# openheart Bioresorbable vascular scaffolds versus conventional drug-eluting stents across time: a meta-analysis of randomised controlled trials

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# ABSTRACT

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Professor Prithwish Banerjee; Prithwish.Banerjee@uhcw. nhs.uk **Background** Bioresorbable vascular scaffolds (BVS) were designed to reduce the rate of late adverse events observed in conventional drug-eluting stents (DES) by dissolving once they have restored lasting patency. **Objectives** Compare the safety and efficacy of BVS

versus DES in patients receiving percutaneous coronary intervention for coronary artery disease across a complete range of randomised controlled trial (RCT) follow-up intervals.

**Methods** A systematic review and meta-analysis was performed using Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. MEDLINE, EMBASE and Web of Science were searched from inception through 5 January 2022 for RCTs comparing the clinical outcomes of BVS versus DES. The primary safety outcome was stent/ scaffold thrombosis (ST), and the primary efficacy outcome was target lesion failure (TLF: composite of cardiac death, target vessel myocardial infarction (TVMI) and ischaemiadriven target lesion revascularisation (ID-TLR)). Secondary outcomes were patient-oriented composite endpoint (combining all-death, all-MI and all-revascularisation), its individual components and those of TLF. Studies were appraised using Cochrane's Risk of Bias tool and metaanalysis was performed using RevMan V.5.4.

**Results** 11 919 patients were randomised to receive either BVS (n=6438) or DES (n=5481) across 17 trials (differing follow-up intervals from 3 months to 5 years). BVS demonstrated increased risk of ST across all timepoints (peaking at 2 years with risk ratio (RR): 3.47; 95% Cl 1.80 to 6.70; p=0.0002). Similarly, they showed increased risk of TLF (peaking at 3 years, RR: 1.35; 95% Cl 1.07 to 1.70; p=0.01) resulting from high rates of TVMI and ID-TLR. Though improvements were observed after device dissolution (5-year follow-up), these were nonsignificant. All other outcomes were statistically equivalent. Applicability to all BVS is limited by 91% of the BVS group receiving Abbott's Absorb.

**Conclusion** This meta-analysis demonstrates that current BVS are inferior to contemporary DES throughout the first 5 years at minimum.

#### INTRODUCTION

Drug-eluting stents (DES) replaced baremetal stents (BMS) as the convention for

# WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Bioresorbable vascular scaffolds (BVS) were designed to replace conventional drug-eluting stents (DES); however, early clinical trials demonstrated increased rates of adverse safety and efficacy outcomes.

#### WHAT THIS STUDY ADDS

 $\Rightarrow$  This meta-analysis of 17 randomised controlled trials comparing BVS to DES shows them to be inferior in safety and efficacy domains at all timepoints out to 5 years. This appears to be driven by an elevated rate of stent thrombosis.

#### HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This meta-analysis builds on early research by being the first to compare RCTs of BVS to DES across all available follow-up durations from implantation to 5-year follow-up—facilitating evaluation of BVS across their bioabsorption window. Long-term data, past the point of stent dissolution, would be needed to see if there is any late benefit to be derived from current BVS.

percutaneous coronary intervention (PCI). DES use polymeric coatings to deliver an immunosuppressant (eg, everolimus) that inhibits neointimal hyperplasia and subsequently reduces restenosis.<sup>1</sup> Clinically, this reduces the rate of repeat myocardial infarction (MI) and the need for revascularisation.<sup>2</sup> DES development appears to have reached maturity, with the competing designs (using permanent or bioabsorbable coatings) achieving equivalence in large-scale, longterm clinical trials.<sup>3–5</sup> However, even the contemporary DES have their problems. The permanently retained metallic stent and its polymeric coating cause persistent inflammation-driving neoatherosclerosis, restenosis and late stent thrombosis-while eliminating local vasomotor function.<sup>1</sup> Subsequently, stent-related events (ie, thrombosis, MI and



Table 1 Full in	clusion and exclusion criteria for the systematic review			
	Inclusion criteria	Exclusion criteria		
Participants	Individuals receiving PCI for coronary artery disease (CAD)	Non-human (animal models or in vitro)		
Intervention	BVS (entirely bioabsorbable scaffold)	Conventional permanent DES or BMS		
Comparator	DES (permanent stent)	BMS		
Outcomes	Reporting at least one of: the primary safety and/or efficacy outcomes (definite/probable ST and TLF)	Non-clinical outcomes (histological, imaging, economic)		
Study design	Prospective RCT	Non-RCT (single-arm, registries)		
Publications	Published full-text articles	Reviews, conference abstracts, posters, letters, case reports		
Language	English	Other languages		
<b>D</b> 100 1 1				

BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents; PCI, percutaneous coronary intervention; RCT, randomised controlled trial; ST, stent/scaffold thrombosis; TLF, target lesion failure.

restenosis requiring repeat revascularisation) continue to accrue at a rate of around 2% per year after the first year, with no evident plateau—that is to say, remaining a risk for life.<sup>6</sup>

A potential solution to this lies with bioresorbable vascular scaffolds (BVS). The premise being that these devices provide adequate structural support to the target artery while it remodels, before completely dissolving to return normal vascular function and negate the late adverse events described above. Abbott Vascular's Absorb BVS was the first device of this kind to gain regulatory approval and is currently the most extensively studied. As detailed in table 3, Absorb is an all polymer,

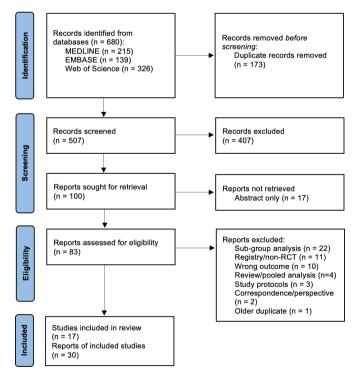


Figure 1 Preferred Reporting Items for Systematic Reviews and Meta- Analyses flow diagram reporting search strategy and study selection. Searches completed in parallel on 5 January 2022. RCT, randomised controlled trial. everolimus-eluting BVS with an indicated time to total dissolution of around 2 years.<sup>7</sup> Despite its early promise,<sup>78</sup> the GHOST-EU registry and BVS-EXAMINATION study soon demonstrated an increased risk of early stent/ scaffold thrombosis (ST) in the Absorb BVS groups.<sup>9 10</sup> A review of seven randomised controlled trials (RCTs) comparing the midterm clinical outcomes of Absorb BVS versus DES by Cassese *et al* went on to confirm that the BVS carried a significantly increased risk of adverse safety and efficacy outcomes over the first 2 years (namely ST and target lesion failure (TLF)—discussed ahead).<sup>11</sup>

Similar reviews comparing BVS to DES have been published,<sup>12–14</sup> all citing similar limitations: (1) a limited number of published studies and (2) a focus on a single BVS type (Absorb). Ni *et al* indicated that the observed failure may change as new BVS come to the fore with 'smaller footprints, less thrombogenicity (eg, magnesium), faster reabsorption and advanced mechanical properties'.<sup>14</sup> As such, this review aims to incorporate recent developments and identify the more current consensus on the safety and efficacy of BVS versus DES with respect to clinical outcomes. Further, given that BVS are a transient intervention this study looks to evaluate how this safety and efficacy profile changes with time, with particular interest to the pre-bioabsorption and postbioabsorption window.

#### **Objective**

Compare the safety and efficacy of BVS versus conventional DES in the treatment of coronary artery disease by PCI across all available timepoints, using published data on clinical outcomes from RCTs.

# **METHODS**

This review was designed in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist (presented in online supplemental appendix C). The protocol is registered with PROSPERO, accessible at: www.crd.york.ac.uk/ with

#### Table 2 Salient characteristics of the included studies

			Patien	ts, n	Stent/scaffo	ld type	Available data (Y/N)			
Study	Trial ID	Centres, n	BVS	DES	BVS	DES	Primary safety (ST)	Primary efficacy (TLF)	Follow-up durations (months)	Year
ABSORB CHINA <sup>25 26</sup>	NCT01923740	24	241	239	ABSORB BVS	XIENCE EES	Y	Y	12, 36	2018
ABSORB II <sup>27-31</sup>	NCT01425281	46	335	166	ABSORB BVS	XIENCE EES	Y	Y	12, 24, 36, 48, 60	2020
ABSORB III <sup>32–34</sup>	NCT01751906	193	1322	686	ABSORB BVS	XIENCE EES	Υ	Y	12, 36, 60	2019
ABSORB IV <sup>35</sup>	NCT02173379	147	1296	1308	ABSORB BVS	XIENCE EES	Υ	Y	12	2018
ABSORB JAPAN <sup>36-38</sup>	NCT01844284	38	266	134	ABSORB BVS	XIENCE EES	Υ	Y	12, 24, 60	2020
AIDA <sup>39 40</sup>	NCT01858077	5	924	921	ABSORB BVS	XIENCE EES	Y	Y	24, 60	2021
COMPARE-ABSORB41	NCT02486068	45	848	822	ABSORB BVS	XIENCE EES	Υ	Y	12	2020
COVER-AMI <sup>42</sup>	NCT02890589	1	10	12	ABSORB BVS	Synergy EES	Ν	Y	3	2019
EVERBIO II <sup>43-45</sup>	NCT01711931	1	80	160	ABSORB BVS	Promus Element EES or Biomatrix Flex BES	Y	Y	9, 24, 60	2021
Hernandez <i>et al</i> <sup>46</sup>	-	1	100	100	ABSORB BVS	Synergy EES	Y	Ν	12	2016
ISAR-ABSORB47	NCT01942070	5	173	89	ABSORB BVS	XIENCE EES	Υ	Υ	12	2019
MAGSTEMI <sup>23</sup>	NCT03234348	11	74	76	Magmaris	Orsiro SES	Υ	Υ	12	2019
NeoVas <sup>48</sup>	NCT02305485	32	278	282	NeoVas	XIENCE EES	Y	Υ	12	2018
PRAGUE-22 <sup>22</sup>	ISRCTN89434356	2	25	25	Magmaris	XIENCE EES	Y	Y	12	2021
Seo et al <sup>49</sup>	NCT02796157	Multi-	171	170	ABSORB BVS	XIENCE EES	Υ	Ν	12	2020
TROFI-II <sup>50 51</sup>	NCT01986803	8	95	96	ABSORB BVS	XIENCE EES	Υ	Y	12, 36	2018
XINSORB <sup>52</sup>	ChiCTR1800014966	17	200	195	XINSORB SES	TIVOLI SES	Y	Y	12	2019

All prospective, non-inferiority, RCTs in adult patients. Published follow-up durations are given with year of latest publication.

BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents; EES, everolimus-eluting stent; RCT, randomised controlled trial; SES, sirolimus-eluting stent; ST, stent/scaffold thrombosis; TLF, target lesion failure.

registration number: CRD42022301449. There was no patient or public involvement in this study.

#### **Eligibility criteria**

For a study to be included in the meta-analysis, the outcomes of interest must be extractable as incidence rates on an intention-to-treat (ITT) basis (table 1).

# Study outcomes

The primary safety outcome is definite/probable ST (ST). The primary efficacy outcome is TLF, this is the device-oriented composite endpoint of cardiac death, target vessel MI (TVMI) and ischaemia-driven target lesion revascularisation (ID-TLR). Secondary outcomes include: the patient-oriented composite endpoint (POCE; a composite of all-cause mortality, all-MI and all-revascularisation), its individual components, cardiac death, TVMI and ID-TLR. These standardised outcomes have previous been defined by the Academic Research Consortium on coronary device trials.<sup>15</sup> All outcomes are assessed on an ITT basis.

# Search and screening strategy

A keyword search was performed across MEDLINE, EMBASE and Web of Science from inception to 5 January

2022, as summarised below (detailed in online supplemental appendix A):

- Coronary Disease OR Myocardial Infarction OR Percutaneous Coronary Intervention
- AND: Bioresorbable Vascular Scaffold OR Bioresorbable Vascular Stent OR Third-Generation Stent
- AND: Drug Eluting Stent OR Everolimus Eluting Stent OR Second-Generation Stent

Duplicates were removed and publications were screened by title and abstract; a second investigator (SZ) independently screened a sample of the publications to ensure agreement. Subsequently, full text articles were retrieved and assessed for eligibility. The reference lists of the included articles were searched for appropriate trials to include. Details of this process are summarised in a PRISMA flowchart (figure 1).

#### Data collection and analysis

A data extraction table was developed using Cochrane guidance.<sup>16</sup> Two reviewers piloted the data extraction method on a sample of papers in parallel, consensus was established, and the remaining studies were analysed by the main reviewer.

All statistical analysis was completed using RevMan V.5.4 software. The summary statistic used for this study is

Specification of

Table 3

BVS

DES

Stent name

**ABSORB BVS** 

**NEOVAS** 

XINSORB

Orsiro

SYNERGY

Tivoli

XIENCE

**Biomatrix Flex** 

**PROMUS Element** 

CoCr, cobalt-chromium; Mg

PLLA, poly-L-lactic acid; PV

MAGMARIS/DREAMS

	Strut thickness		
Manufacturer	(µm)	Materials	Eluted drug
Abbott Vascular	157	PLLA stent, PDLLA coating	Everolimus
BIOTRONIK	125	Mg stent, PLLA coating	Sirolimus
Lepu Medical Technology	170	PLLA, PDLA coating	Sirolimus
Huaan Biotechnology	160	PLLA stent, PDLLA and PLLA coating	Sirolimus
<b>Biosensors International</b>	120	SS (316L), PLA coating (bioabsorbable)	Biolimus
BIOTRONIK	60	CoCr stent, PLLA coating (bioabsorbable)	Sirolimus
Boston Scientific	81	PI-Cr stent, PVDF-HFP coating (durable)	Everolimus
Boston Scientific	74	PI-Cr stent, PLGA coating (bioabsorbable)	Everolimus
Essen Technology	80	CoCr, PLGA coating (bioabsorbable)	Sirolimus
Abbott Vascular	81	CoCr stent, PVDF-HFP coating (durable)	Everolimus
agnesium alloy; PDLLA, poly-D -HFP, poly(vinylidene fluoride-c		Cr, platinum-chromium; PLGA, poly lactic- ylene); SS, stainless steel.	-co-glycolic acid;

risk ratio (RR) with 95% for dichotomous outcomes and ease of interpretation compared with other methods, for example, OR. In view of the variation in population and procedural characteristics across the included studies, for example, differing clinical indications (stable angina vs STEMI), devices, and preinflation/postinflation protocols, a Mantel-Haenszel random-effects model was used.<sup>16</sup> Model-based sensitivity analysis comparing the consistency of results using fixedeffect models was performed to verify this decision.

Outcomes were evaluated at all available follow-up durations. Grouped analysis of follow-up intervals of  $\leq$ 12 months and 2, 3 and 5 years was also performed to investigate the relationship between adverse event accrual and the BVS resorption window. Statistical significance is interpreted using p<0.05 and non-overlap of 95% CIs. Heterogeneity among trials is estimated using Cochran's Q test and the I<sup>2</sup>-statistic (where <25%, 25–50% and >50% represent low, moderate and high heterogeneity, respectively).

Study-based sensitivity analysis was performed by individually omitting each study from the meta-analysis and assessing changes in outcome (in terms of direction of effect and change in magnitude and significance). Small study effects and publication bias was evaluated by visual inspection of funnel plots. Risk of bias in the included studies is evaluated using the Cochrane Risk of Bias Tool (RoB 2).

# RESULTS

# Study selection and characteristics

A PRISMA flow diagram describing the search strategy is presented in figure 1. The search identified 680 publications for screening; 173 duplicates were removed and

tract review. One hundred full-text articles were reviewed for eligibility, of which, 70 were excluded (reasons given in figure 1). The 30 remaining articles meeting the inclusion criteria report different follow-up durations of 17 individual RCTs-enrolling a total of 11919 patients for PCI with either BVS (n=6438) or DES (n=5481).

The main characteristics of the 17 included studies are presented in table 2. Salient characteristics of the included studies . The most studied stents were Abbott Vascular's ABSORB BVS (n=5861) and XIENCE DES (n=4631). Details of all included stents are given in table 3. The most common follow-up duration presented is 12months (14 independent studies), with 5 studies going out to 5 years. Only one follow-up at 48 months was identified (ABSORB II); given the lack of comparators at this interval and that these data are incorporated in to ABSORB II's 60-month follow-up, it was excluded from meta-analysis. Patient and procedural characteristics are presented in online supplemental appendix table 1.

# Study quality assessment

Quality assessment of the included RCTs using Cochrane's Risk of Bias (RoB 2) tool is summarised in table 4. Most of the studies were assessed as having a low risk of bias, with four exceptions. Briefly, prepublished protocols/plans for result reporting could not be found for COVER-AMI, PRAGUE-22, Hernandez et al and XINSORB, while Hernandez et al also did not provide adequate information on their randomisation procedure. It was decided that these concerns alone were not sufficient to exclude these studies from the analysis.

Funnel plots for the primary safety and efficacy outcomes are presented in figure 2; they show no

# Coronary artery disease

	Randomisation process	Deviations from intended interventions	Missing outcome data	Measurement of the outcome	Selection of the reported result	Overall bias
Absorb China	+	+	+	+	+	+
ABSORB II	+	+	+	+	+	+
ABSORB III	÷	+	+	+	+	+
ABSORB IV	•	+	+	•	+	+
ABSORB JAPAN	+	+	+	•	+	+
IDA	+	+	+	+	+	+
COMPARE-ABSORB	+	+	+	+	•	+
OVER-AMI	+	+	+	+	-	-
VERBIO II	+	+	+	+	•	+
lernandez <i>et al</i>	•	+	+	•	-	-
SAR-ABSORB	+	+	+	+	•	+
<b>I</b> AGSTEMI	+	+	+	+	+	+
leoVas	+	+	+	+	•	+
RAGUE-22	+	+	+	+	-	-
eo <i>et al</i>	+	+	+	+	•	+
ROFI-II	+	+	+	+	+	+
INSORB	+	+	+	+	-	-

Some concerns.

High risk of bias.

BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents.

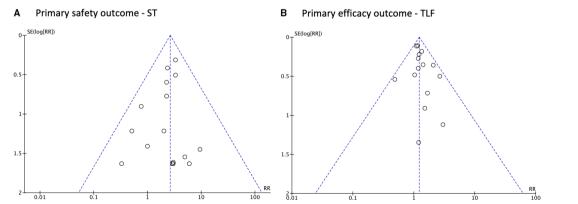
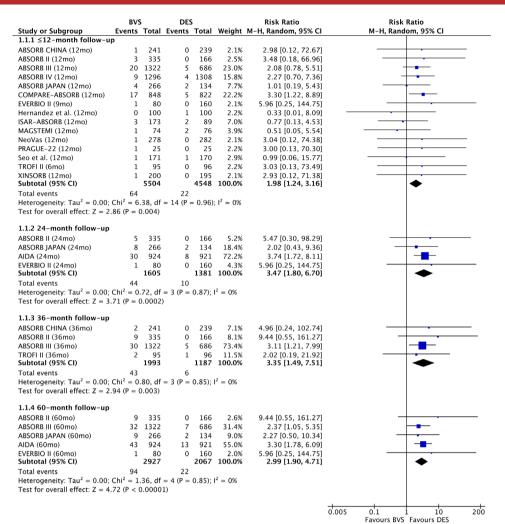


Figure 2 Funnel plot analysis for (A) the primary safety outcome (stent/scaffold thrombosis, ST) and (B) the primary efficacy outcome (target lesion failure, TLF) at latest follow-up. Diagonal lines show pseudo-95% Cls. RR, risk ratio.



**Figure 3** Forest plot for the primary safety outcome of stent thrombosis (ST)—grouped by follow-up duration. Diamonds indicate point estimates and extremes of 95% CIs. See online supplemental appendix B figure 3 for corresponding funnel plot. BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents.

significant interference from small-study effects and the relative symmetry suggests limited publication bias.

There was no evidence of significant heterogeneity in the included studies across the outcomes of interest. Sensitivity analysis across each outcome did not demonstrate significant deviation due to any one included study—including the four with identified bias concerns. Results remain consistent when checked using a fixedeffects model.

