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Supplementary Material 1: Search strategy. SEARCH SYNTAX and SEARCH STRING (in PubMed) for RCTs

- 1. Clopidogrel
- 2. Ticagrelor
- 3. Prasugrel
- 4. P2y12 inhibitor
- 5. ADP receptor antagonist
- 6. 1 OR 2 OR 3 OR 4 OR 5
- 7. acute coronary syndrome
- 8. acute myocardial infarction
- 9. st elevation myocardial infarction
- 10. non-st elevation myocardial infarction
- 11. non-st elevation acute coronary syndrome
- 12. unstable angina
- 13.7 OR 8 OR 9 OR 10 OR 11 OR 12
- 14. Precision-sensitivity maximizing RCT search filter from Cochrane
- 15.6 AND 13 AND 14

((((((clopidogrel) OR (ticagrelor)) OR (prasugrel)) OR (p2y12 inhibitor)) OR (adp receptor antagonist)) AND ((((((acute coronary syndrome) OR (acute myocardial infarction)) OR (st elevation myocardial infarction)) OR (non-st elevation myocardial infarction)) OR (non-st elevation acute coronary syndrome)) OR (unstable angina))) AND ((randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR placebo[tiab] OR clinical trials as topic[mesh:noexp] OR randomly[tiab] OR trial[ti] NOT (animals[mh] NOT humans [mh]))) (((((("clopidogrel"[MeSH Terms] OR "clopidogrel"[All Fields]) OR "clopidogrel s"[All Fields]) OR ("ticagrelor"[MeSH Terms] OR "ticagrelor"[All Fields])) OR (((("prasugrel hydrochloride"[MeSH Terms] OR ("prasugrel"[All Fields] AND "hydrochloride"[All Fields])) OR "prasugrel hydrochloride"[All Fields]) OR "prasugrel"[All Fields]) OR "prasugrel s"[All Fields])) OR ("p2y12"[All Fields] AND ((((("antagonists and inhibitors"[MeSH Subheading] OR ("antagonists"[All Fields] AND "inhibitors"[All Fields])) OR "antagonists and inhibitors"[All Fields]) OR "inhibitors"[All Fields]) OR "inhibitor"[All Fields]) OR "inhibitor s"[All Fields]))) OR ((((("receptors, purinergic p2"[MeSH Terms] OR (("receptors"[All Fields] AND "purinergic"[All Fields]) AND "p2"[All Fields])) OR "purinergic p2 receptors"[All Fields]) OR ("adp"[All Fields] AND "receptor"[All Fields])) OR "adp receptor"[All Fields]) AND (((("antagonist"[All Fields] OR "antagonists and inhibitors" [MeSH Subheading]) OR ("antagonists" [All Fields] AND "inhibitors" [All Fields])) OR "antagonists and inhibitors" [All Fields]) OR "antagonists"[All Fields]))) AND (((((("acute coronary syndrome"[MeSH Terms] OR (("acute"[All Fields] AND "coronary"[All Fields]) AND "syndrome"[All Fields])) OR "acute coronary syndrome"[All Fields]) OR ((("acute"[All Fields] OR "acutely"[All Fields]) OR "acutes"[All Fields]) AND (("myocardial infarction"[MeSH Terms] OR ("myocardial"[All Fields] AND "infarction"[All Fields])) OR "myocardial infarction"[All Fields]))) OR (("st elevation myocardial infarction"[MeSH Terms] OR ((("st"[All Fields] AND "elevation"[All Fields]) AND "myocardial"[All Fields]) AND "infarction"[All Fields])) OR "st elevation myocardial infarction"[All Fields])) OR (((("non-st elevated myocardial infarction"[MeSH Terms] OR ((("non-st"[All Fields] AND "elevated"[All Fields]) AND "myocardial"[All Fields]) AND "infarction"[All Fields])) OR "non st

elevated myocardial infarction"[All Fields]) OR (((("non"[All Fields] AND "st"[All Fields]) AND "elevation"[All Fields]) AND "myocardial"[All Fields]) AND "infarction"[All Fields])) OR "non st elevation myocardial infarction"[All Fields])) OR ("non-st"[All Fields] AND ((((("elevate"[All Fields] OR "elevated"[All Fields])) OR "elevates"[All Fields]) OR "elevation"[All Fields]) OR "elevational"[All Fields]) OR "elevations"[All Fields]) OR "elevational"[All Fields]) OR "elevational"[All Fields]) OR "elevations"[All Fields]) AND (("acute coronary syndrome"[MeSH Terms] OR (("acute"[All Fields] AND "coronary"[All Fields])) OR (("angina, unstable"[MeSH Terms] OR ("angina"[All Fields] AND "unstable"[All Fields]))) OR "unstable angina"[All Fields]) OR ("unstable"[All Fields] AND "angina"[All Fields])))) AND (((((("randomized controlled trial"[Publication Type] OR "controlled clinical trial"[Publication Type]) OR "randomized"[Title/Abstract]) OR "placebo"[Title/Abstract]) OR "clinical trials as topic"[MeSH Terms:noexp]) OR "randomly"[Title/Abstract]) OR "trial"[Title]) NOT ("animals"[MeSH Terms] NOT "humans"[MeSH Terms]))

Translations

clopidogrel: "clopidogrel"[MeSH Terms] OR "clopidogrel"[All Fields] OR "clopidogrel's"[All Fields]

ticagrelor: "ticagrelor"[MeSH Terms] OR "ticagrelor"[All Fields] OR "ticagrelor's"[All Fields]

prasugrel: "prasugrel hydrochloride"[MeSH Terms] OR ("prasugrel"[All Fields] AND "hydrochloride"[All Fields]) OR "prasugrel hydrochloride"[All Fields] OR "prasugrel"s"[All Fields]

inhibitor: "antagonists and inhibitors"[Subheading] OR ("antagonists"[All Fields] AND "inhibitors"[All Fields]) OR "antagonists and inhibitors"[All Fields] OR "inhibitors"[All Fields] OR "inhibitors"[All Fields] OR "inhibitor's"[All Fields] adp receptor: "receptors, purinergic p2"[MeSH Terms] OR ("receptors"[All Fields] AND "purinergic"[All Fields] AND "p2"[All Fields]) OR "purinergic p2 receptors"[All Fields] OR ("adp"[All Fields] AND "receptor"[All Fields]) OR "adp receptor"[All Fields] antagonist: "antagonist"[All Fields] OR "antagonists and inhibitors"[Subheading] OR ("antagonists"[All Fields] OR "antagonists and inhibitors"[All Fields] OR "antagonists" [All Fields]

