

Table 2.46. Case-control and cohort studies of Hepatocellular carcinoma – studies after year 2000

| Reference, study location and period | Organ site (ICD code) | Characteristics of cases | Characteristics of controls | Exposure assessment | Exposure categories | Relative risk (95%CI)* | Adjustment for potential confounders | Comments |
|--|-----------------------------------|--|--|--|---|------------------------|---|---|
| Franceschi <i>et al</i> , (2006) Northern Italy (Pordenone) and Naples, 1999–2002 Hospital-based | HCC, 78% histologically confirmed | All new cases admitted to selected hospitals (N=229, out of 261 eligible). | Patients admitted to same hospitals with acute conditions, excluding tobacco or alcohol- related diseases and hepatitis; frequency matched by area, calendar period, gender, and age to cases (N=431 out of 467 eligible subjects) | Face to face interview with standardized questionnaire | Never smoker | 1.0 | Age, gender, center, education | Interaction with HBsAg ⁺ and/or anti-HCV ⁺ : OR for never/former smokers 23.4 (13.5-40.6 and for current smokers 44.3 (19.7-99.3). OR for current smokers versus never/former smokers for in those HBsAg- and/or anti-HCV-1.02 (0.53-1.97) |
| | | | | | Former smoker | 0.82 (0.45–1.50) | | |
| | | | | | Current smoker | 1.14 (0.61–2.15) | | |
| | | | | | Intensity (Current smokers only) | | | |
| | | | | | Never smoker | 1.0 | | |
| | | | | | 1-14 | 1.15 (0.55–2.42) | | |
| | | | | | ≥15 | 1.13 (0.52–2.45) | | |
| | | | | | p for trend | 0.87 | | |
| Hassan <i>et al</i> , (2008) MD Anderson Cancer Centre, Houston USA, 2000–2006 Hospital-based | HCC histologically confirmed | All new case admitted to MD Anderson (N=319, out of 390 eligible subjects) | Healthy nonblood relatives of the cases, excluding liver, GI, lung or UADT cancers (N=1061, 82% of eligible subjects). No matching. | Face to face interview with standardized questionnaire | Intensity (cigs/days) | | Age, ethnicity, marital status, residence, HCV, HBV, diabetes, alcohol consumption, family history of cancer, education | Potential residual confounding (all covariates have a statistically significant association with case-control status The effect of quitting smoking in men is not credible The effect of HCV infection was enhanced in men by smoking. OR HCV+ smoking – 28.9 (7.3-114.2) versus HCV+ smoking + 136.3 (43.2-429.6) while smoking did not effect of HBV infection. |
| | | | | | Men | | | |
| | | | | | Never smoker | 1.0 | | |
| | | | | | ≤20 | 1.9 (1.2–3.3) | | |
| | | | | | 20+ | 1.7 (1.0–3.2) | | |
| | | | | | p for trend | - | | |
| Women | | | | | | | | |
| Never smoker | 1.0 | | | | | | | |
| ≤20 | 1.0 (0.5–1.9) | | | | | | | |
| 20+ | 0.8 (0.2–3.1) | | | | | | | |
| p for trend | - | | | | | | | |

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|---|------------------------------|---|--|--|---|--|---|---|
| Hassan <i>et al.</i> , (2008) (Contd) | HCC histologically confirmed | All new case admitted to MD Anderson (N=319, out of 390 eligible subjects) | Healthy non-blood relatives of the cases, excluding liver, GI, lung or UADT cancers (N=1061, 82% of eligible subjects). No matching. | Face to face interview with standardized questionnaire | Duration (years) <i>Men</i> Never smokers ≤20 >20 p for trend <i>Women</i> Never smokers ≤20 >20 p for trend Years since cessation <i>Men</i> ≤10 >10 <i>Women</i> ≤10 >10 (never smokers ref category) | 1.0 1.6 (0.9–2.9) 2.1 (1.2–3.6) - 1.0 0.4 (0.2–1.2) 1.5 (0.7–2.9) - 2.4 (1.2–4.9) 1.7 (0.9–2.8) 1.1 (0.4–2.9) 0.8 (0.4–1.8) | Age, ethnicity, marital status, residence, HCV, HBV, diabetes, alcohol consumption, family history of cancer, education | Potential residual confounding (all covariates have a statistically significant association with case-control status The effect of quitting smoking in men is not credible The effect of HCV infection was enhanced in men by smoking. OR HCV+ smoking – 28.9(7.3-114.2) versus HCV+ smoking + 136.3(43.2-429.6) while smoking did not effect of HBV infection. |
| Ohishi <i>et al.</i> , (2008) Hiroshima and Nagasaki cohort (nested case-control), Japan Population-based | HCC | Cohort established in 1958, 20000 atomic bomb survivors plus persons not present in the cities at time of bombing. Incident HCC cases identified through Cancer Registry (N=359, 224 with serum samples) Controls randomly selected among those matching the cases for age, gender, city, time and method of serum storage (N=644). Counter matching on radiation exposure. | | Self-administered standardized questionnaire (administered in 1965 and 1978) | Never smoker Former smoker Current smoker | 1.0 1.12 (0.25–5.07) 2.03 (0.82–4.98)) | Age, gender, city, time and method of serum storage. Counter matching on radiation exposure | |