#### Study outcomes

#### Primary safety outcome: ST

Excluding COVER-AMI, all studies reported the primary safety outcome of definite/probable ST. As demonstrated in figure 3, patient enrolled to the BVS group have a statistically significant increased risk of ST across all time-points. This appears to peak with a relative risk of 3.47 (95% CI 1.80 to 6.70; p=0.0002; I<sup>2</sup>=0%) at 24-month follow-up and decrease over the proceeding intervals to 2.99 at 60 months (95% CI 1.90 to 4.71; p≤0.00001; I<sup>2</sup>=0%), however, this is not statistically significant. At latest follow-up (online supplemental appendix figure 2), this outcome occurred in 2.05% of BVS versus 0.69% of DES patients (RR: 2.56; 95% CI 1.79 to 3.66; p≤0.00001;  $I^2=0\%$ ).

Subgroup analysis of early (0–30 days), late (31 days to 1 year) and very late ST (VLST; 1 year onwards) was performed exclusively on studies that provided extractable data for all three of these time points. BVS exhibit an increased risk of ST across the described intervals, the relative risk appears to peak in the late phase (31 days to 1 year), though there is no significant difference between the intervals (figure 4).

#### Primary efficacy outcome: TLF

Excluding Hernandez *et al* and Seo *et al*, all other studies report the primary efficacy outcome of TLF. As demonstrated in figure 5, patients with BVS have a significantly increased risk of TLF at all time-points. While remaining inferior throughout, the extent of inferiority (in terms of RR) appears to decrease between 36-month and 60-month follow-up (from RR=1.33 to RR=1.18), though this drop is not statistically significant (overlapping 95% CI 1.07 to 1.70 and 95% CI 1.02 to 1.37, respectively).

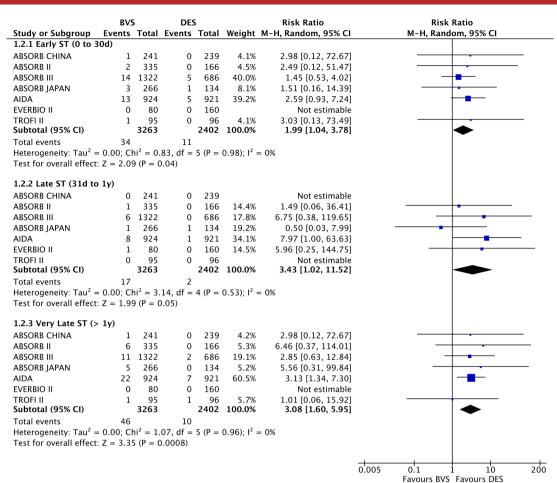


Figure 4 Forest plot for stent thrombosis at early (0–30 days), late (31 days to 1-year) and very late intervals (after 1 year). BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents.

At latest follow-up (online supplemental figure 4), TLF occurred in 9.73% of BVS versus 7.45% of DES patients (RR: 1.21; 95% CI 1.07 to 1.37; p=0.002;  $I^2=0\%$ ).

#### Secondary outcomes

#### Patient-oriented composite endpoint

All studies excluding Hernandez *et al* and Seo *et al* reported POCE or provided adequate information to reliably calculate it. While RRs favoured DES at all time points, overlapping CIs failed to grant this true significance. At latest available follow-up for all studies, POCE occurred in 17.64% of BVS versus 14.78% of DES patients (RR: 1.10; 95% CI 1.01 to 1.19; p=0.03;  $I^2$ =0%; see online supplemental appendix B, figure 6).

#### All death

All studies excluding Hernandez *et al* and Seo *et al* provided mortality outcomes. Mortality rates were lower for BVS versus DES across 24-month, 36-month and 60-month follow-ups, but higher in the 12-month and under group. None of which reached statistical significance. See online supplemental figure 8.

#### Cardiac death

All studies provided incidence of cardiac death. The same relationship described for all-death above was

observed for the outcome of cardiac death. See online supplemental figure 9.

# All MI

All studies provided incidence of MI. Significantly increased rates of MI occurred in BVS versus DES groups across all follow-up durations (10.49% vs 7.26% at 60 month follow-up; RR: 1.39; 95% CI 1.15 to 1.67; p=0.0007), with no significant difference in rate between each group. See online supplemental figure 10.

# Target vessel MI

Excluding Hernandez *et al*, Seo *et al*, MAGSTEMI and ABSORB II at 48 and 60 months, incidence of TVMI was reported for all other studies. The BVS group showed increased rates of TVMI across all follow-up durations compared with DES, this reached significance in the  $\leq$ 12, 24 and 60-month groups (for the latter: 8.49% vs 5.26%; RR: 1.48; 95% CI 1.18 to 1.86; p=0.0008). See online supplemental figure 11.

#### All revascularisation

All studies but Seo *et al* reported incidence of revascularisation. This was similar between BVS and DES at all follow-up durations. See online supplemental figure 12.