acute coronary syndrome: "acute coronary syndrome"[MeSH Terms] OR ("acute"[All Fields] AND "coronary"[All Fields] AND "syndrome"[All Fields]) OR "acute coronary syndrome"[All Fields]

acute: "acute" [All Fields] OR "acutely" [All Fields] OR "acutes" [All Fields] myocardial infarction: "myocardial infarction" [MeSH Terms] OR ("myocardial" [All Fields] AND "infarction" [All Fields]) OR "myocardial infarction" [All Fields] st elevation myocardial infarction: "st elevation myocardial infarction" [MeSH Terms] OR ("st" [All Fields] AND "elevation" [All Fields] AND "myocardial" [All Fields] AND "infarction" [All Fields]) OR "st elevation myocardial infarction" [All Fields] non-st elevated myocardial infarction [MeSH Terms] OR ("non-st" [All Fields] AND "elevated" [All Fields] AND "myocardial" [All Fields] AND "infarction" [All Fields] AND "st" [All Fields] AND "elevation" [All Fields] AND "elevation" [All Fields] AND "myocardial" [All Fields] AND "infarction" [All Fields]) OR "non st elevation myocardial infarction" [All Fields]

elevation: "elevate" [All Fields] OR "elevated" [All Fields] OR "elevates" [All Fields] OR "elevationg" [All Fields] OR "elevational" [All Fields] OR "elevations" [All Fields] OR "elevations" [All Fields]

acute coronary syndrome: "acute coronary syndrome" [MeSH Terms] OR ("acute" [All Fields] AND "coronary" [All Fields] AND "syndrome" [All Fields]) OR "acute coronary syndrome" [All Fields]

unstable angina: "angina, unstable"[MeSH Terms] OR ("angina"[All Fields] AND "unstable"[All Fields]) OR "unstable angina"[All Fields] OR ("unstable"[All Fields]) AND "angina"[All Fields])

clinical trials as topic[mesh:noexp]: "clinical trials as topic"[MeSH Terms:noexp]

animals[mh]: "animals"[MeSH Terms]
humans [mh]: "humans"[MeSH Terms]

Supplementary Material 2: Table with Characteristics of eligible trials

STUDY AND YEAR OF PUBLIC ATION	POPULATI ON	N OF PATI ENT S WIT H NST E- ACS (% OF TOT AL)	INVA SIVE MAN AGE MEN T (% OF TOT AL)		TMENT MS	EFFICACY OUTCOME	MAJOR BLEEDI NG DEFINIT ION	FOL LOW -UP DUR ATI ON (ME DIA N)
WIVIOT T ET AL. 2007 (TRITO N-TIMI 38)	ACS with scheduled PCI	1007 4 (74%)	99.1 %	1.	Prasugr el (n = 6813) Clopido grel (n = 6795)	Composite of death from cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke	TIMI major bleeding not related to CABG	14.5 mont hs
WALLE NTIN ET AL. 2009 (PLATO)	Hospitalized for ACS, with or without ST- segment elevation, with an onset of symptoms during the previous 24 hours	1108 0 (59.5 %)	51.6 %	1.	Ticagrel or (n = 9333) Clopido grel (n = 9291)	Composite of death from vascular causes, myocardial infarction, or stroke.	PLATO major bleeding	9.2 mont hs
ROE ET AL. 2012 (TRILO GY- ACS)	ACS patients selected for a final treatment strategy of medical managemen t without revasculariz ation within 10 days after the index event	9326 (100 %)	0%	1.	Prasugr el (n = 4663) Clopido grel (n = 4663)	Composite of death from cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke	TIMI major bleeding not related to CABG	17 mont hs
SAITO ET AL. 2014 (PRASFI T-ACS)	Japanese ACS patients	680 (49.1 %)	100%		Prasugr el reduced dose (n = 685) Clopido grel (n = 678)	Composite of cardiovascular death, nonfatal myocardial infarction, and nonfatal ischemic stroke.	TIMI major bleeding not related to CABG	12 mont hs

STUDY AND YEAR OF PUBLIC ATION	POPULATI ON	N OF PATI ENT S WIT H NST E- ACS (% OF TOT AL)	INVA SIVE MAN AGE MEN T (% OF TOT AL)		TMENT RMS	EFFICACY OUTCOME	MAJOR BLEEDI NG DEFINIT ION	FOL LOW -UP DUR ATI ON (ME DIA N)
GOTO ET AL. 2015 (PHILO)	Japanese, Korean and Taiwanese ACS patients	368 (45.9 %)	86.1 %	= . 2. Clo	grelor (n 401) pidogrel : 400)	Time to first occurrence of MI, stroke or death from vascular causes	PLATO major bleeding	7 mont hs
MOTOV SKA ET AL. 2017 (PRAGU E-18)	Patients with AMI treated with a primary PCI strategy	72 (5.9 %)	99.2 %	1. 2.	Prasugr el (n = 634) Ticagrel or (n = 596)	Occurrence of cardiovascular death, non-fatal MI, or stroke	Not provided	12 mont hs
PARK ET AL. 2019 (TICAK OREA)	Korean ACS with or without ST elevation	474 (59.3 %)	85.6 %	= 2.Clopi	grelor (n 400) dogrel (n 400)	Composite of death from cardiovascular causes, nonfatal MI, or nonfatal stroke	PLATO major bleeding	12 mont hs
SCHÜP KE ET AL. 2019 (ISAR- REACT 5)	ACS patients	2365 (58.9 %)	79.9 %	1. 2.	Ticagrel or (n = 2012) Prasugr el (n = 2006)	Composite of death, myocardial infarction, or stroke	BARC type 3 to 5	12 mont hs
GIMBEL ET AL. 2020 (POPUL AR AGE)	Patients aged 70 years or older with NSTE-ACS	1002 (100 %)	63.8 %	1.	Clopido grel (n = 500) Ticagrel or or prasugr el (n = 502)	First primary outcome: any bleeding requiring medical intervention, defined as PLATO major or minor bleeding. Second primary outcome: net clinical benefit of all-cause death, myocardial infarction, stroke and PLATO major or minor bleeding	PLATO major bleeding	12 mont hs

Supplementary Material 3: Quality assessment of included studies.



