Supplementary Online Content

Buiten RA, Ploumen EH, Zocca P, et al. Outcomes in patients treated with thin, very thin, or ultrathin strut drug-eluting stents in small coronary vessels: a prespecified analysis of the randomized bio-resort trial. *JAMA Cardiol*. Published online May 21, 2019. doi:10.1001/jamacardio.2019.1776

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This supplementary material has been provided by the authors to give readers additional information about their work.

Supplemental eMethods

Enrolment and randomization

Patients were enrolled between December 2012 and August 2015, at 4 study sites within the Netherlands (Thoraxcentrum Twente, Enschede; Rijnstate Hospital, Arnhem; Haga Hospital, The Hague; Albert Schweitzer Hospital, Dordrecht). Web-based randomization was performed with the use of a custom-designed computer program in random block sizes of 6 and 3, stratified according to the presence of diabetes mellitus. All coronary syndromes were permitted, and there were only few exclusion criteria. Both de novo and restenotic lesions could be treated, and there was no limit for reference vessel size, lesion length, and number of lesions or vessels to be treated.

Procedures and clinical follow-up

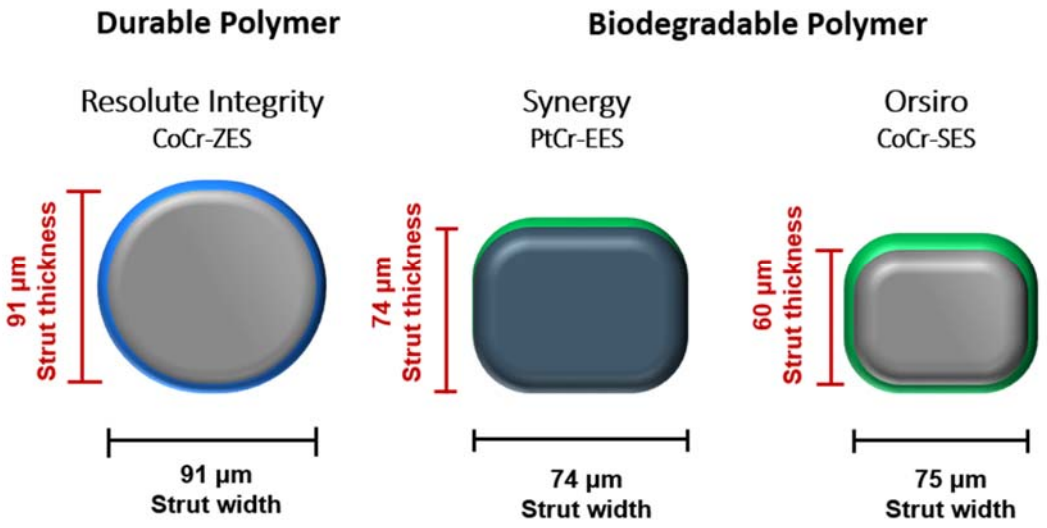
The choice of the concomitant medication and procedural details, such as predilation and stent postdilation, was based on the operator's judgement. In general, dual antiplatelet therapy (DAPT) was prescribed for 6-12 months, according to current international guidelines and depending on the clinical syndrome at presentation. Follow-up data were obtained during visits in the outpatient clinic, by telephone follow-up, or medical questionnaires (research staff blinded to allocated treatment).

Additional technical stent information

During study enrolment all three types of DES were available with diameters ranging from 2.25 – 4.00 mm. Lengths of 8-38 mm were available for everolimus (EES)- and zotarolimus-eluting stents (ZES); sirolimus-eluting stents (SES) had similar lengths (9-40 mm). Strut thickness varies with stent diameter in both biodegradable devices. For SES, the strut thickness is 60 μm for stents ≤ 3.0 mm in diameter, and 80 μm for stent diameters > 3.0 mm. For EES, strut thickness is 74 μm for stent diameters ≤ 2.5 mm, 79 μm for stent diameters ranging from 3.0 – 3.5 mm, and 81 μm for 4.0 mm stent diameter. SES has cobalt chromium struts and is covered by an asymmetrical PLLA coating that is thicker on the abluminal side (7.4 μm vs. 3.5 μm) on a very thin passive coating of silicon carbide. EES has a 4 μm abluminal coating. ZES is circumferentially covered by a 6 μm blend of three polymers.

