

# DRANZCR STATISTICS ASSIGNMENT

1996

This assignment was submitted and successful.  
It is another guide to the adequate levels of statistical  
critique needed for the assignment.

## **Assignment Question:**

You are on the editorial board of the National Oncology Journal. The Editorial Board considers that the following papers are worthy of publication on scientific and interest grounds. You have been asked to review them for statistical content.

Choose 5 of the 10 papers and provide a critique from a statistical point of view with a view to acceptance for publication or suggestions for modification.

## **INTRODUCTION TO SUBMITTED REPORT**

When reviewing a medical paper for statistical content, there are many important areas that must be assessed. One of the methods for assessing articles is by using check lists, which allow one to systematically appraise each aspect of the trial or study presented.

There are several such published check lists, and the ones that I have utilized are found in articles by Fowkes and Fulton (8), Gardner et al (9), and in the textbook by Altman (1). These authors present us with detailed check lists, which is reflected in my analysis of each study. I have attempted to go through each study point by point, referring to the relevant checklists provided by each author. I have attempted not to reproduce each study in its entirety, although many points made do require the quoting of the relevant section in the study. I have also tried not to repeat myself, although some points are pertinent to several areas of discussion.

The above authors are all quite critical of the general standard of statistics presented in medical studies, and believe that satisfactory information regarding each point on the check list is required. When discussing my recommendations for each paper regarding alterations to be considered prior to publication, I have done so using the principle that trials must be judged on the information that is included in the published report. We cannot assume a satisfactory answer to any of the questions on the check list if the information is not given. It is the authors' onus to demonstrate that bias did not occur or was unlikely to have arisen. These points are also made by Altman (1991, p.473).

The decision to publish a study is made after considering several of its features, not only its statistical content. For example a study using a new experimental treatment might be performed, but the design may leave something to be desired: the study may still warrant publication. If all of the relevant information is provided in the published report, then at least the reader is able to make up his or her own mind as to the conclusions and the applicability to clinical practice, and not have to rely on the publishing authors' say so alone