Supplementary Material 4: Assessment of inconsistency, funnel plot and impact of individual studies for the primary efficacy outcome.

Table C.1. Node-splitting method for assessment of inconsistency in network meta-analysis.

Comparison	k	prop	NMA	Direct	Indirect	RoR	Z	p-value
Clopidogrel : Prasugrel	4	0.86	1.23	1.20	1.44	0.83	-0.64	0.52
Clopidogrel : Ticagrelor	3	0.74	0.99	1.04	0.86	1.20	0.64	0.52
Prasugrel : Ticagrelor	2	0.40	0.80	0.72	0.86	0.83	-0.64	0.52

*k: Number of studies providing direct evidence, prop: Direct evidence proportion, NMA: Estimated treatment effect (HR) in network meta-analysis, Direct: Estimated treatment effect (HR) derived from direct evidence, Indirect: Estimated treatment effect (HR) derived from indirect evidence, RoR: Ratio of ratios (direct versus indirect), z: z-value of test for disagreement (direct versus indirect), p-value: p-value of test for disagreement (direct versus indirect).

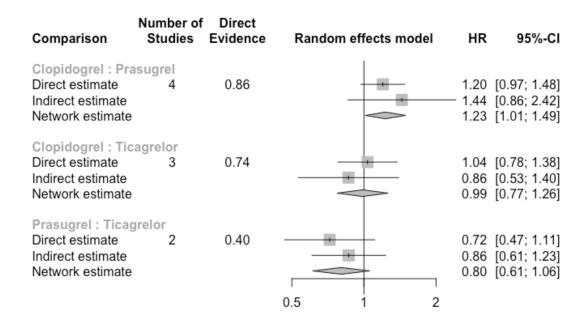


Figure C.1. Forest plot of the direct and indirect evidence for the individual comparisons.

Table C.2. Node-splitting method for assessment of inconsistency in network meta-analysis after excluding patients with conservative management.

Comparison	k	prop	NMA	Direct	Indirect	RoR	z	p-value
Clopidogrel : Prasugrel	3	0.81	1.32	1.31	1.37	0.96	-0.16	0.88
Clopidogrel : Ticagrelor	3	0.72	0.97	0.99	0.94	1.05	0.16	0.88
Prasugrel : Ticagrelor	2	0.48	0.74	0.72	0.76	0.96	-0.16	0.88

*k: Number of studies providing direct evidence, prop: Direct evidence proportion, NMA: Estimated treatment effect (HR) in network meta-analysis, Direct: Estimated treatment effect (HR) derived from direct evidence, Indirect: Estimated treatment effect (HR) derived from indirect evidence, RoR: Ratio of ratios (direct versus indirect), z: z-value of test for disagreement (direct versus indirect), p-value: p-value of test for disagreement (direct versus indirect).

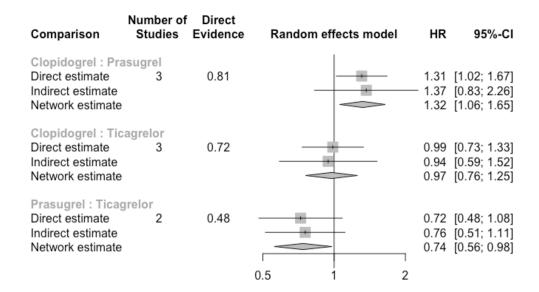


Figure C.2. Forest plot of the direct and indirect evidence for the individual comparisons after excluding patients with conservative management.

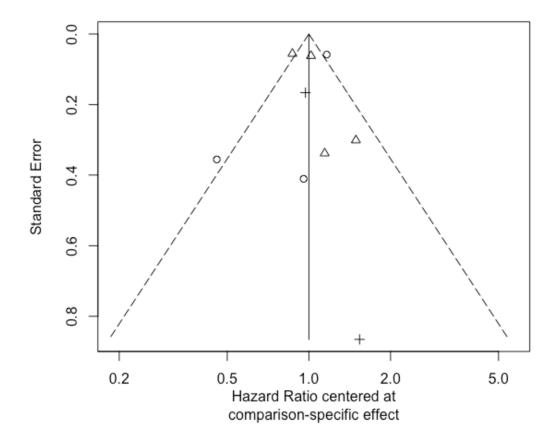


Figure C.3. Funnel plot of studies contributing in the network for the primary outcome.

Table C.3. Impact of individual studies in the network meta-analysis for the primary efficacy outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wiviott 2007	0.35	0.03	0.12
Wallentin 2009	0.07	0.56	0.39
Roe 2012	0.36	0.03	0.12
Saito 2014_UA	0.07	0.004	0.02
Saito 2014_NSTEMI	0.09	0.005	0.02
Goto 2015	0.005	0.08	0.04
Motovska 2017	0.006	0.01	0.03

Park 2019	0.007	0.10	0.06
Schüpke 2019	0.13	0.24	0.37

Supplementary Material 5: Network meta-analysis of interventions for the cardiovascular death outcome.

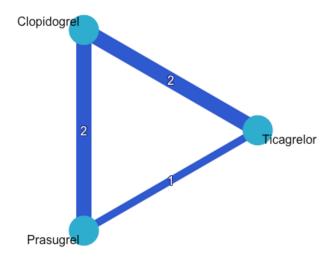


Figure D.1. Network graph of interventions for the cardiovascular death outcome.

Comparison	Number of Studies	Direct Evidence	Random effects model	HR	95%-CI
Clopidogrel : Pr Direct estimate Indirect estimate Network estimate	2	0.94	-	- 1.70	[0.93; 1.22] [0.99; 2.93] [0.96; 1.25]
Clopidogrel : Tie Direct estimate Indirect estimate Network estimate	2	0.90		0.81	[1.08; 1.55] [0.47; 1.37] [1.04; 1.46]
Prasugrel: Tica Direct estimate Indirect estimate Network estimate	1	0.16	0.5 1 2	1.21	[0.45; 1.26] [0.97; 1.52] [0.91; 1.38]

Figure D.2. Forest plot of the network estimates of the potent P2Y12 inhibitors for the cardiovascular death outcome.

