COFFEE

LECTURE

UNIVERSITÄT BERN

Evidence Synthesis: The Foundation of Evidence-Based Practice and Research

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Research support services
Medical Library

Wednesday,
07.05.2025,
13:00, Zoom

Outline

1. Context of Evidence synthesis
2. Family of reviews
3. Sources and guidelines
4. How to choose?
5. Conclusions

Background

What are the common elements shared by research and Evidence-based practice?

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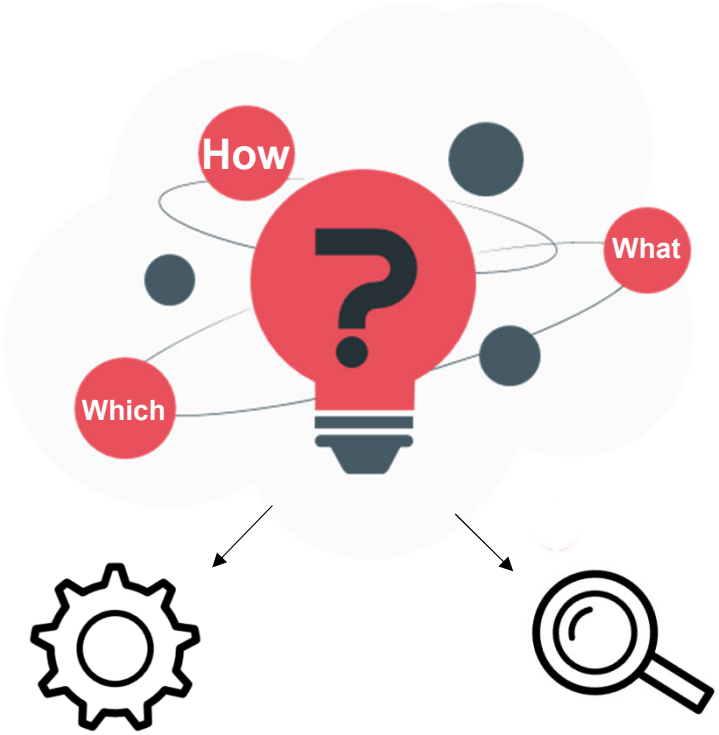
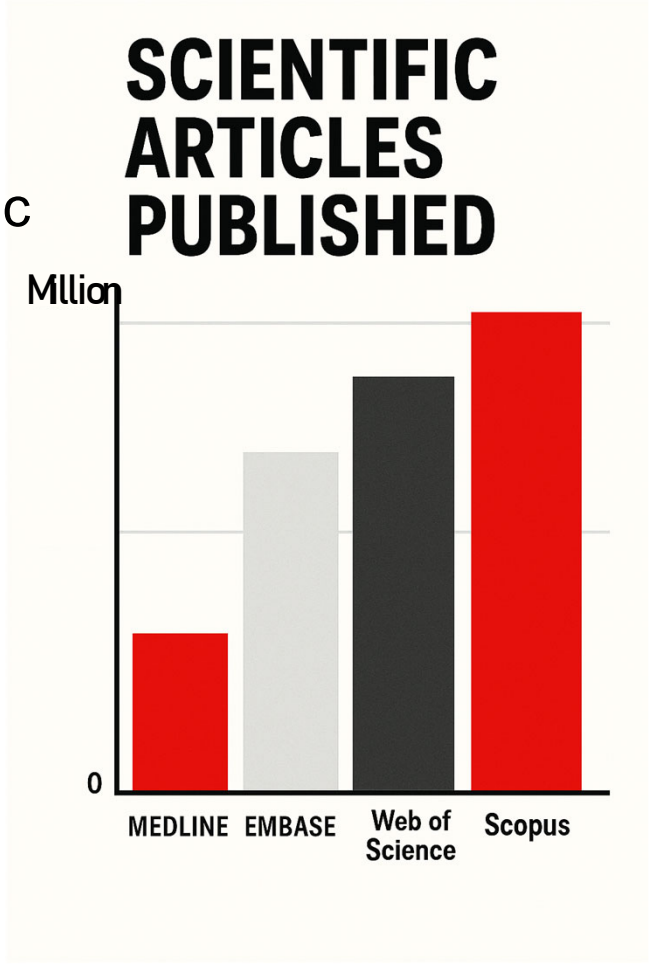


