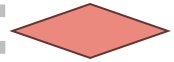
TURGEONLAB

Seeing the Forest for the Trees

Meta-Analysis Without Missing the Plot



Ricky D. Turgeon BSc(Pharm), ACPR, PharmD
Associate Member | UBC Division of Cardiology
Assistant Professor | UBC Faculty of Pharmaceutical Sciences
Clinical Pharmacy Specialist | St. Paul's Hospital PHARM-HF Clinic

Plan for this session

1. Overview of different review types & their purposes
2. Systematic reviews: Key ingredients & best practices
3. Meta-analysis: The 2 reasons to meta-analyze (with examples)
4. Special topics in meta-analysis: Beyond the forest plot
   - Bayesian
   - Individual participant data
   - Network

Key tools & references

Cochrane Handbook: training.cochrane.org/handbook/current

Covidence: guides.library.ubc.ca/covidence

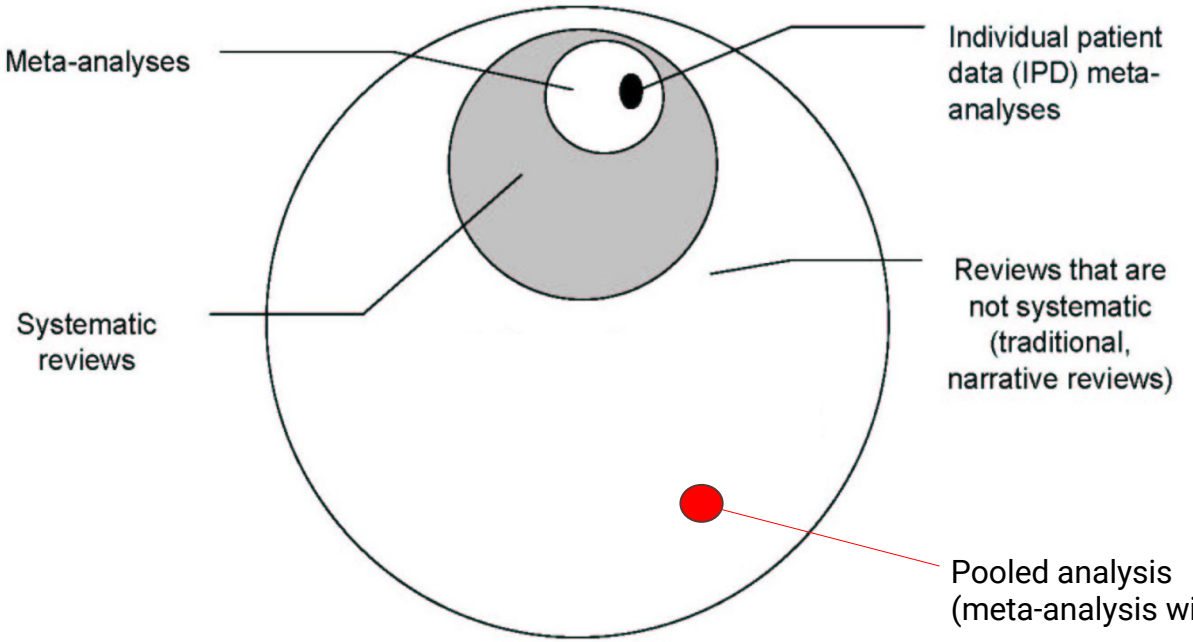
MiniMeta: minimeta.net/

PRISMA 2020 reporting checklist: prisma-statement.org/prisma-2020

ROBUST-RCT risk of bias tool: bmj.com/content/388/bmj-2024-081199

1: Overview of different review types & their purposes

Types of reviews



Natl Med J India 2004;17:86-95

Comparison of major review types

	Narrative review	Systematic review	Scoping review

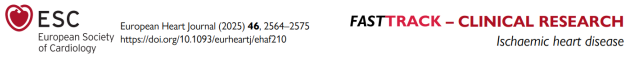
Comparison of major review types

	Narrative review	Systematic review	Scoping review
Purpose	Usually broad questions	Specific, focused question (”PICO”)	Map out a topic/concept, identify knowledge gaps

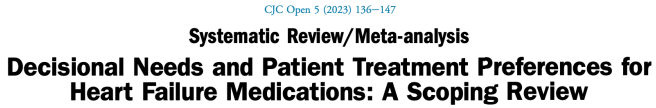
Patrick G. O'Malley, M.D., M.P.H., *Editor*

Heart Failure with Preserved Ejection Fraction

Antonio Cannata, M.D., and Theresa A. McDonagh, M.D.



Colchicine for secondary prevention of vascular events: a meta-analysis of trials

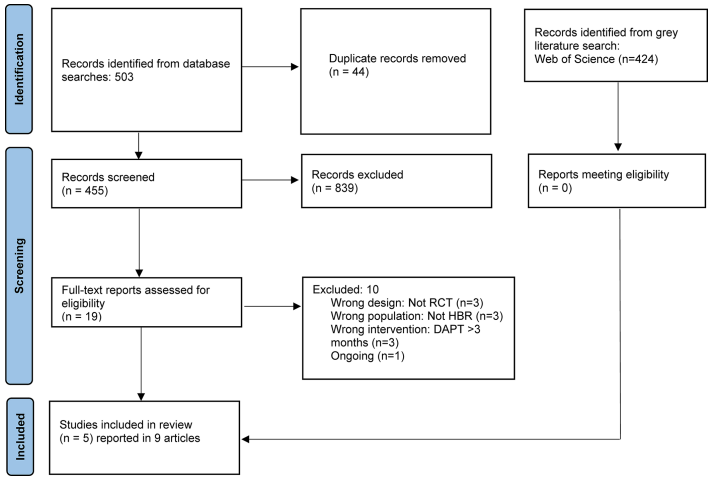


Comparison of major review types

	Narrative review	Systematic review	Scoping review
Search strategy	Usually not described; often focused on published, high-impact articles	Exhaustive, transparent, reproducible; often includes unpublished articles	As with systematic reviews; sometimes broader/more iterative

