

Question from the Fall 1999 Epi Final

CHAPTER 1

1. Select the definition of epidemiology used in this course.
 - a. Epidemiology is the study of health and disease.
 - b. Epidemiology is the study of health and diseases in populations.
 - c. Epidemiology is the study of health promotion.
 - d. Epidemiology is organized effort to improve health and prevent disease.
2. Select the definition of public health used in this course.
 - a. Public health is the study of health and disease.
 - b. Public health is the study of health and disease in populations.
 - c. Public health is the study of health promotion.
 - d. Public health is organized effort to improve health and prevent disease.
3. An epidemic is:
 - a. the occurrence of disease in a group of people.
 - b. the normal occurrence level of disease in a group of people.
 - c. a deficit in the occurrence of disease in a group of people.
 - d. a clear excess in the occurrence of disease in a group of people.
4. Although there is no single way to “do” science, which of the following characterizes the “the scientific method”?
 - a. The use of specialized instruments to collect data.
 - b. The use of numerical analysis to formulate conclusions.
 - c. Hypothesis generation followed by testing.
 - d. The use of non-intuitive methods to formulate conclusions.
5. The miasma theory of the 19th century suggested that diseases were caused by:
 - a. unspecified environmental pollutants.
 - b. genetic factors.
 - c. microbes.
 - d. host factors.
6. The microbiological revolution began in the:
 - a. 17th century (1600s)
 - b. 18th century (1700s)
 - c. 19th century (1800s)
 - d. 20th century (1900s)
7. The 19th century scientist who studied suicide from an epidemiologic perspective was:
 - a. John Snow
 - b. Emile Durkheim
 - c. Louis Pasteur
 - d. Joseph Goldberger
8. The most common cause of death in the U. S. is:
 - a. cardiovascular disease
 - b. cancer
 - c. AIDS
 - d. unintentional injuries
9. The *third* most common cause of death in the U. S. is:
 - a. cardiovascular disease
 - b. cancer
 - c. AIDS
 - d. trauma and injuries
10. The average age of death in the U.S. is in the range:
 - a. 50–60 years
 - b. 60–70 years
 - c. 70–80 years
 - d. 80–90 years
11. In the previous century, the most common causes of death were largely:
 - a. acute and contagious
 - b. acute and noncontagious
 - c. chronic and contagious
 - d. chronic and noncontagious

CHAPTER 2

12. The stage of disease that comes before exposure to the agent is called the stage of:
 - a. susceptibility.
 - b. subclinical disease.
 - c. clinical disease.
 - d. recovery, disability, or death.
13. The latent period of disease is also called the stage of:
 - a. susceptibility.
 - b. subclinical disease.
 - c. clinical disease.
 - d. resolution.
14. Someone suffering from arthritis is taught how to better manage their disease so that are less disabled. This is an example of:
 - a. primary prevention.
 - b. secondary prevention.
 - c. tertiary prevention.
 - d. curative medicine.
15. Vaccination is a form of:
 - a. primary prevention.
 - b. secondary prevention.
 - c. tertiary prevention.
 - d. curative medicine.
16. The “iceberg phenomenon” implies that the disease in question is mostly:
 - a. acute
 - b. chronic
 - c. infectious
 - d. subclinical
17. According to modern epidemiology, a cause is:
 - a. the underlying agent of the disease.
 - b. the pathogenic mechanism of the disease.
 - c. anything that increases the likelihood of the disease.
 - d. anything that increases the likelihood of the disease, all other things being equal.
18. Is “genetic susceptibility” an agent, host, or environmental causal factor?
 - a. Agent
 - b. Host
 - c. Environmental
 - d. None of the above
19. An epidemic may result from:
 - a. changes in susceptibility within the population.
 - b. increases in the pathogenicity of the agent.
 - c. increases in the amount of agent in the environment.
 - d. “a” and “c”
 - e. “a,” “b,” and “c”
20. A disease that continues to increase in clear excess of normalcy over an extended period of time is:
 - a. sporadic.
 - b. endemic.
 - c. a point epidemic.
 - d. a propagating epidemic.
21. Studies done in the early phases of an understanding which are used to generate hypotheses are referred to as:
 - a. descriptive studies.
 - b. analytic studies.
 - c. case-control studies
 - d. cohort studies.