Challenges are opportunities

The large and rapidly growing body of scientific literature

Differences in the complexity of the information to be synthesized (medications vs social health determinants)

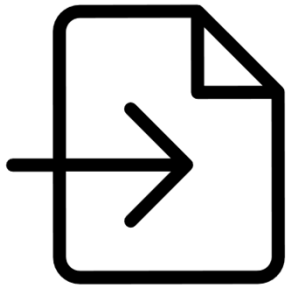


Challenges are opportunities

Evidence synthesis

Method

Transformed



Scientific document

Family of reviews

Systematic Reviews

Use a systematic, documented method to minimize bias, random errors and answer specific questions (e.g., efficacy or effectiveness).

Non-Systematic Reviews

Summarize literature on broad questions using a less rigid but documented process.

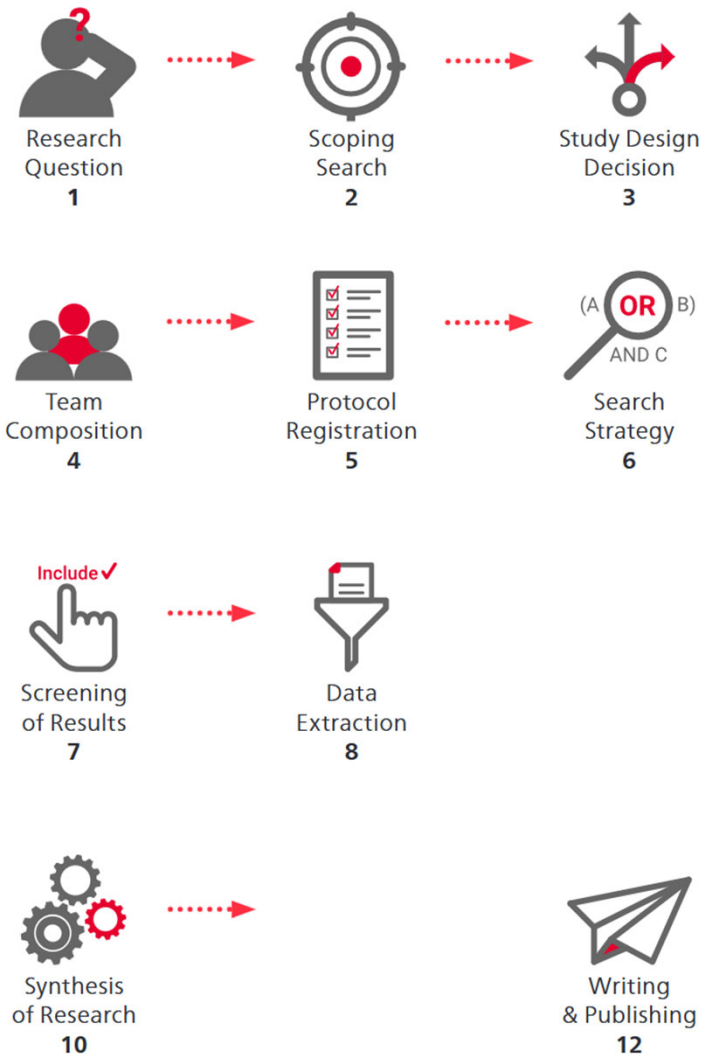
Narrative Reviews

Support a particular viewpoint; methods may be undocumented and subjective.