S1 Appendix. Database search strategy

MEDLINE (inception to August 18, 2022)	Embase (2019 to August 18, 2022)	CENTRAL (2019 to August 18, 2022)
1. percutaneous coronary intervention.mp. or Percutaneous Coronary Intervention/ 2. high bleed* risk.mp. 3. Platelet Aggregation Inhibitors/ or antiplatelet.mp. 4. Platelet Aggregation Inhibitors/ or p2y12.mp. 5. clopidogrel.mp. or Clopidogrel/ 6. prasugrel.mp. or Prasugrel Hydrochloride/ 7. ticagrelor.mp. or Ticagrelor/ 8. 3 or 4 or 5 or 6 or 7 9. 1 and 2 and 8 10. limit 9 to "therapy (maximizes specificity)"	1. percutaneous coronary intervention.mp. or percutaneous coronary intervention/ 2. high bleed* risk.mp. 3. dual antiplatelet therapy/ or antiplatelet.mp. 4. p2y12.mp. 5. acetylsalicylic acid plus clopidogrel/ or clopidogrel/ or clopidogrel.mp. 6. prasugrel.mp. or prasugrel/ 7. ticagrelor.mp. or ticagrelor/ 8. 3 or 4 or 5 or 6 or 7 9. 1 and 2 and 8 10. limit 9 to "therapy (maximizes specificity)"	1. percutaneous coronary intervention.mp. or Percutaneous Coronary Intervention/ 2. high bleed*.mp. 3. antiplatelet.mp. or Platelet Aggregation Inhibitors/ 4. clopidogrel.mp. or Clopidogrel/ 5. prasugrel.mp. or Prasugrel Hydrochloride/ 6. ticagrelor.mp. or Ticagrelor/ 7. 3 or 4 or 5 or 6 8. 1 and 2 and 7 9. limit 8 to medline records 10. limit 9 to embase records 11. 9 or 10 12. 12. 8 not 11



PLOS ONE 2023; https://doi.org/10.1371/journal.pone.0291061

Comparison of major review types

	Narrative review	Systematic review	Scoping review
Study eligibility criteria	Vague	Explicitly stated; Specific, narrow	Explicit stated; often broad/inclusive (especially of design)

Study selection and data extraction

We included parallel randomized controlled trials (RCTs) that enrolled patients who underwent PCI for either ACS or non-ACS indications and had HBR, or reported on a subgroup of patients with HBR, and compared DAPT for 1–3 months followed by SAPT ("short DAPT"), to DAPT for 6–12 months ("standard DAPT"). We included RCTs if they defined HBR based on the ARC-HBR criteria or other explicitly defined criteria.

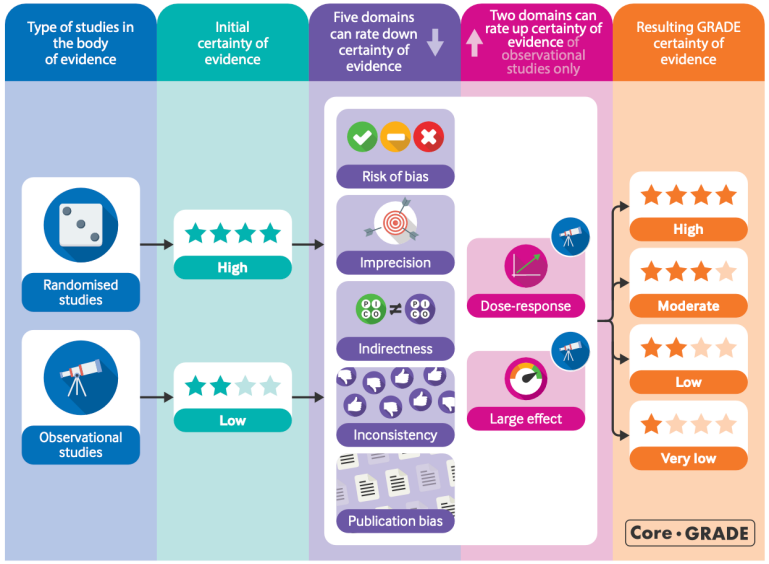
PLOS ONE 2023; https://doi.org/10.1371/journal.pone.0291061

Comparison of major review types

	Narrative review	Systematic review	Scoping review
Quality/risk of bias assessment	Usually none	Core component; standardized	Not usually done, unless key gap to explore

Table 2 Risk of bias assessment[†]

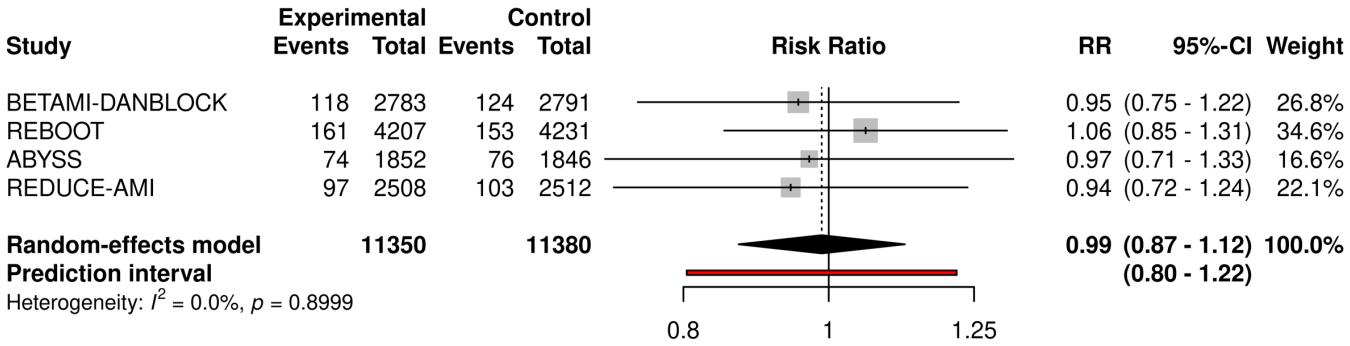
Trial	Randomization process	Deviations from the intended interventions	Missing outcome data	Measurement of the outcome	Selection of the reported result	Overall
Ussia[14]	Some concerns	Some concerns	Low	Low	Low	Some concerns
SAT-TAVI[15]	Some concerns	Low	Some concerns	Some concerns	Some concerns	Some concerns
ARTE[16]	Low	Some concerns	Low	Some concerns	Low	Some concerns
GALILEO[17]	Low	Some concerns	Low	Low	Low	Some concerns
POPular TAVI cohort B[18]	Low	Low	Low	Low	Low	Low
POPular TAVI cohort A[19]	Low	Low	Low	Low	Low	Low
LRT 2.0[20]	Low	Some concerns	Low	Some concerns	Low	Some concerns
ENVISAGE-TAVI AF[21]	Low	Low	Low	Low	Low	Low
ADAPT-TAVR[22]	Low	Some concerns	Low	Low	Low	Some concerns
ATLANTIS[23]	Low	Some concerns	Low	Low	Low	Some concerns



Turgeon, et al. EHJ – CVP 2024;10(5):454-64 https://doi.org/10.1093/ehjcvp/pvad101

Comparison of major review types

	Narrative review	Systematic review	Scoping review
Data synthesis	Narrative	Structured, quantitative **± meta-analysis**	Typically descriptive, thematic, visual



