

Marks

Question 18 (4 marks)

Investigators gathered data on a group of 100 smokers for a period of 10 years. During this time 12 people in the group developed lung cancer, two died in traffic accidents, and three died of heart attacks. The investigators used this data to state that smoking caused lung cancer.

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Describe how this investigation could be improved.

A control could be included, such as 100 non-smokers to compare the results of the 100 smokers. This would highlight the relationship between smoking and lung cancer.

The environment and lifestyle would also have to be accounted for, ^{eg living in a city} and possible subgroups living with others who smoke. The amount of cigarettes consumed per day would also have to be ~~controlled~~ accounted for as it may increase the risk, if so, how many more cigarettes would increase ~~the~~ the rate of lung cancer.