Workflow for Systematic Reviews

Image source:https://www.ub.unibe.ch/unibe/portal/unibiblio/content/e6250/e6264/e984201/e1247589/e1415461/EvidenceSynthesisServices_BibMed_Bern_ger.pdf

Workflow for Non-Systematic Reviews



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Workflow for Narrative Reviews

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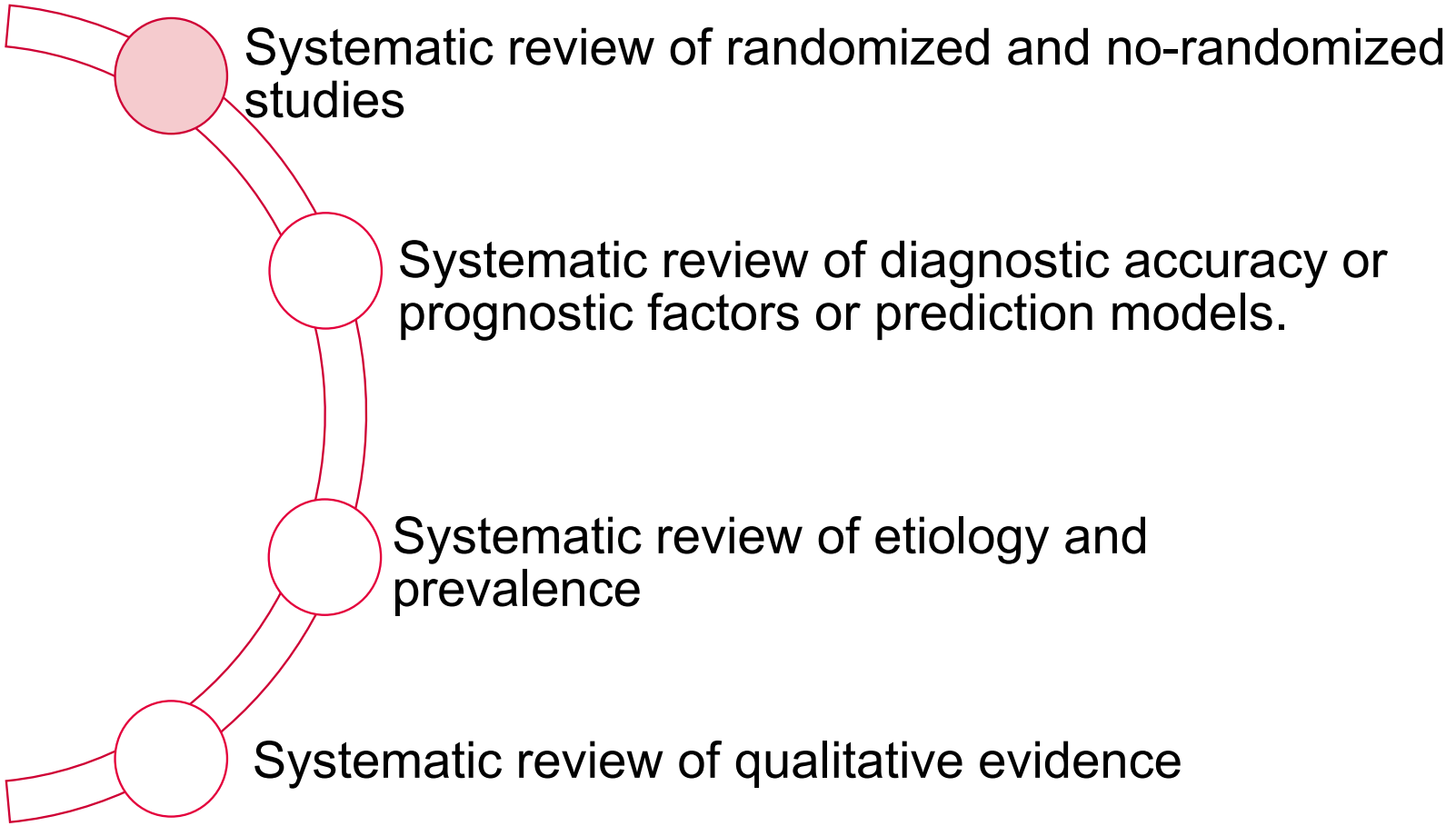
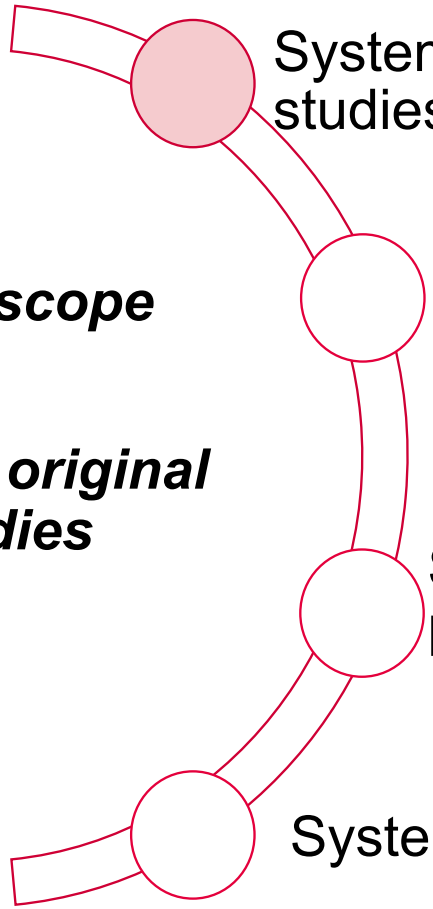
Examples of systematic reviews