CHAPTER 3

22. The presence of an infectious agent on a body surface is:
 - a. contamination.
 - b. an infection.
 - c. an infectious disease.
 - d. a subclinical infection.
23. In epidemiologic terms, a reservoir is:
 - a. a large body of water.
 - b. an animal that harbors the agent.
 - c. a person that harbors the agent.
 - d. the place where the agent lives and multiplies.
24. A zoonotic disease is a:
 - a. tropical disease.
 - b. disease that occurs overseas.
 - c. disease with an insect vector.
 - d. disease shared by humans and animals.
25. Which of the following can serve as a portal for an agent?
 - a. Nasal passages
 - b. Conjunctiva around the eyes
 - c. Anus
 - d. "a" and "b"
 - e. "a," "b," and "c"
26. Transmission that occurs when an agent is suspended in air for an extended period of time or over a extended distance is called:
 - a. direct transmission.
 - b. droplet transmission.
 - c. droplet nuclei transmission.
 - d. vector-borne transmission.
27. Transmission that occurs from person to person is referred to as:
 - a. common vehicle transmission.
 - b. serial transmission.
 - c. vector borne transmission.
 - d. food borne transmission.
28. Resistance to a harmful agent developed by a host as a result of exposure to that agent is called:
 - a. general immunity.
 - b. innate immunity.
 - c. acquired immunity.
 - d. general resistance.
 - e. none of the above.
29. The cough reflex is an example of:
 - a. cellular immunity.
 - b. humoral immunity.
 - c. innate immunity.
 - d. acquired immunity.
30. Biochemical proteins that attach themselves to the surface of invading pathogens are called:
 - a. lymphocytes.
 - b. antibodies.
 - c. immunocytes.
 - d. vaccines.
31. Toxoids are:
 - a. harmless derivatives of toxins that stimulate immunity.
 - b. non-virulent strains of the agent that stimulate immunity.
 - c. produces by the thymus.
 - d. surface proteins antigens.
32. Chronic diseases:
 - a. are of long duration
 - b. seldom resolve spontaneously
 - c. often result in loss of function
 - d. "a" and "c"
 - e. "a," "b," and "c"
33. An synonym for "chronic disease" is:
 - a. noncontagious disease.
 - b. life-style disease.
 - c. degenerative disease.
 - d. all of the above.
34. The approach that has met with the best results in decreasing the incidence of chronic diseases is:
 - a. early treatment.
 - b. risk factors modification.
 - c. medical treatment.
 - d. early detection.
35. Chronic disease epidemiologic research seeks to:
 - a. identify modifiable risk factors.
 - b. describe disease patterns in populations.
 - c. evaluate the efficacy of interventions.
 - d. "a" and "c"
 - e. "a," "b," and "c"

CHAPTER 4

36. Is feeling depressed an example of a sign, symptom, or test?
- Sign
 - Symptom
 - Test
 - None of the above
37. A diagnostic method that produces the same results upon repetition is said to be:
- valid.
 - reproducible.
 - sensitive.
 - specific.
38. A diagnostic method that tends to produce correct results in healthy and unhealthy individuals is said to be:
- reproducible.
 - valid.
 - sensitive.
 - specific.
39. Which of the following is a measure of reproducibility?
- Sensitivity
 - Specificity
 - Predictive value positive
 - The kappa statistic
40. A patient who tests negative for HIV and is actually free of the virus is a:
- true positive.
 - false positive.
 - true negative.
 - false negative.
41. A patient who tests positive for HIV and is truly free of the virus is a:
- true positive.
 - false positive.
 - true negative.
 - false negative.
42. A diagnostic test is used in 100 people of unknown disease status. The test shows 10 positives. Therefore, the _____ is 10%.
- prevalence of the disease
 - apparent prevalence of disease
 - predictive value positive of the test
 - predictive value negative of the test
43. The predictive value positive of a test depends on the:
- test's sensitivity
 - test's specificity
 - prevalence of disease in the population
 - "a" and "c"
 - "a," "b," and "c"
44. Suppose high values on a diagnostic test are indicative of a disease. However, there is some degree of overlap in values for healthy and diseased populations. If the diagnostic cutoff point for a positive test is shifted up (i.e., it is increased), how will this affect the number of false positives reported by the test?
- It will increase.
 - It will decrease.
 - It will remain the same.
 - The effects cannot be predicted.
45. Addressing the scenario as described above (Question 44), how will affect the number of false negatives reported?
- It will increase.
 - It will decrease.
 - It will remain the same.
 - The effects cannot be predicted.
46. A test that is 98% sensitive is used in 1000 people with disease. How many true positives will it identify?
- 95
 - 98
 - 900
 - 980
 - none of the above
47. As the prevalence of a disease in a population decreases, the predictive value of a positive test will:
- increase
 - decrease
 - remain the same
48. The *first* thing to do when confronted with a positive HIV test is to:
- notify the patient.
 - notify the patient's next of kin.
 - retest the blood.
 - draw an additional sample.

