

SUPPLEMENTARY DATA

Table S1. STROBE checklist.

	Item No.	Recommendation	Page No.
<i>Title and abstract</i>	1	(a) Indicate the study’s design with a commonly used term in the title or the abstract	3
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	3
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	5
Objectives	3	State specific objectives, including any prespecified hypotheses	5
Methods			
Study design	4	Present key elements of study design early in the paper	6-7
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	6-7
Participants	6	(a) <i>Cohort study</i> —Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up <i>Case-control study</i> —Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls <i>Cross-sectional study</i> —Give the eligibility criteria, and the sources and methods of selection of participants	6
		(b) <i>Cohort study</i> —For matched studies, give matching criteria and number of exposed and unexposed <i>Case-control study</i> —For matched studies, give matching criteria and the number of controls per case	8
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	7
Data sources/measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	8-9
Bias	9	Describe any efforts to address potential sources of bias	8-9
Study size	10	Explain how the study size was arrived at	9
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	8

Statistical methods	12	a) Describe all statistical methods, including those used to control for confounding	8-9
		b) Describe any methods used to examine subgroups and interactions	8-9
		c) Explain how missing data were addressed	8
		d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy	8
		e) Describe any sensitivity analyses	8-9

Table S2. Number of TAVRs screened per hospital during the study period

	Screened patients undergoing TAVR (N = 1573)
Center 1	355
Center 2	139
Center 3	271
Center 4	185
Center 5	273
Center 6	350

TAVR, transcatheter aortic valve replacement.

Table S3. Baseline ECG characteristics across strata

	All	Individualized management	Standardized management	P overall
	N = 345	n =160	n = 185	
<i>Baseline ECG</i>				.019
Normal	194 (56.2)	80 (50.0)	114 (61.6)	
BAV I + RBBB + LFAB	5 (1.45)	4 (2.50)	1 (0.54)	
Ist degree AVB	22 (6.38)	17 (10.6)	5 (2.70)	
LBBB	23 (6.67)	12 (7.50)	11 (5.95)	
LFAB	30 (8.70)	14 (8.75)	16 (8.65)	
RBBB	71 (20.6)	33 (20.6)	38 (20.5)	

ECG, electrocardiogram; BAV, bicuspid aortic valve; RBBB, right bundle branch block; LFAB, left anterior fascicular block; AVB, atrioventricular block; LBBB, left bundle branch block.

The data are presented as No. (%).

Table S4. Proportionality assumption check

Endpoint	<i>P</i> for Schonfeld residual test
Primary endpoint	.600
All-cause death	.639
Conduction disturbance-related event	.570
Cardiac death	.100
Hospitalization for heart failure	.770
Hospitalization for syncope	.890
Development of new conduction disturbance after discharge	.400
Stroke	.560
New pacemaker implantation	.006

Table S5. Landmark analysis

Outcome	0-30 days			30-365 days		
	HR (95%CI)	Adjusted HR (95%CI)	<i>P</i>	HR (95%CI)	Adjusted HR (95%CI)	<i>P</i>
Primary endpoint	3.21 (0.43-23.72)	1.60 (0.24-10.55)	.462	1.47 (0.85-2.53)	1.06 (0.62-1.79)	.840
All-cause death	-	-	-	2.09 (0.95-4.57)	1.55 (0.78-3.07)	.208
CD-related event	2.06 (0.27-15.58)	1.04 (0.15-7.24)	.968	1.42 (0.12-16.96)	0.58 (0.06-5.87)	.642
Cardiac death	-	-	-	5.59 (1.11-28.15)	8.27 (1.41-48.44)	.019
Hospitalization for heart failure	-	-	-	1.20 (0.51-2.82)	1.47 (0.66-3.25)	.347
Hospitalization for syncope	2.13 (1.18-3.86)	3.63 (2.09-6.32)	< .001	-	-	-
Development of new conduction disturbance after discharge	1.64 (0.19-14.29)	0.89 (0.11-6.99)	.911	1.46 (0.13-16.48)	1.65 (0.06-5.80)	.665
Stroke	3.03 (0.62-14.92)	3.10 (0.58-16.48)	.185	0.74 (0.15-3.60)	0.42 (0.08-2.27)	.310
New pacemaker implantation	0.45 (0.34-0.0)	0.60 (0.42-0.88)	.008	0.76 (0.20-2.86)	0.70 (0.21-2.35)	.568

Events are reported as hazard ratios and their respective 95% confidence intervals.

Table S6. Repeat analysis with mixed-effects models

Outcome	Estimate (95%CI)	<i>P</i>	Adjusted estimate (95%CI)	Adjusted <i>P</i> value
<i>1-year events</i>				
Primary endpoint	1.91 (0.92-3.98)	.082	1.23 (0.56-2.69)	.608
All-cause death	2.45 (1.05-5.75)	.039	0.75 (0.28-2.00)	.560
CD-related event	3.52 (0.24-52.67)	.360	8.61 (0.36-206.79)	.180
Cardiac death	7.78 (1.37-44.25)	.021	33.70 (2.73-415.72)	.006
Hospitalization for heart failure	3.00 (0.45-20.02)	.260	4.31 (0.43-43.08)	.210
Hospitalization for syncope	2.42 (0.29-20.27)	.410	2.70 (0.44-16.48)	.280
Development of new conduction disturbance after discharge	5.11 (0.09-301.34)	.430	11.24 (0.22-582.79)	.230
Stroke	2.13 (0.35-13.08)	.420	1.19 (0.25-5.64)	.820
New pacemaker implantation	0.51 (0.36-0.73)	< .001	1.00 (0.64-1.58)	.970
<i>In-hospital events</i>				
Death	-	-	-	-
Stroke	3.44 (0.90-13.22)	.072	36.22 (0.24-5397.61)	.160
Major vascular complications	5.93 (1.26-27.91)	.024	6.56 (1.95-22.13)	.002
Major bleeding (BARC 3-5)	1.50 (0.48-4.72)	.484	1.23 (0.36-4.26)	.742
New permanent pacemaker implantation	0.21 (0.13-0.34)	< .001	0.38 (0.28-0.51)	< .001
Pacemaker-related complications	-	-	-	-

CD, conduction disturbance.

