NCRI Cancer Conference
Tips on how to write a good abstract

These guidelines aim to provide some tips to improve the chance of your abstract being selected for presentation at the NCRI Cancer Conference and might also help with future publication and get more people to read the full paper itself.

Abstract title

Firstly, the abstract title is extremely important, a simple and powerful title will make a good impression and encourage your audience to read the rest of your abstract. Do not make it too long or else it may bore or confuse the reader. Do not leave the audience guessing what your abstract is about. The title should clearly summarise its content e.g. 'Recurrence rates after low dose radioiodine ablation for differentiated thyroid cancer'.

Structure

Abstracts should be written in 4 main sections: background, methods, results and conclusions. Abstracts must be no more than 300 words, tables can be included but will count towards the word limit.

Background

This should be very concise and explain to the reader what is the key background knowledge, problem or gap in evidence that prompted you to conduct this research. In most cases, the background can be framed in just 70 words, sometimes even a single sentence may suffice.

Aspects to include:

- What is already known about the subject of the study
- What is not known about the subject and hence what the study intended to examine (or what the paper seeks to present)
- Why is this research important? Describe the wider impact of the work and why your work crucial to solve the problem

It must be clear why the research is being conducted in the first place.

Example:

Overall survival (OS) is the gold standard endpoint for controlled clinical trials but requires extended follow-up and large sample sizes. The UK contributed 3 trials to this Gynaecological Cancer Intergroup (GCIG) meta-analysis, aiming to evaluate whether progression free survival (PFS), based on CA125 measurements confirmed by radiological exam or combined GCIG criteria, is an effective surrogate endpoint for OS in advanced ovarian cancer.

Method

The methods section is usually the second-longest section in the abstract. It should contain enough information to enable the reader to understand what was done, and how. It should describe the research methodology including sample sizes, the primary and other outcome measures and statistical power. For clinical studies it should describe how patients were selected and treated.

Important questions to address:

- What was the research design?
- What was done and how?
- If relevant, what was the sample size in the whole sample and/or the different groups?
- What controls were put in place?
- What was the primary outcome measure and how was it defined?

If relevant, also address:

- What was the clinical diagnosis of the patients recruited if applicable?
- How were the patients sampled?
- What treatments did patients in different groups receive, and at what doses?
- What was the duration of the study?

Examples:

CAF-specific endoglin expression was studied in resection specimens from CRC patients using immunohistochemistry and related to metastases-free survival. Endoglin-mediated invasion was assessed in vitro by transwell invasion, using primary CRC-derived CAFs. The effect of CAF-specific endoglin expression on tumor cell invasion was investigated in a zebrafish model for CRC, while effects on liver metastasis were assessed in a mouse model.

PERSEPHONE is a randomised phase 3 non-inferiority trial comparing 6 to 12m trastuzumab, the largest reduced-duration non-inferiority trial internationally. Mapping onto standard UK practice, all HER2+ EBC patients were eligible. Stratification is by ER status, chemotherapy type, and chemotherapy and trastuzumab timing. The primary endpoint is DFS from diagnosis (first relapse or death). Randomising 4000 patients (1:1) enabled the trial to assess non-inferiority of 6m (5% 1-sided significance, 85% power), defined as 'no worse than 3%' below the 12m arm's assumed 80% 4-year DFS. The pre-planned definitive DFS analysis required 500 events.

Results

The results section is the most important part of the abstract; readers want to know what the findings of the study are. It should contain as much detail and data as possible.

- Readers want to know what your discoveries are with facts and figures.

For example, the statement "Response rates differed significantly between diabetic and nondiabetic patients" leaves the reader uniformed. Far better to say "The response rate was higher in nondiabetic than in diabetic patients (49% vs 30%, respectively; P<0.01)." Include:

- For clinical trials, the number of patients entered and when, and dropout rates
- The results of the analysis of the primary objectives and the more important secondary objectives (expressed in words along with 'P' values in parentheses).
- Give actual figures in preference to non-specific statements, and where differences are described give the appropriate statistics for significance.
- Important negative findings (if any)
- In clinical reports, include data on important adverse events as well as efficacy

Examples:

4089 patients were randomised from 152 UK sites (Oct'07–Jul'15). ER+ 69%; chemotherapy - 42% anthracycline (A)-based / 48% A and taxane (T)-based / 10% T-based; adjuvant chemotherapy 85%; sequential trastuzumab 53%. At 5.4 years median follow-up, there were 512 (13%) DFS events. 12m and 6m 4-year DFS rates were 89.8% (95%CI 88.3–91.1) and 89.4% (95%CI 87.9–90.7) respectively. The HR of 1.07 (90%CI 0.93–1.24) demonstrated non-inferiority (HR<1.32) of 6m trastuzumab (1-sided p=0.01). Congruent results were found for overall survival (OS) and within the pre-planned DFS and OS landmark analyses (after 6m of trastuzumab). Heterogeneity was observed in some stratification variables. Cardiac events were reduced in 6m patients (4% v 8% of 12m patients stopping treatment due to cardiotoxicity (p<0.0001)).

CAFs located specifically at invasive borders of CRC express endoglin and increased expression intensity correlated with increased disease stage. Endoglin-expressing CAFs were also detected in lymph node and liver metastases, suggesting a role in CRC metastasis formation. In stage-II CRC, CAF-specific endoglin expression at the invasive borders correlated with poor metastasis-free survival. In vitro experiments revealed that endoglin is indispensable for bone morphogenetic protein (BMP)-9-induced signaling and CAF survival. CAF invasion in vitro was inhibited by targeting endoglin using the neutralizing antibody TRC105. In zebrafish, endoglin-expressing fibroblasts enhanced colorectal tumor cell infiltration into the liver and decreased survival. Finally, endoglin targeting, specifically on CAFs, with TRC105 decreased metastatic spread of CRC cells to the mouse liver.

Conclusion

The conclusion is the most crucial part of the abstract, it is what people are most likely to read and remember about your study. Therefore, the take-home message needs to be clear.

Usually, the conclusion relates to the primary outcome measure; however, other important or unexpected findings should also be mentioned.

Include:

- What has your study contributed to in the field?
- Any additional findings of importance
- why are your results important? Will they lead to further research or change in practice? Describe the wider impact of the work
- Make sure that you state the conclusion concisely and avoid overstatements
- Summarise the main outcomes of your work

Examples:

Endoglin-expressing CAFs contribute to CRC progression and metastasis. Treatment with TRC105 inhibits CAF invasion and tumor metastasis, indicating an additional target beyond the angiogenic endothelium, possibly contributing to beneficial effects reported during clinical evaluations.

PERSEPHONE demonstrates 6m of trastuzumab as non-inferior to 12m with an observed difference in DFS of only 0.4% at 4 years. Given cardiac and other toxicities during months 7-12 of treatment, our results support a reduction of trastuzumab duration to 6m.

Final tips

NCRI Scientific Committee will consider the following aspects when reviewing the abstract, so make sure you address them clearly and concisely:

- The rationale of the study
- The appropriateness of methods
- Whether the results are presented in a way that allows the reader to reach a conclusion
- Whether the conclusions are justified, based on the results presented
- Overall clarity of the abstract

The committee will also assess the likely impact on the field and novelty of the results.