

APPENDIX A

Summary of each study and its main results

On the following pages a summary of each study and its main results are presented.

There are 54 studies:

ASIA (9 studies)

China: HU, FU
Hong Kong: CHAN
India: NOTANI, JUSSAW
Japan: HIRAYA, WAKAI
Korea: CHOI
Singapore: MACLEN

SOUTH AND CENTRAL AMERICA (6 studies)

Argentina: MATOS, PEZZOT
Brazil: SUZUKI
Cuba: JOLY
Uruguay: DESTEF1, DESTEF2

USA - SINGLE STATE (10 studies)

California: SIDNEY, CARPEN
Louisiana: CORREA
New Jersey: WILCOX
New Mexico: PATHAK
New York: BROSS, WYNDER
Pennsylvania: KHUDER, WEINBE
Texas: BUFFLE

USA - NATIONWIDE OR MULTICENTRE (7 studies)

AHF1, AHF2, KAUFMA, MRFIT, CPSI, CPSII, SPEIZE

EUROPE - NOT UK (12 studies)

Multicountry: LUBIN

Denmark: LANGE

Finland: PERNU

France: BENHAM

Italy: BERRIN

Austria: VUTUC

Germany: JOCKEL, KNOTH

Norway: ENGELA

Poland: ZEMLA

Spain: AGUDO, ARMADA

EUROPE - UK (10 studies)

ALDERS, BENSHL, DEAN, DEAN2, DOLL1, HAWTHO, GILLIS, MIGRAN, RIMING,
TANG

NAME: Heilongjiang case-control study						
DESIGN: CC						
LOCATION: Asia : China : Heilongjiang Province (5 hospitals)						
PERIOD: 1985-87						
POPULATION	AGE RANGE: No restriction					
	RACE: No restriction					
	OTHER DETAILS: -					
CASES	NUMBER: 161 men, 66 women					
	HISTOLOGICAL CONFIRMATION: 100%					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: -					
CONTROLS	NUMBER: 161 men, 66 women					
	TYPE: Patients with non-neoplastic and non-lung disease					
	MATCHING FACTORS: Sex, Age (5 years), Area of residence					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: 60.4% general surgery, 17.6% urological diseases, 22.0% orthopaedic diseases and trauma					
ASPECTS OF CIG TYPE: Factory-made, Hand-made, Mixed						
DATA BY HISTOLOGICAL TYPE: No						
CONFOUNDING VARIABLES: None						
OTHER COMMENTS: Controls may include some smoking-associated diseases						
REFERENCES: Hu <i>et al</i> (1997)						
RESULTS						
	Males			Females		
	Cases	Controls	RR(CI)	Cases	Controls	RR(CI)
Factory-made(base)	57	51	1.00	7	9	1.00
Hand-made	43	31	1.24(0.68-2.25)	14	7	2.57(0.67-9.83)
Mixed	18	12	1.34(0.59-3.05)	4	1	5.14(0.47-56.9)
Ever hand-made	61	43	1.27(0.74-2.19)	18	8	2.89(0.79-1.05)
Source : Table II	Results recalculated to base = factory-made cigarettes					

NAME: Harbin case-control study						
DESIGN: CC						
LOCATION: Asia : China: Harbin (3 districts)						
PERIOD: 1977-79						
POPULATION	AGE RANGE: No restriction					
	RACE: No restriction					
	OTHER DETAILS: -					
CASES	NUMBER: 523					
	HISTOLOGICAL CONFIRMATION: Validation by X-ray or pathology					
	PROXY INTERVIEWS: 100%					
	OTHER DETAILS: -					
CONTROLS	NUMBER: 523					
	TYPE: Non-respiratory deaths					
	MATCHING FACTORS: Sex, Age, District of residence					
	PROXY INTERVIEWS: 100%					
	OTHER DETAILS: -					
ASPECTS OF CIG TYPE: Factory-made, Hand-made						
DATA BY HISTOLOGICAL TYPE: No						
CONFOUNDING VARIABLES: None						
OTHER COMMENTS: Results only presented for sexes combined Controls may include some smoking-associated diseases						
REFERENCES: Fu and Gou (1984)						
RESULTS	Factory-made (base)			Hand-made		
	Cases	Controls		Cases	Controls	RR(CI)
Nangang district	66	56		31	20	1.32 (0.68-2.56)
Daoli district	84	64		22	24	0.70 (0.36-1.36)
Daowai district	67	72		30	16	2.01 (1.01-4.03)
Combined (adjusted for district)	217	192		83	60	1.22 (0.83-1.78)
Source : Table VII						

NAME:	Hong Kong case-control study					
DESIGN:	CC					
LOCATION:	Asia : Hong Kong (5 hospitals)					
PERIOD:	1976-77					
POPULATION	AGE RANGE: No restriction					
	RACE: No restriction					
	OTHER DETAILS: -					
CASES	NUMBER: 208 men, 189 women					
	HISTOLOGICAL CONFIRMATION: 215/397 (54%)					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: Only about half of available patients interviewed, due to illness or treatment in other hospitals					
CONTROLS	NUMBER: 204 men, 189 women					
	TYPE: Orthopaedic					
	MATCHING FACTORS: Hospital, Broad age group					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: Controls were younger than cases, especially in males					
ASPECTS OF CIG TYPE: Manufactured, hand-rolled						
DATA BY HISTOLOGICAL TYPE: No						
CONFOUNDING VARIABLES: None						
OTHER COMMENTS: Data also available by amount smoked, but does not allow RRs to be calculated adjusted for this						
REFERENCES: Chan <u>et al</u> (1979)						
RESULTS						
		Males			Females	
	Cases	Controls	RR(CI)	Cases	Controls	RR(CI)
Man. only (base)	167	138	1.00	42	12	1.00
HR only	2	1	1.65(0.15-18.4)	17	12	0.41(0.15-1.08)
Mixed	37	22	1.39(0.78-2.47)	46	26	0.51(0.23-1.13)
Any HR	39	23	1.40(0.80-2.46)	63	38	0.47(0.22-1.01)
Source : Table IV, taking “manufactured cigarettes only” as any manufactured, “tobacco as handrolled” as any hand rolled and “both manufactured and handrolled cigarettes” as manufactured or hand rolled.						

NAME:	Bombay Tata Memorial Case-Control Study				
DESIGN:	CC				
LOCATION:	Asia : India : Bombay (Tata Memorial Hospital)				
PERIOD:	1963-71				
POPULATION	AGE RANGE: 30+				
	RACE: No restriction				
	OTHER DETAILS: -				
CASES	NUMBER: 683 Men				
	HISTOLOGICAL CONFIRMATION: 288/683 (42%) hist. or cyt. confirmed				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: -				
CONTROLS	NUMBER: 1279 men				
	TYPE: Non cancer (excluding TB, lung abscess, inflammation)				
	MATCHING FACTORS: Age, Community				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: -				
ASPECTS OF CIG TYPE: Cigarettes, bidis					
DATA BY HISTOLOGICAL TYPE: Yes (but only very few in Kreyberg II and no control data so not usable)					
CONFOUNDING VARIABLES: No					
OTHER COMMENTS: Some results come from 1974 paper, which involves 520 cases and 520 individually-matched controls					
REFERENCES: Notani and Sanghvi (1974), Notani <u>et al</u> (1977)					
RESULTS	Cigarettes only (base)		Bidis only		
	Cases	Controls	Cases	Controls	RR (CI)
<10/day	6	42	79	147	3.76 (1.53-9.23)
10-19/day	28	47	117	171	1.15 (0.68-1.94)
20+	44	40	238	203	1.07 (0.67-1.70)
Total (adjusted for amount)	78	129	434	521	1.38 (1.01-1.88)
Source : Notani <u>et al</u> (1977) Table II					
	Cigarettes only (base)		Bidis only		Mixed
	Cases	Controls	Cases	Controls	RR (CI)
Notani and Sanghvi (1974)	56	58	327	227	1.49(1.00-2.24)
Notani <u>et al</u> (1977)	78	129	435	521	1.38(1.01-1.88)
Source : Tables III and II respectively					

NAME:		Greater Bombay Case-Control Study								
DESIGN:		CC								
LOCATION:		Asia : India : Bombay								
PERIOD:		1964-1973								
POPULATION	AGE RANGE:	No restriction								
	RACE:	No restriction								
	OTHER DETAILS:	-								
CASES	NUMBER:	792 men								
	HISTOLOGICAL CONFIRMATION:	41% based on histology or cytology								
	PROXY INTERVIEWS:	No								
	OTHER DETAILS:	Cases came from Greater Bombay Cancer Registry - smoking data only available for 42.6% of 1861								
CONTROLS	NUMBER:	792 Men								
	TYPE:	Voters list of Greater Bombay Corporation								
	MATCHING FACTORS:	Age, Community								
	PROXY INTERVIEWS:	No								
	OTHER DETAILS:	-								
ASPECTS OF CIG TYPE:		Cigarettes, bidis								
DATA BY HISTOLOGICAL TYPE:		Not presented with control data								
CONFOUNDING VARIABLES:		Religion, amount, duration separately								
OTHER COMMENTS:		-								
REFERENCES:		Jussawalla and Jain (1979)								
RESULTS			Cigarettes only (base)		Bidis only		Mixed			
			Cases	Controls	Cases	Controls	RR(CI)	Cases	Controls	RR(CI)
	Total	126	77	451	85	3.24(2.25-4.68)	66	6	6.72(2.78-16.2)	
	Hindus	57	28	297	52	2.81(1.64-4.81)	32	2	7.86(1.76-35.2)	
	Muslims	36	17	92	22	1.97(0.94-4.14)	23	2	5.43(1.15-25.7)	
	Christians	26	30	38	7	6.26(2.39-16.4)	9	2)	5.33(1.10-26.0)	
	Others	7	2	24	4	1.71(0.26-11.4)	2	0)		
	Total (adj religion)	126	77	451	85	2.84(1.93-4.20)	66	6	6.15(2.52-15.0)	
	1-9/day	17	17	100	20	5.00(2.19-11.4)				
	10-19/day	37	48	142	52	3.54(2.08-6.04)				
	20+/day	72	12	209	13	2.68(1.17-6.14)				
	Total (adj amount)	126	77	451	85	3.60(2.43-5.34)				
	<20 years	50	39	146	52	2.19(1.30-3.70)			Sources :	
	20-29 years	38	23	158	19	5.03(2.49-10.2)			Table IV religion	
30+ years	38	15	147	14	4.14(1.84-9.33)			Table VI amount		
Total (cig years)	126	77	451	85	3.17(2.18-4.61)			Table VII duration		

STUDY REF: HIRAYA

NAME: Japanese 29 Health Center Study	
DESIGN: Prospective	
LOCATION: Asia : Japan	
PERIOD: 1965/66 followed up to 1981	
POPULATION	AGE RANGE: 40+ at baseline
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 1454 men, 463 women
	HISTOLOGICAL CONFIRMATION: No - Death Certificates
	PROXY INTERVIEWS: NA
	OTHER DETAILS: -
BASELINE POP.	NUMBER: 122261 men and 142857 women at baseline
	TYPE: NA
	MATCHING FACTORS: NA
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Filter/plain	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Not stated	
OTHER COMMENTS: Questionnaire included question on filter use, but the reference below is the only one of Hirayama's many papers which cites any results!	
REFERENCES: Hirayama <u>et al</u> (1984)	
RESULTS	In the text on p 178 it is stated that "the lung cancer-standardized mortality rate was observed to be .. 48.9% lower in smokers of filtertip cigarettes compared to smokers of nonfiltertip cigarettes, according to our cohort study" but no other details were given

NAME: Okinawa case-control study		
DESIGN: CC		
LOCATION: Asia : Japan : Okinawa (National Okinawa Hospital)		
PERIOD: 1988-91		
POPULATION	AGE RANGE: 40-89	
	RACE: No restriction	
	OTHER DETAILS: Residents of 3 main Okinawan islands	
CASES	NUMBER: 245 men and 88 women	
	HISTOLOGICAL CONFIRMATION: 100%	
	PROXY INTERVIEWS: No	
	OTHER DETAILS: -	
CONTROLS	NUMBER: 490 men and 176 women	
	TYPE: General population - using electoral registers	
	MATCHING FACTORS: Sex, Age, Residence (2:1)	
	PROXY INTERVIEWS: No	
	OTHER DETAILS: -	
ASPECTS OF CIG TYPE: Filter/no filter Okinawa/Non-Okinawa brand (Only for men)		
DATA BY HISTOLOGICAL TYPE: Yes		
CONFOUNDING VARIABLES: Age, age at starting smoking, fraction smoked per cigarette, number/day. Also filter/no filter and years since quit for brand analyses		
OTHER COMMENTS: Okinawa brands 17 mg tar; non-Okinawa 9 mg tar		
REFERENCES: Wakai <u>et al</u> (1997)		
RESULTS	Filter/plain RR (CI)	Okinawa/Non-Okinawa brand RR (CI)
Men		
All cell types	1.02(0.31-3.33)	1.45(1.02-2.07)
Squamous cell carcinoma	0.45(0.14-1.52)	1.75(1.10-2.78)
Adenocarcinoma	4 (Not significant)	1.35(0.83-2.17)
Sources :	Table 4	Table 5
(NB. Only 5 lung cancer cases in smokers of non-filter cigarettes)		

NAME:		Korea case-control study				
DESIGN:		CC				
LOCATION:		Asia : Korea (Korea Cancer Centre Hospital)				
PERIOD:		1985-1988				
POPULATION	AGE RANGE:	No restriction				
	RACE:	No restriction				
	OTHER DETAILS:	-				
CASES	NUMBER:	280 men and 95 women				
	HISTOLOGICAL CONFIRMATION:	Cytology or histopathology				
	PROXY INTERVIEWS:	No				
	OTHER DETAILS:	-				
CONTROLS	NUMBER:	560 men and 190 women				
	TYPE:	Patients excluding cancer or other diseases related to smoking				
	MATCHING FACTORS:	Age, Sex, Date of Attending Hospital, Area				
	PROXY INTERVIEWS:	No				
	OTHER DETAILS:	-				
ASPECTS OF CIG TYPE:		Filter/mixed/nonfilter				
DATA BY HISTOLOGICAL TYPE:		No				
CONFOUNDING VARIABLES:		No				
OTHER COMMENTS:		It is stated that RRs in Table 3, which were sex-specific and were relative to nonsmokers, were adjusted for sex and duration of smoking but this makes no sense				
REFERENCES:		Choi <i>et al</i> (1989)				
RESULTS						
		Males			Females	
	Cases	Controls	RR(CI)	Cases	Controls	RR(CI)
Plain only (base)	13	2	1.00	1	0	1.00
Mixed	211	360	0.09(0.02-0.40)	13	15	0.00(NS)
Filter only	43	103	0.06(0.01-0.30)	5	11	0.00(NS)
Mixed or plain only (base)	224	362	1.00	14	15	1.00
Filter only	43	103	0.68(0.46-1.00)	5	11	0.49(0.14-1.76)
Source : Table 3. Calculated from numbers of cases and controls						