Table S7. Repeat analysis using a Fine-Gray model with all-cause mortality as a competing risk

Outcome	Hazard ratio (95%CI)	<i>P</i>	Adjusted hazard ratio (95%CI)	Adjusted <i>P</i> value
<i>1-year events</i>				
Primary endpoint	1.66 (0.91-3.04)	.099	1.65 (0.87-3.15)	.130
CD-related event	2.08 (0.55-7.81)	.280	1.88 (0.44-7.94)	.390
Hospitalization for heart failure	1.81 (0.58-5.68)	.260	1.92 (0.35-34.22)	.246
Hospitalization for syncope	3.39 (0.61-18.80)	.160	2.12 (0.32-41.61)	.280
Development of new conduction disturbance after discharge	1.79 (0.45-7.17)	.410	1.57 (0.35-7.00)	.550
Stroke	1.59 (0.62-4.08)	.330	1.51 (0.37-4.00)	.410
New pacemaker implantation	0.59 (0.45-0.78)	< .001	0.60 (0.45-0.79)	< .001

CD, conduction disturbance.

Table S8. Interaction analysis for the primary endpoint in specific subgroups

Unadjusted analysis			IPTW adjusted analysis		
Annulus ≤ 430	Annulus > 430	$P_{\text{interaction}}$	Annulus ≤ 430	Annulus > 430	$P_{\text{interaction}}$
1.85 (0.90-3.79)	2.28 (0.63-8.20)	.760	1.47 (0.80-2.72)	1.17 (0.22-6.14)	.834
BE	SE (SA)	$P_{\text{interaction}}$	BE	SE (SA)	$P_{\text{interaction}}$
2.19 (0.69-6.93)	1.56 (0.86-2.81)	.604	1.01 (0.27-3.76)	1.21 (0.65-2.26)	.226
Female	Male	$P_{\text{interaction}}$	Female	Male	$P_{\text{interaction}}$
1.65 (0.74-3.69)	2.14 (0.68-6.74)	.695	1.68 (0.73-3.85)	0.99 (0.25-3.87)	.610

IPTW, inverse probability of treatment weighting; BE, balloon-expandable; SE, self-expanding; SA, self-expanding with supra-annular design.

Figure S1. Study flowchart.

