Supplemental Material

Data S1.

Supplement Methods

Study population

The SMART-CHOICE trial was an investigator-initiated, multicenter, open-label, noninferiority, randomized study performed at 33 sites in Korea (12). The trial compared P2Y12 inhibitor monotherapy after 3 months of dual antiplatelet therapy (DAPT) with 12 months of DAPT in patients receiving current-generation drug-eluting stents. Eligible patients were aged 20 years or older and had 1 or more coronary artery stenoses of 50% or greater in a native coronary artery with visually estimated diameter of 2.25 mm or greater and 4.25 mm or smaller amenable to stent implantation and underwent percutaneous coronary intervention. Exclusion criteria included hemodynamic instability/cardiogenic shock, active pathologic bleeding or drug-eluting stent implantation within 12 months before the index procedure. Notably, patients on anticoagulation or other medications potentially related to bleeding were included in the SMART-CHOICE trial if there was no bleeding at the time of study participation.

Procedures

The diameter and length of the stent were determined according to the operators' discretion. Intravascular imaging or fractional flow reserve was done if clinically indicated. All patients received 300 mg of aspirin and a 300 mg or 600 mg clopidogrel loading dose orally before percutaneous coronary intervention, unless they had previously received these antiplatelet medications. For patients with acute coronary syndrome, a loading dose of 60 mg prasugrel or 180 mg ticagrelor was used.

End points

All deaths were considered cardiac unless a definite non-cardiac cause could be established. Myocardial infarction was defined as elevated cardiac enzyme levels (cardiac troponin or myocardial band fraction of creatine kinase) above the upper reference limit with ischemic symptoms or electrocardiographic findings indicative of ischemia. However, periprocedural enzyme-level elevation within 48 hours after the index

procedure without concomitant ischemic symptoms or electrocardiographic findings indicative of ischemia was excluded in the assessment of study end points (24). Stroke was defined as any non-convulsive focal or global neurologic deficit of abrupt onset lasting for more than 24 hours or leading to death, which was caused by ischemia or hemorrhage within the brain. Stent thrombosis was defined as definite or probable stent thrombosis according to the Academic Research Consortium classification (24). Bleeding was defined as Bleeding Academic Research Consortium type 2 to 5 bleeding; major bleeding, Bleeding Academic Research Consortium type 3 to 5 bleeding (25).

Statistical analysis

For per-protocol analysis, patients who did not receive the assigned treatment were excluded based on the regular assessments of study participants every 3 months. A landmark analysis was performed with a landmark of aspirin discontinuation at 3 months. Prespecified subgroup analysis of the primary end point was performed to evaluate the consistency of treatment effects of 3-month DAPT compared with 12-month DAPT, using Cox regression model with tests for interaction. For propensity-score matching and inverse-probability weighted analyses, propensity scores were calculated using a logistic regression model for Orsiro stents and everolimus-eluting stents. The following variables were considered for the propensity score: age more than 65 years old, male, diabetes mellitus, current smoking, previous myocardial infarction, clinical presentation of acute myocardial infarction, complex lesion, use of intravascular ultrasound, and multi-lesion intervention. The propensity-score mating was performed using nearest neighbor method without calipers. Covariate balances were assessed with absolute standardized mean differences. Categorical variables are presented as numbers (percentages) and compared with the $\chi 2$ test or Fisher exact test. Continuous variables are presented as mean ± SD and compared with the *t* test.

Table S1. Baseline characteristics, according to the per-protocol analysis.