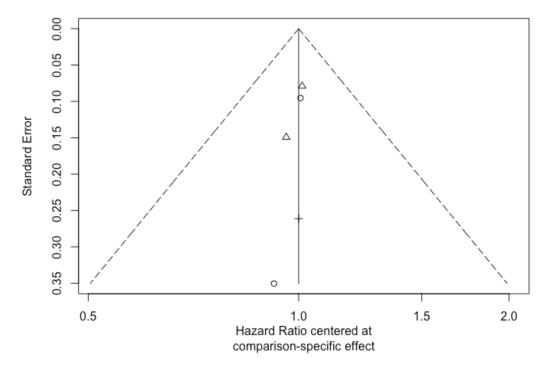


Figure D.3. Funnel plot of studies contributing in the network for the cardiovascular death outcome.

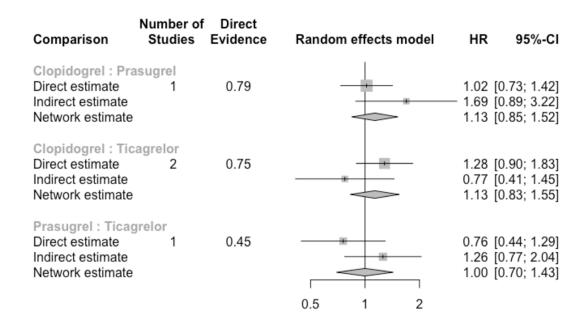


Figure D.4. . Forest plot of the network estimates of the potent P2Y12 inhibitors for the cardiovascular death outcome in the sensitivity analysis.

Table D.1. Impact of individual studies in the network meta-analysis for the cardiovascular death outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wiviott 2007	0.21	0.01	0.08
Wallentin 2009	0.04	0.83	0.75
Roe 2012	0.73	0.02	0.47
Schüpke 2019	0.06	0.10	0.16
Gimbel 2020	0.01	0.06	0.04

Supplementary Material 6: Network meta-analysis of interventions for the all-cause mortality outcome.

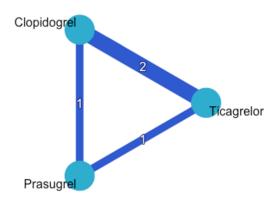


Figure E.1. Network graph of interventions for the all-cause death outcome.

Comparison	Number of Studies	Direct Evidence	Random effects model	HR	95%-CI
Clopidogrel : Po Direct estimate Indirect estimate Network estimate	1	0.72	*	— 1.76	[0.68; 1.66] [0.87; 3.56] [0.84; 1.78]
Clopidogrel: Ti Direct estimate Indirect estimate Network estimate	2	0.81	*	0.74	[0.85; 1.77] [0.35; 1.57] [0.80; 1.55]
Prasugrel: Tica Direct estimate Indirect estimate Network estimate	1	0.48	0.5 1 2	1.16	[0.38; 1.28] [0.65; 2.05] [0.60; 1.38]

Figure E.2. Forest plot of the network estimates of the potent P2Y12 inhibitors for the all-cause mortality outcome.

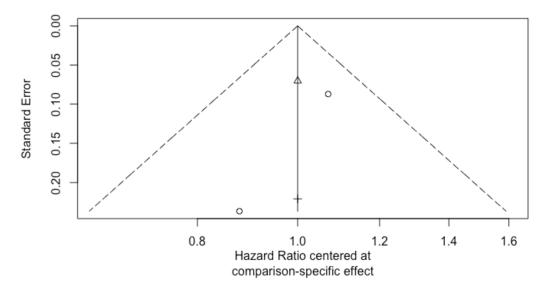


Figure E.3. Funnel plot of studies contributing in the network for the all-cause death outcome.

Comparison	Number of Studies	f Direct Evidence	Random effects model	HR	95%-CI
Clopidogrel : Propriect estimate Indirect estimate Network estimate	0	0	*		[1.16; 2.92] [1.16; 2.92]
Clopidogrel : Ti Direct estimate Indirect estimate Network estimate	2	1.00	# -		[1.10; 1.51] [1.10; 1.51]
Prasugrel: Tica Direct estimate Indirect estimate Network estimate	1	1.00	0.5 1 2		[0.45; 1.08] [0.45; 1.08]

Figure E.4. . Forest plot of the network estimates of the potent P2Y12 inhibitors for the all-cause death outcome in the sensitivity analysis.

Table E.1. Impact of individual studies in the network meta-analysis for the all-cause death outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wallentin 2009	0.10	0.53	0.23
Roe 2012	0.72	0.19	0.52
Schüpke 2019	0.28	0.19	0.48
Gimbel 2020	0.04	0.28	0.09

Supplementary Material 7: Network meta-analysis of interventions for the myocardial infarction outcome.

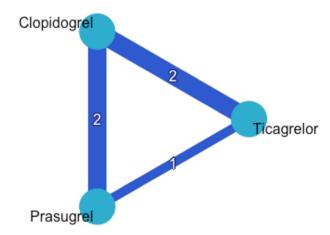


Figure F.1. Network graph of interventions for the myocardial infarction outcome.

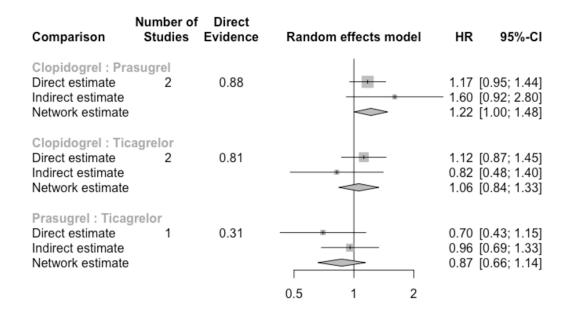


Figure F.2. Forest plot of the network estimates of the potent P2Y12 inhibitors for the myocardial infarction outcome.

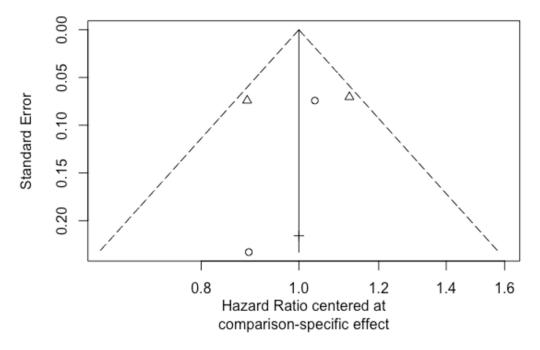


Figure F.3. Funnel plot of studies contributing in the network for the myocardial infarction outcome.

