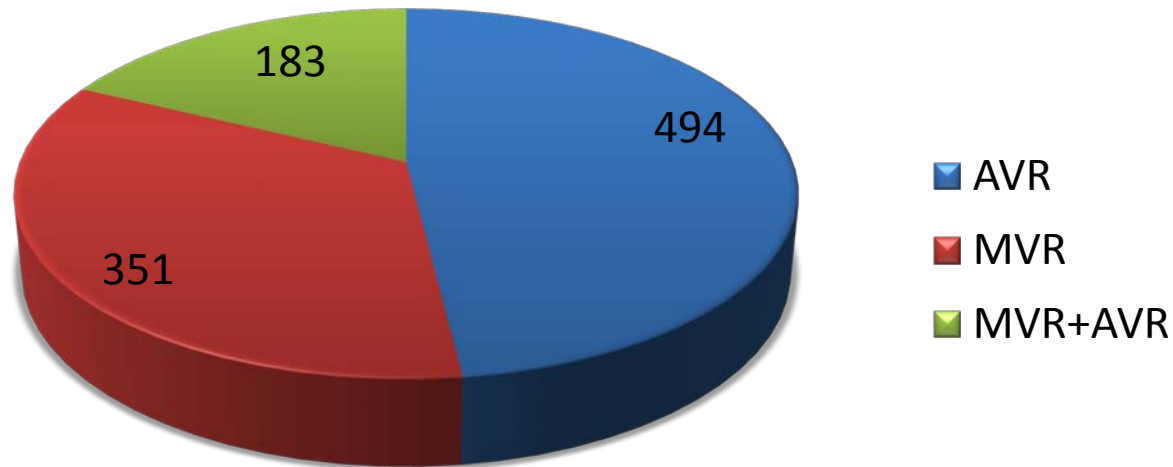
MedEng-2 / CardiaMed

10 years of clinical use

The Research Institute for Transplantology and
Artificial Organs, Moscow

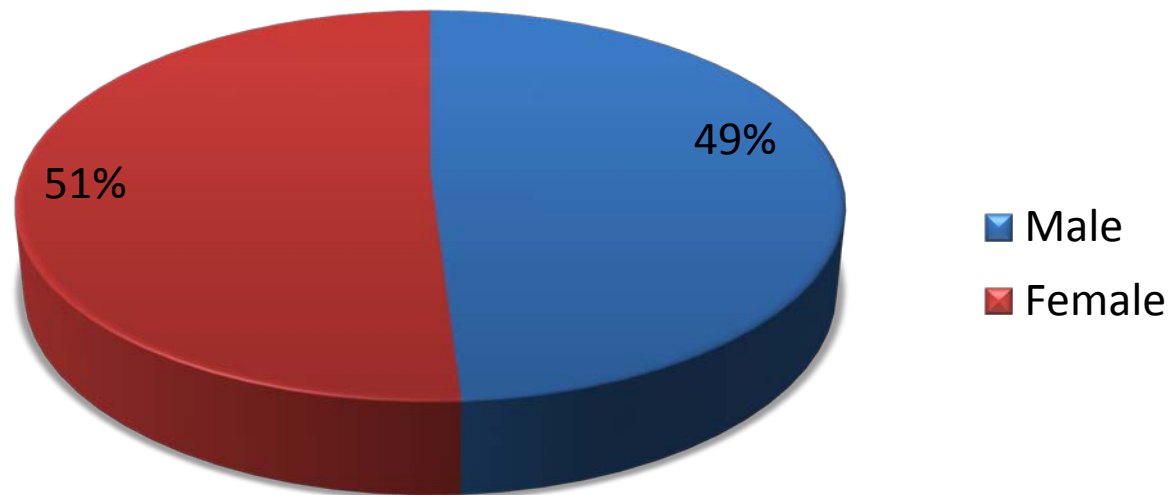
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Number of implants (n=1028)



Demography

- Age at operation 16 to 83 years.
Mean age 49.6 ± 10.4



Patient characteristics

	AVR (n=494)	MVR (n=351)	DVR (n=183)
Rheumatism	269(54.4%)	275 (78.3%)	99(54.1%)
Endocarditis	109(22.1%)	34 (9.6%)	58 (31.6%)
Atherosclerosis	68 (13.7%)	24 (6.8%)	25 (13.6%)
Congenital anomalies	36 (7.2%)	2 (0.7%)	
Degeneration	12 (3.8%)	16(11.7%)	1