2: Systematic reviews: Key ingredients & best practices

Key steps to conduct a systematic review

1. Establish a research team with appropriate areas of expertise
2. Prepare the protocol
   i. Define the research question(s) and scope of the review
   ii. Design the search strategy
   iii. Define inclusion and exclusion criteria
   iv. Identify data to be collected from the included studies
   v. Select tools and methods for assessing the risk of bias of included studies
   vi. Determine the analytic plan
3. Execute the search
4. Screen citations for inclusion into the review
5. Collect data from the included studies, including elements to describe the study-level PICO, risk of bias and for analytic purposes
6. Evaluate the risk of bias of each included study, at the level of the outcome
7. Synthesize evidence, either qualitatively or in combination with quantitative analytics (meta-analysis)
8. Report the systematic review in accordance with established best practices

J Am Coll Clin Pharm 2021;4:849-54

Key steps to conduct a systematic review: Tools & tips

1. Establish a research team with appropriate areas of expertise
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→ **Key team members:**
- Librarian for the search
- Meta-analyst/statistician for the analysis

→ **Covidence or Rayyan**

→ **Risk of bias tools for RCTs:**
- Cochrane RoB2
- ROBUST-RCT tool

J Am Coll Clin Pharm 2021;4:849-54

Key steps to conduct a systematic review vs critical appraisal

1. Establish a research team with appropriate areas of expertise
2. Prepare the protocol
   i. Define the research question(s) and scope of the review
   ii. Design the search strategy
   iii. Define inclusion and exclusion criteria
   iv. Identify data to be collected from the included studies
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7. Synthesize evidence, either qualitatively or in combination with quantitative analytics (meta-analysis)
8. Report the systematic review in accordance with established best practices

BOX 14-1

Users' Guides for Credibility of the Systematic Review Process

Did the review explicitly address a sensible clinical question?

Was the search for relevant studies exhaustive?

Was the risk of bias of the primary studies assessed?

Did the review address possible explanations of between-study differences in results?

Did the review present results that are ready for clinical application?

Were selection and assessments of studies reproducible?

Did the review address confidence in effect estimates?

J Am Coll Clin Pharm 2021;4:849-54
Users' Guides to the Medical Literature 2015 (3rd ed)

AI for evidence synthesis (in 2025)?

2025 systematic review (done by humans)

- 19 studies performing various SR tasks
  - 17 used ChatGPT (various models, including 4o)
  - Comparator: Human experts
  - Task success:
    - Searching: **Missed 68-96%** of relevant studies
    - Screening: **8-71% error rate** for titles/abstracts & 4-46% for full-text
    - Data extraction: **4-31% error rate**
    - Risk of bias assessment: **10-56% error rate**

Research Synthesis Methods 2025;16:601-19

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    - Risk of bias assessment: **10-56% error rate**
- **Authors' quote:** This suggests that we made a wise decision not to use GenAI to assist in conducting this review.

Research Synthesis Methods 2025;16:601-19

3: Meta-analysis: The 2 reasons to meta-analyze & examples

There are 2 reasons to meta-analyze:
#1. Increase power & precision

Combine data across studies that address a sufficiently similar PICO

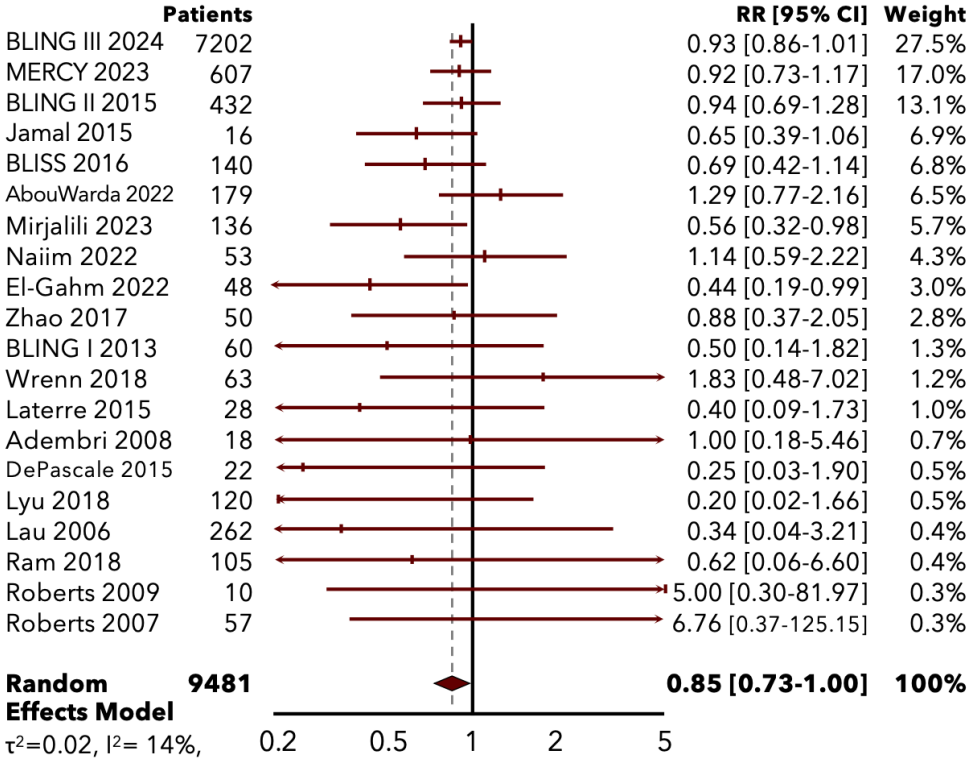
Detect effects that may not be apparent in individual studies

- Death, when individual studies focused on broader composite endpoint
- Clinical endpoints, when individual studies focused on surrogates
- Safety, specific harms

Result: Smaller p-values, narrower confidence intervals around effect size vs individual studies

J Am Coll Clin Pharm 2021;4:1170-8

E.g. 1, mortality: Prolonged vs intermittent infusions of IV antibiotics & mortality



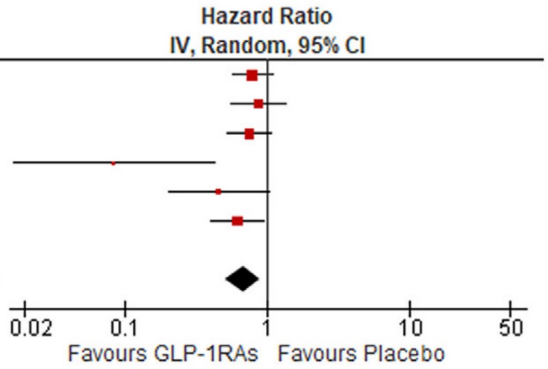
Chaudhari I, et al. In press

E.g. 2, underpowered secondary outcome:
Incretin mimetics in HFmrEF/pEF & CV death/HFH

