Supplementary data

Supplementary Table 1. STROBE Statement—Checklist of items that should be included in reports of cohort studies.

	Item No	Recommendation	Reported
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract (*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	X
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	X
Objectives	3	State specific objectives, including any prespecified hypotheses	X
Methods			
Study design	4	Present key elements of study design early in the paper	X
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	X
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up (*b*) For matched studies, give matching criteria and number of exposed and unexposed	X
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	X
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	X
Bias	9	Describe any efforts to address potential sources of bias	X
Study size	10	Explain how the study size was arrived at	X
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	X
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding (*b*) Describe any methods used to examine subgroups and interactions (*c*) Explain how missing data were addressed (*d*) If applicable, explain how loss to follow-up was addressed (*e*) Describe any sensitivity analyses	a. X b. X c. N/A d. N?A e. N/A

Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram	X
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest (c) Summarise follow-up time (eg, average and total amount)	X X
Outcome data	15*	Report numbers of outcome events or summary measures over time	X

Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (*b*) Report category boundaries when continuous variables were categorized (*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	X
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	X
Discussion			
Key results	18	Summarise key results with reference to study objectives	X
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	X
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	X
Generalisability	21	Discuss the generalisability (external validity) of the study results	X
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	X

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org

Supplementary Table 2. Major characteristics of the five included studies. Adapted with permission from [3].

Variable	ABSORB II	ABSORB Japan	ABSORB China	ABSORB III	ABSORB EXTEND
ClinicalTrials.gov identifier	NCT01425281	NCT01844284	NCT01923740	NCT01751906	NCT01023789
Type of study	Randomised	Randomised	Randomised	Randomised	Observational
Masking	Single blind	Single blind	Open label	Single blind	Open label
Number of centres	46	38	24	193	56
Number of patients	501	400	480[a]	2,008	812
- Assigned to BRS	335	266	241	1,322	812
- Assigned to EES	166	134	239	686	N/A
Number of lesions allowed	2	2	2	2	2
Number of vessels allowed[b]	2	2	2	2	2
Target lesion reference vessel diameter (mm)	2.25-3.8 by online QCA	2.5-3.75 by online QCA or visual assessment	2.5-3.75 by online QCA or visual assessment	2.5-3.75 by visual assessment	2.0-3.8 by visual assessment
Maximum target lesion length (mm)	48	24	24	24	28
Device overlap allowed	Yes	For bail-out only	For bail-out only	For bail-out only	Yes
Routine angiographic follow-up	At 3 years	At 13 months	At 1 year	No	No
Primary endpoint	Angiographic vasomotion at 3 years	TLF at 1 year	Angiographic in-segment late loss at 1 year	TLF at 1 year	Not specified
Total duration of follow-up (years)	5	5	5	5	3

[a] A total of 5 patients (3 randomised to BVS and 2 randomised to EES) withdrew consent immediately after enrolment and were deregistered. These patients are not included in the study population.
[b] Maximum one lesion per vessel.
BRS: bioresorbable scaffold; EES: everolimus-eluting stent; QCA: quantitative coronary analysis; TLF: target lesion failure

Supplementary Table 3. Clinical characteristics of the five included studies.

