

How to read a scientific paper

In everyday practice

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# Scientific papers

• PubMed search - no. of publications

- Palliative 2018 7574
- Pain 2018 61535
- Morphine 2018 1946
- Euthanasia 2018 700
- It is impossible to read all papers

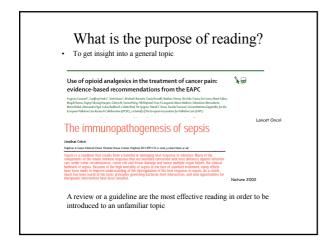
#### Strategies to limit the number of papers Papers on "palliative care and 2018" 6179 Total number · Include only English literature 5965 · Include one category of papers - Clinical trials 230 732 - Reviews - Metaanalyses 63 - Randomized clinical trials 171 · Read only high quality journals - JAMA (including JAMA spin off journals) 4 RCT (53 total) – NEJM 1 RCt (3total)

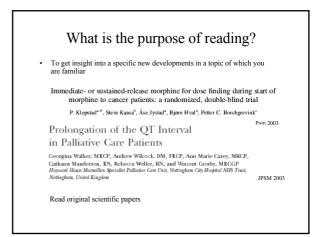
Strategies to limit the number of papers Papers on palliative care in 2018

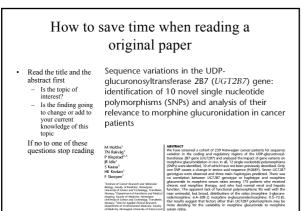
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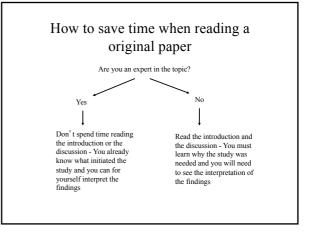
- Read only journals devoted to palliative medicine
   J Pain Symptom Manage 25 clinical trials
- Read only papers by well known researchers
   Kaasa 26
- Read only guidelines

What is the purpose of reading?
To do research
Sarch by PubMed, find important papers summarizing the topic, browse the references in those papers, repeat browsing in these papers, use ISI or similar to find papers that have cited the important papers. Do this procedure repeatedly until you are not able to find new information. Some days work
To get insight into a topic you are interested and know well
Use PubMed or other databases in order to find new papers. Use automatic search strategies
To learn something new
Browse a journal within your or a general field. And perhaps for typersonal opinion)









### Do you need to read the paper? Is it new?

- New original question?
- Larger population than previous studies?
- Improved methods?
- Other populations than previous studies?

### Is the paper relevant for your practice? Who is the study about?

- How were the participants recruited?
  - Consecutively
  - One or more centers
  - Be aware of selection bias
- Does the paper describe the patients in enough detail
- Who was included in the study
- · Does the study population reflects your patients?
- Were the subjects studied in real life circumstances?

# Can you trust the results? Design good enough?

- Was the design of the study sensible? – What intervention was studied and what was it
  - compared with?What outcome was measured and how?
  - What outcome was measured and no
     Was systematic bias avoided?
  - was systematic bias avoided?
     Recall bias
    - Observer bias
    - · Patient related bias
  - Was the outcome predefined?

## Can you trust the paper? Results valid?

- How are the results presented?
  - Did the results reflect the aim of the study?
  - Was the study groups comparable?
  - Was the results also presented as absolute numbers?
  - Is drop-outs and patients not included accounted for?
  - Is the results of clinical significance?

### And finally

### After reading

- Do you know why they did the study?
- Is the patients similar to your patients?
- Have they assessed what matters?
- Do you trust the findings?