Patient characteristics (2)

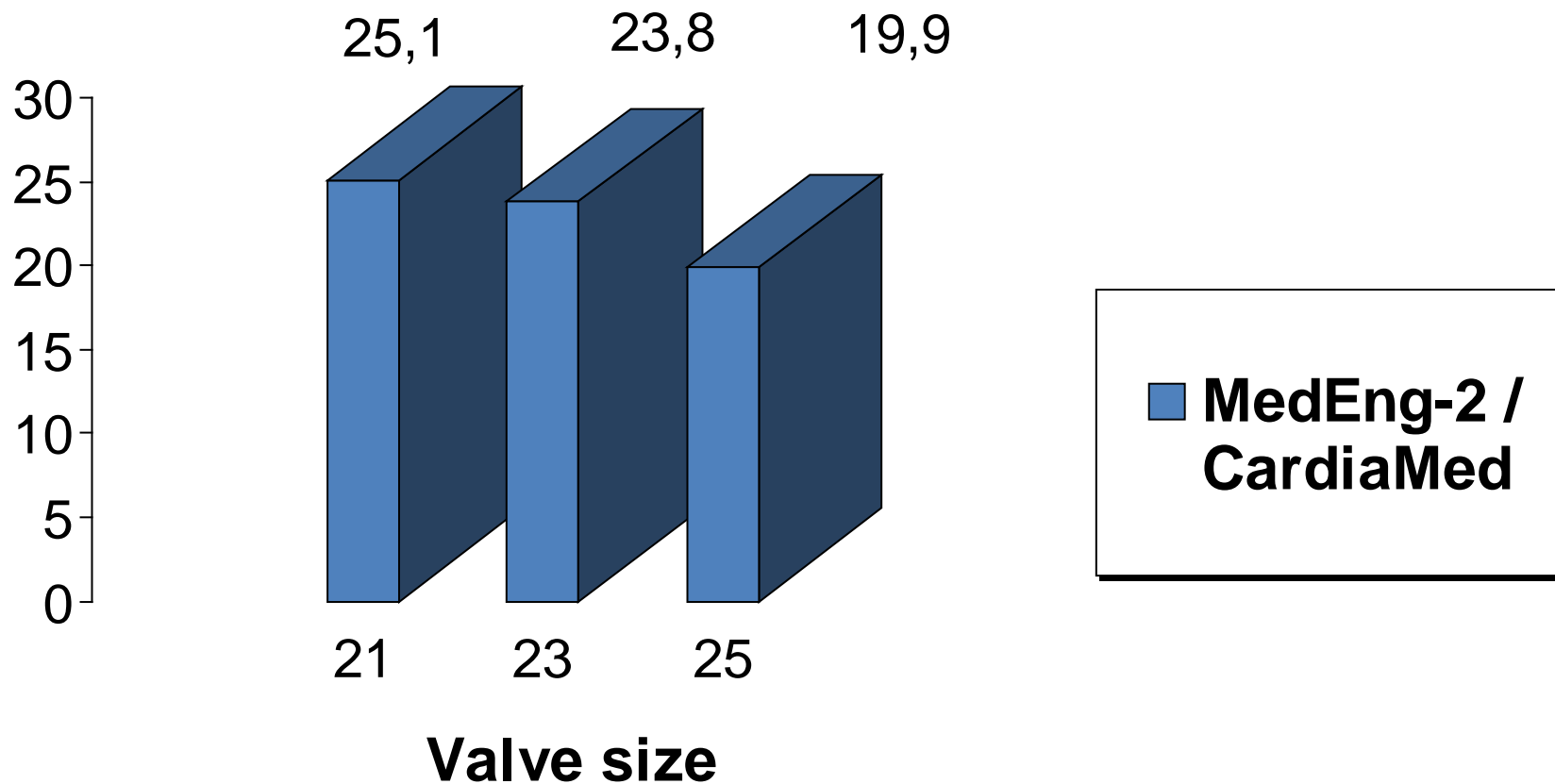
	AVR (n=494)	MVR (n=351)	DVR (n=183)
Circ. insuff. IIA	299	225	68
Circ. insuff. IIB	57 (16.0%)	73 (24.5%)	25 (26.8%)
FC III	277	225	60
FC IV	79 (22.2%)	73 (24.5%)	33 (35.5%)
Reoperation	29	81(10 MVR)	17
Flick. arrhyth.	19 (5.3%)	169 (56.7%)	50 (53.8%)