Variable	ABSORB II (n=335)	ABSORB Japan (n=266)	ABSORB China (n=238)	ABSORB III (n=1322)	ABSORB EXTEND (n=812)	Overall (n=2,973)
Age (years)	61.5±10.0	67.2±9.4	57.2±11.4	63.5±10.6	61.1±10.8	62.4±10.8
Men	253 (75.5%)	210 (78.9%)	171 (71.8%)	934 (70.7%)	603 (74.3%)	2,171 (73.0%)
Body mass index (kg/m^2)	27.9±4.1	24.0±3.0	25.2±3.4	30.6±6.2	27.2±4.4	28.4±5.6
Diabetes	80 (23.9%)	96 (36.1%)	61 (25.6%)	416 (31.5%)	216 (26.6%)	869 (29.2%)
Insulin-dependent	22 (6.6%)	24 (9.0%)	23 (9.7%)	138 (10.5%)	37 (4.6%)	244 (8.2%)
Dyslipidaemia	252 (75.2%)	218 (82.0%)	102 (42.9%)	1,140 (86.2%)	584 (71.9%)	2,296 (77.2%)
Hypertension	231 (69.0%)	208 (78.2%)	140 (58.8%)	1,122 (84.9%)	580 (71.4%)	2,281 (76.7%)
Current smoker	79 (23.6%)	53 (19.9%)	78 (32.8%)	281 (21.3%)	188 (23.2%)	679 (22.8%)
Prior myocardial infarction	93 (28.0%)	42 (16.0%)	40 (16.8%)	282 (21.5%)	230 (28.5%)	687 (23.3%)
Prior PCI	117 (34.9%)	94 (35.3%)	24 (10.1%)	482 (36.5%)	224 (27.6%)	941 (31.7%)
Prior CABG	7 (2.1%)	5 (1.9%)	0	57 (4.3%)	14 (1.7%)	83 (2.8%)
Creatinine clearance (ml/min)	98.2±32.3	N/A	97.0±32.2	105.5±79.4	N/A	103.2±68.9
Advanced chronic kidney disease*	N/A	N/A	2 (0.8%)	143 (10.8%)	8 (1.0%)	153 (6.5%)
Evidence of ischaemia at presentation						
None	0	0	1 (0.4%)	28 (2.1%)	54 (6.7%)	83 (2.8%)
Stable angina	214 (63.9%)	170 (63.9%)	53 (22.3%)	757 (57.3%)	461 (56.8%)	1,655 (55.7%)
Unstable angina	68 (20.3%)	26 (9.8%)	156 (65.5%)	355 (26.9%)	215 (26.5%)	820 (27.6%)
Silent ischaemia	42 (12.5%)	70 (26.3%)	6 (2.5%)	132 (10.0%)	49 (6.0%)	299 (10.1%)
Acute myocardial infarction	11 (3.3%)	0	18 (7.6%)	37 (2.8%)	33 (4.1%)	99 (3.3%)
Post-myocardial infarction angina	0	0	4 (1.7%)	12 (0.9%)	0	16 (0.7%)
Stable ischaemic heart disease	256 (76.4%)	240 (90.2%)	60 (25.2%)	917 (69.4%)	564 (69.5%)	2,037 (68.5%)
Acute coronary syndrome	79 (23.6%)	26 (9.8%)	178 (74.8%)	404 (30.6%)	248 (30.5%)	935 (31.5%)

*Estimated glomerular filtration rate <30 ml/min/1.73 m^2 or dialysis at the time of screening.
CABG: coronary artery bypass graft; PCI: percutaneous coronary intervention

Supplementary Table 4. Angiographic characteristics of the five included studies.

Variable	ABSORB II (n=335)	ABSORB Japan (n=266)	ABSORB China (n=238)	ABSORB III (n=1322)	ABSORB EXTEND (n=812)	Overall (n=2,973)
Number of diseased vessels	1.19±0.45	N/A	1.55±0.78	1.37±0.60	1.25±0.63	1.33±0.62
Number of lesions treated	1.09±0.28	1.03±0.18	1.05±0.23	1.05±0.21	1.08±0.27	1.06±0.24
One	306 (91.3%)	257 (96.6%)	225 (94.5%)	1,257 (95.1%)	750 (92.4%)	2,795 (94.0%)
Two	29 (8.7%)	9 (3.4%)	13 (5.5%)	64 (4.8%)	62 (7.6%)	177 (6.0%)
Treated vessel						
Right coronary	95 (26.1%)	85 (30.9%)	63 (25.1%)	404 (29.2%)	250 (28.6%)	897 (28.5%)
Left anterior descending	163 (44.8%)	127 (46.2%)	139 (55.4%)	617 (44.5%)	395 (45.2%)	1,441 (45.8%)
Circumflex	106 (29.1%)	63 (22.9%)	49 (19.5%)	363 (26.2%)	228 (26.1%)	809 (25.7%)
Left main	0	0	0	1 (0.1%)	1 (0.1%)	2 (0.1%)
Baseline quantitative coronary analysis						
Reference vessel diameter (mm)	2.59±0.38	2.71±0.45	2.81±0.44	2.67±0.45	2.65±0.39	2.67±0.43
Minimal luminal diameter (mm)	1.07±0.32	0.96±0.33	0.98±0.40	0.92±0.37	1.11±0.32	1.00±0.36
Diameter stenosis (%)	58.6±11.1	64.5±11.1	65.3±12.9	65.2±12.5	58.0±10.6	62.4±12.2
Lesion length (mm)	13.8±6.5	13.4±5.3	14.1±5.1	12.6±5.4	12.3±5.3	12.9±5.5
Lesion characteristics						
Thrombus	5 (1.4%)	0	0	3 (0.2%)	14 (1.6%)	22 (0.7%)
Tortuosity (moderate/severe)	34 (9.4%)	23 (8.4%)	6 (2.4%)	40 (2.9%)	N/A	103 (4.5%)
Angulation >45°	9 (2.5%)	33 (12.0%)	18 (7.2%)	166 (12.0%)	N/A	226 (9.9%)
Calcification (moderate/severe)	46 (12.7%)	76 (27.7%)	44 (17.5%)	457 (33.1%)	121 (13.9%)	744 (23.7%)
Ulceration	N/A	11 (4.0%)	6 (2.4%)	37 (2.7%)	N/A	54/1,905 (2.8%)
Aneurysm	N/A	2 (0.7%)	1 (0.4%)	36 (2.6%)	N/A	39/1,905 (2.0%)
Bifurcation	0	100 (36.4%)	126 (50.2%)	508 (36.7%)	48 (5.5%)	782 (24.9%)
Type B2/C lesion	165 (45.5%)	208 (75.6%)	188 (74.9%)	949 (68.7%)	386 (44.7%)	1,896 (60.5%)

