Supplementary Online Content

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

RADIAL investigators

- Mario Gaudino, Department of Cardiothoracic Surgery, Weill Cornell Medicine, New York, USA
- Umberto Benedetto, Bristol Heart Institute, Bristol, United Kingdom
- Stephen Fremes, Schulich Heart Centre, Sunnybrook Health Sciences Centre, University of Toronto, Toronto, Canada
- Karla Ballman, Department of Healthcare Policy and Research, Weill Cornell Medicine, New York, USA
- Giuseppe Biondi-Zoccai, Department of Medico-Surgical Sciences and Biotechnologies, Sapienza University, Rome, Italy and Mediterranea Cardiocentro, Napoli, Italy
- Art Sedrakyan, Department of Healthcare Policy and Research, Weill Cornell Medicine, New York, USA
- Giuseppe Nasso, Anthea Hospital, Bari, Italy
- Jai Raman, Austin Hospital, Melbourne, VIC, Australia
- Brian Buxton, University of Melbourne, Melbourne, VIC, Australia
- Philip A. Hayward, University of Melbourne, Melbourne, VIC, Australia
- Neil Moat, NHLI, Imperial College London, and Royal Brompton and Harefield NHS Foundation Trust, London, United Kingdom
- Peter Collins, NHLI, Imperial College London, and Royal Brompton and Harefield NHS Foundation Trust, London, United Kingdom
- Carolyn Webb, NHLI, Imperial College London, and Royal Brompton and Harefield NHS Foundation Trust, London, United Kingdom
- Miodrag Peric, Dedinje Cardiovascular Institute and Belgrade University School of Medicine, Belgrade, Serbia
- Ivana Petrovic, Dedinje Cardiovascular Institute and Belgrade University School of Medicine, Belgrade, Serbia
- Kyung J. Yoo, Yonsei University College of Medicine, Seoul, South Korea
- Irbaz Hameed, Department of Cardiothoracic Surgery, Weill Cornell Medicine, New York, USA
- Antonino Di Franco, Department of Cardiothoracic Surgery, Weill Cornell Medicine, New York, USA
- Marco Moscarelli, Anthea Hospital, Bari, Italy
- Giuseppe Speziale, Anthea Hospital, Bari, Italy
- Leonard N. Girardi, Department of Cardiothoracic Surgery, Weill Cornell Medicine, New York, USA
- David L. Hare, Austin Hospital, Melbourne, VIC, Australia and University of Melbourne, Melbourne, VIC, Australia
- David P. Taggart, University of Oxford, Oxford, United Kingdom
- John Puskas, Icahn School of Medicine at Mount Sinai, New York City, US
- Mohamed Rahouma, Department of Cardiothoracic Surgery, Weill Cornell Medicine, New York, USA
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Search Strategy

Ovid MEDLINE (ALL - 1946 to March 06, 2020)
Searched on March 9, 2020
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1. Radial Artery/
2. (radial arter* or arteria radialis or radialis artery).tw.
3. 1 or 2
4. Saphenous Vein/
5. (Saphenous or SVG or saphena vein or saphenous venos system or vena saphena).tw.
6. 4 or 5
7. Coronary Artery Bypass/
8. (aorta adj2 bypass).tw.
9. CABG.tw.
10. (aortic coronary bypass or aorticocoronary anastomosis).tw.
11. (aorto coronary adj2 (bypass or graft)).tw.
12. (aortocoronary adj2 (anastomosis or bypass or shunt or graft)).tw.
13. (coronary adj2 (bypass or graft)).tw.
14. (Total arterial revascularization or total arterial revascularisation or Multiple arterial revascularization or multiple arterial revascularisation).tw.
15. or/7–14
16. 3 and 6 and 15 542

Ovid Embase (1974 to 2020 March 05)
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3. 1 or 2
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6. 4 or 5
7. coronary artery bypass graft/
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9. CABG.tw.
10. (aortic coronary bypass or aorticocoronary anastomosis).tw.
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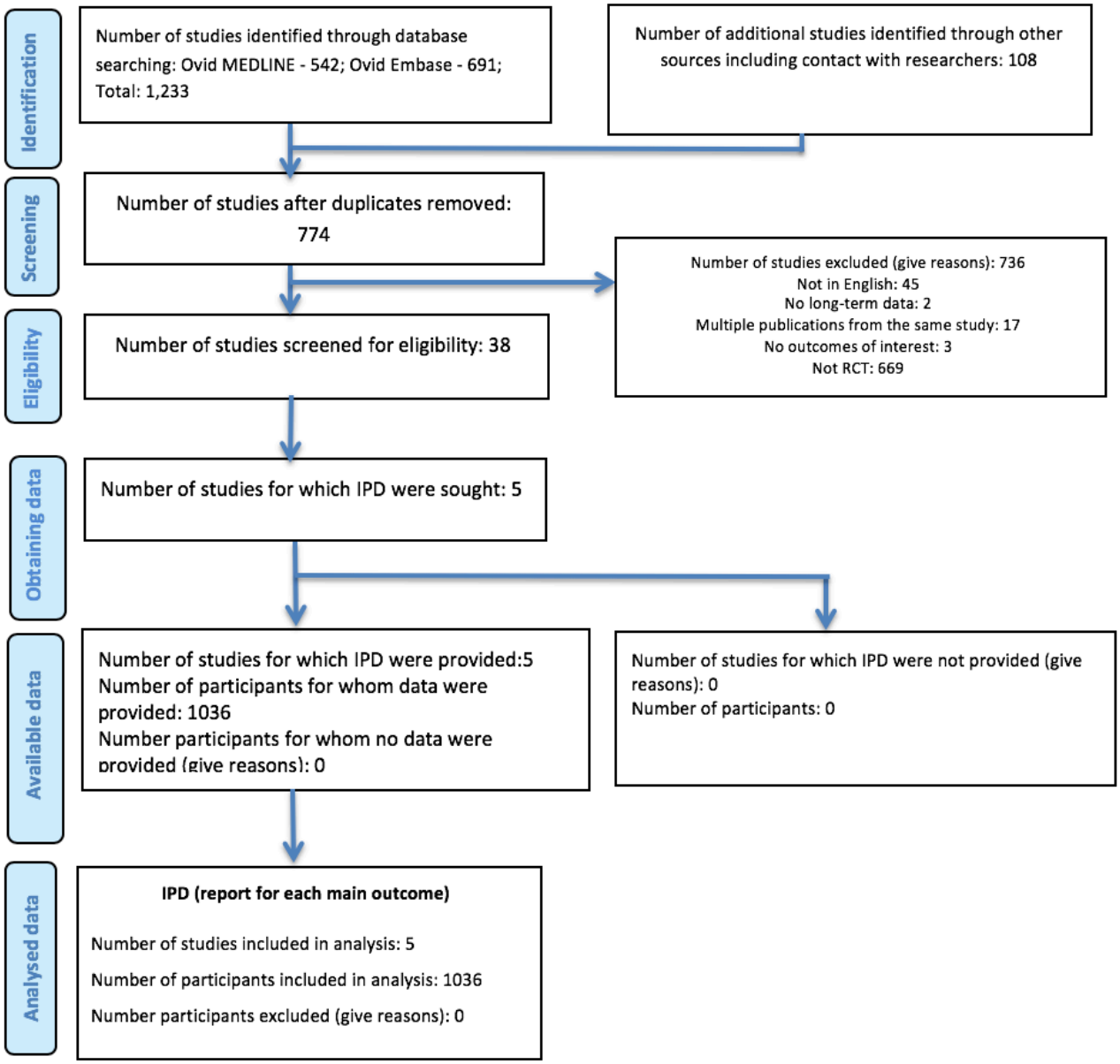
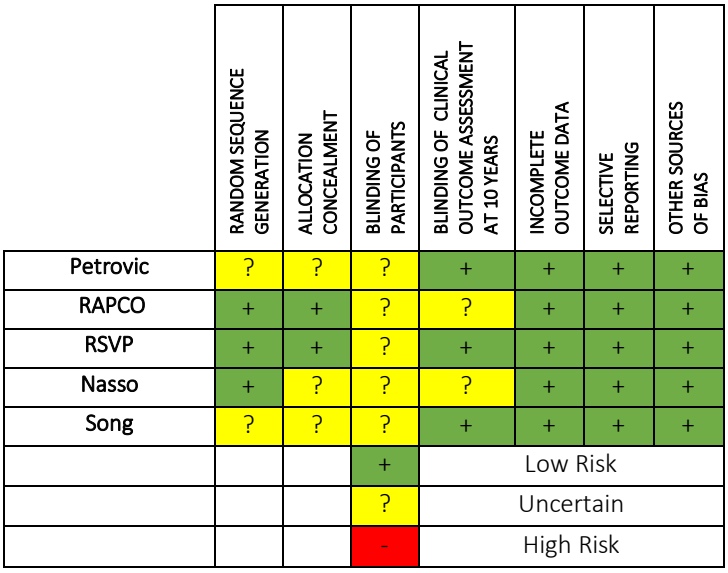
15. or/7–14
16. 3 and 6 and 15 691