49. The first stage of a disease screening program should:
- a. be sensitive.
 - b. be specific
 - c. have high predictive value positive
 - d. be costly.

TABLE 1. Data for a Hypothetical Diagnostic Test.

	Disease +	Disease !
Test +	60	20
Test !	40	80

50. The sensitivity of this test is:
- a. .60
 - b. .67
 - c. .75
 - d. none of the above
51. The specificity of this test is:
- a. .60
 - b. .67
 - c. .75
 - d. none of the above
52. The predictive value positive of this test is:
- a. .60
 - b. .67
 - c. .75
 - d. none of the above
53. The predictive value negative of this test is:
- a. .60
 - b. .67
 - c. .75
 - d. none of the above
-

CHAPTER 5

54. Epidemiologic case definitions should be based on:
- clinical criteria.
 - subjective criteria.
 - person, place, and time criteria.
 - “a” and “c”
 - “a,” “b,” and “c”
55. The name of the widely used uniform nomenclature of disease used in public health and clinical settings worldwide is:
- the Diagnostic and Statistical Manual
 - the National Health Exam and Nutrition Survey
 - the National Health Interview Survey
 - the International Classification of Disease
56. Expansion of a case definition to include previously unrecognized cases (e.g., as happened when the AIDS case definition was expanded in 1993) can result in:
- an epidemic.
 - a pandemic.
 - an artifactual decrease in the number of cases.
 - an artifactual increase in the number of cases.
57. The International Classification of Disease uses a scheme based on:
- presumptive cause
 - disease mechanism
 - anatomical location
 - “a” and “c”
 - “a,” “b,” and “c”

CHAPTER 6

58. Simple counts of cases are inadequate for analytic purposes because case counts are:
- of little consequence.
 - have little public health relevance.
 - difficult to interpret without accounting for population size.
 - all of the above.
59. Which of the following are epidemiologic measures of disease frequency.
- prevalence
 - relative risk
 - incidence density
 - "a" and "c"
 - "a," "b," and "c"
60. Why might it be useful for a public health person to have a sense of the likelihood of being struck by lightning?
- Because it is an important public health concern.
 - Because it is common.
 - Because it provides a guidepost by which to gauge rare events.
 - Because it might be asked on "Double Jeopardy."
61. True rates represent:
- unitless numbers with a limited range of 0 to 1.0.
 - numbers in which numerator is a subset of the denominator.
 - proportions.
 - the potential for change in one quantity relative to another.
62. Which of the following is a true rate?
- prevalence
 - cumulative incidence
 - incidence density
 - relative risk
-

One hundred people begin a study, at which time 10 have the disease in question. During two years of follow-up, 20 develop the disease.

63. The prevalence of disease at the beginning of the study is:
- 1%
 - 10%
 - 20%
 - none of the above
64. The cumulative incidence of disease, reported to

the nearest whole percent is:

- 1%
 - 10%
 - 20%
 - none of the above
65. The number of person-years in the study is:
- 90
 - 100
 - 200
 - none of the above
-
66. Which of the following statements are true?
- Cumulative incidence considers only newly occurring events, whereas prevalence considers both new and old cases
 - Cumulative incidence is a measure of disease frequency, whereas prevalence is not.
 - Cumulative incidence is measured as a proportion, whereas prevalence is not.
 - "a" and "c"
 - "a," "b," and "c"
67. A thousand healthy people are followed for 3 years. How many person-years does this represent?
- 1000
 - 2000
 - 3000
 - none of the above