A) Composite of CV Death or Worsening HF event

Study or Subgroup	log[Hazard Ratio]	SE	GLP-1RAs Total	Placebo Total	Weight	Hazard Ratio IV, Random, 95% CI
EXSCEL	-0.2357	0.1674	499	561	25.0%	0.79 [0.57, 1.10]
FLOW	-0.1462	0.224	167	158	19.5%	0.86 [0.56, 1.34]
SELECT	-0.2877	0.183	1174	1099	23.4%	0.75 [0.52, 1.07]
STEP HFpEF	-2.4663	0.8216	263	266	2.7%	0.08 [0.02, 0.42]
STEP HFpEF DM	-0.7853	0.4082	310	306	9.1%	0.46 [0.20, 1.01]
SUMMIT	-0.478	0.216	364	367	20.2%	0.62 [0.41, 0.95]
Total (95% CI)			**2777**	**2757**	**100.0%**	**0.68 [0.51, 0.89]**

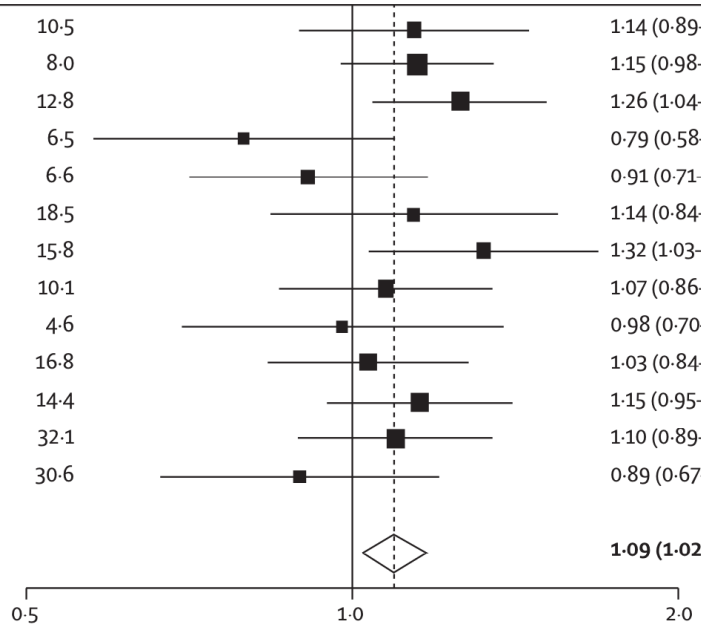
Heterogeneity: Tau² = 0.05; Chi² = 9.51, df = 5 (P = 0.09); I² = 47%
Test for overall effect: Z = 2.77 (P = 0.006)



J Cardiac Fail 2025;31:1076-80

E.g. 3, harms: Risk of incident diabetes with statin vs control in 13 RCTs

	n	Statin		Placebo or control		OR (95% CI)	Weight (%)
		Events	Rate	Events	Rate		
ASCOT-LLA[7]	7773	154	11·9	134	10·5	1·14 (0·89–1·46)	7·07%
HPS[8]	14573	335	9·2	293	8·0	1·15 (0·98–1·35)	13·91%
JUPITER[4]	17802	270	16·0	216	12·8	1·26 (1·04–1·51)	11·32%
WOSCOPS[5]	5974	75	5·2	93	6·5	0·79 (0·58–1·10)	4·24%
LIPID[6]	6997	126	6·0	138	6·6	0·91 (0·71–1·71)	6·53%
CORONA[9]	3534	100	20·9	88	18·5	1·14 (0·84–1·55)	4·65%
PROSPER[12]	5023	165	20·5	127	15·8	1·32 (1·03–1·69)	6·94%
MEGA[13]	6086	172	10·8	164	10·1	1·07 (0·86–1·35)	8·03%
AFCAPS/TEXCAPS[18]	6211	72	4·5	74	4·6	0·98 (0·70–1·38)	3·76%
4S[15]	4242	198	17·3	193	16·8	1·03 (0·84–1·28)	8·88%
ALLHAT[14]	6087	238	16·4	212	14·4	1·15 (0·95–1·41)	10·23%
GISSI HF[16]	3378	225	34·8	215	32·1	1·10 (0·89–1·35)	9·50%
GISSI PREV[16]	3460	96	27·5	105	30·6	0·89 (0·67–1·20)	4·94%
Overall (I^2=11·2% [95% CI 0·0–50·2%])						**1·09 (1·02–1·17)**	**100%**



Lancet 2010;375:735-42

There are 2 reasons to meta-analyze: #2. Identify & explain inconsistency

- **Detect differences in effect between studies (statistical heterogeneity)**
  - Visual differences apparent in the forest plot
  - Test for heterogeneity (e.g. I^2)

- **Explain heterogeneity**
  - Meta-regression
  - Sensitivity analyses (e.g. trial-level subgroup analysis, leave-one-out analysis)

- **Explore subgroup differences**, aka heterogeneity of treatment effect
  - Ideally within & between studies

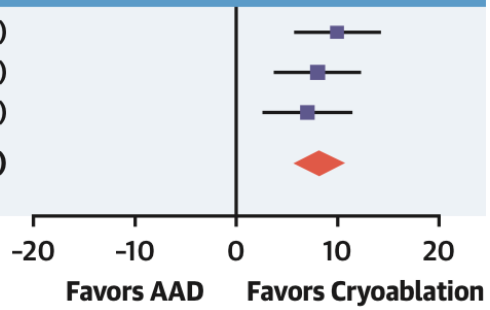
J Am Coll Clin Pharm 2021;4:1170-8

E.g. 4, confirm consistency: Cryoablation vs antiarrhythmic drugs in early AF & quality of life

B Mean Difference in AFEQT Score

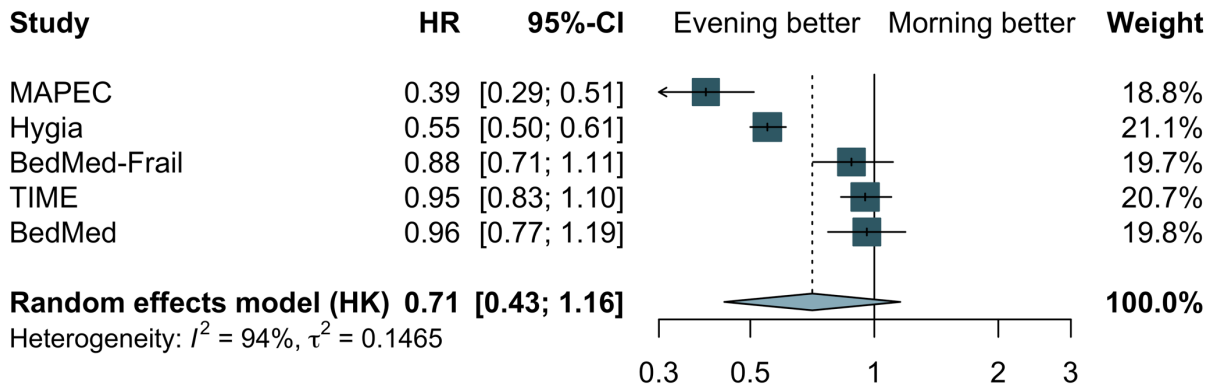
Study	Cryoablation Mean	Cryoablation SD	Cryoablation Total	AAD Mean	AAD SD	AAD Total	Weight	Mean Difference IV, Random, 95% CI
Cryo-FIRST	88	14.8	89	78.1	14.8	92	33.7%	9.90 (5.59-14.21)
EARLY-AF	88.3	19.1	154	80.3	19.1	149	33.9%	8.00 (3.70-12.30)
STOP-AF First	91.9	15.4	99	84.9	15.4	90	32.4%	7.00 (2.60-11.40)
Total (95% CI)			**342**			**331**	**100.0%**	**8.32 (5.81-10.82)**

Heterogeneity: $Tau^2 = 0.00$; chi-square = 0.88, df = 2 ($P = 0.64$); $I^2 = 0\%$
Test for overall effect: Z = 6.51 (P < 0.00001)



Andrade, et al. JACC 2021;78:914-30

E.g. 5, heterogeneity: Timing of BP-lowering med administration & trial-level risk of bias



Turgeon et, al. CJC 2025. In press.