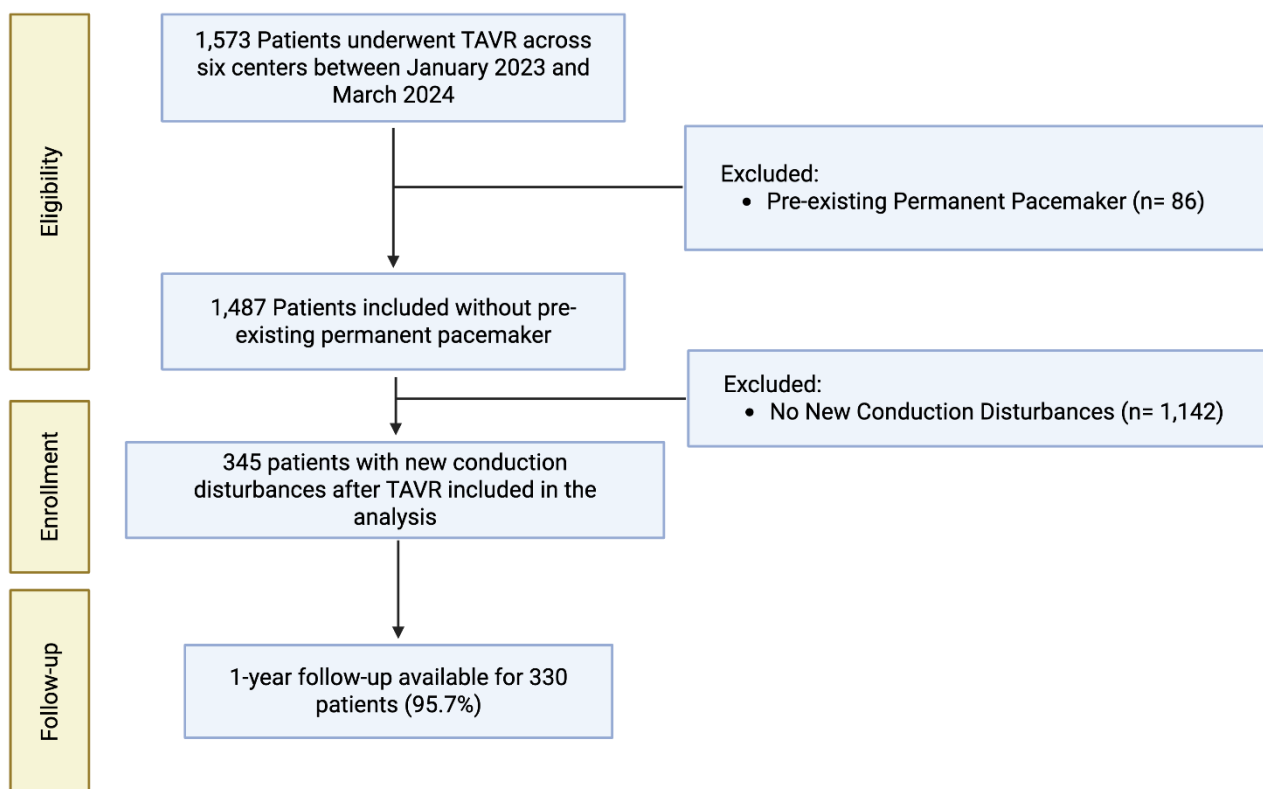
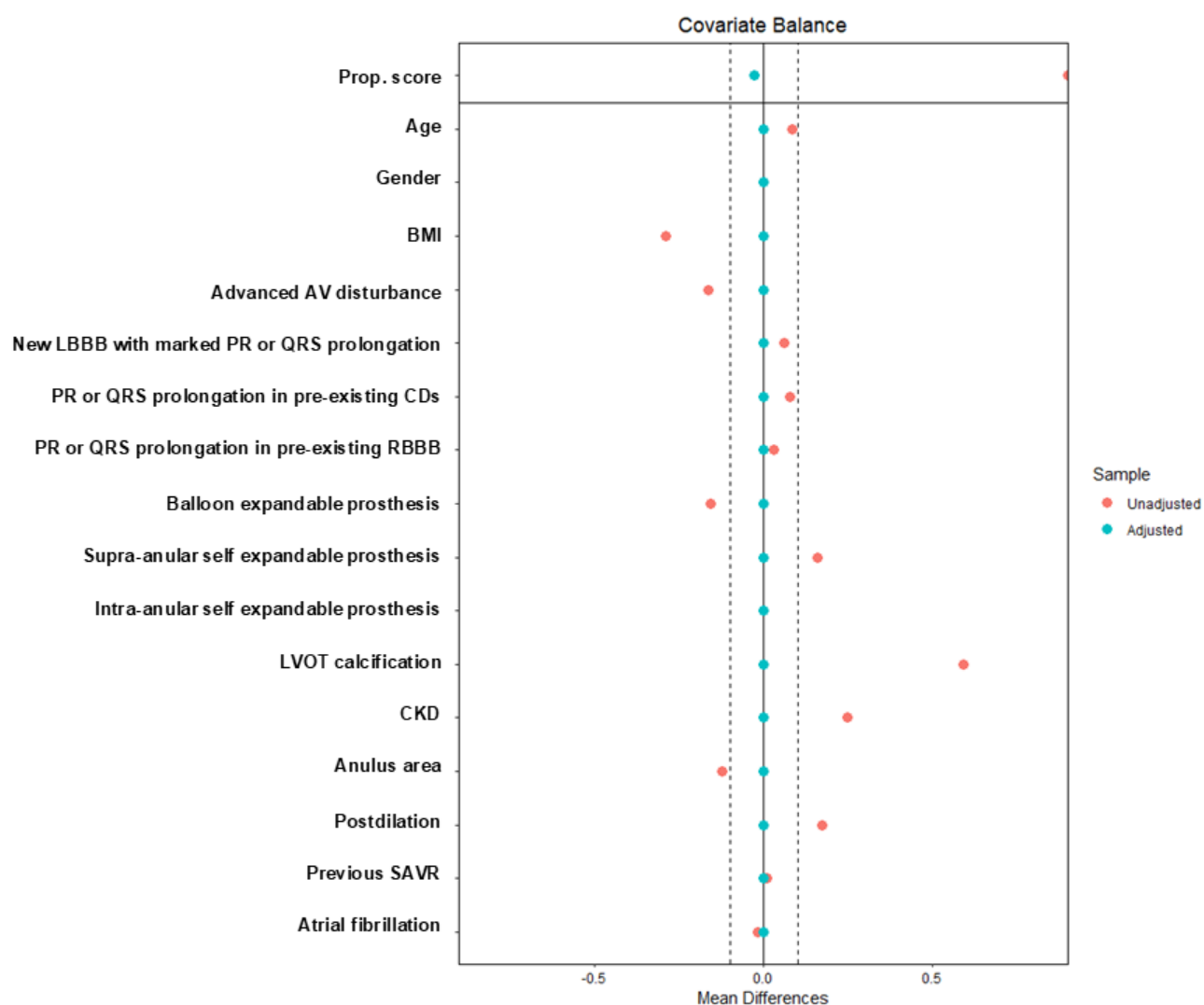
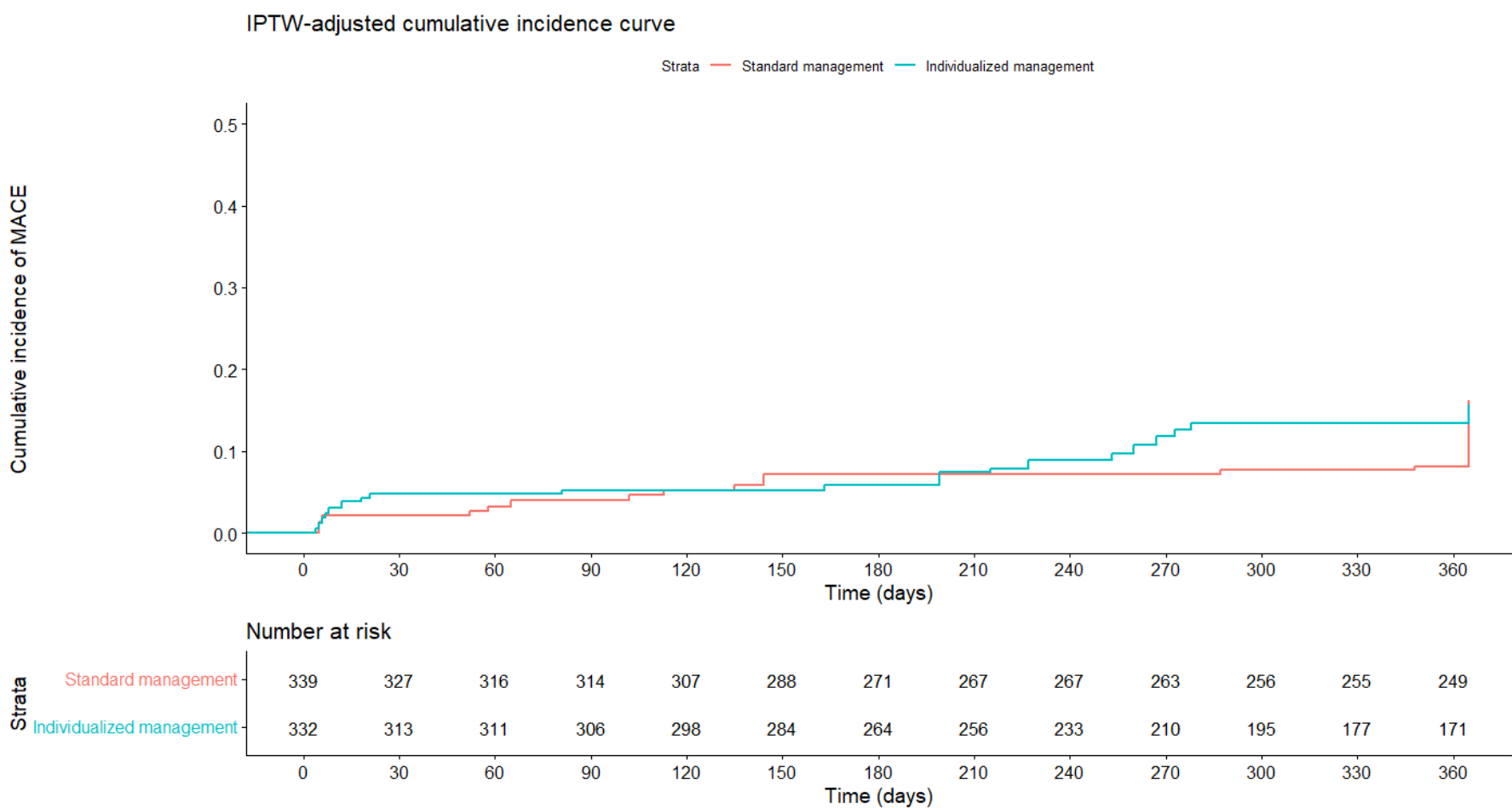


Figure S2. Love plot for between-group differences in confounding variables.