Concomitant pathology and additional interventions

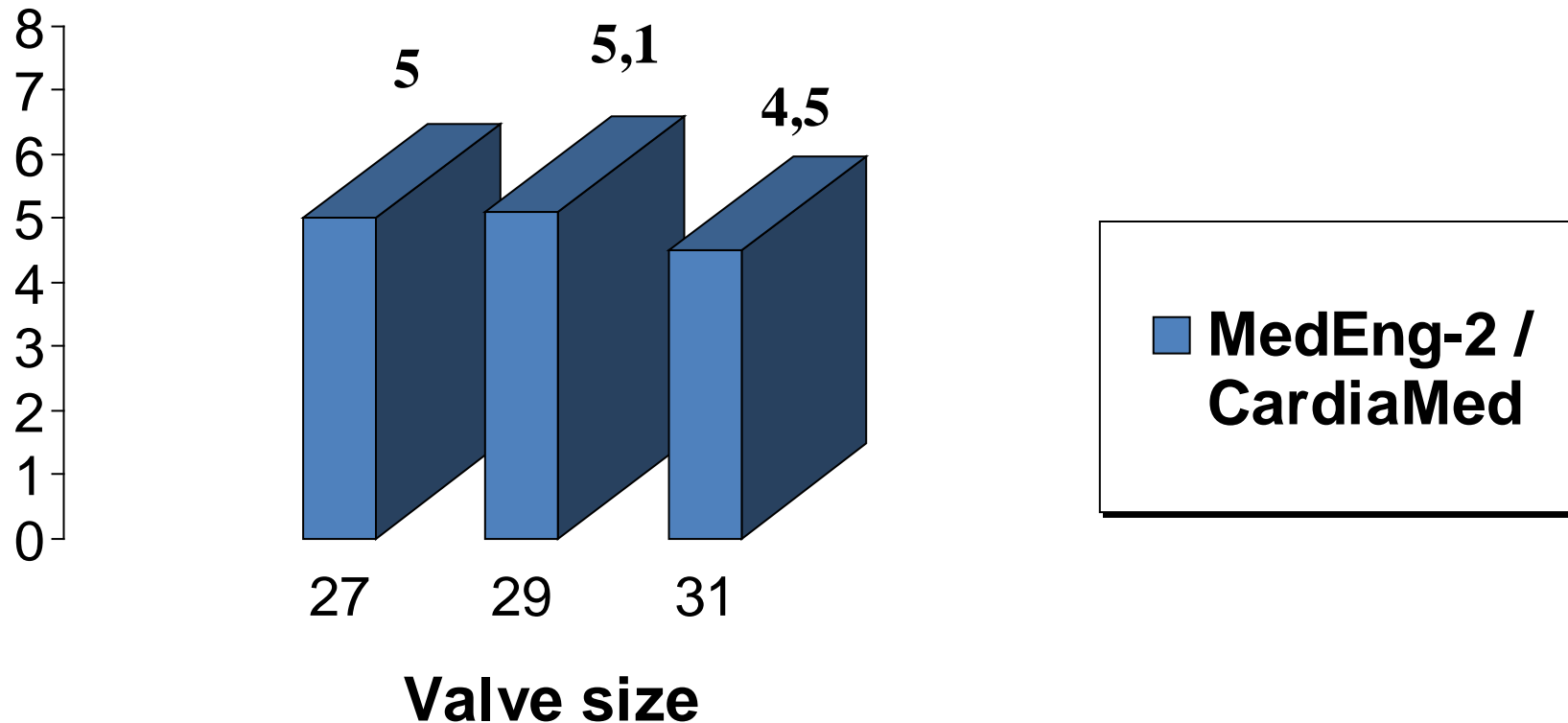
	AVR(n=494)	MVR(n=351)	DVR(n=183)
Tricuspid insuff.	28	139	32
Ischemic heart disease	68	35	35
CABG (60)	38	14	8
Angioplasty	35	23	15
Repair of TV (119)	37	143	23
Preservation of subv. structures		134	31

- 949 patients were discharged from clinic.
- Late outcomes were derived from direct patient examinations and questionnaires.
- 824 (87%) patients with the MedEng-2 prosthesis participated in the study.