	Dual antiplatelet therapy		P
	3 months (n=376)	12 months (n=465)	
Age (years)	64.9 ± 10.6	65.0 ± 10.2	0.87
Male	271 (72.1)	342 (73.6)	0.63
Diabetes mellitus	153 (40.7)	179 (38.5)	0.52
Hypertension	230 (61.2)	298 (64.1)	0.38
Dyslipidemia	162 (43.1)	209 (45.0)	0.59
Current smoking	95 (25.3)	108 (23.2)	0.49
Previous MI	21 (5.6)	23 (5.0)	0.68
Previous revascularization	42 (11.2)	64 (13.8)	0.26
Chronic renal failure	10 (2.7)	14 (3.0)	0.76
Left ventricular ejection fraction (%)	59.8 ± 10.4	60.1 ± 11.0	0.70
Clinical presentation			0.20
Stable angina	174 (46.3)	219 (47.1)	
Unstable angina	97 (25.8)	143 (30.7)	
Non- ST-segment elevation MI	71 (18.9)	71 (15.3)	
ST-segment elevation MI	34 (9.0)	32 (6.9)	
Multiple vessels disease	182 (48.4)	219 (47.1)	0.71
Location of lesion treated			
Left main	3 (0.8)	8 (1.7)	0.36
Left anterior descending artery	232 (61.7)	279 (60.0)	0.62
Left circumflex	99 (26.3)	120 (25.8)	0.86
Right coronary artery	142 (37.8)	166 (35.7)	0.54
Calcified lesion	64 (17.0)	84 (18.1)	0.69
Bifurcation lesion	42 (11.2)	55 (11.8)	0.77
Thrombotic lesion	30 (8.0)	30 (6.5)	0.39
Use of intravascular ultrasound	66 (17.6)	101 (21.7)	0.13
Treated lesions per patient	1.4 ± 0.7	1.3 ± 0.6	0.16
Multi-lesion intervention	122 (32.5)	137 (29.5)	0.35
Multi-vessel intervention	93 (24.7)	107 (23.0)	0.56
Number of stents per patient	1.5 ± 0.7	1.4 ± 0.7	0.13
Stent length per patient, mm	38.6 ± 22.5	36.4 ± 21.3	0.14

Data are n (%) or means ± SD. MI denotes myocardial infarction.

Table S2. Clinical outcomes at 12 months, according to the per-protocol analysis.

	Dual antiplatelet therapy		Hazard ratio (95% CI)	P
	3 months (n=376)	12 months (n=465)		
Target vessel failure	7 (1.9)	14 (3.0)	0.62 (0.25 – 1.53)	0.30
Cardiac death	2 (0.5)	5 (1.1)	0.50 (0.10 – 2.56)	0.40
Target vessel-related myocardial infarction	1 (0.3)	4 (0.9)	0.31 (0.04 – 2.78)	0.30
Target vessel revascularization	5 (1.5)	8 (1.8)	0.77 (0.25 – 2.35)	0.64
All-cause death	5 (1.3)	6 (1.3)	1.04 (0.32 – 3.39)	0.96
Any myocardial infarction	2 (0.5)	8 (1.7)	0.31 (0.07 – 1.46)	0.14
Repeated revascularization	9 (2.5)	12 (2.7)	0.93 (0.39 – 2.20)	0.86
Stent thrombosis	0	0	-	-
Stroke	3 (0.8)	3 (0.6)	1.25 (0.25 – 6.17)	0.79
Bleeding BARC type 2-5	7 (1.9)	16 (3.5)	0.54 (0.22 – 1.30)	0.17
Major bleeding	4 (1.1)	5 (1.1)	0.99 (0.27 – 3.70)	0.99
Major adverse cardiac and cerebrovascular events	10 (2.7)	14 (3.0)	0.89 (0.39 – 2.00)	0.77
Net adverse clinical events	11 (2.9)	16 (3.4)	0.85 (0.39 – 1.83)	0.68

Data are n or n (%). The percentages are Kaplan–Meier estimates. BARC denotes Bleeding Academic Research Consortium; CI, confidence interval.

Table S3. Baseline characteristics in patients assigned to 3-month dual antiplatelet therapy from the SMART-CHOICE trial.

	Orsiro stents (n=481)	Everolimus-eluting stents (n=1,014)	P
Age (years)	65.1 ± 10.7	64.4 ± 10.7	0.25
> 65 years old	267 (55.5)	524 (51.7)	0.17
Male	347 (72.1)	740 (73.0)	0.73
Diabetes mellitus	194 (40.3)	376 (37.1)	0.23
Hypertension	294 (61.1)	627 (61.8)	0.79
Dyslipidemia	211 (43.9)	462 (45.6)	0.54
Current smoking	121 (25.2)	303 (29.9)	0.06
Previous myocardial infarction	26 (5.4)	36 (3.6)	0.09
Previous revascularization	58 (12.1)	114 (11.2)	0.64
Chronic renal failure	15 (3.1)	29 (2.9)	0.78
Left ventricular ejection fraction (%)	60.0 ± 10.6	60.0 ± 11.0	0.98
Clinical presentation of acute myocardial infarction	128 (26.6)	275 (27.1)	0.84
Multiple vessels disease	233 (48.4)	516 (50.9)	0.38
Complex lesion	163 (33.9)	323 (31.9)	0.43
Use of intravascular ultrasound	91 (18.9)	281 (27.7)	0.0002
Treated lesions per patient	1.4 ± 0.7	1.3 ± 0.6	0.12
Multi-lesion intervention	150 (31.2)	280 (27.6)	0.15
Multi-vessel intervention	114 (23.7)	223 (22.0)	0.46
Number of stents per patient	1.5 ± 0.8	1.4 ± 0.7	0.21
Stent length per patient, mm	38.5 ± 22.8	37.9 ± 22.4	0.60

