

such as experiments in bacteriology (59) or genetics (60,61,62). In these cited articles, alpha values of 0.001 were used.

Statistical significance needs to be distinguished from clinical significance. Kaul and Diamond (63), Kane (64), Bhardwaj et al. (65), and Houle and Stump (66), warn of the situation where data are statistically significant but are not clinically significant and have no real-world value. A number of publications have reported that a parameter was statistically significant, but not clinically significant, for example, Jeffrey et al. (67), and van Maldegem et al. (68). Fethney (69) pointed out that the *P* value on its own provides no information about the overall importance or meaning of the results to clinical practice.

IX. CALCULATING THE *P* VALUE—A WORKING EXAMPLE

The following table lists the parameters needed for calculating the *P* value (Table 9.2).

Only one example will be shown for calculating the *P* value. This example involves comparing the mean of a first sample (study drug group) with the mean of a second sample (control group). The data are from Machin and Gardner (70).

In Group 1 (study drug group), subjects died on months: 6, 6, 10, 10, 12, 12, 12, 24, and 32.

In Group 0 (control group), subjects died on months: 6, 6, 6, 6, 8, 8, 12, 12, 20, 24, 30, and 42.

When faced with the need to calculate a *P* value, the researcher must choose between various different statistical tests. One of these

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