eFigure 1. PRISMA-Individual Patient Data (IPD) flow diagram.

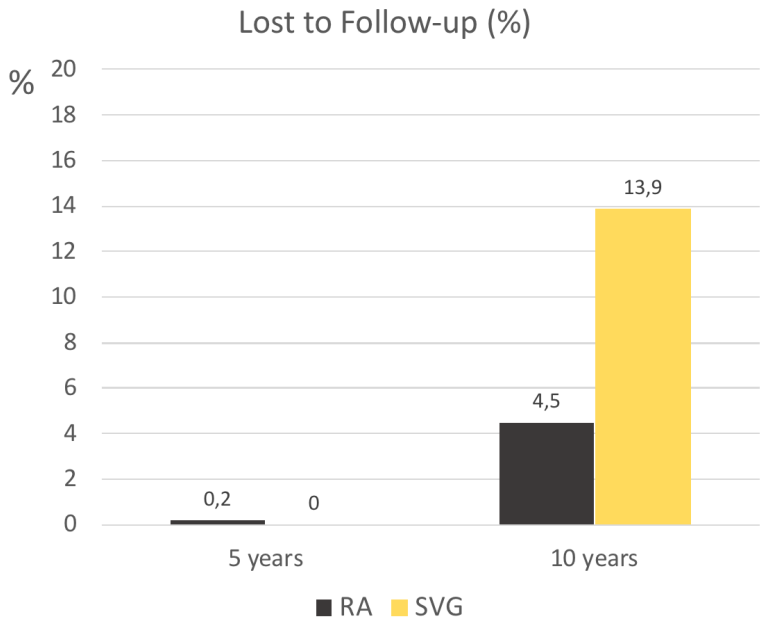


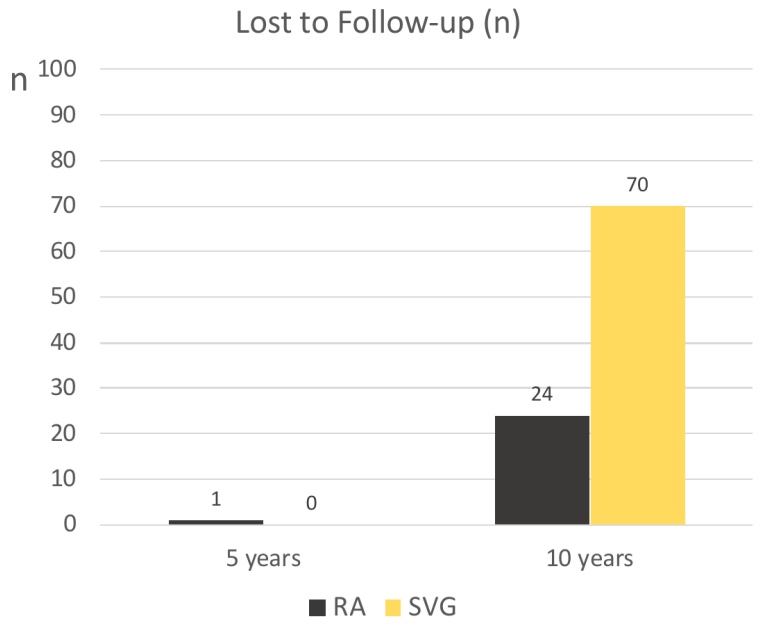
The PRISMA IPD flow diagram © Reproduced with permission of the PRISMA IPD Group, which encourages sharing and reuse for non-commercial purposes

eFigure 2. The Cochrane Collaboration's tool for assessing risk of bias in the included randomized trials.
RAPCO: Radial Artery Patency and Clinical Outcome; RSVP: Radial Artery Versus Saphenous Vein Patency.

