Supplementary data

Supplementary Table 1. Baseline characteristics according to polymer coating strategy in patients with moderate-severe coronary calcification.

	BP-DES (n=304)	**PF-DES (n=755)**	**PP-DES (n=613)**	**p value**
Age, yrs	68.7±11.1	69.1±10.9	69.6±10.2	0.518
Male	229 (75.3)	590 (78.1)	470 (76.7)	0.585
Body Mass Index (kg/m^2)	27.0±4.2	27.8±4.8	27.4±4.4	0.029
Diabetes mellitus	110 (36.2)	243 (32.2)	211 (34.4)	0.416
Insulin-dependent	32 (10.5)	95 (12.6)	86 (14.0)	0.321
Arterial hypertension	222 (73.0)	532 (70.5)	441 (71.9)	0.669
Hyperlipidemia	209 (68.8)	476 (63.0)	404 (65.9)	0.186
Current smoker	44 (14.5)	130 (17.2)	81 (13.2)	0.112
Prior myocardial infarction	80 (26.3)	216 (28.6)	199 (32.5)	0.114
Prior coronary artery bypass grafting	40 (13.2)	87 (11.5)	93 (15.2)	0.139
Clinical presentation Acute myocardial infarction Unstable Angina Stable Angina	 37 (12.2) 100 (32.9) 167 (54.9)	 145 (19.2) 133 (17.6) 477 (63.2)	 97 (15.8) 147 (24.0) 369 (60.2)	 <0.001
Ejection fraction*, %	53.2±11.6	51.3±12.8	52.4±11.6	0.091
1-vessel disease 2-vessel disease	31 (10.2) 70 (23.0)	81 (10.7) 161 (21.3)	49 (8.0) 130 (21.2)	0.444

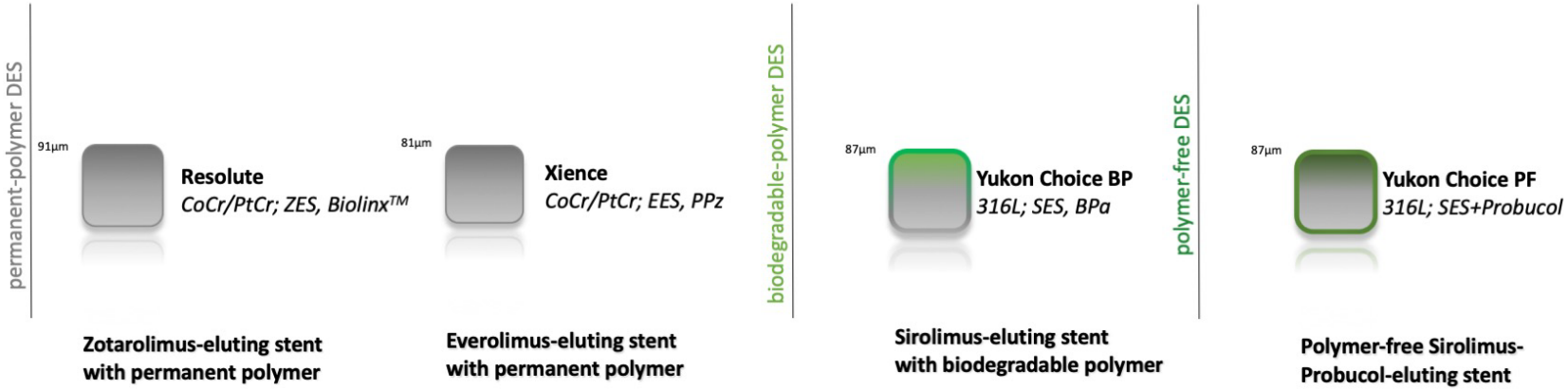
3-vessel disease	203 (66.8)	513 (67.9)	434 (70.8)	
Number of lesions	1.47±0.70	1.61±0.77	1.55±0.72	0.014

Values are n (%) or mean ± standard deviation unless otherwise indicated. *Available in n=1,617 patients. BP: biodegradable polymer; DES: drug-eluting stent; PF: polymer free; PP: permanent polymer.