Supplementary Table 5. Procedural characteristics of the five included studies.

Variable	ABSORB II (n=335)	ABSORB Japan (n=266)	ABSORB China (n=238)	ABSORB III (n=1,322)	ABSORB EXTEND (n=812)	Overall (n=2,973)
Intravascular imaging guidance	325 (97.0%)	40 (15.0%)	0	146 (11.2%)	12 (4.3%)	523 (21.6%)
Predilatation	364 (100.0%)	275 (100.0%)	250 (99.6%)	1,383 (99.9%)	870 (99.7%)	3,142 (99.8%)
Maximum predilatation balloon diameter (mm)	2.6±0.4	2.8±0.4	2.8±0.4	2.9±0.4	2.6±0.3	2.7±0.4
Maximum predilatation balloon pressure (atm)	8.0±0.0	N/A	N/A	12.1±3.4	12.7±3.4	11.7±3.5
Post-dilatation with non-compliant balloon	221 (60.7%)	176 (64.0%)	154 (61.4%)	788 (57.0%)	599 (68.7%)	1,938 (61.6%)
Maximum post-dilatation balloon diameter (mm)	3.15±0.34	3.18±0.44	3.29±0.43	3.22±0.45	3.12±0.24	3.18±0.39
Maximum post-dilatation balloon pressure (atm)	15.4±3.4	15.5±4.1	16.8±3.8	15.6±3.3	16.7±3.5	16.0±3.6
Total scaffold length per lesion (mm)	24.1±10.8	20.2±5.8	22.8±6.7	20.5±7.2	22.0±7.0	21.5±7.6
Overlapping scaffolds	N/A	N/A	N/A	N/A	115 (14.2%)	115 (14.2%)
Post-PCI quantitative coronary analysis						
In-scaffold						
Acute gain (mm)	1.15±0.38	1.47±0.40	1.51±0.46	1.45±0.45	1.17±0.34	1.34±0.44
Minimal luminal diameter (mm)	2.22±0.33	2.42±0.37	2.48±0.39	2.37±0.40	2.28±0.31	2.34±0.37
Diameter stenosis (%)	15.8±6.5	11.6±7.5	12.2±7.5	11.6±8.8	15.3±6.3	13.2±7.9
In-segment						
Acute gain (mm)	0.99±0.40	1.25±0.41	1.32±0.47	1.23±0.46	0.99±0.36	1.14±0.44
Minimal luminal diameter (mm)	2.06±0.37	2.20±0.39	2.30±0.40	2.15±0.41	2.10±0.33	2.14±0.39
Diameter stenosis (%)	20.1±7.7	20.0±6.7	19.0±6.8	20.0±7.9	20.0±7.0	19.9±7.5
Device success	N/A	271 (98.9%)	245 (98.0%)	N/A	861 (98.9%)	1,377 (98.7%)

PCI: percutaneous coronary intervention

Supplementary Table 6. Salient clinical, angiographic, and procedural characteristics according to dual antiplatelet discontinuation.