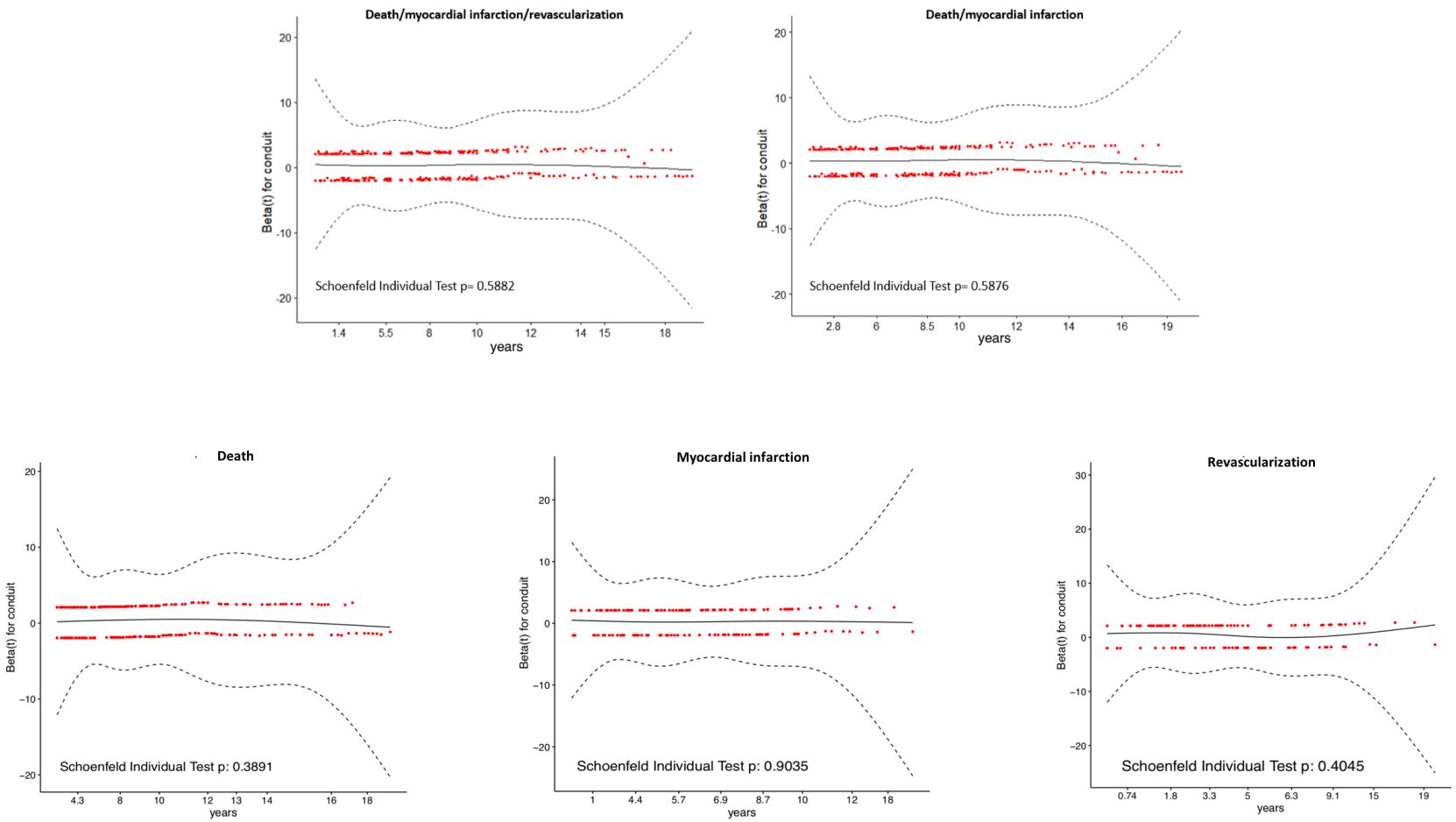


eFigure 3. Details on patients lost to follow-up.
RA: radial artery; SVG: saphenous vein graft.

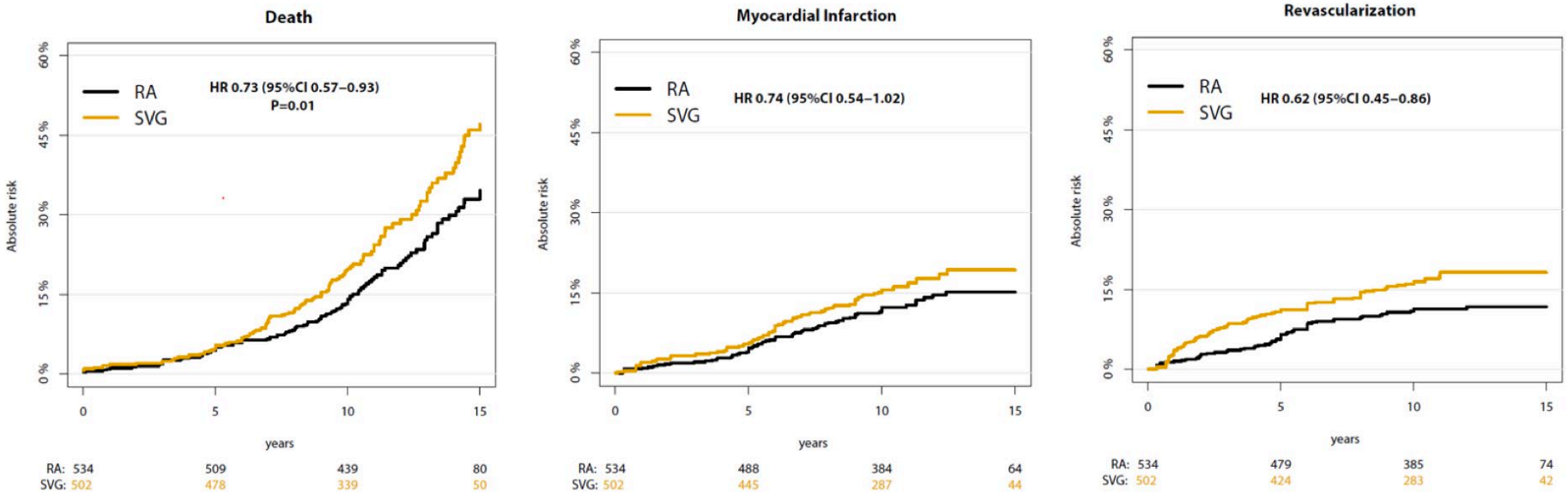




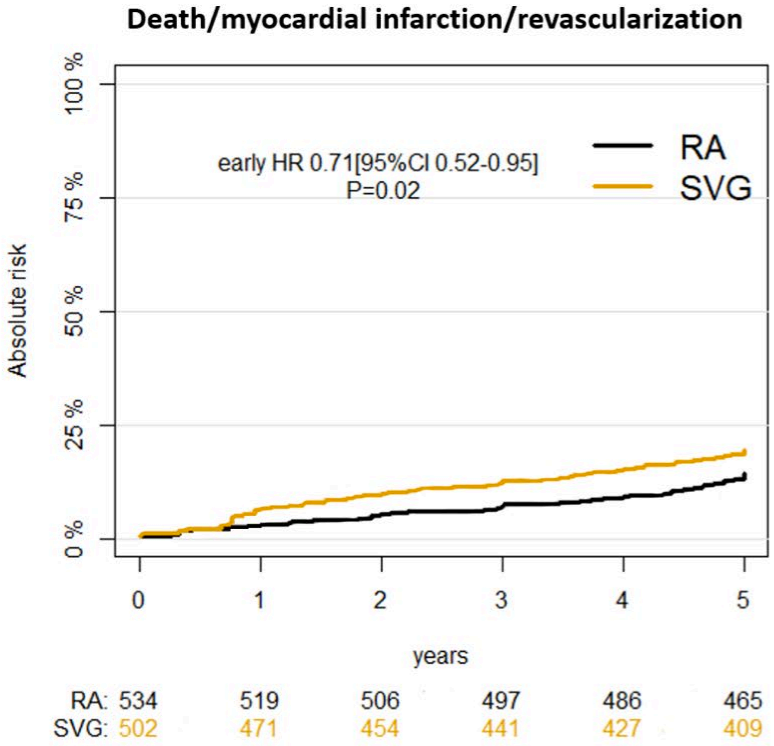
eFigure 4. Goodness-of-fit and Schoenfeld residuals for the primary outcome, secondary outcome, and their individual components.

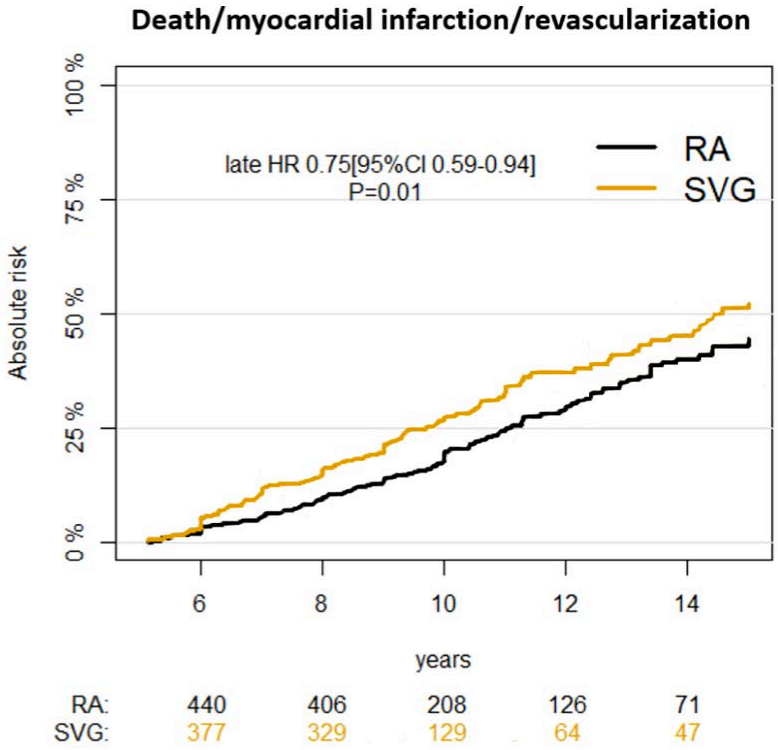


eFigure 5. Post-hoc outcomes: death, myocardial infarction and repeat revascularization.
Cumulative incidence of death (left panel; median [interquartile range] observation time: 10.0 [10.0-12.4] years vs 10.0 [8.9 vs 10.9] years in the radial artery [RA] vs saphenous vein [SVG] groups, respectively), myocardial infarction (middle panel; median [interquartile range] observation time: 6.3 [4.5-8.6] years vs 6.0 [4.1-8.2] years in the RA vs SVG groups, respectively), and repeat revascularization (right panel; median [interquartile range] observation time: 5.0 [2.4-6.3] years vs 3.3 [1.3-7.0] years in the RA vs SVG groups, respectively) in the RA versus SVG group (patients analyzed according to their randomization group).
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.