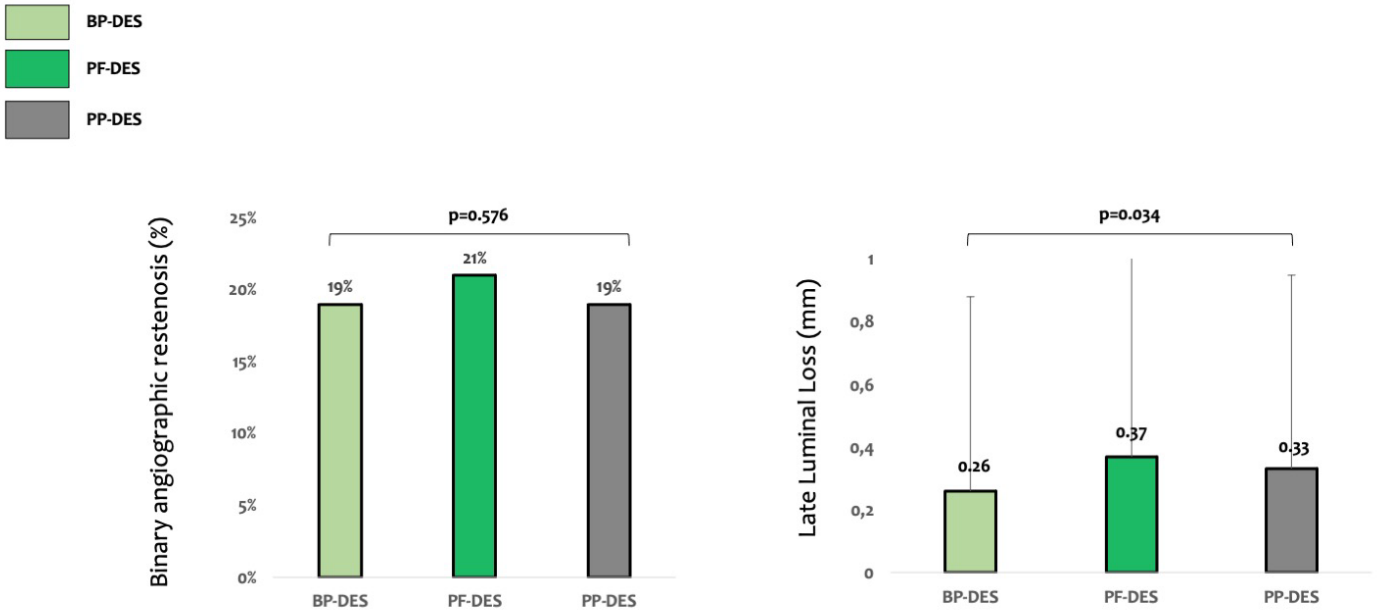
Supplementary Table 2. Procedural characteristics according to polymer coating strategy in patients with moderate-severe coronary artery calcification.

	BP-DES (n=361)	PF-DES (n=966)	PP-DES (n=779)	p value
Target vessel				
Left anterior descending artery	164 (45.4)	436 (43.8)	360 (46.2)	0.498
Left circumflex artery	96 (26.6)	250 (25.1)	206 (26.4)	
Right coronary artery	101 (28.0)	310 (31.1)	213 (27.3)	
Chronic total occlusion	32 (8.9)	84 (8.4)	47 (6.0)	0.105
Complex morphology (B2/C)	314 (87.0)	886 (89.0)	677 (86.9)	0.359
Bifurcation	116 (32.1)	326 (32.7)	255 (32.7)	0.976
Ostial	72 (19.9)	218 (21.9)	173 (22.2)	0.672
Lesion length, mm	15.7±9.7	17.9±10.3	17.7±10.3	0.001
Vessel size, mm	2.75±0.52	2.76±0.50	2.80±0.50	0.190
Diameter stenosis, %				
Before procedure	66.2±15.8	68.5±15.7	68.0±15.1	0.050
After procedure	12.6±9.7	12.7±8.1	12.5±8.1	0.921
Maximum balloon diameter, mm	3.06±0.53	3.05±0.53	3.09±0.53	0.480
Maximum balloon pressure, bar	16.4±3.1	16.2±3.4	16.3±3.4	0.461
Number of stents	1.8±0.7	1.9±0.6	1.9±0.8	0.017
Total stent length, mm	25.8±12.5	28.3±13.2	28.4±13.0	0.003

Values are n (%) or mean ± standard deviation unless otherwise indicated.
BP: biodegradable polymer; DES: drug-eluting stent; PF: polymer free; PP: permanent polymer.