Variable	Permanent discontinuation (n=2,139)	No permanent discontinuation (n=830)	Overall (n=2,969)	*p*-value
Age (years)	62.9±10.7	61.2±10.9	62.5±10.8	<0.0001
Men	1,541 (72.0%)	628 (75.7%)	2,169 (73.1%)	0.05
Diabetes	603 (28.2%)	266 (32.0%)	869 (29.3%)	0.04
Current smoker	443 (20.7%)	234 (28.2%)	677 (22.8%)	<0.0001
Prior myocardial infarction	426 (20.0%)	262 (31.8%)	688 (23.3%)	<0.0001
Prior PCI	626 (29.3%)	359 (43.3%)	985 (33.2%)	<0.0001
Acute coronary syndrome	659 (30.8%)	275 (33.2%)	934 (31.5%)	0.21
Number of diseased vessels	1.32±0.61	1.33±0.64	1.33±0.62	0.97
Number of treated lesions	1.06±0.24	1.06±0.24	1.06±0.24	0.93
Total lesion length (mm)*	12.9±5.5	12.6±5.4	12.9±5.5	0.16
Reference vessel diameter (mm)*	2.68±0.43	2.65±0.43	2.67±0.43	0.07
Calcification (moderate/severe)*	559 (24.8%)	183 (20.9%)	742 (23.7%)	0.07
Bifurcation lesion*	569 (25.1%)	212 (24.3%)	781 (24.9%)	0.61
Left main or left anterior descending artery treated*	560 (24.7%)	250 (28.4%)	810 (25.8%)	0.04
Intravascular imaging guidance	412 (23.1%)	110 (17.4%)	522 (21.6%)	0.003
Device success*	2,442 (99.3%)	956 (99.1%)	3,398 (99.2%)	0.55

* per lesion.

Supplementary Table 7. Any dual antiplatelet therapy discontinuation in 2,973 BRS-treated patients.