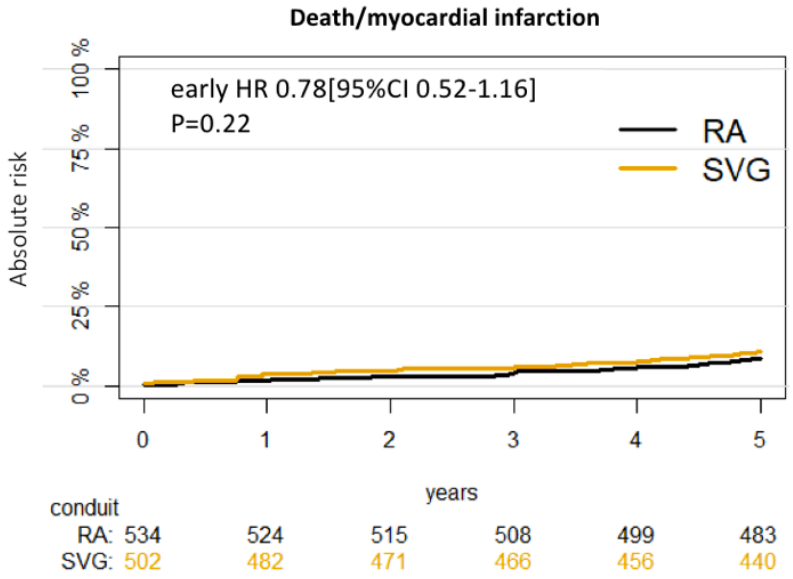


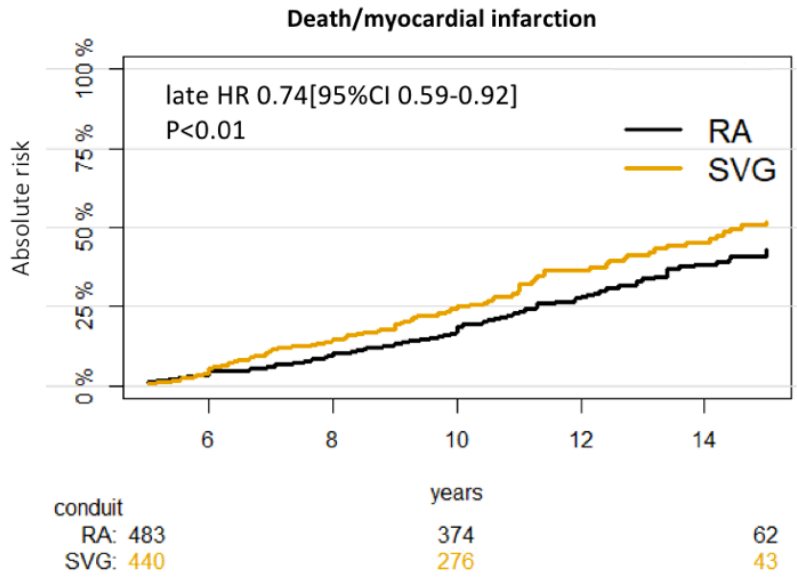
eFigure 6. Time segmented analysis for the composite of death, myocardial infarction or revascularization (left panel: events in the first five years of follow-up; right panel: events after the fifth year of follow-up).
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.



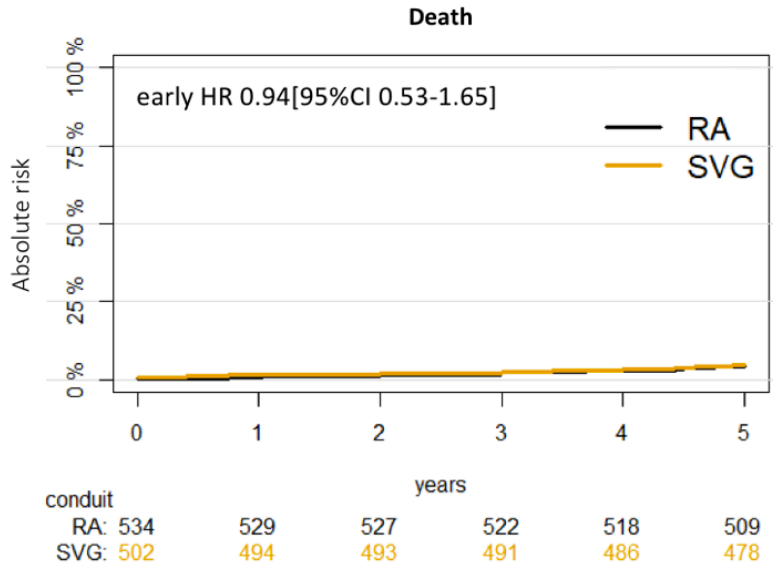


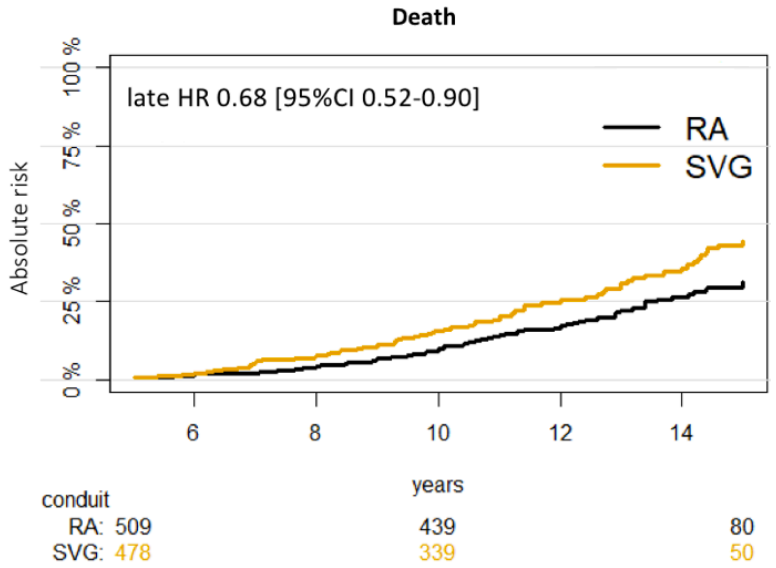
eFigure 7. Time segmented analysis for the composite of death or myocardial infarction (left panel: events in the first five years of follow-up; right panel: events after the fifth year of follow-up).
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.



