

Searching ClinicalTrials.gov did not change the conclusions of a systematic review

Wilson LM, Sharma R, Dy SM, Waldfogel JM,
Robinson KA. Searching ClinicalTrials.gov did not
change the conclusions of a systematic review. J Clin
Epidemiol 2017 Jul 27

Objectives

- To assess the effect of searching [ClinicalTrials.gov](https://clinicaltrials.gov) on the conclusions and strength of evidence grading of a systematic review

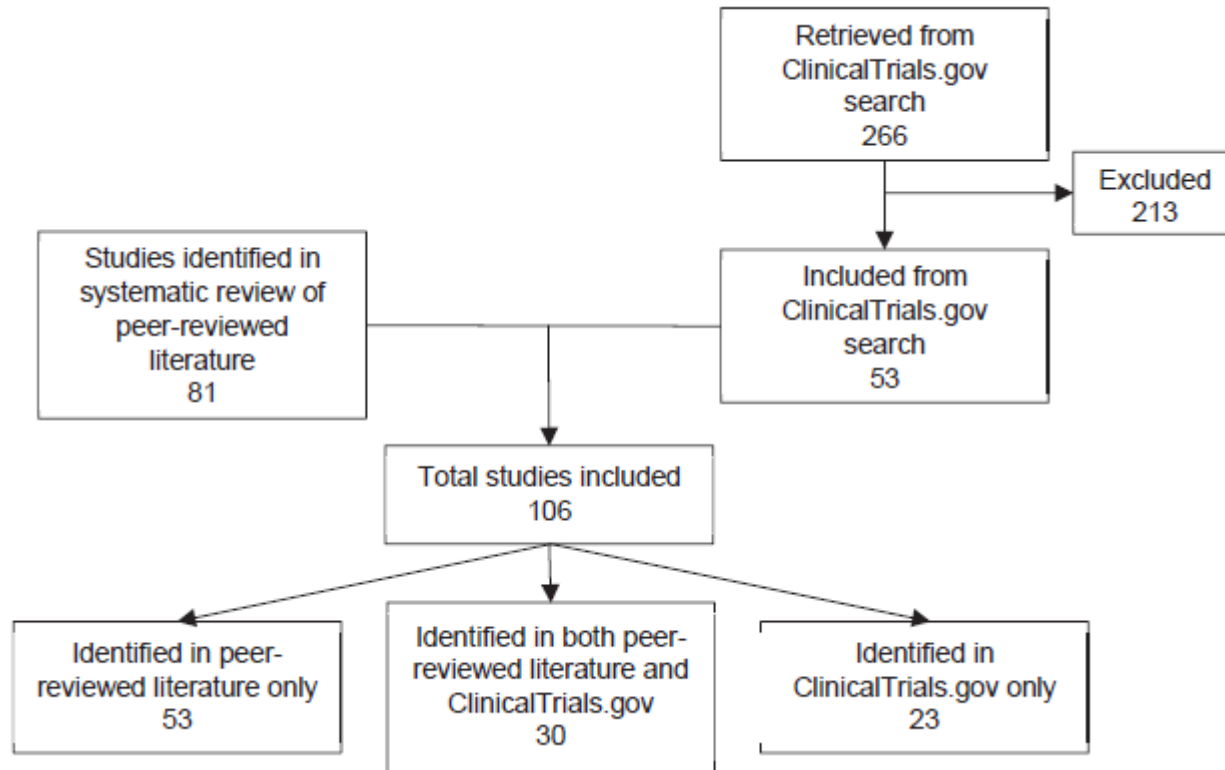
Methods

- Searched
 - Peer-reviewed literature
 - Used portion of a systematic review comparing the effectiveness of pharmacologic treatment options for symptoms of diabetic peripheral neuropathy
 - ClinicalTrials.gov
- Screened
 - Applied same eligibility criteria
 - Randomized controlled trial
 - Pharmacologic interventions to treat symptoms of diabetic peripheral neuropathy
 - Blinded
 - At least 10 adults with type 1 or type 2 diabetes
 - At least 3 weeks