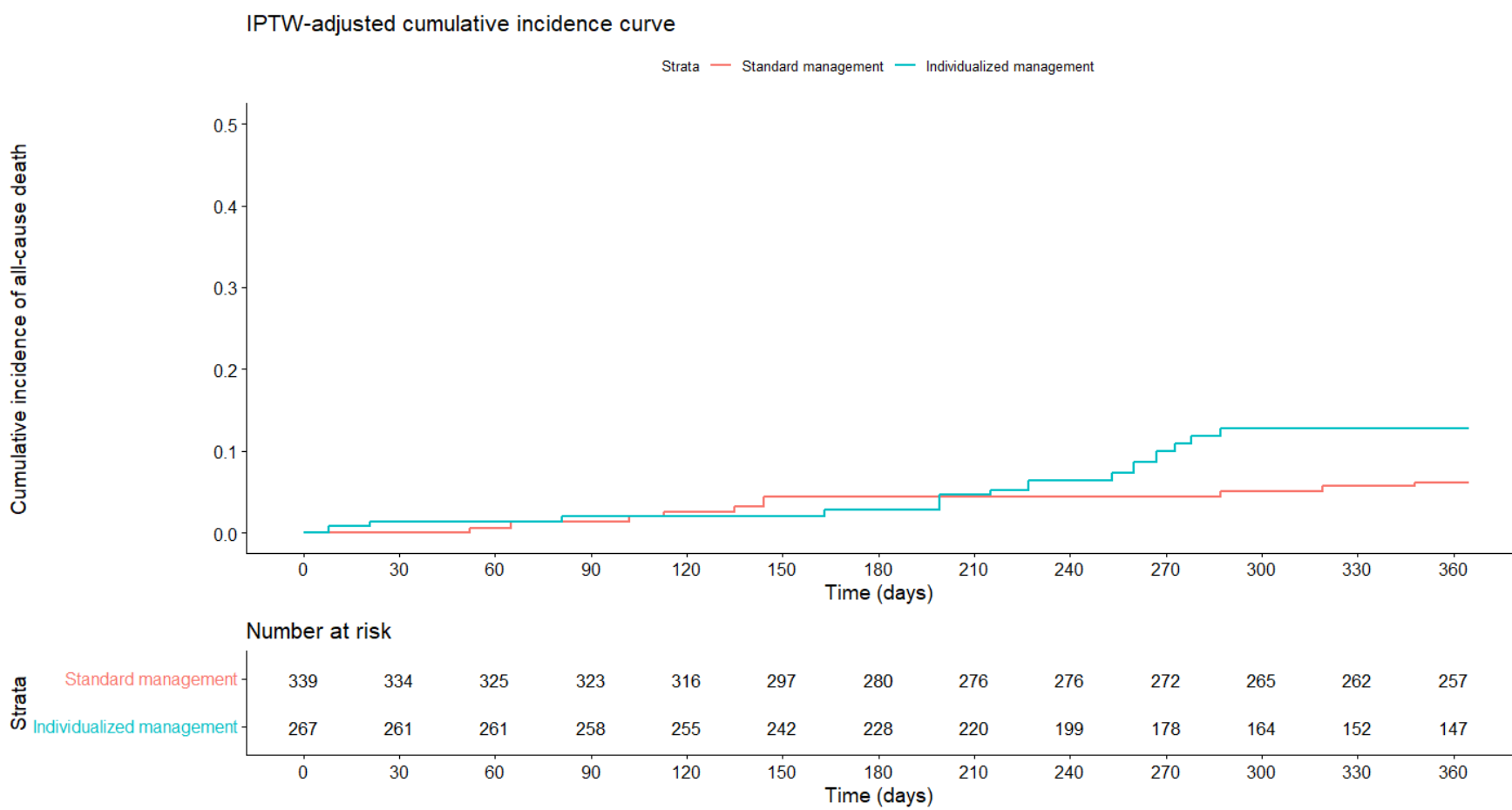
AV, atrioventricular; BMI, body mass index; CD, conduction disturbance; CKD, chronic kidney disease; LBBB, left bundle branch block; LLB, left bundle branch; LVOT, left ventricular outflow tract; SAVR, surgical aortic valve replacement.

Figure S3. IPTW-adjusted cumulative incidence curves for MACE.



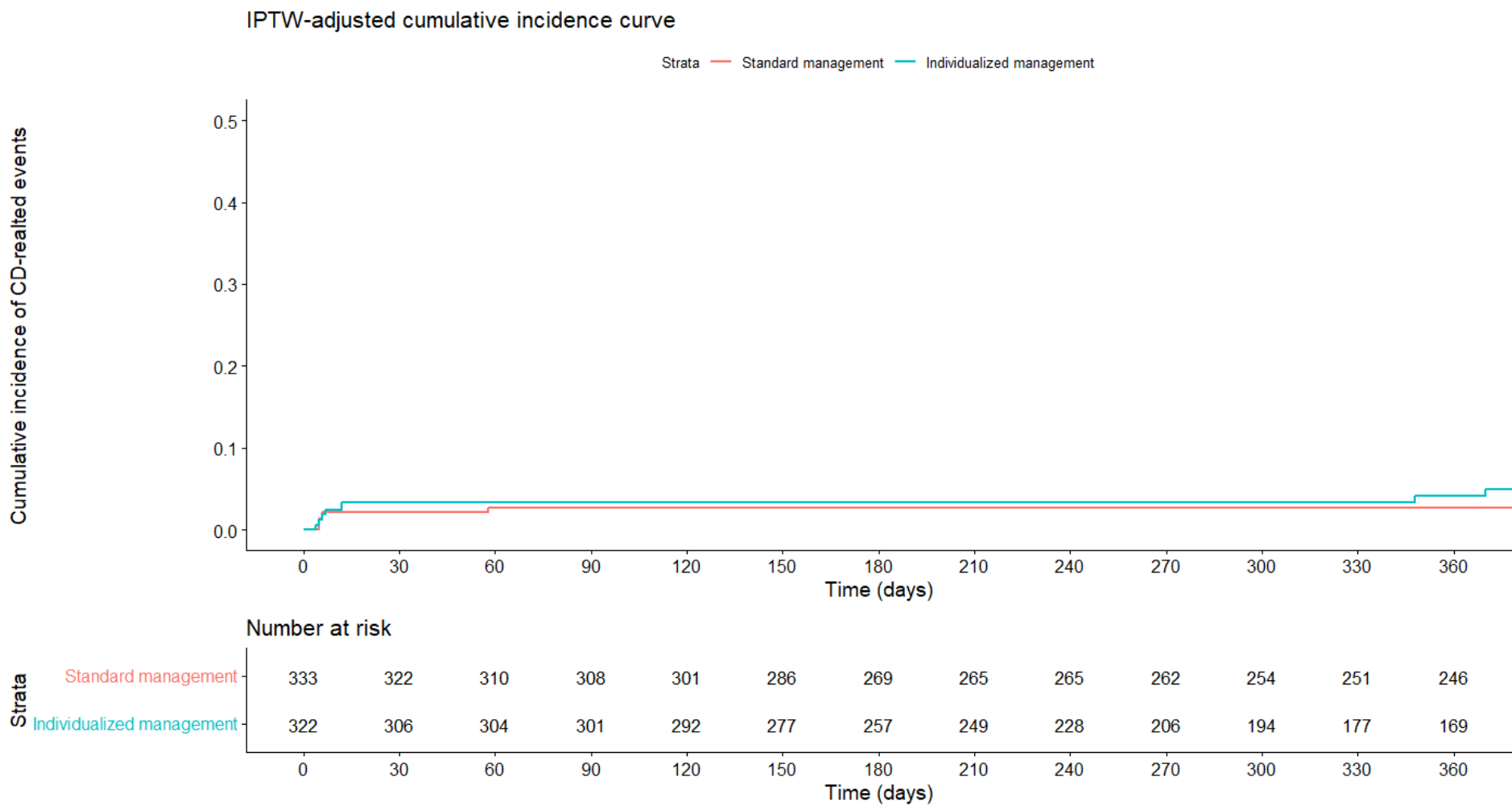
IPTW, inverse probability of treatment weighting; MACE, major adverse cardiovascular events.