Comparison	Number of Studies	f Direct Evidence	Random effects model	HR	95%-CI
Clopidogrel : Pr Direct estimate Indirect estimate Network estimate	1	0.93		- 1.54	[1.15; 1.51] [0.95; 2.51] [1.17; 1.52]
Clopidogrel : Ti Direct estimate Indirect estimate Network estimate	2	0.77	*	0.92	[0.85; 1.38] [0.59; 1.44] [0.84; 1.29]
Prasugrel: Tica Direct estimate Indirect estimate Network estimate	1	0.30	*	0.82	[0.46; 1.07] [0.62; 1.08] [0.62; 0.99]
			0.5 1 2		

Figure F.4. . Forest plot of the network estimates of the potent P2Y12 inhibitors for the myocardial infarction outcome in the sensitivity analysis.

Table F.1. Impact of individual studies in the network meta-analysis for the myocardial infarction outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wiviott 2007	0.44	0.02	0.20
Wallentin 2009	0.05	0.62	0.45
Roe 2012	0.43	0.02	0.19
Schüpke 2019	0.12	0.19	0.31
Gimbel 2020	0.01	0.20	0.11

Supplementary Material 8: Network meta-analysis of interventions for the stroke outcome.

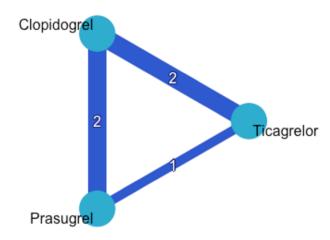


Figure G.1. Network graph of interventions for the stroke outcome.

Comparison	Number of Studies	Direct Evidence	Random effects model	HR	95%-CI
Clopidogrel : Pr Direct estimate Indirect estimate Network estimate	2	0.92		— 1.28	[0.80; 1.35] [0.52; 3.15] [0.82; 1.36]
Clopidogrel : Ti Direct estimate Indirect estimate Network estimate	2	0.89		0.80	[0.72; 1.35] [0.33; 1.93] [0.72; 1.30]
Prasugrel: Tica Direct estimate Indirect estimate Network estimate	1	0.19	0.5 1 2	0.95	[0.33; 1.79] [0.63; 1.43] [0.63; 1.32]

Figure G.2. Forest plot of the network estimates of the potent P2Y12 inhibitors for the stroke outcome.

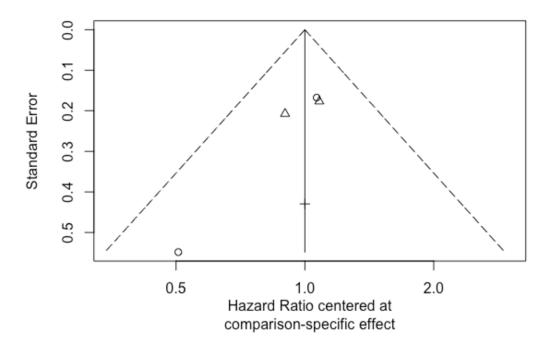


Figure G.3. Funnel plot of studies contributing in the network for the stroke outcome.

Comparison	Number of Studies	f Direct Evidence	Random effects model	HR	95%-CI
Clopidogrel: Pro Direct estimate Indirect estimate Network estimate	1	0.86	*	0.95	[0.62; 1.40] [0.34; 2.63] [0.64; 1.37]
Clopidogrel : Tid Direct estimate Indirect estimate Network estimate	2	0.73	*	0.72	[0.41; 1.30] [0.28; 1.83] [0.44; 1.18]
Prasugrel : Tica Direct estimate Indirect estimate Network estimate	1	0.41	0.5 1 2	0.78	[0.33; 1.79] [0.39; 1.58] [0.45; 1.33]

Figure G.4. . Forest plot of the network estimates of the potent P2Y12 inhibitors for the stroke outcome in the sensitivity analysis.

Table G.1. Impact of individual studies in the network meta-analysis for the myocardial infarction outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wiviott 2007	0.39	0.01	0.19
Wallentin 2009	0.05	0.81	0.70
Roe 2012	0.53	0.01	0.29
Schüpke 2019	0.08	0.11	0.19
Gimbel 2020	0.01	0.08	0.04

Supplementary Material 9: Network meta-analysis of interventions for the stent thrombosis outcome.

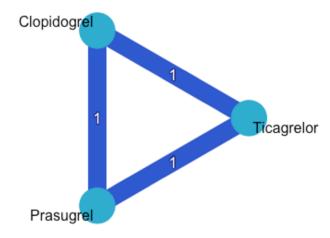


Figure H.1. Network graph of interventions for the stent thrombosis outcome.

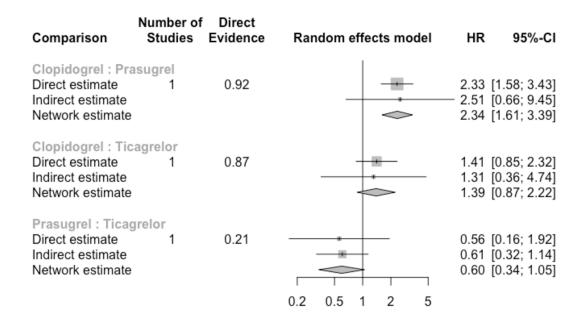


Figure H.2. Forest plot of the network estimates of the potent P2Y12 inhibitors for the stent thrombosis outcome.

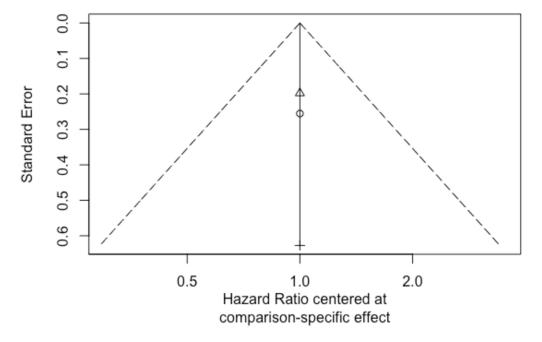


Figure H.3. Funnel plot of studies contributing in the network for the stent thrombosis outcome.