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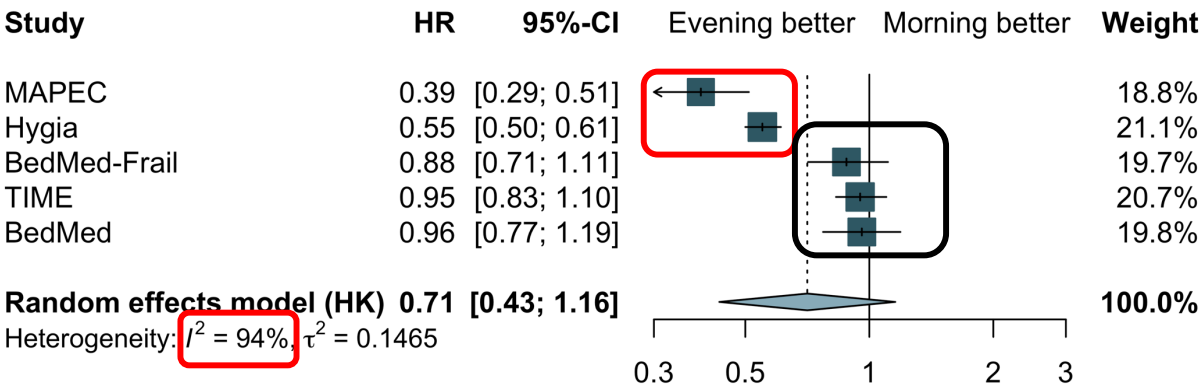
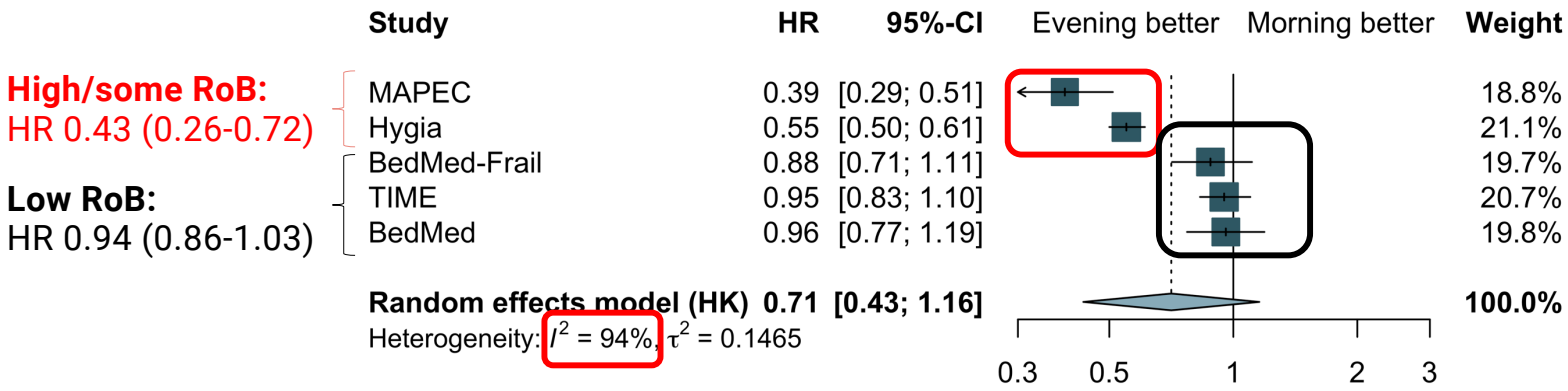


Turgeon et, al. CJC 2025. In press.

E.g. 5, heterogeneity: Timing of BP-lowering med administration & trial-level risk of bias

High/some RoB:
HR 0.43 (0.26-0.72)

Low RoB:
HR 0.94 (0.86-1.03)



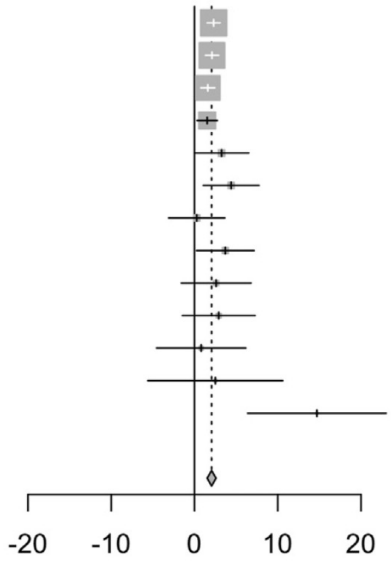
Turgeon et, al. CJC 2025; https://onlinecjc.ca/article/S0828-282X(25)01011-6/fulltext

E.g. 6, identifying & explaining heterogeneity:
SGLT2Is in HF & quality of life

A

Study	Experimental Total	Mean	SD	Control Total	Mean	SD	MD	95%-CI	Weight
DAPA-HF	2104	74.90	12.8755	2104	72.60	12.9203	2.30	[1.52; 3.08]	28.2%
DELIVER	2243	75.10	13.6689	2243	73.00	13.6689	2.10	[1.30; 2.90]	26.8%
EMPEROR-Preserved	2473	1.60	15.0458	2473	0.00	15.0458	1.60	[0.76; 2.44]	24.4%
EMPEROR-Reduced	1239	1.52	15.4895	1239	0.00	15.4895	1.52	[0.30; 2.74]	11.5%
EMPERIAL-Reduced	147	9.65	14.3094	147	6.40	14.3094	3.25	[-0.02; 6.52]	1.6%
PRESERVED-HF	152	68.90	14.9003	152	64.50	14.9003	4.40	[1.05; 7.75]	1.5%
EMPERIAL-Preserved	153	5.80	15.0406	153	5.53	15.0406	0.27	[-3.10; 3.64]	1.5%
DEFINE-HF	130	72.60	14.2005	130	68.90	14.2005	3.70	[0.25; 7.15]	1.4%
CHIEF-HF	208	61.70	22.2000	208	59.10	21.4000	2.60	[-1.59; 6.79]	1.0%
EMPULSE	230	69.75	23.6900	230	66.84	24.1300	2.91	[-1.46; 7.28]	0.9%
Empire-HF	94	77.60	17.6000	94	76.80	19.8000	0.80	[-4.56; 6.16]	0.6%
EMBRACE-HF	33	64.20	16.7694	33	61.70	16.7694	2.50	[-5.59; 10.59]	0.3%
EMPA-TROPISM	40	88.30	13.3000	40	73.60	23.3000	14.70	[6.39; 23.01]	0.2%
Random effects model	**9246**			**9246**			**2.05**	**[1.52; 2.58]**	**100.0%**