Figure S4. IPTW-adjusted cumulative incidence curves for all-cause death.



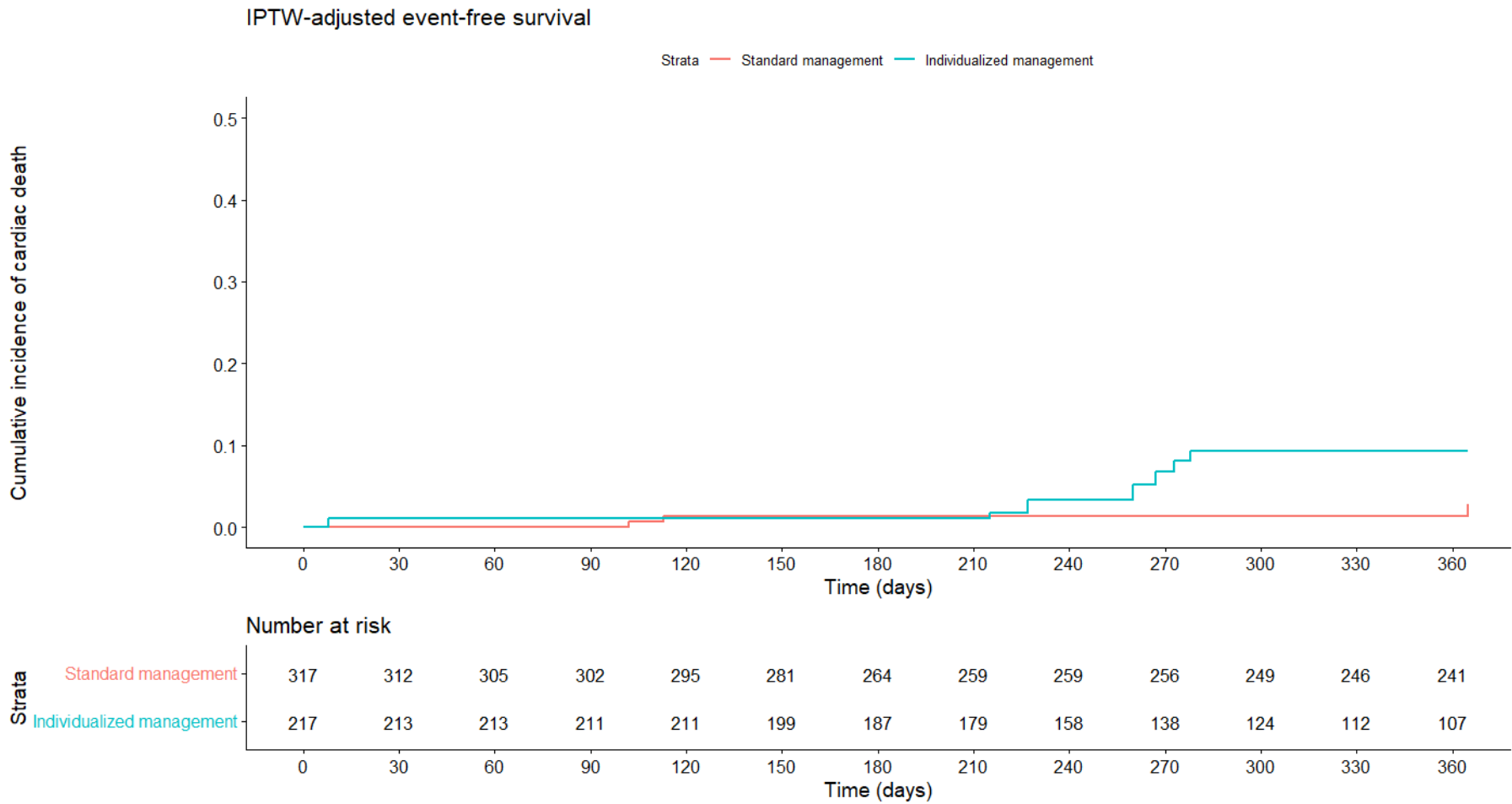
IPTW, inverse probability of treatment weighting.

Figure S5. IPTW-adjusted cumulative incidence curves for CD-related events.



CD, conduction disturbances; IPTW, inverse probability of treatment weighting.

Figure S6. IPTW-adjusted cumulative incidence curves for cardiac death.



IPTW, inverse probability of treatment weighting.

Figure S7. IPTW-adjusted cumulative incidence curves for hospitalization for heart failure.