NAME:		Singapore case-control study			
DESIGN:		CC			
LOCATION:		Asia : Singapore (3 hospitals)			
PERIOD:		1972-1973			
POPULATION	AGE RANGE:	No restriction			
	RACE:	No restriction			
	OTHER DETAILS:	-			
CASES	NUMBER:	147 men and 86 women			
	HISTOLOGICAL CONFIRMATION:	Not required			
	PROXY INTERVIEWS:	No			
	OTHER DETAILS:	-			
CONTROLS	NUMBER:	134 men and 166 women			
	TYPE:	Patients excluding those with smoking related diseases			
	MATCHING FACTORS:	Sex, Age, Dialect, Ward (men 1:1, women 2:1)			
	PROXY INTERVIEWS:	No			
	OTHER DETAILS:	-			
ASPECTS OF CIG TYPE:		Manufactured/hand rolled			
DATA BY HISTOLOGICAL TYPE:		No			
CONFOUNDING VARIABLES:		No			
OTHER COMMENTS:		Data in Table III of source paper are by amount smoked, but based on small numbers and hand rolled and manufactured groups overlap, so not used.			
REFERENCES:		MacIennan <u>et al</u> (1977)			
RESULTS					
		Manuf only (base)	Ever hand rolled	Mixed manuf/ hr	Hand rolled only
Men	RR/CI (Cases/controls)	1.00 (90/88)	1.64(0.96-2.79) (52/31)	0.98(0.27-3.50) (5/5)	1.77(1.01-3.10) (47/26)
Women Cantonese	RR/CI (Cases/controls)	1.00 (9/23)	2.04(0.69-6.03) (12/15)	0.93(0.23-3.69) (4/11)	5.11(1.23-21.3) (8/4)
Continued					

STUDY REF: MACLEN (Continued)

	Manuf only (base)	Ever hand rolled	Mixed manuf/ hr	Hand rolled only
Women Non-Cantonese RR/CI (Cases/controls)	1.00 (18/16)	0.15(0.04-0.59) (6/13)	0.13(0.02-6.30) (3/8)	0.20(0.04-1.10) (3/5)
Women Total RR/CI (Cases/contols)	1.00 (27/29)	0.69(0.31-1.52) (18/28)	1.31(0.47-3.66) (7/19)	0.40(0.14-1.09) (11/9)
Source : Table I				

NAME: Buenos Aires case-control study					
DESIGN: CC					
LOCATION: S. America : Argentina : Buenos Aires (4 hospitals)					
PERIOD: 1994-96					
POPULATION	AGE RANGE: No restriction				
	RACE: No restriction				
	OTHER DETAILS: -				
CASES	NUMBER: 200 men				
	HISTOLOGICAL CONFIRMATION: 94.5%				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: -				
CONTROLS	NUMBER: 397 men				
	TYPE: Hospitalized for conditions unrelated to tobacco				
	MATCHING FACTORS: Age, hospital (2 : 1)				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: -				
ASPECTS OF CIG TYPE: Black/blond tobacco Filter/plain					
DATA BY HISTOLOGICAL TYPE: Yes					
CONFOUNDING VARIABLES: Matching factors and number/day					
OTHER COMMENTS: Black/blond calculated from blond/black. Results also presented for mainly black, mainly blond. F/P calculated from P/F.					
REFERENCES: Matos <u>et al</u> (1998)					
RESULTS					
		Blond only (base)	Ever black	Mixed black/ blond	Black only
Male - all		1.00	1.31(0.85-2.02)	1.33(0.84-2.11)	1.25(0.71-2.50)
- current smokers		1.00	1.29(0.76-2.19)	1.32(0.73-2.38)	1.25(0.56-2.50)
- ex-smokers		1.00	1.76(0.96-3.25)	1.82(0.92-3.59)	1.67(0.67-3.33)
Source : Table 3 re-estimated to base blond only					
- squamous carcinoma		1.00	2.67(1.35-5.30)	2.76(1.32-5.76)	2.50(0.83-5.00)
- adenocarcinoma		1.00	1.63(0.93-2.86)	1.71(0.94-3.12)	1.43(0.67-3.33)
Source : Table 5 re-estimated to base blond only					
					Continued

STUDY REF: MATOS (Continued)

	Mainly plain (base)	Mainly filter
Male - all	1.00	1.25(0.67-2.50)
- current smokers	1.00	0.37(0.11-1.11)
- ex-smokers	1.00	3.33(1.25-10.00)
Source : Table 3		
- only black	1.00	1.67(0.36-10.00)
- only blond	1.00	1.67(0.71-5.00)
Source : Table 4		
- squamous carcinoma	1.00	0.71(0.27-1.67)
- adenocarcinoma	1.00	1.43(0.63-3.33)
Source : Table 5		

NAME:	Rosario case-control study	
DESIGN:	CC	
LOCATION:	S. America : Argentina : Rosario (2 hospitals)	
PERIOD:	1987-91	
POPULATION	AGE RANGE:	No restriction
	RACE:	No restriction
	OTHER DETAILS:	-
CASES	NUMBER:	215 men
	HISTOLOGICAL CONFIRMATION:	100%
	PROXY INTERVIEWS:	No
	OTHER DETAILS:	-
CONTROLS	NUMBER:	433 men
	TYPE:	Patients with non-smoking related disease
	MATCHING FACTORS:	Age, hospital
	PROXY INTERVIEWS:	No
	OTHER DETAILS:	-
ASPECTS OF CIG TYPE:	Black/blond tobacco	Filter/plain
DATA BY HISTOLOGICAL TYPE:	Yes	
CONFOUNDING VARIABLES:	Age, hospital admission, intensity, years of smoking (data also available adjusted for age and hospital admission only)	
OTHER COMMENTS:	-	
REFERENCES:	Pezzotto <u>et al</u> (1993)	
RESULTS		
	Ever Black/Blond only RR (CI)	Never plain/ever plain RR (CI)
Squamous cell	1.3 (0.73-2.31)	0.20 (0.11-0.37)
Adenocarcinoma	2.0 (1.03-3.90)	0.38 (0.19-0.75)
Small cell	1.5 (0.63-3.58)	0.25 (0.10-0.61)
All types	1.7 (1.19-2.43)	0.29 (0.20-0.42)
Source : Table 7 Width of CI estimated from unadjusted data		

NAME:	Rio de Janeiro case-control study
DESIGN:	CC
LOCATION:	S. America : Brazil : Rio de Janeiro (2 hospitals)
PERIOD:	1991-92
POPULATION	AGE RANGE: No restriction
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 99 men, 24 women
	HISTOLOGICAL CONFIRMATION: 100%
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
CONTROLS	NUMBER: 99 men, 24 women
	TYPE: Patients excluding cancer and respiratory diseases
	MATCHING FACTORS: Age, sex, race
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE:	Cigarette/Black tobacco
DATA BY HISTOLOGICAL TYPE:	No
CONFOUNDING VARIABLES:	Age, sex, race and pack-years
OTHER COMMENTS:	Black tobacco is hand rolled
REFERENCES:	Suzuki <u>et al</u> (1994)
RESULTS	<p>Black tobacco and cigarettes versus cigarette only</p> <p>RR (95% CI)</p> <p>Adjusted for age, sex, race 3.7 (1.6-8.6)</p> <p>Adjusted also for pack-years 2.8 (1.0-7.7)</p> <p>Source : Table 6</p>

NAME: Havana case-control study						
DESIGN: CC						
LOCATION: C. America : Cuba : Havana (12 hospitals)						
PERIOD: 1978-80						
POPULATION	AGE RANGE: No restriction					
	RACE: No restriction					
	OTHER DETAILS: -					
CASES	NUMBER: 826 (607 men and 219 women)					
	HISTOLOGICAL CONFIRMATION: Cytology or histology					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: -					
CONTROLS	NUMBER: 979 hospital + 539 neighbourhood					
	TYPE: Hospital : patients with diseases unrelated to smoking Neighbourhood : on same block as case or as close as possible					
	MATCHING FACTORS: Hospital : sex, age, hospital, admission date Neighbourhood : sex, age, area of residence					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: -					
ASPECTS OF CIG TYPE: Dark/light tobacco (lifetime tar)						
DATA BY HISTOLOGICAL TYPE: No						
CONFOUNDING VARIABLES: None						
OTHER COMMENTS: tar only analyzed as lifetime exposure in 3 groups adjusted for either years or daily exposure but not both; also no CI ^ not used						
REFERENCES: Joly <u>et al</u> (1983)						
RESULTS						
		Males			Females	
	Cases	Controls	RR (CI)	Cases	Controls	RR (CI)
Light tobacco only (base)	10	16	1.00	16	19	1.00
Mixed	13	19	1.09 (0.38-3.16)	16	18	1.06(0.41-2.72)
Dark only	529	674	1.26 (0.57-2.79)	133	84	1.88 (0.92-3.86)
Any dark	524	693	1.25(0.56-2.78)	149	102	1.73(0.85-3.53)
Source : Table 2						

NAME: First Montevideo case-control study	
DESIGN: CC	
LOCATION: S. America : Uruguay : Montevideo (Instituto de Oncologia)	
PERIOD: 1988-94	
POPULATION	AGE RANGE: 25-84
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 497 men
	HISTOLOGICAL CONFIRMATION: 100% (see also other comments)
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
CONTROLS	NUMBER: 497 men
	TYPE: Diseases unrelated to smoking for 1992-94 papers (or to mate for 1996 paper)
	MATCHING FACTORS: Age, residence, urban/rural status (1996 paper only)
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Black/blond, hand rolled/manufactured, filter/plain	
DATA BY HISTOLOGICAL TYPE: Yes	
CONFOUNDING VARIABLES: Age, residence, urban/rural status, education	
OTHER COMMENTS: 1992-1994 papers only include some of the cases and controls. 1992 and 1994 papers include some additional cases not histologically confirmed	
REFERENCES: De Stefani <u>et al</u> (1992, 1993, 1994, 1996a)	
RESULTS	
	RR (CI)
Blond only (base)	1.00
Mixed	2.23 (1.43-3.47)
Black only	1.79 (1.31-2.43)
Ever black	1.89(1.41-2.52)
Source : Table 2 of 1996a paper, re-estimated to bases shown.	
	RR (CI)
Manuf. (base)	1.00
Hand rolled	1.67 (1.22-2.30)
Plain (base)	1.00
Filter	0.72 (0.54-0.96)
	RR (CI)
Manuf.	1.0
Mixed	1.6 (0.9-2.6)
HR Lifetime	0.9 (0.6-1.5)
HR Ever	1.2 (0.8-1.8)
Squamous	1.0
Small cell	1.0
Adenocarcinoma	1.0
Large cell	1.0
All types	1.0
Source : Table 6 of 1994 paper	
Continued	

STUDY REF: DESTEF 1 (Continued)

	Blond only	Ever black
Squamous	1.00	2.75(1.46-5.18)
Small cell	1.00	2.03(0.67-6.08)
Adenocarcinoma	1.00	1.75(0.76-4.07)
Other types	1.00	2.73(0.82-9.12)
All types (with histology)	1.00	2.12(1.29-3.46)

Source : Table 6 of 1992 paper

STUDY REF: DESTEF 2

NAME: Second Montevideo case-control study	
DESIGN: CC	
LOCATION: S. America : Uruguay : Montevideo (5-7 hospitals)	
PERIOD: 1993-96	
POPULATION	AGE RANGE: 30-84
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 427 men
	HISTOLOGICAL CONFIRMATION: 363/427 (85.0%)
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
CONTROLS	NUMBER: 428 men
	TYPE: Patients with conditions unrelated to smoking
	MATCHING FACTORS: Age, residence
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Black/blond, manufactured/hand rolled, plain/filter	
DATA BY HISTOLOGICAL TYPE: Yes	
CONFOUNDING VARIABLES: Age, sex, residence, urban/rural status, education, family history of lung cancer, body mass index	
OTHER COMMENTS: Table 4 of 1996b paper major source, based on 320 cases and 320 controls. Table 8 of 1996c paper also used.	
REFERENCES: De Stefani <u>et al</u> (1996b, 1996c)	
RESULTS	
	RR (CI)
Blond (base)	1.00
Black	2.38 (1.62-3.52)
	RR (CI)
Manuf. (base)	1.00
Hand rolled	2.00 (1.28-3.12)
	RR (CI)
Plain (base)	1.00
Filter	0.73 (0.51-1.05)
Source : Table 4 of 1996b paper, re- estimated to base shown.	
	All cell types
Blond	1.00
Black	1.78 (1.15-2.76)
	Squamous cell carcinoma
Blond	1.00
Black	1.77 (0.96-3.26)
	Adenocarcinoma
Blond	1.00
Black	1.20 (0.54-2.63)
(Among subjects never exposed to asbestos)	
Source : Table 8 of 1996c paper, re-estimated to base = blond.	