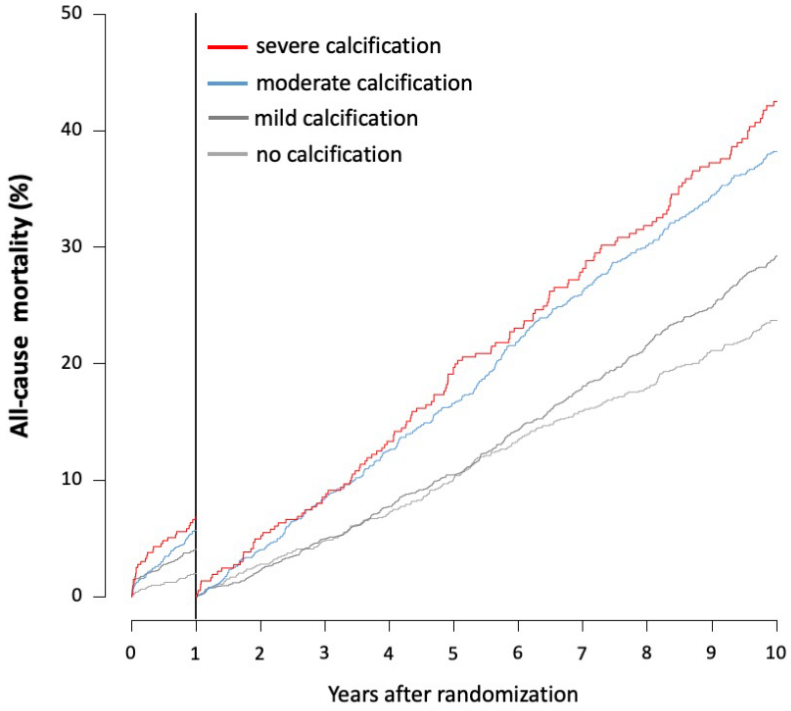


Supplementary Figure 1. Overview of principal characteristics of selected new-generation drug-eluting stents.



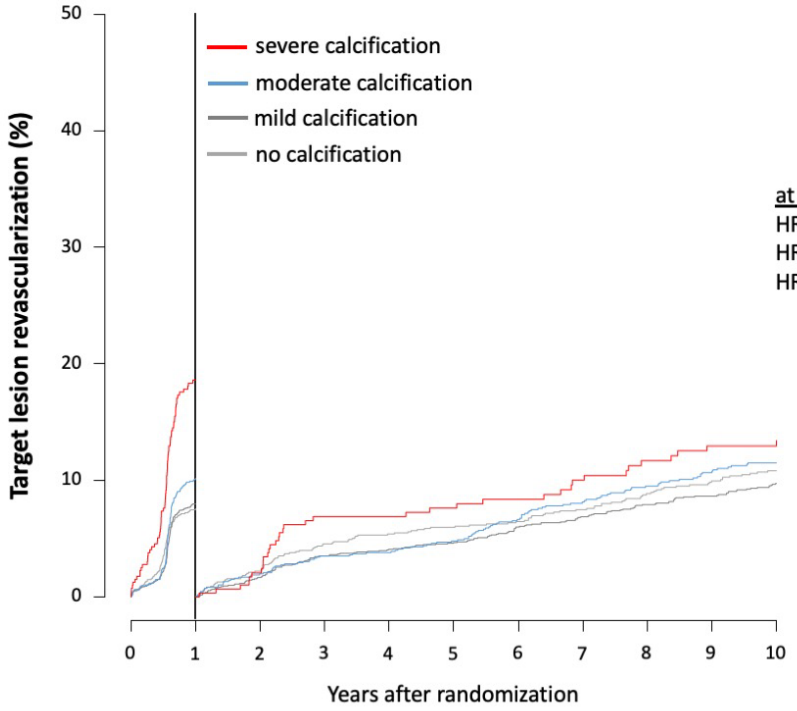
Supplementary Figure 2. Angiographic outcomes at 6-8 months according to polymer coating strategy in patients with moderate-severe coronary calcification.