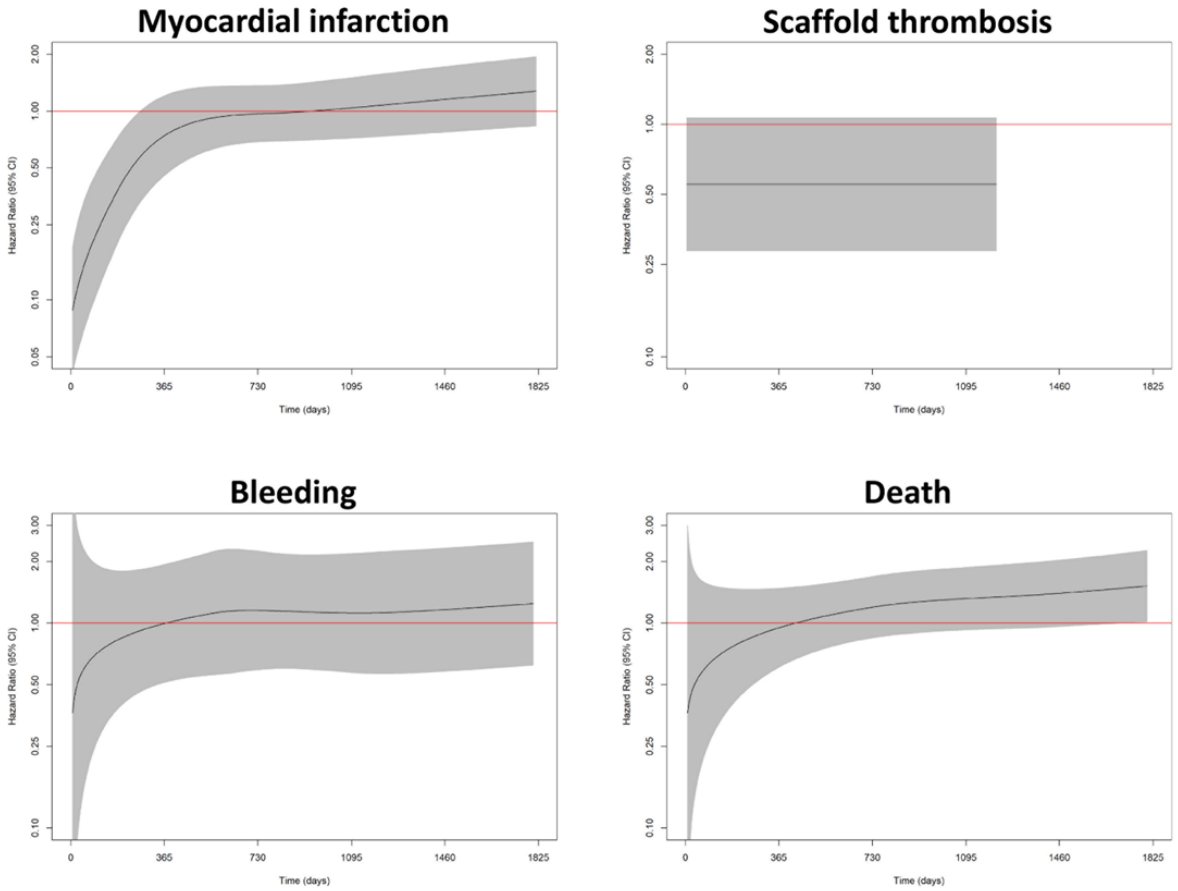
Interval	>24 hours	≥7 days	Permanently
0-1 year	678/2,970 (22.8%)	630/2,970 (21.2%)	482/2,970 (16.2%)
0-6 months	187/2,970 (6.3%)	145/2,970 (4.9%)	73/2,970 (2.5%)
6 months-1 year	610/2,937 (20.8%)	586/2,937 (20.0%)	479/2,937 (16.3%)
1-3 years	1,661/2,911 (57.1%)	1,640/2,911 (56.3%)	1,475/2,911 (50.7%)
1-2 years	1,490/2,911 (51.2%)	1,474/2,911 (50.6%)	1,311/2,911 (45.0%)
2-3 years	1,576/2,840 (55.5%)	1,566/2,840 (55.1%)	1,454/2,840 (51.2%)
0-3 years	1,742/2,970 (58.7%)	1,699/2,970 (57.2%)	1,484/2,970 (50.0%)

Note: the denominators represent the number of patients alive and on-study at the start of each interval.

Supplementary Table 8. Pooled adverse event rates and unadjusted and adjusted risks occurring in patients with versus without permanent dual antiplatelet therapy (DAPT) discontinuation during 3-5-year and 0-5-year follow-up.

Variable	No permanent discontinuation	Permanent discontinuation*	Unadjusted HR (95% CI)	*p*-value	Adjusted HR (95% CI)	*p*-value
Myocardial infarction						
3-5 years	4.8%	0.2%	24.59 (5.85-103.34)	<0.0001	1.08 (0.56-2.07)	0.82
0-5 years	14.0%	6.8%	2.06 (1.60-2.65)	<0.0001	0.84 (0.59-1.18)	0.31
Scaffold thrombosis						
3-5 years	0.1%	0.1%	1.93 (0.10-36.05)	0.78	N/A	N/A
0-5 years	3.3%	1.8%	1.98 (1.21-3.23)	0.005	0.60 (0.31-1.16)	0.13
Bleeding						
3-5 years	2.7%	0.0%	N/A	<0.0001	1.08 (0.40-2.94)	0.87
0-5 years	3.5%	2.2%	1.37 (0.84-2.24)	0.04	1.23 (0.64-2.36)	0.53
Death						
3-5 years	8.0%	0.2%	47.43 (11.52-195.2)	<0.0001	1.08 (0.66-1.77)	0.75
0-5 years	8.2%	4.8%	1.58 (1.13-2.20)	0.0008	1.31 (0.92-1.87)	0.14

CI: confidence interval; HR: hazard ratio



Supplementary Figure 1. Spline analysis demonstrating the time-varying association of the hazard for study outcomes depending on dual antiplatelet therapy (DAPT) status during the 5-year follow-up period.
Note: the model could not be fitted for scaffold thrombosis due to the very low event rate beyond 3 years.