STUDY REF: SIDNEY

NAME: Kaiser Permanente Prospective Study	
DESIGN: P	
LOCATION: USA : California : San Francisco and Oakland	
PERIOD: 1979-85 followed up until 1991	
POPULATION	AGE RANGE: 30-89
	RACE: No restriction
	OTHER DETAILS: Kaiser Permanente Medical Care Program members attending for multiphasic check-up
CASES	NUMBER: 318
	HISTOLOGICAL CONFIRMATION: Not required
	PROXY INTERVIEWS: No
	OTHER DETAILS: Self-administered questionnaire
BASELINE POP.	NUMBER: 34975 men, 44971 women
	TYPE: NA
	MATCHING FACTORS: NA
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Filter/plain, Tar level, Menthol/non-menthol	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Age, race, education, years of smoking, cigs/day	
OTHER COMMENTS: Numbers of cases stated and follow-up period for 1995 paper, others shorter. Current smokers of 20+ cigarettes.	
REFERENCES: Petitti and Friedman (1985), Sidney <u>et al</u> (1993), Sidney <u>et al</u> (1995)	
RESULTS	
	Men Women
Duration of filter use (years)	- none (base) 1.0 1.0
	- 1-9 0.72 (0.30-1.76) 1.08 (0.45-2.59)
	- 10-19 0.93 (0.50-1.75) 0.70 (0.33-1.49)
	- \geq 20 1.04 (0.58-1.87) 0.36 (0.18-0.75)
	- any 1.03 (0.61-1.75) 0.65 (0.32-1.31)
Source : Sidney <u>et al</u> (1993) Tables 3 and 4.	
Per mg tar	1.02 (0.98-1.05) 0.99 (0.96-1.03)
Source : Sidney <u>et al</u> (1993) Table 3	
Continued	

STUDY REF: SIDNEY (Continued)

Duration of menthol use (years)	- none (base)	1.0	1.0
	- 1-9	1.10 (0.65-1.87)	0.72 (0.38-1.39)
	- 10-19	1.32 (0.84-2.08)	1.01 (0.61-1.69)
	- ≥ 20	1.59 (0.96-2.63)	0.70 (0.40-1.23)
	- any	1.45 (1.03-2.02)	0.75 (0.51-1.11)

Source : Sidney et al (1995) Tables 4 and 5

		Men	Woman
Tar level (mg/cig)	- > 18 (base)	1.00	1.00
	- 11-18	1.02(0.62-1.65)	1.39(0.71-2.70)
	- < 11	0.79(0.41-1.50)	1.49(0.76-2.94)

Source : Sidney et al (1993) Table 3, re-estimated to base > 18 mg tar.

STUDY REF: CARPEN

NAME: Los Angeles case-control study																															
DESIGN: CC																															
LOCATION: USA : California : Los Angeles County																															
PERIOD: 1990-1994																															
POPULATION	AGE RANGE: 40-84																														
	RACE: African Americans and Caucasians (non Hispanic)																														
	OTHER DETAILS:																														
CASES	NUMBER: 353																														
	HISTOLOGICAL CONFIRMATION: Not required																														
	PROXY INTERVIEWS: No																														
	OTHER DETAILS: -																														
CONTROLS	NUMBER: 724																														
	TYPE: Licensed drivers (age <65), Medicare beneficiaries (age >65)																														
	MATCHING FACTORS: Frequency matched on age, sex, race (2:1)																														
	PROXY INTERVIEWS: No																														
	OTHER DETAILS: -																														
ASPECTS OF CIG TYPE: Menthol/Regular																															
DATA BY HISTOLOGICAL TYPE: No																															
CONFOUNDING VARIABLES: Matching factors, total pack-years, years since quitting																															
OTHER COMMENTS: -																															
REFERENCES: Carpenter <i>et al</i> (1999)																															
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Pack-years of mentholated cigarettes	<table border="0"> <thead> <tr> <th></th> <th>Males</th> <th>Females</th> </tr> </thead> <tbody> <tr> <td>0(base)</td> <td>1.00</td> <td>1.00</td> </tr> <tr> <td>>0-15</td> <td>0.87(0.57-1.37)</td> <td>1.58(0.77-3.22)</td> </tr> <tr> <td>16-31</td> <td>1.21(0.56-2.62)</td> <td>0.51(0.19-1.34)</td> </tr> <tr> <td>32+</td> <td>1.48(0.71-3.05)</td> <td>0.41(0.15-1.11)</td> </tr> <tr> <td></td> <td>(trend p 0.25)</td> <td>(trend p 0.04)</td> </tr> <tr> <td></td> <td colspan="2">Males + Females</td> </tr> <tr> <td>Exclusive regular</td> <td colspan="2">1.00 (base)</td> </tr> <tr> <td>Exclusive menthol</td> <td colspan="2">1.04(0.62-1.75)</td> </tr> <tr> <td>Mixed menthol/regular</td> <td colspan="2">1.01(0.71-1.42)</td> </tr> </tbody> </table>		Males	Females	0(base)	1.00	1.00	>0-15	0.87(0.57-1.37)	1.58(0.77-3.22)	16-31	1.21(0.56-2.62)	0.51(0.19-1.34)	32+	1.48(0.71-3.05)	0.41(0.15-1.11)		(trend p 0.25)	(trend p 0.04)		Males + Females		Exclusive regular	1.00 (base)		Exclusive menthol	1.04(0.62-1.75)		Mixed menthol/regular	1.01(0.71-1.42)	
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Source : Tables 2 and 4.																															

STUDY REF: CORREA

NAME: Louisiana case-control study	
DESIGN: CC	
LOCATION: USA : Louisiana : 29 parishes mainly in South	
PERIOD: 1979-81	
POPULATION	AGE RANGE: No restriction
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 1338
	HISTOLOGICAL CONFIRMATION: 97%
	PROXY INTERVIEWS: 24%
	OTHER DETAILS: -
CONTROLS	NUMBER: 1393
	TYPE: Not COPD, Ca Larynx, Oral, Oesophagus, Bladder
	MATCHING FACTORS: Race, sex, age (5 years), hospital
	PROXY INTERVIEWS: 11%
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Plain/Filter	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Age, sex (all cases), matching factors and packs/day (BAC cases)	
OTHER COMMENTS:	
REFERENCES: Correa <u>et al</u> (1984), Pickle <u>et al</u> (1984), Falk <u>et al</u> (1992)	
RESULTS All cases	
Filter/plain RR for sexes combined	0.55 (CI not available but estimated roughly as 0.35-0.85)
Source : Correa <u>et al</u> Table 4.	
Bronchioalveolar carcinoma	
Plain only (base)	1.00
Mixed	0.77 (0.22-2.69)
Filter only	0.25 (0.02-2.87)
Source : Falk <u>et al</u> (1992) Table 3, re-estimated to plain only as base.	

STUDY REF: WILCOX

NAME: New Jersey Case Control Study	
DESIGN: CC	
LOCATION: USA : New Jersey : 6 high mortality areas	
PERIOD: 1980-81	
POPULATION	AGE RANGE: No restriction
	RACE: White
	OTHER DETAILS: -
CASES	NUMBER: 763 men
	HISTOLOGICAL CONFIRMATION: 100%
	PROXY INTERVIEWS: 43.8%
	OTHER DETAILS: From hospital records, cancer registry files and death certificate files
CONTROLS	NUMBER: 900 men
	TYPE: A) Random sample of men with motor vehicle licences (for non-proxies) B) From state death certificate files (for proxies)
	MATCHING FACTORS: Frequency matched on area, race, age (5 years) and on date of death/diagnosis for proxies
	PROXY INTERVIEWS: 37.3%
	OTHER DETAILS: Death certificates indicating lung cancer or respiratory disease excluded
ASPECTS OF CIG TYPE: Tar level	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Age, cigs/day, duration, pack-years	
OTHER COMMENTS: Restricted to smokers with complete brand histories smoking continuously 1973-1980	
REFERENCES: Wilcox <u>et al</u> (1988)	
RESULTS	Tar level 1973-1980
	<14.0 14.1-17.5 17.6-21.0 21.1-28.0 (base)
Unadjusted	0.53(0.29-0.97) 0.86(0.59-1.26) 1.04(0.66-1.64) 1.00
Adj. intensity	0.61(0.33-1.12) 1.01(0.68-.151) 1.16(0.72-1.86) 1.00
Adj. duration	0.58(0.32-1.07) 0.89(0.60-1.32) 1.05(0.65-1.67) 1.00
Adj. intensity + duration	0.61(0.32-1.13) 1.04(0.70-1.56) 1.21(0.75-1.96) 1.00
Adj. pack years	0.71(0.37-1.35) 1.06(0.71-1.59) 1.19(0.73-1.93) 1.00
Source : Table 2	

STUDY REF: PATHAK

NAME: New Mexico Case Control Study			
DESIGN: CC			
LOCATION: USA : New Mexico : Statewide			
PERIOD: 1980-1982			
POPULATION	AGE RANGE: 25-84		
	RACE: White		
	OTHER DETAILS: -		
CASES	NUMBER: 192 men and 277 women		
	HISTOLOGICAL CONFIRMATION: 96.4% histology, cytology or autopsy		
	PROXY INTERVIEWS: 47%		
	OTHER DETAILS: Not alveolar carcinoma		
CONTROLS	NUMBER: 338 men and 426 women		
	TYPE: Random telephone numbers (aged ≤ 65) Medicare participants (aged > 65)		
	MATCHING FACTORS: Age, sex, race (frequency matched) 1:5:1		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: -		
ASPECTS OF CIG TYPE: Filter/plain (nonfilter includes hand rolled)			
DATA BY HISTOLOGICAL TYPE: No			
CONFOUNDING VARIABLES: Age, sex, race, amount, duration, amount x duration			
OTHER COMMENTS: Analyses limited to current cigarette smokers. Results not presented for Hispanics and non-Hispanics together			
REFERENCES: Pathak <u>et al</u> (1986), Samet <u>et al</u> (1984)			
RESULTS	By years used	Non-Hispanics	Hispanics
	Filter only	0.80	0.04(p<0.05)
	67-99% filter	0.71	0.26(p<0.05)
	34-66% filter	0.58	0.39
	1-33% filter	0.83	0.56
	Non filter only (base)	1.00	1.00
Source : Table 7			
(Risks noted to be higher for hand rolled than commercial non filter, but results combined as difference not significant; CI not presented)			

STUDY REF: BROSS

NAME: Roswell Park case control study																																																																																			
DESIGN: CC																																																																																			
LOCATION: USA : New York : Buffalo (Roswell Park Memorial Institute)																																																																																			
PERIOD: 1960-1966																																																																																			
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	RACE: White																																																																																		
	OTHER DETAILS: -																																																																																		
CASES	NUMBER: 974 men																																																																																		
	HISTOLOGICAL CONFIRMATION: Not stated																																																																																		
	PROXY INTERVIEWS: No																																																																																		
	OTHER DETAILS: -																																																																																		
CONTROLS	NUMBER: 974 men																																																																																		
	TYPE: No diagnosis of neoplastic disease																																																																																		
	MATCHING FACTORS: Age (5 years), entry date (4 years), hospital																																																																																		
	PROXY INTERVIEWS: No																																																																																		
	OTHER DETAILS: -																																																																																		
ASPECTS OF CIG TYPE: Filter/plain (current brand)																																																																																			
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STUDY REF: WYNDER

NAME: Sloan Kettering case-control study					
DESIGN: CC					
LOCATION: US : New York : New York City (Sloan-Kettering Cancer Centre)					
PERIOD: 1966-69					
POPULATION	AGE RANGE: No restriction				
	RACE: No restriction				
	OTHER DETAILS: -				
CASES	NUMBER: 284 men and 66 women				
	HISTOLOGICAL CONFIRMATION: 100%				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: Wynder (1972) also includes some patients from other hospitals in Los Angeles, Houston and New York for 1970-71. Wynder and Hoffmann (1972) includes additional cases but not controls				
CONTROLS	NUMBER: 420 men and 132 women				
	TYPE: Patients with diseases unrelated to smoking				
	MATCHING FACTORS: Sex, age, hospital				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: -				
ASPECTS OF CIG TYPE: Filter/plain (filter for at least 10 years)					
DATA BY HISTOLOGICAL TYPE: Results only given for Kreyberg I males					
CONFOUNDING VARIABLES: Amount smoked					
OTHER COMMENTS: Smokers of at least one cigarette a day for 20 years +. (10 year 20 a day reclassified as 20 year 10 a day)					
REFERENCES: Wynder <u>et al</u> (1970), Wynder and Hoffmann (1972), Wynder (1972)					
RESULTS					
	Nonfilter (base)		Filter (10+ years)		
	Cases	Controls	Cases	Controls	RR(CI)
1-9/day	4	6	2	11	0.27(0.04-1.95)
10-20/day	24	31	17	36	0.61(0.28-1.34)
21-40/day	30	21	22	28	0.55(0.25-1.21)
41+/day	23	4	25	7	0.62(0.16-2.40)
Total (unadjusted)	81	62	66	82	0.62(0.39-0.98)
Total (adjusted for amount)	81	62	66	82	0.56(0.34-0.92)
Source : Wynder <u>et al</u> (1970) Table 5					
1-20/day	40	37	22	47	0.43(0.22-0.85)
21+/day	67	25	61	35	0.65(0.35-1.21)
Total (unadjusted)	107	62	83	82	0.59(0.38-0.91)
Total (adjusted for amount)	107	62	83	82	0.54(0.34-0.85)
Source : Wynder and Hoffmann (1972) Figure 15					
Continued					

STUDY REF: WYNDER (Continued)

	Nonfilter (base)		Filter (10+ years)		RR(CI)
	Cases	Controls	Cases	Controls	
1-9/day	5	10	2	16	0.25(0.04-1.54)
10-20/day	41	31	34	54	0.48(0.25-0.90)
21-40/day	47	32	36	39	0.63(0.33-1.19)
41+/day	33	7	28	14	0.42(0.15-1.20)
Total (unadjusted)	126	80	100	123	0.52(0.35-0.76)
Total (adjusted for amount)	126	80	100	123	0.51(0.34-0.76)

Source : Wynder (1972) Figure 9

STUDY REF: KHUDER

NAME: Philadelphia case-control study			
DESIGN: CC			
LOCATION: USA : Pennsylvania : Philadelphia (15 hospitals)			
PERIOD: 1985-1987			
POPULATION	AGE RANGE: 36+		
	RACE: No restriction		
	OTHER DETAILS: Living in Philadelphia		
CASES	NUMBER: 482 men		
	HISTOLOGICAL CONFIRMATION: 100%		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: -		
CONTROLS	NUMBER: 1094 men		
	TYPE: From population health survey		
	MATCHING FACTORS: Race (2:1 White, 3:1 Black), Age		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: -		
ASPECTS OF CIG TYPE: Filter/plain			
DATA BY HISTOLOGICAL TYPE: No			
CONFOUNDING VARIABLES: None			
OTHER COMMENTS: -			
REFERENCES: Khuder <u>et al</u> (1998)			
RESULTS			
	Cases	Controls	OR (CI)
Not smoked filter	284	334	1.00
Smoked filter	173	440	0.46 (0.37-0.59)
Source : Table 2			

