Evidence-based medicine

實證醫學競賽

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參賽編號

臨床情境

一位68歲糖尿病第二型合併慢性腎病(腎絲球過濾率約45 mL/min/1.73m)的男性病人，因有蛋白尿(每日蛋白排>0.5g)且血壓控制不佳，現正使用ACE抑制劑(如氯沙坦)控制血壓。主治醫師考慮在此病人加入一項新的腎保護藥物(例如SGLT2抑制劑)來降低進一步惡化為末期腎病或需洗腎的風險。

瞭解病人的主要問題

1. 蛋白尿
2. 血壓控制不佳

尊重病人的治療意願

1. 避免腎病惡化

背景知識

介紹

慢性腎病（CKD）在1型和2型糖尿病患者中都很常見。 它的定義是，至少三個月內，尿白蛋白排洩增加和/或腎小球濾過率（GFR）降低（表1）。 糖尿病腎病（DKD）被廣泛定義為糖尿病患者中存在CKD。 （見「成人慢性腎病的定義和分期」，「慢性腎病的定義」部分。）

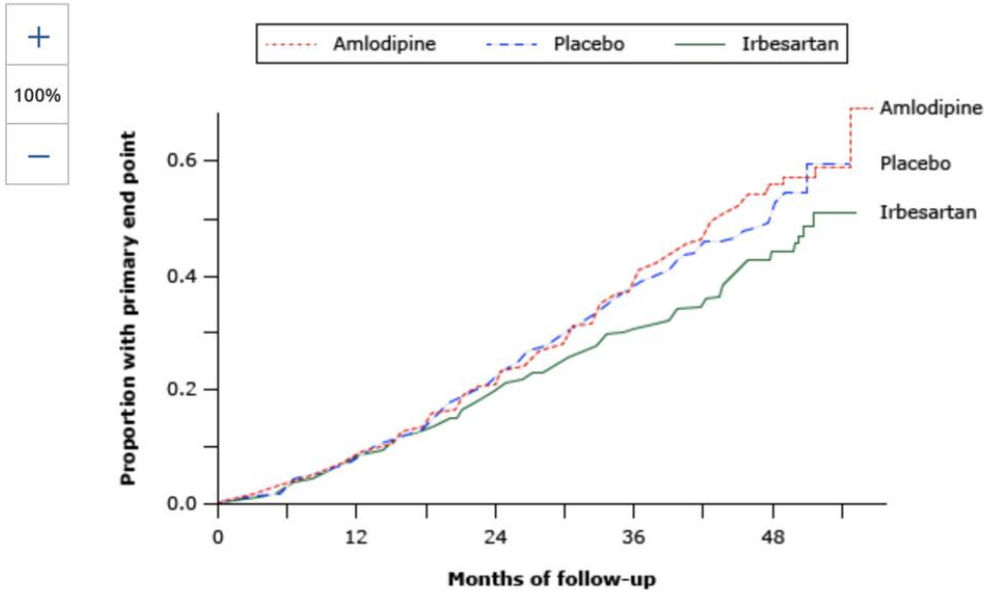
CKD的分類和分期基於GFR和白蛋白尿（表2）[1]。 這些類別和階段適用於CKD的所有原因，包括DKD。 大多數指南建議定期估計糖尿病患者的GFR和白蛋白尿，以檢測DKD的發展。 此外，一旦在糖尿病患者中檢測到低估計的GFR（eGFR）或白蛋白尿，就應該更頻繁地進行測量（例如，每年兩到四次或更多），以進行持續的風險評估並指導治療的實施。 （見「糖尿病腎病：表現、評估和診斷」，「病例檢測：白蛋白尿和eGFR評估」部分。）

在全球範圍內，DKD是終末期腎病（ESKD）的最常見原因。 例如，2017年在美國，近一半的被診斷為ESKD的患者中，有一半的人報告糖尿病是主要病因[2]。

背景知識

UpToDate®

Irbesartan slows progression of nephropathy in type 2 diabetes



Effect of irbesartan, amlodipine, and placebo on the course of patients with hypertension with nephropathy due to type 2 diabetes; the target blood pressure was similar in the 3 groups. Treatment with irbesartan was associated with a risk of the primary end point (doubling of the baseline serum creatinine, development of end-stage kidney disease, or death from any cause) that was 20% lower than placebo and 23% lower than amlodipine.

Adapted from data published in: Lewis EJ, Hunsicker LG, Clarke WR, et al. N Engl J Med 2001; 345:851.

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背景知識

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糖尿病腎病變的治療

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欄位編輯： Richard J Glassock，醫學博士，美國內科醫學會會員, 大衛·M·內森，醫學博士, 拉吉夫·阿加瓦爾，醫學博士
副主編： 約翰·P·福爾曼，醫學博士，理學碩士

貢獻者揭露

所有主題都會隨著新證據的出現和同儕審查流程的完成而更新。

文獻回顧截至： **2025 年 10 月。**
本主題上次更新時間： **2025年10月23日。**

介紹

慢性腎臟病（CKD）在第1型和第2型糖尿病患者中都很常見。其定義為至少持續三個月尿白蛋白排泄量增加及/或腎絲球濾過率（GFR）降低（表1）。糖尿病腎病變（DKD）的定義較為廣泛，指糖尿病患者合併CKD。 （請參閱「成人慢性腎臟病的定義和分期」中「CKD的定義」部分。）

慢性腎臟病 (CKD) 的分類和分期是基於腎小球濾過率 (GFR) 和蛋白尿 （表 2）[1]。這些分類和分期適用於所有病因引起的 CKD，包括糖尿病腎病變 (DKD)。大多數指引建議糖尿病患者定期進行 GFR 估算和蛋白尿檢測，以監測 DKD 的發生。此外，一旦發現糖尿病患者的估計 GFR (eGFR) 降低或出現蛋白尿，應增加檢測頻率（例如，每年 2 至 4 次或更多），以便持續進行風險評估並指導治療方案的實施。 （請參閱「糖尿病腎病變：表現、評估和診斷」中「病例發現：蛋白尿和 eGFR 評估」部分。）

在全球範圍內，糖尿病腎病變是末期腎病（ESKD）最常見的原因。例如，在美國，2017 年報告稱，糖尿病是近一半被診斷為 ESKD 患者的主要原因 [2]。

5A-1
Ask
提出問題

根據臨床問題形成第一個PICO

	PICO關鍵字
P	Type 2 diabetes mellitus
I	SGLT2-I+ACEi
C	Only ACEi
O	BP、血糖、proteinuria、eGFR、BW、Adverse evant

□治療/預防型問題　□診斷型問題　□預後型問題　□傷害/病因型問題

根據臨床問題形成第二個PICO

	PICO關鍵字
P	Type 2 diabetes mellitus
I	Lifestyle modification
C	ACEi
O	Survival Mortality Adverse event

□治療/預防型問題　□診斷型問題　□預後型問題　□傷害/病因型問題

5A-2
Acquire
搜尋資料

檢索策略

首先以『P』、『I』做搜尋，再依據結果適當加入關鍵字及同義詞

	PICO關鍵字	MeSH同義詞	中文關鍵字
P	Type 2 diabetes mellitus	[MeSH Terms]	
I	SGLT2-I	[MeSH Terms]	
C	ACEi	Placebo	安慰劑
O	Adverse effect、 Blood pressure、 proteinuria	Survival Mortality Adverse event	副作用、 血壓、 蛋白尿

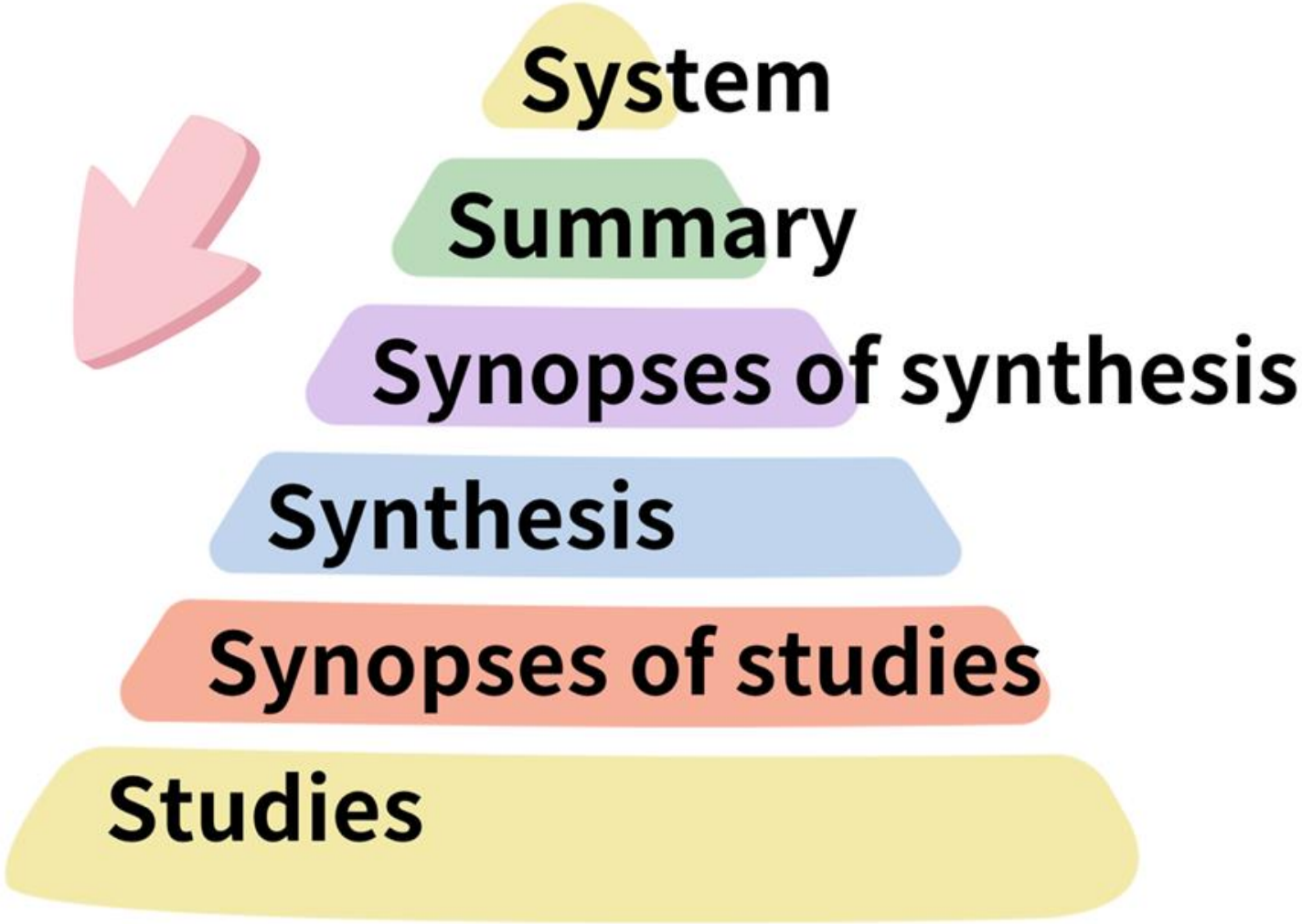
檢索策略

首選Level1：SR of RCT

Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence

Question	Step 1 (Level 1*)	Step 2 (Level 2*)	Step 3 (Level 3*)	Step 4 (Level 4*)	Step 5 (Level 5)
How common is the problem?	Local and current random sample surveys (or censuses)	Systematic review of surveys that allow matching to local circumstances**	Local non-random sample**	Case-series**	n/a
Is this diagnostic or monitoring test accurate? (Diagnosis)	Systematic review of cross sectional studies with consistently applied reference standard and blinding	Individual cross sectional studies with consistently applied reference standard and blinding	Non-consecutive studies, or studies without consistently applied reference standards**	Case-control studies, or "poor or non-independent reference standard**	Mechanism-based reasoning
What will happen if we do not add a therapy? (Prognosis)	Systematic review of inception cohort studies	Inception cohort studies	Cohort study or control arm of randomized trial*	Case-series or case-control studies, or poor quality prognostic cohort study**	n/a
Does this intervention help? (Treatment Benefits)	Systematic review of randomized trials or *n*-of-1 trials	Randomized trial or observational study with dramatic effect	Non-randomized controlled cohort/follow-up study**	Case-series, case-control studies, or historically controlled studies**	Mechanism-based reasoning
What are the COMMON harms? (Treatment Harms)	Systematic review of randomized trials, systematic review of nested case-control studies, *n*-of-1 trial with the patient you are raising the question about, or observational study with dramatic effect	Individual randomized trial or (exceptionally) observational study with dramatic effect	Non-randomized controlled cohort/follow-up study (post-marketing surveillance) provided there are sufficient numbers to rule out a common harm. (For long-term harms the duration of follow-up must be sufficient.)**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning
What are the RARE harms? (Treatment Harms)	Systematic review of randomized trials or *n*-of-1 trial	Randomized trial or (exceptionally) observational study with dramatic effect			
Is this (early detection) test worthwhile? (Screening)	Systematic review of randomized trials	Randomized trial	Non -randomized controlled cohort/follow-up study**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning

資料庫



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搜索策略

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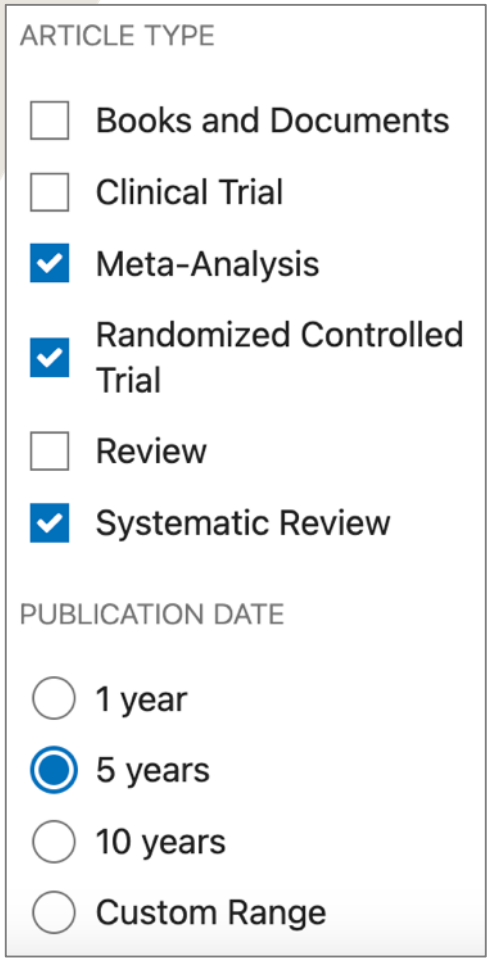
臨床問題

Systematic Review 、Meta-Analysis[Major]
Randomized Controlled Trial/Cohort Study

限定5年內、free full text
English、中文（台灣本土文獻）

Meet Our 『PICO』

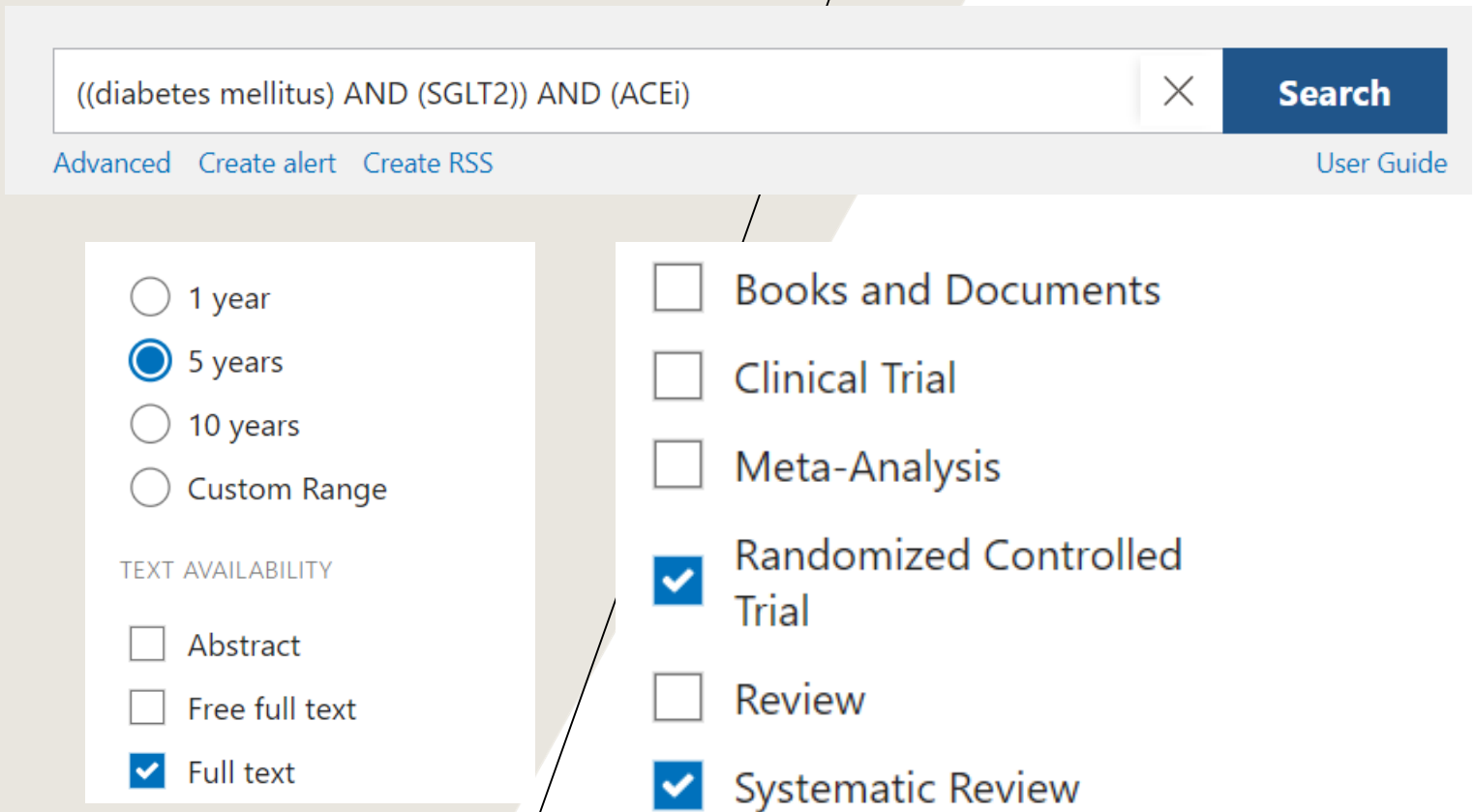
搜尋 PubMed



輸入關鍵字
『 』
適當使用布林運算『AND』、『OR』

限定適當文章類型
『Meta-Analysis』文章
『Systematic Reviews』 文章
『Randomized controlled Trial』文章
限定搜尋範圍
限定『5年』 文章
限定『Full text』全文可供評讀

搜尋 PubMed



SR作為filters
篩選level 1文獻

P AND I AND C

SR作為filters
篩選level 1文獻

P AND I

確認advanced search正確

使用MeSH terms

搜尋

Cochrane Library

Content type

- [x] Cochrane Reviews
- [ ] Cochrane Protocols
- [ ] Trials
- [ ] Clinical Answers
- [ ] Editorials
- [ ] Special Collections

Date published on the Cochrane Library

- ○ All dates
- ○ The last month
- ○ The last 3 months
- ○ The last 6 months
- ○ The last 9 months
- ○ The last year
- ○ The last 2 years
- ◉ Between Jan 2020 and Nov 2025

輸入關鍵字
『 』
適當使用布林運算『AND』、『OR』

使用Limit功能
限定『 Review 』 文章
限定『 5年 』文章

搜尋Embase®

Broad search e.g. 'heart attack' AND stress

'diabetes mellitus' and 'SGLT2' and 'ACEI'

+ Add field Limit to Reset form

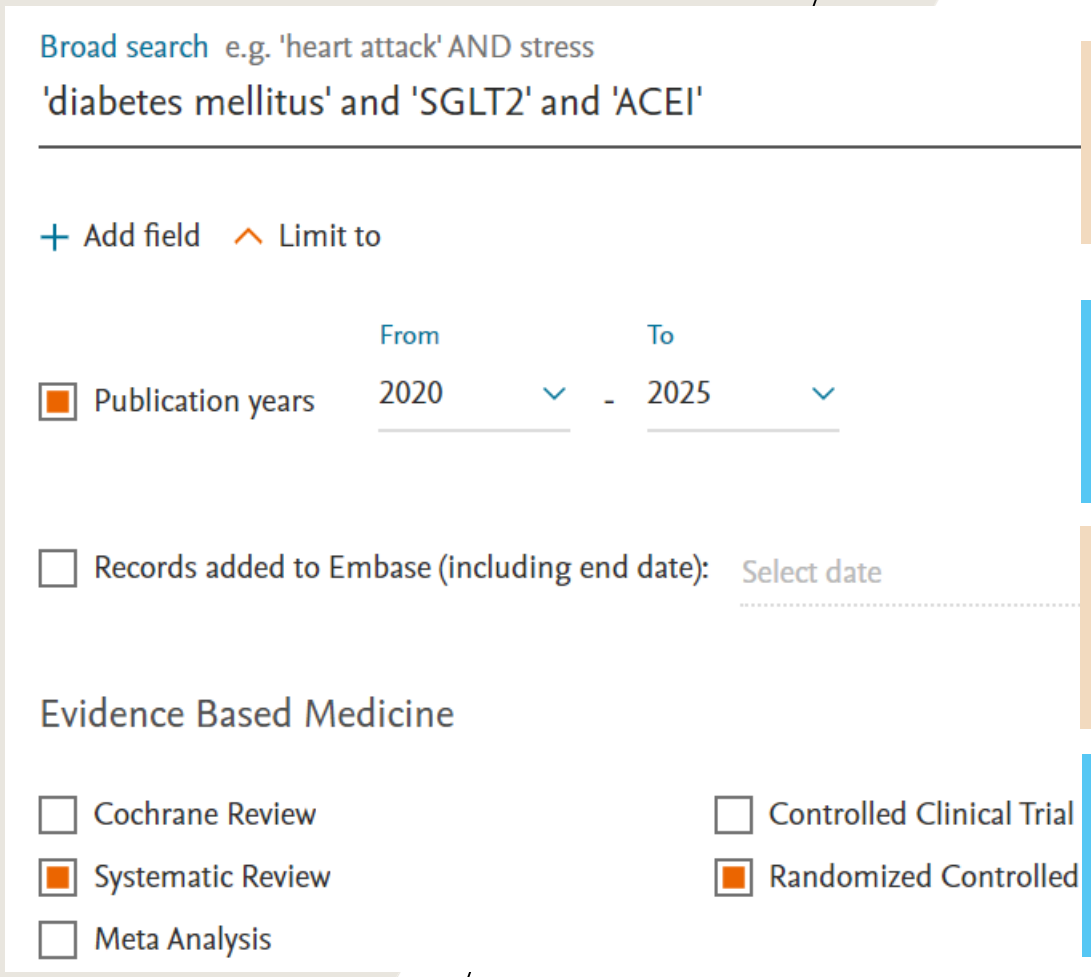
	From		To
☑ Publication years	2020	-	2025

☐ Records added to Embase (including end date): Select date

Evidence Based Medicine

- ☐ Cochrane Review
- ☑ Systematic Review
- ☐ Meta Analysis
- ☐ Controlled Clinical Trial
- ☑ Randomized Controlled Trial

搜尋Embase®



搜尋策略使用/br
搜尋all fields

比對emtree term
關掉不相關的詞

確認synonyms
包含所有可能

SR作為filters
篩選level 1文獻

Results filters
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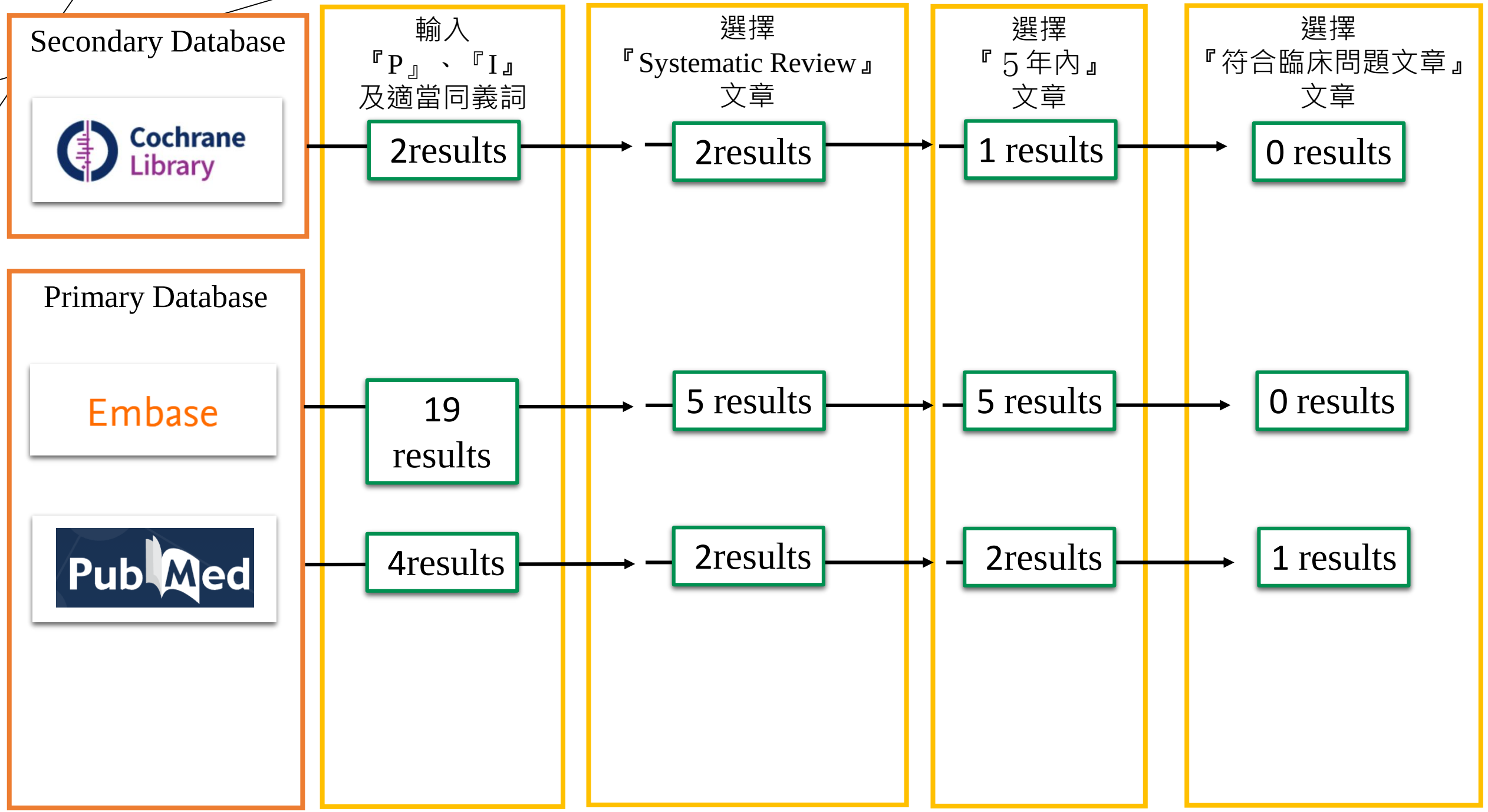
提升搜尋效益