Heterogeneity: $I^2 = 25\%$, $\tau^2 < 0.0001$, $p = 0.19$



Shah & Turgeon. CJC Open 2024;6:639-48

E.g. 6, identifying & explaining heterogeneity: SGLT2Is in HF & quality of life

Table 3. Subgroup analyses

	KCCQ-OSS	
Outcome	MD (95% CI)	Number of studies (sample size, n)
Timepoint		$P = 0.04$
LVEF category, %		$P = 0.30$
≤ 40	2.15 (1.53−2.78)	5 (7428)
> 40	1.89 (1.33−2.45)	4 (10,042)
Mixed	3.96 (1.28−6.65)	4 (1022)
Agent		$P = 0.36$
Canagliflozin	2.60 (−1.59−6.79)	1 (416)
Dapagliflozin	2.30 (1.75−2.84)	4 (9258)
Empagliflozin	1.69 (1.05−2.34)	8 (8818)

P values are for subgroup differences.

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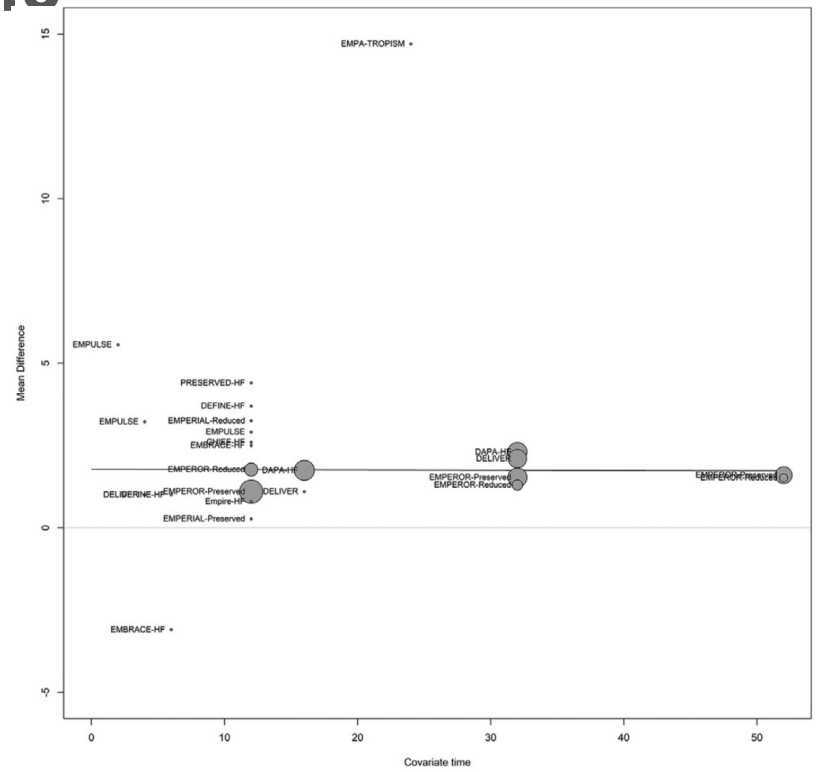
Empagliflozin	1.69 (1.05–2.34)	8 (8818)

P values are for subgroup differences.



Shah & Turgeon. CJC Open 2024;6:639-48

4: Special topics in meta-analysis: Beyond the forest plot

Bayesian meta-analysis

Advantages of Bayesian (vs frequentist) statistics:

- Incorporate prior information/evidence
  - More nuanced interpretations; less yo-yoing as evidence is produced
  - Tests robustness of evidence to “what ifs”, different beliefs
- Probabilistic interpretations
  - E.g. “99% probability of any benefit; 85% probability of a benefit > minimal important difference”
  - Can also quantify probability of null hypothesis (which cannot be done with traditional statistics)

Bayesian meta-analysis
Recommended reading

Canadian Journal of Cardiology 41 (2025) 30–44

Methods in Cardiovascular Research and Practice

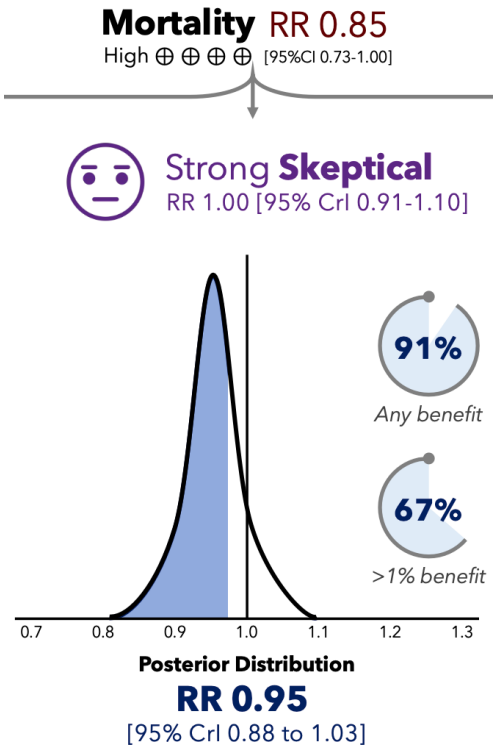
Bayesian Analytical Methods in Cardiovascular Clinical Trials: Why, When, and How

Samuel Heuts, MD, PhD,[a,b] Michal J. Kawczynski, MD,[a,b] Ahmed Sayed, MD,[c] Sarah M. Urbut, MD, PhD,[d] Arthur M. Albuquerque, MD,[e] John M. Mandrola, MD,[f] Sanjay Kaul, MD,[g] Frank E. Harrell, Jr, PhD,[h] Andrea Gabrio, PhD,[i,j] and James M. Brophy, MD, PhD[k]

