

# Cannabis use and risk of lung cancer: a case–control study

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## Abstract

The aim of the present study was to determine the risk of lung cancer associated with cannabis smoking.

A case–control study of lung cancer in adults  $\leq 55$  yrs of age was conducted in eight district health boards in New Zealand. Cases were identified from the New Zealand Cancer Registry and hospital databases. Controls were randomly selected from the electoral roll, with frequency matching to cases in 5-yr age groups and district health boards. Interviewer-administered questionnaires were used to assess possible risk factors, including cannabis use. The relative risk of lung cancer associated with cannabis smoking was estimated by logistic regression.

In total, 79 cases of lung cancer and 324 controls were included in the study. The risk of lung cancer increased 8% (95% confidence interval (CI) 2–15) for each joint-yr of cannabis smoking, after adjustment for confounding variables including cigarette smoking, and 7% (95% CI 5–9) for each pack-yr of cigarette smoking, after adjustment for confounding variables including cannabis smoking. The highest tertile of cannabis use was associated with an increased risk of lung cancer (relative risk 5.7 (95% CI 1.5–21.6)), after adjustment for confounding variables including cigarette smoking.

In conclusion, the results of the present study indicate that long-term cannabis use increases the risk of lung cancer in young adults.