Secondary Database
Cochrane Library
Primary Database
Embase
PubMed
輸入
『P』、『I』
及適當同義詞
選擇
『Systematic Review』
文章
選擇
『5年內』
文章
選擇
『符合臨床問題文章』
文章
2results
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1 results
0 results
19
results
5 results
5 results
0 results
4results
2results
2results
1 results

選出最佳文獻

文獻標題[年份]	研究設計	樣本數	搜尋時間	情境
Efficacy and safety of combination therapy with sodium–glucose cotransporter 2 inhibitors and renin–angiotensin system blockers in patients with type 2 diabetes: a systematic review and meta-analysis	SR	7Trials	inception to May 2020	P ● I ● C ● O ●

- ✓ 最佳研究設計SR of RCT
- ✓ 較新的發表年份
- ✓ 最符合臨床情境PICO

確認是否遺漏更新更好的RCT

Embase

#2 ('diabetes mellitus'/exp OR 'diabetes mellitus') AND 'sglt2' AND 'acei' AND ([systematic review]/lim OR [randomized controlled trial]/lim) AND [2020-2025]/py

1 Effects of sodium-glucose co-transporter-2 inhibitors by background cardiovascular medications: A systematic review and meta-analysis
Avgerinos I., Karagiannis T., Matthews D.R., Tsapas A., Bekiari E.
Diabetes, Obesity and Metabolism 2023 25:10 (3020-3029)
Embase MEDLINE NURSING Abstract Index Terms View Full Text Similar records

2 Influence of SGLT2i and RAASi and Their Combination on Risk of Hyperkalemia in DKD: A Network Meta-Analysis
Luo X., Xu J., Zhou S., Xue C., Chen Z., Mao Z.
[In Process] *Clinical Journal of the American Society of Nephrology* 2023 18:8 (1019-1030)
Embase MEDLINE NURSING Abstract Index Terms View Full Text Similar records

3 Benefits of SGLT2 inhibitors combining with renin–angiotensin-system blockers on cardiovascular outcomes in chronic kidney disease patients: A systemic review and meta-analysis
Liu T., Li R., Wang X., Gao X., Zhang X.
Medicina Clinica 2022 159:2 (65-72)
Embase MEDLINE Abstract Index Terms View Full Text Similar records

4 Efficacy and safety of combination therapy with sodium-glucose cotransporter 2 inhibitors and renin-angiotensin system blockers in patients with type 2 diabetes: A systematic review and meta-analysis
Tian B., Deng Y., Cai Y., Han M., Xu G.
Nephrology Dialysis Transplantation 2022 37:4 (720-729)
Embase MEDLINE Abstract Index Terms View Full Text Similar records

5 Incremental efficacy of medical therapy for chronic heart failure with a reduced ejection fraction: A systematic review and network meta-analysis
De Marzo V., Savarese G., Tricarico L., Brunetti N.D., Canepa M., Porto I., Ameri P.
European Journal of Heart Failure 2021 23:SUPPL 2 (132-133)
Embase Abstract Index Terms View Full Text Similar records

確認是否遺漏更新更好的RCT

Cochrane Library

Cochrane Reviews
0

0 results matching '**Population** "Diabetes Mellitus" AND **Intervention** "Sodium-glucose Co-transporter 2 (SGLT2) Inhibitors" AND **Comparison** "Angiotensin-converting enzyme inhibitor "'
02, December 2025

Select all (0) Export selected citation(s) Show all PICOs

Order By Relevancy

Results per page 25

5A-3 Appraise 評讀文獻

以CASP工具嚴格評讀文章

CASP
Critical Appraisal
Skills Programme

CASP Checklist: 10 questions to help you make sense of a Systematic Review

How to use this appraisal tool: Three broad issues need to be considered when appraising a systematic review study:

- Are the results of the study valid? (Section A)
- What are the results? (Section B)
- Will the results help locally? (Section C)

✔ 針對效度直觀分析
✔ 針對結果直觀分析
✔ 共10個問題探討各面向

以CASP工具嚴格評讀文章

1.Did the review address a clearly focused question?

此系統性回顧是否問了一個清楚、明確的臨床問題？

Validity

1.Did the review address a clearly focused question?
此系統性回顧是否問了一個清楚、明確的臨床問題？

Background: This study was designed to evaluate the efficiency and safety of combination therapy with sodium–glucose cotransporter 2 (SGLT2) inhibitors and renin–angiotensin system blockers such as angiotensin–converting enzyme inhibitor (ACEI) and angiotensin receptor blocker (ARB) in patients with type 2 diabetes mellitus (T2DM).

評讀結果

P	Type 2 diabetes mellitus
I	Sodium-glucose contransporter(SGLT2) inhibitors and renin–angiotensin system blockers
C	angiotensin-converting enzyme inhibitor (ACEI) and angiotensin receptor blocker (ARB)
O	Efficiency and safety

☑ Yes □ No □ Can’t

以CASP工具嚴格評讀文章

2.Did the authors look for the right type of papers?

作者是否尋找適當研究型態的文獻？

Validity

2.Did the authors look for the right type of papers?
作者是否尋找適當研究型態的文獻？

Methods:

We searched the PubMed, Embase, Web of Science and Cochrane Library databases from their inception to May 2020. Two authors independently performed study selection, risk-of-bias assessment and data extraction. The quality and risk of bias were assessed by the Cochrane Risk of Bias Tool. Statistical heterogeneity was determined by the I2 statistics.

評讀結果

- 收錄符合問題的RCT
- 清楚定義了納入條件
- 清楚定義排除條件
- 納入RCT及placebo

研究

☑ Yes □ No □ Can't tell

以CASP工具嚴格評讀文章

3.Do you think all the important, relevant studies were included?

你認為所有重要且相關的研究是否皆被納入？

Validity

3.Do you think all the important, relevant studies were included?
你認為所有重要且相關的研究是否皆被納入？

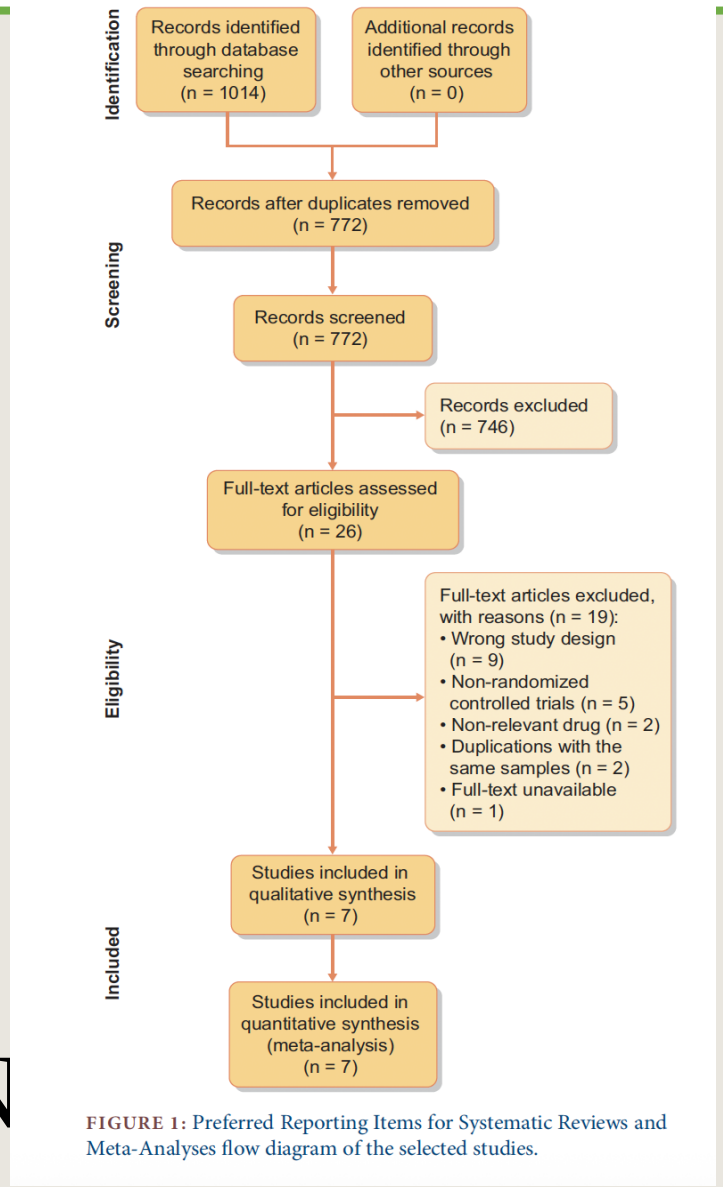


FIGURE 1: Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow diagram of the selected studies.

☑ Yes □ N

評讀結果

- 搜尋各種資料庫
- Prisma protocol 清楚說明納入排除理由
- 搜尋不限年代、語言、國家、種族
- 從參考資料再搜尋
- 與專家聯繫
- 包含已/未發表文獻
- 搜尋非英文文獻

以CASP工具嚴格評讀文章

4.Did the review’s authors do enough to assess quality of the included studies?

系統性文獻回顧的作者是否評估所納入研究文獻的品質？

Validity

4.Did the review's authors do enough to assess quality of the included studies?
系統性文獻回顧的作者是否評估所納入研究文獻的品質？

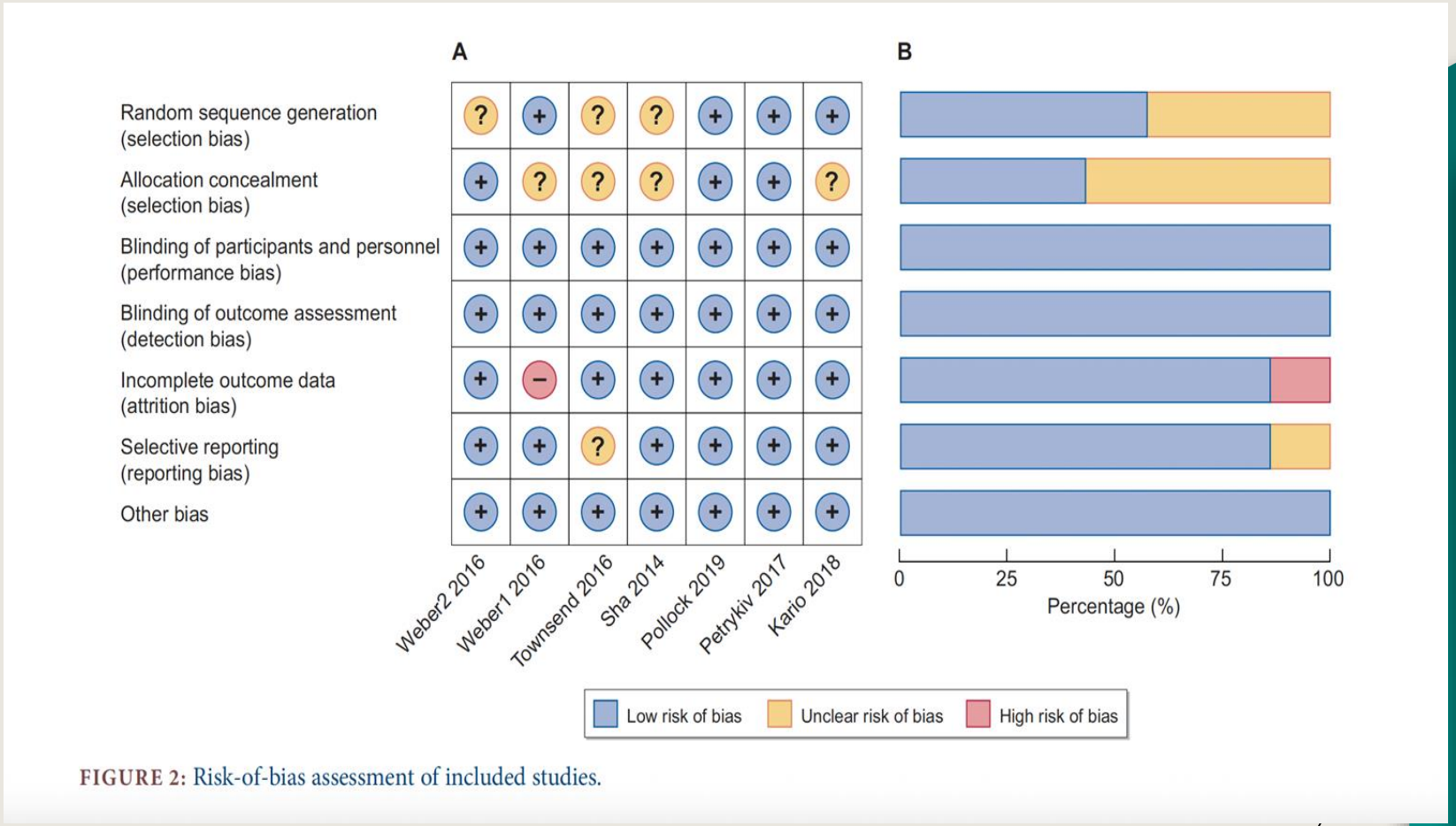


FIGURE 2: Risk-of-bias assessment of included studies.

