

A supplementary search to identify additional relevant literature not captured in a systematic literature review search strategy

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Poster # MSR56

KEY TAKEAWAYS

- An additional, supplementary search of related trials identified in an initial search can be utilised to inform a systematic literature review (SLR) with a narrow population when time and resources are limited
- A supplementary search of identified trials for a clinical SLR will ensure a reduction of bias in SLR reporting
- A significant number of records were not found in the initial search strategy due to poor reporting practices
- To ensure research is not lost, authors should endeavour to follow established guidance for trial reporting, publish abstracts for reports and utilise spell check before publication

INTRODUCTION

- Current design for search strategies for SLRs to encapsulate records when using a targeted population can be challenging
- Striking the right balance between sensitivity and specificity, whilst also ensuring record numbers remain manageable and relevant, is a particular difficulty when resources are limited

CASE STUDY

- Clinical SLR with a restricted population comprised of a specific cancer with a specific gene mutation and protein overexpression
- During title and abstract (ti/ab) screening, it became apparent that not all relevant reports of key clinical trials were retrieved by the database searches
- Concerns were raised that relevant records using a broader population may not be captured with the original search strategy

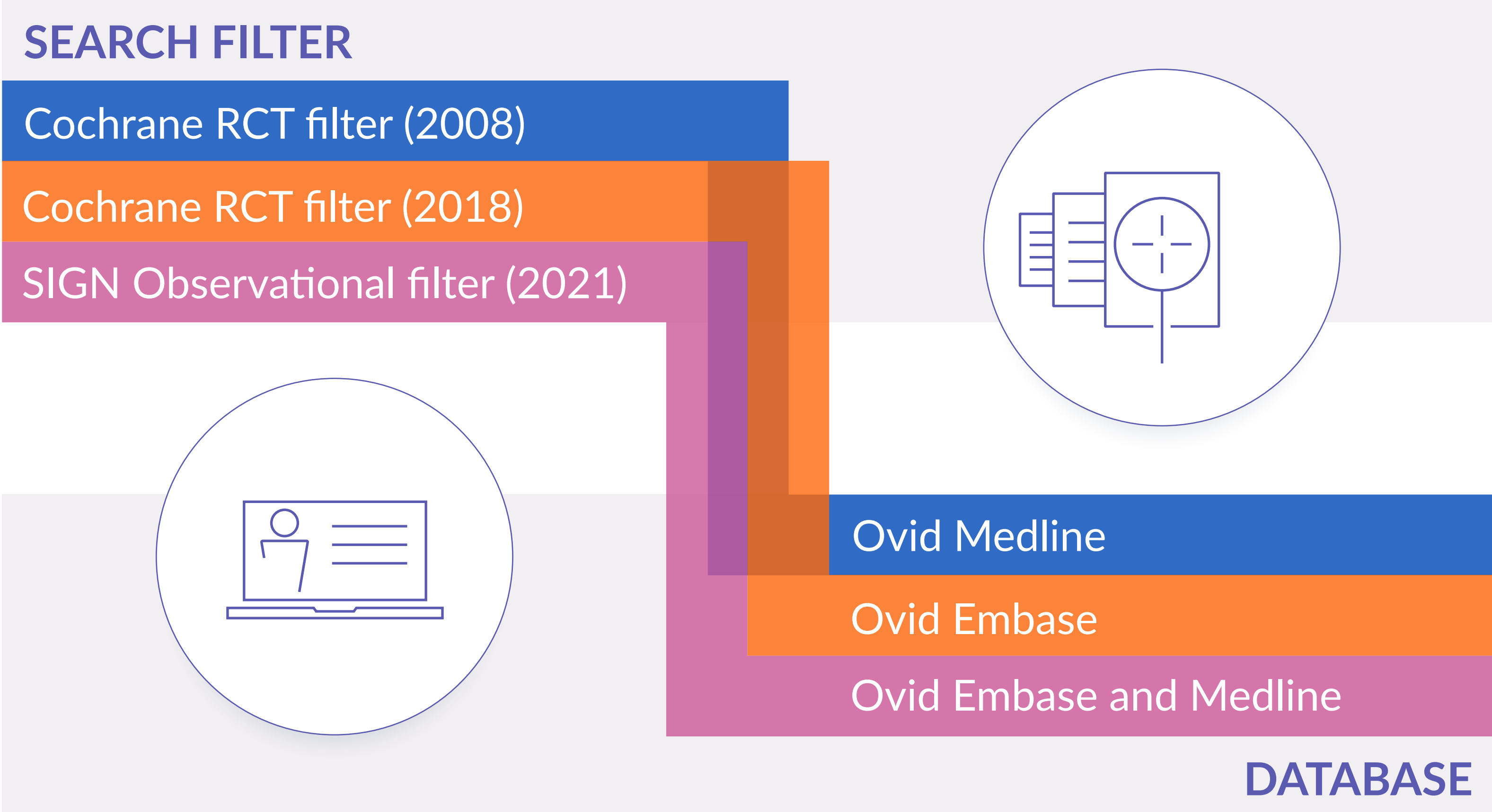
OBJECTIVES

- To ensure that all relevant published papers relating to relevant trials are found without compromising on strict search deadlines