3A.



at 0-1 year	at 1-10 years
$HR_{severe\ vs\ no}$ 3.5 [2.0-6.1]	$HR_{severe\ vs\ no}$ 2.0 [1.6-2.5]
$HR_{severe\ vs\ mild}$ 1.7 [1.1-2.6]	$HR_{severe\ vs\ mild}$ 1.6 [1.3-2.0]
$HR_{severe\ vs\ moderate}$ 1.2 [0.8-1.9]	$HR_{severe\ vs\ moderate}$ 1.1 [0.9-1.4]

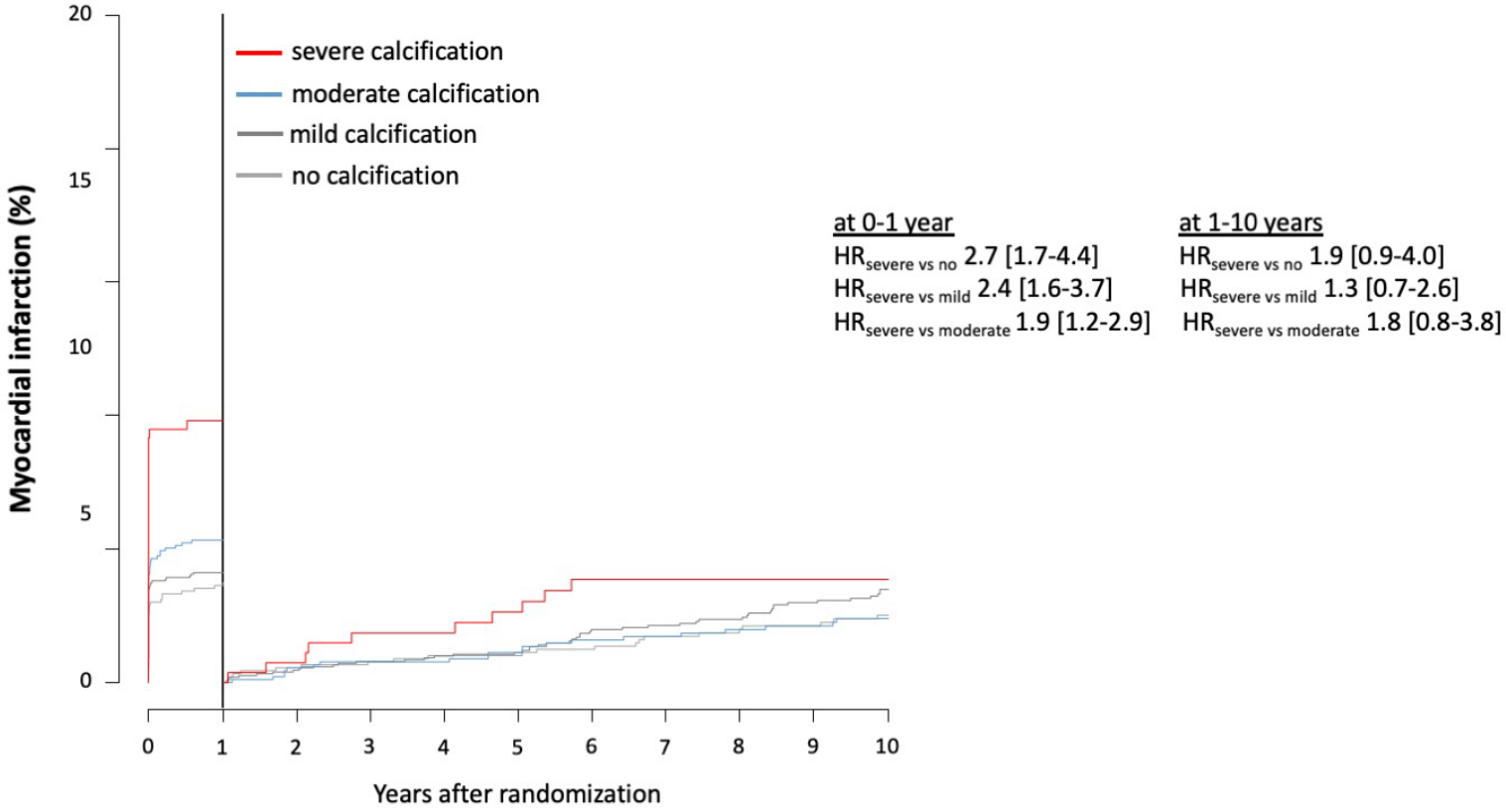
3B.



