1. Subjects are recruited to take part in a study examining the effect of a new therapy to aid with smoking cessation for persons who smoke cigarettes. If a subject is followed until he/she stops smoking, their survival time is:

- (●) Uncensored
- ( ) Excluded from the analysis
- ( ) Censored
- ( ) Survival time is zero, since the subject had the event of interest

2. Subjects are recruited to take part in a study examining the effect of a new therapy to aid with smoking cessation for persons who smoke cigarettes. The event of interest is "quitting smoking". If a subject makes it to the end of the follow up period without quitting smoking, their survival time is:

- [ ] Excluded from the analysis
- [ ] Uncensored
- [ ] Survival time is zero, since the subject never had the event of interest
- [x] Censored

3. When the incidence rate ratio is 1.00, which of the following statements is true:

- ○ There is a 100% chance of having the event of interest in at least on of the two groups being compared.
- ◉ The incidence rate of the event is the same in both groups being compared.
- ○ The total time at risk in the follow-up period is the same in both comparison groups.
- ○ The number of events during the follow-up period is the same in both comparison groups.

4. What is a benefit of using an incidence rate ratio when comparing time-to-event data of two groups?

- ○ The incidence rate can be computed when total follow-up time (years at risk) are different in each group.
- ○ The incidence rate is easily interpreted as a relative risk measure between two groups.
- ○ The incidence rate can be used when sample sizes are different in each group.
- ◉ All of the above.

5. Which of the following statements describe aspects of the Kaplan-Meier estimate of the survival function? apply)

- [x] The probability of surviving (remaining event free) beyond time 0 is 1 (100%).

✓ **Correct**

- [ ] At the end of the follow-up period, the probability of survival (remaining event free) is always 0.00.
- [x] The probability of survival (remaining event free) does not change at censoring times.

✓ **Correct**

- [ ] If a participant drops out, the probability of survival will decrease at the time of drop out.

