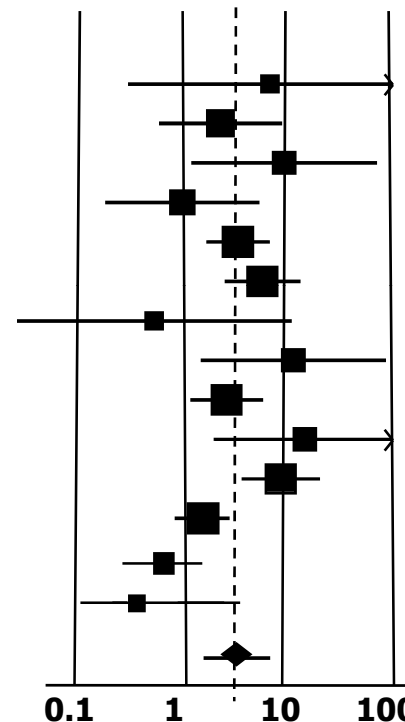


Oral cavity cancer

Study name	cases	controls	ψ	Lower limit	Upper limit
Aviano	85	855	6.99	0.32	152.39
Italy multicenter	131	2577	2.37	0.63	8.95
Switzerland	138	883	9.50	1.27	71.13
Central Europe	196	907	1.03	0.19	5.49
New York	536	906	3.47	1.75	6.88
Iowa	253	759	5.92	2.62	13.39
Tampa	22	889	0.56	0.03	11.05
Los Angeles	52	1004	11.60	1.56	86.18
Texas	238	865	2.72	1.24	5.97
Puerto Rico	93	521	14.94	2.06	108.33
South America	459	1705	8.80	3.78	20.49
Intl multicenter	323	988	1.36	0.61	3.04
Boston	139	659	0.81	0.27	2.43
Rome	17	294	0.41	0.03	6.54
Combined	2682	13812	3.09	1.82	5.23

P for heterogeneity < 0.01



ψ and 95% CI

Figure S1. Multiplicative interaction parameters (ψ) for tobacco (cigarette, cigar, pipe, snuff, chewing tobacco) and alcohol study and combined, using INHANCE pooled data version 1.1. ORs used to calculate ψ were adjusted for age, sex, race/ethnicity, education level. The Milan, Seattle, and North Carolina studies are not included because there were no oral cavity cancer case of one of the joint effects.

Pharyngeal cancer

Study name	cases	controls	ψ	Lower limit	Upper limit
Aviano	218	855	2.00	0.16	25.34
Italy multicenter	411	2577	5.44	1.09	27.07
Switzerland	247	883	2.66	0.87	8.14
New York	517	906	1.86	0.88	3.93
Seattle	173	607	6.95	1.11	43.60
Iowa	160	759	3.42	1.04	11.23
North Carolina	61	202	2.25	0.24	21.35
Tampa	58	889	1.06	0.27	4.18
Los Angeles	167	1004	0.65	0.23	1.81
Texas	426	865	1.58	0.90	2.77
Puerto Rico	200	521	4.83	1.18	19.80
South America	575	1705	2.92	1.06	8.05
Intl multicenter	277	988	1.82	0.74	4.47
Boston	291	659	0.91	0.35	2.35
Rome	46	294	6.30	1.04	38.05
Combined	3827	13714	1.90	1.41	2.56

P for heterogeneity < 0.01

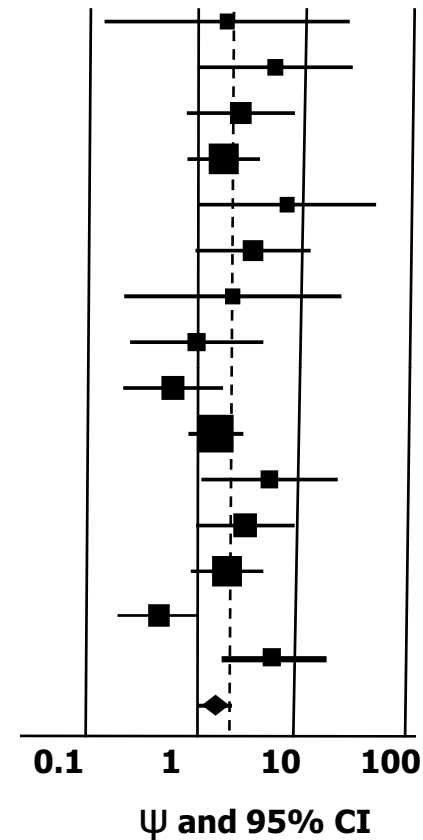


Figure S2. Multiplicative interaction parameters (ψ) for tobacco (cigarette, cigar, pipe, snuff, chewing tobacco) and alcohol study and combined, using INHANCE pooled data version 1.1. ORs used to calculate ψ were adjusted for age, sex, race/ethnicity, education level. The Milan and Central Europe studies are not included because there were no pharyngeal cancer cases in the estimation of one of the joint effects.

Laryngeal cancer

Study name	cases	controls	ψ	Lower limit	Upper limit
Milan	242	1531	0.94	0.27	3.31
Italy multicenter	460	2577	1.05	0.22	5.05
Switzerland	124	883	18.73	1.64	213.71
Central Europe	382	907	7.46	1.15	48.33
Iowa	94	759	2.73	0.27	27.45
Tampa	62	889	0.81	0.04	15.73
Los Angeles	86	1004	2.42	0.47	12.42
Texas	155	865	0.20	0.03	1.12
South America	858	1705	1.20	0.58	2.49
Rome	187	294	3.68	0.87	15.45
Combined	2650	11414	1.62	0.85	3.09

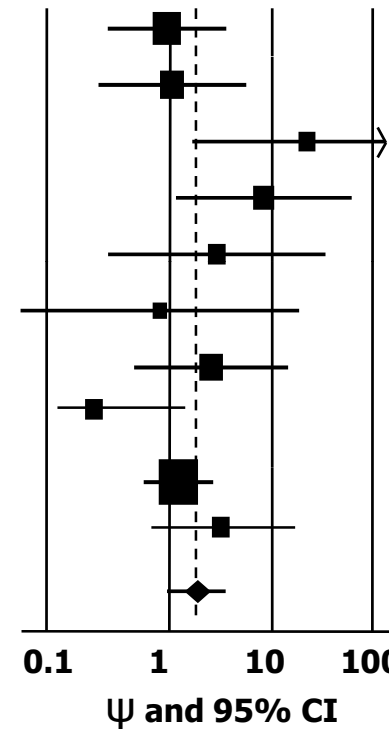


Figure S3. Multiplicative interaction parameters (ψ) for tobacco (cigarette, cigar, pipe, snuff, chewing tobacco) and alcohol study and combined, using INHANCE pooled data version 1.1. ORs used to calculate ψ were adjusted for age, sex, race/ethnicity, education level. The Aviano, New York multicenter, Seattle, North Carolina, Puerto Rico, Intl multicenter studies are not included because there were no laryngeal cancer cases in this study or in the estimation of one of the joint effects.