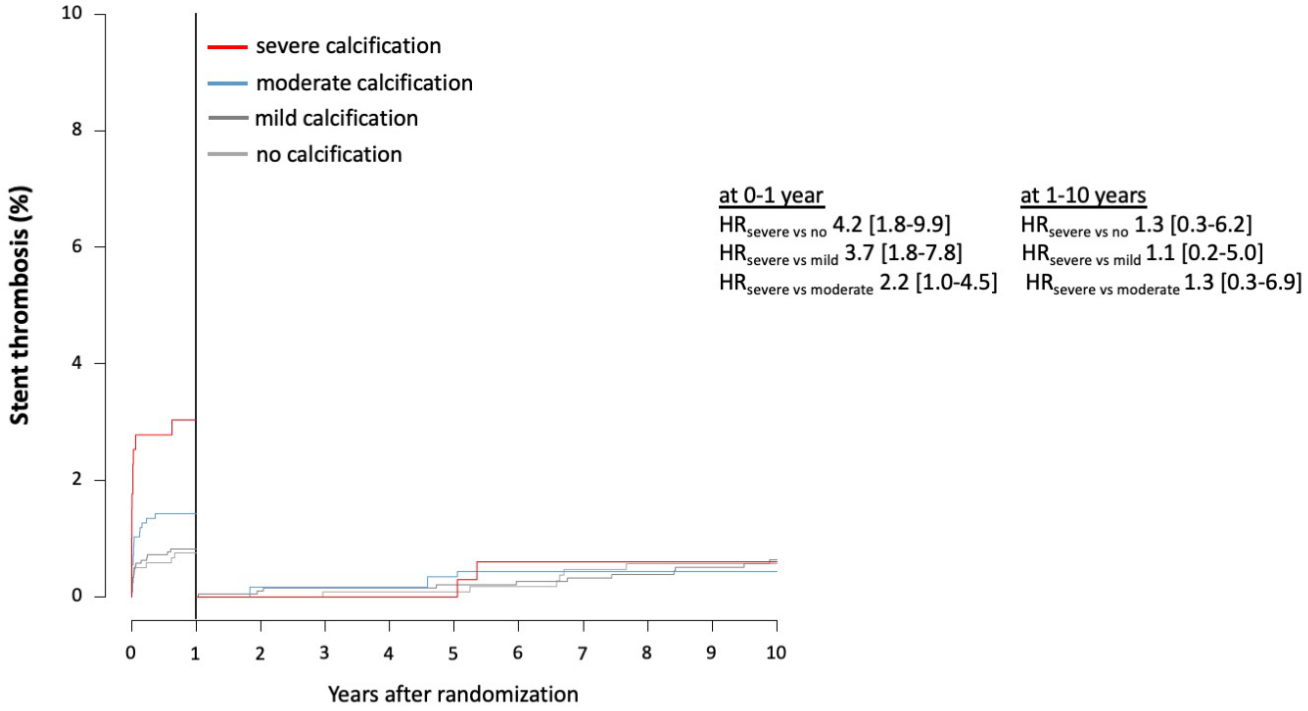
at 0-1 year
$HR_{severe\ vs\ no}$ 2.7 [2.0-3.7]
$HR_{severe\ vs\ mild}$ 2.6 [2.0-3.4]
$HR_{severe\ vs\ moderate}$ 2.0 [1.5-2.7]

at 1-10 years
$HR_{severe\ vs\ no}$ 1.4 [0.7-1.0]
$HR_{severe\ vs\ mild}$ 1.6 [1.1-2.3]
$HR_{severe\ vs\ moderate}$ 1.2 [0.9-1.8]