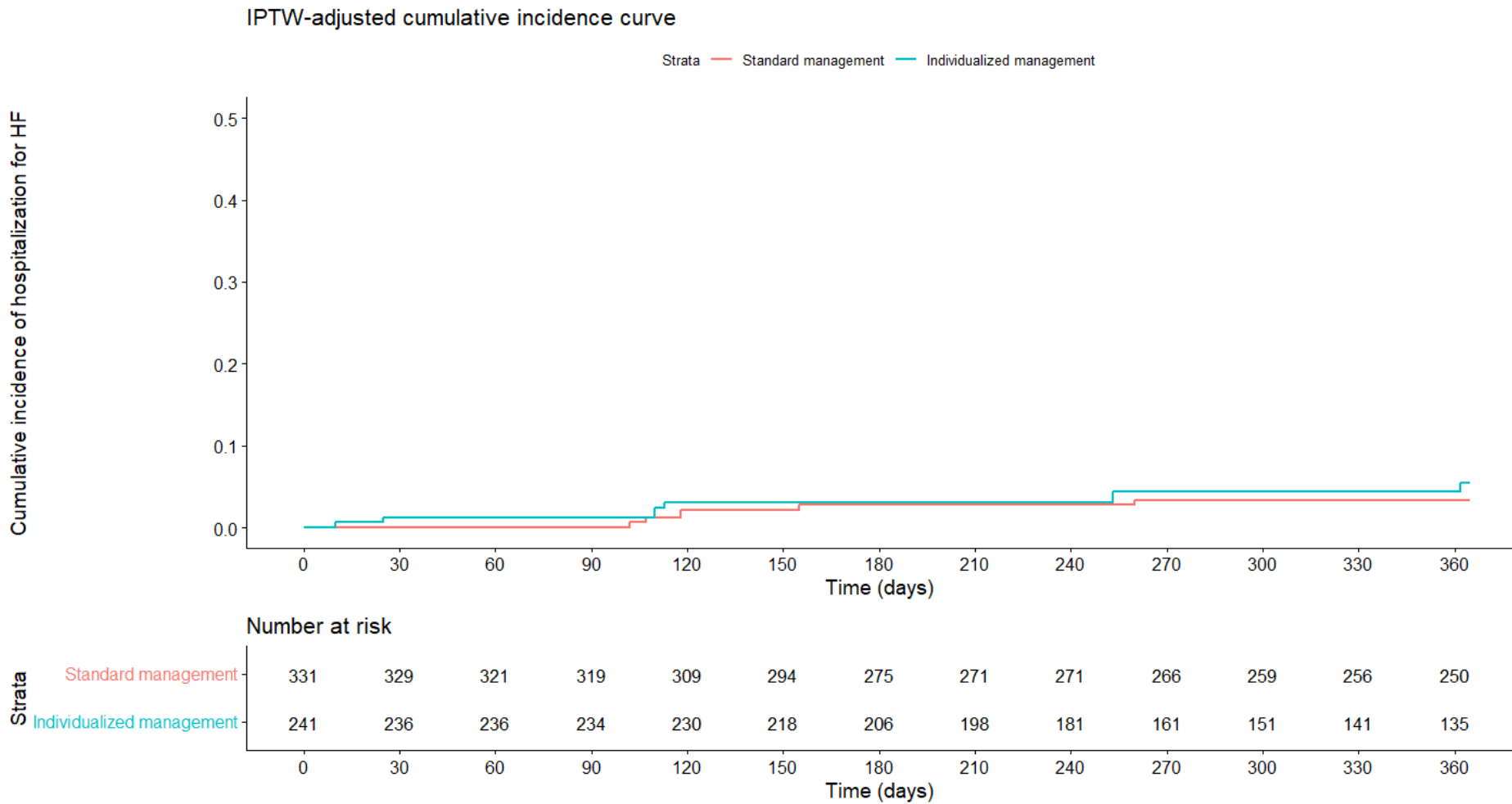
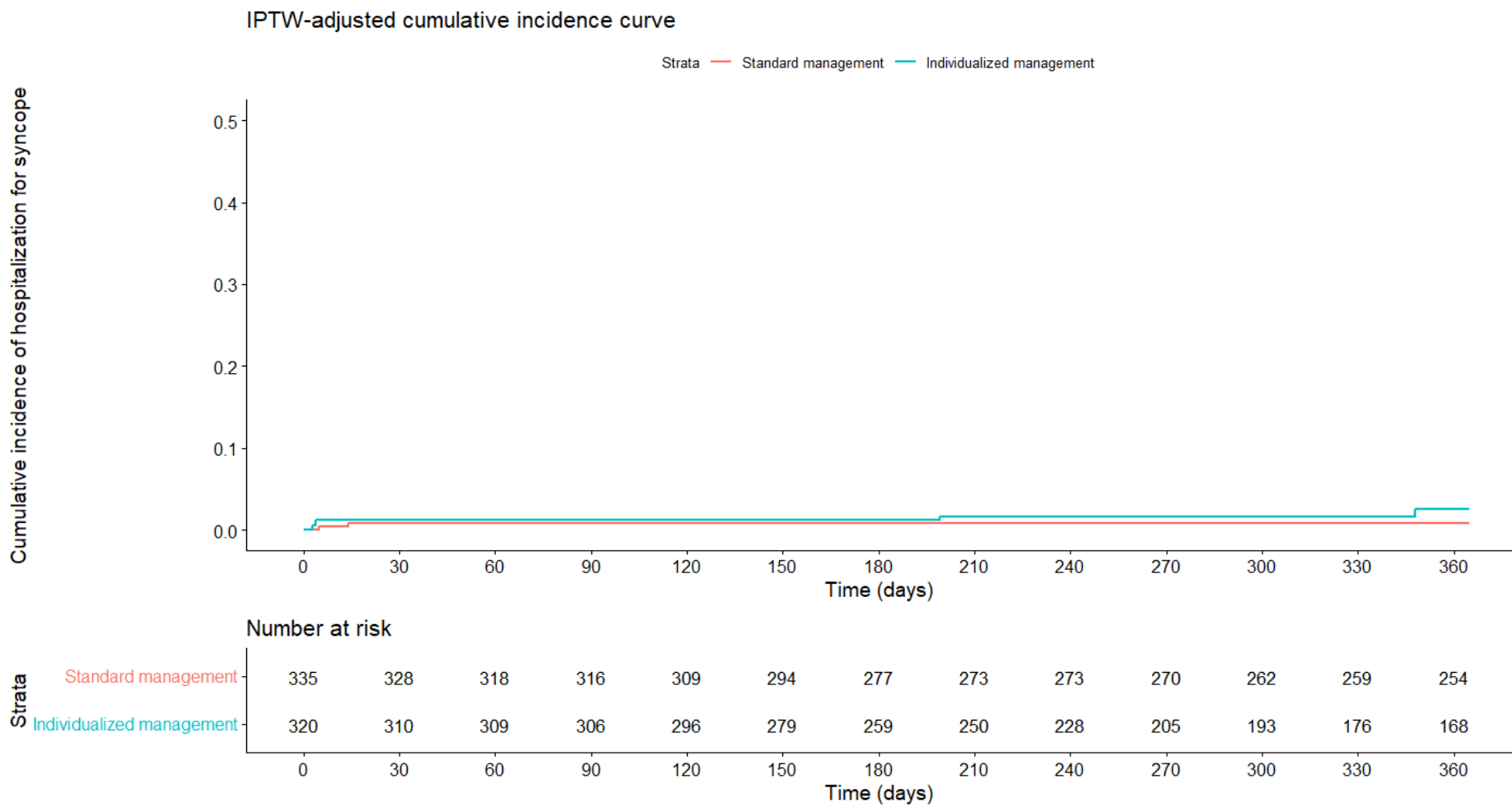