Data are n (%) or means ± SD.

Table S4. Baseline characteristics in patients assigned to 3-month dual antiplatelet therapy from propensity-score matched population.

	Orsiro stents (n=481)	Everolimus-eluting stents (n=481)	P
Age (years)	65.1 ± 10.7	65.0 ± 11.2	0.44
> 65 years old	267 (55.5)	261 (54.3)	0.70
Male	347 (72.1)	365 (75.9)	0.19
Diabetes mellitus	194 (40.3)	194 (40.3)	1.00
Hypertension	294 (61.1)	305 (63.4)	0.46
Dyslipidemia	211 (43.9)	188 (39.1)	0.13
Current smoking	121 (25.2)	122 (25.4)	0.94
Previous myocardial infarction	26 (5.4)	26 (5.4)	1.00
Previous revascularization	58 (12.1)	50 (10.4)	0.41
Chronic renal failure	15 (3.1)	10 (2.1)	0.31
Left ventricular ejection fraction (%)	60.0 ± 10.6	59.6 ± 12.4	0.63
Clinical presentation of acute myocardial infarction	128 (26.6)	116 (24.1)	0.37
Multiple vessels disease	233 (48.4)	227 (47.2)	0.70
Complex lesion	163 (33.9)	162 (33.7)	0.95
Use of intravascular ultrasound	91 (18.9)	95 (19.8)	0.74
Treated lesions per patient	1.4 ± 0.7	1.4 ± 0.6	0.69
Multi-lesion intervention	150 (31.2)	152 (31.6)	0.89
Multi-vessel intervention	114 (23.7)	128 (26.6)	0.30
Number of stents per patient	1.5 ± 0.8	1.4 ± 0.7	0.20
Stent length per patient, mm	38.5 ± 22.8	38.5 ± 23.9	0.97

Data are n (%) or means ± SD.

Table S5. Standardized differences of variables used in propensity-score matching and inverse-probability weighted analyses.

	Standardized differences		
	Unadjusted	**Propensity-score matching**	**Inverse-probability weighted**
Age > 65 years old	0.077	0.025	0.007
Male	-0.017	-0.066	-0.004
Diabetes mellitus	0.067	0.013	0.000
Current smoking	-0.106	0.010	-0.008
Previous myocardial infarction	0.090	0.000	0.009
Clinical presentation of acute myocardial infarction	-0.011	0.052	-0.003
Complex lesion	0.043	0.004	0.002
Use of intravascular ultrasound	-0.209	-0.005	-0.004
Multi-lesion intervention	0.078	-0.013	0.006

Figure S1. Landmark analyses at 3 months for target vessel failure (A) and net adverse clinical event (B) between 3-month (line) and 12-month (dotted line) dual antiplatelet therapy.