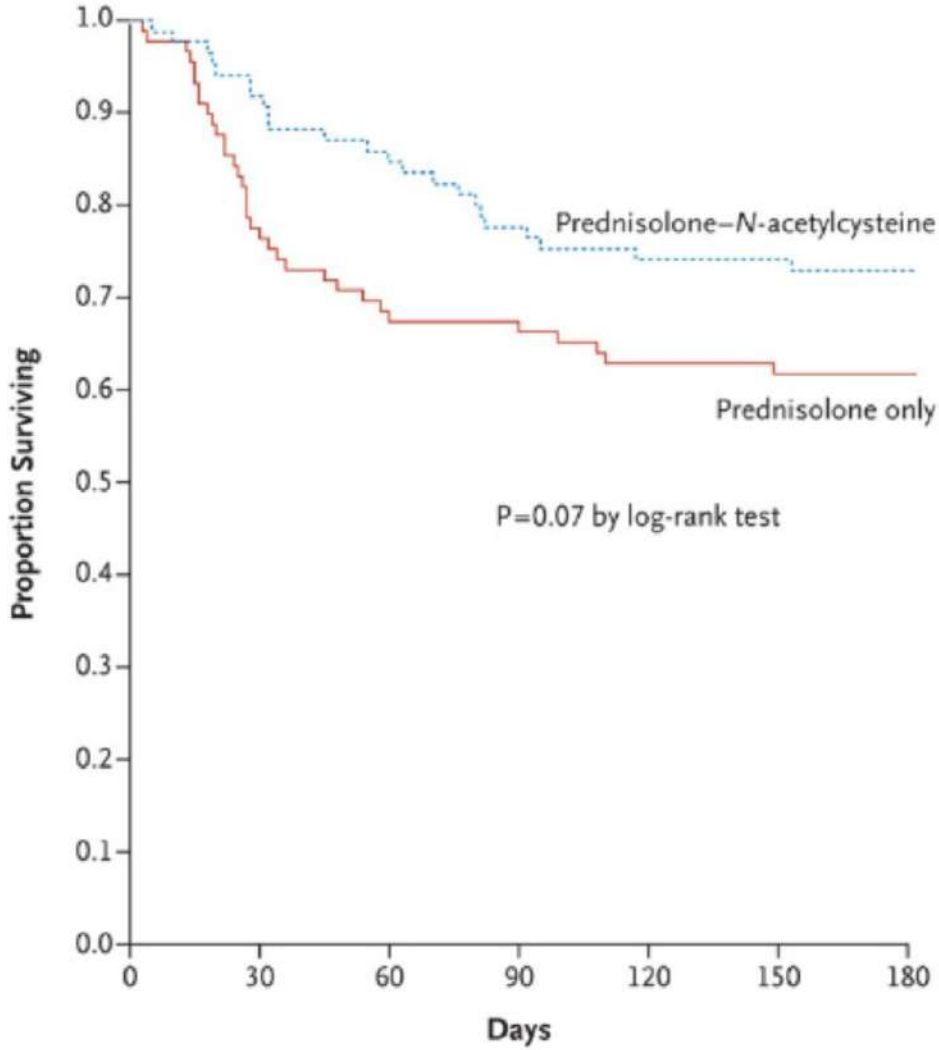
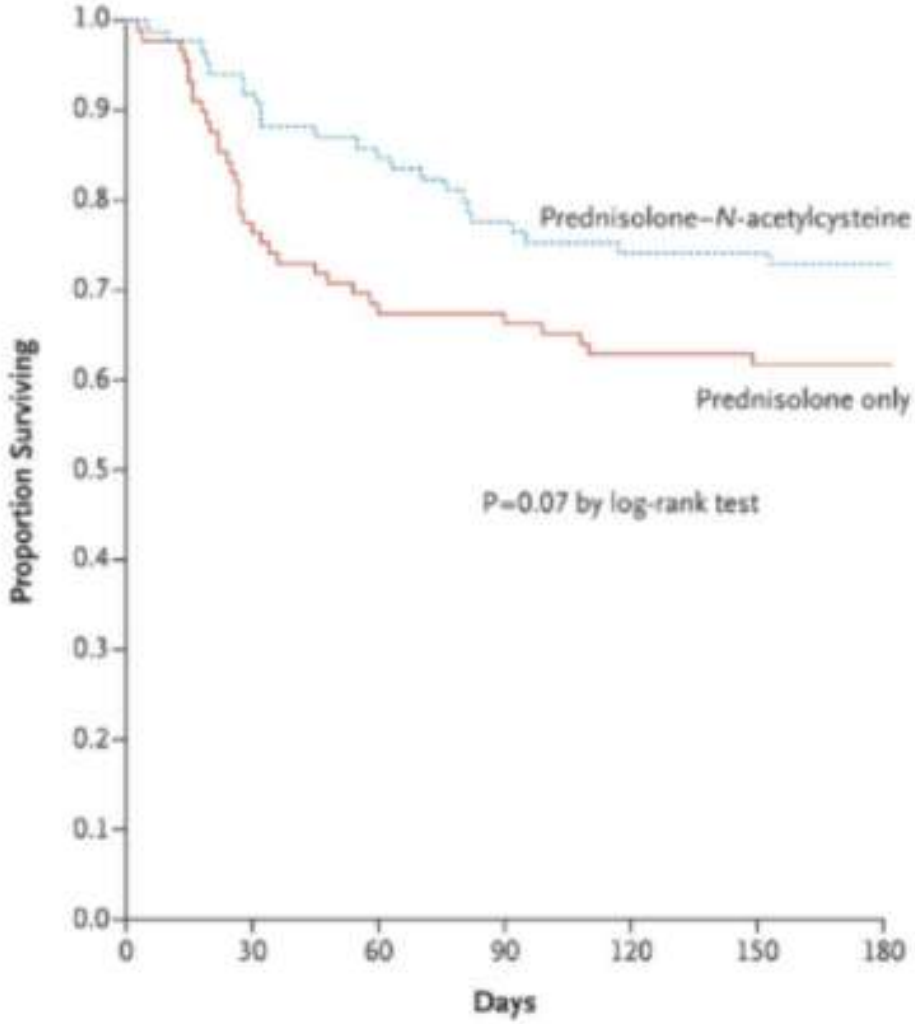


Figure taken from:

Nguyen-Khac E, et al. Glucocorticoids plus N-Acetylcysteine in Severe Alcoholic Hepatitis. *N Engl J Med* 2011; 365:1781-1789.