STUDY REF: WEINBE

NAME: Allegheny County Study			
DESIGN: Comparison of risk factors in high and low risk areas			
LOCATION: US : Pennsylvania : Allegheny County (Lawrenceville/South Hills)			
PERIOD: 1978-79			
POPULATION	AGE RANGE: 35+		
	RACE: White		
	OTHER DETAILS: Interviews of random sample of males aged 35-64 in the two areas		
HIGH RISK	NUMBER: 378		
	HISTOLOGICAL CONFIRMATION: NA		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: Lawrenceville - high risk - 127.7 per 100,000		
LOW RISK	NUMBER: 607		
	TYPE: NA		
	MATCHING FACTORS: NA		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: South Hills - low risk - 59.0 per 100,000		
ASPECTS OF CIG TYPE: Tar, filter/plain			
DATA BY HISTOLOGICAL TYPE: NA			
CONFOUNDING VARIABLES: Age			
OTHER COMMENTS: Data for current smokers only			
REFERENCES: Weinberg <u>et al</u> (1982)			
RESULTS			
	Lawrenceville	South Hills	p
Mean tar content (mg)	18.7	16.8	NS
Lifetime tar (g)			
- all ages	7528.5	5289.3	< 0.001
- 45-54	7569.9	5540.1	< 0.01
- 65+	10942.3	5197.1	<0.001
Filter smokers (%)			
- 35-44	86.9	89.6	NS
- 45-54	70.7	76.9	NS
- 55-64	59.2	76.9	NS
- 65+	63.3	73.9	NS
- All ages	Not given	8.9 higher	< 0.05
Source : Text p49			

STUDY REF: BUFFLE

NAME: Texas case-control study			
DESIGN: CC			
LOCATION: US : Texas : six coastal counties (56 hospitals)			
PERIOD: 1976-80			
POPULATION	AGE RANGE: 30-79		
	RACE: White		
	OTHER DETAILS: -		
CASES	NUMBER: 475 men and 460 women		
	HISTOLOGICAL CONFIRMATION: 100%		
	PROXY INTERVIEWS: 84%		
	OTHER DETAILS: -		
CONTROLS	NUMBER: 466 men and 482 women		
	TYPE: Population-based and decedent controls from state and federal records		
	MATCHING FACTORS: Age, race, sex, region of residence, vital status at time of ascertainment		
	PROXY INTERVIEWS: 81%		
	OTHER DETAILS: -		
ASPECTS OF CIG TYPE: Filter/plain, hand rolled (Ives only)			
DATA BY HISTOLOGICAL TYPE: No			
CONFOUNDING VARIABLES: None			
OTHER COMMENTS: Ives (1984) considered only women in Harris County - 259 cases and 278 controls			
REFERENCES: Buffler <u>et al</u> (1984), Buffler <u>et al</u> (1986), Ives (1984)			
RESULTS			
Filter/plain RR	Males 0.92	Females 1.17	(CIs not available)
Source : Buffler (1984) Table 6			
	Cases	Controls	RR (CI)
Non-filter only (base)	47	38	1.00
Filter only	129	78	1.34 (0.80-2.23)
Mixed	64	45	1.15 (0.65-2.04)
Source : Ives (1984) Appendix C Table 29			
Continued			

STUDY REF: BUFFLE (Continued)

	Cases	Controls	RR (CI)
Manufactured (base)	240	161	1.00
Hand rolled	32	9	2.39(1.11-5.13)

Source : Ives (1984) Appendix C Tables 11 and 29

STUDY REF: AHF1

NAME:		American Health Foundation multicentre case-control study 1						
DESIGN:		CC						
LOCATION:		US : New York, Miami, Birmingham, Houston, LA, New Orleans						
PERIOD:		1969-76						
POPULATION	AGE RANGE:	No restriction						
	RACE:	No restriction						
	OTHER DETAILS:	-						
CASES	NUMBER:	1051 men, 314 women						
	HISTOLOGICAL CONFIRMATION:	100%						
	PROXY INTERVIEWS:	No						
	OTHER DETAILS:	-						
CONTROLS	NUMBER:	2519 men, 831 women						
	TYPE:	Patients with no tobacco-related disease						
	MATCHING FACTORS:	Age, sex, race, city (frequency matched)						
	PROXY INTERVIEWS:	No						
	OTHER DETAILS:	Matching to cases which also included cancer of larynx, oral cavity, oesophagus and bladder						
ASPECTS OF CIG TYPE:		Never filter/switched last 10 years/switched 10+ years ago						
		(NF)		(STF)		(LTF)		
DATA BY HISTOLOGICAL TYPE:		Yes						
CONFOUNDING VARIABLES:		Age, duration, amount smoked						
OTHER COMMENTS:		-						
REFERENCES:		Wynder and Stellman (1977,1979), Mushinski and Stellman (1978)						
RESULTS								
		Kreyberg I			Kreyberg II			Combined
Unadjusted		Cases	Controls	RR(CI)	Cases	Controls	RR(CI)	RR(CI)
Males	- NF	200	398	1.00	73	398	1.00	1.00
	- STF	114	215	1.06(0.80-1.40)	51	215	1.29(0.87-1.92)	1.12(0.87-1.44)
	- LTF	164	414	0.79(0.62-1.01)	88	414	1.16(0.83-1.63)	0.89(0.71-1.11)
Females	- NF	21	30	1.00	13	30	1.00	1.00
	- STF	22	43	0.73(0.34-1.56)	22	43	1.18(0.52-2.71)	0.90(0.47-1.72)
	- LTF	62	157	0.56(0.30-1.06)	46	157	0.68(0.33-1.40)	0.61(0.35-1.05)
Source : Wynder and Stellman (1977) Tables 5 and 6								
Continued								

STUDY REF: AHF1 (Continued)

Kreyberg I		NF (base)		LTF		RR(CI)
		Cases	Controls	Cases	Controls	
Males	1-10/day	13	65	11	68	0.81(0.34-1.93)
	11-20/day	69	185	53	182	0.78(0.52-1.18)
	21-30/day	44	71	31	61	0.82(0.46-1.45)
	31-40/day	50	53	40	61	0.70(0.40-1.21)
	41+/day	28	24	32	42	0.62(0.32-1.33)
Total	(unadjusted)	204	398	167	414	0.80(0.62-1.01)
	(adjusted for amount)	204	398	167	414	0.75(0.59-0.97)
Females	1-10/day	4	12	9	52	0.52(0.14-1.97)
	11-20/day	8	11	22	70	0.43(0.15-1.21)
	21-30/day	4	3	13	18	0.54(0.10-2.84)
	31+/day	5	4	21	17	0.99(0.23-4.26)
Total	(unadjusted)	21	30	65	157	0.59(0.32-1.11)
	(adjusted for amount)	21	30	65	157	0.55(0.29-1.06)

Source : Mushinski and Stellman (1978) Figure 1. (Similar table in Wynder and Stellman (1979) but based on fewer cases and more controls.)

Kreyberg I			
Males	LTF/NFS	adjusted for duration and quantity	0.84(0.65-1.09)
		adjusted for age and quantity	0.79(0.61-1.03)
Females	LTF/NFS	adjusted for duration and quantity	0.78(0.40-1.49)
		adjusted for age and quantity	0.73(0.38-1.39)

Source : Wynder and Stellman (1979) Table 3.

NAME: American Health Foundation multicentre case-control study 2																													
DESIGN: CC																													
LOCATION: US : 45 hospitals																													
PERIOD: 1977-95																													
POPULATION	AGE RANGE: No restriction																												
	RACE: No restriction																												
	OTHER DETAILS: -																												
CASES	NUMBER: Large : numbers vary in papers																												
	HISTOLOGICAL CONFIRMATION: 100%																												
	PROXY INTERVIEWS: No																												
	OTHER DETAILS: -																												
CONTROLS	NUMBER: Large : numbers vary in papers																												
	TYPE: Patients with no tobacco-related disease																												
	MATCHING FACTORS: Age, sex, hospital, city, date of admission																												
	PROXY INTERVIEWS: No																												
	OTHER DETAILS: -																												
ASPECTS OF CIG TYPE: Filter/plain, menthol, change in number smoked in switchers to filter. Tar results presented as lifetime cumulative tar and not used																													
DATA BY HISTOLOGICAL TYPE: Yes																													
CONFOUNDING VARIABLES: Varies - see below																													
OTHER COMMENTS: Many other papers than those cited, but tend to duplicate results. Numerous results, which tend to overlap each other.																													
REFERENCES: Augustine <i>et al</i> (1989), Kabat and Hebert (1991), Kabat (1996), Morabia and Wynder (1991), Stellman <i>et al</i> (1997), Wynder and Kabat (1988), Wynder and Muscat (1995).																													
RESULTS Adj. age, education, cigs/day <table border="1"> <thead> <tr> <th></th> <th>Lifetime nonfilter (base)</th> <th>Switched</th> <th>Lifetime filter</th> </tr> </thead> <tbody> <tr> <td>Males - Sq. cell</td> <td>1.0</td> <td>0.9(0.7-1.2)</td> <td>0.8(0.5-1.2)</td> </tr> <tr> <td>- Adenocarc.</td> <td>1.0</td> <td>1.0(0.8-1.3)</td> <td>1.0(0.7-1.5)</td> </tr> <tr> <td>- Combined</td> <td>1.0</td> <td>0.96(0.77-1.19)</td> <td>0.92(0.65-1.29)</td> </tr> <tr> <td>Females - Sq. cell</td> <td>1.0</td> <td>0.6(0.3-1.0)</td> <td>0.4(0.2-0.8)</td> </tr> <tr> <td>- Adenocarc.</td> <td>1.0</td> <td>1.2(0.7-2.0)</td> <td>0.9(0.5-1.7)</td> </tr> <tr> <td>- Combined</td> <td>1.0</td> <td>0.97(0.60-1.56)</td> <td>0.68(0.39-1.19)</td> </tr> </tbody> </table> Source : Stellman <i>et al</i> (1997) Table 3			Lifetime nonfilter (base)	Switched	Lifetime filter	Males - Sq. cell	1.0	0.9(0.7-1.2)	0.8(0.5-1.2)	- Adenocarc.	1.0	1.0(0.8-1.3)	1.0(0.7-1.5)	- Combined	1.0	0.96(0.77-1.19)	0.92(0.65-1.29)	Females - Sq. cell	1.0	0.6(0.3-1.0)	0.4(0.2-0.8)	- Adenocarc.	1.0	1.2(0.7-2.0)	0.9(0.5-1.7)	- Combined	1.0	0.97(0.60-1.56)	0.68(0.39-1.19)
	Lifetime nonfilter (base)	Switched	Lifetime filter																										
Males - Sq. cell	1.0	0.9(0.7-1.2)	0.8(0.5-1.2)																										
- Adenocarc.	1.0	1.0(0.8-1.3)	1.0(0.7-1.5)																										
- Combined	1.0	0.96(0.77-1.19)	0.92(0.65-1.29)																										
Females - Sq. cell	1.0	0.6(0.3-1.0)	0.4(0.2-0.8)																										
- Adenocarc.	1.0	1.2(0.7-2.0)	0.9(0.5-1.7)																										
- Combined	1.0	0.97(0.60-1.56)	0.68(0.39-1.19)																										
Continued																													

STUDY REF: AHF2 (Continued)

Adj. age, education, cigs/day, inhalation		Nonfilter only (base)	Switchers (1-9 years)	Switchers (10+ years)	Filter only
Males	- KI	1.0	0.8(0.6-1.2)	0.7(0.5-0.9)	0.7(0.4-1.3)
	- KII	1.0	1.0(0.6-1.5)	0.8(0.5-1.2)	0.9(0.4-1.5)
	- Combined	1.0	0.85(0.62-1.18)	0.72(0.54-0.95)	0.77(0.46-1.30)
Females	- KI	1.0	1.0(0.5-2.0)	0.7(0.4-1.4)	0.6(0.3-1.4)
	- KII	1.0	1.0(in base)	1.0(0.8-1.3)	1.0(0.6-1.5)
	- Combined	1.0	1.0(in base)	0.94(0.74-1.19)	0.87(0.56-1.33)

Source : Kabat (1996) Table 2

Adj. age	Lifetime nonfilter (base) (base)	Switchers (1-9 years)	Switchers (10-20 years)	Switchers (21+ years)	Lifetime filter	
Males	- Sq. cell	1.0	1.10(0.73-1.65)	0.97(0.70-1.35)	0.93(0.61-1.41)	0.52(0.33-0.84)
	- Adenocarc.	1.0	0.92(0.62-1.37)	1.10(0.79-1.52)	0.88(0.58-1.33)	0.81(0.53-1.24)
	- Combined	1.0	1.00(0.71-1.41)	1.03(0.78-1.37)	0.90(0.63-1.29)	0.67(0.46-0.97)
Females	- Sq. cell	1.0	0.71(0.34-1.48)	0.48(0.26-0.90)	0.77(0.40-1.48)	0.33(0.18-0.63)
	- Adenocarc.	1.0	1.26(0.69-2.30)	1.07(0.59-1.94)	1.41(0.75-2.64)	0.79(0.43-1.43)
	- Combined	1.0	1.01(0.55-1.85)	0.77(0.46-1.31)	1.09(0.63-1.90)	0.55(0.33-0.93)

Source : Wynder and Muscat (1995) Table 1 re-estimated to lifetime nonfilter (base)

Adj. age, education, cigs/day, inhalation		Nonfilter only (base)	Switchers (1-9 years)	Switchers (10+ years)	Filter only
Males	- KI	1.00	0.83(0.59-1.17)	0.66(0.49-0.90)	0.69(0.37-1.27)
	- KII	1.00	0.96(0.61-1.51)	0.79(0.53-1.18)	0.87(0.43-1.54)
Females	- KI	1.00	0.99(0.49-2.03)	0.74(0.40-1.36)	0.64(0.30-1.35)
	- KII	1.00	1.00(in base)	0.99(0.76-1.29)	0.96(0.62-1.47)

Source : Wynder and Kabat (1988) Tables 5 and 6

Unadjusted		Average tar (among filter smokers) in mg		
		15+	10-14	< 10
Males	- Kreyberg I	1.00	1.26(0.90-1.78)	1.29(0.78-2.13)
	- Kreyberg II	1.00	0.94(0.63-1.41)	1.33(0.71-2.48)
	- Combined	1.00	1.13(0.87-1.47)	1.32(0.89-1.95)
Females	- Kreyberg I	1.00	0.60(0.39-0.91)	0.77(0.44-1.34)
	- Kreyberg II	1.00	0.87(0.56-1.34)	1.17(0.60-2.26)
	- Combined	1.00	0.72(0.53-0.97)	0.93(0.61-1.42)