Pressure gradient (peak) derived from Echo across aortic prostheses ($p > 0,01$)



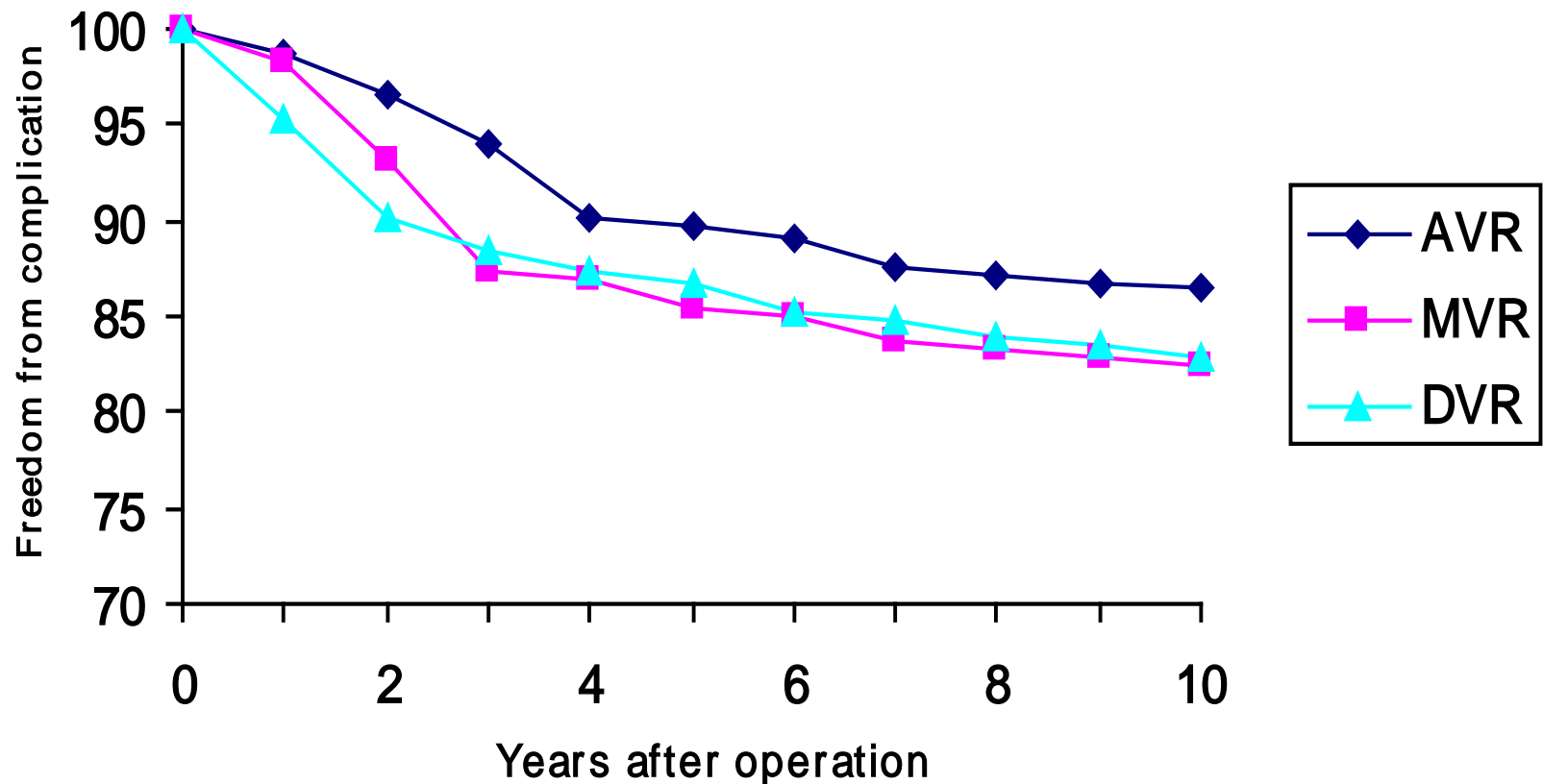
Pressure gradient derived from Echo across mitral prostheses ($p > 0.01$)