☑ Yes □ No □ Can't tell

評讀結果

- 個reviewers獨立評讀所收錄的所有研究
- 必須同時通過兩種評讀工具才納入:data extraction form on Covidence and Covidence SR software, 及Cochrane's domain based evaluation
- 評讀依據研究設計、blinding 、bias 、限制、一致性判斷貢獻度、outcomes

以CASP工具嚴格評讀文章

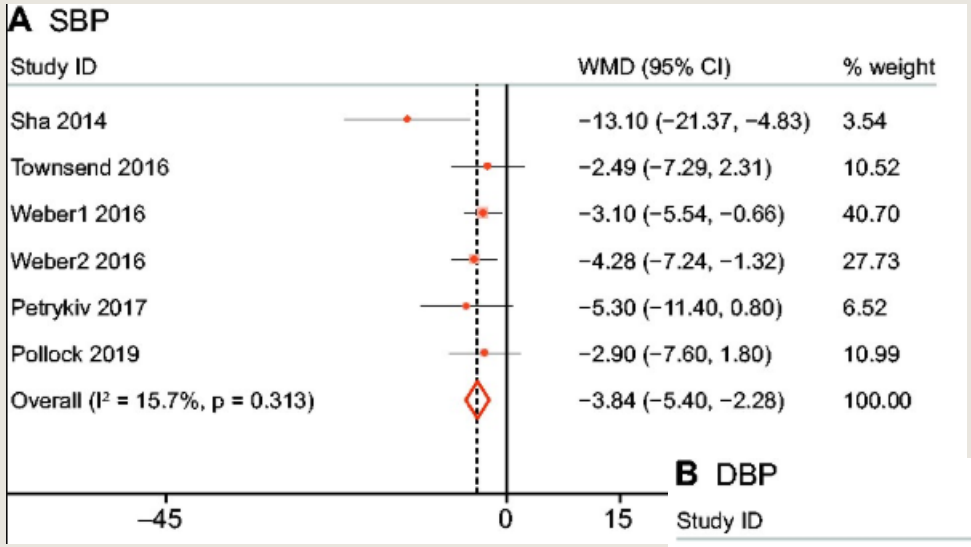
5. If the results of the review have been combined, was it reasonable to do so?

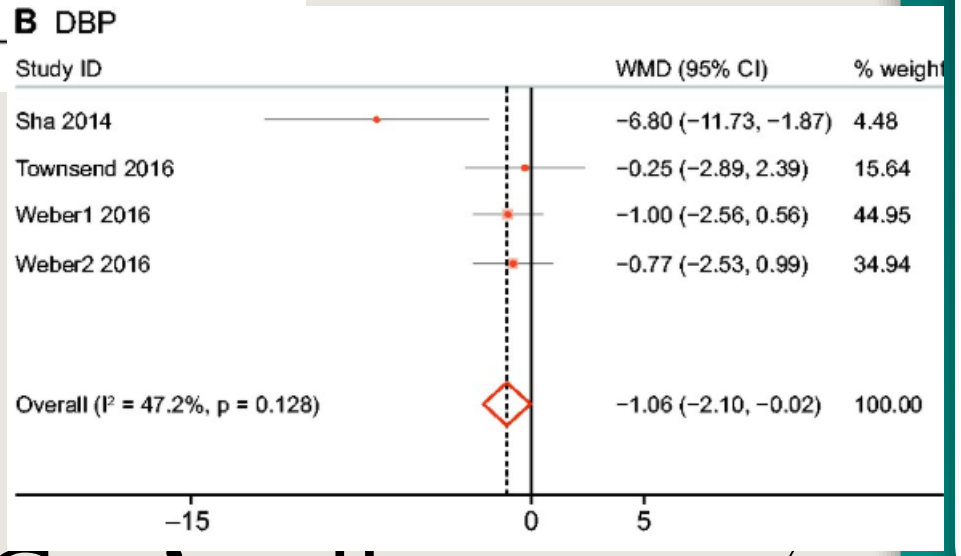
如果作者將研究結果進行合併，這樣的合併是否合理？

Validity

5. If the results of the review have been combined, was it reasonable to do so?

如果作者將研究結果進行合併，這樣的合併是否合理？





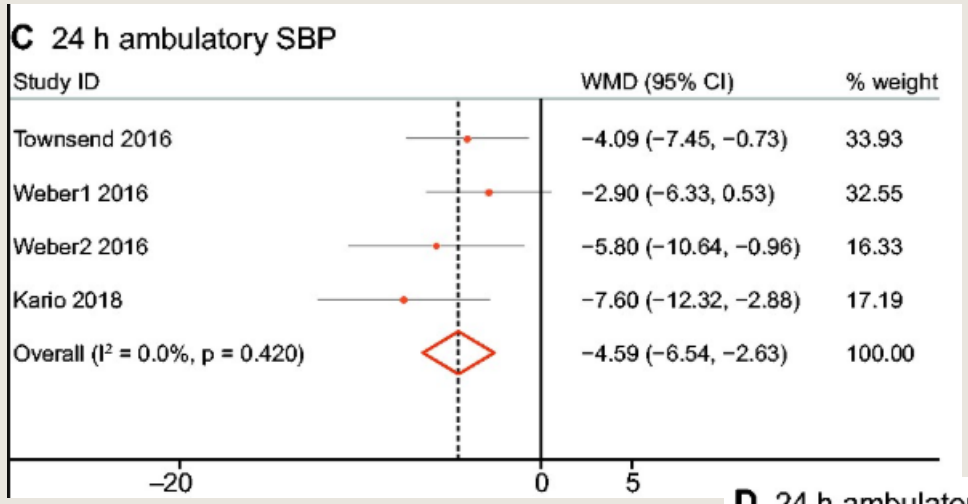
評讀結果

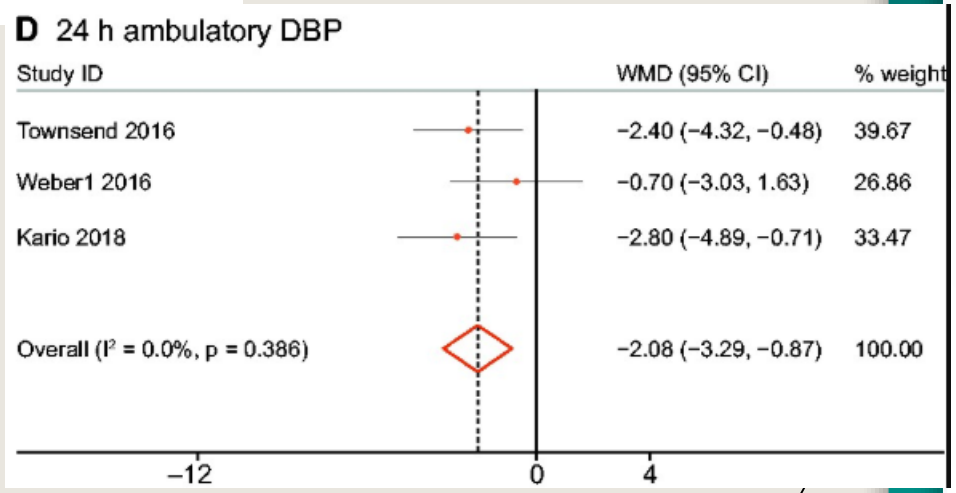
- 異質性（heterogeneity）：低~中度(I :<50%)
- 採用fixed-effect model
- 次族群分析
- 敏感性測試

☑ Yes □ No □ Can’t tell

5. If the results of the review have been combined, was it reasonable to do so?

如果作者將研究結果進行合併，這樣的合併是否合理？





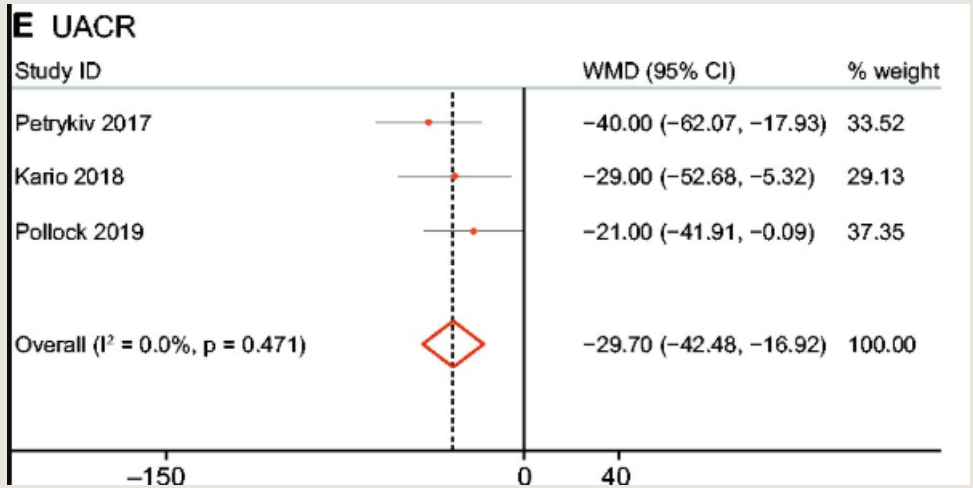
評讀結果

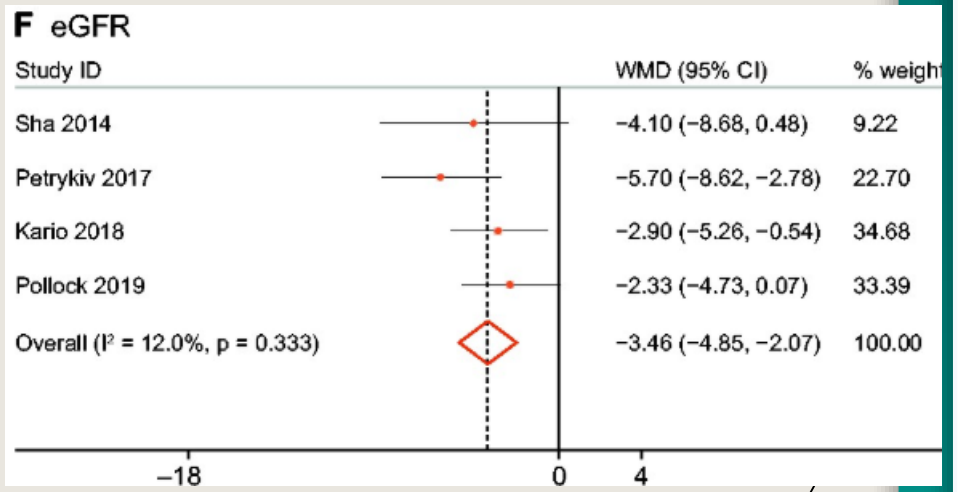
- 異質性（heterogeneity）：低度(I：<50 %)
- 採用fixed-effect model
- 次族群分析
- 敏感性測試

