College of the European School of Oncology

Learning to care online

e-session 523001

Publishing and Presenting Your Research Findings

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Publishing and Presenting Your Research Findings

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Aims of the presentation

To understand:

- How to plan a good oral presentation
- How to design a poster
- The ethical obligation to publish
  - and the problem of Publication Bias
- Principles of authorship and other ethical issues
- What to include in an abstract
  - both for a publication and presentation at a meeting
- What to include and what to avoid in a paper
- How to select a relevant journal

How to plan a good oral presentation

Advice: Think of all the awful presentations that you have sat through, analyze why they were poor, and avoid making the same errors

Major reasons:

1. No clear plan
2. Couldn't read or understand the slides – too much on them
3. Too many slides. Spoke too quickly. Didn't take time to explain
4. Ran over time

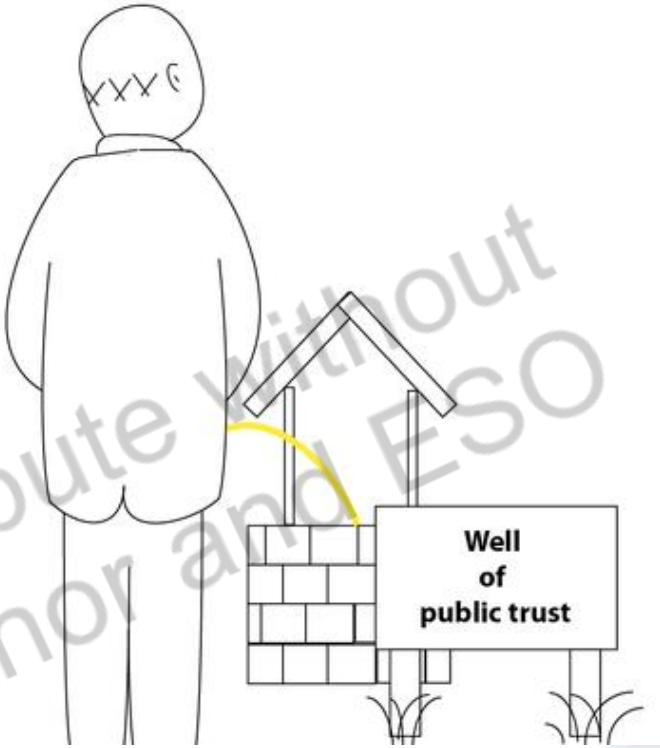
How to plan a good oral presentation

- Who is your audience? – plan your talk for them
- Plan to fit your allotted time
  - For a 10 minute slot plan about 10 slides
- Plan the presentation like the paper
  - Study design, Patients and Methods, Main results, Discussion and Conclusions
- Avoid unnecessary details - Speak slowly and clearly
  - Respect that many in your audience will not be native English speakers

Tannock's rules for posters

- You must stand 3 meters (10 feet) away from it and be able to read every word.
- Minimum font size is 24 or 20 bold
  - Do not include an abstract that nobody can read – you can provide an abstract as a hand-out
  - Use point-form and not long sentences
- You can make at most 3 main points
  - The more you put in the less people will remember

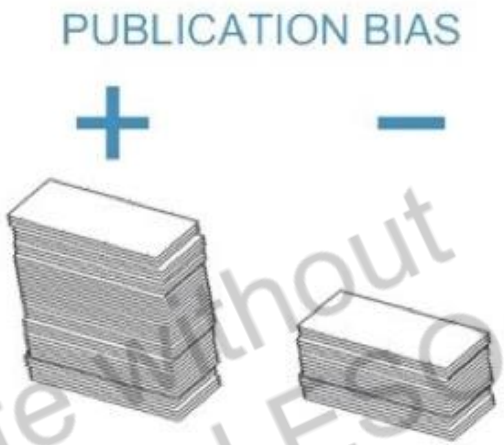
Publication is an ethical requirement



- Research has no value unless its results are available to others.
- Failure to publish breaks an implicit contract with the patients who participated, and with those who funded the research.