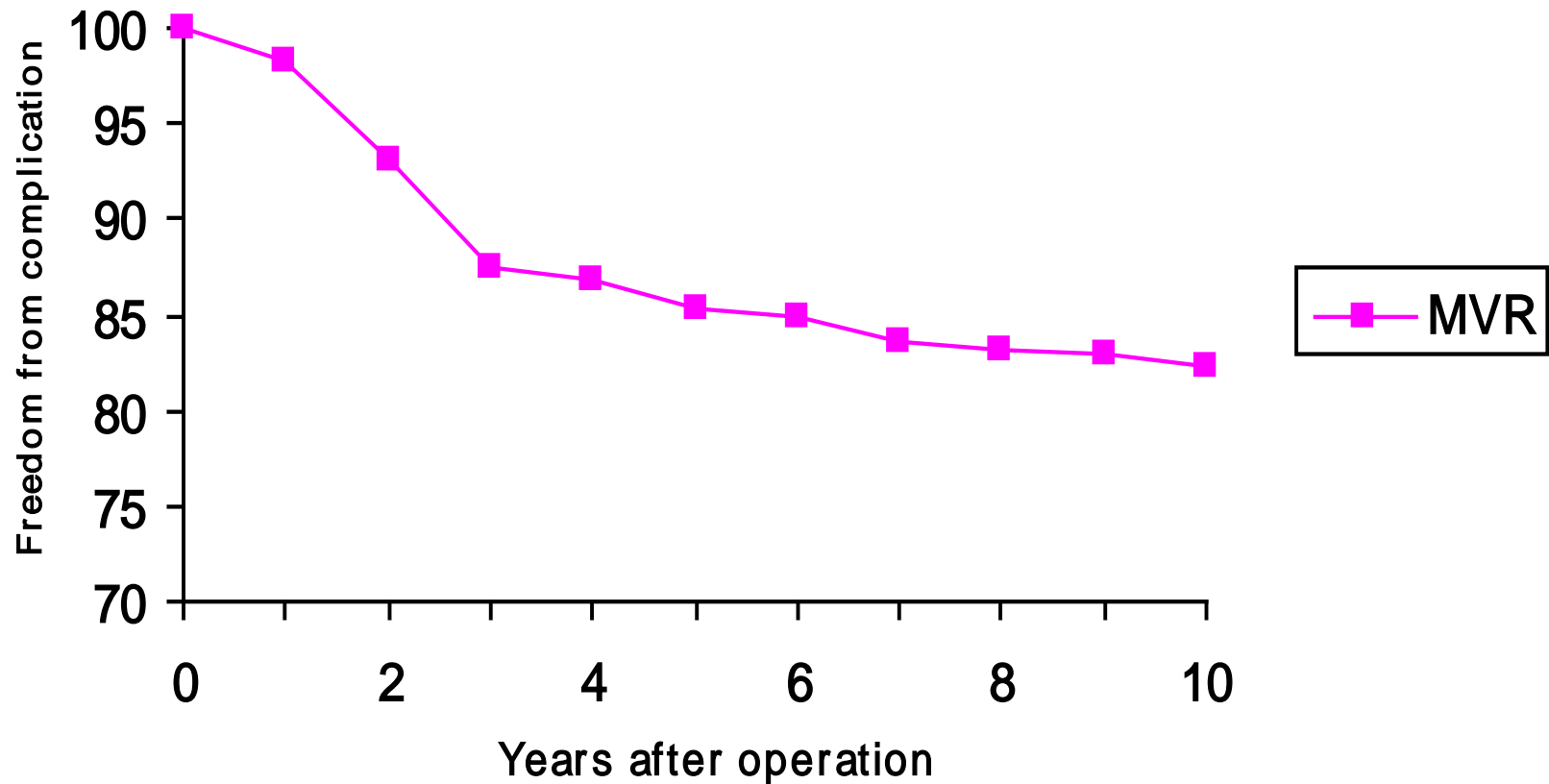
Late mortality and causes

	AVR (n=397)	MVR (n=289)	DVR (n=138)
Mortality	11 (2.7%)	19 (6.2%)	4(4,3%)
Prosthetic valve endocarditis		4*	
Acute heart failure	1	3	
Embolic syndrome	3	3	
Myocardial Infarction	2		1
Rupture of aorta			1
Sudden death	1		
Lymphoblastoma		1	
Traffic accident		2	
Dilatation cardiomyopathy		1	
Unknown cause	4	5	2