☑ Yes □ No □ Can’t tell

5. If the results of the review have been combined, was it reasonable to do so?

如果作者將研究結果進行合併，這樣的合併是否合理？





評讀結果

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☑ Yes □ No □ Can’t tell

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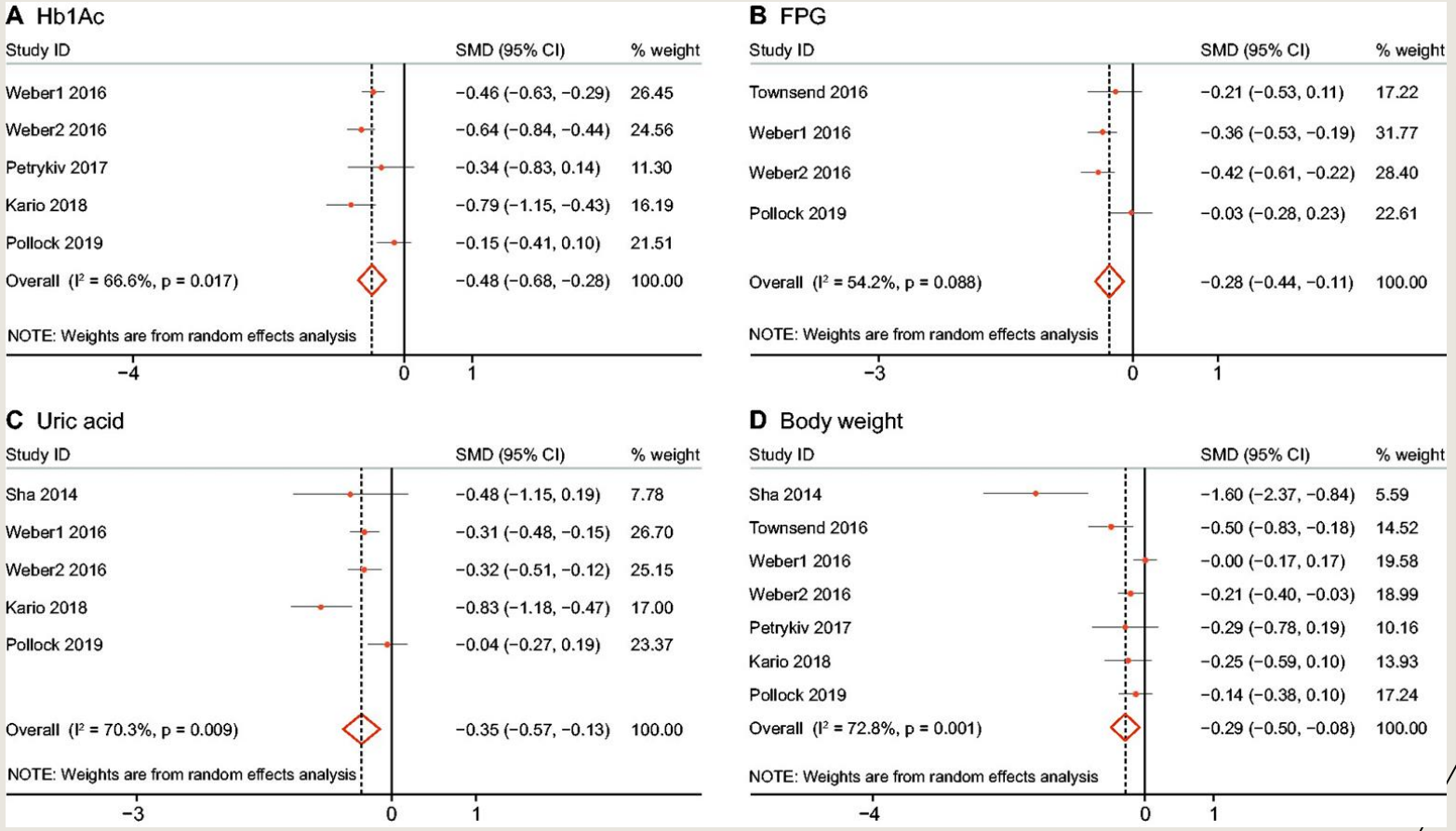
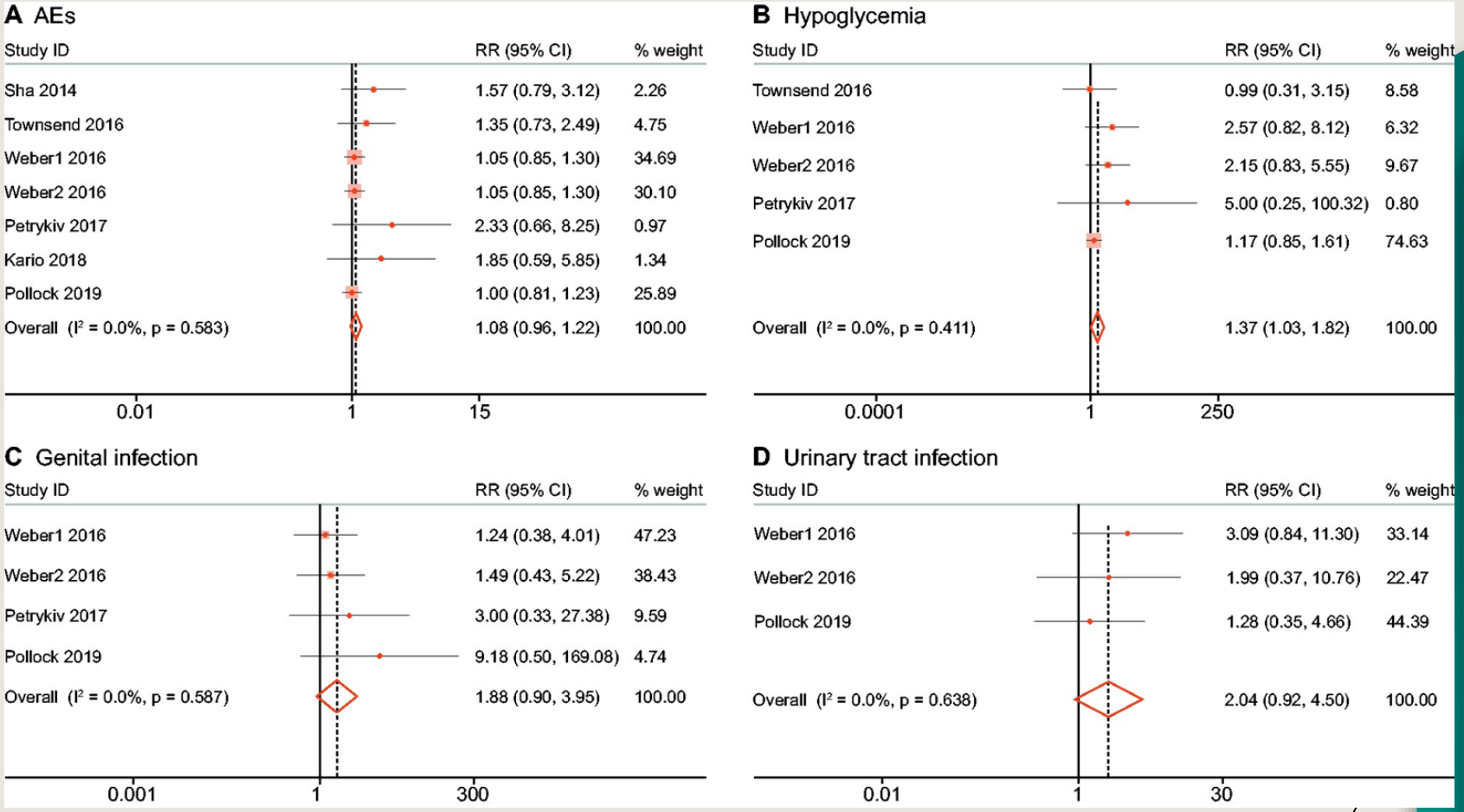


☑Yes □ No □ Can’t tell

評讀結果

- 異質性（heterogeneity）：中~高度(I :>50%)
- 採用random-effect model
- 次族群分析
- 敏感性測試

5. If the results of the review have been combined, was it reasonable to do so?
如果作者將研究結果進行合併，這樣的合併是否合理？



評讀結果

- 異質性（heterogeneity）：低度(I :~0%)
- 採用fixed-effect model
- 次族群分析
- 敏感性測試

☑ Yes □ No □ Can’t tell

以CASP工具嚴格評讀文章

6. What are the overall results of the review?
   這篇系統性文獻回顧的整體結果如何？

Importance

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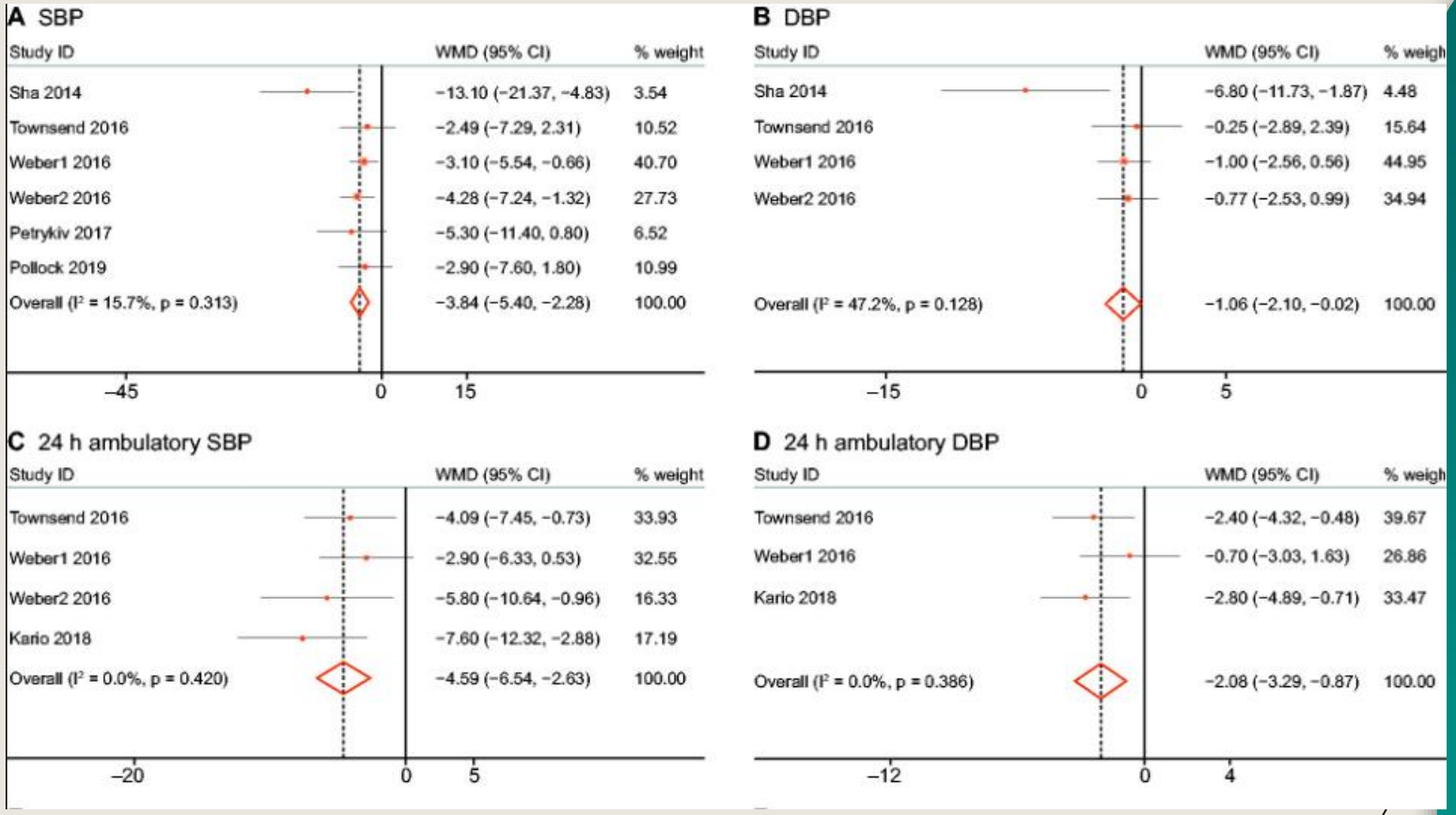
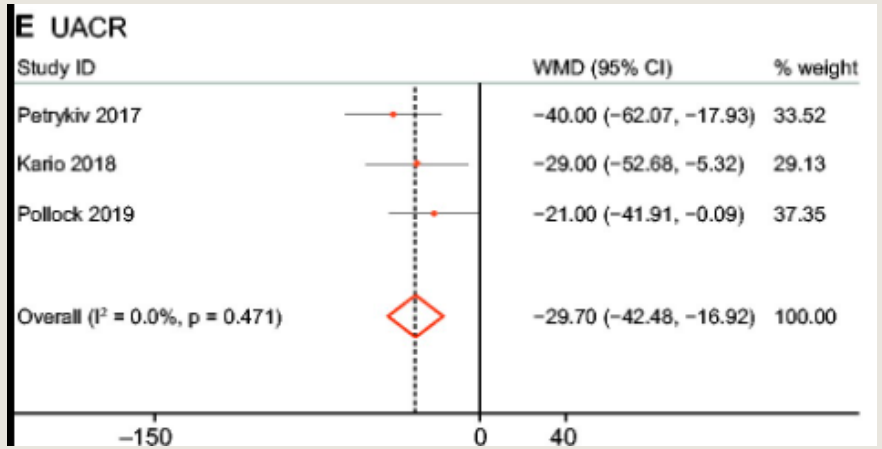


