

How to write an outstanding manuscript

David J. Kerr

**“This chap started talking to me about this and that -
about which I know very little”**

Chick Murray

Publishing in oncology: specific aspects

- 1. Always cite Annals of Oncology**
- 2. If it's good, submit it to Annals**
- 3. Use recognised standards – RECIST, NCI CTC, etc.**
- 4. Think: Leukaemia or Leukemia?**
- 5. Also: Gleevec or Glivec?**
- 6. Er...**
- 7. ...that's it**

Even not outstanding manuscripts will get published somewhere

“There seems to be no study too fragmented, no hypothesis too trivial, no literature citation too biased or egotistical, no design too warped, no methodology too bungled, no presentation of results too inaccurate, too obscure, and too contradictory, no analysis too self-serving, no argument too circular, no conclusions too trifling or too unjustified, and no grammar and syntax too offensive for a paper to end up in print.”

Rennie (JAMA, 1986)

We must do better than that

Journals are for medicine not medicine for journals

“Authors and editors should have the same goals: the advancement of scientific understanding and improvement in the treatment and prevention of disease.”

Altman (JAMA, 2002)

What is important ?

- Ethics
- Using international standards
- Understanding and reporting quantitative methods
- Read as much as you can, write no more than you must

Ethics (i)

- Whatever the results, always publish – you have a responsibility to trial patients, and to ensure the completeness of the evidence base
- Generally, only publish when you have all patient data – you have a responsibility to patients to include their results
- Publish sub-studies appropriately – i.e. as agreed by the trials group and never jeopardise the full report
- Report possible conflicts of interest

Ethics (ii)

- Informed consent is essential
- Understand the Declaration of Helsinki – particularly with respect to choice of controls
(<http://www.wma.net/e/policy/b3.htm>)
- Follow ethical approval procedures for trials

(Much more on publication ethics from COPE

www.publicationethics.org.uk/)

Use recognized standards

Use RECIST, NCI-CTC, TNM, etc.

- But be specific about versions, dates and sources

Understand quantitative methods

- If you can, involve a statistician in your research from the outset
- Even if you can, make the effort to understand what you are doing – statistics is not simply a tool for data analysis it is vital to trial design
- If you can't involve a statistician, use recognised statistical designs
- Even if you use a recognised design, make the effort to understand what you are doing
- Always make the effort to describe your quantitative methods

Reporting clinical data collection

Consider

- WHO collected the data and from whom and give numbers?
- WHAT data were collected?
- WHEN – frequency and intervals
- WHERE – describe the setting
- HOW – collection and analysis
- WHY was this approach taken?

CONSORT

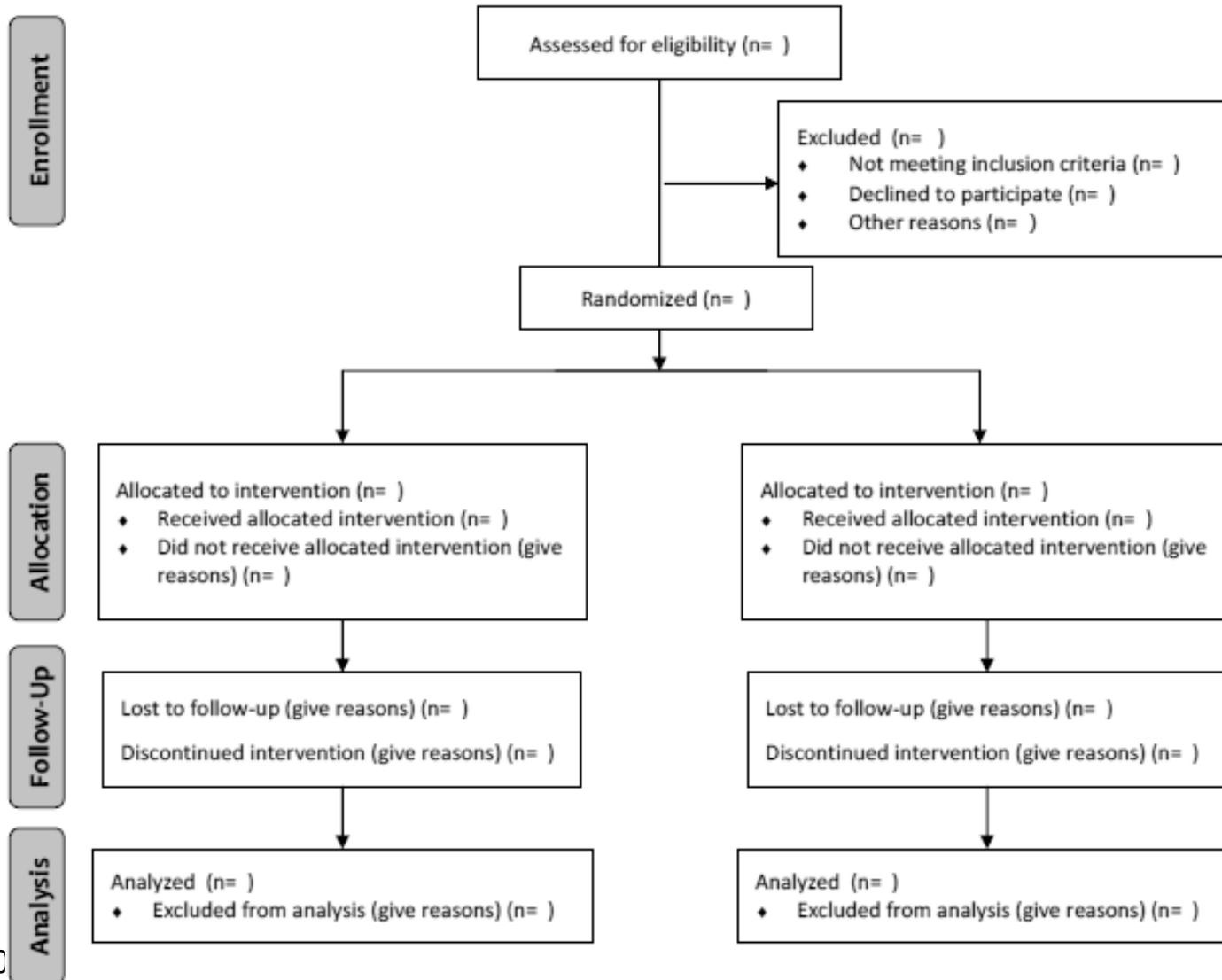
CONSORT = CONSolidated Standards of Reporting Trials www.consort-statement.org

