JULY 2008
QUESTION 02

A published trial shows an Odds Ratio for effect of 0.88 [95% CI, 0.62 – 1.26]. Discuss your interpretation of this statistical statement.

The odds ratio

is an assessment of effect between two binary data values.
often used in systematic reviews
as a condition becomes increasingly rare it will aporiximate the risk ratio
this is useful as the denominator in RR may be unknown
if it is common condition it will tend to overestimate risk
it is calculated as shown below

	Outcome	
Risk Factor	Yes	No
Yes	a	b
No	c	d

$$RR = \frac{a/(a+b)}{c/(c+d)} \qquad OR = \frac{ad}{bc}$$

Absolute risk = RR x incidence
NNT = 1/absolute risk

An odds ratio of 0.88 indicates a reduction of risk of 12%

1.0 indicates no change
>1.0 indicates increased risk

The confidence interval

confidence that in a repeated experiment the population parameter will occur within the interval
as the CI crosses 1.0 it is possible that the OR may be 1.0 (no effect) or >1.0 (increased risk)
using the 95% CI therefore this is not a significant result

Further interpretation is limited

Bias - systematic deviation from the truth not assessed
Confounding error - whether the result may due to a difference reason
Random error
Randomisations technique not indicated
Blinding not discussed
Sample size not indicated
Power of the study, derived from accepted sensitivity of type 1 and 2 errors, the effect size and variance