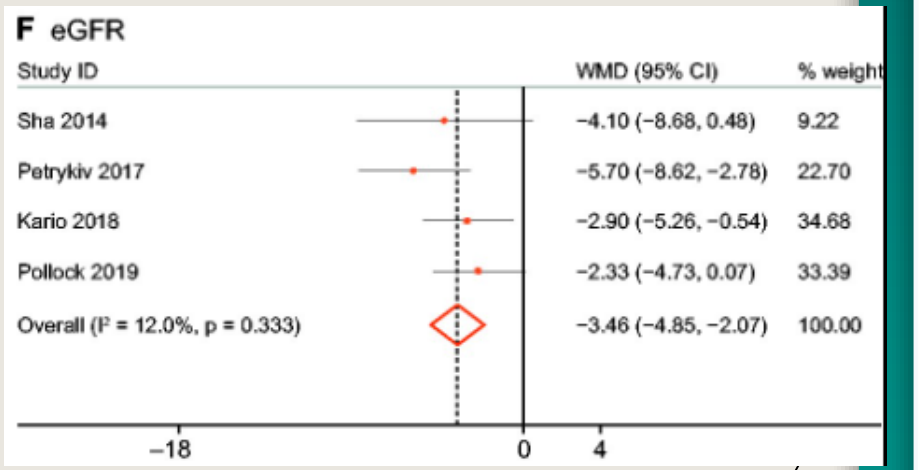
評讀結果

- P>0.05無顯著差異

☑ Yes □ No □ Can’t tell

6. What are the overall results of the review?
這篇系統性文獻回顧的整體結果如何？





評讀結果

- P>0.05無顯著差異

☑ Yes □ No □ Can’t tell

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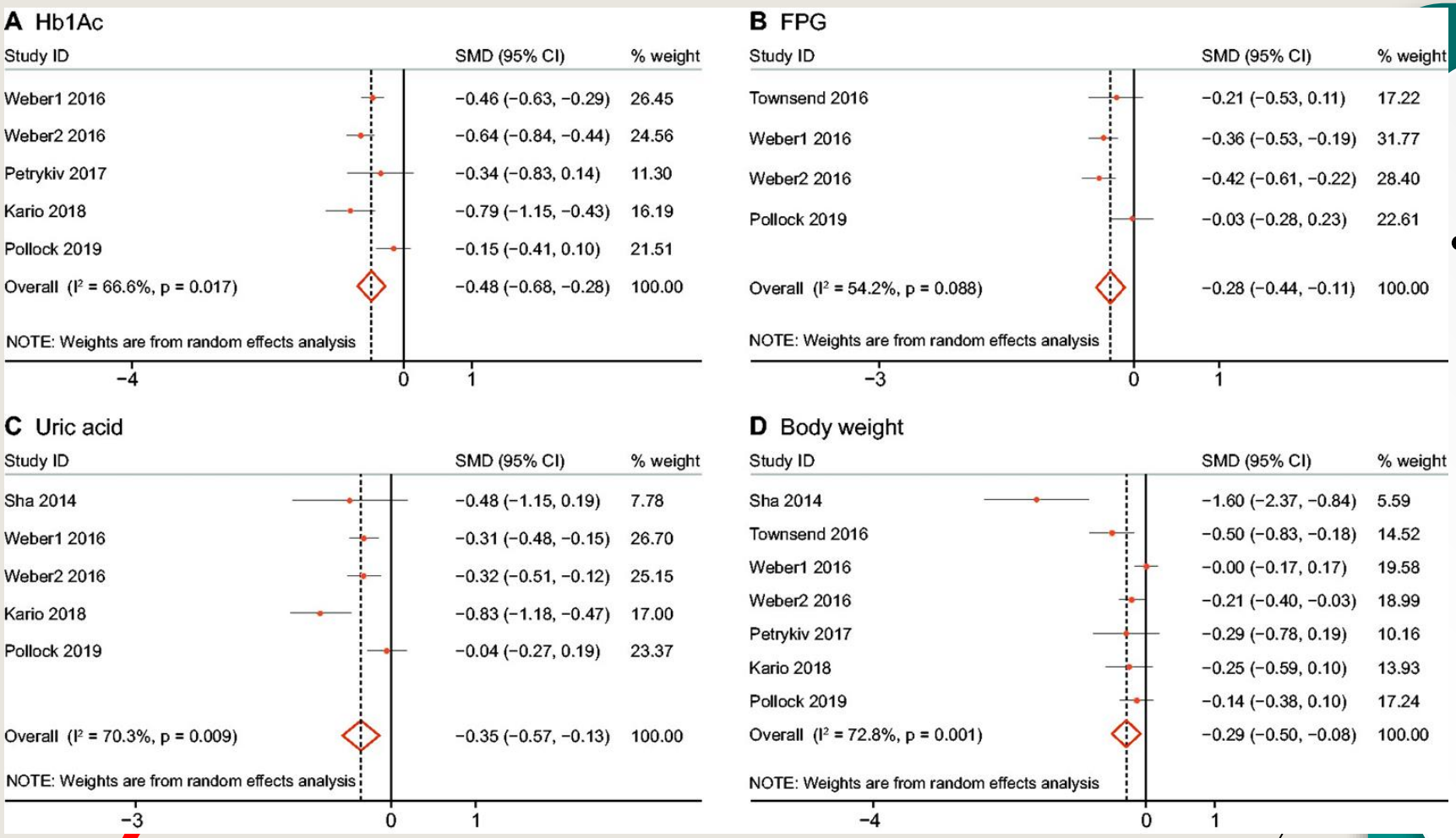

評讀結果

- P<0.05有顯著差異

☑ Yes □ No □ Can’t tell

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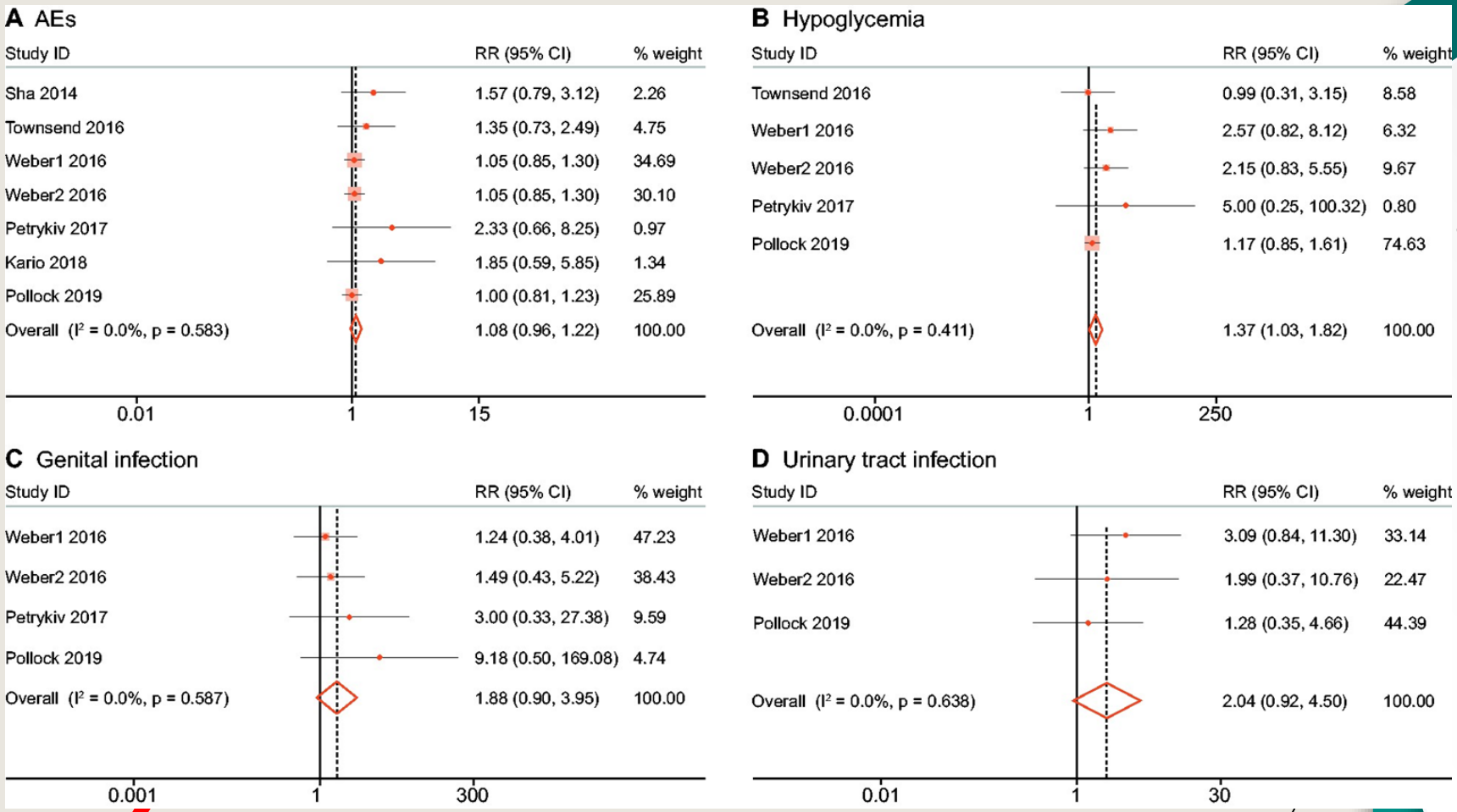
這篇系統性文獻回顧的整體結果如何？



評讀結果

- P>0.05無顯著差異

☑ Yes □ No □ Can’t tell

以CASP工具嚴格評讀文章

7. How precise are the results?
結果精準嗎？

Importance

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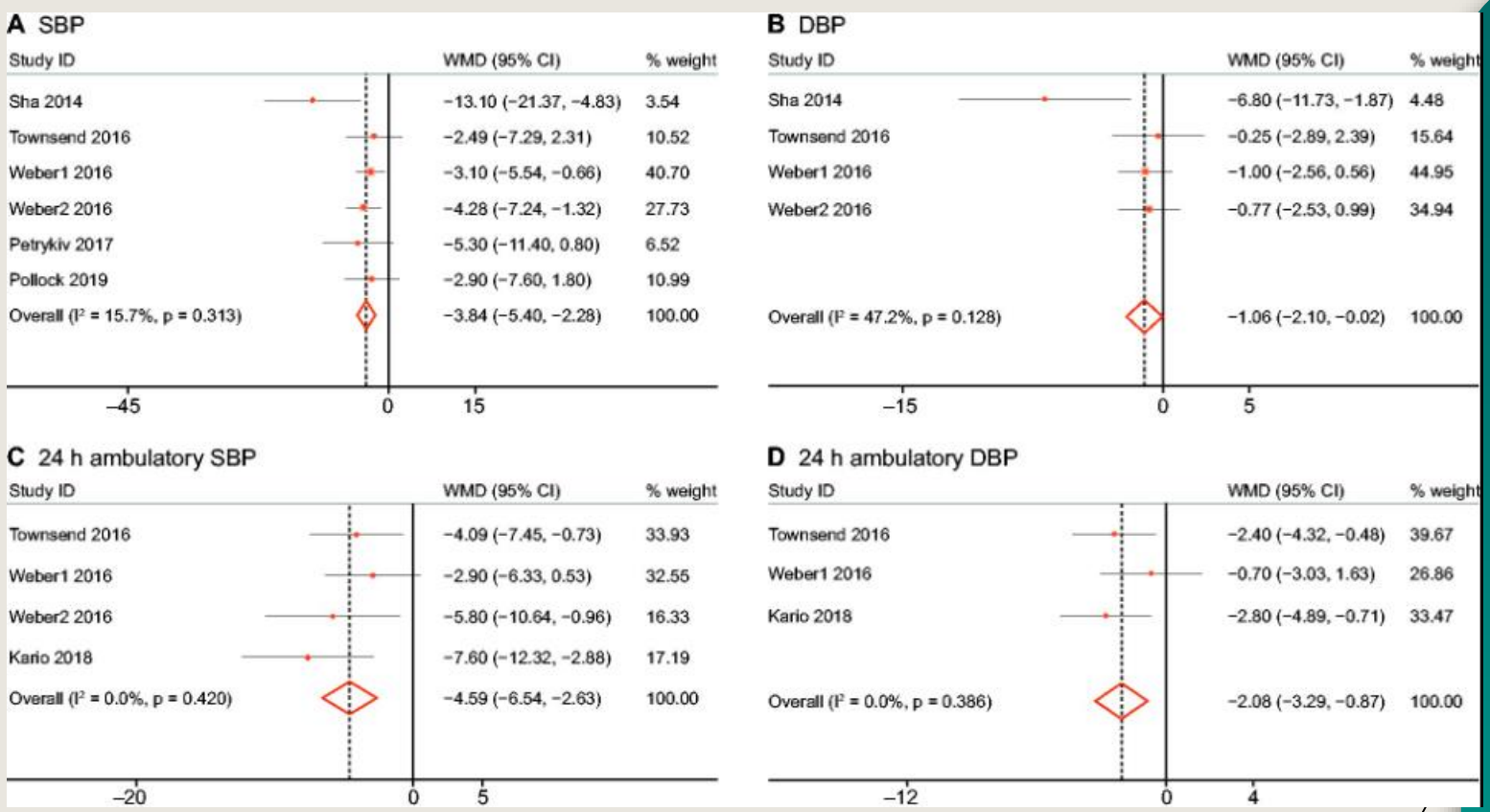
結果精準嗎？