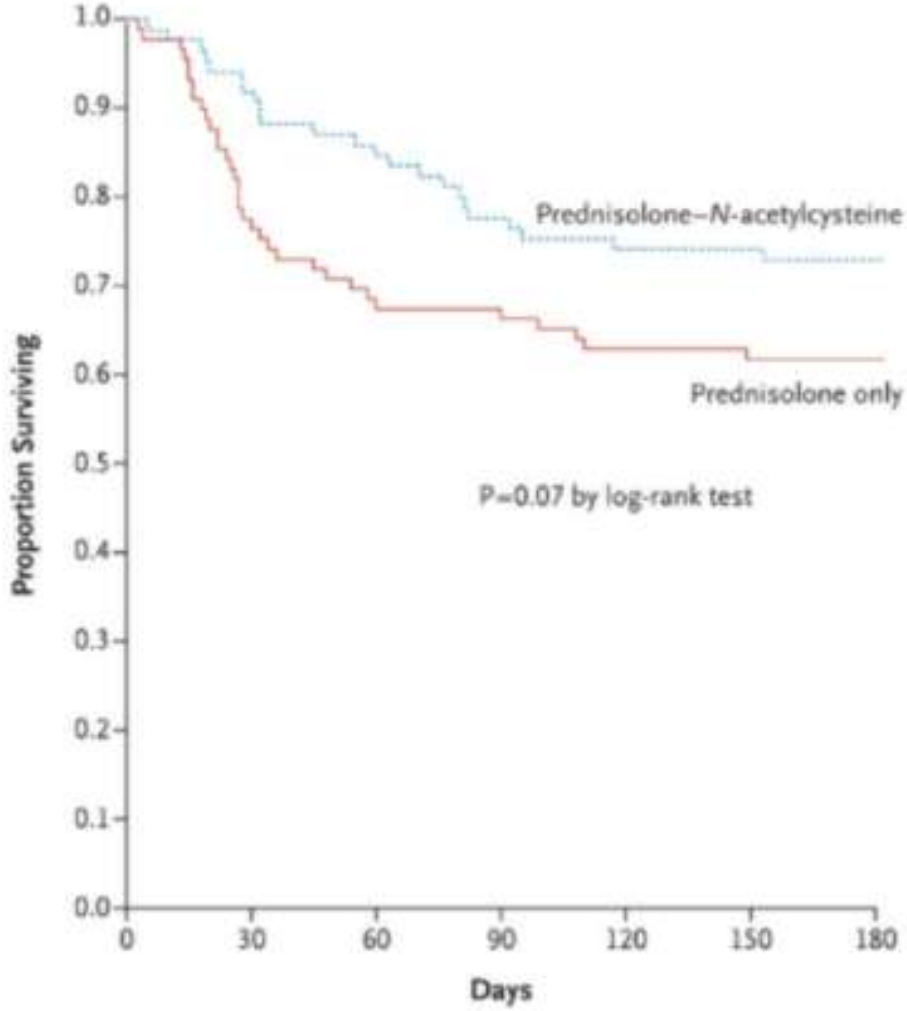
6. Based on the following Kaplan-Meier curve, one would expect the estimated incidence rate ratio (IRR_hat): of mortality in the prednisolone–N-acetylcysteine group compared to the prednisolone-only group to be:



No. at Risk							
Prednisolone only	89	69	61	60	56	55	46
Prednisolone–N-acetylcysteine	85	78	73	66	63	63	48

- ○ approximately 1
- ◉ less than 1
- ○ greater than 1
- ○ less than 0

7. In the study from which the following Kaplan-Meier curve was estimated, only 48 people out of the original 85 in the prednisolone–N-acetylcysteine group were still at risk at 180 days. However, the proportion surviving represented in the Kaplan Meier Curve is near 75%. This is because:



No. at Risk							
Prednisolone only	89	69	61	60	56	55	46
Prednisolone–N-acetylcysteine	85	78	73	66	63	63	48

- ○ The true proportion surviving should be 56.5%.
- ○ 37 people had events.
- ○ 48 people did not have events.
- ◉ Some of the people had incomplete data and were censored before the 180th day.