Source : Wynder and Kabat (1988) Figures 1 and 2

		Never menthol	Menthol 1-14 years	Menthol 15+ years
Males	- all types	1.00	1.14(0.82-1.59)	0.98(0.70-1.38)
Females	- all types	1.00	0.82(0.52-1.28)	0.76(0.53-1.16)
Both sexes	- squamous cell	1.00	1.17(0.78-1.78)	0.92(0.60-1.42)
	- small cell	1.00	1.99(0.73-5.41)	0.84(0.27-2.61)
	- adenocarcinoma	1.00	0.98(0.68-1.42)	0.95(0.66-1.36)

Source : Kabat and Hebert (1991) Tables 3 and 4

Risks in relation to change in number smoked after switching to filter - adj. nonfilter and filter duration, nonfilter cigs/day and age at switch	Males	Females
No increase (base)	1.00	1.00
Increased by 1-10 cigs/day	1.19(0.93-1.51)	1.66(1.23-2.24)
Increased by 11-20 cigs/day	1.75(1.33-2.29)	2.97(2.09-4.20)
Increased by 21+ cigs/day	2.37(1.64-3.41)	3.83(2.31-6.34)

Source : Augustine et al (1989) Table 4

STUDY REF: KAUFMA

NAME: US/Canada multicentre case-control study	
DESIGN: CC	
LOCATION: USA : Boston, New York, Philadelphia, Baltimore, Tucson Canada : Ontario	
PERIOD: 1981-1986	
POPULATION	AGE RANGE: 40-69
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 881
	HISTOLOGICAL CONFIRMATION: Not stated
	PROXY INTERVIEWS: No
	OTHER DETAILS: No other cancer or history of cancer
CONTROLS	NUMBER: 2570
	TYPE: Patients with diseases unrelated to smoking and no history of cancer
	MATCHING FACTORS: None
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Tar	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Age, sex, race, region, years of education, year of interview, number of cigs/day, age at starting smoking	
OTHER COMMENTS: -	
REFERENCES: Kaufman <u>et al</u> (1989)	
RESULTS	
	Average tar content (mg)
	29+ (base) 22-28 < 22
M+F Brand identified for 75%+ of years of smoking	1.00 0.61(0.26-1.46) 0.32(0.14-0.75)
M+F Brand identified for 100% Source : Table 3; re-estimated to 29+ mg tar base	1.00 0.63(0.16-2.44) 0.42(0.11-1.58)
M+F Brand smoked at least 10 years before admission Source : Table 4; re-estimated to 29+ mg tar base	1.00 0.75(0.36-1.56) 0.25(0.11-0.58)
Continued	

STUDY REF: KAUFMA (Continued)

M	Brand smoked at least 10 years before admission	1.00	0.90(0.36-2.23)	0.25(0.08-0.82)
F	Brand smoked at least 10 years before admission	1.00	0.38(0.09-1.58)	0.21(0.05-0.93)

Source : Table 5; re-estimated to 29+ mg tar base

STUDY REF: MRFIT

NAME: Multiple risk factor intervention trial			
DESIGN: Prospective study - intervention on diet, smoking, blood pressure			
LOCATION: USA : 22 centres			
PERIOD: 1973/76 followed up until end of 1985 (Mean 10.5 years)			
POPULATION	AGE RANGE: 35-57 at baseline		
	RACE: No restriction		
	OTHER DETAILS: Men selected to be at high risk of CHD and free of overt CHD		
CASES	NUMBER: 119 men		
	HISTOLOGICAL CONFIRMATION: No		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: Based on death certificates		
BASELINE POP.	NUMBER: 12866 men		
	TYPE: Randomized to special intervention or usual care (until 1982)		
	MATCHING FACTORS: NA		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: -		
ASPECTS OF CIG TYPE: Filter/plain, tar level, nicotine level			
DATA BY HISTOLOGICAL TYPE: No			
CONFOUNDING VARIABLES: Age, blood pressure, cholesterol, cigarettes/day (Kuller) and age start, alcohol, tar yield, nicotine yield, filter/non-filter, thiocyanate (Ockene)			
OTHER COMMENTS: Men who reported smoking cigarettes at entry			
REFERENCES: Kuller <u>et al</u> (1991), Ockene <u>et al</u> (1990)			
RESULTS			
	Multivariate regression coefficient	S.E.	RR(CI)
Filter/non-filter	-0.6440	0.4076	NS 0.53(0.24-1.17)
Tar (per mg)	-0.1334	0.0952	NS 0.88(0.73-1.05)
Nicotine (per mg)	1.9110	1.3438	NS 6.75(0.49-94.2)
Source : Ockene <u>et al</u> (1990) Table 2			
Tar 20+ mg (base)	1.00	Nicotine 1.5+ mg (base)	1.00
16-19 mg	0.71(0.49-1.03)	1.1-1.4 mg	0.66(0.42-1.04)
≤ 15 mg	0.88(0.52-1.49)	≤ 1.0 mg	0.68 (0.40-1.17)
Per mg tar	1.03(0.98-1.07)	Per mg nicotine	1.51(0.74-3.09)
Source : Kuller <u>et al</u> (1991) Table 8		Source : Kuller <u>et al</u> (1991) Table 7	

STUDY REF: CPSI

NAME: American Cancer Society Cancer Prevention Study I				
DESIGN: P				
LOCATION: USA : 25 states				
PERIOD: 1959-60 followed up for 12 years				
POPULATION	AGE RANGE: No restriction			
	RACE: No restriction			
	OTHER DETAILS: Enrolled by volunteer workers. Tend to be predominantly white and above average social class			
CASES	NUMBER: 969 in first 6 years of follow up			
	HISTOLOGICAL CONFIRMATION: No			
	PROXY INTERVIEWS: No			
	OTHER DETAILS: Death certificates			
BASELINE POP.	NUMBER: Over 1 million (222,830 in Stellman's analysis)			
	TYPE: NA			
	MATCHING FACTORS: NA			
	PROXY INTERVIEWS: No			
	OTHER DETAILS: Questionnaires once every 2 years. Stellman and Garfinkel analysis restricted to white males with no history of cancer, heart disease or stroke who did not report being sick and had completed some high school.			
ASPECTS OF CIG TYPE: Tar/nicotine				
DATA BY HISTOLOGICAL TYPE: No				
CONFOUNDING VARIABLES: Age, race, number cigs/day, age starting to smoke, place of residence, occupational exposures to dust, fumes, chemicals, etc, education, prior history of lung cancer, prior history of heart disease (Hammond), age, number cigs/day (Stellman)				
OTHER COMMENTS: For Hammond High T/N = 2.0-2.7 mg nicotine and 25.7-35.7 mg tar Low T/N = < 1.2 mg nicotine (usually < 17.6 mg tar) and Medium T/N = Intermediate For Stellman categories based only on tar				
REFERENCES: Hammond <i>et al</i> (1976a, 1976b, 1977), Lee and Garfinkel (1980), Stellman and Garfinkel (1989)				
RESULTS				
Men	- RR(CI)	High T/N (base)	Medium T/N	Low T/N
	deaths	1.00	0.90(0.78-1.04)	0.68(0.54-0.86)
		93	379	350
Source : Stellman and Garfinkel (1989), Table 2, 6 years follow-up, CI estimated from deaths.				
Continued				

STUDY REF: CPSI (Continued)

			High T/N (base)	Medium T/N	Low T/N
Men	1960-66	RR(CI)	1.00	0.96(0.75-1.24)	0.83(0.64-1.08)
		adj. deaths	122.4	117.4	101.0
Women	1960-66	RR(CI)	1.00	0.86(0.57-1.30)	0.57(0.36-0.91)
		adj. deaths	48.3	41.4	27.4
Men	1960-66	RR(CI)	1.00	0.94(0.70-1.27)	0.79(0.58-1.08)
		adj. deaths	89.6	84.5	70.6
Women	1960-66	RR(CI)	1.00	0.73(0.49-1.09)	0.62(0.41-0.94)
		adj. deaths	58.1	42.2	36.2

Source : Hammond et al (1976), Table 2, CI estimated from adjusted deaths

STUDY REF: CPSII

NAME: American Cancer Society Cancer Prevention Study II	
DESIGN: P	
LOCATION: USA : All 50 states plus DC and Puerto Rico	
PERIOD: 1982 followed until 1988	
POPULATION	AGE RANGE: 30+
	RACE: No restriction
	OTHER DETAILS: Enrolled by volunteer workers. Tend to be predominantly white and above average social class
CASES	NUMBER: 2920 in men and 1462 in women
	HISTOLOGICAL CONFIRMATION: No
	PROXY INTERVIEWS: No
	OTHER DETAILS: Death certificates
BASELINE POP.	NUMBER: Approx 1.2 million (509000 men and 677000 women)
	TYPE: NA
	MATCHING FACTORS: NA
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Tar, filter/plain	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: age, number cigs/day, inhalation (Garfinkel) age (Thun)	
OTHER COMMENTS: Halpern <u>et al</u> (1993) only used for numbers of deaths	
REFERENCES: Garfinkel and Stellman (1988), Thun and Heath (1997), Halpern <u>et al</u> (1993)	
<p>RESULTS</p> <p>4 year follow-up - current smokers - women RR 1.031 ($p < 0.01$) per mg tar yield Source : Garfinkel and Stellman (1988), text below Table 8.</p> <p>Current smokers, smoked for at least 20 years - women Filter 40% or less (base) 1.00 Filter exclusively 0.66(0.57-0.78) Source : Garfinkel and Stellman (1988), text below Table 8.</p> <p>Men Non-filter 1.00 Mixed 0.8(0.7-0.9) Filter 0.45(0.4-0.5) Source : Thun and Heath (1997), Figure 2 (CI estimated assuming 500 deaths per group)</p>	

STUDY REF: SPEIZE

NAME: Nurses Health Study	
DESIGN: P	
LOCATION: USA	
PERIOD: 1976 followed until 1992	
POPULATION	AGE RANGE: 30-55
	RACE: No restriction
	OTHER DETAILS: Registered female nurses free from cancer (except non-melanoma skin cancer)
CASES	NUMBER: 593
	HISTOLOGICAL CONFIRMATION: Cell type available for all but 25
	PROXY INTERVIEWS: No
	OTHER DETAILS: Hospital records and pathology reports reviewed blind of smoking history
BASELINE POP.	NUMBER: 118,351
	TYPE: NA
	MATCHING FACTORS: NA
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Tar	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: age, age first smoked, current number smoked	
OTHER COMMENTS: R Peto cited as contributing, but he does not believe effects of adjustment	
REFERENCES: Speizer <u>et al</u> (1999)	
RESULTS	
<p>16 year follow-up - current smokers - women 1978 tar level bottom vs. top quartile 0.50 (0.76-0.67) adjusted for age and age first smoked 1.00 (0.71-1.43) adjusted also for number cigs smoked</p> <p>Source : Speizer <u>et al</u> (1999) text above Table 1, inverting RRs to make them relative to top quartile. Note that the text does not give RRs for intermediate groups and variously refers to tertiles and quartiles.</p>	

NAME: West European multicentre case-control study																										
DESIGN: CC																										
LOCATION: Europe : Austria, France, Germany (Hamburg, Heidelberg), Italy (Milan, Rome), Scotland (Glasgow)																										
PERIOD: 1976-80																										
POPULATION	AGE RANGE: No restriction																									
	RACE: No restriction																									
	OTHER DETAILS: -																									
CASES	NUMBER: 6920 men and 884 women																									
	HISTOLOGICAL CONFIRMATION: 100%																									
	PROXY INTERVIEWS: No																									
	OTHER DETAILS: -																									
CONTROLS	NUMBER: 13460 men and 1747 women																									
	TYPE: Patients mainly with diseases unrelated to smoking																									
	MATCHING FACTORS: Sex, age, study site																									
	PROXY INTERVIEWS: No																									
	OTHER DETAILS: -																									
ASPECTS OF CIG TYPE: Filter/plain, tar level																										
DATA BY HISTOLOGICAL TYPE: Yes																										
CONFOUNDING VARIABLES: Years of cessation (yc), number smoked (n), duration of smoking (d)																										
OTHER COMMENTS: No adjustment for age																										
REFERENCES: Lubin <u>et al</u> (1984a,b), Lubin (1984), Lubin and Blot (1984)																										
RESULTS																										
	<table> <thead> <tr> <th></th> <th>Lifetime Nonfilter (base)</th> <th>Mixed</th> <th>Lifetime Filter</th> <th>Adjustment Factors</th> </tr> </thead> <tbody> <tr> <td>Males - all types</td> <td>1.00</td> <td>0.89(0.82-0.96)</td> <td>0.56(0.47-0.66)</td> <td>yc, d</td> </tr> <tr> <td>all types</td> <td>1.00</td> <td>1.00(0.91-1.10)</td> <td>0.48(0.40-0.56)</td> <td>yc, n</td> </tr> <tr> <td>Females - all types</td> <td>1.00</td> <td>0.72(0.36-1.44)</td> <td>0.40(0.19-0.83)</td> <td>yc, d</td> </tr> <tr> <td>all types</td> <td>1.00</td> <td>1.00(0.54-1.87)</td> <td>0.43(0.22-0.85)</td> <td>yc, n</td> </tr> </tbody> </table>		Lifetime Nonfilter (base)	Mixed	Lifetime Filter	Adjustment Factors	Males - all types	1.00	0.89(0.82-0.96)	0.56(0.47-0.66)	yc, d	all types	1.00	1.00(0.91-1.10)	0.48(0.40-0.56)	yc, n	Females - all types	1.00	0.72(0.36-1.44)	0.40(0.19-0.83)	yc, d	all types	1.00	1.00(0.54-1.87)	0.43(0.22-0.85)	yc, n
	Lifetime Nonfilter (base)	Mixed	Lifetime Filter	Adjustment Factors																						
Males - all types	1.00	0.89(0.82-0.96)	0.56(0.47-0.66)	yc, d																						
all types	1.00	1.00(0.91-1.10)	0.48(0.40-0.56)	yc, n																						
Females - all types	1.00	0.72(0.36-1.44)	0.40(0.19-0.83)	yc, d																						
all types	1.00	1.00(0.54-1.87)	0.43(0.22-0.85)	yc, n																						
Source : Lubin <u>et al</u> (1984a) Table V, re-estimated to correct base.																										
Continued																										

STUDY REF: LUBIN (Continued)

Males - squamous cell	1.00	0.84(0.78-0.91)	0.53(0.45-0.62)	yc, d
oat cell	1.00	1.15(0.99-1.34)	0.77(0.59-1.01)	
KI, unknown type	1.00	1.06(0.86-1.31)	0.63(0.41-0.94)	
adenocarcinoma	1.00	1.07(0.90-1.27)	0.71(0.52-0.99)	
Females - squamous cell	1.00	0.27(0.17-0.43)	0.15(0.09-0.26)	
oat cell	1.00	1.43(0.70-2.91)	0.71(0.33-1.54)	
KI, unknown type	1.00	1.06(0.56-2.01)	0.59(0.39-0.88)	
adenocarcinoma	1.00	1.36(0.66-2.83)	0.45(0.20-1.05)	

Source : Lubin and Blot (1984), Table 4, re-estimated to correct base.