CHAPTER 8

68. Which of the following is a measures of association?
- Incidence Density Difference
 - Cumulative Incidence
 - Cumulative Incidence Ratio
 - "a" and "c"
 - "a," "b," and "c"
69. Reverse causality bias suggests that the:
- exposure causes the disease
 - disease causes the exposure
 - neither "a" nor "b"
70. A negative association between an exposure and diseases *suggests* that the exposure might be:
- beneficial
 - hazardous
 - risky
 - inconsequential
71. Which of the following statements are true?
- Associations are *not* always causal.
 - Associations may be due to chance.
 - Associations may be due to bias.
 - "a" and "c"
 - "a," "b," and "c"
72. Which of the following measures *excess risk*?
- Incidence Density Difference
 - Cumulative Incidence Ratio
 - Incidence Density Ratio
 - "a" and "c"
 - "a," "b," and "c"
73. A relative risk of 2.0 suggests:
- a positive association
 - a negative association
 - a doubling of risk
 - "a" and "c"
 - "a," "b," and "c"
74. A population attributable fraction of .34 suggests:
- a disease risk of 34%.
 - an excess of 34 cases per 100 people.
 - a reduction of 34% of the cases with elimination of the exposure from the population
 - none of the above

75. Which of the following does *not* quantify relative risk?
- odds ratio
 - cumulative incidence ratio
 - cumulative incidence
 - standardized morbidity ratio

TABLE 2. Cumulative Incidence Data

	Exposure +	Exposure !	
Disease +	400	100	500
Disease !	1600	900	2500
Total	2000	1000	3000

76. The cumulative incidence ratio in these data is:
- 0.50
 - 1.00
 - 2.00
 - 2.25
 - none of the above
77. The cumulative incidence difference *per 100* is:
- 0.10
 - 1.00
 - 10.00
 - 100.00
 - none of the above
78. The attributable fraction in the population is:
- .10
 - .20
 - .30
 - .40
 - none of the above
79. The attributable fraction in exposed cases is:
- .10
 - .20
 - .30
 - .40
 - none of the above
80. In general, the above data suggest:
- A positive association between the exposure and disease
 - A negative association between the exposure and disease
 - No association between the exposure and disease

CHAPTER 9

81. *Analytic* epidemiologic studies are used to:
- describe patterns of disease occurrence
 - draw inferences about disease etiology (cause)
 - generate hypotheses about disease etiology
 - "a" and "c"
 - "a," "b," and "c"
82. Cohort studies are:
- forward in direction
 - experimental
 - observational
 - "a" and "c"
 - "a," "b," and "c"
83. The *main difference* between experimental studies and observational studies is that experimental studies:
- study disease causality
 - study curative medicine
 - study prevention
 - allow the researcher to allocate a treatment or intervention
84. Which of the following are true?
- Clinical trials and community trials are experimental studies.
 - Community trials are forward in direction.
 - Community trials randomize interventions on a group-by-group basis.
 - "a" and "c"
 - "a," "b," and "c"
85. Which of the following comparative statements about cohort and cross-sectional studies are true?
- Cross-sectional studies are observational whereas cohort studies are not.
 - Cross-sectional studies are adirectional whereas cohort studies are not.
 - Cross-sectional studies are experimental whereas cohort studies are not.
 - Cross-sectional are experimental whereas cohort studies are not.
86. The timing of a study may be:
- historical or cross-sectional
 - historical or case-control
 - historical or concurrent
 - historical or cohort
87. The internal validity of a sample refers to the extent to which it reflects:
- the target population.
 - the external population
 - reality.
 - all of the above.
 - none of the above.
88. Which of the following is the preferred way to do survey research?
- Use a convenience sample.
 - Use volunteers.
 - Pay study subjects.
 - Use a random sample.
89. A case-control sample starts by selecting 100 cases of kidney cancer and 100 controls from a hospitalized population. This is an example of:
- fixed-exposure sampling.
 - fixed-disease sampling.
 - non-fixed sampling.
 - cohort sampling.
90. Select synonyms for cross-sectional study.
- Adirectional study.
 - Forward-directional study.
 - Prevalence study
 - "a" and "c"
 - "a," "b," and "c"
91. A cohort study misclassifies non-cases as cases. This is an example of:
- cart-before-the-horse bias.
 - selection bias.
 - information bias.
 - confounding.
92. The main requirement for controls in case-control studies is that they must be:
- people with the disease being studied.
 - people with a different disease than the disease being studied.
 - representative of people with the disease being studied.
 - representative of people without the disease being studied.
93. A patient's improvement when given a pharmacologically inert substance is called:
- information bias.
 - selection bias.
 - the cohort effect.
 - the placebo effect.