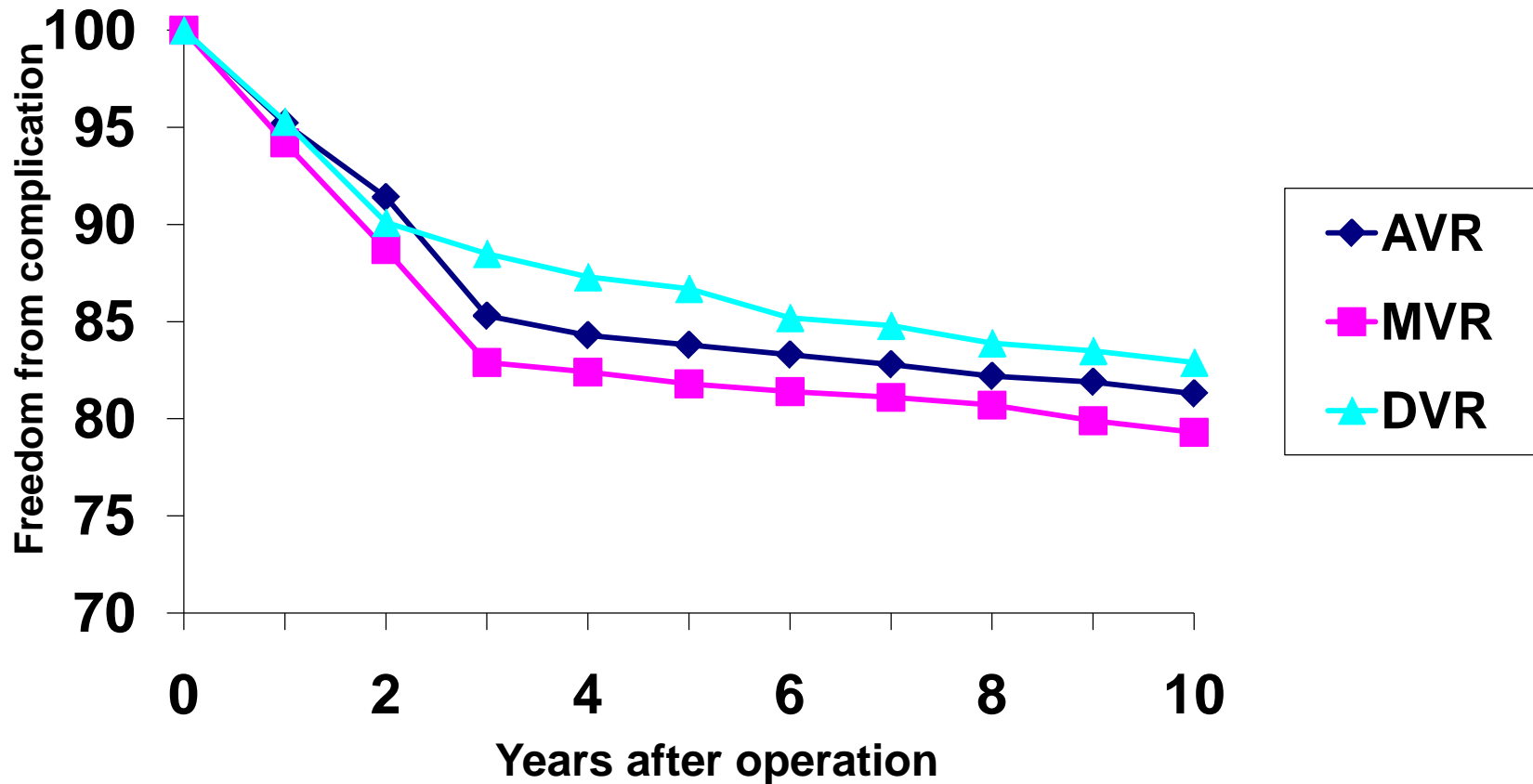
Freedom from prosthetic valve endocarditis after AVR, MVR, and DVR