eFigure 1

Multidimensional representation of study devices for the smallest sized stents



The upper site of the image shows the abluminal side of the stent struts, this part of the stent is apposed to the vessel wall.
***Abbreviations*:** CoCr = cobalt-chromium; EES = everolimus-eluting stent; SES = sirolimus-eluting stent; PtCr = platinum-chromium; ZES = zotarolimus-eluting stent.

eTable 1

Technical details of study devices

	ZES	SES	EES
Uncoated strut thickness, μm	91	60 > 3.0mm stents: 80	74 3.0 – 3.5 mm: 79 4.0 mm stent: 81
Coating thickness, μm	5.6	7.4 / 3.5 (ab- / luminal)	4
Coated strut thickness, μm	102	71	78
Metal	Cobalt-chromium	Cobalt-chromium	Platinum-chromium
Polymer	PLGA (poly [lactic-co-glycolic acid] polymer) coating	PLLA (poly [L-lactide] acid) (BIOlute®), on thin amorphous silicon carbide (proBIO®)	BioLinx®, a blend of hydrophobic C10, hydrophilic C19, and poly-vinyl pyrrolidone
Drug release time, months	3	3.3	6
Degradation time, months	4	≥ 24	--

***Abbreviations*:** EES = everolimus-eluting stent; SES = sirolimus-eluting stent; ZES = zotarolimus-eluting stent.

eTable 2

Medication at index procedure and at 1-, 2-, and 3-year follow-up

	SES	EES	ZES	P SES vs. ZES	P EES vs. ZES
Index procedure, n=1,506	**n=525**	**n=496**	**n=485**		
Dual antiplatelet therapy	506 (96.4)	482 (97.2)	473 (97.5)	0.29	0.73
With clopidogrel	278 (53.0)	272 (54.8)	272 (56.1)	0.32	0.70
With ticagrelor or prasugrel	228 (43.4)	210 (42.3)	201 (41.4)	0.52	0.78
OAC with P2Y12 inhibitor	11 (2.1)	9 (1.8)	10 (2.1)	0.97	0.78
1-year follow-up, n=1,469	**n=515**	**n=482**	**n=472**		
Dual antiplatelet therapy	437 (84.9)	413 (85.7)	410 (86.9)	0.47	0.86
With clopidogrel	247 (48.0)	227(47.1)	235 (49.8)	0.57	0.41
With ticagrelor or prasugrel	190 (36.9)	186 (38.6)	175 (37.1)	0.95	0.63
OAC with P2Y12 inhibitor	55 (10.7)	51 (10.6)	48 (10.2)	0.79	0.84
2-year follow-up, n=1,453	**n=511**	**n=477**	**n=465**		
Dual antiplatelet therapy	31 (6.1)	38 (8.0)	44 (9.5)	0.05	0.42
With clopidogrel	18 (3.5)	24 (5.0)	23 (4.9)	0.27	0.95
With ticagrelor or prasugrel	13 (2.5)	14 (2.9)	21 (4.5)	0.09	0.20
OAC with P2Y12 inhibitor	5 (1.0)	9 (1.9)	6 (1.3)	0.65	0.47
3-year follow-up, n=1,388	**n=481**	**n=459**	**n=448**		
Dual antiplatelet therapy	35 (7.3)	35 (7.6)	25 (5.6)	0.29	0.22
With clopidogrel	23 (4.8)	20 (3.3)	15 (3.3)	0.27	0.43
With ticagrelor or prasugrel	12 (2.5)	15 (3.3)	10 (2.2)	0.79	0.34
OAC with P2Y12 inhibitor	4 (0.8)	6 (1.3)	3 (0.7)	>0.99	0.51

***Abbreviations*:** EES = everolimus-eluting stent; OAC = oral anticoagulation therapy; SES = sirolimus-eluting stent; ZES = zotarolimus-eluting stent.