% years nonfilter brands smoked -	Males	Females	Adjustment Factors
100% (base)	1.00	1.00	yc, d, n
84-99%	1.00	1.05	
70-83%	1.00	0.95	
50-69%	0.82	0.85	
1-49%	0.88	0.90	
0%	0.59	0.50	

Source : Lubin et al (1984a) Table VII, re-estimated to correct base.

Most recent change	Current Smokers	Former Smokers	Adjustment Factors
Stayed nonfilter (base)	1.00	1.00	yc, d
Nonfilter to filter	0.85	1.08	
Stayed filter	0.54	0.64	

Source : Lubin (1984) Table VI, re-estimated to correct base.

Mean cigarette tar content	Males	Females	Adjustment Factors
Highest VI (base for males)	1.00	-	yc, d, n
V (base for females)	0.93 (0.73-1.18)	1.00	
IV	0.93(0.74-1.16)	0.73(0.40-1.33)	
III	1.21(0.96-1.54)	0.87(0.44-1.69)	
II	0.86(0.67-1.10)	1.27(0.67-2.40)	
Lowest I	0.71(0.55-0.93)	0.67(0.38-1.18)	

Source : Lubin et al (1984a) Table X, re-estimated to correct base.

Proportion of smoking history	Males	Females	Adjustment Factors
High-tar brands (100%) (base)	1.00	1.00	yc, d, n
High-tar brands (> 75%)	1.06(0.93-1.21)	0.52(0.31-0.88)	
Other mixed levels	0.88(0.79-0.99)	0.77(0.49-1.19)	
Low-tar brands (> 75%)	0.71(0.43-1.56)	-	
Low-tar brands (100%)	0.59(0.45-0.77)	0.13(0.06-0.27)	

Source : Lubin et al (1984a) Table XI, re-estimated to correct base.

STUDY REF: LANGE

NAME: Copenhagen City Heart Study		
DESIGN: P		
LOCATION: Europe : Denmark : Copenhagen		
PERIOD: 1976 followed to 1989		
POPULATION	AGE RANGE:	20+
	RACE:	No restriction
	OTHER DETAILS:	Defined area around the University Hospital
CASES	NUMBER:	200 men and 68 women
	HISTOLOGICAL CONFIRMATION:	No
	PROXY INTERVIEWS:	No
	OTHER DETAILS:	Death certificate
BASELINE POP.	NUMBER:	6511 men and 7703 women
	TYPE:	NA
	MATCHING FACTORS:	NA
	PROXY INTERVIEWS:	No
	OTHER DETAILS:	-
ASPECTS OF CIG TYPE:		filter/plain
DATA BY HISTOLOGICAL TYPE:		No
CONFOUNDING VARIABLES:		age and pack-years
OTHER COMMENTS:		-
REFERENCES:		Lange <u>et al</u> (1992), Lange <u>et al</u> (1993)
RESULTS		
	Male	Female
Filter only/plain only	0.9(0.6-1.4)	0.7(0.4-1.4)
Source : Lange <u>et al</u> (1992) Table 4		

STUDY REF: PERNU

NAME: Helsinki case-control study						
DESIGN: CC						
LOCATION: Europe : Finland : Helsinki (4 hospitals + some for 1957-58 from Cancer Registry)						
PERIOD: 1944-1958						
POPULATION	AGE RANGE: No restriction					
	RACE: No restriction					
	OTHER DETAILS: -					
CASES	NUMBER: 1477 men and 129 women					
	HISTOLOGICAL CONFIRMATION: 50%					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: -					
CONTROLS	NUMBER: 713 men and 1060 women					
	TYPE: Cancer free					
	MATCHING FACTORS: None - but controls selected as aged					
	PROXY INTERVIEWS: No					
	OTHER DETAILS: -					
ASPECTS OF CIG TYPE: Pilli/Pölli (Pilli has an attached "holder" made of cardboard, but no actual filter; Pölli includes short cigarettes smoked with short wooden mouthpiece, and cigarettes of American-type.						
DATA BY HISTOLOGICAL TYPE: No						
CONFOUNDING VARIABLES: None						
OTHER COMMENTS: Mixed questionnaire and personal interview						
REFERENCES: Pernu (1960)						
RESULTS						
	Males		Females			
	Cases	Controls	RR(CI)	Cases	Controls	RR(CI)
Pölli (base)	706	216		7	24	
Pilli	432	137	0.96(0.76-1.23)	10	89	0.39(0.13-1.12)
Source : Table 15						

STUDY REF: BENHAM

NAME: French case-control study				
DESIGN: CC				
LOCATION: Europe : France : 16 hospitals (13 in Paris)				
PERIOD: 1976-1980				
POPULATION	AGE RANGE: No restriction			
	RACE: No restriction			
	OTHER DETAILS: -			
CASES	NUMBER: 1625 men and 96 women			
	HISTOLOGICAL CONFIRMATION: 100%			
	PROXY INTERVIEWS: No			
	OTHER DETAILS: -			
CONTROLS	NUMBER: 3091 men and 192 women			
	TYPE: Mainly diseases not associated with smoking			
	MATCHING FACTORS: Age, sex, hospital, interviewer			
	PROXY INTERVIEWS: No			
	OTHER DETAILS: -			
ASPECTS OF CIG TYPE: Dark/light, filter/plain, hand rolled/manufactured, tar levels				
DATA BY HISTOLOGICAL TYPE: Yes				
CONFOUNDING VARIABLES: See below				
OTHER COMMENTS: Part of Lubin multicentre study				
REFERENCES: Benhamou <u>et al</u> (1985, 1987, 1989, 1994)				
RESULTS				
(Source) Adjustment factors	Light (base)	Ever dark	Mixed	Dark
	<u>Males</u>			
(1985, Table 4) None (Kreyberg I)	1.0	3.63(2.05-6.42)	3.08(1.54-6.15)	3.69(1.98-6.90)
(1985, Table 8) N cigs, Dur, Inhale, Class, Current/ex, HR/manuf, Filter/plain (Kreyberg I)	1.0	1.88(0.92-3.83)	1.55(0.71-3.42)	1.94(0.95-3.96)
(1994, Table 2) Age	1.0	3.41(2.00-5.81)	4.4 (1.9-10.3)	3.4(2.0-5.8)
(1994, Table 3) Age, N cigs, Dur, Inhale, Current use, Filter/plain, Tar	1.0	1.73(0.92-3.26)	2.6(1.1-6.5)	1.7(0.9-3.2)
(1989, Table IV) Age, N cigs, Dur	1.0	3.32(1.91-5.74)	2.44(0.95-6.27)	3.33(1.92-5.77)
				Continued

STUDY REF: BENHAM (Continued)

	Never filter (base)	Mixed	Always filter	
<u>Males</u>				
(1985, Table 4) None (Kreyberg I)	1.0	1.02(0.84-1.25)	0.60(0.44-0.82)	
(1985, Table 8) N cigs, Dur, Inhale, Class, Tobacco type, Current/ex, HR/manuf (Kreyberg I)	1.0	0.89(0.69-1.14)	0.81(0.58-1.15)	
(1994, Table 2) Age	1.0	1.00(0.84-1.19)	0.38(0.24-0.62)	
(1994, Table 3) Age, N cigs, Dur, Inhale, Current use, Tobacco type, Tar	1.0	1.00(0.79-1.27)	0.63(0.35-1.10)	
(1989, Table IV) Age, N cigs, Dur	1.0	0.95(0.76-1.18)	0.70(0.52-0.94)	
	> 75% high tar (base)	51-75% high tar	< 50% high tar	Light imported (unknown tar)
<u>Males</u>				
(1994, Table 2) Age	1.0	1.10(0.92-1.32)	0.74(0.59-0.94)	0.26(0.14-0.47)
(1994, Table 3) Age, N cigs, Tar, Inhale, Current use, Tobacco type, Filter/plain	1.0	0.94(0.54-1.64)	0.79(0.52-1.20)	0.30(0.10-0.92)
	Never hand rolled (base)	Mixed	Always hand rolled	Ever hand rolled
<u>Males</u>				
(1985, Table 4) None (Kreyberg I)	1.0	1.64(1.25-2.15)	1.24(0.89-1.71)	1.46(1.18-1.82)
(1985, Table 8) N cigs, Dur, Inhale, Class, Tobacco type, Current/ex, Filter/plain (Kreyberg I)	1.0	1.32(0.95-1.81)	1.22(0.83-1.79)	1.28(0.99-1.66)
(1989, Table IV) Age, N cigs, Dur	1.0	1.38(0.84-2.26)	1.25(0.92-1.69)	1.28(0.98-1.67)
	100% nonfilter (base)	51-99% nonfilter	≤ 50% non filter	
<u>Females</u>				
(1987, Table III) Matching factors	1.0	0.45(0.09-2.23)	0.16(0.04-0.61)	
(1987, Table IV) N cigs, Dur, Inhale (includes nonsmokers)	1.0	0.35(0.05-2.38)	0.28(0.05-1.47)	
	≤ 50% dark (base)	51+% dark	51-99% dark	100% dark
(1987, Table IV) Matching factors	1.00	2.04(0.75-5.57)	1.66(0.31-8.84)	2.13(0.75-6.01)

NAME: Italian case-control study	
DESIGN: CC	
LOCATION: Europe : Italy : Milan	
PERIOD: 1977-80	
POPULATION	AGE RANGE: No restriction
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 1101 men
	HISTOLOGICAL CONFIRMATION: 100%
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
CONTROLS	NUMBER: 1918 women
	TYPE: Mainly diseases not associated with smoking
	MATCHING FACTORS: Age, sex, residence, date of diagnosis
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Dark/light tobacco, filter/plain	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Age, residence, consumption, years since cessation and use of filter or type of tobacco	
OTHER COMMENTS: Part of Lubin multicentre study - not fully reported	
REFERENCES: Benhamou and Benhamou (1993)	
RESULTS	
Light tobacco (base)	1.0
Mixed tobacco	1.15(0.86-1.53)
Dark tobacco	1.60(1.19-2.15)
Ever dark	1.30(0.98-1.73)
Source : Tables 2 and 4 : CI estimated using numbers	
Always plain (base)	1.00
< 50% filter	1.18 NS
≥ 50% filter	1.27 NS
Always filter	0.91 NS
Source : Table 5	

STUDY REF: VUTUC

NAME:	Austrian case-control study		
DESIGN:	CC		
LOCATION:	Europe : Austria : Nationwide (15 centres)		
PERIOD:	1976-80		
POPULATION	AGE RANGE:	No restriction	
	RACE:	No restriction	
	OTHER DETAILS:	Men with occupational exposure to inhalation risk excluded	
CASES	NUMBER:	252 men and 297 women	
	HISTOLOGICAL CONFIRMATION:	100%	
	PROXY INTERVIEWS:	No	
	OTHER DETAILS:	-	
CONTROLS	NUMBER:	839 men and 580 women	
	TYPE:	50% patients with diseases unrelated to smoking, 50% neighbourhood	
	MATCHING FACTORS:	Age (± 5 years)	
	PROXY INTERVIEWS:	No	
	OTHER DETAILS:	-	
ASPECTS OF CIG TYPE:	Tar level		
DATA BY HISTOLOGICAL TYPE:	No		
CONFOUNDING VARIABLES:	Age, duration, cigs/day		
OTHER COMMENTS:	Part of Lubin multicentre study. Very large number of other papers, many giving risk only by lifetime total tar.		
REFERENCES:	Vutuc and Kunze (1982, 1983)		
RESULTS			
		Tar > 24 mg (base)	15-24 mg < 15 mg
Males	- main brand	1.00	0.56(0.37-0.86)
	- exclusive brand	1.00	0.41(0.23-0.75)
Source : Vutuc and Kunze (1983) Table 1, re-estimated to base > 24 mg tar.			
Females	- main brand	1.00	0.49(0.32-0.76)
	- exclusive brand	1.00	0.43(0.20-0.93)
Source : Vutuc and Kunze (1982) Table 1, re-estimated to base > 24 mg tar. (Results for < 15 mg based on very few cases and controls in both sexes) (Estimates of CI for males unreliable)			

NAME: North West German case-control study					
DESIGN: CC					
LOCATION: Europe : Germany : Bremen, Hamburg, Hanover, Cologne, Bielefeld (7 hospitals)					
PERIOD: 1985-86					
POPULATION	AGE RANGE: No restriction				
	RACE: No restriction				
	OTHER DETAILS: -				
CASES	NUMBER: 146 male and 48 females				
	HISTOLOGICAL CONFIRMATION: Not required				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: -				
CONTROLS	NUMBER: 292 males and 96 females				
	TYPE: 50% hospital controls with diseases unrelated to smoking 50% population controls randomly drawn from residence registry				
	MATCHING FACTORS: Sex and age				
	PROXY INTERVIEWS: No				
	OTHER DETAILS: -				
ASPECTS OF CIG TYPE: Filter/plain					
DATA BY HISTOLOGICAL TYPE: No					
CONFOUNDING VARIABLES: Matching factors					
OTHER COMMENTS: -					
REFERENCES: Jockel <u>et al</u> (1992)					
RESULTS					
	<table> <tr> <td></td> <td>Males</td> </tr> <tr> <td>Any filter/no filter (in last 20 years)</td> <td>0.41(0.21-0.81)</td> </tr> </table>		Males	Any filter/no filter (in last 20 years)	0.41(0.21-0.81)
	Males				
Any filter/no filter (in last 20 years)	0.41(0.21-0.81)				
Source : Table 3					