94. A study is done in which the study subjects and evaluators are kept in the dark about their exposure status. This is an example of:
- randomization.
 - single blinding.
 - double blinding.
 - the Hawthorne effect.
95. Which of the following study designs are experimental?
- Cohort
 - Cross-sectional
 - Community trial
 - "a" and "c"
 - "a," "b," and "c"
96. A study compares the sero-prevalence of HIV in male and female prisoners. This is an example of a _____ study.
- cohort
 - cross-sectional
 - case-control
 - clinical
97. Which of the following study designs studies the exposure and disease in a backward direction?
- Cohort study
 - Cross-sectional study
 - Case-control study
 - Clinical trial
98. Comparative incidence studies are also called:
- cohort studies.
 - cross-sectional studies.
 - case-control studies.
 - clinical trials.
99. Which of the following statements is true about case-control studies?
- can evaluate multiple exposures
 - can estimate incidence
 - well-suited for the study of rare diseases
 - "a" and "c"
 - "a," "b," and "c"
100. One hundred people with infectious hepatitis and 100 healthy controls are questioned about their consumption of raw clams in the prior two weeks. This is an example of a:
- clinical trial
 - case-control study
 - cohort study
 - community trial

101. One hundred office workers and 100 bus drivers are followed forward for the new occurrence of hypertension. This is an example of a:
- clinical trial
 - case-control study
 - cohort study
 - community trial

TABLE 3. Case-Control Data

	Exposure +	Exposure !	
Disease +	20	40	60
Disease !	10	50	60
Total	30	90	120

102. The exposure proportion in cases is:
- 20 / 30
 - 20 / 40
 - 20 / 10
 - 10 / 60
 - none of the above
103. The exposure proportion in controls is:
- 20 / 40
 - 20 / 60
 - 10 / 50
 - 10 / 60
 - none of the above
104. The exposure odds in cases is:
- 20 / 30
 - 20 / 40
 - 20 / 10
 - 10 / 60
 - none of the above
105. The exposure odds in controls is:
- 20/40
 - 20/60
 - 10/50
 - 10/60
 - none of the above
106. The exposure odds ratio is:
- 0.4
 - 0.5
 - 2.0
 - 2.5
 - none of the above
107. Data in the above table demonstrate a:
- positive association
 - negative association
 - no association

CHAPTERS 10 & 11

108. Random error in the estimation of a parameter results from:
- sampling variability
 - problems in the study's design
 - confounding
 - selection bias
109. A synonym for systematic error is:
- imprecision
 - sampling variability
 - confounding
 - bias
110. Parameters represent:
- calculate values from studies
 - hypothetical values from populations
 - incidence density ratios
 - odds ratios
111. The symbol $\hat{RR}$ ("RR hat") represents the relative risk:
- parameter
 - estimator
 - null value
 - significant value
112. A relative risk for a positive association is said to be significant if the lower limit of the 95% confidence interval is:
- is less than 1
 - greater than 1
 - = 1
 - none of the above
113. A range of values that has known likelihood of capturing a parameter is called a:
- hypothesis test.
 - statistic.
 - incidence density ratio.
 - confidence interval.
114. Confidence interval length provides insight into an estimates:
- significance
 - bias
 - precision
 - validity
115. A 95% confidence interval for a relative risk is (1.8, 9.2). This confidence interval is:
- insignificant
 - significant and positive
 - significant and negative
116. A relative risk that exaggerates an association is said to be:
- unbiased.
 - biased toward the null.
 - biased away from the null.
 - imprecise.
117. Confounding occurs when:
- the sample is nonrepresentative
 - the sample is too small
 - data have been misclassified
 - extraneous factors bias results.
118. Selection bias occurs when:
- the sample is nonrepresentative
 - the sample is too small.
 - data have been misclassified
 - extraneous factors bias results.
119. Information bias occurs when:
- the sample is nonrepresentative
 - the sample is too small
 - data have been misclassified
 - extraneous factors bias results.

