

## ... about *P* values

- ◆ A *P* value represents the probability that an observed difference between two treatment groups could have arisen by chance, and that the two interventions being compared actually have the same effect.
- ◆ A low *P* value for a difference between two treatment groups indicates that it is more likely to have arisen because the interventions have different effects. In scientific studies, an arbitrary probability of 1 in 20 or less ( $P \leq 0.05$ ) is used to define a statistically significant difference between groups.
- ◆ A *P* value that is not significant may indicate that there is no difference between groups *or* that there were too few events in the study to demonstrate any difference.
- ◆ A *P* value does not indicate the *clinical* significance of a result.
- ◆ A *P* value does not give any indication as to the strength of the evidence obtained from a study. The best estimate of this can be made by looking at the confidence intervals for a result.

Consider  $P=0.049$  and  $P=0.051$ ; one result is considered significant and the other is not, however, they are very similar values.

See *Things to know about confidence intervals*.