2.1.1 $\pm 22$ -month follow-up ARSOR8 (II.V. (12mo) 16 241 5 239 3.5% 3.17 (1.18, 8.52) ARSOR8 (II.V. (12mo) 16 241 5 239 3.5% 3.17 (1.18, 8.52) ARSOR8 II.V. (12mo) 16 2426 48 1308 25.4% 1.35 (1.09.1, 1.83) ARSOR8 II.V. (12mo) 64 1296 48 1308 25.4% 1.35 (1.09.1, 1.59, 3.12) COMPARE-ARSOR8 (I.2mo) 43 848 34 822 17.6% 1.23 (0.79, 1.30) COMPRACH (12mo) 1 10 12 0.5% 1.20 (10.09, 16.84) COMPRACH (12mo) 1 10 11 12 0.5% 1.20 (10.09, 16.84) COMPRACH (12mo) 1 3 74 5 76 3.5% 2.67 (1.00, 7.12) NAGSTRMI (12mo) 1 3 74 5 76 3.5% 2.67 (1.00, 7.12) NAGSTRMI (12mo) 1 3 74 5 76 3.5% 2.66 201 MAGSTRMI (12mo) 1 3 74 5 76 3.5% 2.68 (1.00, 1.37, 73.49) NAGSTRMI (12mo) 1 3 74 5 76 3.5% 2.68 (1.00, 1.37, 73.49) NAGSTRMI (12mo) 1 2 95 3.1% 0.49 (0.13, 73.49) NAGSTRMI (12mo) 1 2 95 3.1% 0.49 (0.13, 73.49) NAGSTRMI (12mo) 1 2 0.00 (h <sup>2</sup> = 10.98, df = 13 (P = 0.61); h <sup>2</sup> = 0% Total events 291 183 Hereogeneticy Tau <sup>2</sup> = 0.00; h <sup>2</sup> = 10.98, df = 13 (P = 0.61); h <sup>2</sup> = 0% Test for overall effect: 2 = 2.73 (P = 0.006) 2.12 24-month follow-up ARSOR8 I(12mo) 1 3 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(26mo) 13 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(136mo) 13 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(136mo) 13 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(136mo) 13 241 12 29 0.66 7.7% 2.28 (0.88, 5.89] ARSOR8 I(136mo) 13 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(136mo) 13 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(136mo) 13 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(136mo) 13 241 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 I(136mo) 13 241 12 239 8.8% 1.21 (1.00, 4.45] ARSOR8 I(136mo) 13 241 12 239 8.8% 1.21 (0.09, 1.68] Total events 226 9 20 teterogeneticy: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.70, df = 3 (P = 0.64); h <sup>2</sup> = 0% Test for overall effect: 2 = 2.28 (P = 0.02) 2.1.46 0-month follow-up ARSOR8 II (160mo) 13 243 11 239 8.8% 1.17 (0.54, 2.56] ARSOR8 II (160mo) 13 241 12 239 8.6% 1.17 (0.54, 2.56] ARSOR8 II (160mo) 13 241 12 249 8.6% 1.16 (0.04, 1.45] ARSOR8 II (160mo) 13 241 12 249 8.6% 1.16 (0.04, 1.45] ARSOR8 II (		BVS		DES	-		Risk Ratio	Risk Ratio
$\begin{split} & \text{SSOR8} (-1) \text{KA} (12 \text{mo}) & \text{S} = 241 & 10 & 239 & 4.1\% & 0.79 (0.32, 1.98] \\ & \text{MSOR8} (1(12 \text{m})) & 102 & 1322 & 41 & 686 & 27.7\% & 1.29 (10.5), 1.83] \\ & \text{MSOR8} (11(12 \text{m})) & 102 & 1322 & 41 & 686 & 27.7\% & 1.29 (10.5), 1.83] \\ & \text{MSOR8} (112 \text{m})) & 64 & 1296 & 48 & 1308 & 25.4\% & 1.35 (10.3, 1.94] \\ & \text{MSOR8} (12 \text{m})) & 11 & 266 & 48 & 1308 & 25.4\% & 1.20 (0.59, 1.634] \\ & \text{MSOR8} (12 \text{m})) & 11 & 126 & 58 & 1.20 (0.59, 1.634] \\ & \text{VERIO} (13 \text{m})) & 13 & 10 & 11 & 12 & 0.5\% & 1.20 (0.59, 1.634] \\ & \text{VERIO} (13 \text{m})) & 3 & 278 & 2.82 & 1.1\% & 1.55 (0.26, 9.04] \\ & \text{AACSTEMI (12 \text{m})} & 3 & 278 & 2.82 & 1.1\% & 1.55 (0.26, 9.04] \\ & \text{AACSTEMI (21 \text{m})} & 3 & 278 & 2.82 & 1.1\% & 1.55 (0.26, 9.04] \\ & \text{AACSTEMI (21 \text{m})} & 3 & 278 & 2.82 & 1.1\% & 1.55 (0.26, 9.04] \\ & \text{AACSTEMI (21 \text{m})} & 3 & 278 & 2.82 & 1.1\% & 1.55 (0.26, 9.04] \\ & \text{AACSTEMI (21 \text{m})} & 3 & 278 & 2.82 & 1.1\% & 1.55 (0.26, 9.04] \\ & \text{AACSTEMI (21 \text{m})} & 5 & 290 & 10 & 195 & 3.3\% & 0.49 (0.13, 7.3.49] \\ & \text{AACSTEMI (21 \text{m})} & 5 & 291 & 183 \\ & \text{Herrogenetic, Tau' = 0.00 (Ch'' = 1.098, df = 13 (P = 0.61); l' = 0\% \\ & \text{Fert for overall effect } 2 = 2.73 (P = 0.006) \\ & \text{L12 24-month follow-up} \\ & \text{MSOR8 (11(A66 \text{m})} & 13 & 241 & 11 & 239 & 8.6\% & 1.17 (0.54, 2.56] \\ & \text{ASSOR8 (12 \text{m})} & 16 & 80 & 20 & 160 & 16.8\% & 1.13 (1.04, 1.70] \\ & \text{for al events} & 146 & 105 \\ & \text{fert or overall effect } Z = 2.28 (P = 0.02) \\ & \text{L13 36-month follow-up} \\ & \text{MSOR8 (136 \text{m})} & 13 & 241 & 11 & 239 & 8.6\% & 1.17 (0.54, 2.56] \\ & \text{MSOR8 (116 (36 \text{m}))} & 34 & 335 & 8 & 166 & 9.7\% & 2.11 [1.00, 4.45] \\ & \text{ASOR8 (136 \text{m})} & 13 & 241 & 11 & 239 & 8.6\% & 1.17 [0.54, 2.56] \\ & \text{MSOR8 (16 \text{m})} & 28 & 335 & 9 & 166 & 4.3\% & 2.09 [1.04, 4.22] \\ & \text{MSOR8 (16 \text{m})} & 13 & 224 & 92 & 8.6\% & 1.46 [0.041, 6.85] \\ & \text{MSOR8 (16 \text{m})} & 13 & 224 & 92 & 187 & 10.00\% & 1.33 [1.04, 1.457] \\ & \text{For H (16 \text{m})} & 28 & 265 & 10 & 134 & 4.4\% & 1.10 (2.1, 2.37] \\ & \text{For H (16 \text{m})} & 28 & 265 & 10 & 134 & 4.$			Total	Events	Total	Weight	M-H, Random, 95% Cl	M-H, Random, 95% Cl
ASOR8 III (12mo) 16 241 5 239 3.5% 3.17 [1.18, 8.22] ASOR8 III (12mo) 16 1232 41 686 27.7% 1.29 [0.91, 1.83] ASOR8 IV (12mo) 64 1296 48 1308 25.4% 1.35 [0.93, 1.94] ASOR8 IV (12mo) 11 266 5 134 3.2% 1.11 [0.39, 31.2] COWTARE-ABSOR8 (12mo) 11 266 5 134 3.2% 1.12 [0.09, 16.44] VERBO II (9mo) 1 8 10 1 1 2 0.5% 1.20 [0.09, 16.44] VERBO II (9mo) 1 2 173 6 89 3.8% 1.03 [0.40, 2.65] MACSTEMI (12mo) 12 173 6 89 3.8% 1.03 [0.40, 2.65] MACSTEMI (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7.12] NevVas (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] TROFI II (6mo) 1 95 0 96 0.3% 3.03 [0.13, 7.3.49] Subtotal (95% CI) 5 149 4363 100.0% 1.29 [1.08, 1.55] Total events 291 183 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.0.98, df = 13 (P = 0.61); l <sup>2</sup> = 0% Test for overall effect: Z = 2.73 (P = 0.02) Subtotal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 291 183 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.0.98, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.2 24-month follow-up ASSOR8 II/24MO 88 924 75 921 69.9% 1.17 [0.54, 2.56] Subtotal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.0.98, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ASSOR8 II/24MO 3 3 241 11 239 8.8% 1.17 [0.54, 2.56] ASSOR8 II/34MO 436m0 13 241 11 239 8.8% 1.17 [0.54, 2.56] ASSOR8 II/36m0 3 34 335 8 166 9.7% 2.11 [1.00, 4.45] ASSOR8 II/36m0 174 1322 70 686 7.8% 1.22 [0.99, 1.68] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>14</sup> = 2.28 (P = 0.02) 2.1.3 36-month follow-up ASSOR8 II/60m0 38 335 9 166 4.3% 2.09 [1.04, 4.22] ASSOR8 II/60m0 13 241 11 239 8.8% 1.17 [0.54, 2.56] ASSOR8 II/60m0 38 335 9 166 4.3% 2.09 [1.04, 4.22] ASSOR8 II/60m0 38 335 9 166 4.3% 2.09 [1.04, 4.22] ASSOR8 II/60m0 138 924 7 121 921 40.5% 1.13 [1.02, 1.37] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>14</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect; Z = 2.27 (P = 0.02) ASSOR8 II/60m0 138	•							
ABSOR8 III (12mo) 102 1322 41 6 66 27.7% 1.29 [0.51, 1.83] ABSOR8 IV (12mo) 64 1296 48 1308 25.4% 1.35 [0.33, 1.94] ABSOR8 IV (12mo) 11 266 5 134 3.2% 1.11 [0.39, 3.12] COVER-AMI (3mo) 1 10 1 12 0.5% 1.20 [0.05, 16.84] EVERSIO II (12mo) 12 173 6 89 3.8% 1.03 [0.40, 2.65] MAGSTEM (12mo) 12 173 6 89 3.8% 1.03 [0.40, 2.65] MAGSTEM (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7, 1.20] NexViss (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7, 1.20] NexViss (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] PRAGLE-22 (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] PRAGLE-22 (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] NAGSTEM (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7, 1.20] NexViss (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] PRAGLE-22 (12mo) 3 25 1 2.5 0.7% 3.00 [0.33, 2692] NISOR8 (12mo) 5 200 10 1195 3.1% 0.49 [0.17, 1.40] Subtatal (95% CT) 2149 4363 1000% 1.28 [1.08, 1.55] Total events 291 133 (P = 0.61); I <sup>2</sup> = 0% Test for overall effect: 2 = 2.73 (P = 0.006) 21.2 24-month follow-up ABSOR8 II (24mo) 16 80 20 160 16.8% 1.91 [10.73, 5.01] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 38 335 9 166 4.3% 2.09 [1.04, 4.52] ABSOR8 II (60mo) 28 236 01 134 4.4% 1.11 [0.80, 1.46] ABSOR8 II (60mo) 28 236 01 134 4.4% 1.11 [0.81, 1.470] ABSOR8 II (60mo) 28 266 01 134 4.4% 1.11 [0.81, 1.471] ABSOR8 II (60mo) 28 266 01 134 4.4% 1.11 [0.81, 1.471] ABSOR8 II (60mo) 28 266 01 134 4.4% 1.11 [0.81, 1.471] ABSOR8 II (60mo) 28 266 01 13								
ABSORB IV (12mo) 64 1296 48 1308 25 4% 1.35 [0.33, 1.94] ABSORB JAPAN (12mo) 11 266 5 134 3.2% 1.11 [0.33, 3.12] COMPARE-ABSORB (12mo) 43 845 34 822 17.6% 1.23 [0.79, 1.90] COVER-AMI (3mo) 1 10 1 12 0.5% 1.23 [0.79, 1.90] COVER-AMI (3mo) 1 10 1 12 0.5% 1.20 [0.55, 2.62] FAR-ABSORB (12mo) 12 173 6 89 3.8% 1.03 [0.40, 2.65] NAGSTEM (12mo) 12 173 6 89 3.8% 1.03 [0.40, 2.65] NeoVas (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] PRACUE-22 (12mo) 3 278 1 25 0.7% 3.00 [0.33, 25, 22] TROFI II (6mo) 1 95 0 96 0.3% 3.03 [0.13, 73.49] XINSORB (12mo) 1 95 0 96 0.3% 3.03 [0.13, 73.49] XINSORB (12mo) 1 95 200 10 195 3.1% 0.04 [0.17, 1.40] Subtoal (95% CD) 5 149 4363 100.0% 1.29 [1.08, 1.55] Tatal events 291 183 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.0, 98, df = 13 (P = 0.61); l <sup>2</sup> = 0% Test for overall effect: Z = 2.73 (P = 0.00b) 2.1.2 24-month follow-up ABSORB II/24mo) 88 924 75 921 69.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 88 924 75 921 69.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtoal (95% CD) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ABSORB II/34mO 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB II/36mO 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB II/36mO 13 241 12 20 686 4.3% 2.09 [1.04, 4.68] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.20, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB II (36mo) 13 241 12 0.06% 1.35 [1.07, 1.70] Total events 226 92 EVERSIO II (60mo) 13 20 (P = 0.64); l <sup>2</sup> = 0.% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 13 229 18 686 4.3.6% 1.16 [0.94, 1.45] ABSORB II (60mo) 13 8 33 5 9 166 4.3.5% 2.09 [1.04, 4.22] ABSORB II (60mo) 13 8 23 5 9 166 4.3.5% 2.								
ABSORB JAPAN (12mo) 11 266 5 134 3.2% 1.11 [0.39, 3.12] COVER-AMI (3mo) 1 43 648 34 822 17.6% 1.23 [0.79, 1.90] COVER-AMI (3mo) 9 80 15 160 5.6% 1.20 [0.55, 2.62] MAGSTEM (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7.12] NAGSTEM (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7.12] NAGSTEM (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] PRACUE-22 (12mo) 3 278 1 25 0.7% 3.00 [0.33, 26.92] TAGCH (16mo) 1 95 0 96 0.3% 3.03 [0.13, 73.49] NINSORB (12mo) 5 200 10 195 3.1% 0.49 [0.17, 1.40] Subtotal (95% CD) 5149 4363 100.0% 1.29 [1.08, 1.55] Total events 291 183 ABSORB I/2mo) 2 3 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB I/2mo) 2 3 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB I/2mo) 2 3 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB I/2mo) 2 3 335 5 166 0.5% 1.91 [0.73, 5.01] AIDA (24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] AIDA (24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] AIDA (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtotal (95% CD) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 2.99, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: 2 = 2.28 (P = 0.02) 2.13 36-month follow-up ABSORB I/APAN (24mo) 13 241 11 229 8.8% 1.17 [0.54, 2.56] ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] Total events 26 9 0.02 2.13 36-month follow-up ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] Total events 2 2.54 (P = 0.01) 2.14 60-month follow-up ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] Subtotal (95% CD) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 2 2.54 (P = 0.01) 2.14 60-month follow-up ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 135 241 21 921 40.5% 1.11 [0.89, 1.40] EVERBIOII (160mo) 136 2924 121 921 40.5% 1.117 [0.54, 2.56] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325				. –				