Examples of systematic reviews



Clear scope

Source: original studies

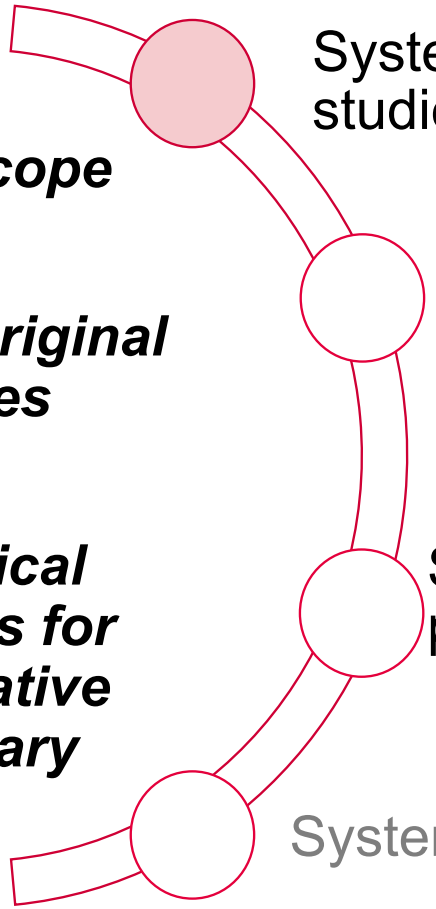
Systematic review of randomized and no-randomized studies

Systematic review of diagnostic accuracy or prognostic factors or prediction models.

Systematic review of etiology and prevalence

Systematic review of qualitative evidence

Examples of systematic reviews



Clear scope

Source: original studies

Statistical methods for quantitative summary

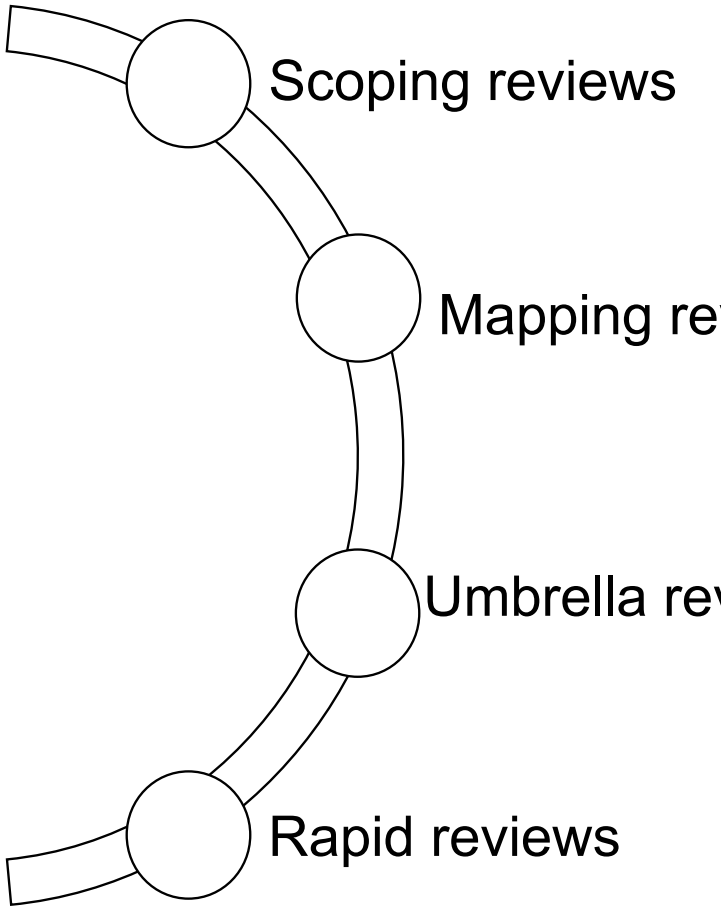
Systematic review of randomized and no-randomized studies *meta-analysis*