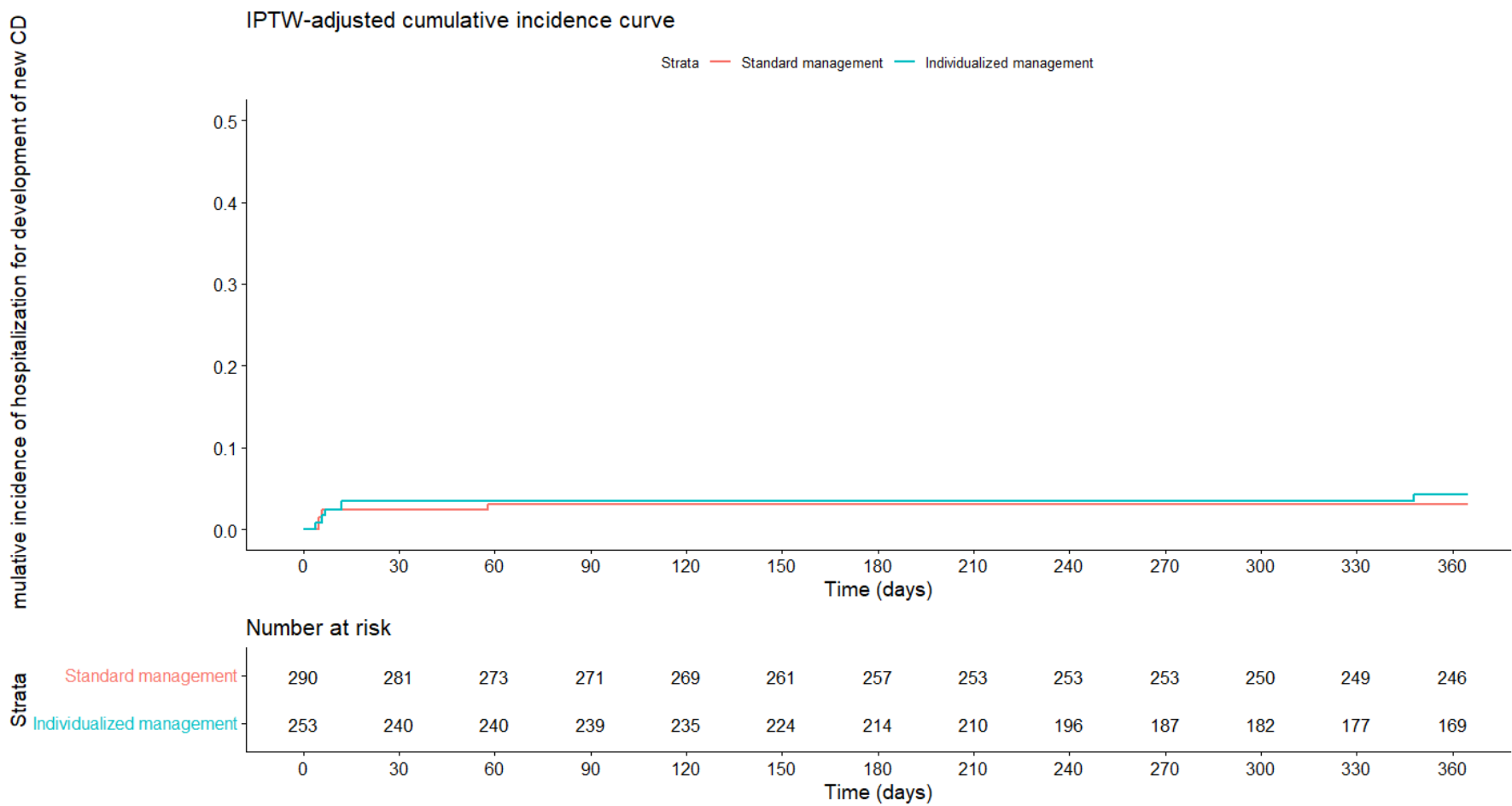