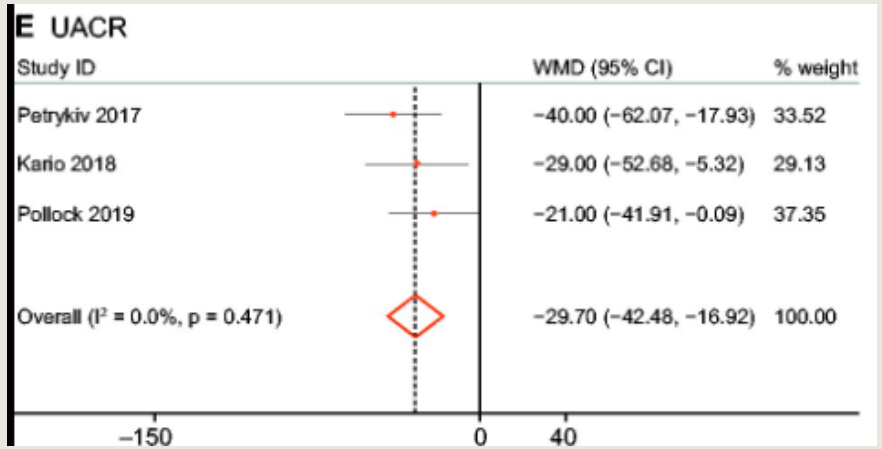


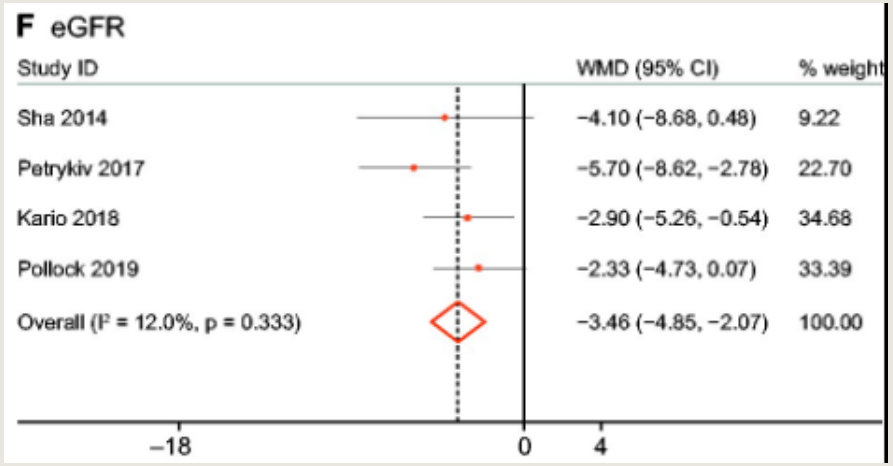
評讀結果

- 95%CI：
  −3.84(-5.40~-2.28)
  −1.06(−2.10~−0.02)
- −4.59(−6.54~−2.63)
- −2.08(−3.29~−0.87)
- NNT / RRR

☑ Yes □ No □ Can’t tell

7. How precise are the results?
結果精準嗎？



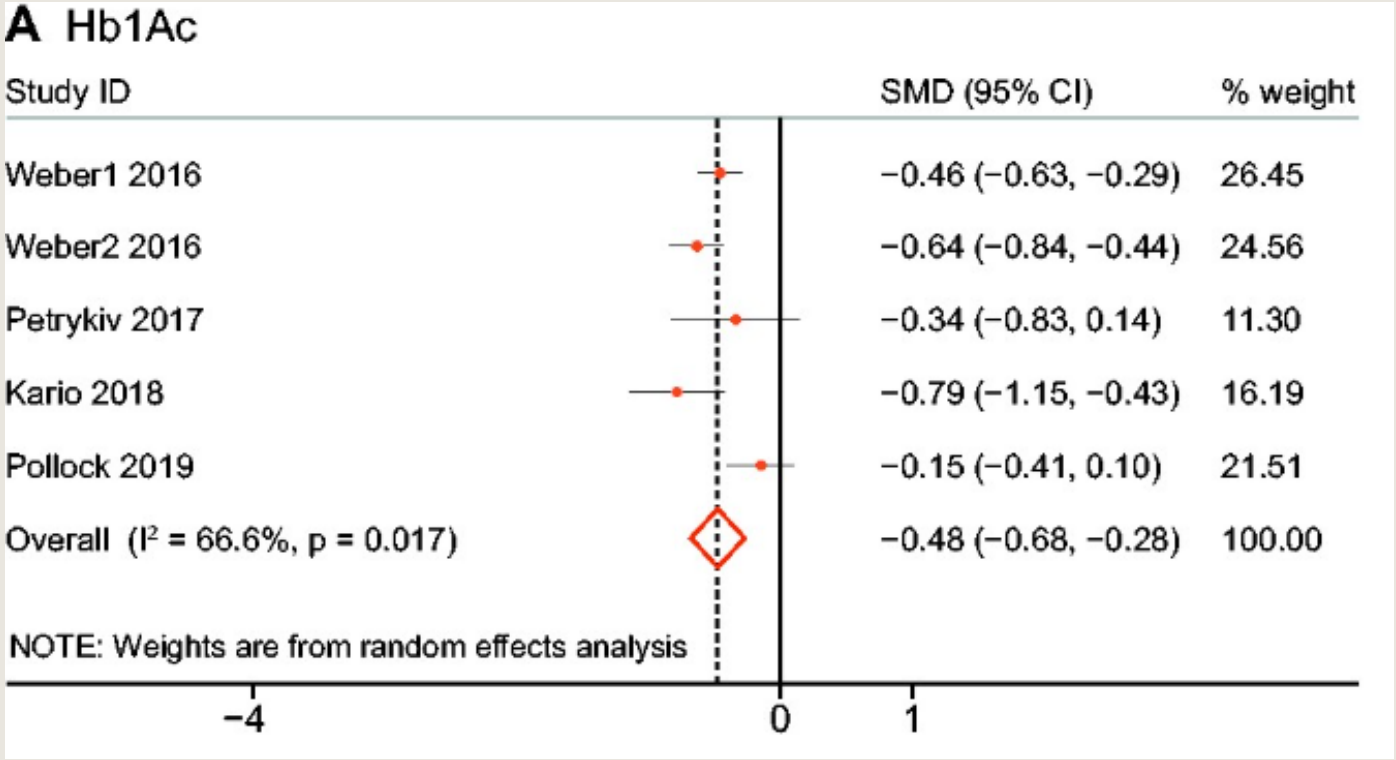


☑ Yes □ No □ Can’t tell

評讀結果

- 95%CI
  −29.70(−42.48~−16.92)
  −3.46(−4.85 ~ −2.07)
- NNT / RRR

7. How precise are the results?
結果精準嗎？

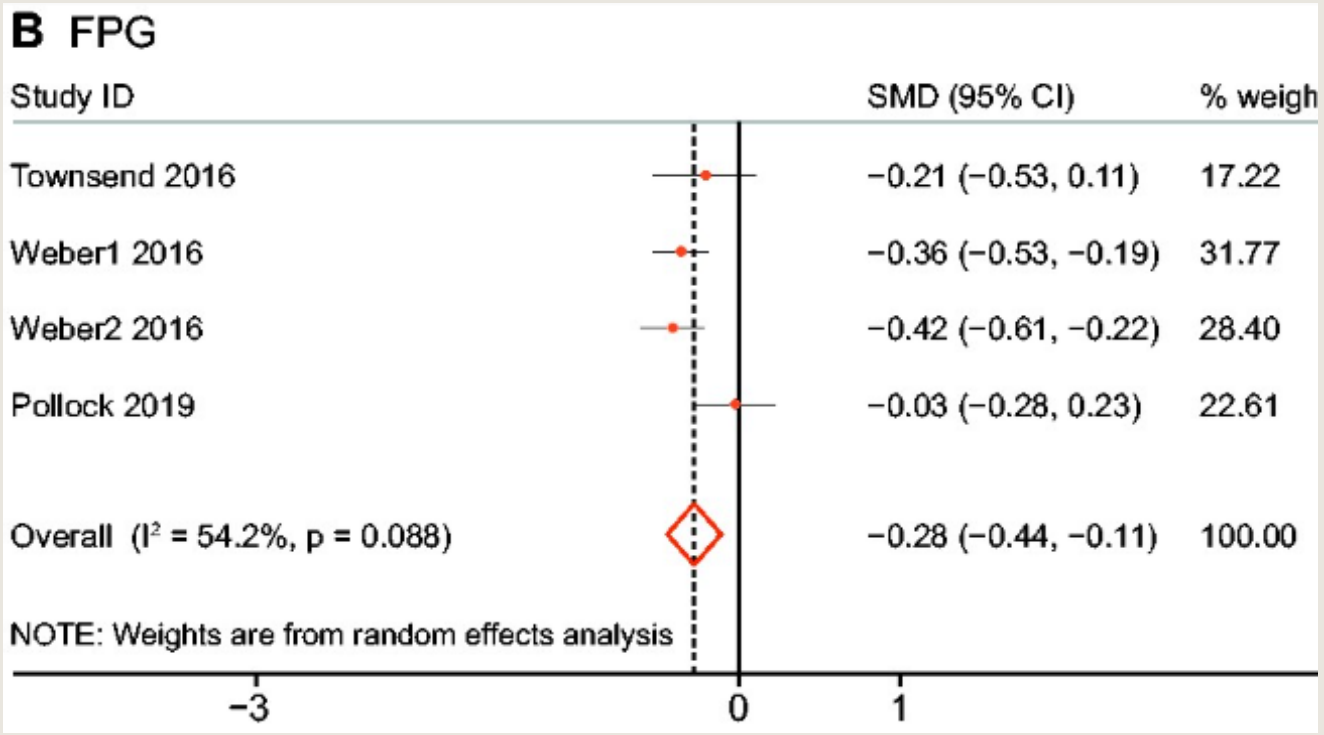


☑ Yes □ No □ Can’t tell

評讀結果

- 95%CI : -0.48(-0.68~-0.28)
- ＮＮＴ／ＲＲＲ

7. How precise are the results?
結果精準嗎？

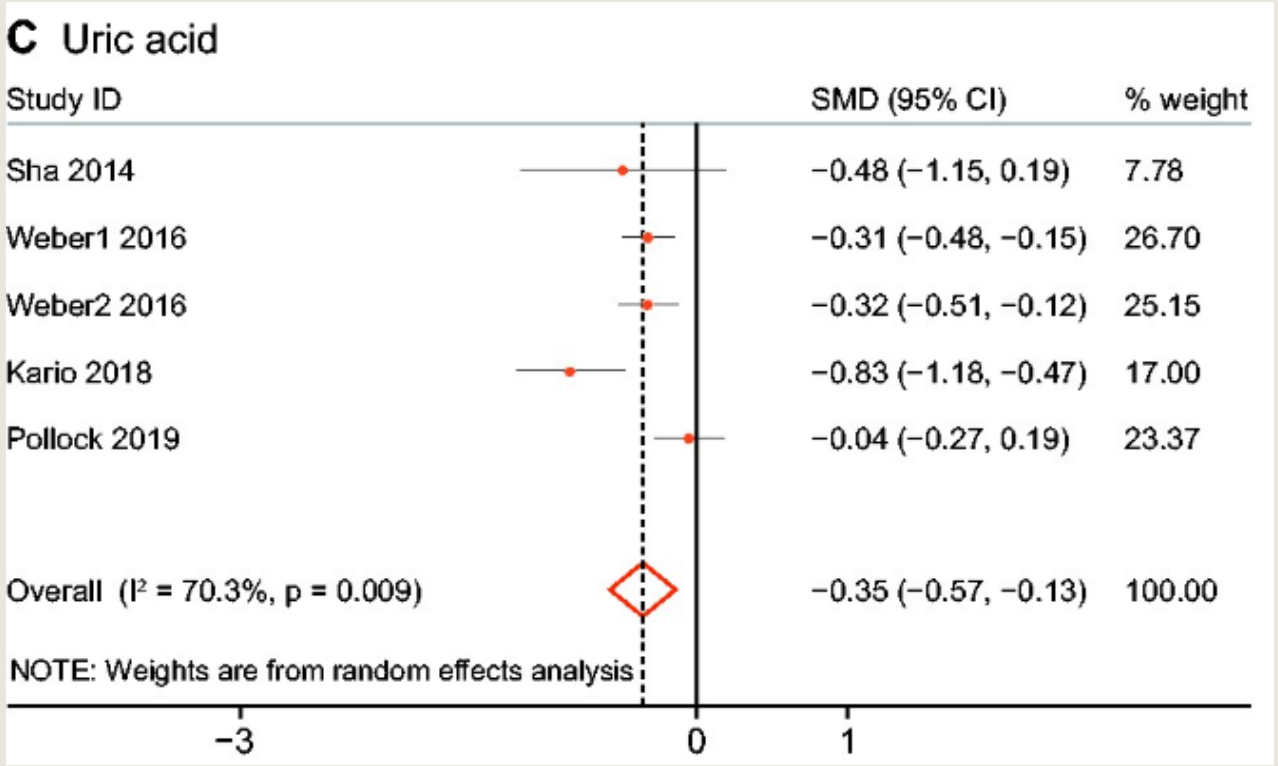


☑ Yes □ No □ Can’t tell

評讀結果

- 95%CI：-0.28(-0.44~-0.11)
- ＮＮＴ／ＲＲＲ

7. How precise are the results?
結果精準嗎？

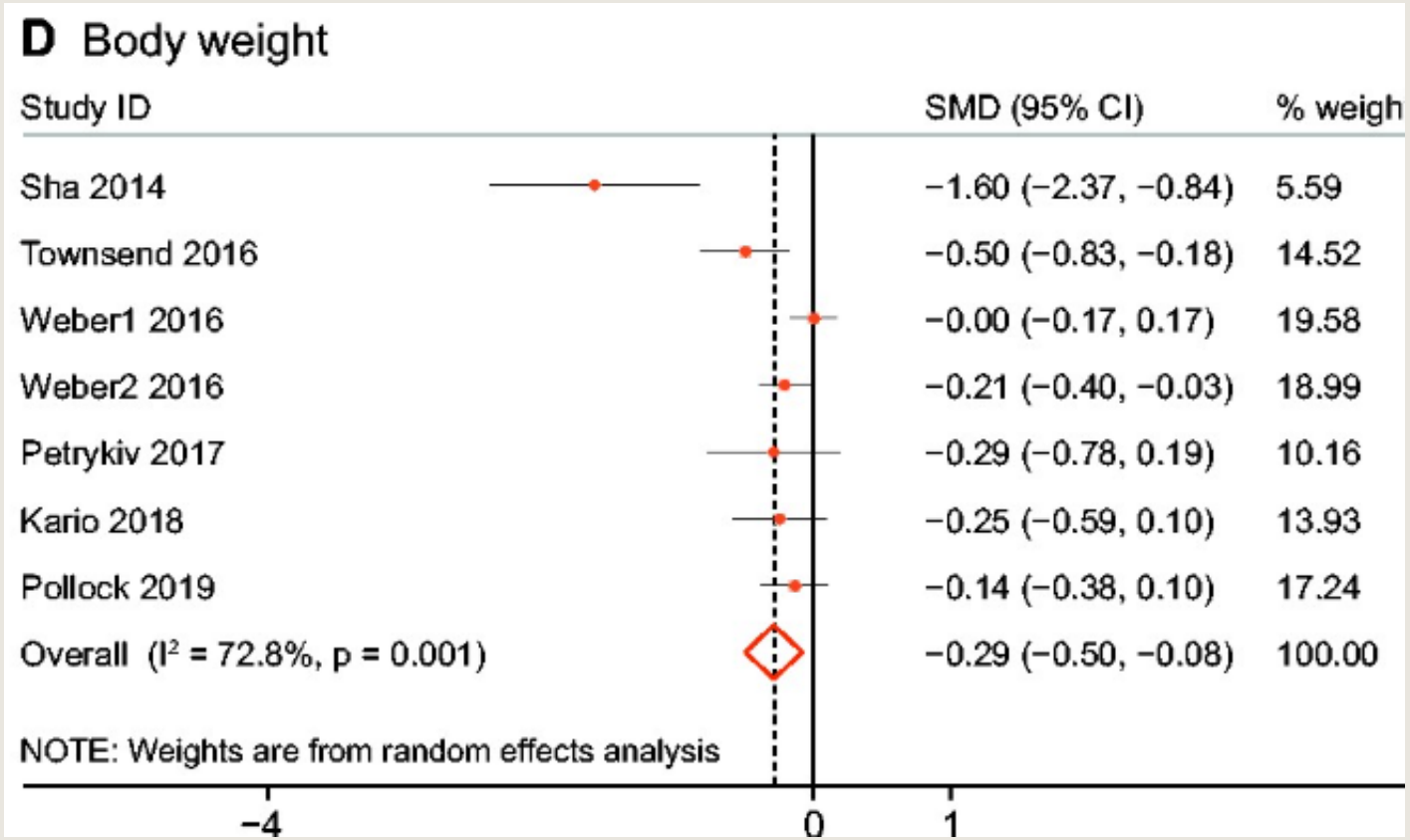


☑ Yes □ No □ Can’t tell

評讀結果

- 95%CI : -0.35(-0.57~-0.13)
- ＮＮＴ／ＲＲＲ

7. How precise are the results?
結果精準嗎？

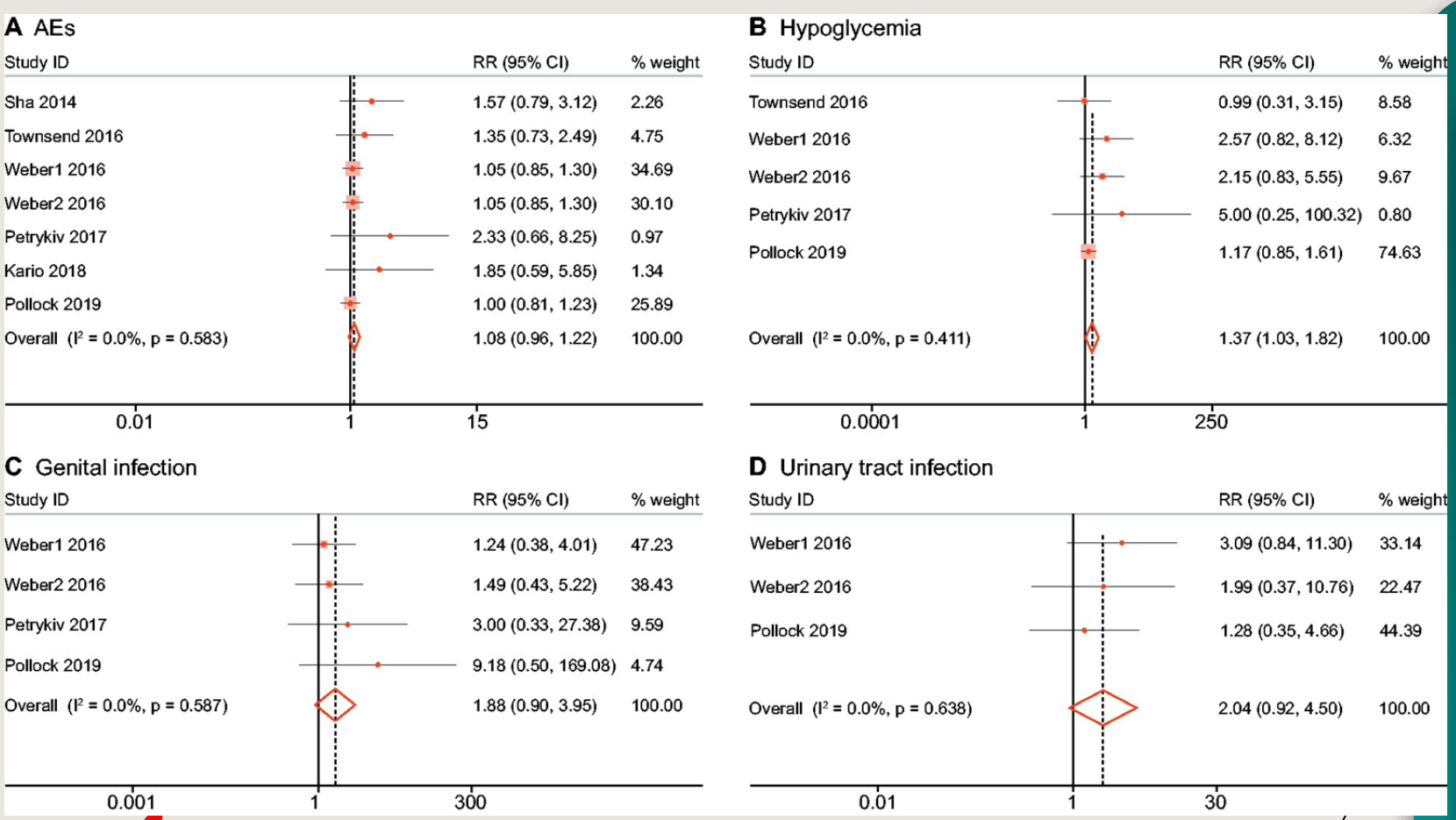


☑ Yes □ No □ Can’t tell

評讀結果

- 95%CI : -0.29(-0.50~-0.08)
- ＮＮＴ／ＲＲＲ

7. How precise are the results?
結果精準嗎？



評讀結果

- 95%CI：
  1.08(0.96~1.22)
  1.37(1.03~1.82)
  188(0.90~3.95)
  2.04(0.92~4.50)
- NNT / RRR

☑ Yes □ No □ Can’t tell

評定證據等級

V

- 清楚、明確的臨床問題
- 收納適當的研究類型
- 所有研究都被納入
- 納入研究文獻的品質
- 結果合併的合理性

I

- 整體結果
- 其精準性

所有研究都被納入 ▶ 只到2020

納入研究文獻的品質 ▶ 研究品質差

其精準性 ▶ 研究不精準

Level 2

Outcomes	Number of participants (studies)	Quality of the evidence (GRADE)	Relative effect (95% CI)	Anticipated absolute effects	
				Risk with comparison	Risk difference with intervention
SBP	1499 (6 RCTs)	⨁⨁⨁◯ Moderate[a,b]	–	mean SBP = 0	MD 3.84 lower (5.4 lower to 2.28 lower)
DBP	1167 (4 RCTs)	⨁⨁⨁◯ Moderate[a,b]	–	mean DBP = 0	MD 1.06 lower (2.1 lower to 0.02 lower)
24-h SBP	1139 (4 RCTs)	⨁⨁⨁◯ Moderate[a,b]	–	mean 24-h SBP = 0	MD 4.59 lower (6.54 lower to 2.63 lower)
24-h DBP	830 (3 RCTs)	⨁⨁⨁◯ Moderate[a,b]	–	mean 24-h DBP = 0	MD 2.08 lower (3.29 lower to 0.87 lower)
UACR	463 (3 RCTs)	⨁⨁◯◯ Low[a,b,c]	–	mean UACR = 0	MD 29.7 lower (42.48 lower to 16.92 lower)
eGFR	497 (4 RCTs)	⨁⨁◯◯ Low[a,b,c]	–	mean eGFR = 0	MD 3.46 lower (4.85 lower to 2.07 lower)
Hb1Ac	1396 (5 RCTs)	⨁⨁◯◯ Low[a,b,d]	–	–	SMD 0.48 lower (0.68 lower to 0.28 lower)
FPG	1353 (4 RCTs)	⨁⨁◯◯ Low[a,b,d]	–	–	SMD 0.28 lower (0.44 lower to 0.11 lower)
Uric acid	1416 (5 RCTs)	⨁⨁◯◯ Low[a,b,d]	–	–	SMD 0.35 lower (0.57 lower to 0.13 lower)
Body weight	1676 (7 RCTs)	⨁◯◯◯ Very low[a,b,d,e]	–	–	SMD 0.29 lower (0.50 lower to 0.08 lower)
AEs	1757 (7 RCTs)	⨁⨁◯◯ Low[a,b,e]	RR 1.08 (0.96–1.22)	361 per 1000	29 more per 1,000 (14 fewer to 79 more)
Hypoglycaemia	1590 (5 RCTs)	⨁⨁◯◯ Low[a,b,c]	RR 1.37 (1.03–1.82)	79 per 1000	29 more per 1,000 (2 more to 65 more)
Genital infection	1421 (4 RCTs)	⨁⨁◯◯ Low[a,b,c]	RR 1.88 (0.90–3.95)	14 per 1000	12 more per 1,000 (1 fewer to 41 more)
Urinary tract infection	1355 (3 RCTs)	⨁⨁◯◯ Low[a,b,c]	RR 2.04 (0.92–4.50)	13 per 1000	14 more per 1,000 (1 fewer to 46 more)

評定證據等級

考慮降階Level 2

Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence

Question	Step 1 (Level 1*)	Step 2 (Level 2*)	Step 3 (Level 3*)	Step 4 (Level 4*)	Step 5 (Level 5)
How common is the problem?	Local and current random sample surveys (or censuses)	Systematic review of surveys that allow matching to local circumstances**	Local non-random sample**	Case-series**	n/a
Is this diagnostic or monitoring test accurate? (Diagnosis)	Systematic review of cross sectional studies with consistently applied reference standard and blinding	Individual cross sectional studies with consistently applied reference standard and blinding	Non-consecutive studies, or studies without consistently applied reference standards**	Case-control studies, or "poor or non-independent reference standard**	Mechanism-based reasoning