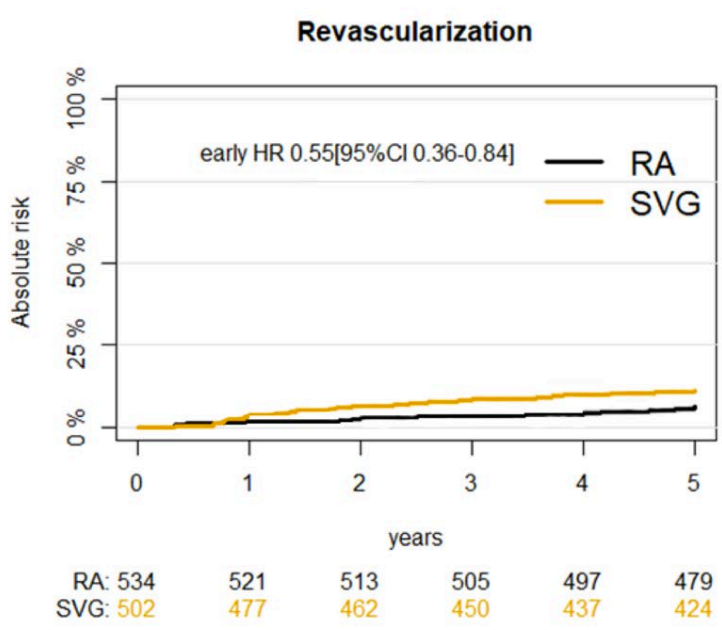


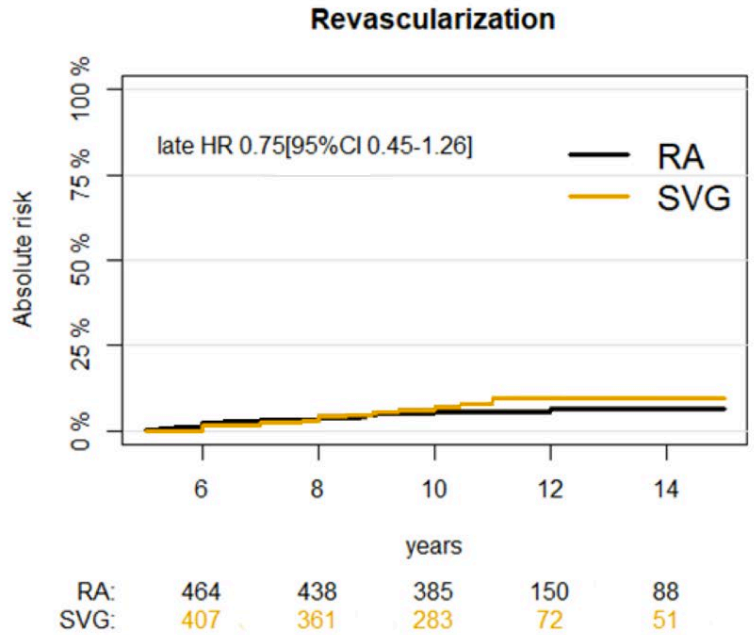
eFigure 8. Time segmented analysis for death (left panel: events in the first five years of follow-up; right panel: events after the fifth year of follow-up).
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.



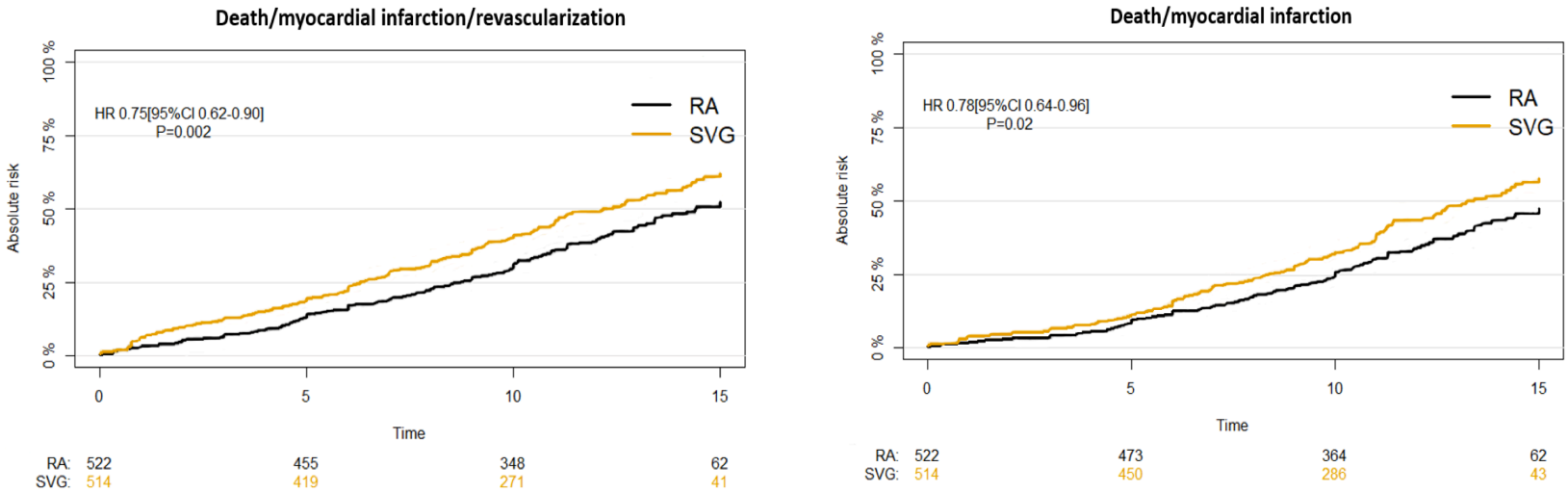


eFigure 9. Time segmented analysis for revascularization (left panel: events in the first five years of follow-up; right panel: events after the fifth year of follow-up).
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.

