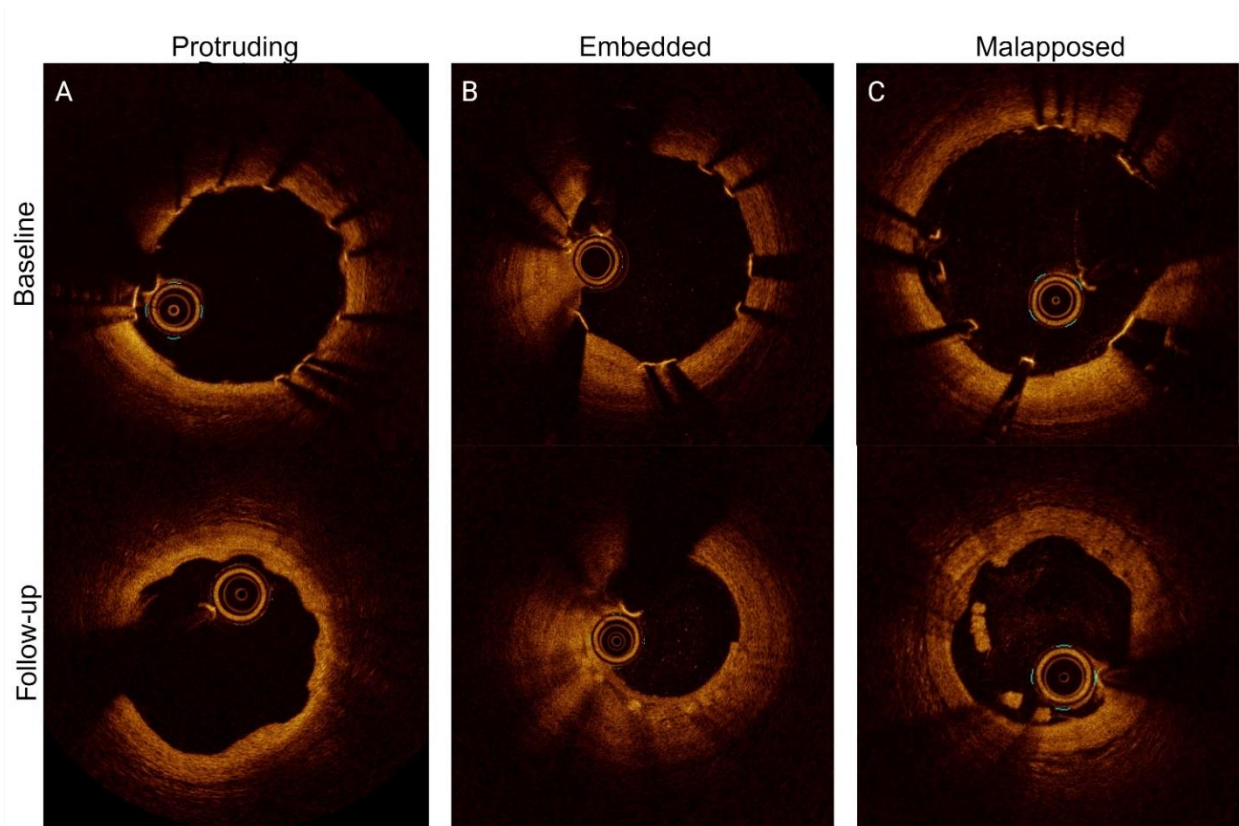


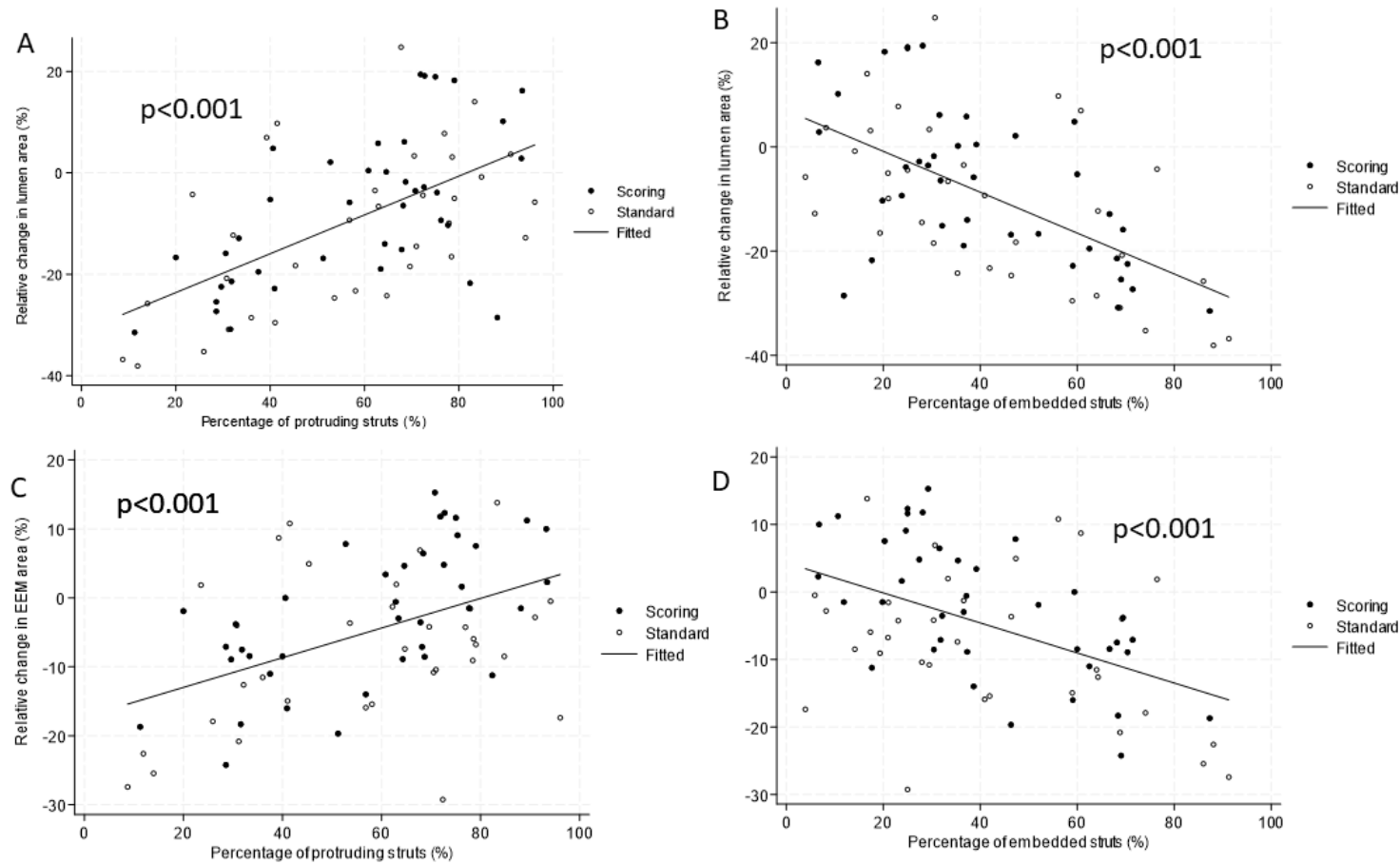
SUPPLEMENTAL MATERIAL

Figure S1: Strut remnant types



OCT images illustrating two categories of strut remnants at follow-up. Upper panel represents baseline images, and lower panel represents corresponding cross section at follow-up. (A) Protruding strut remnants: At baseline, all struts are well-apposed, and the cross sectional lumen area is 8.9 mm². At 6-month follow-up, the strut remnants are visible from 10 to 6 o'clock as bumpy irregularities in the lumen contour, protruding into the lumen. The lumen area is 9.2 mm². (B) Embedded strut remnants: At baseline, all struts are well-apposed, and the lumen area is 8.5 mm². At 6-month follow-up, there are visible, covered embedded strut remnants from 5 to 9 o'clock. Scaffold recoil and neointimal growth contribute to lumen area reduction to 5.0 mm². (C) Malapposed struts: At baseline, there are four malapposed struts from 6 to 9 o'clock, and at follow-up the strut remnants persist to be malapposed. Abbreviations: OCT = optical coherence tomography.