What will happen if we do not add a therapy? (Prognosis)	Systematic review of inception cohort studies	Inception cohort studies	Cohort study or control arm of randomized trial*	Case-series or case-control studies, or poor quality prognostic cohort study**	n/a
Does this intervention help? (Treatment Benefits)	Systematic review of randomized trials or *n*-of-1 trials	Randomized trial or observational study with dramatic effect	Non-randomized controlled cohort/follow-up study**	Case-series, case-control studies, or historically controlled studies**	Mechanism-based reasoning
What are the COMMON harms? (Treatment Harms)	Systematic review of randomized trials, systematic review of nested case-control studies, *n*-of-1 trial with the patient you are raising the question about, or observational study with dramatic effect	Individual randomized trial or (exceptionally) observational study with dramatic effect	Non-randomized controlled cohort/follow-up study (post-marketing surveillance) provided there are sufficient numbers to rule out a common harm. (For long-term harms the duration of follow-up must be sufficient.)**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning
What are the RARE harms? (Treatment Harms)	Systematic review of randomized trials or *n*-of-1 trial	Randomized trial or (exceptionally) observational study with dramatic effect			
Is this (early detection) test worthwhile? (Screening)	Systematic review of randomized trials	Randomized trial	Non -randomized controlled cohort/follow-up study**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning

□研究品質差 □結果不精確 □絕對結果小 □PICO和臨床情境不符 □證據間無一致性

評定證據等級-GRADE

介入措施

SGLT2-i

主要結果

BP、蛋白尿、
腎功能、血糖、
尿酸、體重及不良事件

證據品質

Low to moderate

降級

研究偏差風險	🔴
結果異質性	🟢
證據間接性	🟢
結果精準性	🟢
具出版偏差	無法判斷

升級

效果顯著	無
干擾因素存在仍具效果	無法判斷
劑量效應關係	無

以CASP工具嚴格評讀文章

8. Can the results be applied to the local population?
此研究結果對當地病人有幫助嗎？

Practice

8. Can the results be applied to the local population ?
此研究結果對當地病人有幫助嗎？

	評讀文獻	臨床情境
性別	Male and female	male
共病	Exclude DKA, HHS or UTI	CKD
種族	No limit	Asian
年齡	≥18 years	68 Y/O
疾病	T2DM	T2DM
介入	SGLT2-I	SGLT2-i

✓ □ Yes □ No □ Can't

評讀結果

- 文獻與臨床情境題及年齡相同，種族收納白人及非白人(種族之bias為low risk)
- ，能運用於同病人。
-

以CASP工具嚴格評讀文章

9. Were all important outcomes considered?
是否所有重要的臨床結果都有被考量到？

☑ Yes □ No □ Can’t tell

以CASP工具嚴格評讀文章

10. Are the benefits worth the harms and costs?

付出的傷害和花費換得介入措施所產生的效益是否值得？

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付出的傷害和花費換得介入措施所產生的效益是否值得？

成本效益

☑ Yes □ No □ Can’t tell

花費	單獨使用ACEI	優點	副作用
自費SGLT2-I約每顆50	健保給付	血糖控制較優	泌尿道感染、低血糖

No	CASP questions	Yes/No
1	此篇系統性文獻回顧是否問了一個清楚、明確的問題?	Yes
2	作者是否尋找適當研究型態的文獻?	Yes
3	你認為所有重要且相關的研究都被納入?	Yes
4	系統性文獻回顧的作者是否評估所納入研究文獻的品質?	Yes
5	如果作者將研究結果進行合併，這樣的合併是否合理?	Yes
6	這篇系統性文獻回顧的整體結果為何？	Yes
7	結果精準嗎？	Yes
8	此研究結果是否可應用到當地的族群？	Yes
9	是否所有重要的臨床結果都有被考量到？	Yes
10	付出的傷害和花費換得介入措施所產生的益處是否值得？	Yes

5A-4
Apply
臨床應用

臨床應用

藥物頻率：每日一次，一次一顆
藥物費用：健保價

Reference:

衛生福利部
中央健康保險署

5A-5
Audit
執行決策

多方觀點

醫療現況	治療病人的偏好
證據等級：Level 1-2	希望可以改善蛋白尿及血壓控制，避免腎病惡化
利弊平衡	**費用資源**
加上SGLT2-I能改善血壓及血糖控制，延緩腎功能惡化	可能導致泌尿道感染，需進一步治療或住院的風險

共享決策

文獻查證: 利>弊的確定性

病人知情偏好的確定性	是	否
是	我們建議應該做 並解釋行動方案	**我們建議**考慮做 提供選項輔助決策
否	我們建議考慮做 提供選項輔助決策	我們建議考慮做 提供選項輔助決策

Reference: 李宜恭醫師《醫策會SDM上課教材》

回答病人問題 - 以去學術化術語方式

您好，經過我們團隊縝密的實證搜尋後，目前現有最佳證據是由系統性回顧文獻支持，證實加入SGLT2抑制劑可減少腎功能的惡化及洗腎風險，並改善血糖及血壓控制，減少蛋白尿，但容易造成泌尿道感染及低血糖，所以如果使用的話，會需要特別留意相關症狀，並且即早處理。


謝謝各位
評審聆聽