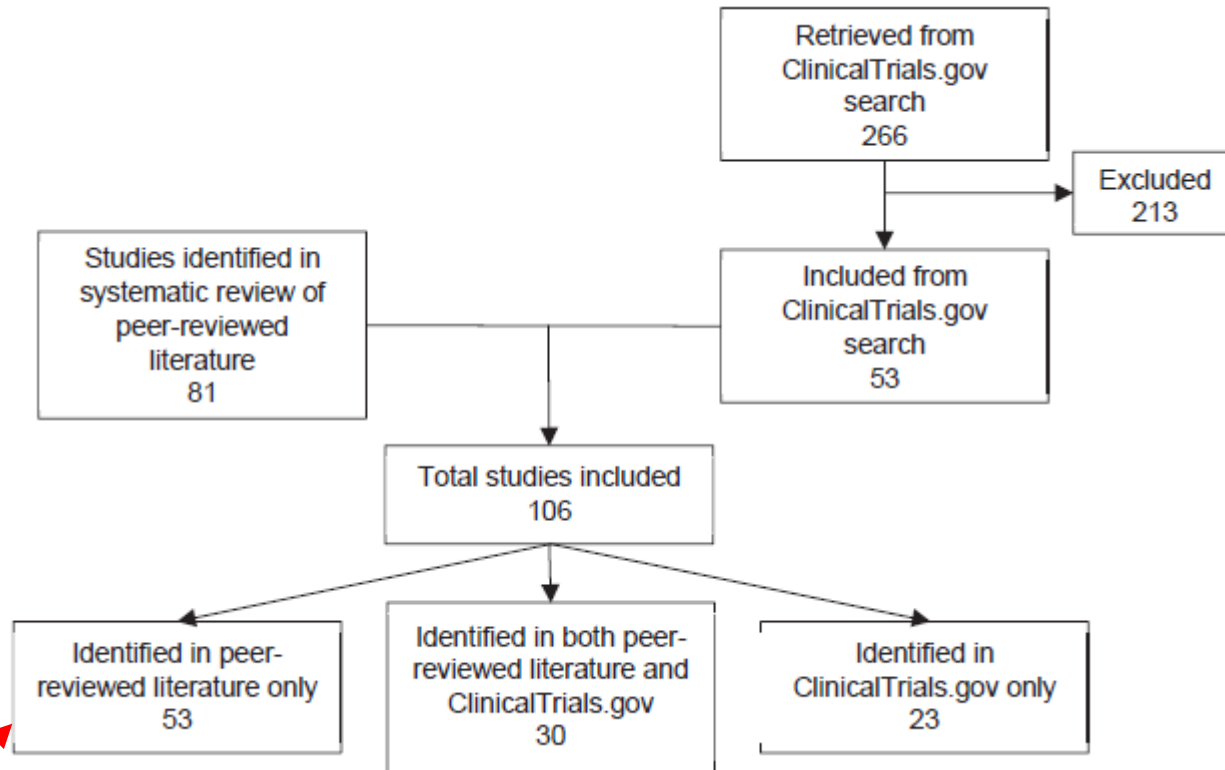
Methods

- Matched published and registry records
 - PubMed citations included in the registry record
 - NCT number reported in peer-reviewed article
 - Manually searched PubMed
- Compared matched records
 - Study design characteristics
 - Outcomes
- Determined effect on conclusions and SOE
 - Synthesized body of evidence with and without records from ClinicalTrials.gov
 - Graded pain and quality of life