Table H.1. Impact of individual studies in the network meta-analysis for the stent thrombosis outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wiviott 2007	0.92	0.13	0.79
Wallentin 2009	0.08	0.87	0.79
Schüpke 2019	0.08	0.13	0.21

Supplementary Material 10: Network meta-analysis of interventions for the safety outcomes.

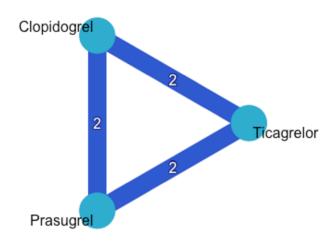


Figure I.1. Network graph of interventions for the major bleeding safety outcome.

Table I.1. Node-splitting method for assessment of inconsistency in network meta-analysis for the major bleeding outcome

Comparison	k	prop	NMA	Direct	Indirect	RoR	Z	p-value
Clopidogrel : Prasugrel	2	0.75	0.87	0.76	1.32	0.58	-1.11	0.27
Clopidogrel : Ticagrelor	2	0.77	0.73	0.83	0.48	1.73	1.11	0.27
Prasugrel : Ticagrelor	2	0.49	0.84	0.63	1.10	0.58	-1.11	0.27

*k: Number of studies providing direct evidence, prop: Direct evidence proportion, NMA: Estimated treatment effect (HR) in network meta-analysis, Direct: Estimated treatment effect (HR) derived from direct evidence, Indirect: Estimated treatment effect (HR) derived from indirect evidence, RoR: Ratio of ratios (direct versus indirect), z: z-value of test for disagreement (direct versus indirect), p-value: p-value of test for disagreement (direct versus indirect).

Table I.2. Impact of individual studies in the network meta-analysis for the major bleeding outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wiviott 2007	0.40	0.06	0.19
Wallentin 2009	0.08	0.45	0.21
Roe 2012	0.35	0.05	0.16
Motovska 2017	0.02	0.02	0.05
Schüpke 2019	0.22	0.21	0.44
Gimbel 2020	0.05	0.32	0.13

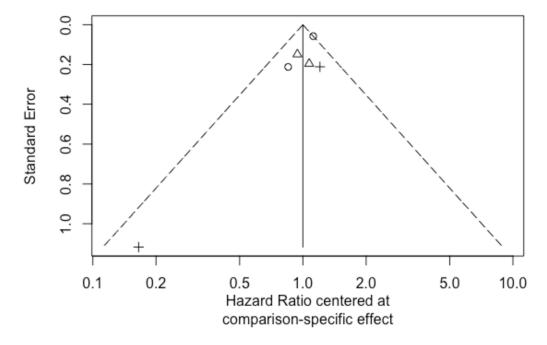


Figure I.2. Funnel plot of studies contributing in the network for the major bleeding outcome.

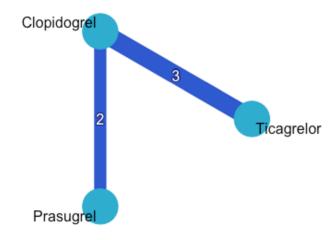


Figure I.3. Network graph of interventions for the major or minor bleeding safety outcome.

Table I.3. Node-splitting method for assessment of inconsistency in network meta-analysis for the major or minor bleeding outcome

Comparison	k	Prop	NMA	Direct	Indirect	RoR	Z	p-value
Clopidogrel : Prasugrel	2	1	0.73	0.73	-	-	ı	-
Clopidogrel : Ticagrelor	3	1	0.78	0.78	-	-	-	-
Prasugrel : Ticagrelor	0	0	1.07	-	1.07	-	-	-

^{*}k: Number of studies providing direct evidence, prop: Direct evidence proportion, NMA: Estimated treatment effect (HR) in network meta-analysis, Direct: Estimated treatment effect (HR) derived from direct evidence, Indirect: Estimated treatment effect (HR) derived from indirect evidence, RoR: Ratio of ratios (direct versus indirect), z: z-value of test for disagreement (direct versus indirect), p-value: p-value of test for disagreement (direct versus indirect).

Table I.4. Impact of individual studies in the network meta-analysis for the major or minor bleeding outcome.

Study	Clopidogrel : Prasugrel	Clopidogrel : Ticagrelor	Prasugrel : Ticagrelor
Wiviott 2007	0.60	0.00	0.46
Wallentin 2009	0.00	0.61	0.39
Roe 2012	0.40	0.00	0.29
Park 2019	0.00	0.08	0.04
Gimbel 2020	0.00	0.31	0.16

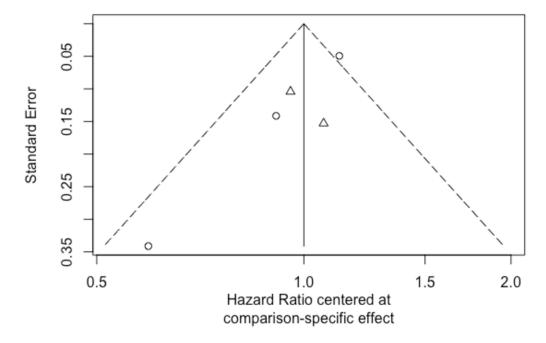
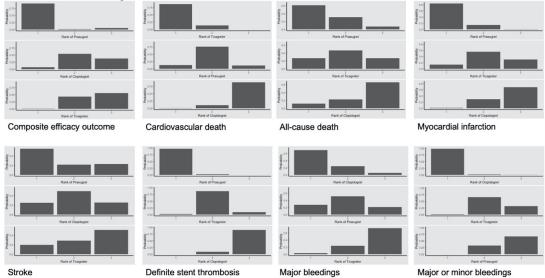


Figure I.4. Funnel plot of studies contributing in the network for the major or minor bleeding outcome.

Supplementary Material 11: Rankogram for every outcome in the main analysis.



Supplementary Material 12: Grading of evidence.