Figure S8. IPTW-adjusted cumulative incidence curves for hospitalization for syncope.



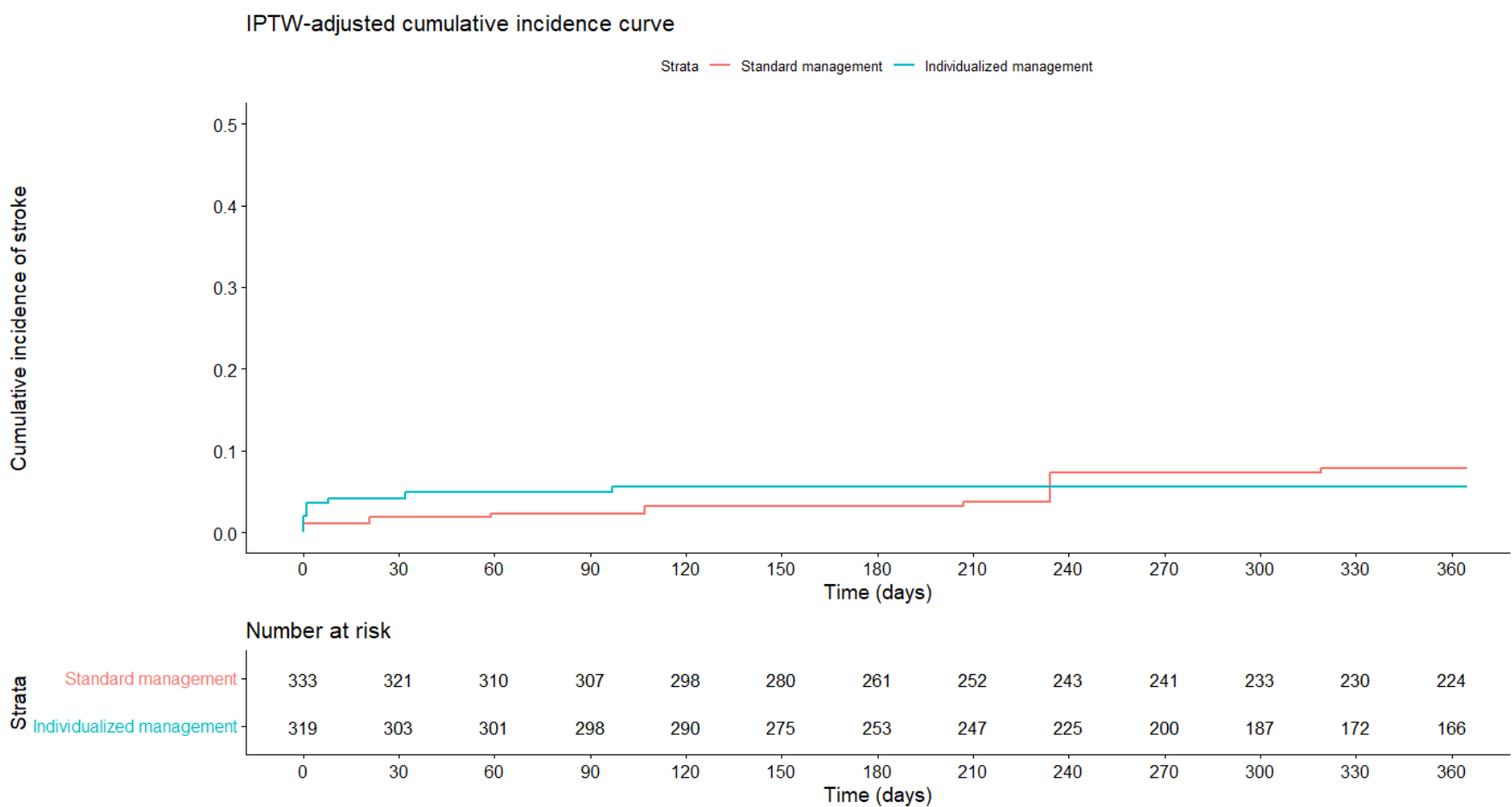
IPTW, inverse probability of treatment weighting.

Figure S9. IPTW-adjusted cumulative incidence curves for development of new CD.



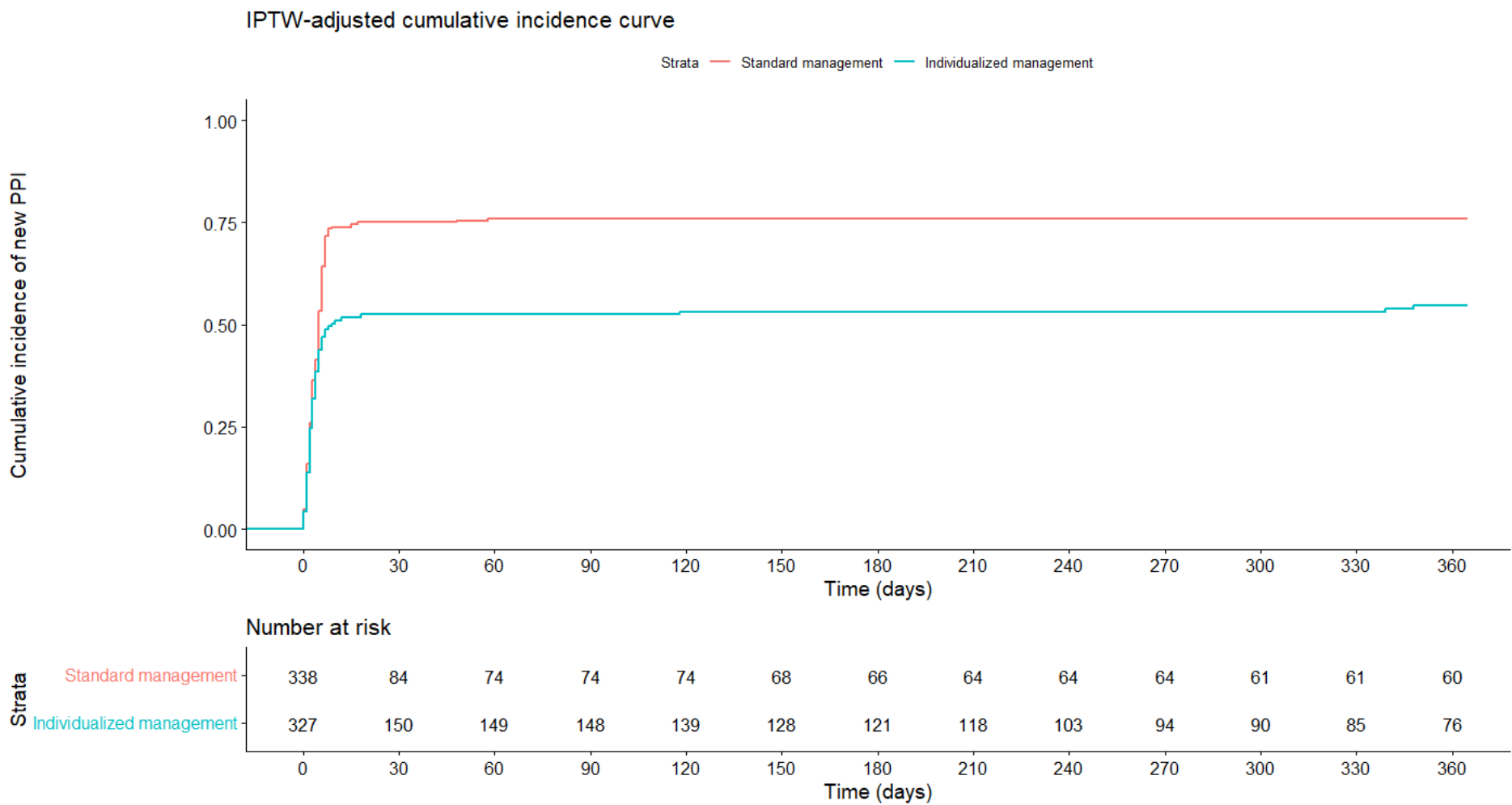
CDs, conduction disturbances; IPTW, inverse probability of treatment weighting.

Figure S10. IPTW-adjusted cumulative incidence curves for stroke.



IPTW, inverse probability of treatment weighting.

Figure S11. IPTW-adjusted cumulative incidence curves for new permanent pacemaker implantation.



IPTW, inverse probability of treatment weighting; PPI, permanent pacemaker implantation.