$\begin{array}{c} COMPARE-ARSOR8\left(12 mo\right) & 43 & 848 & 34 & 822 & 17.6\% & 1.23 (0.79, 1.90) \\ COVER-AMI\left(mo\right) & 1 & 10 & 11 & 12 & 0.5\% & 1.20 (0.9, 16.84) \\ EVER8I0\left(I1\left(Imo\right) & 12 & 173 & 6 & 89 & 3.8\% & 1.03 (0.55, 2.62) \\ ISAR-ARSOR8\left(12 mo\right) & 12 & 173 & 6 & 89 & 3.8\% & 1.03 (0.40, 2.65) \\ ISAR-ARSOR8\left(12 mo\right) & 12 & 278 & 2 & 282 & 1.1\% & 1.52 (0.26, 9.04) \\ NeACSTEM\left(12 mo\right) & 1 & 278 & 2 & 282 & 1.1\% & 1.52 (0.26, 9.04) \\ NeACUE-22\left(12 mo\right) & 3 & 278 & 2 & 282 & 1.1\% & 1.52 (0.26, 9.04) \\ NEACUE-22\left(12 mo\right) & 3 & 278 & 2 & 282 & 1.1\% & 1.52 (0.26, 9.04) \\ NISOR8\left(12 mo\right) & 1 & 95 & 0 & 96 & 0.3\% & 3.03 (0.13, 73.49) \\ NISOR8\left(12 mo\right) & 1 & 95 & 0 & 96 & 0.3\% & 3.03 (0.13, 73.49) \\ NISOR8\left(12 mo\right) & 1 & 95 & 0 & 96 & 0.61\% & 1.29 \left[1.08, 1.55\right] \\ Total verms & 291 & 183 \\ Heterogeneity: Tau^2 = 0.00; Chi^2 = 1.09, df = 13 (P = 0.61); I^2 = 0\% \\ Test \ for overall effect: Z = 2.73 (P = 0.006) \\ 2.1.2 \ 2.4 moht \ follow-up \\ ABSOR8\ I.(24 mo) & 23 & 335 & 5 & 166 & 6.7\% & 2.28 \left[0.88, 5.89\right] \\ ABSOR8\ I.(24 mo) & 16 & 80 & 20 & 160 & 16.8\% & 1.60 & [0.88, 2.92] \\ Subtotal\left(95\% CO\right) & 1605 & 1381 & 10.00\% & 1.33 \left[1.04, 1.70\right] \\ Total verms & 146 & 105 \\ Heterogeneity: Tau^2 = 0.00; Chi^2 = 2.89, \ df = 3 (P = 0.41); \ l^2 = 0\% \\ Test \ for overall effect: Z = 2.28 (P = 0.02) \\ ABSOR8\ I.(36 mo) & 13 & 241 & 11 & 239 & 8.8\% & 1.17 \left[0.54, 2.56\right] \\ ABSOR8\ I.(36 mo) & 13 & 241 & 11 & 239 & 8.8\% & 1.29 \left[0.99, 1.68\right] \\ Total \ verms & 226 & 92 \\ Heterogeneity: \ Tau^2 = 0.00; Chi^2 = 1.70, \ df = 3 (P = 0.64); \ l^2 = 0\% \\ Test \ for overall effect: Z = 2.54 (P = 0.01) \\ ABSOR8\ I.(60 mo) & 38 & 335 & 9 & 166 & 4.3\% & 2.09 \left[1.04, 4.22\right] \\ ABSOR8\ I.(60 mo) & 135 & 244 & 121 & 10.0\% & 1.35 \left[1.07, 1.70\right] \\ Total verms & 2.69 & 2.94 & 1.21 & 2.21 & 0.5\% \\ ABSOR8\ I.(60 mo) & 135 & 9.24 & 1.21 & 9.24 & 0.5\% \\ ABSOR8\ $								
COVER AMI (3mo) 1 10 1 12 0.5% 1.20 [0.09, 16.84] VERBIO II (9mo) 9 80 15 160 5.6% 1.20 [0.57, 262] SAR-ABSORB (12mo) 12 173 6 89 3.8% 1.03 [0.40, 2.65] MAGSTEMI (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7.12] NAGSTEMI (12mo) 3 275 1 25 0.7% 3.00 [0.33, 26.92] TRACUL-22 (12mo) 3 275 1 25 0.7% 3.00 [0.33, 26.92] TRACUL-22 (12mo) 5 200 10 195 3.1% 0.49 [0.17, 1.40] Subtotal (95% C) 5149 4363 100.0% 1.29 [1.08, 1.55] Total events 291 183 MASORB II (2mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB II (24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB II (24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB II (24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] AIDA (24mo) 88 924 75 921 69.9% 1.17 [0.87, 1.57] EVERIO II (24mo) 16 88 020 160 16.6% 1.60 [0.88, 2.92] Subtotal (95% C) 1669 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.89, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.02) 2.1.3 36-month follow-up ABSORB II (36mo) 174 1322 70 686 78.8% 1.279 [0.99, 1.68] Total events 226 92 Subtotal (95% C) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 920 Subtotal (95% C) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 2.1.4 60-month follow-up ABSORB II (36mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (36mo) 132 212 98 686 43.6% 1.16 [0.94, 1.45] ABSORB II (36mo) 132 226 92 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 138 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138 325 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 138								
EVERBIO II (9mo) 9 80 15 160 5.6% 1.20 [0.55, 2.62] MAGSTEMI (12mo) 12 173 6 89 3.8% 1.03 [0.40, 2.65] MAGSTEMI (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7.12] NeaVas (12mo) 3 278 2 262 1.1% 1.52 [0.26, 9.04] FRACUE-22 (12mo) 3 278 2 262 1.1% 1.52 [0.26, 9.04] FRACUE-22 (12mo) 3 25 1 25 0.7% 3.00 [0.3, 26.92] TROFI II (6mo) 1 95 0 96 0.3% 3.03 [0.13, 73.49] SUNSOR8 (12mo) 5 200 10 195 3.1% 0.49 [0.17, 1.40] Subtat (95% C1) 5149 4363 100.0% 1.29 [1.08, 1.55] Total events 291 183 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.0.98, df = 13 ( $P = 0.61$ ); $l^2 = 0\%$ Test for overall effect: Z = 2.73 ( $P = 0.006$ ) 2.12 24-month follow-up ABSOR8 II (24mo) 16 80 20 160 16.8% 1.69 [0.88, 5.89] ABSOR8 II (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtatal (95% C1) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 2.89, (ff = 3 ( $P = 0.41$ ); $l^2 = 0\%$ Test for overall effect: Z = 2.28 ( $P = 0.02$ ) 2.1.3 36-month follow-up ABSOR8 III (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] Ch <sup>2</sup> (1.66mo) 134 335 8 166 9.7% 2.11 [1.00, 4.45] ABSOR8 III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] Ch <sup>2</sup> (1.66mo) 1393 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 1.70, df = 3 ( $P = 0.64$ ); $l^2 = 0\%$ Test for overall effect: Z = 2.28 ( $P = 0.01$ ) 2.1.4 60-month follow-up ABSOR8 III (60mo) 28 266 10 134 4.4% 1.16 (0.94, 1.45] ABSOR8 III (60mo) 28 335 9 166 4.3% 2.09 [1.04, 4.22] ABSOR8 III (60mo) 28 226 10 134 4.4% 1.16 (0.94, 1.45] ABSOR8 III (60mo) 28 226 10 0.33 4.34 4.4% 1.16 (0.94, 1.45] ABSOR8 III (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] VERBIO III (60mo) 135 924 121 921 40.5% 1.11 [0.12, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Ch <sup>2</sup> = 3.10, df = 4 ( $P = 0.54$ ); $l^2 = 0\%$ Test for overall effect: Z = 2.27 ( $P = 0.02$ )								T
$\begin{aligned} & \text{ISAR} - \text{ASSORB} (12\text{mo}) & 12 & 173 & 6 & 89 & 3.8\% & 1.03 [0.40, 2.65] \\ & \text{MAGSTEMI } (12\text{mo}) & 13 & 74 & 5 & 76 & 3.5\% & 2.67 [1.00, 7.12] \\ & \text{NACSTEMI } (12\text{mo}) & 3 & 278 & 2 & 282 & 1.1\% & 1.52 [0.26, 9.04] \\ & \text{PRACUE-22} (12\text{mo}) & 3 & 25 & 1 & 25 & 0.7\% & 3.00 [0.33, 72.92] \\ & \text{PRACUE-22} (12\text{mo}) & 3 & 25 & 1 & 25 & 0.7\% & 3.00 [0.37, 74.9] \\ & \text{NINSORB} (12\text{mo}) & 5 & 200 & 10 & 195 & 3.1\% & 0.49 [0.17, 1.40] \\ & \text{Subtotal } (95\% \text{CI}) & 5149 & 4363 & 100.0\% & 1.29 [1.08, 1.55] \\ & \text{Total events} & 291 & 183 \\ & \text{Heterogeneity: Tau^2 = 0.00; Ch1^2 = 10.98, df = 13 (P = 0.61); 1^2 = 0\% \\ & \text{Test for overall effect: } Z = 2.73 (P = 0.000) \\ & \text{Z1.2 24-month follow-up} \\ & \text{ABSORB II (24\text{mo})} & 23 & 335 & 5 & 166 & 6.7\% & 2.28 [0.88, 5.89] \\ & \text{ABSORB II (24\text{mo})} & 23 & 335 & 5 & 166 & 6.7\% & 2.28 [0.88, 5.89] \\ & \text{ABSORB II (24\text{mo})} & 88 & 924 & 75 & 921 & 69.9\% & 1.17 [0.87, 1.57] \\ & \text{VERBIO II (24\text{mo})} & 16 & 80 & 20 & 160 & 16.8\% & 1.39 [10.73, 5.01] \\ & \text{AIDA } (24\text{mo}) & 88 & 924 & 75 & 921 & 69.9\% & 1.37 [0.87, 1.57] \\ & \text{VERBIO II (24\text{mo})} & 18 & 924 & 11 & 239 & 8.8\% & 1.17 [0.54, 2.56] \\ & \text{ABSORB II (ANG (36\text{mo})} & 13 & 241 & 11 & 239 & 8.8\% & 1.29 [0.99, 1.68] \\ & \text{Total events} & 1167 & 10.26 & 78.8\% & 1.29 [0.99, 1.68] \\ & \text{ABSORB II (36\text{mo})} & 13 & 241 & 11 & 239 & 8.8\% & 1.17 [0.54, 2.56] \\ & \text{ABSORB II (36\text{mo})} & 13 & 241 & 11 & 239 & 8.8\% & 1.17 [0.54, 2.56] \\ & \text{ABSORB II (36\text{mo})} & 13 & 241 & 11 & 239 & 8.8\% & 1.29 [0.99, 1.68] \\ & \text{Total events} & 226 & 92 \\ & \text{Heterogeneity: Tau^2 = 0.00; Ch1^2 = 1.70, df = 3 (P = 0.64); 1^2 = 0\% \\ & \text{Tast for overall effect: Z = 2.54 (P = 0.01) \\ & \textbf{21.14 60\text{-month follow-up} \\ & \text{ABSORB II (60\text{mo})} & 135 & 924 & 121 & 921 & 40.5\% & 1.17 [0.68, 2.00] \\ & \text{ABSORB II (60\text{mo})} & 135 & 924 & 121 & 921 & 40.5\% & 1.17 [0.4, 4.22] \\ & \text{ABSORB II (60\text{mo})} & 135 & 924 & 121 & 921 & 40.5\% & 1.17 [0.4, 2.20] \\ & \text{ABSORB II (60\text{mo})} & 135 & 924 & 121 & 922 & 40.5\% & 1.118 [1.02, 1.3$								
MAGSTRM (12mo) 13 74 5 76 3.5% 2.67 [1.00, 7.12] NeoVas (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] PRACUE-22 (12mo) 3 25 1 25 0.7% 3.00 [0.3, 75.49] XINSOR8 (12mo) 1 95 0 96 0.3% 3.03 [0.13, 73.49] XINSOR8 (12mo) 1 95 0 96 0.3% 3.03 [0.13, 73.49] XINSOR8 (12mo) 2 91 1 83 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 10.98, df = 13 (P = 0.61); l <sup>2</sup> = 0% Test for overall effect: Z = 2.73 (P = 0.006) 2.1.2 24-month follow-up ABSOR8 II (24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSOR8 II (24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] ADDA (24mo) 18 924 75 921 69.9% L17 [0.87, 1.57] EVERBIO II (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtotal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ABSOR8 II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSOR8 II (36mo) 13 241 11 239 8.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Verst for overall effect: Z = 2.28 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.24 (P = 0.01) 2.1.4 60-month follow-up ABSOR8 II (36mo) 13 224 1 21 92 4.05% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.24 (P = 0.01) 2.1.4 60-month follow-up ABSOR8 II (60mo) 13 8 335 9 166 4.3% 2.09 [1.04, 4.22] ABSOR8 II (60mo) 13 6 24 1 21 921 40.3% 1.11 [0.89, 1.40] VERBIO II (60mo) 13 6 24 1 21 921 40.3% 1.14 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.3% 1.14 [0.89, 1.40] VERBIO II (60mo) 137 8 02 9 160 7.3% 1.137 [1.60, 2.00] Subtotal (95% CI) 22927 2067 100.0% L18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)		-						
Nevvas (12mo) 3 278 2 282 1.1% 1.52 [0.26, 9.04] PRAGUE-22 (12mo) 3 275 1 25 0.7% 3.00 [0.33, 26.92] TACH II (6mo) 1 95 0 96 0.3% 3.03 [0.13, 73.49] XINSOR8 (12mo) 5 200 10 195 3.1% 0.49 [0.17, 1.40] Subtotal (95% CI) 5149 4 3436 100.0% L29 [1.08, 1.55] Total events 2 291 183 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.9.8, df = 13 ( $P = 0.61$ ); l <sup>2</sup> = 0% Test for overall effect: Z = 2.73 ( $P = 0.006$ ) Z.1.2 24-month follow-up ABSOR8 JIR/NR ( $24mo$ ) 19 266 5 134 6.5% L38 [1.024mo] 16 80 20 160 16.5% L38 [1.024mo] 16 80 20 160 16.5% 1.91 [0.73, 5.01] AIDA ( $24mo$ ) 88 924 75 921 69.9% L1.7 [0.87, 1.57] VEKBIO II ( $24mo$ ) 16 80 20 160 16.5% Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 ( $P = 0.41$ ); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 ( $P = 0.02$ ) Z.1.3 6-month follow-up ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 239 8.8% L17 [0.54, 2.56] ABSOR8 II ( $36mo$ ) 13 241 11 221 40.8% L11 [1.00, 4.45] ABSOR8 II ( $36mo$ ) 13 224 12 921 40.5% L11 [1.00, 4.45] ABSOR8 II ( $60mo$ ) 135 924 121 921 40.5% L11 [1.06, 9, 2.00] Subtotal (95% CI) 2927 2067 100.0% L18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 ( $P = 0.54$ ); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 ( $P = 0.02$ )				-				
PAGUE-22 (12mo) 3 25 1 25 0.7% 3.00 [0.33, 26.92] TROFII (6mo) 1 95 0.96 0.3% 3.03 [0.13, 73.49] TROFII (6mo) 1 95 0.96 0.3% 3.03 [0.13, 73.49] TROFII (6mo) 1 5200 10 195 3.1% 0.49 [0.17, 1.40] Subtotal (95% CI) 5149 4363 100.0% 1.29 [1.08, 1.55] Total events 291 183 Heterogeneity: Tau2 = 0.00; Chi2 = 10.98, df = 13 (P = 0.61); l2 = 0% Test for overall effect: Z = 2.73 (P = 0.006) 2.1.2 2 4-month follow-up ABSORB II (24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSOR (24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] ABSOR (24mo) 18 8 924 75 921 69.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtotal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 1 46 105 Heterogeneity: Tau2 = 0.00; Chi2 = 2.29, df = 3 (P = 0.41); l2 = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 16-month follow-up ABSORB II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB II (36mo) 5 95 3 96 6.2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.29 [1.04, 4.22] ABSORB II (36mo) 5 95 3 96 6.2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.29 [1.04, 4.22] ABSORB II (36mo) 13 241 12 21 96 636 43.3% 2.09 [1.04, 4.22] ABSORB II (36mo) 5 95 3 96 6.2.7% 1.68 [0.41, 6.85] ABSORB II (36mo) 13 241 22 0.00 (24 1322 98 636 43.6% 1.16 [0.94, 1.45] ABSORB II (36mo) 13 241 22 0.01 22.7% 1.68 [0.41, 6.85] ABSORB II (36mo) 174 1322 70 646 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (36mo) 174 1322 70 646 78.8% 1.29 [0.99, 1.68] ABSORB II (60mo) 18 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 18 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 18 22.7% 1.68 [0.41, 6.85] ABSORB II (60mo) 18 22.7% 1.68 [0.41, 6.85] ABSORB II (60mo) 18 22.7% 1.22 9.8 (686 43.6% 1.16 [0.94, 1.45] ABSORB II (60mo) 18 22.7% 2.067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau2 = 0.00; Chi2 = 3.10, df = 4 (P = 0.54); l2 = 0% TEST for overall effect: Z = 2.27 (P = 0.02)								