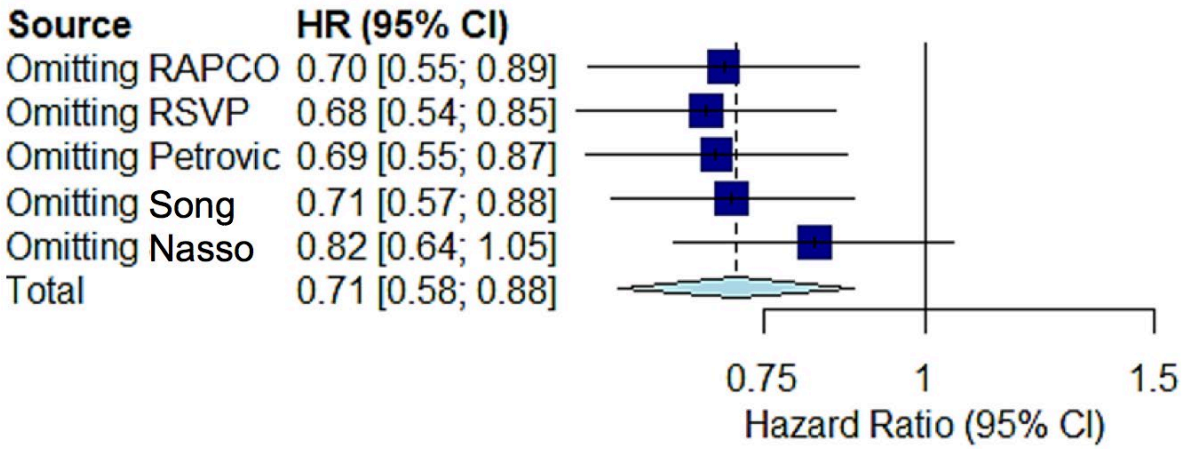




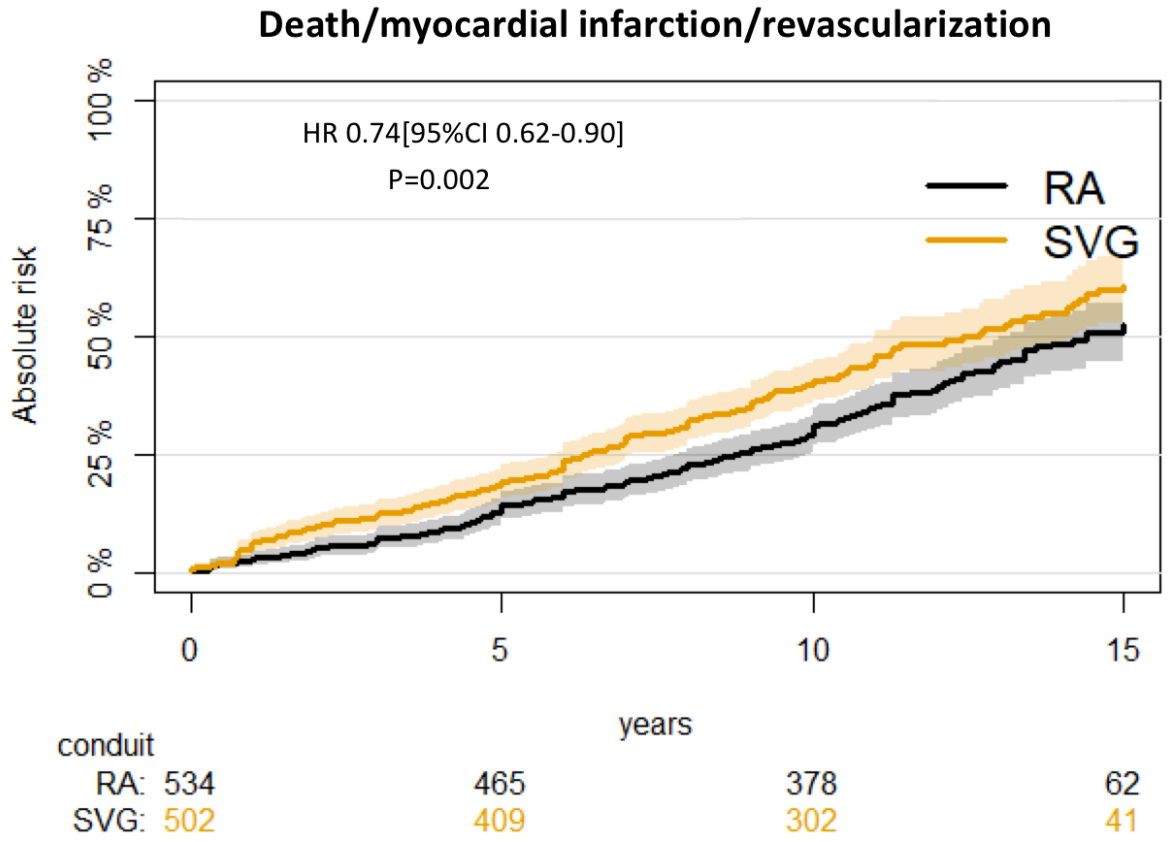
eFigure 10. Analysis according to the conduit received for the primary (left panel) and secondary (right panel) endpoint.
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.



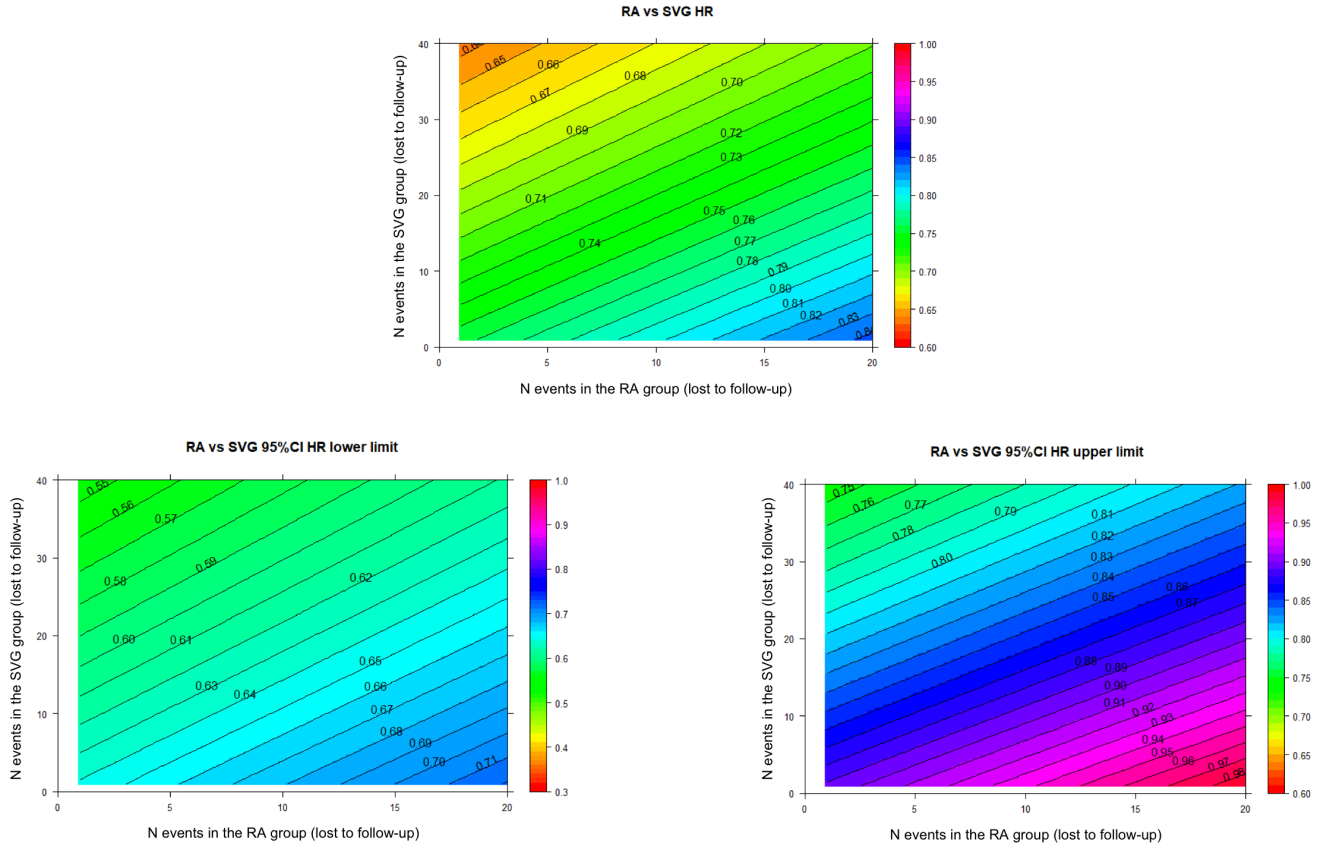
eFigure 11. Leave-one-out analysis for the two-stage meta-analytic estimate for the composite primary end point of death, myocardial infarction or revascularization.
CI: confidence interval; HR: hazard ratio; RAPCO: Radial artery patency and clinical outcome trial; RSVP: Radial artery vs saphenous vein patency study.