Systematic review of diagnostic accuracy or prognostic factors or prediction models *meta-analysis*

Systematic review of etiology and prevalence *meta-analysis*

Systematic review of qualitative evidence

Examples of non-systematic reviews



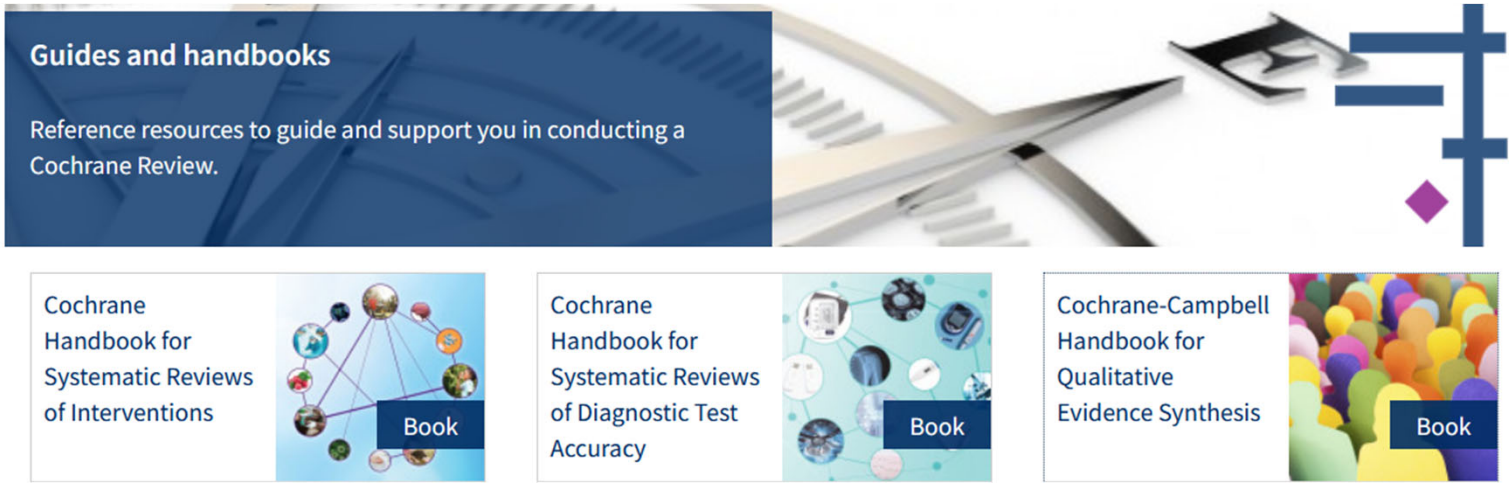
To identify and map the *scope* of available evidence on a topic, including both *primary and secondary studies*.

Produce a *map* that displays the available evidence and facilitates the identification of gaps.

To synthesize evidence from multiple *systematic reviews* and *meta-analyses*.

To rapidly summarize available evidence to support urgent decision-making.