ADDITIONAL QUESTIONS

“Vitamin C Study”: About 11,000 U.S. adults 25–74 years of age were nutritionally examined during 1971-1974, at which time an index of vitamin C intake was formed from detailed dietary histories. Over the next 10 years, 1,809 deaths occurred. The relationship between vitamin C and various types of mortality was then studied. Briefly, subjects with the highest level of vitamin C intake had a relative risk of cancer mortality of 0.8 (95% confidence interval: 0.5, 1.2). The relative risk of cardiovascular disease mortality was 0.6 (95% confidence interval: 0.4, 0.8).

120. This study is an example of a:
 - a. clinical trial
 - b. cross-sectional study
 - c. case-control study
 - d. cohort study
 121. The association between vitamin C and cancer mortality is:
 - a. not significant
 - b. significant and positive
 - c. significant and negative
 122. The association between vitamin C intake and cardiovascular disease mortality is:
 - a. not significant
 - b. significant and positive
 - c. significant and negative
 123. If highly educated people were more likely to take vitamin C, and “education” was associated with low levels of cardiovascular disease, the apparent association between cardiovascular disease and vitamin C will be effected by what type of error?
 - a. Selection bias
 - b. Information bias
 - c. Confounding
 - d. Random error (non-differential misclassification)
 124. If the bias hypothesized in question 123 were true, the association between high vitamin C and cardiovascular mortality would be:
 - a. Decreased (biased toward the null)
 - b. Increased (biased away from the null)
 - c. Altered, but the direction of the bias cannot be predicted (biased unpredictably)
 - d. Unchanged (unbiased)
-

“Kaposi’s Sarcoma Study”: Behavioral risk factors for Kaposi’s sarcoma were examined in 67 AIDS-patients who developed Kaposi’s sarcoma and 135 AIDS-patient controls. In this study, the sexual practice of insertive oroanal contact was found to have an exposure odds ratio of 2.6 (95 percent confidence interval: 1.3, 5.3).

125. This study is an example of a:
 - a. clinical trial
 - b. cross-sectional study
 - c. case-control study
 - d. cohort study
126. The association between insertive oroanal contact and Kaposi’s Sarcoma is:
 - a. not significant
 - b. significant and positive
 - c. significant and negative
127. This study supports the theory that insertive oroanal contact causes AIDS.
 - a. True
 - b. False

TWO ORAL CONTRACEPTIVE STUDIES

Study A (General Practitioners, 197?): *Mortality Among Oral-Contraceptive Users.* In a large prospective study carried out in the United Kingdom, the death-rate from diseases of the circulatory system in women who had used oral contraceptives was five times that of controls who had never used them; the death-rate in those who had taken the pill continuously for 5 years or more was ten times that of controls. The excess deaths in oral-contraceptive users were due to a wide range of vascular conditions. The total mortality-rate in women who had ever used the pill was increased by 40%, and this was due to an increase in deaths from circulatory disease of 1 per 5,000 ever-users per year. The excess was substantially greater than the death-rate from complications of pregnancy in the controls, and was double the death-rate from accidents. The excess mortality-rate increased with age, cigarette smoking, and duration of oral contraceptive use.

Study B (Mann, 1975): *Myocardial Infarction in Young Women with Special Reference to Oral Contraceptive Practice.* Sixty-three women discharged from hospital with a diagnosis of myocardial infarction and 189 control patients were studied. All were under 45 years of age at the time of admission. Current oral contraceptive use, heavy cigarette smoking, treated hypertension and diabetes, pre-eclamptic toxemia, and obesity were all reported by, and type II hyperlipoproteinaemia was found more often in patients with myocardial infarction than their controls. The relationship between myocardial infarction and oral contraceptives could not be explained in terms of an association between the use of their preparations and other factors. The combined effect of the risk factors was clearly synergistic.

128. Is Study A a clinical trial, case-control study, or cohort study?
 - a. Clinical Trial
 - b. Case-Control Study
 - c. Cohort Study
129. Is Study B a clinical trial, case-control study, or cohort study?
 - a. Clinical Trial
 - b. Case-Control Study
 - c. Cohort Study
130. Which of the two studies do you think was less expensive to conduct?
 - a. Study A
 - b. Study B
131. Which of the two studies yielded results more quickly?
 - a. Study A
 - b. Study B
132. Which of the two studies was better able to investigate multiple health consequences of oral contraceptive use?
 - a. Study A
 - b. Study B
133. Which of the two studies was better able to investigate multiple possible causes of cardiovascular problems?
 - a. Study A
 - b. Study B