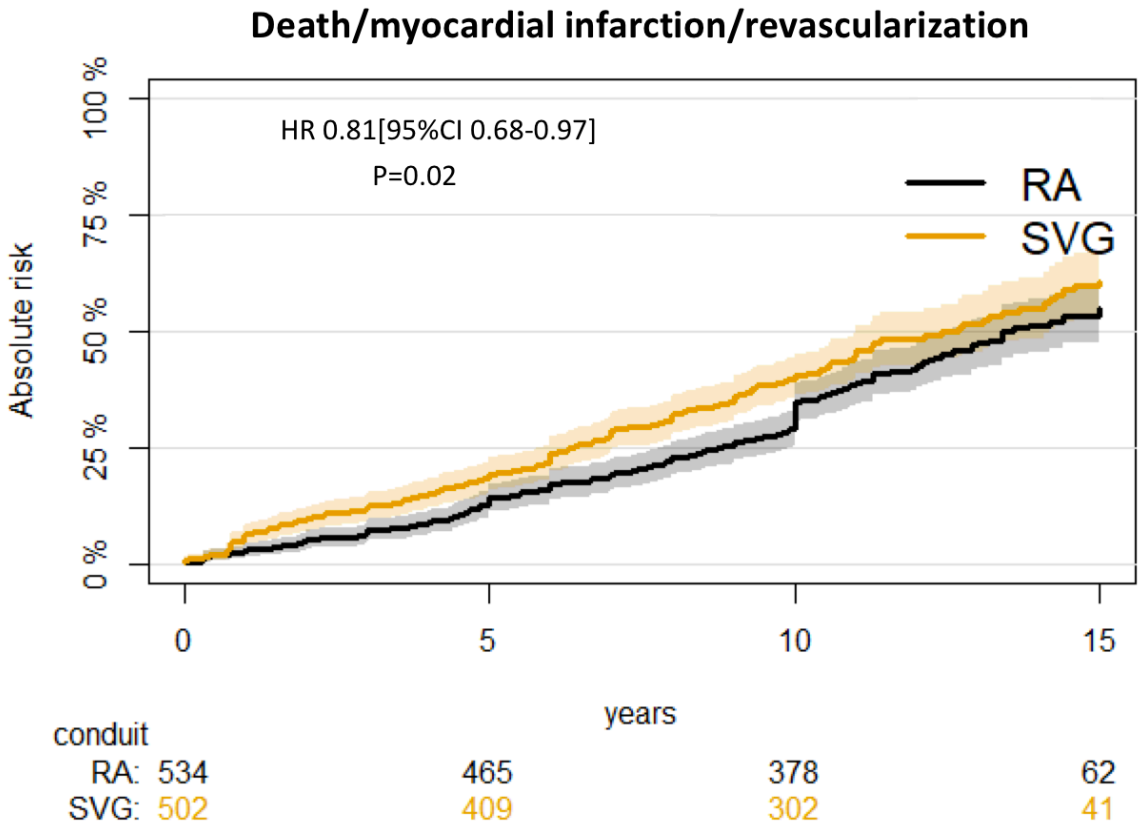
eFigure 12. Sensitivity analysis: all patients lost to follow-up were treated as non-events in both groups and assigned 10 years follow-up.
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.



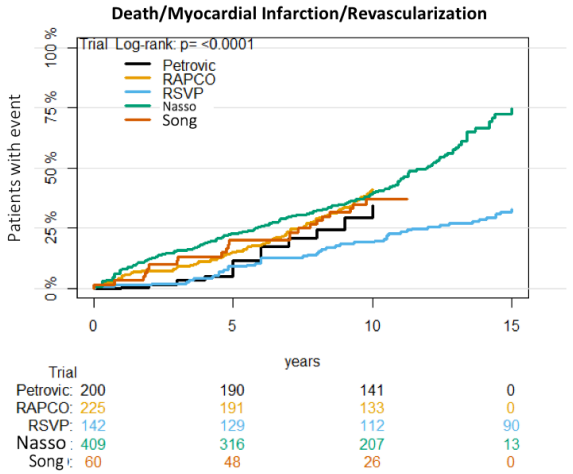
eFigure 13. Tipping point analysis. Tipping point analysis was used to investigate the impact of the hypothetical distribution of events among patients with missing 10-year follow-up (20 in the radial artery [RA] and 41 in the saphenous vein [SVG] group) on the overall effect size. For this analysis, 200 random combinations of event rates in the two groups were generated. These events were combined with the events of patients who completed 10 years follow-up and the hazard ratio (HR) with relative 95% confidence interval (CI) was calculated for each scenario. The results were displayed using a rectangular contour plot which shows the relationship between the event rates in the RA (x-axis) and the SVG (y-axis) and the HR or upper and lower limit of 95% CI as contours. Across all possible combinations, including the most favorable to the SVG (all patients with RA and none with SVG have an event), the upper limit of the 95% CI of the treatment effect does not exceed one.
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.

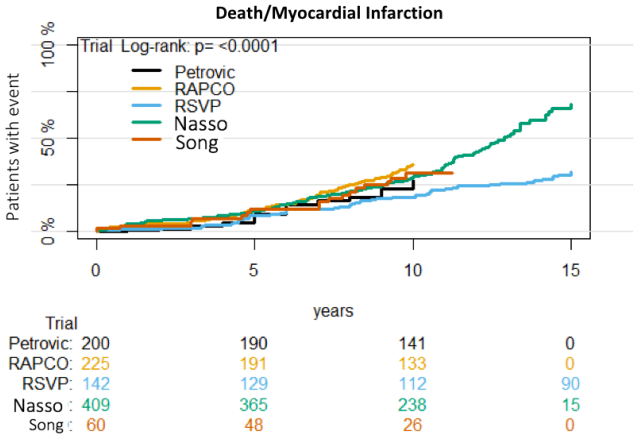


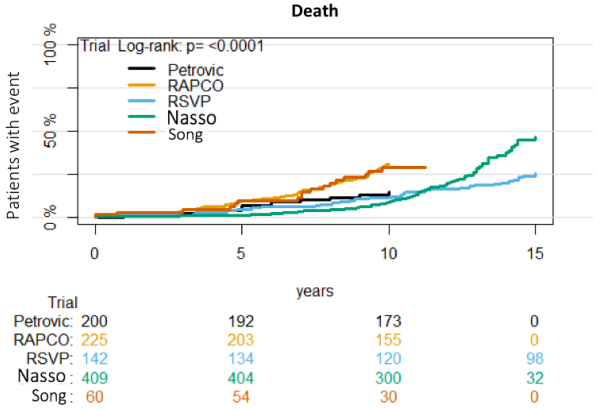
eFigure 14. Extreme scenario analysis: all patients lost to follow-up in the saphenous vein (SVG) group were considered as non-event and assigned 10 years follow-up; all patients lost to follow-up in the radial artery (RA) group were considered dead at 10 years follow-up.
CI: confidence interval; HR: hazard ratio; RA: radial artery; SVG: saphenous vein graft.



eFigure 15. Overall event rates in the included trials.
RAPCO: Radial artery patency and clinical outcome trial; RSVP: Radial artery vs saphenous vein patency study.







eTable e1. Baseline characteristics of patients with and without 10 years follow-up.