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Subtoal (95% CI) 5149 4363 100.0% 1.29 [1.08, 1.55] Total events 291 183 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.0.98, df = 13 (P = 0.61); l <sup>2</sup> = 0% Test for overall effect: Z = 2.73 (P = 0.006) 2.1.2 24-month follow-up ABSORB I/24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB I/24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB I/24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] AIDA (24mo) 88 924 75 921 69.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 16 80 20 160 16.88 1.60 [0.88, 2.92] Subtoal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ABSORB II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TOFI II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TOFI II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TOFI II (36mo) 174 1322 6 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 28 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB II (60mo) 28 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB II (60mo) 28 2266 10 134 4.4% 1.41 [0.71, 2.82] ABSORB II (60mo) 135 924 121 221 40.5% 1.111 [0.69, 1.40] EVERBIO II (60mo) 13 2924 122 291 40.5% 1.111 [0.69, 2.00] Subtoal (95% CI) 2927 2067 100.0% 1.38 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)		-		-			• / •	
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Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 10.98, df = 13 ( $P = 0.61$ ); l <sup>2</sup> = 0% Test for overall effect: Z = 2.73 ( $P = 0.006$ ) 2.1.2 24-month follow-up ABSORB II (24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB II (24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] AIDA (24mo) 88 924 75 921 69.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 168 0 20 160 16.8% 1.66 [0.88, 2.92] Subtotal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 ( $P = 0.41$ ); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 ( $P = 0.02$ ) 2.1.3 36-month follow-up ABSORB (HINA (36mo) 174 1322 70 686 78.8% 1.27 [0.54, 2.56] ABSORB II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 ( $P = 0.64$ ); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 ( $P = 0.01$ ) 2.1.4 60-month follow-up ABSORB II (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB II (60mo) 220 1322 92 166 7.3% 1.17 [0.59, 2.00] 2.1.4 60-month follow-up ABSORB II (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] ADDA (60mo) 13 5 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 ( $P = 0.54$ ); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 ( $P = 0.02$ )	,	291		183				•
ABSORB II (24mo) 23 335 5 166 6.7% 2.28 [0.88, 5.89] ABSORB JAPAN (24mo) 19 266 5 134 6.5% 1.91 [0.73, 5.01] ABSORB JAPAN (24mo) 18 224 75 921 66.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtotal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 ( $P = 0.41$ ); $I^2 = 0\%$ Test for overall effect: $Z = 2.28$ ( $P = 0.02$ ) 2.1.3 36-month follow-up ABSORB II (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% Test for overall effect: $Z = 2.54$ ( $P = 0.64$ ); $I^2 = 0\%$ Test for overall effect: $Z = 2.54$ ( $P = 0.01$ ) 2.1.4 60-month follow-up ABSORB II (60mo) 28 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB II (60mo) 28 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 ( $P = 0.64$ ); $I^2 = 0\%$ Test for overall effect: $Z = 2.54$ ( $P = 0.01$ ) 2.1.4 60-month follow-up ABSORB II (60mo) 28 226 122 98 686 43.6% 1.16 [0.94, 1.45] ABSORB II (60mo) 28 226 122 91 60 7.3% 1.17 [0.69, 2.00] 2.1.4 60-month follow-up ABSORB II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 ( $P = 0.54$ ); $I^2 = 0\%$ Test for overall effect: $Z = 2.27$ ( $P = 0.02$ )	Heterogeneity: $Tau^2 = 0.00$ ; (	$Chi^2 = 1$			9 = 0.61	.); $I^2 = 0\%$	5	
ABSORB JAPAN $(24mo)$ 19 266 5 134 6.5% 1.91 [0.73, 5.01] AIDA (24mo) 88 924 75 921 69.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtotal (95% CI) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ABSORB CHINA (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TAOFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB III (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 28 266 10 134 4.4% 1.41 [0.74, 2.82] AIDA (60mo) 17 8 0 29 160 7.3% 1.17 [0.68, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)	2.1.2 24-month follow-up							
AlDA $(24mo)$ 88 924 75 921 69.9% 1.17 [0.87, 1.57] EVERBIO II (24mo) 16 80 20 160 16.8% 1.60 [0.88, 2.92] Subtotal (95% Cl) 16005 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ABSORB CHINA (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB CHINA (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% Cl) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% Cl) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.57 (P = 0.02)	ABSORB II (24mo)	23	335	5	166	6.7%	2.28 [0.88, 5.89]	
EVERBIO II (24mo) 16 80 20 160 16.8% 1.60 $(0.88, 2.92]$ Subtotal (95% CI) 1605 1381 100.0% 1.33 $(1.04, 1.70]$ Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 (P = 0.41); 1 <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ABSORB CHINA (36mo) 13 241 11 239 8.8% 1.17 $[0.54, 2.56]$ ABSORB II (36mo) 34 335 8 166 9.7% 2.11 $[1.00, 4.45]$ ABSORB II (36mo) 174 1322 70 686 78.8% 1.29 $[0.99, 1.68]$ TROFI II (36mo) 5 95 3 96 2.7% 1.68 $[0.41, 6.85]$ Subtotal (95% CI) 1993 1187 100.0% 1.35 $[1.07, 1.70]$ Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); 1 <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 220 1322 98 686 43.6% 1.16 $[0.94, 1.45]$ ABSORB II (60mo) 28 266 10 134 4.4% 1.41 $[0.71, 2.82]$ AIDA (60mo) 135 924 121 921 40.5% 1.11 $[0.89, 1.40]$ EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 $[0.69, 2.00]$ Subtotal (95% CI) 2927 2067 100.0% 1.18 $[1.02, 1.37]$ Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); 1 <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)	ABSORB JAPAN (24mo)	19	266	5	134	6.5%	1.91 [0.73, 5.01]	<b>—</b>
Subtotal (95% Ci) 1605 1381 100.0% 1.33 [1.04, 1.70] Total events 146 105 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) 2.1.3 36-month follow-up ABSORE CHINA (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORE II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORE III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% Ci) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORE JIAPAN (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.17 [0.69, 2.00] Subtotal (95% Ci) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)	AIDA (24mo)	88	924	75	921	69.9%	1.17 [0.87, 1.57]	<b>=</b>
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 2.89, df = 3 (P = 0.41); l <sup>2</sup> = 0% Test for overall effect: Z = 2.28 (P = 0.02) <b>2.1.3 36-month follow-up</b> ABSOR8 CHINA (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSOR8 II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSOR8 III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% Cl) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) <b>2.1.4 60-month follow-up</b> ABSOR8 III (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 135 924 121 921 40.5% 1.17 [0.69, 2.00] Subtotal (95% Cl) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)		16		20				•
Test for overall effect: $Z = 2.28 (P = 0.02)$ <b>2.1.3 36-month follow-up</b> ABSORB CHINA (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB III (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: $Z = 2.54 (P = 0.01)$ <b>2.1.4 60-month follow-up</b> ABSORB II (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIOI II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: $Z = 2.27 (P = 0.02)$	Total events	146		105				
ABSORB CHINA (36mo) 13 241 11 239 8.8% 1.17 [0.54, 2.56] ABSORB II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB III (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIOI II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)				= 3 (P =	0.41);	$ ^2 = 0\%$		
ABSORB II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB III (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)	2.1.3 36-month follow-up							
ABSORB II (36mo) 34 335 8 166 9.7% 2.11 [1.00, 4.45] ABSORB III (36mo) 174 1322 70 686 78.8% 1.29 [0.99, 1.68] TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB III (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)	ABSORB CHINA (36mo)	13	241	11	239	8.8%	1.17 [0.54, 2.56]	
TROFI II (36mo) 5 95 3 96 2.7% 1.68 [0.41, 6.85] Subtotal (95% CI) 1993 1187 100.0% 1.35 [1.07, 1.70] Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) 2.1.4 60-month follow-up ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB JAPAN (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.77 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)		34	335	8	166			
Subtotal (95% Cl)   1993   1187   100.0%   1.35   [1.07, 1.70]     Total events   226   92     Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0%     Test for overall effect: Z = 2.54 (P = 0.01) <b>2.1.4 60-month follow-up</b> ABSORB II (60mo)   38   335   9   166   4.3%   2.09 [1.04, 4.22]     ABSORB III (60mo)   220   1322   98   686   43.6%   1.16 [0.94, 1.45]     ABSORB JAPAN (60mo)   28   266   10   134   4.4%   1.41 [0.71, 2.82]     AIDA (60mo)   135   924   121   921   40.5%   1.11 [0.89, 1.40]     EVERBIO II (60mo)   17   80   29   160   7.3%   1.17 [0.69, 2.00]     Subtotal (95% Cl)   29227   2067   100.0%   1.18 [1.02, 1.37]   100     Total events   438   267   118 [1.02, 1.37]   118 [1.02, 1.37]   101     Test for overall effect: Z = 2.27 (P = 0.02)   1.01 f= 4 (P = 0.54); l <sup>2</sup> = 0%   1.41 [0.71, 2.82]   1.41 [0.71, 2.82]   1.41 [0.71, 2.82]	ABSORB III (36mo)	174	1322	70	686	78.8%	1.29 [0.99, 1.68]	
Total events 226 92 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); l <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) <b>2.1.4 60-month follow-up</b> ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB JAPAN (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)		5	95	3	96	2.7%	1.68 [0.41, 6.85]	————
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 1.70, df = 3 (P = 0.64); I <sup>2</sup> = 0% Test for overall effect: Z = 2.54 (P = 0.01) <b>2.1.4 60-month follow-up</b> ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB JAPAN (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); I <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)	Subtotal (95% CI)		1993		1187	100.0%	1.35 [1.07, 1.70]	◆
Test for overall effect: $Z = 2.54 (P = 0.01)$ 2.1.4 60-month follow-up ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB JAPAN (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.77 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: $Z = 2.27 (P = 0.02)$	Total events	226		92				
ABSORB II (60mo) 38 335 9 166 4.3% 2.09 [1.04, 4.22] ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 [0.94, 1.45] ABSORB JAPAN (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); I <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)				= 3 (P =	0.64);	$l^2 = 0\%$		
ABSORB III (60mo) 220 1322 98 686 43.6% 1.16 $[0.94, 1.45]$ ABSORB JAPAN (60mo) 28 266 10 134 4.4% 1.41 $[0.71, 2.82]$ AIDA (60mo) 135 924 121 921 40.5% 1.11 $[0.89, 1.40]$ EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 $[0.69, 2.00]$ Subtotal (95% CI) 2927 2067 100.0% 1.18 $[1.02, 1.37]$ Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)	•							
ABSORB JAPAN (60mo) 28 266 10 134 4.4% 1.41 [0.71, 2.82] AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); $I2 = 0\%$ Test for overall effect: Z = 2.27 (P = 0.02)								
AIDA (60mo) 135 924 121 921 40.5% 1.11 [0.89, 1.40] EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); $I2 = 0\%$ Test for overall effect: Z = 2.27 (P = 0.02)	. ,							<b>=</b>
EVERBIO II (60mo) 17 80 29 160 7.3% 1.17 [0.69, 2.00] Subtotal (95% CI) 2927 2067 100.0% 1.18 [1.02, 1.37] Total events 438 267 Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); I <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)								<u>+</u>
Subtotal (95% Cl)   2927   2067   100.0%   1.18 [1.02, 1.37]     Total events   438   267     Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); l <sup>2</sup> = 0%     Test for overall effect: Z = 2.27 (P = 0.02)								<b>†</b>
Heterogeneity: Tau <sup>2</sup> = 0.00; Chi <sup>2</sup> = 3.10, df = 4 (P = 0.54); I <sup>2</sup> = 0% Test for overall effect: Z = 2.27 (P = 0.02)				29				•
	Heterogeneity: $Tau^2 = 0.00$ ; (	$Chi^2 = 3$			0.54);	$1^2 = 0\%$		