STUDY REF: KNOTH

NAME: Mannheim/Ludwigshafen/Heidelberg study		
DESIGN: Case study		
LOCATION: Europe : Germany : Mannheim, Ludwigshafen, Heidelberg		
PERIOD: 1967-76		
POPULATION	AGE RANGE: No restriction	
	RACE: No restriction	
	OTHER DETAILS: -	
CASES	NUMBER: 733 men and 59 women	
	HISTOLOGICAL CONFIRMATION: Histologically or cytologically confirmed	
	PROXY INTERVIEWS: 96% from sons, daughters or spouses	
	OTHER DETAILS: Only 35% response rate	
CONTROLS	NUMBER: None	
	TYPE: NA	
	MATCHING FACTORS: NA	
	PROXY INTERVIEWS: NA	
	OTHER DETAILS: NA	
ASPECTS OF CIG TYPE: Plain/filter		
DATA BY HISTOLOGICAL TYPE: No		
CONFOUNDING VARIABLES: None		
OTHER COMMENTS: No control population, use of average age at death invalid		
REFERENCES: Knoth <u>et al</u> (1983)		
RESULTS		
	Filter	Plain
Average age at death	60.6(59.6-61.7)	62.6(61.1-63.3)
Cigarettes per day	26.4	31.0
Stopped smoking for > one year	23.2%	14.1%
Lifetime consumption of cigarettes	468000	379000
Duration of smoking	40.5	43.1
Source : Text of paper		

STUDY REF: ENGELA

NAME:		Norwegian parts of US/UK/Norway Migrant Study			
DESIGN:		P			
LOCATION:		Europe : Norway			
PERIOD:		1964/65 followed until 1993			
POPULATION	AGE RANGE:	Born 1893-1927 (men), 1893-1932 (women)			
	RACE:	No restriction			
	OTHER DETAILS:	Random sample of residents in Norway + Additional sample from 4 counties (Øst-Agder, Vest-Agder, Rogaland, Finnmark) + sample of siblings of Norwegian-born migrants to the USA			
CASES	NUMBER:	333 men and 102 women			
	HISTOLOGICAL CONFIRMATION:	Not required			
	PROXY INTERVIEWS:	No			
	OTHER DETAILS:	-			
BASELINE POP.	NUMBER:	11857 men and 14269 women			
	TYPE:	NA			
	MATCHING FACTORS:	NA			
	PROXY INTERVIEWS:	No			
	OTHER DETAILS:	Self-administered questionnaire			
ASPECTS OF CIG TYPE:		Filter/plain, hand rolled			
DATA BY HISTOLOGICAL TYPE:		Yes			
CONFOUNDING VARIABLES:		Age			
OTHER COMMENTS:		-			
REFERENCES:		Engeland <u>et al</u> (1996)			
RESULTS					
		Plain only (base)	Mixed	Filter only	
Men		1.00	0.00	0.67(0.30-1.43)	
Women		1.00	2.09(0.47-9.31)	0.91(0.41-2.03)	
		Manuf. only (base)	Mixed	Hand rolled only	Ever hand rolled
Men	- all	1.00	0.63(0.38-1.05)	1.20(0.88-1.63)	1.06(0.79-1.43)
	- squamous cell	1.00	1.2(0.5-2.8)	2.1(1.1-4.1)	1.91(1.00-3.64)
	- adenocarcinoma	1.00	0.3(0.1-1.2)	0.5(0.2-1.2)	0.43(0.18-1.00)
	- small cell	1.00	0.3(0.1-1.3)	1.0(0.4-2.2)	0.73(0.32-1.67)
Female	- all	1.00	1.28(0.58-2.81)	1.73(0.96-3.15)	1.56(0.91-2.69)
Source : Table 3 (men and Table 4 (women), re-estimated to correct base.					

STUDY REF: ZEMLA

NAME: Gliwice case-control study	
DESIGN: CC	
LOCATION: Europe : Poland : Gliwice	
PERIOD: Not stated	
POPULATION	AGE RANGE: No restriction
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 210 men
	HISTOLOGICAL CONFIRMATION: Not required
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
CONTROLS	NUMBER: 420 men
	TYPE: Not suffering from cancer
	MATCHING FACTORS: Age
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Filter/plain	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: None	
OTHER COMMENTS: Presentation of results very difficult to follow	
REFERENCES: Zemla <u>et al</u> (1988)	
RESULTS	
Filter/plain RR in men	
(a)	Unexposed to dust 0.97
(b)	Exposed to dust 3.57
Source : Table 1	

NAME: Barcelona case-control study	
DESIGN: CC	
LOCATION: Europe : Spain : Barcelona (10 hospitals)	
PERIOD: 1989-1992	
POPULATION	AGE RANGE: No restriction
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 103 women
	HISTOLOGICAL CONFIRMATION: 98% of cases
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
CONTROLS	NUMBER: 206 women
	TYPE: Patients without tobacco-related diseases
	MATCHING FACTORS: Age, town of residence, hospital
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Filter/plain, Blond/black	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Matching factors	
OTHER COMMENTS: -	
REFERENCES: Agudo <i>et al</i> (1994)	
RESULTS	
Filter only/any non filter	0.22 (0.04, 1.27)
Black/blond tobacco	2.63 (0.56, 12.30)
Source : Table III, re-estimated to correct base.	

STUDY REF: ARMADA

NAME: Second Barcelona case-control study	
DESIGN: CC	
LOCATION: Europe : Spain : Barcelona (1 hospital)	
PERIOD: 1986-1990	
POPULATION	AGE RANGE: Up to 80
	RACE: No restriction
	OTHER DETAILS: Not in bad physical condition or demented
CASES	NUMBER: 325 males
	HISTOLOGICAL CONFIRMATION: 100%
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
BASELINE POP.	NUMBER: 325 males
	TYPE: Patients without smoking-related diseases or trauma
	MATCHING FACTORS: Age, hospital
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Filter/plain, blond/black	
DATA BY HISTOLOGICAL TYPE: No (stated prevalence of black tobacco similar by type in cases)	
CONFOUNDING VARIABLES: Age, cumulative cigarette consumption, socioeconomic status, filter/plain, blond/black, duration of smoking, daily cigarette consumption	
OTHER COMMENTS: -	
REFERENCES: Armadans-Gil <u>et al</u> (1999)	
RESULTS	
Source : Table 3	<u>Lifetime filter use</u>
	Never Mixed Always
Cases	63 197 57
Controls	55 127 72
RR(95% CI) ^e	1.00 1.35(0.59-2.07) 0.69(0.42-1.14)
RR(95% CI)	1.0 1.0(0.6-1.6) 0.7(0.4-1.2)
	Adjustment ^a factors None Age, CCC
Source : Table 3 and text p616 (results excluding long-term ex-smokers)	<u>Long-term (exclusive last 20 years) filter use</u>
	No Yes
Cases	128 165
Controls	94 132
RR(95% CI)	1.0 0.92(0.65-1.30)
RR(95% CI)	1.0 0.4(0.3-0.7)
	None Age, CCC
Continued	

STUDY REF: ARMADA (Continued)

<u>Source</u> : Tables 3 and 4	<u>Smoking pattern</u> ^b			Adjustment factors	
	<u>Non-filter</u>	<u>Ex-smoker</u>	<u>Filter</u>		
Cases	102	50	165		
Controls	35	87	132		
RR(95% CI) ^a	1.0	0.20(0.12-0.33)	0.43(0.27-0.67)	None	
RR(95% CI)	1.0	0.3(0.2-0.6)	0.4(0.3-0.7)	Age, CCC	
RR(95% CI)	1.00	0.31(0.2-0.6)	0.40(0.2-0.7)	Age, SES, Type T	
RR(95% CI)	1.00	0.34(0.2-0.6)	0.41(0.3-0.7)	Age, SES, dur, cons, type T	
<u>Source</u> : Table 4	<u>Type of tobacco</u>				
	<u>Blond only</u>	<u>Black or blond</u>	<u>Black and blond</u>	<u>Black only</u>	
Cases	8	309	47	262	
Controls	26	228	33	195	
RR(95% CI) ^c	1.00	4.40(1.96-9.91)	4.63(1.87-11.5)	4.37(1.94-9.85)	None
RR(95% CI)	1.00		4.9(1.7-13.7)	5.3(2.1-13.6)	Age, CCC
RR(95% CI)	1.00	5.04(2.0-12.7)			Age, CCC, SES, pattern
RR(95% CI)	1.00	4.68(1.9-11.8)			Age, SES, dur, cons, pattern
Notes:	^a adjustment factors: CCC = cumulative cigarette consumption, SES = socio-economic status, dur = duration of cigarette smoking, cons = average daily cigarette consumption, type T = type of tobacco, pattern = smoking pattern ^b Smoking pattern : ex-smoker (>5 years since cessation), filter (exclusive filter cigarette use during last 20 smoking years), non-filter otherwise ^c Unadjusted RR and CI estimated from numbers of cases and controls.				

STUDY REF: ALDERS

NAME: Multicentre case-control study 1977-82			
DESIGN: CC			
LOCATION: Europe : UK : 10 regions of England (46 hospitals)			
PERIOD: 1977-82			
POPULATION	AGE RANGE: 35-74		
	RACE: No restriction		
	OTHER DETAILS: -		
CASES	NUMBER: 1025 men and 676 women		
	HISTOLOGICAL CONFIRMATION: Not required		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: -		
CONTROLS	NUMBER: 1025 men and 676 women		
	TYPE: Diseases definitely or probably not associated with smoking		
	MATCHING FACTORS: Sex, age, hospital region and, when possible, hospital ward and time of interview		
	PROXY INTERVIEWS: No		
	OTHER DETAILS: -		
ASPECTS OF CIG TYPE:		Filter/plain, tar level	
DATA BY HISTOLOGICAL TYPE:		Yes	
CONFOUNDING VARIABLES:		See below	
OTHER COMMENTS:		PNL involved in study. Some additional results included from full study report to TAC. CI estimated from numbers given.	
REFERENCES:		Alderson <u>et al</u> (1985)	
RESULTS	Male	Female	Confounding Variables
Never filter (base)	1.00	1.00	Age, number of cigarettes smoked 3 years before admission; ignoring smoking habits less than 3 years before admission; ever smokers of pipes, cigars or hand rolled cigs excluded
Ever filter	1.20(0.83-1.73)	1.09(0.70-1.70)	
Ever plain (base)	1.00	1.00	
Never plain	1.48(0.85-2.57)	0.66(0.47-0.92)	
Always plain (base)	1.00	1.00	
Switched to filter up to 10 years before admission	1.13(0.65-1.97)	1.04(0.54-1.99)	
Switched to filter more than 10 years before admission	1.09(0.73-1.63)	1.41(0.86-2.31)	
Always filter	1.48(0.81-2.69)	0.85(0.52-1.38)	
Source : Alderson et al (1985), Table 5, CI estimated from numbers			

Continued

STUDY REF: ALDERS (Continued)

Tar band 10 years before admission			
29+ mg (base)	1.00	1.00	Age, number smoked
23-28 mg	0.92(0.57-1.49)	1.06(0.64-1.75)	most often; manufactured
17-22 mg	0.83(0.55-1.24)	1.12(0.74-1.70)	only smokers
Tar band 5 years before admission			
23-28 mg (base)	1.00	1.00	As above
0-22 mg	0.81(0.56-1.18)	0.96(0.63-1.45)	
Tar band at admission			
17-22 mg (base)	1.00	1.00	As above
0-16 mg	1.10(0.62-1.95)	0.96(0.61-1.52)	
Source : Alderson <u>et al</u> (1985), Full Report, Table 13F, CI estimated from numbers			
Manuf. only (base)	1.00	-	Age
Ever hand rolled	1.46(1.11-1.91)		
Mixed manuf/HR	1.39(1.04-1.85)		
Hand rolled only	1.95(0.01-3.77)		
Source : Alderson <u>et al</u> (1985), Table 3, re-estimated to base manuf. only			

NAME: Whitehall Study			
DESIGN: P			
LOCATION: Europe : UK : Whitehall, London			
PERIOD: 1967-69 followed for 10 years			
POPULATION	AGE RANGE:	40-64	
	RACE:	No restriction	
	OTHER DETAILS:	Civil Servants	
CASES	NUMBER:	193 men	
	HISTOLOGICAL CONFIRMATION:	No - death certificates	
	PROXY INTERVIEWS:	NA	
	OTHER DETAILS:	-	
BASELINE POP.	NUMBER:	17475 men	
	TYPE:	NA	
	MATCHING FACTORS:	NA	
	PROXY INTERVIEWS:	No	
	OTHER DETAILS:	Self-administered questionnaire	
ASPECTS OF CIG TYPE:		Tar yield	
DATA BY HISTOLOGICAL TYPE: No			
CONFOUNDING VARIABLES:		Age, employment grade	
OTHER COMMENTS:		Borland results based on only 90 men as CO yield often not known. CI estimated.	
REFERENCES: Higenbottam <u>et al</u> (1982), Borland <u>et al</u> (1983)			
RESULTS			
		Tar level (mg/cig)	
	≥ 33 (base)	24-32	18-23
No further adjustments	1.00	0.78(0.49-1.25)	0.68(0.45-1.01)
Adj. also for inhalation	1.00	0.76(0.47-1.22)	0.67(0.45-1.00)
Adj. also for number/day	1.00	0.63(0.36-1.11)	0.56(0.36-0.86)
Source : Higenbottam et al (1982), Table 4			
		CO (mg/cig)	
	> 20 mg (base)	$> 18-20$ mg	≤ 18 mg
Adj. also for cigs/day and tar yield	1.00	1.01(0.55-1.87)	0.67(0.32-1.39)
Source : Borland et al (1983), Table IV, re-estimated to > 20 mg base			