You have an ethical obligation to present and publish the results of your research

Publication (and Presentation) Bias



- Publication should depend on the quality of the study

Authors are more likely to publish or present a study if it appears to have "positive" results

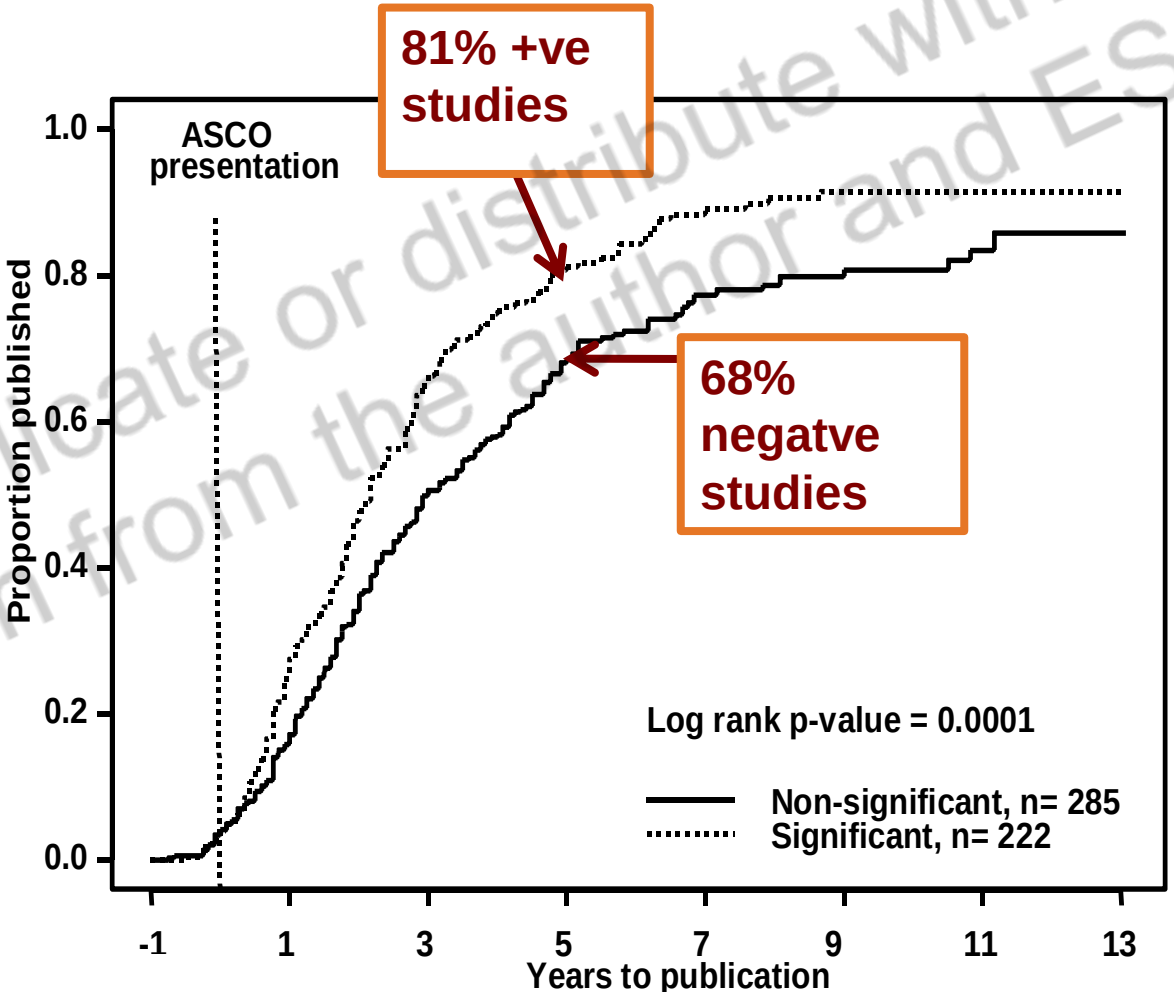
Journals and Meetings are more likely to accept a paper if it appears to have "positive" results

This leads to bias in the literature, and can lead to inappropriate management of patients

Publication Bias applies to all trials

(Krzyzanowska et al, JAMA 2003;290:495-50)

For 510 RCTs reported in ASCO abstracts, there was delayed publication of negative trials