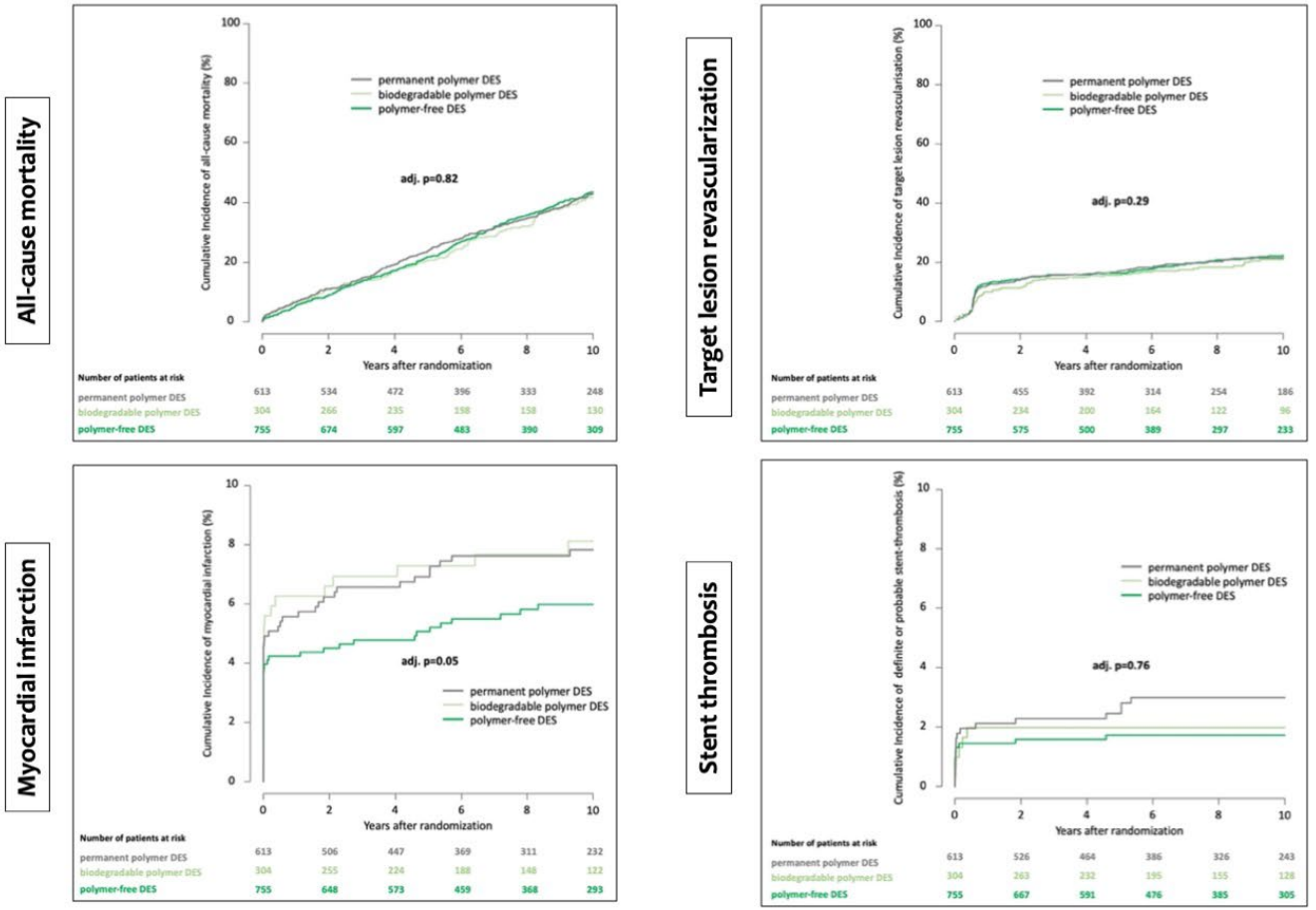
3C.


severe calcification
moderate calcification
mild calcification
no calcification
Myocardial infarction (%)
20
15
10
5
0
0
1
2
3
4
5
6
7
8
9
10
Years after randomization
at 0-1 year
HR severe vs no 2.7 [1.7-4.4]
HR severe vs mild 2.4 [1.6-3.7]
HR severe vs moderate 1.9 [1.2-2.9]
at 1-10 years
HR severe vs no 1.9 [0.9-4.0]
HR severe vs mild 1.3 [0.7-2.6]
HR severe vs moderate 1.8 [0.8-3.8]

3D.



Supplementary Figure 3. Kaplan-Meier curves and landmark analyses.
A) Kaplan-Meier curves and results of landmark analysis at 0-1 and 1-10 years for all-cause mortality.
B) Kaplan-Meier curves and results of landmark analysis at 0-1 and 1-10 years for target lesion revascularisation.
C) Kaplan-Meier curves and results of landmark analysis at 0-1 and 1-10 years for myocardial infarction.
D) Kaplan-Meier curves and results of landmark analysis at 0-1 and 1-10 years for stent thrombosis.



Supplementary Figure 4. Ten-year clinical outcomes according to different polymer coating strategies in patients with moderate-severe coronary calcification.