METHODS

- A search strategy was devised for a targeted population and conducted on four databases: Ovid Medline, Ovid Embase, and CDSR and CENTRAL, via the Cochrane library
- The initial search strategy did not include any interventions
- Population terms were combined with validated, sensitive search filters per database (Table 1)

Table 1: Search filters and applicable databases used in the initial search strategy



Abbreviations: RCT, randomised controlled trial; SIGN, Scottish Intercollegiate Guidelines Network

- Following completion of ti/ab screening, named trials were identified
- A supplementary, targeted search was conducted in Ovid Embase for named trials



EXAMPLE OF THE SEARCH STRATEGY USED:

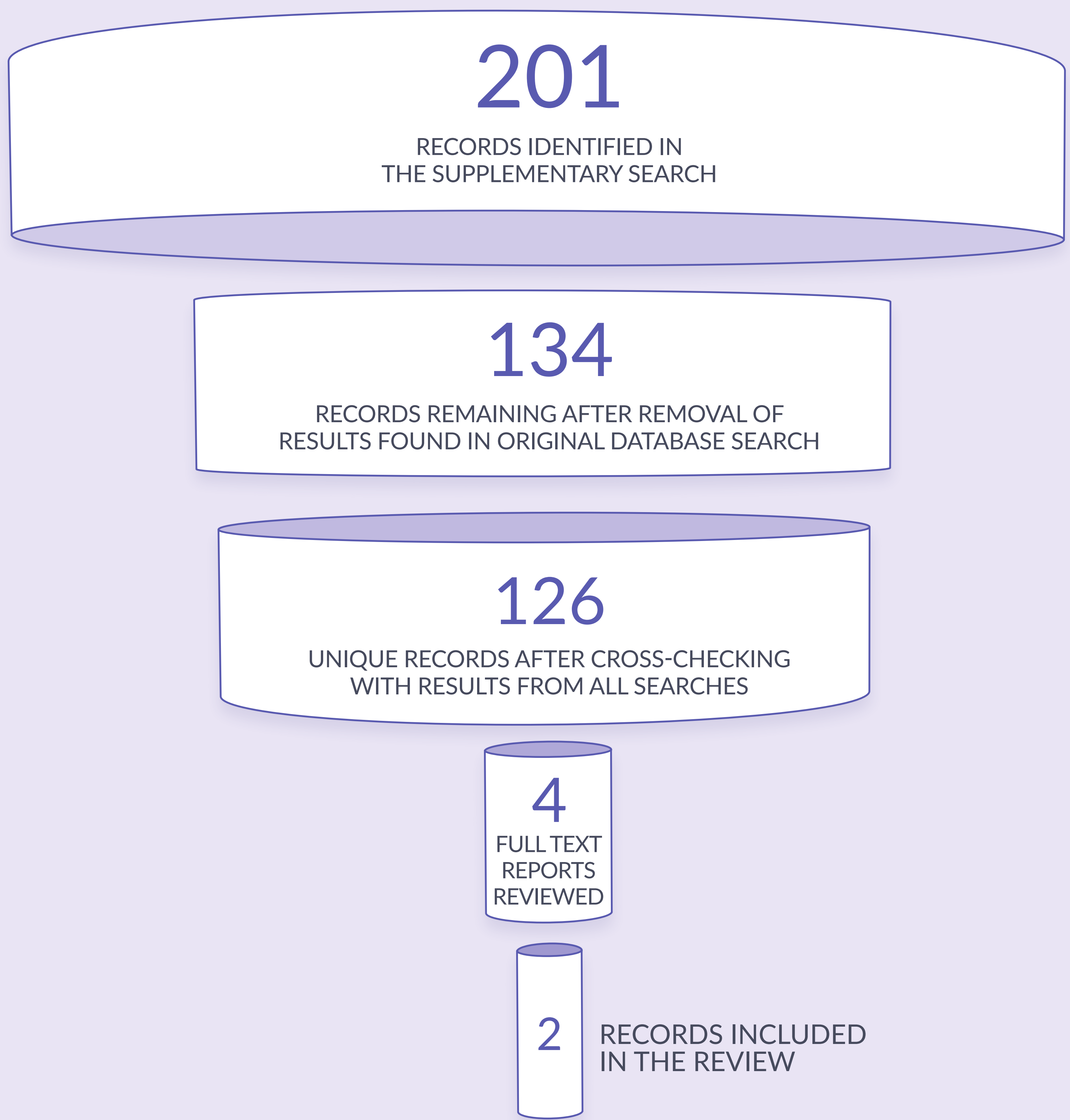
(Trial 1 or Trial 2 or “key phrase used in reporting trial 2” or Trial 3 or Trial 4 or Trial 5x or (Trial 5 adj2 (trial or study)) or Trial 6 or Trial 7).ti.ab

- Using the Boolean operator NOT, the supplementary search strategy and original search strategy were combined
- Supplementary records (n = 201) were cross-referenced against all results from the initial searches (n = 2436)
- Any unique records were analysed by an information specialist to determine why they were not picked up in the original search