- A checklist and flow diagram to improve the quality of RCT reports
- A standard way for researchers to report trials
- Checklist includes items, based on evidence, that need to be addressed in the report
- Flow diagram provides a clear picture of the progress of all participants in the trial, from the time they are randomized until the end of their involvement

Why CONSORT?

- RCTs can have great impact on patient care
- Poorly conducted RCTs can be biased and bias the evidence base
- Analysis of published RCTs had consistently shown wide variation in reporting quality
- RCT reports should give meaningful data about
 - design
 - conduct
 - analysis
 - generalisability

CONSORT 2010 flow diagram



The essence of CONSORT

“...Authors should provide enough information for readers to know how a trial was performed, so that they can judge whether the findings are likely to be reliable.”

Altman (BMJ, 1996)

Reporting phase II studies

Determination of the success or failure of a therapeutic treatment after a phase II trial depends on the quality of the statistical design.

But

Review of 308 phase II trials in cancer published in 1997 (295 single-arm studies) found that 250 (81%) did not report an identifiable statistical design.

Positive findings were reported in 48% of designed studies but 70% of studies with no reported design.

Mariani & Marubini (JCO, 2000)

Phase II trial reporting is still evolving

Journal	% Reporting statistical design	
	1995	2000
Am J Clin Oncol	12.5	36.0
Br J Cancer	29.4	28.6
Cancer	15.1	56.1
Eur J Cancer	8.3	33.3
JCO	20.0	59.3
Ann Oncol	6.9	39.3

Reviewed 393 pII trials published in 1995 ($n=185$) and 2000 ($n=208$)

Neither sample size nor design parameters were specified in 157 (85%) and 113 (46%) papers in 1995 and 2000, respectively.

Thezenas et al. (Eur J Cancer , 2004)

What to report for phase II trials

- The goal of pII trials remains to screen for anti-tumour activity
- There is no CONSORT-like standard for pII trials

CONSIDER

- Endpoints – response, time to event, toxicities
- Numbers – patient nos, group nos, drug nos, stage nos
- Statistical design

Reporting phase I trials

- There is no CONSORT-like reporting standard for phase I trials
- Little published research on quality of phase I reporting
- We might expect similar problems to those seen with other trial reports
- Work in the UK (NTRAC) highlighted QA as an issue

When reporting phase I trials

- Remember the purpose of pI trials
- Report analytical methods
- Detail AUC calculations
- Give details of assay validation

Final thoughts on data reporting

- Report all necessary data but don't pad with unnecessary data
- Resist the temptation to include data just because you have it
 - e.g. confirmatory prognostic factor data for common diseases
- Do not inflate statistically insignificant differences
- Be sure the data give additional insights

Presentation and styling

- Do look at a recent issue of the journal you plan to submit to
(links to 3500 journals' Instructions at <http://mulford.meduohio.edu/instr/>)
- Do read the Instruction to authors of the journal
- Be aware of word/figure/table limits
- Use the appropriate reference and citation styles
- Help Editors and Referees (and yourself) – **Number all pages**

English for oncology

- For many of you English is not your mother tongue
- But neither is oncology
- Read widely and critically – remember, every paper will get published somewhere
- When writing, remember Orwell's rules

Orwell's rules

- 1*. Never use a metaphor, simile, or other figure of speech which you are used to seeing in print.
2. Never use a long word where a short one will do.
3. If it is possible to cut a word out, always cut it out.
4. Never use the passive where you can use the active.
- 5*. Never use a foreign phrase, a scientific word or a jargon word if you can think of an everyday English equivalent.
6. Break any of these rules sooner than say anything outright barbarous

George Orwell, Politics and the English Language

*Rules 1 and 5 may not always apply in oncology

Further reading

1. Albert T. Winning the publications game: How to get published without neglecting your patients. Radcliffe Medical Press, 2000
2. Altman D. Practical statistics for medical research. Chapman Hall (new edn expected 2005/6)
3. Altman et al. Review of survival analyses published in cancer journals. Br J Cancer 1995; 72: 511.
4. Girling D et al. Clinical trials in cancer. Principles and Practice. Oxford University Press, 2003
5. Greenhalgh T. How to read a paper (series) – free online at bmj.com
6. Orwell G. Politics and the English language

Final word

The best preparation for an outstanding manuscript is doing good research