Presentation of data

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Our readers rely on authors to present data honestly and in formats that promote meaningful interpretation. Tables and graphs are helpful, and graphic abstracts are being used increasingly to convey important results efficiently.

Be honest about your data and the limitations of the study design. Graphs should always be scaled appropriately, and important causes of bias should be discussed. Selection bias, refusal rate, and dropout rate can result in spurious results. Authors should examine and comment on blinding and randomization, as unblinded assessments may be influenced by investigator knowledge of the treatment group. No member of the study team should know what the next "random" allocation will be, as unconscious body language may affect whether or not the patient enrolls in the study. Always specify the method of randomization, the measures taken to reduce bias, and reasons for patient refusal or withdrawal broken down by treatment group. Be honest about remaining biases and the potential impact on your results.

Appropriately matched controls are difficult to achieve, and authors should discuss issues that may affect interpretation of the data. Clinical trials should include an intent-to-treat analysis, and authors should avoid using parametric methods, such as the *t* test, analysis of variance, or linear regression when the results are not normally distributed. Comparing *P* values between subgroups is inappropriate because *P* value does not capture the magnitude of a difference but simply the probability of a similar or more extreme result if the null hypothesis is true.

Enlist the help of a statistician when appropriate. Jonathan Silverberg published an excellent pair of Continuing Medical Education articles on statistics in the *Journal* that can serve as a handy reference, and online resources are readily available, including a primer on the use of statistics on the Elsevier website. Helpful references for the "statistically challenged" appear below.

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