Table 2.53. Recent case-control studies of active smoking and breast cancer incidence by smoking status*

Case-control study	Cases/ controls	Exposure	Cases		RR (95%CI)		Controlled for
Band et al. (2002)	Premen. 318/340 Postmen. 700/685 Population-based	**Never** **Ever**	Pre 128 189	Post 315 380	Pre 1.00 (ref) 1.50 (1.09-2.07)	Post 1.00 (ref) 0.96 (0.77-1.19)	Age, menopausal status, alcohol consumption, biopsy for benign breast disease, BMI, change in BMI since age 18, education, ethnicity, marital status, family history of breast cancer, history of biopsy for benign breast diseases, HRT, reproductive factors (age at menarche, menopause, 1st pregnancy & 1st full-term pregnancy, number of pregnancies, live births, age at menopause, oral contraceptives)
Lash & Aschengrau (2002)	666/615 Population-based	**Never** **Ever**	80 361		1.00 (ref) 0.72 (0.55-0.95)		Age, alcohol consumption, BMI, family history breast cancer, personal history breast cancer or benign disease, medical radiation, reproductive factors (age at first birth, parity)
Gammon et al. (2004)	1356/1383 Population-based	**Never A/P** **Pass only** **Active** **Active&Pass**	155 443 127 631		1.0 (ref) 1.04 (0.81-1.35) 1.06 (0.76-1.48) 1.15 (0.90-1.48)		Age, benign breast disease, BMI, weight prior to reference date, family history, personal history of fertility problems, reproductive factors (parity, menopausal status)
Li et al. (2004)	975/1007 Population-based	**Never** **Current** **Former**	432 123 384		1.00 (ref) 1.4 (1.0-1.9) 1.2 (1.0-1.5)		Age, alcohol consumption, BMI, reference year (many more factors evaluated)
Mechanic et al. (2006)	2311/2022 Population-based	**Never** **Current** **Former** **Passive**	AA/W 161/287 156/214 245/482 332/431		African Am. 1.00 (ref) 1.2 (0.9-1.7) 1.8 (1.3-2.5) 1.4 (1.0-1.9)	White 1.00 (ref) 0.8 (0.6-1.0) 1.2 (0.9-1.5) 1.0 (0.8-1.2)	Age, alcohol consumption, family history breast cancer, reproductive factors (age at menarche, age at first full-term pregnancy/parity), sampling probability offsets
Prescott et al. (2007)	1728/441	**Never** **Current** **Former**	991 286 451		1.00 (ref) 0.89 (0.64-1.24) 1.04 (0.80-1.36)		Age, alcohol consumption, education, family history of breast or ovarian cancer, reproductive factors (age at menarche & first term pregnancy, parity), race,
Magnusson et al. (2007) Population-based	3345/3454	**Never** **Current** **Former**	1526 657 601		1.00 (ref) 1.0 (0.9-1.2) 1.0 (0.9-1.1)		Age, alcohol consumption, BMI, reproductive factors (age at first birth) – Present stratified data on other covariates
Roddam et al. (2007)	639/640 Population-based	**Never** **Current** **Former**	297 186 156		1.00 (ref) 1.04 (0.79-1.36) 1.15 (0.87-1.53)		Age, menopausal status, alcohol consumption, BMI, family history of breast cancer, region, SES, reproductive factors (age at menarche & first birth, parity, OC use)
Slattery et al. (2008) (NHW)	1527/1601 Population-based	**Never** **Current** **Former**	Pre/peri 313 74 148	Post 516 324 345	Pre/Peri 1.00 (ref) 1.3 (0.9-1.9) 1.4 (<1.0-1.8)	Post 1.00 (ref) 1.0 (0.7-1.3) 1.1 (0.8-1.7)	Age, menopausal status, alcohol consumption, BMI, center, education, ERT (recent), NSAIDs, physical activity, reproductive factors (parity)

Table 2.53. Recent case-control studies of active smoking and breast cancer incidence by smoking status*

Case-control study	Cases/controls	Exposure	Cases		RR (95%CI)		Controlled for
			Pre/peri	Post	Pre/Peri	Post	
Slattery et al. (2008) (H/AI)	798/924 Population-based	**Never**	232	286	1.00 (ref)	1.00 (ref)	Age, center, BMI, NSAIDs, parity, alcohol, physical activity, recent estrogen in post-menopausal women
		Current	30	64	0.9 (0.5-1.6)	1.0 (0.7-1.5)	
		Former	67	100	1.1 (0.8-1.7)	0.9 (0.7-1.3)	
Rollison et al. (2008)	287/311 Population-based	**Never**	163		1.00 (ref)		Age, education, menopausal status
		Ever	124		1.43 (1.03-1.99)		
Ahern et al. (2009)	557/432 Population-based	**Never**	232		1.0 (ref)		Age, menopausal status, alcohol consumption, BMI, family history of breast cancer, lifetime passive smoke, parity
		≤23 pack-yrs	189		1.2 (0.9-1.7)		
		>23 pack-yrs	136		0.9 (0.7-1.3)		
Young et al. (2009)	6235/6533	**Never**	1270		1.00 (ref)		Age, menopausal status, BMI, alcohol consumption, family history of breast cancer, history of benign breast disease, household income, HRT use, reproductive factors (age at menarche, age of first live birth, parity, OC use)
		Passive	1481		0.97 (0.88-1.07)		
		Active only	1143		1.10 (0.98-1.23)		
		Act+Pass	1352		1.13 (1.01-1.25)		

*Case-control studies not considered in IARC 2004 review. Excludes Fink & Lash (2003), Suzuki et al. (2007), Sillanpää et al. (2007) & Young et al. (2009) which do not report data by smoking status.