NAME: Northern Ireland Case-Control Study		
DESIGN: CC		
LOCATION: Europe : UK : Northern Ireland		
PERIOD: 1960-62		
POPULATION	AGE RANGE: 35+	
	RACE: No restriction	
	OTHER DETAILS: -	
CASES	NUMBER: 803 men and 151 women	
	HISTOLOGICAL CONFIRMATION: No	
	PROXY INTERVIEWS: 100%	
	OTHER DETAILS: Obtained from Register of Deaths	
CONTROLS	NUMBER: 803 men and 151 women	
	TYPE: Non-respiratory illness	
	MATCHING FACTORS: Next person in register of same sex and 5 year age-group	
	PROXY INTERVIEWS: 100%	
	OTHER DETAILS: -	
ASPECTS OF CIG TYPE: Filter/plain		
DATA BY HISTOLOGICAL TYPE: No		
CONFOUNDING VARIABLES: None		
OTHER COMMENTS: -		
REFERENCES: Wicken <u>et al</u> (1966)		
RESULTS		
	Male	Female
Man. cig smoker who last regularly smoked		
Plain (base)	1.00	1.00
Filter	0.97(0.50-1.86)	3.12(0.65-15.0)
Source : Table 8		

NAME: North-East England Case-Control Study																												
DESIGN: CC																												
LOCATION: Europe : UK : England (Cleveland County)																												
PERIOD: 1963-72 (deaths), 1973 living sample																												
POPULATION	AGE RANGE: 35+																											
	RACE: No restriction																											
	OTHER DETAILS: -																											
CASES	NUMBER: 616 men and 150 women																											
	HISTOLOGICAL CONFIRMATION: Not required																											
	PROXY INTERVIEWS: 100%																											
	OTHER DETAILS: 79% (men) and 75% (women) of all deaths listed in death registers																											
CONTROLS	NUMBER: 2563 men and 2958 women																											
	TYPE: Living population, random sample of households																											
	MATCHING FACTORS: None																											
	PROXY INTERVIEWS: One member of each household answered for all residents																											
	OTHER DETAILS: -																											
ASPECTS OF CIG TYPE: Filter/plain																												
DATA BY HISTOLOGICAL TYPE: No																												
CONFOUNDING VARIABLES: Age, amount smoked, inhalation																												
OTHER COMMENTS: Results for current smoking not used as subject to excessive "time bias" due to difference in timing of population.																												
REFERENCES: Dean <u>et al</u> (1977) with supplement																												
RESULTS <u>Smoking habits in 1969</u> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%;">Plain (base)</th> <th style="width: 20%;">Filter</th> </tr> </thead> <tbody> <tr> <td>Men - adjusted for age</td> <td>1.00</td> <td>0.52(0.38-0.71)</td> </tr> <tr> <td>- adjusted for age, cigs/day</td> <td>1.00</td> <td>0.54(0.40-0.73)</td> </tr> <tr> <td>- adjusted for age, inhalation</td> <td>1.00</td> <td>0.55(0.41-0.74)</td> </tr> <tr> <td>- adjusted for age, cigs/day, inhalation</td> <td>1.00</td> <td>0.54(0.40-0.73)</td> </tr> <tr> <td>Women - adjusted for age</td> <td>1.00</td> <td>0.69(0.43-1.12)</td> </tr> <tr> <td>- adjusted for age, cigs/day</td> <td>1.00</td> <td>0.68(0.42-1.11)</td> </tr> <tr> <td>- adjusted for age, inhalation</td> <td>1.00</td> <td>0.86(0.53-1.40)</td> </tr> <tr> <td>- adjusted for age, cigs/day, inhalation</td> <td>1.00</td> <td>0.82(0.50-1.33)</td> </tr> </tbody> </table> <p>Source : Supplement Table 10, CI estimated from numbers.</p>			Plain (base)	Filter	Men - adjusted for age	1.00	0.52(0.38-0.71)	- adjusted for age, cigs/day	1.00	0.54(0.40-0.73)	- adjusted for age, inhalation	1.00	0.55(0.41-0.74)	- adjusted for age, cigs/day, inhalation	1.00	0.54(0.40-0.73)	Women - adjusted for age	1.00	0.69(0.43-1.12)	- adjusted for age, cigs/day	1.00	0.68(0.42-1.11)	- adjusted for age, inhalation	1.00	0.86(0.53-1.40)	- adjusted for age, cigs/day, inhalation	1.00	0.82(0.50-1.33)
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- adjusted for age, inhalation	1.00	0.86(0.53-1.40)																										
- adjusted for age, cigs/day, inhalation	1.00	0.82(0.50-1.33)																										
Continued																												

STUDY REF: DEAN 2 (Continued)

<u>Change in smoking habits (1954-1969)</u> (restricted to subjects not changing cigs/day)		Always plain (base)	Switched to filter	Always filter
Men	- adjusted for age	1.00	0.57(0.41-0.79)	0.32(0.19-0.54)
	- adjusted for age, cigs/day	1.00	0.59(0.43-0.82)	0.35(0.21-0.59)
Women	- adjusted for age	1.00	0.95(0.56-1.60)	0.31(0.16-0.62)
	- adjusted for age, cigs/day	1.00	0.98(0.58-1.65)	0.32(0.16-0.64)

Source : Supplement Table 10, CI estimated from numbers.

NAME: Multicentre study 1948-52		
DESIGN: CC		
LOCATION: Europe : UK : London, Bristol, Cambridge, Leeds, Newcastle		
PERIOD: 1948-52		
POPULATION	AGE RANGE: Up to 74	
	RACE: No restriction	
	OTHER DETAILS: -	
CASES	NUMBER: 1357 men and 108 women	
	HISTOLOGICAL CONFIRMATION: 70%	
	PROXY INTERVIEWS: No	
	OTHER DETAILS: -	
CONTROLS	NUMBER: 1357 men and 108 women	
	TYPE: Diseases other than cancers related to smoking	
	MATCHING FACTORS: Age, sex, hospital, time in hospital	
	PROXY INTERVIEWS: No	
	OTHER DETAILS: -	
ASPECTS OF CIG TYPE: Filter/plain (only asked of last 523 male and 34 female cases and controls)		
DATA BY HISTOLOGICAL TYPE: No		
CONFOUNDING VARIABLES: None		
OTHER COMMENTS: Only 3 cases smoked filter cigarettes, results given for men only		
REFERENCES: Doll and Hill (1952), Doll (1954), Doll (1955)		
RESULTS		
	Never filter (base)	Ever filter
Men	1.00	0.18(0.05-0.63)
Source : Doll and Hill (1952), Table VIII.		

STUDY REF: HAWTHO

NAME: West Central Scotland Prospective study		
DESIGN: P		
LOCATION: Europe : UK : Scotland (occupational groups, Tiree, Paisley)		
PERIOD: 1965-68 (occupational), 1970-72 (Tiree), 1974-75 (Paisley) followed until 1977		
POPULATION	AGE RANGE: 45-64	
	RACE: No restriction	
	OTHER DETAILS: -	
CASES	NUMBER: 104 men and < 28 women	
	HISTOLOGICAL CONFIRMATION: No - death certificates	
	PROXY INTERVIEWS: NA	
	OTHER DETAILS: -	
BASELINE POP.	NUMBER: 11295 men and 7491 women	
	TYPE: Attending multiphasic screening clinic	
	MATCHING FACTORS: NA	
	PROXY INTERVIEWS: No	
	OTHER DETAILS: -	
ASPECTS OF CIG TYPE: Filter/plain, hand rolled/manufactured		
DATA BY HISTOLOGICAL TYPE: No		
CONFOUNDING VARIABLES: Age and number smoked		
OTHER COMMENTS: Overlaps Renfrew/Paisley results of Tang		
REFERENCES: Hawthorne and Fry (1978)		
RESULTS		
	Plain (base)	Filter
Men	1.00	0.83(0.53-1.31)
Women	1.00	1.29
	Manufactured (base)	Hand rolled
Men	1.00	1.94(0.95-3.97)
Source : Table 10		

STUDY REF: GILLIS

NAME: West Central Scotland case-control study	
DESIGN: CC	
LOCATION: Europe : UK : Scotland (Glasgow and urban west)	
PERIOD: 1976-81	
POPULATION	AGE RANGE: No restriction
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 656 men
	HISTOLOGICAL CONFIRMATION: 77%
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
CONTROLS	NUMBER: 1312 men
	TYPE: No major tobacco related disease
	MATCHING FACTORS: Age, date and place of interview
	PROXY INTERVIEWS: No
	OTHER DETAILS: -
ASPECTS OF CIG TYPE: Tar level	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Number cigs/day	
OTHER COMMENTS: Part of Lubin study. Results for < 17 mg and 17-22 mg tar combined as little data for < 17 mg; results for 23-28 mg and > 28 mg tar combined as little data for 28 mg +.	
REFERENCES: Gillis <u>et al</u> (1988)	
RESULTS	
	Tar level
	23 mg + (base) - 22 mg
1-14/day	1.00 0.78(0.37-1.62)
15-24/day	1.00 0.54(0.33-0.87)
25-34/day	1.00 1.24(0.56-2.75)
34+/day	1.00 1.11(0.45-2.71)
Total (unadjusted)	1.00 0.73(0.52-1.01)
Total (adjusted for cigs/day)	1.00 0.74(0.53-1.03)
Source : Table 5	

STUDY REF: MIGRAN

NAME: British part of US/UK/Norway migrant study	
DESIGN: P	
LOCATION: Europe : UK : Nationwide	
PERIOD: 1964-65 followed until 1977	
POPULATION	AGE RANGE: 30+
	RACE: No restriction
	OTHER DETAILS: -
CASES	NUMBER: 136 men and 23 women current cig smokers
	HISTOLOGICAL CONFIRMATION: No - death certificates
	PROXY INTERVIEWS: NA
	OTHER DETAILS: -
BASELINE POP.	NUMBER: 3661 men and 2727 women current cig smokers
	TYPE: See below
	MATCHING FACTORS: NA
	PROXY INTERVIEWS: No
	OTHER DETAILS: Two samples: (i) Population sample - random sample of British population (Scotland oversampled x4) (ii) Sibs sample - brothers and sisters of British born migrants to the US
ASPECTS OF CIG TYPE: Filter/plain, hand rolled/manufactured	
DATA BY HISTOLOGICAL TYPE: No	
CONFOUNDING VARIABLES: Age, number smoked, inhalation, age starting	
OTHER COMMENTS: Todd only gives results for males and population sample	
REFERENCES: Todd <u>et al</u> (1978), Lee (1979), Lee and Garfinkel (1981)	
RESULTS	
	Plain (base) Filter
Males - adjusted for age and number smoked only	1.00 1.16(0.78-1.73)
- adjusted for inhalation and age of starting also	1.00 1.13(0.75-1.70)
Females - adjusted for age and number smoked only	1.00 1.00(0.42-2.38)
- adjusted for inhalation and age of starting also	1.00 0.92(0.38-2.23)
Source : Lee (1979) Table 18	
Continued	

STUDY REF: MIGRAN (Continued)

	Man. only (base)	Ever hand rolled	Mixed	Hand rolled only
Males - adjusted for age and number smoked	1.00	1.67(1.11-2.51)	1.65(0.87-3.13)	1.73(1.07-2.81)

Source : Lee (1979) Table 18

STUDY REF: RIMING

NAME: Mass radiography follow up study		
DESIGN: P		
LOCATION: Europe : UK : England (Manchester and Cheshire)		
PERIOD: 1970-1971 followed until 1976		
POPULATION	AGE RANGE: 40+	
	RACE: No restriction	
	OTHER DETAILS: -	
CASES	NUMBER: 104 men (among cigarette smokers)	
	HISTOLOGICAL CONFIRMATION: Not required	
	PROXY INTERVIEWS: NA	
	OTHER DETAILS: -	
BASELINE POP.	NUMBER: 10414 men	
	TYPE: Volunteers for mass radiography examinations	
	MATCHING FACTORS: NA	
	PROXY INTERVIEWS: No	
	OTHER DETAILS: -	
ASPECTS OF CIG TYPE: Filter/plain		
DATA BY HISTOLOGICAL TYPE: No		
CONFOUNDING VARIABLES: Number smoked, age		
OTHER COMMENTS: -		
REFERENCES: Rimington (1981)		
RESULTS		
	Plain (base)	Filter
1-9/day	1.00	0.44(0.08-2.40)
10-19/day	1.00	0.68(0.35-1.31)
20+/day	1.00	0.60(0.36-1.00)
Total (adjusted for age only)	1.00	0.65(0.44-0.96)
Total (adjusted for age and cigs/day)	1.00	0.62(0.42-0.91)
Source : Table 1		

STUDY REF: TANG

NAME:	Study of four British cohorts	A. BUPA C. Renfrew/Paisley	B. Whitehall D. UK heart disease prevention project	
DESIGN:	P			
LOCATION:	Europe : UK : A,B. London C. Scotland D. England & Wales			
PERIOD:	A. 1975-82 B. 1967-70 C. 1972-76 D. 1971-73 followed for 13 years on average			
POPULATION	AGE RANGE:	A. 35-64 B. 36-78 C. 45-64 D. 40-60		
	RACE:	No restriction		
	OTHER DETAILS:	A. Professional and business men B. Civil servants C. Residents D. Factory workers		
CASES	NUMBER:	836 men		
	HISTOLOGICAL CONFIRMATION:	No - death certificates		
	PROXY INTERVIEWS:	NA		
	OTHER DETAILS:	-		
BASELINE POP.	NUMBER:	A. 21398 B. 19167 C. 6591 D. 9099 men. Total 56255		
	TYPE:	NA		
	MATCHING FACTORS:	NA		
	PROXY INTERVIEWS:	No		
	OTHER DETAILS:	-		
ASPECTS OF CIG TYPE:	Filter/plain, tar yield			
DATA BY HISTOLOGICAL TYPE:	No			
CONFOUNDING VARIABLES:	Age, study, number/day			
OTHER COMMENTS:	Some overlap with results from BENS HL (Whitehall) and HAWTHO (West Central Scotland)			
REFERENCES:	Tang <i>et al</i> (1995)			
RESULTS				
	Plain (base)	Filter		
1-10 cigs/day	1.00	0.99(0.47-2.12)		
11-20 cigs/day	1.00	1.01(0.73-1.39)		
> 20 cigs/day	1.00	0.87(0.61-1.22)		
Total (adjusted cigs/day)	1.00	0.94(0.75-1.18)		
Source : Table 4				
Relative mortality per 15 mg decrease in tar yield		0.75(0.52-1.09)		
^ per mg increase in tar yield		1.02(0.99-1.04)		
Source : Table 5				

APPENDIX BReferences to the 54 studiesASIA

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SOUTH AND CENTRAL AMERICA

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