## Google search

## Critical Appraisal Worksheets

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#### Worksheets

- Different kinds of research are :
  - different in terms of methodological validity
  - how they present their results
  - how they translate to an individual patient
- http://www.cebm.net/critical\_appraisal.asp
  - At CEBM : <a href="http://www.cebm.net/index.asp">http://www.cebm.net/index.asp</a>
  - You can access worksheets by clicking the links, or you can download the whole lot as a PDF



#### Different kinds of research

- Primary Studies
  - Therapy
  - Diagnosis
  - Prognosis
  - Harm / Etiology
  - Systematic Reviews
    - http://intmedweb.wfu bmc.edu/mwilson\_pro ducts/critical/index.ht ml

- Primary Studies
  - Systematic Review
  - Decision Analysis
  - Practice Guidelines
  - Economic Analysis
  - Health Services Research
  - Clinical Utilization Review

# CASP

- Critical appraisal is the process of deciding whether a piece of research can help you in answering your clinical question
- There are three questions you need to ask about any kind of research:
  - Is it valid?
  - Is it important?
  - Is it applicable to the patient?



## Diagnosis

- Validity check
  - Did the study include an independent blinded comparison with gold standard?
  - Did the patient sample include an appropriate spectrum of patients similar to those found in the general practice?
  - Was the gold standard applied to all case?
- What are the results?
  - Can you calculate the LR+, LR-?

## Therapy

#### Validity check

- Were the assignment of patients to treatment groups randomized?
- Were all enrolled patients accounted for at the conclusion of the study?
- Intention-to-treat analysis: yes/no?
- Was the study double-blinded: yes/no?
- Were the treatment groups similar at the start of the study?

#### What are the results?

- Can you calculate the NNT, NNH?
- What is the relative risk, odds ratio?
- How precise are these estimates (CI)?



#### Validity check

- Was exposures and outcomes measured similarly in the groups compared?
- Were the comparison groups similar in outcome in all respects except for the variable studied?
- Was the follow-up adequate?
- Was there a temporal and dose relationship?
- What are the results?
  - What is the relative risk, odds ratio?
  - How precise are these estimates (CI)?



### **Prognosis**

- Validity check
  - Was the patient sample representative at a well-defined point in the course of the disease or disorder?
  - Was the length of follow-up adequate?
  - Was the follow-up complete?
- What are the results
  - http://evidence.ahc.umn.edu/fundamentals\_of\_ ebhc\_practice.htm



## 例: Systematic Reviews 3-1

- Are the results of this systematic review valid?
  - Did this review address a focused clinical question?
  - Were the criteria for article inclusion appropriate?
  - Is it unlikely that relevant studies were missed?
  - Was the validity of the included studies appraised?
  - Was the assessments of studies reproducible?
  - Were the results similar from study to study?



## 例: Systematic Reviews 3-2

## What Are the Results?

- What are the overall results of the review?
- How precise are the results?



## 例: Systematic Reviews 3-3

- Will the Results Help Me In My Patient Care?
  - Can the results be applied to my patients?
  - Were all clinically important outcomes considered?
  - Are the benefits worth the harms and costs?

## 結論: Based on the JAMA User Guides series