**Figure 5** Forest plot for the primary efficacy outcome of target lesion failure (TLF)—grouped by follow-up duration. See Figure 5, Appendix B for corresponding funnel plot. BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents.

#### Ischaemia-driven target lesion reintervention

All studies but Hernandez *et al* and ISAR-ABSORB provided incidence of ID-TLR. The BVS group showed increased rates of ID-TLR at each follow-up duration, but this only reached significance at 24 and 60 months (for the latter: 9.09% vs 7.11%; RR: 1.36; 95% CI 1.11 to 1.65; p=0.003). online supplemental figure 13.

Summarising the significant findings, BVS was found to be inferior to DES in terms of ST, TLF, ID-TLR, TVMI and all-MI, but not POCE, all-death, cardiac death or all-revascularisation. Table 5 provides a summary of all finding.

#### DISCUSSION

The main findings of this meta-analysis of 17 RCTs comparing BVS with DES across all available follow-up durations (grouped to  $\leq$ 12months and 2, 3, and 5 years) are as follow: First, BVS are inferior to DES at all

timepoints with respect to the primary safety (ST) and efficacy outcomes (TLF). Second, the increased risk of ST is significant (3.47-fold greater at 2years), starts early (the first 30 days) and remains durable throughout 5years of follow-up (2.99-fold greater risk at 5years). Third, the increased risk of TLF (1.18-fold higher at 5years) appears to be driven primarily by elevated rates of TVMI and ID-TLR. Finally, the more generalised secondary outcomes (POCE, all-death, cardiac death and all-revascularisation) are statistically equivalent between groups across all time points—confirming that it is local, device-specific failings driving the inferiority of BVS.