Ethical Issues in Publication

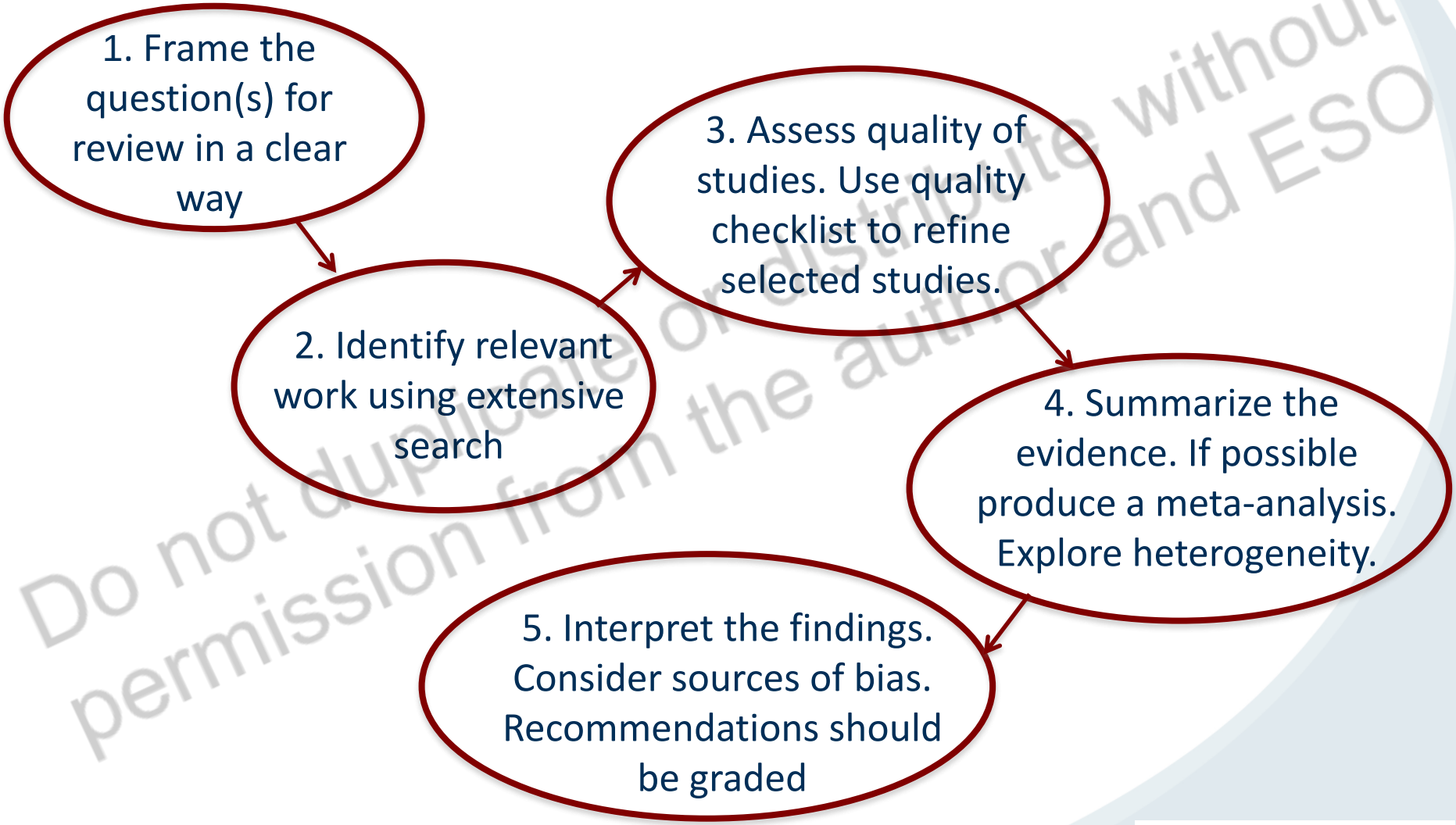
1. Duplicate Publication
2. Authorship and Order
3. Scientific Misconduct (including plagiarism)
4. Conflict of interest

Systematic Review of the Literature

- Before starting ANY clinical research study, and before publishing, undertake a systematic review of the literature
- Search databases of publications such as Medline, PubMed and the Cochrane library using appropriate search terms
- Reference lists of relevant articles should be searched to detect relevant papers that may have been missed
- If there is no high-quality published review of the topic, it is appropriate to publish a systematic review

A Useful Guide for Systematic Reviews

(Khan, et al. J R Soc Med 2003; 96:118-121)



Developing principles for…

- Authorship should be decided before study is opened.
- All authors must have made substantive contributions
- Study chair is responsible for drafting the MS. All authors must approve the final MS.
- Other authors would usually include
  - Study statistician
  - Investigators active on the steering committee
  - Investigators who accrue more than a predefined number of patients

What to include in the abstract of your paper or presentation?

