Literature Searching Getting Started

Suzannah Bridge, Matthew Henry, Carolyn Smith & Kat Steiner

Outreach Librarians, Bodleian Health Care Libraries

Oxford University Hospitals NHS Foundation Trust

BODLEIAN LIBRARIES

After this session you will be able to…

- Explain what structured searching is, and when to use it
- Break your research question down into searchable concepts
- Make use of Boolean operators (ANDs/ORs) in your structured searches

Our example question

How effective is AI at detecting breast cancer?

Why can't I just Google it?

Google Search I'm Feeling Lucky

Our example question

How effective is AI at detecting breast cancer?

Structured search: PICO (1)

How effective is AI at detecting breast cancer?

P patient / population / problem

I(E) intervention / exposure

C comparison, control

O outcome

Other frameworks are available, particularly for qualitative research. See https://guides.lib.unc.edu/pico/frameworks

Structured search: PICO (2)

How effective is AI at detecting breast cancer?

P	patient / population / problem	→	people being screened for breast cancer
I(E)	intervention / exposure	→	artificial intelligence screening
C	comparison, control	→	n/a
O	outcome	→	efficacy of AI screening

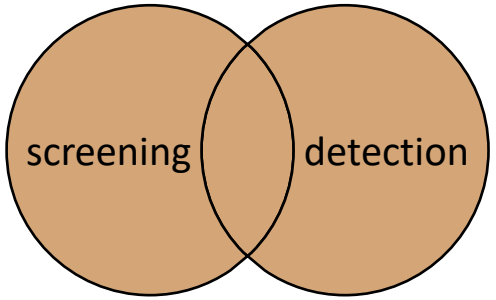
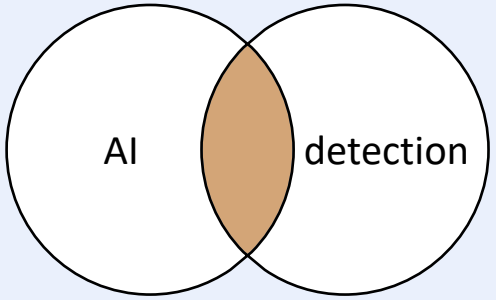
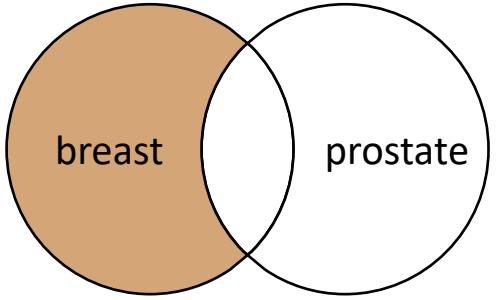
Structured search: search terms

Concept 1	→	breast cancer
Concept 2	→	AI
Concept 3	→	screening

Structured search: search terms

Concept 1	→	breast cancer, breast tumour
Concept 2	→	AI, artificial intelligence, machine learning
Concept 3	→	screening, screen, detection, detect

Structured search: combining terms (1)

OR	Broadens your search		screening OR detection
AND	Narrows your search		AI AND detection
NOT	Narrows your search		breast NOT prostate

Structured search: combining terms (2)

("breast cancer")

AND

(ai **OR** "artificial intelligence" **OR** "machine learning")

AND

(detect **OR** detection **OR** screen **OR** screening)

AND = Combining different search concepts, narrows search

OR = Combining synonyms for the same concept, broadens search

Structured search: shortcuts (1)

- **" " quotation marks** – used when searching for phrases
  - e.g. "artificial intelligence"
- *** asterisk** – used to find different word endings
  - e.g. detect* will find detect, detects, detected, detection

Structured search: shortcuts (2)

("breast cancer*")
AND
(ai **OR** "artificial intelligence" **OR** "machine learning")
AND
(detect* **OR** screen*)

* = truncation
" " = phrase searching

Structured search: applying limits

Filter by:

- date,
- language,
- publication type (e.g. systematic review, RCT),
- age groups

This carefully about what limits you might want to apply and why.
You should have a clear rationale.

Demonstration

pubmed.ncbi.nlm.nih.gov

Managing and organising references

Reference management software

- EndNote and RefWorks (OU subscription)
- Zotero (Free)

Learn more in another workshop

- iSkills sessions

Search process: note taking

At some point, you'll write up your review. To report the search accurately keep notes on:

- Search terms used – full search strategy for each database
- Limits applied
- Databases & web-sites searched
- Date of search

Search process: questions

- Contact us
  - hcl-enquiries@bodleian.ox.ac.uk
- LibGuides
  - Literature Searching
  - Medical Researchers: Research Resources
- Resource list – will be emailed to you after this session