It is important to note that while there is an increased relative risk of ST in BVS versus DES, the incidence of this complication is low (2.05% and 0.69% at latest follow-up, respectively), and its overall clinical relevance is ultimately limited, with equivocal all-cause mortality and revascularisation rates observed across all time points.

# Coronary artery disease

	BVS		DES			Risk Ratio	Risk Ratio
Study or Subgroup		Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% Cl
3.2.1 ≤12-month follow-u	•						
ABSORB CHINA (12mo)	19	241	23	239	4.7%	0.82 [0.46, 1.46]	
ABSORB II (12mo)	24	335	15	166	4.2%	0.79 [0.43, 1.47]	
ABSORB III (12mo)		1322	96	686	32.8%	1.22 [0.98, 1.52]	
ABSORB IV (12mo)		1296	53	1308	12.8%	1.28 [0.90, 1.81]	
ABSORB JAPAN (12mo)	26	266	11	134	3.5%	1.19 [0.61, 2.34]	
COMPARE-ABSORB (12mo)	99	848	85	822	21.3%	1.13 [0.86, 1.48]	
COVER–AMI (3mo)	3	10	1	12	0.4%	3.60 [0.44, 29.45]	
EVERBIO II (9mo)	21	80	41	160	7.8%	1.02 [0.65, 1.61]	
ISAR-ABSORB (12mo)	26	173	13	89	4.2%	1.03 [0.56, 1.90]	
MAGSTEMI (12mo)	17	74	11	76	3.4%	1.59 [0.80, 3.16]	
NeoVas (12mo)	3	278	3	282	0.6%	1.01 [0.21, 4.98]	
PRAGUE-22 (12mo)	4	25	1	25	0.4%	4.00 [0.48, 33.33]	
TROFI II (6mo)	7	95	6	96	1.4%	1.18 [0.41, 3.38]	
XINSORB (12mo)	10	200	14	195	2.6%	0.70 [0.32, 1.53]	
Subtotal (95% CI)		5243		4290	100.0%	1.14 [1.00, 1.29]	•
Total events	551		373		.2		
Heterogeneity: Tau <sup>2</sup> = 0.00; Test for overall effect: Z = 2.			= 13 (P =	= 0.81)	; I <sup>2</sup> = 0%		
3.2.2 24-month follow-up							
ABSORB II (24mo)	39	335	21	166	10.8%	0.92 [0.56, 1.51]	
ABSORB JAPAN (24mo)	52	266	16	134	9.9%	1.64 [0.97, 2.76]	
AIDA (24mo)	155	924	140	921	60.9%	1.10 [0.89, 1.36]	<b>#</b>
EVERBIO II (24mo) <b>Subtotal (95% CI)</b>	27	80 1605	51	160 <b>1381</b>	18.4% <b>100.0%</b>	1.06 [0.72, 1.55] <b>1.12 [0.95, 1.31]</b>	•
Total events	273		228				
Heterogeneity: $Tau^2 = 0.00$ ; Test for overall effect: $Z = 1$ .			= 3 (P =	0.43);	$ ^2 = 0\%$		
3.2.3 36-month follow-up							
ABSORB CHINA (36mo)	28	241	28	239	16.0%	0.99 [0.61, 1.62]	
ABSORB II (36mo)	68	335	39	166	27.1%	0.86 [0.61, 1.22]	
ABSORB III (36mo)		1322	120	686	51.5%	1.28 [1.06, 1.55]	-
TROFI II (36mo)	2.50	95	120	96	5.4%	1.14 [0.46, 2.82]	
Subtotal (95% CI)		1993	0		100.0%	1.10 [0.88, 1.37]	•
Total events	401		195				Ť
Heterogeneity: $Tau^2 = 0.01$ ;		17. df -		0 24)	$l^2 = 2.8\%$		
Test for overall effect: $Z = 0.01$ ,			5,1 -	5.27),	. – 20/0		
3.2.4 60-month follow-up							
ABSORB II (60mo)	80	335	41	166	8.3%	0.97 [0.70, 1.34]	- <b>+</b> -
ABSORB III (60mo)	378	1322	168	686	36.4%	1.17 [1.00, 1.37]	-
ABSORB JAPAN (60mo)	74	266	34	134	7.3%	1.10 [0.77, 1.55]	- <b>-</b>
AIDA (60mo)	259	924	241	921	39.7%	1.07 [0.92, 1.24]	<b>+</b>
EVERBIO II (60mo) <b>Subtotal (95% CI)</b>	31	80 2927	69	160 <b>2067</b>	8.3% <b>100.0%</b>	0.90 [0.65, 1.25] <b>1.08 [0.98, 1.19]</b>	-
Total events Heterogeneity: Tau <sup>2</sup> = 0.00; Test for overall effect: Z = 1.			553 = 4 (P =	0.62);	$l^2 = 0\%$		
							0.02 0.1 1 10 50

Figure 6 Forest plot for the patient-oriented composite endpoint—grouped by follow-up. See Appendix B, Figure 7 for corresponding funnel plot. BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents.

The low heterogeneity demonstrated throughout this meta-analysis supports conclusions that the elevated adverse outcome rates are attributed directly to the use of BVS versus DES, rather than any inter-study differences. Our findings are in agreement with previous reviews of outcomes at early and interim follow-up durations.<sup>13 17</sup> For example, in their exclusive analysis of Absorb BVS trials at 2-year follow-up, Cassese *et al*<sup>11</sup> demonstrated a similar threefold increased risk of ST accompanied by an increased risk of TLF due to high relative TVMI and ID-TLR rates—as depicted above. Thus, confirming that BVS are at least inferior to DES as solid stents—prior to their complete bio-absorption at around 2 years.<sup>7</sup>

But conceptually, the value of BVS is their promise of a reduction in the late events that plague conventional DES by disappearing once they have fulfilled their purpose of restoring patency to the target artery. To a limited extent, this review supports this premise. Here, both primary outcomes demonstrate a relative plateau in event accumulation for BVS after their dissolution window—with drops in the relative risk between 3-year and 5-year follow-ups, although non-significant with overlapping 95% CIs. However, even if this relationship were to achieve significance at later intervals—which is not unreasonable to suggest, given the adverse event accrual rate of 2% per year for permanent metallic stents<sup>6</sup>—the high initial adverse event rates could continue to render BVS both clinically and economically unfavourable.

Given the particularly high relative risk of ST, and the fact that it can mechanistically drive TLF via TVMI and ID-TLR, it presents as the obvious target for investigation. Cuculi and colleagues studied the causes of ST in BVS using quantitative coronary angiography and optical coherence tomography.<sup>18</sup> They describe a biphasic model, where early ST results from inadequate antithrombotic therapy and poor implantation technique (scaffold undersizing and underexpansion); and late/VLST is associated with peri-strut low-intensity areas (indicative of

	Follow-up duration									
Outcome	≤12 <b>months</b>	24 months	36 months	60 months						
Primary safety: definite/ probable-ST		8	۲	8						
Primary efficacy: TLF	8		۲	8						
POCE	-	Ξ	0	-						
All-death	-	Ξ	0							
Cardiac death	•	•	0	0						
AII-MI		۲	۲	8						
TVMI			0	8						
All-revascularisation	•	•		-						
ID-TLR	•		-							

BVS superior to DES.

inflammation), neovascularisation and scaffold discontinuity. This biphasic relationship may explain the late spike in relative risk of ST which we observe in the BVS group between 31 days and 1 year (see the Primary safety outcome: ST section).

Possible underlying causes of the above observations have previously been discussed<sup>1</sup> and may be grouped as device and operator driven. Device-related failings include their thicker strut profile-table 3 shows this to be around double that of DES across the included studies. This is required to achieve adequate radial strength from the dissolvable material, a factor which would decrease non-linearly as stents dissolve. Strut thickness is known to increase rates of ST clinically,<sup>19</sup> where the increased surface area and changes to haemodynamics at the micro-level are widely discussed to be thrombogenic.<sup>20</sup> Novel metallic BVS with thinner struts and reduced thrombogenicity may address this going forwards,<sup>21</sup> though they present mixed results in the Prague-22<sup>22</sup> and MAGSTEMI<sup>23</sup> trials evaluated in this study. Operator related failings include suboptimal PCI technique. This was investigated by Puricel et al, who subsequently described an optimised BVSspecific implantation strategy (involving specific sizing and predilation and postdilation parameters) that effectively reduced ST rates from 3.3% to 1% at 1 year.<sup>24</sup> Clearly there are numerous opportunities for improving outcomes.

#### **Key limitations**

Conclusions regarding BVS versus DES are limited in general applicability, given that 91% of the BVS population studied received *Abbott's Absorb*. Further, a lack of access to the raw data meant it was not possible to statistically analyse the effect that important patient, lesion and procedural characteristics had on the observed outcome.

#### CONCLUSIONS

This meta-analysis demonstrates that current BVS are inferior to contemporary DES throughout the first 5 years at minimum, increasing patients' risk of serious adverse events (ST and MI) and the need for reintervention of the target lesion during this time. This appears to be applicable to the use of PCI for silent ischaemia through to full STEMI. However, this may change with the implementation of improved implantation strategies, better antiplatelet therapies, progressions in scaffold design and the availability of later follow-up data from more recent trials. These remain important areas for future research, remembering that BVS are compared with contemporary DES like Abbott's Xience, whose gold-standard safety and efficacy profiles follow extensive iterative development.

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**Contributors** EJ-S was responsible for the planning, conduct and reporting of this study. SZ assisted with screening articles, trialling data extraction methods and report editing. PB guided and critically reviewed the work and is the guarantor of this work.

<sup>-</sup> Equivalent.

BVS inferior to DES.

BVS, bioresorbable vascular scaffolds; DES, drug-eluting stents; ID-TLR, ischaemia-driven target lesion revascularisation; MI, myocardial infarction; POCE, patient-oriented composite endpoint; TLF, target lesion failure; TVMI, target vessel myocardial infarction.

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