Results

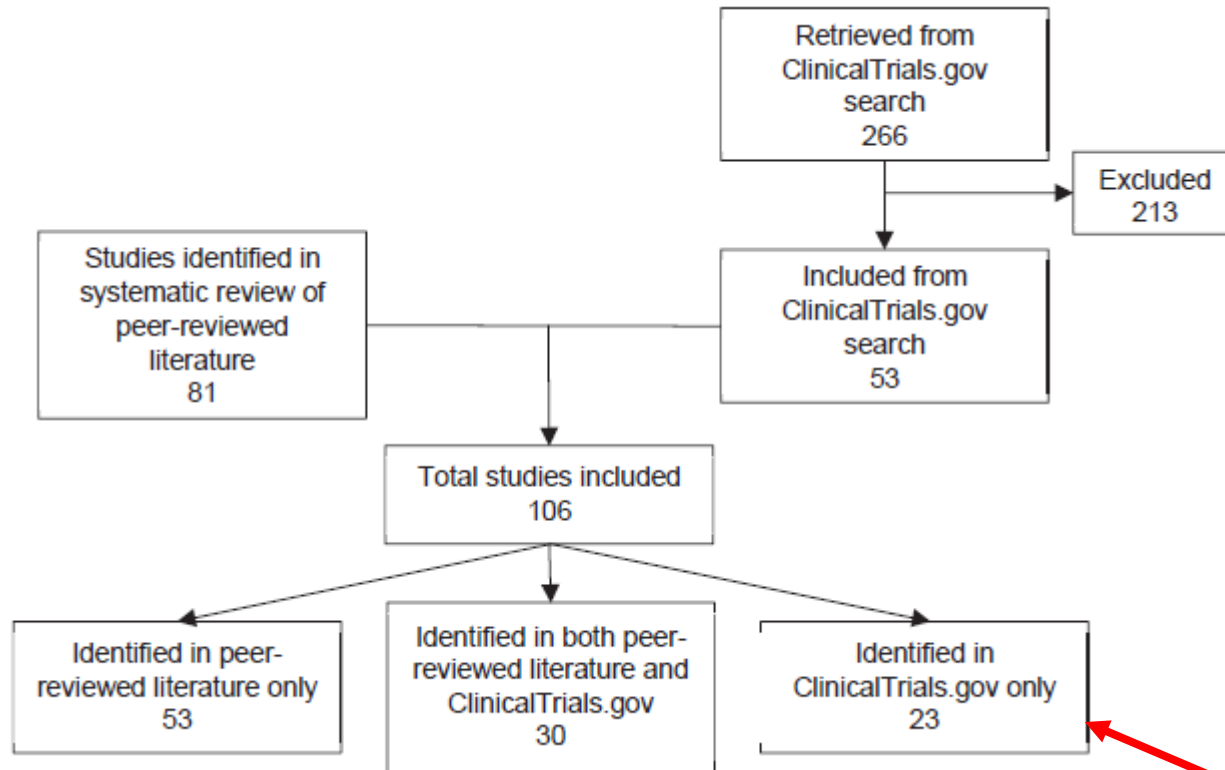


Results



Most of these were older or conducted outside of US

Results



16 were completed
3 recruiting
2 unknown status
5 had results

Results

Table 1. Summary of the differences in outcomes results and adverse event reporting

Pain	<i>N</i> = 12
Similar results reported in ClinicalTrials.gov and peer-reviewed publication	12 [18–22,33–39]
Quality of life	<i>N</i> = 7
Similar results reported in ClinicalTrials.gov and peer-reviewed publication	3 [34,35,37]
Different metrics reported in ClinicalTrials.gov vs. peer-reviewed publication	3 [18,33,36]
Did not fully report on outcome in peer-reviewed publication	1 [20]
Adverse events	<i>N</i> = 12
Discrepancies in the total number of serious adverse events	3 [21,33,36]
Discrepancies in the total number of adverse events	11 [18–22,33–38]
Discrepancies in the number withdrawn due to adverse events	3 [19,20,37]

Results

Table 2. Effect of searching ClinicalTrials.gov on the overall conclusion and strength of evidence grade for comparisons and outcomes

Effect	Change in conclusion for pain and number of comparisons (<i>n</i> = 31)	Change in strength of evidence grading for pain and number of comparisons (<i>n</i> = 31)	Change in conclusion for quality of life and number of comparisons (<i>n</i> = 31)	Change in strength of evidence grading for quality of life and number of comparisons (<i>n</i> = 31)
No studies identified in ClinicalTrials.gov	10	10	10	10
No effect	20	17	21	17
Changed effect size	1	NA	0	NA
Strengthened suspicion of reporting bias	NA	0	NA	2
Downgraded reporting bias domain, but no impact on overall strength of evidence grade	NA	2	NA	0
ClinicalTrials.gov identified the only studies evaluating a comparison but did not provide sufficient evidence to affect the overall conclusion or the strength of evidence grade	0	2	0	2