Table K.1. Grading of evidence in the network meta-analysis of P2Y12 inhibitors for the efficacy outcomes in the main analysis

main analysis. Pairwise	Network meta-analysis		Downgrading due			
comparison	estimate	Confidence	to			
- Companicon	Composite efficacy	outcome				
Mixed evidence. Hazard Ratio (95% Confidence Interval)						
Clopidogrel :	,		,			
Prasugrel	1.23 (1.01;1.49)	Low	Heterogeneity			
Clopidogrel : Ticagrelor	0.99 (0.78;1.27)	Low	Imprecision Heterogeneity			
Prasugrel : Ticagrelor	0.80 (0.61;1.06)	Low	Imprecision Heterogeneity			
	g of treatments	Moderate	Inconsistency			
ranking	Cardiovascular o		Inconsistency			
Miyada	evidence. Hazard Ratio (95%		ntorvall			
	 		,			
Clopidogrel : Prasugrel	1.09 (0.96;1.25)	Low	Heterogeneity Incoherence			
Clopidogrel : Ticagrelor	1.22 (1.04;1.46)	Low	Heterogeneity Incoherence			
Prasugrel : Ticagrelor	1.12 (0.91;1.38)	Very low	Imprecision Heterogeneity Incoherence			
Rankino	g of treatments	High	-			
· •	All-cause dea					
Mixed 6	evidence. Hazard Ratio (95%		nterval)			
Clopidogrel : Prasugrel	1.23 (0.84;1.78)	Low	Imprecision Heterogeneity			
Clopidogrel : Ticagrelor	1.12 (0.80;1.55)	Low	Imprecision Heterogeneity			
Prasugrel : Ticagrelor	0.91 (0.60;1.38)	Low	Imprecision			
Ranking	g of treatments	Low	Imprecision Inconsistency			
	Myocardial infar	ction	-			
Mixed 6	evidence. Hazard Ratio (95%		nterval)			
Clopidogrel : Prasugrel	1.22 (1.01;1.49)	Low	Heterogeneity			
Clopidogrel : Ticagrelor	1.06 (0.84;1.33)	Low	Imprecision Heterogeneity			
Prasugrel : Ticagrelor	0.87 (0.66;1.14)	Low	Imprecision Heterogeneity			
Ranking of treatments Moderate Inconsistency						
Stroke						
Mixed 6	evidence. Hazard Ratio (95%	% Confidence I	nterval)			
Clopidogrel : Prasugrel	1.06 (0.82;1.36)	Low	Heterogeneity			

Clopidogrel : Ticagrelor	0.97 (0.72;1.30)	Low	Heterogeneity
Prasugrel : Ticagrelor	0.91 (0.63;1.32)	Low	Imprecision Heterogeneity
Ranking	g of treatments	Moderate	Imprecision
	Definite stent thron	nbosis	
Mixed 6	evidence. Hazard Ratio (95%	6 Confidence I	nterval)
Clopidogrel : Prasugrel	2.34 (1.61;3.40)	Low	Heterogeneity
Clopidogrel : Ticagrelor	1.40 (0.86;2.22)	Low	Imprecision Heterogeneity
Prasugrel : Ticagrelor	0.60 (0.34;1.04)	Low	Imprecision Heterogeneity
Ranking	g of treatments	High	-

Imprecision: Confidence intervals include values favoring either treatment.

Incoherence: Disagreement between direct and indirect estimates.

Heterogeneity: Substantial between-study variance within the comparison.

Inconsistency: Evidence of heterogeneity in the network.

Table K.2. Grading of evidence in the network meta-analysis of P2Y12 inhibitors for the safety outcomes in the main analysis.

main analysis.	T					
Pairwise comparison	Network meta-analysis estimate	Confidence	Downgrading due to			
Major bleedings						
Mixed evidence. Hazard Ratio (95% Confidence Interval)						
Clopidogrel : Prasugrel	0.87 (0.57;1.33)	0.87 (0.57;1.33) Low				
Clopidogrel : Ticagrelor	0.73 (0.49;1.11)	Low	Imprecision Heterogeneity Imprecision Heterogeneity			
Prasugrel : Ticagrelor	0.84 (0.52;1.38)	Low				
Ranking	g of treatments	Very low	Imprecision Indirectness Inconsistency			
Major or minor bleedings						
Mixed 6	evidence. Hazard Ratio (95%	6 Confidence I	nterval)			
Clopidogrel : Prasugrel	0.73 (0.57;0.94)	Very low	Heterogeneity Incoherence			
Clopidogrel : Ticagrelor	0.78 (0.63;0.96)	Very low	Within-study bias Heterogeneity Incoherence			
Indirect evidence. Hazard Ratio (95% Confidence Interval)						
Prasugrel : Ticagrelor	1.07 (0.77;1.47)	Very low	Heterogeneity Incoherence			
Ranking of treatments Moderate Indirection						

Imprecision: Confidence intervals include values favoring either treatment.

Incoherence: Disagreement between direct and indirect estimates.

Within-study bias: Dominated by evidence at high or moderate risk of bias.

Heterogeneity: Substantial between-study variance within the comparison.

Indirectness: Absence of agreement in outcome definition. Inconsistency: Evidence of heterogeneity in the network.

Table K3. Grading of evidence in the network meta-analysis of $P2Y_{12}$ inhibitors for the outcomes in patients managed invasively (sensitivity analysis).

Pairwise	Network meta-		Downgrading due			
comparison	analysis estimate		to			
Composite efficacy outcome						
Mixed evidence. Hazard Ratio (95% Confidence Interval)						
Clopidogrel : Prasugrel	1.32 (1.05;1.64) Moderate		Heterogeneity			
Clopidogrel : Ticagrelor	0.97 (0.76;1.25)	Low	Imprecision Heterogeneity			
Prasugrel : Ticagrelor	0.74 (0.56;0.98)	Moderate	Heterogeneity			
Ranking	of treatments	High	-			
	Cardiovascula	r death				
Mixed	evidence. Hazard Ratio (95% Confidence	e Interval)			
Clopidogrel : Prasugrel	1.13 (0.84;1.52)	Low	Imprecision Heterogeneity			
Clopidogrel : Ticagrelor	1.13 (0.83;1.55)	Low	Imprecision Heterogeneity			
Prasugrel : Ticagrelor	1.00 (0.70;1.43)	Low	Imprecision			
	of treatments	Moderate	Imprecision			
<u>J</u>	All-cause d		•			
Mixed	evidence. Hazard Ratio (e Interval)			
Clopidogrel : Prasugrel	1.83 (1.16;2.91)	Very low	Heterogeneity Incoherence			
Clopidogrel : Ticagrelor	1.29 (1.10;1.51)	Very low	Imprecision Heterogeneity Incoherence			
Prasugrel : Ticagrelor	0.70 (0.45;1.08)	Very low	Heterogeneity Incoherence			
Ranking	of treatments	High	-			
-	Myocardial inf	arction				
Mixed	evidence. Hazard Ratio (95% Confidence	e Interval)			
Clopidogrel : Prasugrel	1.33 (1.17;1.52)	Low	Heterogeneity			
Clopidogrel : Ticagrelor	1.04 (0.84;1.29)	Low	Imprecision Heterogeneity			
Prasugrel : Ticagrelor	0.78 (0.62;0.99)	Low	Heterogeneity			
Ranking of treatments		High	-			
Stroke						
Mixed evidence. Hazard Ratio (95% Confidence Interval)						
Clopidogrel : Prasugrel	0.94 (0.64;1.37)	Low	Imprecision Heterogeneity			