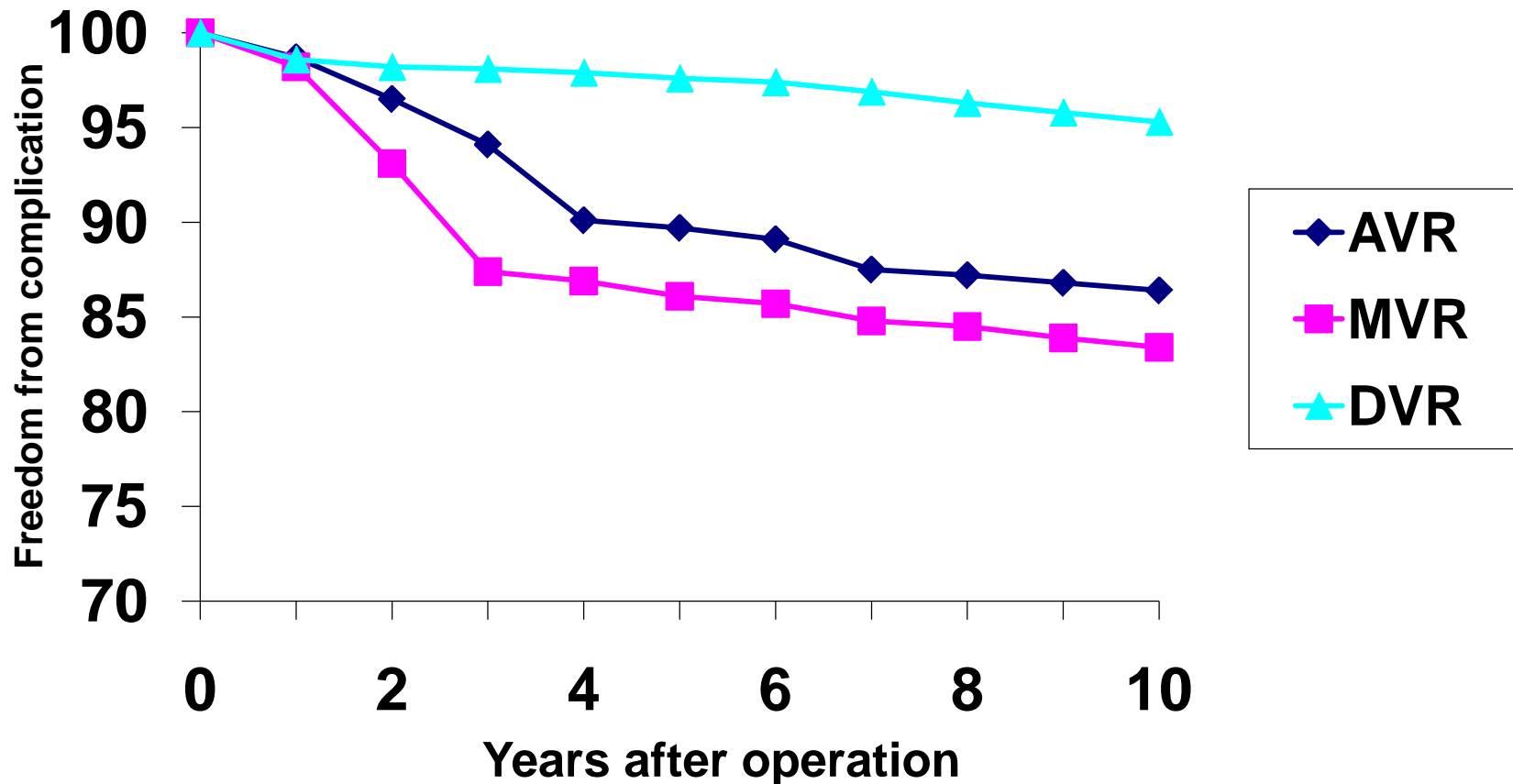
Freedom from prosthetic valve thrombosis after MVR