RESULTS

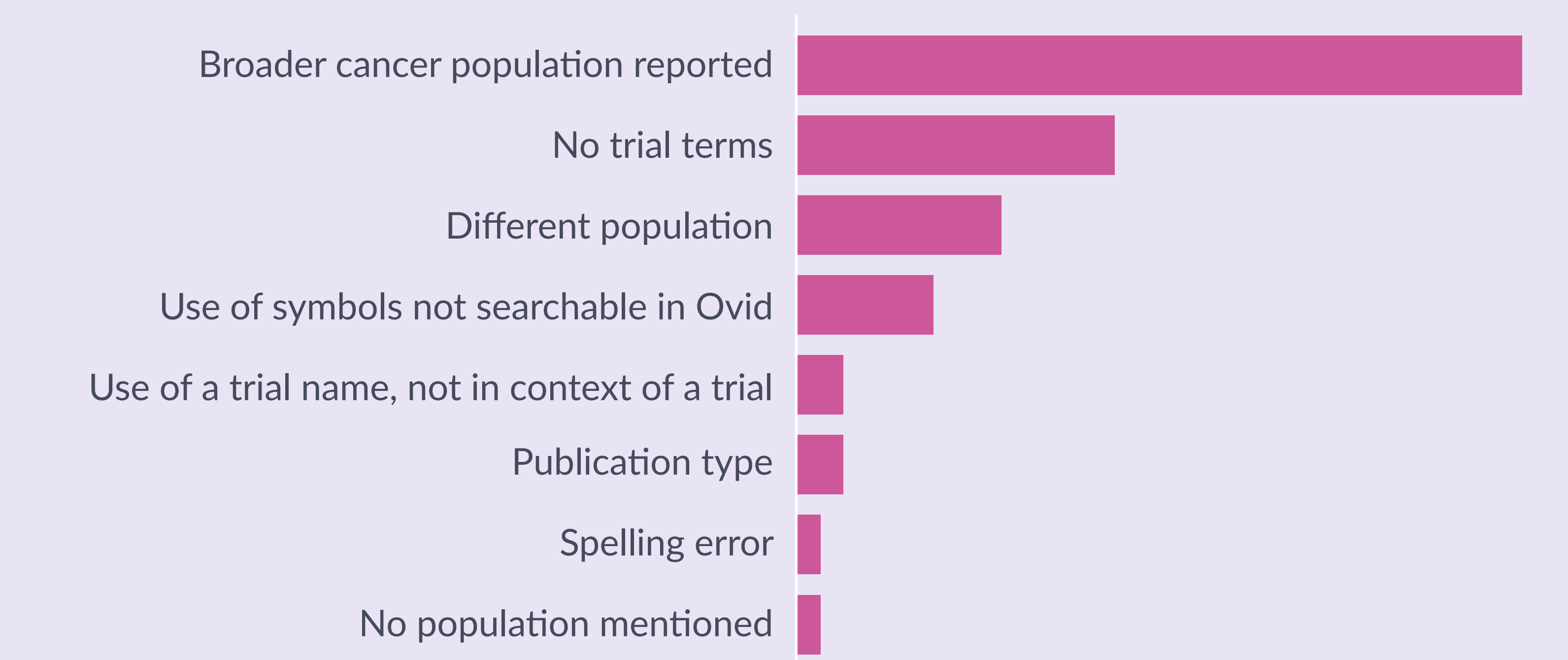
- Ti/ab screening identified 7 named trials that were relevant to the targeted population in the SLR
- The supplementary RCT search identified 201 records, the flow of these records through the review is demonstrated in Figure 1
- The unique records were assessed for eligibility against predetermined eligibility criteria by two independent reviewers

Figure 1. Flow of records identified in the supplementary search through the review



- A number of records were found where the main trial name was used for several smaller branched trials. As these records were wholly irrelevant, they were excluded from further analysis
- Reasons for each of the unique records not being picked up in the initial search are reported in Figure 2

Figure 2. Identified reasons for records being missed in the initial search strategy



- 48% of records of relevant trials were missed due to the reporting of a broader population than was searched for in the initial strategy
- 30% of the records were missed due to poor reporting by the authors, including no RCT terms (21%), use of symbols not recognised by Ovid (13%) and spelling errors in the abstract (1%)
- Lack of trial terms being reported was most commonly found in conference abstracts
- Of the four records that were assessed at full text for eligibility, the most common reason (75%) for the records being missed was that they reported a broader population and were missed by the narrow search strategy, the remaining record was missed due to no trial terms being included in it's reporting

SUGGESTIONS

- Check reporting of trials against CONSORT guidelines
- Ensure abstracts are checked thoroughly for spelling and grammar errors
- Do not use symbols such as '-' as databases (Ovid) recognise this as a space
- Ensure abbreviated terms are reported first in full, and then in their abbreviated form

CONCLUSIONS

- Including a pragmatic supplementary search step in SLRs with narrow population could be beneficial method where time and resources are limited
- The addition of a supplementary search of named clinical trials reduces bias in reporting of results