Bayesian statistics for clinical research

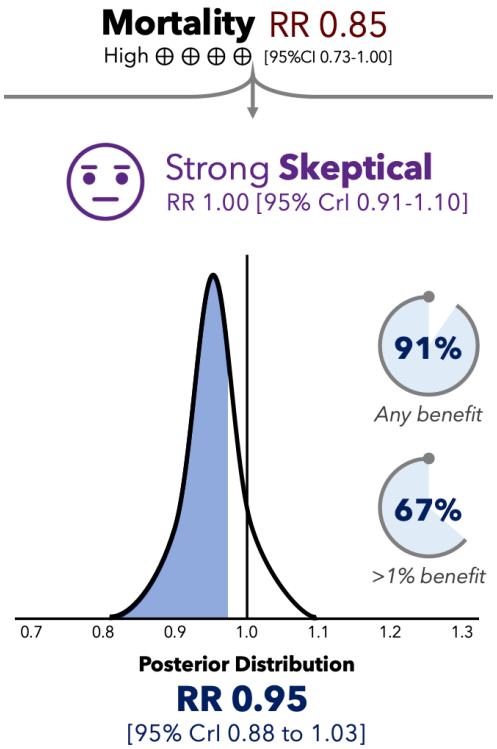
Ewan C Goligher, Anna Heath, Michael O Harhay **Lancet 2024; 404: 1067–76**

E.g. 7, Bayesian MA: Prolonged antibiotic IV infusions & mortality



Chaudhari I, et al. In press

E.g. 7, Bayesian MA: Prolonged antibiotic IV infusions & mortality



		Any benefit	>1% benefit	>2% benefit
Optimistic	Weak	98 %	93 %	82 %
	Moderate	99 %	94 %	82 %
	Strong	100 %	97 %	85 %
Skeptical	Weak	98 %	92 %	80 %
	Moderate	97 %	89 %	74 %
	Strong	91 %	64 %	31 %
Pessimistic	Weak	97 %	90 %	76 %
	Moderate	94 %	82 %	63 %
	Strong	33 %	9 %	2 %

Chaudhari I, et al. In press

Individual participant data-level meta-analysis (IPDMA)

Key advantages of IPDMA (vs trial-level MA):

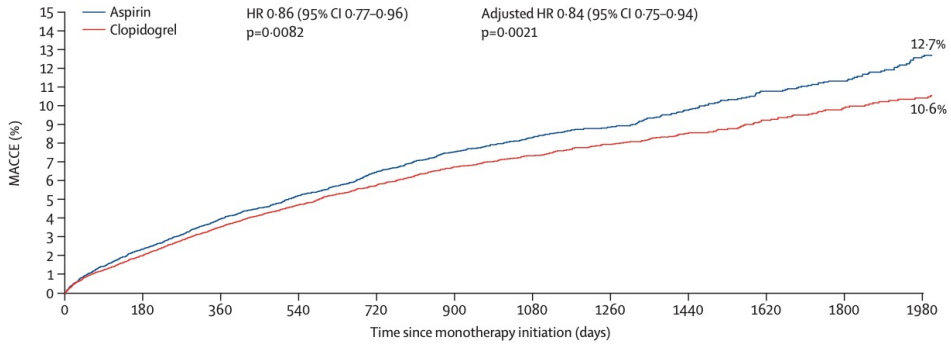
- Standardize across studies (inclusion/exclusion criteria, outcomes, follow-up duration, analysis, handling of missing data)
- Adjust for consistent set of prognostic factors
- More granular subgroup analyses

Challenges: Costly & time-consuming to obtain & analyze; requires advanced statistical expertise to fully leverage IPD with “1-stage” IPDMA

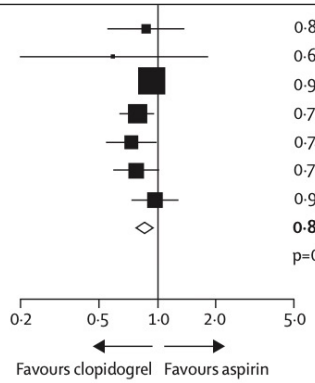
IPDfromKM: Software to reconstruct IPD for outcomes from published Kaplan-Meier

- Can be used to verify published analyses, but lack granularity for full IPDMA (events not tied to baseline characteristics/subgroups)

E.g. 8, IPDMA: Clopidogrel vs ASA in stable CAD/post-DAPT



	Clopidogrel		Aspirin		HR (95% CI)	Weights, %
	Number of events/ number of patients	Person-years	Number of events/ number of patients	Person-years		
ASCET[26]	34/499	997	39/502	1003	0·87 (0·55–1·38)	4·8%
CADET[25]	5/94	40	8/90	36	0·60 (0·19–1·82)	0·9%
CAPRIE[24]	461/4242	7751	486/4204	7662	0·94 (0·83–1·07)	38·6%
HOST-EXAM[21]	159/2710	13040	203/2728	13088	0·79 (0·64–0·97)	19·7%
SMART-CHOICE 3[19]	76/2752	6015	103/2754	6001	0·74 (0·55–0·99)	10·8%
STOPDAPT-2[22]	93/1445	5339	119/1437	5296	0·78 (0·59–1·02)	12·7%
STOPDAPT-3[20]	101/2765	2431	104/2760	2421	0·97 (0·74–1·27)	12·5%
Summary estimate	**929/14507**	**35 614**	**1062/14475**	**35508**	**0·86 (0·77–0·95)**	
Random-effects model					p=0·0040	
Heterogeneity: I^2=0%, τ^2=0·003, p=0·52						

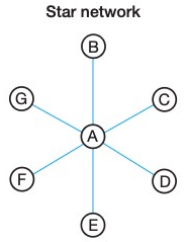


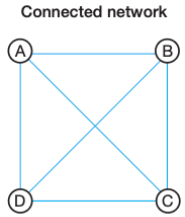
Valgimigli M, et al. Lancet 2025

Network meta-analysis (NMA)
a.k.a. multiple treatment comparison MA

"Borrows" information from indirect evidence to:

- Allow indirect comparisons between 2 treatments (B-C) that have never been directly compared in an RCT, but have been compared to a common comparator (A-B; A-C)
- Increase precision of direct comparisons





Can be done using Bayesian (most common; reasonably easy to learn using R packages gemtc, rjags) or frequentist approach

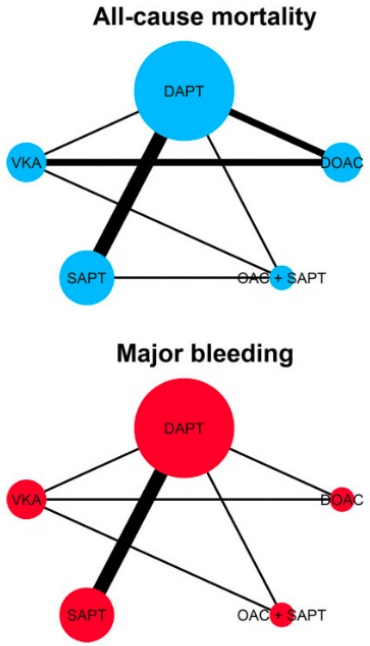
Relies on the **transitivity assumption** (*no important differences* between trials, other than treatments being compared)