1. The primary endpoint should be defined explicitly
2. The concluding sentence of the abstract should relate only to the primary endpoint
3. The abstract should include a statement of major toxicity

Unfortunately many reports, both in high level journals and at ASCO or ESMO, do NOT meet these simple requirements

Bias in reporting of end points of efficacy and toxicity in randomized, clinical trials for women with breast cancer

Annals of Oncology 00: 1–6, 2013

F. E. Vera-Badillo, R. Shapiro, A. Ocana, E. Amir & I. F. Tannock*

- We identified 164 reports of RCTs for breast cancer, published between 1995 and 2011
- 92 of 164 trials showed no significant difference in their primary endpoint
- In 59% of reports of these 92 trials the concluding statement of the abstract used secondary endpoints to suggest benefit
- Only one third of reports indicated the frequency of grade 3-4 toxicity in the abstract

Recommendations for what **not** to include in an abstract

- Analyses of endpoints that are not pre-specified in the protocol
- Results of subgroup analysis that are not pre-specified in the protocol

This is data dredging and can give results that are statistically invalid

Writing the paper

Background

- What is the question and why is it important?
- What information is already known and what is not known?
- How have you addressed this deficiency?
- What are the objectives of the research – what are your hypotheses?

CONSORT statement of what to include in a report of a clinical trial

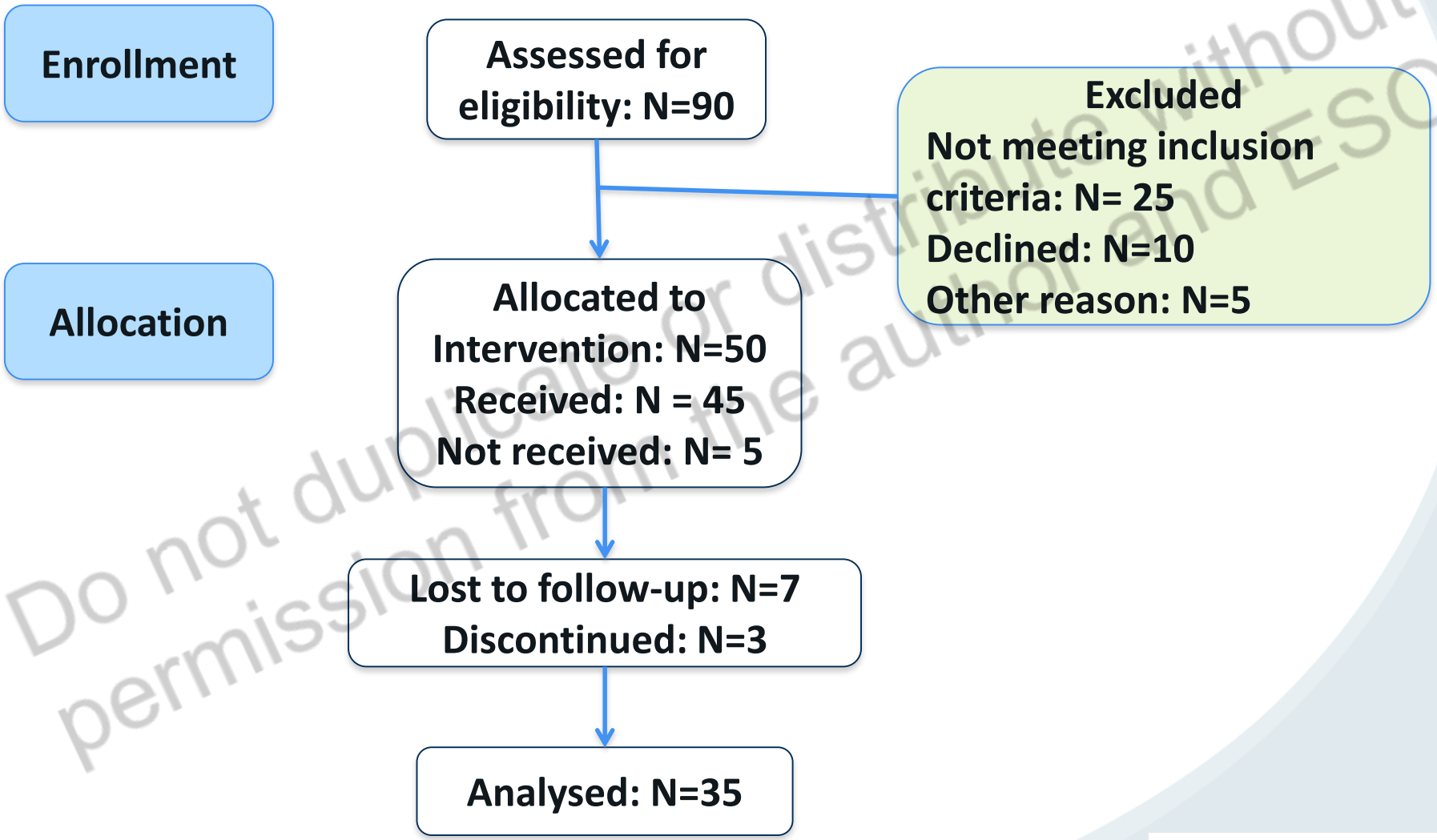
http://www.consort-statement.org/

Methods	**Participants** **Interventions** **Objectives** **Outcomes** **Sample size** **Randomisation** **Blinding** **Statistical methods**	**Results**	**Participant flow** **Recruitment** **Baseline data** **Numbers analysed** **Outcomes and estimation** **Ancillary analyses** **Adverse events**
		Discussion	**Interpretation** **Generalisability** **Overall evidence**

Methods

- How did you design the study?
- Which people were recruited and how (if it is a clinical study)?
- Include tools (questionnaires), measures, devices etc. (details can be in an on-line appendix)
- Which statistical methods were used?
- Describe ethics clearance (including animals if used)
