

## Preview: Pre-Quiz #9 Case-Control Studies

### Question 1

4 points

Which of the following statements is true regarding case-control studies? (Select one.)

- a. Like cohort studies, case-control studies compare incidences.
- b. The odds ratio provides a fairly accurate estimate of the relative risk provided the outcome is uncommon.
- c. An odds ratio can be calculated only in case-control studies and not in cohort type studies.
- d. It is not correct to interpret an odds ratio as if it were a risk ratio

### Question 2

4 points

Which of the following statements about case-control studies are true? (Select all that apply.)

- a. They are generally less costly than prospective cohort studies.
- b. They are efficient for assessing diseases with long latency (the time between exposure and disease occurrence).
- c. They are not efficient for rare exposures.
- d. They are not efficient for rare outcomes.

### Question 3

4 points

Which of the following statements are true regarding selection of the comparison group ("controls") for a case-control study? (Select all that apply.)

- a. In order to avoid selection bias, it is important to select controls who would have been cases had they developed the disease.
- b. When cases are identified from the general population, then the control group subjects should be selected from hospitals.
- c. Choosing controls from a different hospital than those the cases came from will not cause a bias since they are both hospital-based.
- d. Using general population controls tends to be more expensive than using hospital based controls, because more effort must be expended to identify controls who are willing to participate.

### Question 4

4 points

Which of the following statements are true concerning bias in case-control studies? (Select all that apply.)

- a. Selection bias may occur as a result of controls not being able to recall past exposure as accurately as cases.
- b. Information bias results when the mechanism of identifying and enrolling cases differs significantly from that used to identify and enroll controls.

- c. It is important to have clear definition of what is meant by a “case” and what is meant by a “control” in order to minimize misclassification bias, which is a type of information bias.
- d. Using hospitalized controls from the same hospital that the cases came from may minimize selection bias in hospital based case-control studies.

**Question 5**

**4 points**

This question is based on the following article: Handheld Cellular Telephone Use and Risk of Brain Cancer. JAMA: 2000 Dec; 284(23):3001 -3007. In this study, 469 men and women with brain cancer aged 18-80 years from participating hospitals were matched to 422 controls from those same hospitals. The investigators subsequently compared their past and current use of cellular telephones. After adjusting for confounders, the odds ratio comparing those who never used cellular telephones with past or present users was 0.85 (95% CI: 0.6-1.2). From the information above, which of the following are correct? (Select all that apply.)

- a. This type of study is efficient in comparing rare outcomes.
  - b. One of the goals of choosing controls from the same hospitals as the cases in this study was to avoid selection bias.
  - c. The internal validity of the study would have been improved if the controls were selected from the general population.
  - d. In general, this type of study is prone to selection bias, because it is retrospective, and outcome status has already been established at the beginning of the study.
-