

**Table 2.8. Case-control studies of combined estrogen-progestogen oral contraceptives and liver cancer**

Reference, study area	Age (years)	No. of cases	No. of controls	Odds ratio <sup>a</sup> (95% CI)	Comments
Henderson et al. (1983b), California, USA	18–39	11	22	[7.0 (0.7–71)]	
Forman et al. (1986), England and Wales	20–44	30	147	3.8 (1.0–14.6)	Adjusted for age, year of birth
Neuberger et al. (1986), United Kingdom	< 50	26	1333	1.0 (0.4–2.4)	Not adjusted for tobacco smoking or alcoholic beverage consumption. Three cases are also included in Forman et al. (1986).
Palmer et al. (1989), USA	19–54	12	60	[15 (1.7–126)]	No information on tobacco smoking
WHO (1989b), Chile, China, Colombia, Israel, Kenya, Nigeria, Philippines, Thailand	15–56 (mean, 41.8)	122	802	0.7 (0.4–1.2)	Adjusted for alcoholic beverage consumption, number of live births, occupation
Kew et al. (1990), South Africa	15–54	38	79	1.9 (0.6–5.6)	No effect of alcoholic beverage or tobacco consumption on risk estimates
Vall Mayans et al. (1990), Catalonia region, Spain	No age limits	29	57	[4.7 (1.1–20)]	86.5% of cases had liver cirrhosis. Tobacco and alcohol adjustment did not alter risk estimates.
Yu et al. (1991), California, USA	18–74	25	58	3.0 (1.0–9.0)	Adjustment for tobacco and alcohol did not alter risk estimates.
Hsing et al. (1992), USA	25–49	72	549	1.6 (0.6–2.6)	
Tavani et al. (1993), Italy	28–60	43	194	2.6 (1.0–7.0)	Adjusted for age, education, parity
Heinemann (1997), Collaborative MILTS, France, Germany, Greece, Italy, Spain, United Kingdom	< 65	293	1779	0.8 (0.5–1.0)	No association for duration of use, type of formulation; significantly increased risk for > 6 years of use in individuals with no hepatitis infection or liver cirrhosis
Yu et al. (2003), Taiwan, China (China)	≥ 35	218	729	0.75 (0.44–1.28)	No association for ≥ 2 years' duration of use

CI, confidence interval; MILTS, Multicentre International Liver Tumour Study

<sup>a</sup> Odds ratios are given for never versus ever use of oral contraceptives.