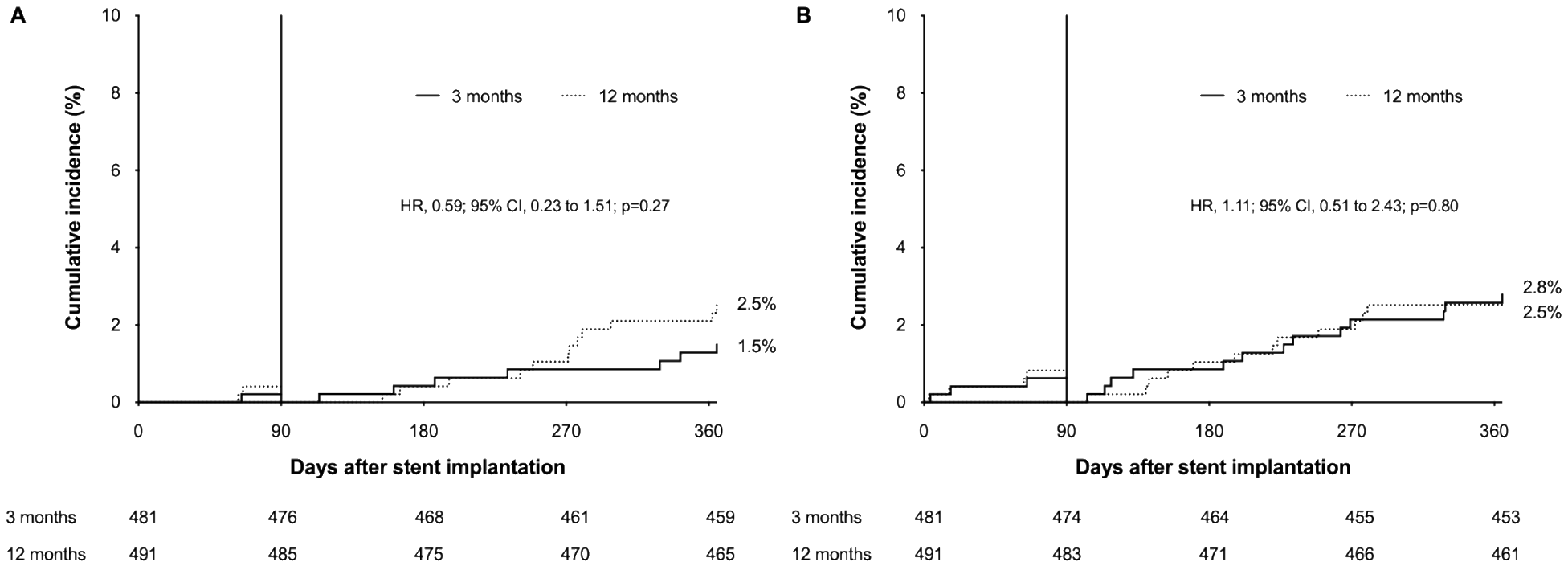
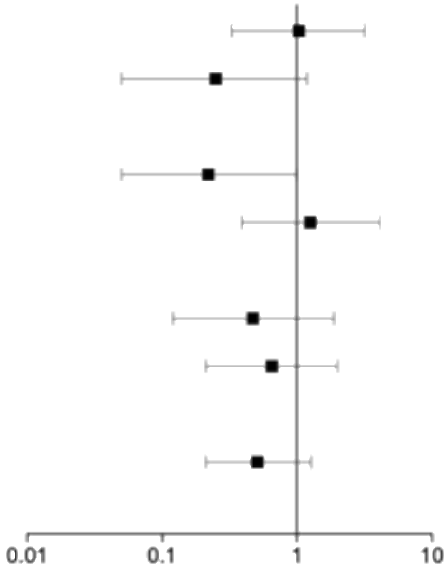


Figure S2. Subgroup analyses for primary end point.

Subgroup	Patients	Target vessel failure		Hazard ratio (95% CI)	p for interaction
		3-month DAPT	12-month DAPT		
Acute coronary syndrome					0.15
Yes	516	6/254 (2.4%)	6/262 (2.3%)	1.03 (0.33 – 3.19)	
No	456	2/227 (0.9%)	8/229 (3.5%)	0.25 (0.05 – 1.18)	
Diabetes mellitus					0.07
Yes	384	2/194 (1.0%)	9/190 (4.7%)	0.22 (0.05 – 1.00)	
No	588	6/287 (2.1%)	5/301 (1.7%)	1.26 (0.39 – 4.13)	
Multivessel intervention					0.72
Yes	225	3/114 (2.6%)	6/111 (5.4%)	0.47 (0.12 – 1.88)	
No	747	5/367 (1.4%)	8/380 (2.1%)	0.65 (0.21 – 1.99)	
P2Y12 inhibitor					0.99
Clopidogrel	802	7/395 (1.8%)	14/407 (3.4%)	0.51 (0.21 – 1.27)	
Prasugrel or ticagrelor	170	1/86 (1.2%)	0/84 (0%)	-	



CI denotes confidence interval; DAPT, dual antiplatelet therapy.