- "Strong" assumption, requires a very well-defined PICO
- Assessed with statistical tests for coherence

Ann Intern Med 2013;159:130-37

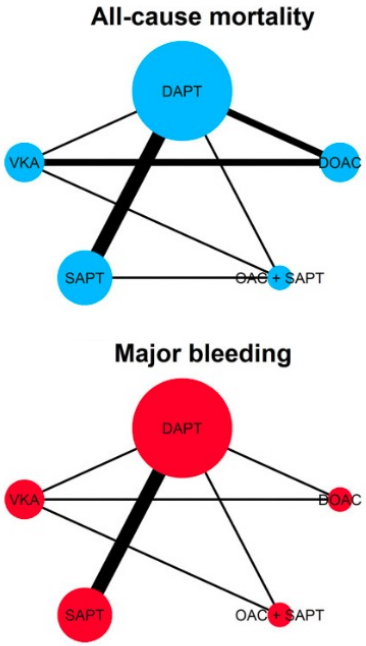
E.g. 9, NMA: Antithrombotic regimens post-TAVI

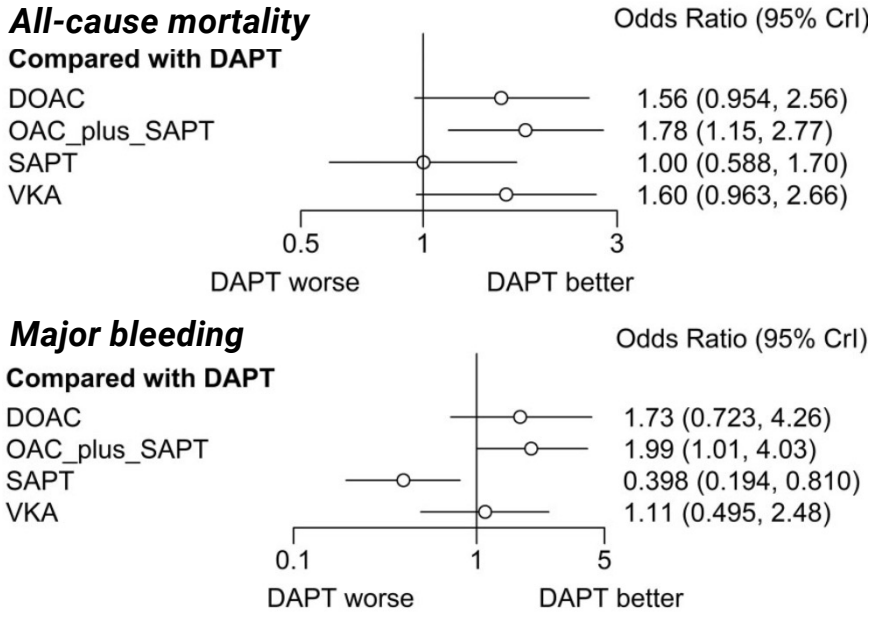
Network diagrams



Turgeon, et al. EHJ – CVP 2024;10(5):454-64 https://doi.org/10.1093/ehjcvp/pvad101

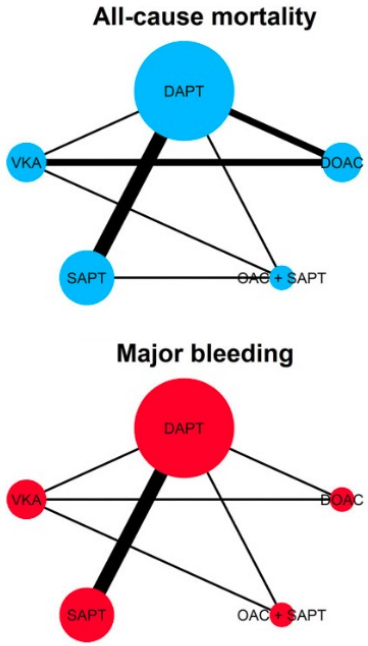
E.g. 9, NMA: Antithrombotic regimens post-TAVI





Turgeon, et al. EHJ – CVP 2024;10(5):454-64 https://doi.org/10.1093/ehjcvp/pvad101

E.g. 9, NMA: Antithrombotic regimens post-TAVI



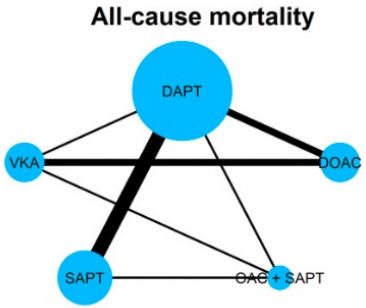
Network league table

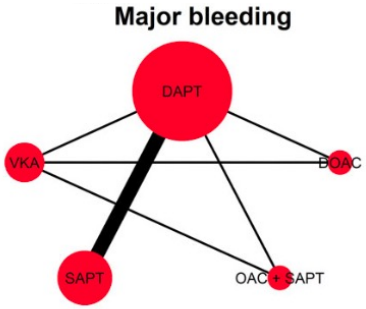
Table 3 Pairwise comparisons for all-cause death (blue) vs. major bleeding (red)[†]

SAPT	*0.40 (0.19–0.81)*	*0.23 (0.08–0.71)*	0.36 (0.12–1.05)	*0.20 (0.07–0.54)*
1.00 (0.59–1.70)	**DAPT**	0.58 (0.23–1.38)	0.90 (0.40–2.02)	0.50 (0.25–0.99)
0.64 (0.31–1.32)	0.64 (0.39–1.05)	**DOAC**	1.55 (0.92–2.77)	0.87 (0.35–2.22)
0.62 (0.30–1.30)	0.62 (0.38–1.04)	0.97 (0.71–1.35)	**VKA**	0.56 (0.25–1.26)
0.56 (0.28–1.12)	*0.56 (0.36–0.87)*	0.87 (0.50–1.50)	0.90 (0.53–1.52)	**OAC + SAPT**

Turgeon, et al. EHJ – CVP 2024;10(5):454-64 https://doi.org/10.1093/ehjcvp/pvad101

E.g. 9, NMA: Antithrombotic regimens post-TAVI





Network rankogram & SUCRA scores

Table 4 Rankings and surface under the cumulative ranking curve scores†

Outcome, rank (SUCRA)	SAPT	DAPT	DOAC	VKA	OAC + SAPT
All-cause death	2 (0.81)	2 (0.86)	4 (0.36)	4 (0.30)	5 (0.18)
Major bleeding	1 (0.99)	2 (0.62)	4 (0.19)	3 (0.58)	5 (0.12)

SUCRA (surface under the cumulative ranking curve) values can be interpreted as the probability of an intervention being among ranked best

(i.e. SUCRA=1 means 100% of comparators are worse than the selected intervention)

Turgeon, et al. EHJ – CVP 2024;10(5):454-64 https://doi.org/10.1093/ehjcvp/pvad101

TURGEONLAB

Thank you!

Questions?