Results

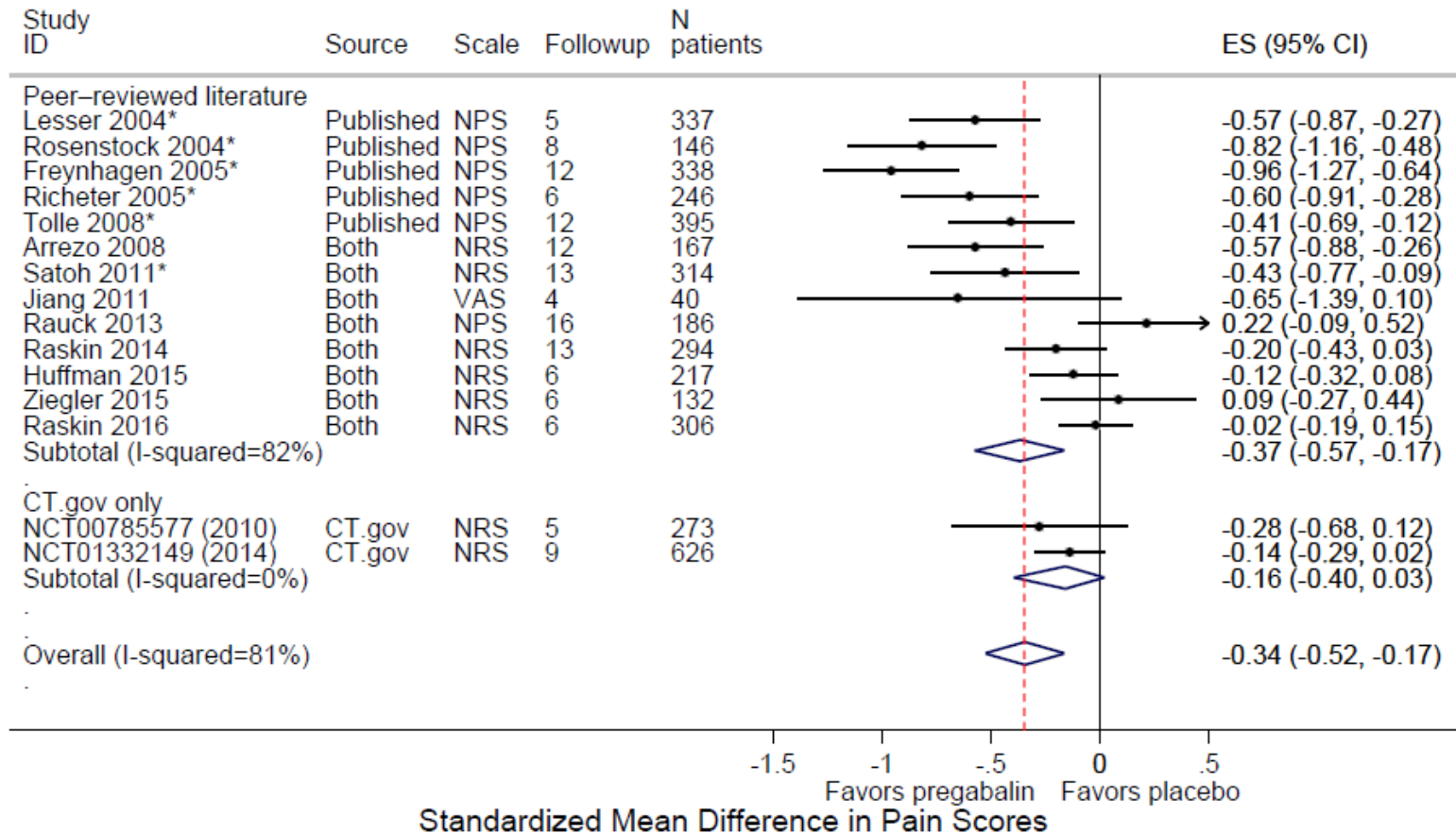
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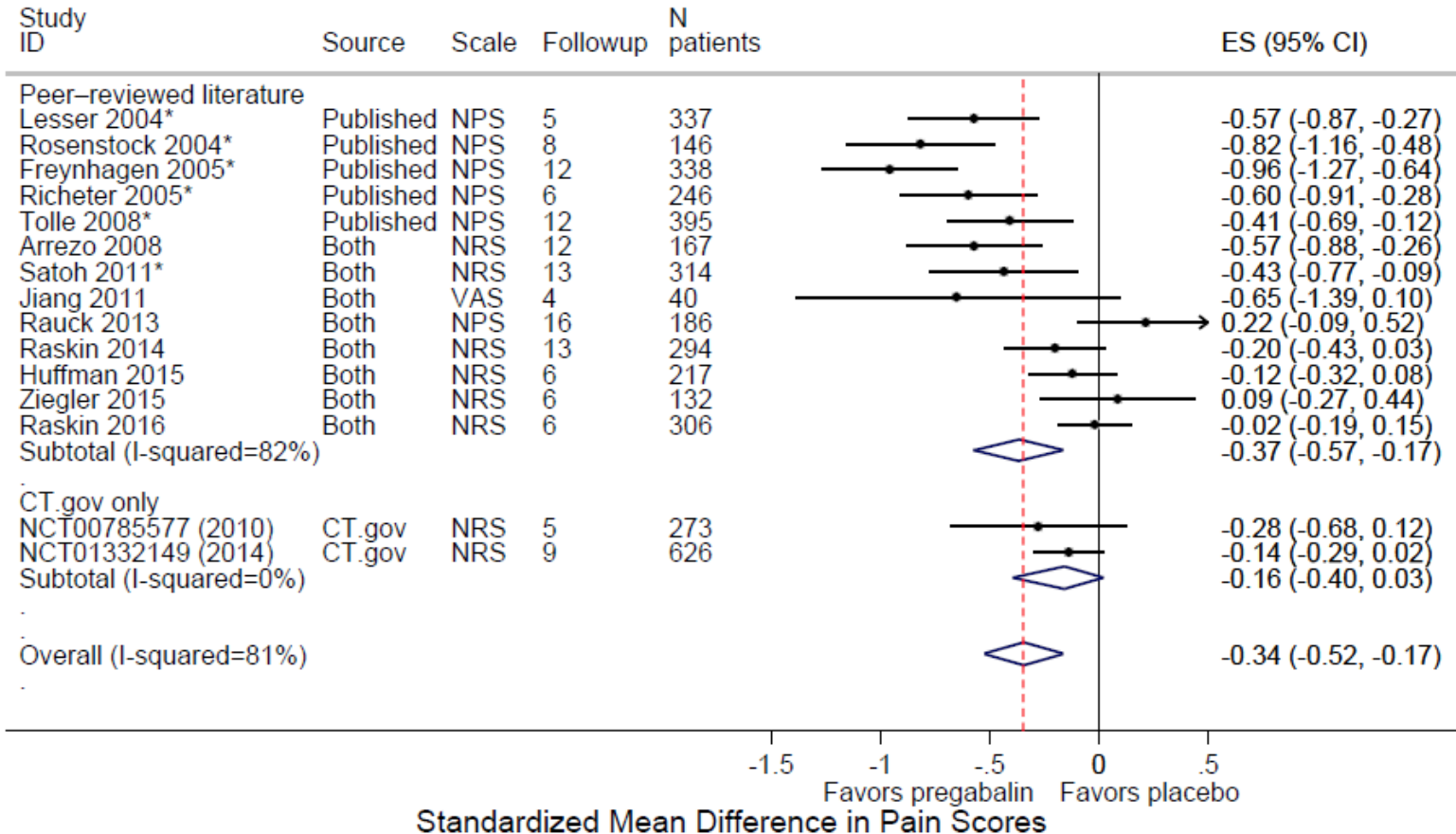
ClinicalTrials.gov identified a new study and reporting bias not already suspected

ClinicalTrials.gov reported quality of life as outcome, but not reported in paper

Results



Results



NCT00838799	NCT01504412	?
NCT01770964	NCT01928381	
NCT01939366	NCT02372578	

Discussion

- Most studies found on ClinicalTrials.gov did not sufficient information to inform conclusions or SOE
 - Sometimes, further support for reporting bias

Limitations

- Case study
- Low to moderate SOE
- Older studies
- Did not assess adverse events

To discuss

- Do we need to search ClinicalTrials.gov?
 - How can we best use what is available in ClinicalTrials.gov?
- Should we always suspect reporting bias?
- Will the new reporting requirements help?