Methodological guidelines



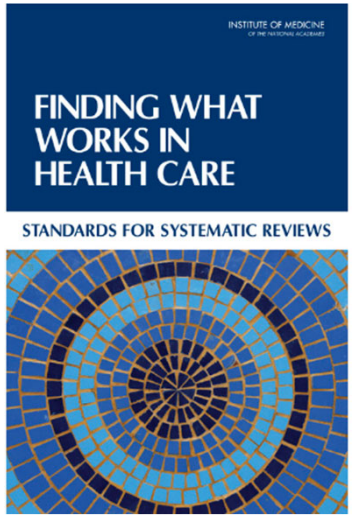
https://training.cochrane.org/handbooks

Methodological guidelines

JBI

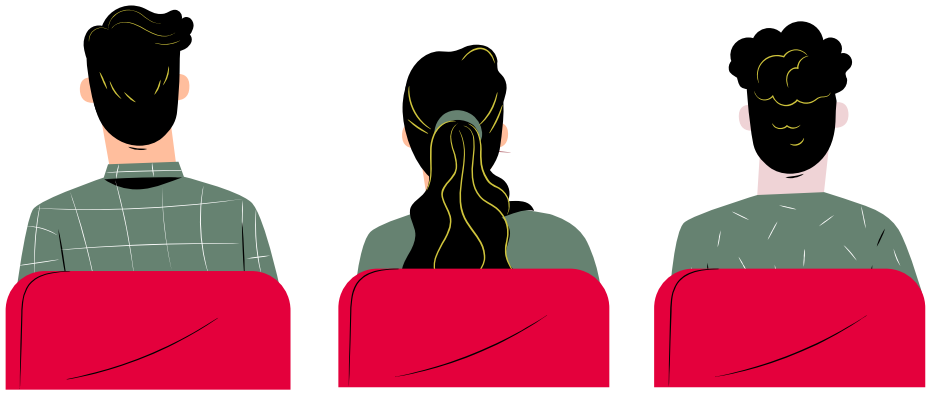
JBI Manual for Evidence Synthesis

- About this Manual
- Contributors
- Chapter 1: JBI Systematic Reviews
- Chapter 2: Systematic reviews of qualitative evidence
- Chapter 3: Systematic reviews of effectiveness



How to select the methodology?

- Aim
- Type of evidence to be synthesized
- Type of analysis to be performed
- Time and resources available



How to select the methodology?

Previously known as "What Review is Right for You?"

This tool is designed to provide guidance and supporting material to reviewers on methods for the conduct and reporting of knowledge synthesis.

Select the type of review:

Quantitative | Qualitative

https://whatreviewisrightforyou.knowledgetranslation.net/

Conclusions

- There are three major and growing families of reviews, generally classified by their titles as systematic, non-systematic, or narrative reviews.
- Systematic and non-systematic reviews share methodological similarities, particularly in the rigor of their literature search (i.e., systematic searching).
- The correct review type is determined by the aim, type of studies, type of analysis, and sources of the work being carried out.

Are you interested?

Contact the Research Support Team

support_med.ub@unibe.ch

Visit the Research Support for Medicine and Pharmacy website

www.unibe.ch/ub/medresearch

References

- ***Meeting the review family: exploring review types and associated information retrieval requirements*** https://onlinelibrary.wiley.com/doi/epdf/10.1111/hir.12276
- ***What kind of systematic review should I conduct? A proposed typology and guidance for systematic reviewers in the medical and health sciences*** https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/s12874-017-0468-4
- ***Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach*** https://pubmed.ncbi.nlm.nih.gov/30453902/

References

- ***What is an evidence map? A systematic review of published evidence maps and their definitions, methods, and products*** https://doi.org/10.1186/s13643-016-0204-x
- ***A 24-step guide on how to design, conduct, and successfully publish a systematic review and meta-analysis in medical research*** https://doi.org/10.1007/s10654-019-00576-5
- ***Mapping reviews, scoping reviews, and evidence and gap maps (EGMs): the same but different- the "Big Picture" review family***
  https://pubmed.ncbi.nlm.nih.gov/36918977/

Thanks

for your attendance

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Next Coffee Lectures, slides and screencasts:

http://
bib.unibe.ch/scimed

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Now there is time for...

Questions & Discussion

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