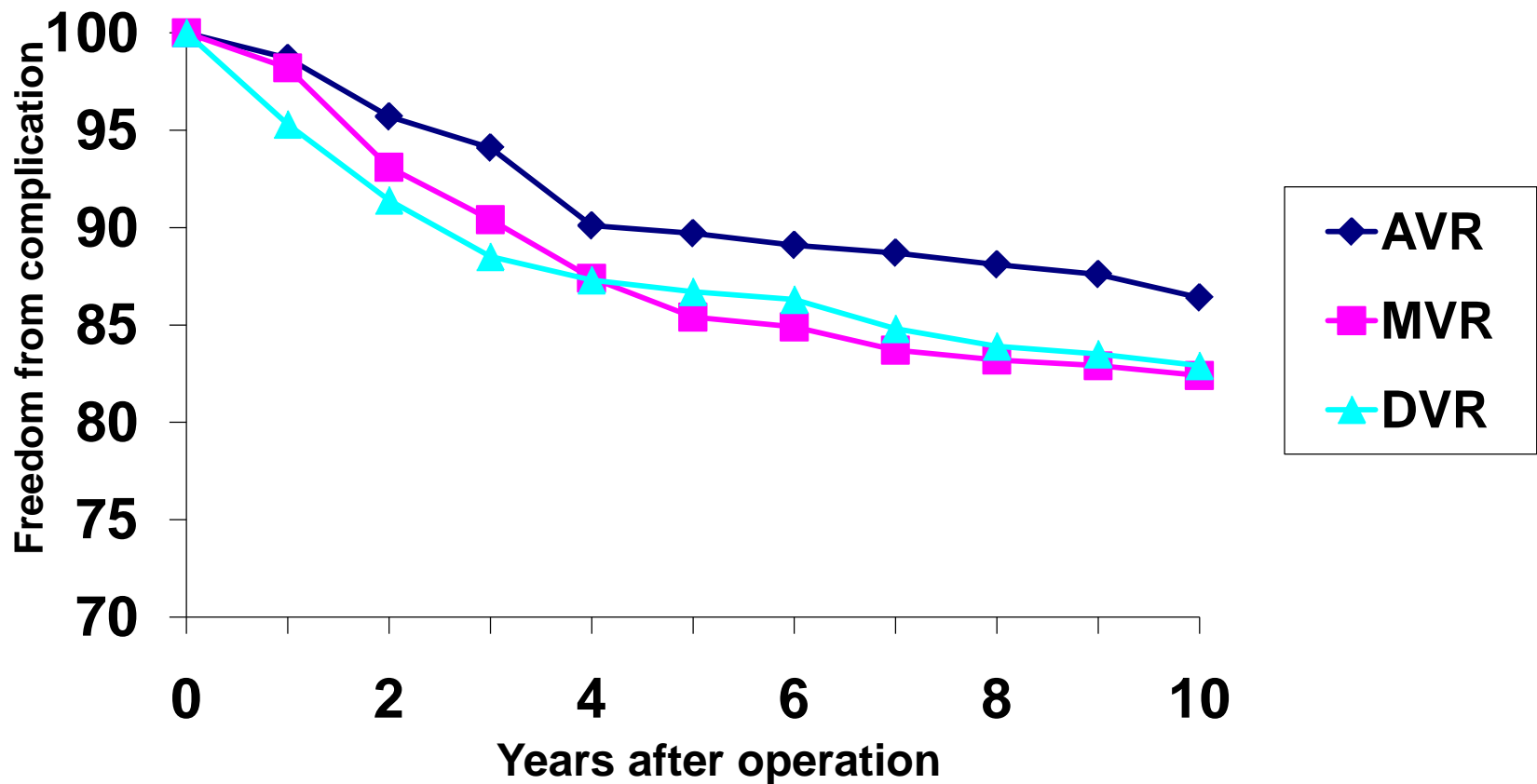
Freedom from reoperation after AVR, MVR, and DVR



Freedom from embolic syndrome after AVR, MVR, and DVR



Actuarial curve of survival at 10 years after AVR, MVR, and DVR



Conclusion

- The principal advantage of the MedEng-2 / CardiaMed prostheses is their safety. Low rates of mortality and complications indicate to their safety.
- The specific complications occur postoperatively within the first 3 years due to inadequacy of anticoagulant therapy and prophylaxis of infection.