- Should be detailed enough for someone else to reproduce your work

Results: Use CONSORT diagram for a clinical study



Results

Report your main result (primary endpoint)

- Report only pre-planned analyses
- Group, tabulate and graph
- Do not duplicate tables and text
- Do not overinflate data
- Do not *slip* interpretation into results

Discussion

- Start with summary statement of the main finding
- Why is it important, surprising, concerning?
- How does this compare to other work?
- Main strengths and main limitations
- Implications for practice, implication for future research
- Conclusion – what is the main point?

Simple words

- a majority of = most
- at the present time = now
- give rise to = cause
- in some cases = sometimes
- is defined as = is
- it is believed that = I think
- on the basis of = by
- subsequent to = after

What to avoid in your paper

- Length
- Conclusions not based on the primary endpoint
- Multiple significance tests & analysis of subgroups
- Overstatement
- Claiming to be first
- Criticism of others
- Comparing with other single arm studies

Multiple Significance Tests (Data Torturing)

They are used in comparing treatment effects between randomized groups due to:

1. Use of multiple endpoints
2. Subgroup analysis
3. Repeated analysis of data after different time intervals

Beware of Subset Analysis

5-FU and levamisole as adjuvant treatment for Dukes C colon cancer

1. Mayo Clinic Trial (Laurie et al, JCO 1989;7:1447)

   More effective for men, older patients

2. Southwest Oncology Group Trial
   (Moertel et al, NEJM 1990;322:352)

   More effective for women, younger patients

Selecting a journal

A balance between ambition and common sense

- Reasonable to try first a journal with high impact factor (IF) that publishes your type of research
- Often you will need to resubmit to journal with lower IF
- There are many "scam" journals. Submit only to those referenced in PubMed

What to do with rejection?

- Don’t take it personally
- Use the feedback provided
- Refocus and resubmit quickly
- Seek help of a senior mentor

Happy Writing and Presenting!

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Thank you!

for participating in this

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