	Follow-up duration ≥ 10 years			Follow-up duration < 10 years		
	Radial Artery Graft Group (n=509)	Saphenous Vein Graft Group (n=432)	P value	Radial Artery Graft Group (n=25)	Saphenous Vein Graft Group (n=70)	P value
Age, mean (SD)	66.4 (9.3)	66.7 (9.9)	0.62	69.8 (9.1)	69.5 (9.1)	0.90
Male, n (%)	363 (71.3)	313 (72.5)	0.75	13 (52.0)	38 (54.3)	1.00
Diabetes, n (%)	174 (34.2)	146 (33.8)	0.96	7 (28.0)	31 (44.3)	0.23
Prior myocardial infarction, n (%)	159 (31.2)	145 (33.6)	0.49	5 (20.0)	15 (21.4)	1.00
Left ventricular ejection fraction <50%, n (%)	68 (13.4)	59 (13.7)	0.97	2 (8.0)	5 (7.1)	1.00
Target vessel: Right coronary artery, n (%)	112 (22.0)	102 (23.6)	0.61	7 (28.0)	31 (44.3)	0.23
Follow-up duration, mean (SD)	11.5 (3.8)	10.6 (3.7)	0.001	8.7 (1.5)	8.2 (1.3)	0.11

SD: standard deviation.

eTable 2. Results of the sensitivity analyses for the primary outcome.
CI: confidence interval

	Hazard Ratio	95% CI – p value
Adjusted Cox model*	0.73	0.61-0.88 – 0.001
Drop-outs treated as non-events in both groups^	0.74	0.62-0.90 – 0.002
Extreme scenario analysis#	0.81	0.68-0.97 – 0.02

*variables included in the model were: age, gender, diabetes, previous myocardial infarction, left ventricular ejection fraction and kidney insufficiency.
^all patients lost to follow-up were treated as non-events in both groups and assigned 10 years follow-up.
#all patients lost to follow-up in the saphenous vein group were considered as non-event and assigned 10 years follow-up, all patients lost to follow-up in the radial artery group were considered dead at 10 years follow-up.

eTable 3. Event rates by trials for the primary composite endpoint of death, myocardial infarction or revascularization stratified by conduit received.
CI: confidence interval; NA: not applicable; RA: radial artery; RAPCO: Radial artery patency and clinical outcome trial; RSVP: Radial artery vs saphenous vein patency study; SVG: saphenous vein graft.

Trial	Conduit	Interval (years)	No. at risk	No. of events	No. lost to follow-up	Survival probability	95%CI
Petrovic	RA	0-5	100	4	0	100.0	0.0-100.0
		5-10	96	21	0	0.0	NA
		10-15	75	7	68	NA	NA
	SVG	0-5	100	6	0	100.0	0.0-100.0
		5-10	94	28	0	0.0	NA
		10-15	66	3	63	NA	NA
RAPCO	RA	0-5	113	14	0	100.0	0.0-100.0
		5-10	99	28	0	0.0	NA
		10-15	71	0	71	NA	NA
	SVG	0-5	112	20	0	100.0	0.0-100.0
		5-10	92	30	0	0.0	NA
		10-15	62	0	62	NA	NA
RSVP	RA	0-5	82	7	0	100.0	0.0-100.0
		5-10	75	9	1	98.6	96.0-100.0
		10-15	65	7	2	95.3	90.1-100.0
	SVG	0-5	60	6	0	100.0	0.0-100.0
		5-10	54	5	2	96.2	91.0-100.0
		10-15	47	10	3	86.1	75.6-96.6
Nasso	RA	0-5	204	37	0	100.0	0.0-100.0
		5-10	167	24	12	91.9	87.5-96.3
		10-15	131	33	92	9.1	2.7-15.5
	SVG	0-5	205	56	0	100.0	0.0-100.0
		5-10	149	39	34	71.3	63.1-79.4
		10-15	76	16	53	15.2	7.4-23.0
Song	RA	0-5	35	7	0	100.0	0.0-100.0
		5-10	28	5	7	70.4	51.9-88.8
		10-15	16	0	16	NA	NA
	SVG	0-5	25	5	0	100.0	0.0-100.0
		5-10	20	5	5	66.7	42.8-90.5
		10-15	10	0	10	NA	NA

eTable 4. Event rates by trials for the secondary composite endpoint of death or myocardial infarction stratified by conduit received.
CI: confidence interval; NA: not applicable; RA: radial artery; RAPCO: Radial artery patency and clinical outcome trial; RSVP: Radial artery vs saphenous vein patency study; SVG: saphenous vein graft.

Trial	Conduit	Interval (years)	No. at risk	No. of events	No. lost to follow-up	Survival probability	95%CI
Petrovic	RA	0-5	100	3	1	97.9	94.9-100.0
		5-10	96	17	4	0.0	NA
		10-15	75	6	69	NA	NA
	SVG	0-5	100	6	0	97.8	94.8-100.0
		5-10	94	19	9	0.0	NA
		10-15	66	2	64	NA	NA
RAPCO	RA	0-5	113	12	2	98.2	95.6-100.0
		5-10	99	23	5	0.0	NA
		10-15	71	0	71	NA	NA
	SVG	0-5	112	14	6	94.4	90.1-98.8
		5-10	92	28	2	0.0	NA
		10-15	62	0	62	NA	NA
RSVP	RA	0-5	82	7	0	100.0	0.0-100.0
		5-10	75	9	1	98.6	96.0-100.0
		10-15	65	6	3	93.8	87.8-99.7
	SVG	0-5	60	5	1	98.2	94.7-100.0
		5-10	54	5	2	94.5	88.4-100.0
		10-15	47	10	3	84.5	73.8-95.3
Nasso	RA	0-5	204	19	0	100.0	0.0-100.0
		5-10	185	26	12	92.7	88.7-96.7
		10-15	147	34	107	7.7	2.2-13.3
	SVG	0-5	205	25	0	100.0	0.0-100.0
		5-10	180	43	46	68.5	60.9-76.0
		10-15	91	20	62	15.2	7.9-22.5
Song	RA	0-5	35	4	3	91.0	81.2-100.0
		5-10	28	5	7	64.0	45.9-82.2
		10-15	16	0	16	NA	NA
	SVG	0-5	25	3	2	91.7	80.6-100.0
		5-10	20	5	5	61.1	38.0-84.2
		10-15	10	0	10	NA	NA

eTable 5. Event rates by trials for death stratified by conduit received.
CI: confidence interval; NA: not applicable; RA: radial artery; RAPCO: Radial artery patency and clinical outcome trial; RSVP: Radial artery vs saphenous vein patency study; SVG: saphenous vein graft.

Trial	Conduit	Interval (years)	No. at risk	No. of events	No. lost to follow-up	Survival probability	95%CI
Petrovic	RA	0-5	100	3	0	100.0	0.0-100.0
		5-10	97	9	0	0.0	NA
		10-15	88	3	85	NA	NA
	SVG	0-5	100	5	0	100.0	0.0-100.0
		5-10	95	10	0	0.0	NA
		10-15	85	0	85	NA	NA
RAPCO	RA	0-5	113	12	0	100.0	0.0-100.0
		5-10	101	19	0	0.0	NA
		10-15	82	0	82	NA	NA
	SVG	0-5	112	10	0	100.0	0.0-100.0
		5-10	102	29	0	0.0	NA
		10-15	73	0	73	NA	NA
RSVP	RA	0-5	82	3	1	98.8	96.3-100.0
		5-10	78	5	2	96.2	92.0-100.0
		10-15	71	7	2	93.2	87.5-99.0
	SVG	0-5	60	4	0	100.0	0.0-100.0
		5-10	56	4	3	94.5	88.5-100.0
		10-15	49	10	3	85.2	74.9-95.4
Nasso	RA	0-5	204	2	0	100.0	0.0-100.0
		5-10	202	8	15	92.4	88.7-96.1
		10-15	179	30	131	12.5	7.1-18.0
	SVG	0-5	205	3	0	100.0	0.0-100.0
		5-10	202	20	61	67.4	60.7-74.1
		10-15	121	23	84	13.9	8.0-19.9
Song	RA	0-5	35	4	0	100.0	0.0-100.0
		5-10	31	5	7	73.7	57.0-90.5
		10-15	19	0	19	NA	NA
	SVG	0-5	25	2	0	100.0	0.0-100.0
		5-10	23	6	6	64.7	42.0-87.4
		10-15	11	0	11	NA	NA