Figure S2: Correlation between Δ lumen and Δ vessel area and percentage of protruding and embedded remnants



Correlation between relative change in lumen and vessel area vs. percentage protruding or embedded strut remnants. There is a positive correlation between A) change in lumen area and protruding strut remnants, and B) a negative correlation between change in lumen area and embedded strut remnants. There is a positive correlation between C) change in vessel area and protruding strut remnants, and D) a negative correlation between change in vessel area and embedded strut remnants. Abbreviations: EEM = external elastic membrane

Table S1: Exclusion criteria
Ostial lesions (cannot be cleared with flushed contrast by OCT)
Significantly calcified lesions defined with an arc > 180° and calcium thickness > 0.5 mm and calcium length of > 5 mm evaluated with IVUS and/or OCT)
Lesions longer than 40 mm
Tortuous arteries where the PCI-operator estimated that the introduction of an OCT-catheter would not be possible or would be associated with increased risk
Allergy to aspirin, ticagrelor, clopidogrel, prasugrel or sirolimus
eGFR < 30 ml/min or creatinine > 150 µg/L (due to the required amount of contrast by OCT)
Expected survival < 1 year
Patients participating in other randomized stent studies
Abbreviations: IVUS = Intravascular Ultrasound; OCT = Optical Coherence Tomography; PCI = Percutaneous Coronary Intervention

Table S2: Intravascular ultrasound findings of the scaffold treated segment

	Baseline			6-month follow-up		
	Scoring balloon	Standard balloon	p-value	Scoring balloon	Standard balloon	p-value
No. of patients	40	38		39	34	
Lumen measurements						
Minimal lumen area, mm ²	7.0 ± 1.2	6.8 ± 1.5	0.48	5.6 ± 1.2	5.2 ± 1.8	0.23
Mean lumen area, mm ²	8.4 ± 1.3	8.3 ± 1.6	0.59	7.7 ± 1.4	7.4 ± 2.3	0.42
Total lumen volume, mm ³	182.9 ± 47.2	187.8 ± 59.4	0.69	170.4 ± 61.8	159.6 ± 54.1	0.43
Vessel measurements						
EEM area at MLA site, mm ²	14.7 ± 3.4	16.1 ± 4.9	0.13	13. ± 3.50	13.7 ± 4.7	0.86
Mean EEM area, mm ²	16.7 ± 2.9	17.0 ± 4.2	0.75	16.2 ± 3.2	15.6 ± 4.7	0.50
Total EEM volume, mm ³	361.6 ± 97.5	383.9 ± 130.2	0.40	353.9 ± 120.7	336.8 ± 111.0	0.53
Scaffold measurement						
Total no. of analyzed struts	140.9 ± 42.2	150.7 ± 30.8	0.24	108.0 ± 28.1	109.1 ± 27.3	0.86
Scaffold length, mm	20.9 [17.4 ; 24.1]	21.4 [20.0 ; 25.5]	0.20	21.2 [14.0 ; 36.3]	21.6 [13.7 ; 33.6]	0.70
Minimal scaffold area, mm ²	7.7 ± 1.4	7.5 ± 1.7	0.62	6.9 ± 1.5	6.4 ± 2.0	0.21
Mean scaffold area, mm ²	9.4 ± 1.6	9.2 ± 2.0	0.75	9.7 ± 1.6	8.8 ± 2.5	0.08
Total scaffold volume, mm ³	202.5 ± 52.2	209.2 ± 64.2	0.61	211.6 ± 69.2	190.7 ± 61.3	0.18

Abbreviations: EEM = external elastic membrane, MLA = minimal lumen area