Pairwise comparison	Network meta- analysis estimate	Confidence	Downgrading due to			
Clopidogrel :	analysis estimate		Imprecision			
Ticagrelor	0.73 (0.45;1.19)	Low	•			
Prasugrel :			Heterogeneity Imprecision			
Ticagrelor	0.78 (0.45;1.33)	Low	Heterogeneity			
	of trootmonts	Moderate	Imprecision			
INalikiliy	U I I I					
Definite stent thrombosis Mixed evidence. Hazard Ratio (95% Confidence Interval)						
		Jo / Corniderice	e intervaij			
Clopidogrel : Prasugrel	2.34 (1.61;3.40)	Low	Heterogeneity			
Clopidogrel:	1.40 (0.86;2.22)	Low	Imprecision			
Ticagrelor	1.40 (0.00,2.22)	LOW	Heterogeneity			
Prasugrel:	0.60 (0.24:1.04)	Low	Imprecision			
Ticagrelor	0.60 (0.34;1.04)	Low	Heterogeneity			
Ranking	of treatments	High	-			
-	Major bleed					
Mixed	evidence. Hazard Ratio (95% Confidence	e Interval)			
Clopidogrel : Prasugrel	0.89 (0.50;1.59)	Low	Imprecision			
Clopidogrel :	0 = 0 (0 1 = 1 1 0)		Imprecision			
Ticagrelor	0.72 (0.45;1.18)	Low	Heterogeneity			
Prasugrel :	0.00 (0.45.4.47)		Imprecision			
Ticagrelor	0.82 (0.45;1.47)	Low	Heterogeneity			
11009.010			Imprecision			
Ranking	of treatments	Very low	Indirectness			
			Inconsistency			
	Major or minor b	oleedings				
Mixed	evidence. Hazard Ratio (95% Confidence	e Interval)			
Clopidogrel:			Heterogeneity			
Prasugrel	0.70 (0.53;0.93)	Very low	Incoherence			
	0.73 (0.59;0.91)		Within-study bias			
Clopidogrel :		Very low	Heterogeneity			
Ticagrelor			Incoherence			
Indirect evidence. Hazard Ratio (95% Confidence Interval)						
Prasugrel :	,		Heterogeneity			
Ticagrelor	1.05 (0.73;1.50)	Very low	Incoherence			
<u> </u>	Ranking of treatments Moderate Indirectness					
raming of treatments involved in the contest						

Imprecision: Confidence intervals include values favoring either treatment.

Incoherence: Disagreement between direct and indirect estimates.

<u>Within-study bias</u>: Dominated by evidence at high or moderate risk of bias. <u>Heterogeneity</u>: Substantial between-study variance within the comparison.

<u>Indirectness</u>: Absence of agreement in outcome definition. <u>Inconsistency</u>: Evidence of heterogeneity in the network.

Supplementary Material 13: Hazard ratios of all outcomes across studies included in the systematic review

Study	Compo site CV efficac y	CV death	All- cause death	MI	Strok e	Definit e stent throm bosis	Major bleedi ng	Major or minor bleedin g
TRITO N-TIMI 38	0.82 (0.73;0. 93)	0.98 (0.73;1 .31)	-	0.76 (0.66; 0.87)	1.07 (0.71; 1.6)	0.43 (0.29;0 .63)	1.4 (1.05;1 .88)	1.43 (1.17;1. 76)
PLATO *	0.83 (0.74;0. 93)	0.77 (0.64;0 .93)	0.76 (0.64; 0.9)	0.86 (0.74; 0.99)	0.95 (0.69; 1.33)	0.71 (0.43;1 .17)	1.07 (0.95;1 .19)	1.14 (1.03;1. 25)
TRILO GY- ACS**	0.96 (0.86;1. 07)	0.93 (0.8;1. 09)	0.94 (0.82; 1.08)	0.96 (0.83; 1.11)	0.89 (0.63; 1.26)	-	1.23 (0.84;1 .81)	1.28 (0.95;1. 73)
PRASF IT-ACS (UA)	0.73 (0.38;1. 43)	1	-	-	-	-	1	1
PRASF IT-ACS (NSTE MI)	0.56 (0.31;1. 01)	-	-	-	-	-	-	-
PHILO	1.01 (0.45;2. 25)	-	-	-	-	-	-	-
PRAG UE-18	0.47 (0.09;2. 56)	1	-	-	-	-	3.84 (0.43;3 4.39)	1
TICAK OREA	2.11 (1.05;4. 23)	1	-	-	-	-	1	2.16 (1.11;4. 23)
ISAR- REACT 5	1.35 (0.97;1. 86)***	1.32 (0.79;2 .2)***	1.43 (0.93; 2.21)	1.43 (0.94; 2.19)	1.3 (0.44; 2.37)	1.78 (0.52;6 .08)	1.9 (0.72;1 .65)	-
POPula r AGE	-	1.19 (0.6;2. 37)	1.08 (0.68; 1.72)	1 (0.63; 1.57)	0.5 (0.17; 1.46)	-	0.71 (0.47;1 .08)	0.71 (0.54;0. 94)****

^{*}data for the sensitivity analysis were used from Lindholm D et al. Ticagrelor vs. clopidogrel in patients with non-ST-elevation acute coronary syndrome with or without revascularization: results from the PLATO trial. Eur Heart J. 2014 Aug 14;35(31):2083-93.

^{**}excluded from the sensitivity analysis

^{***}provided by Authors of ISAR-REACT 5

^{****}data for the sensitivity analysis in the Supplement of the main paper