Socioeconomic inequalities in cancer incidence in Europe: a comprehensive review of population-based epidemiological studies

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Supplementary table 1: Search strategy

Search	Query
#9	#8 AND 2000-2019 period restriction
#8	#7 AND English language restriction
#7	#1 AND #2 AND #3 AND #4 AND #5 AND #6
#6	adult* OR aged OR man OR men OR woman OR women OR older population* OR older person* OR Elderly OR older people
#5	Europe OR European OR Albania OR Albanian OR Andorra OR Andorran OR Austria OR Austrian OR Belarus OR Belarusian OR Belgium OR Belgian OR Bosnia OR Herzegovina OR Bosnian OR Bulgaria OR Bulgarian OR Croatia OR Croatian OR Cyprus OR Cyprian OR Czech OR Denmark OR Danish OR Estonia OR Estonian OR Finland OR Finnish OR France OR French OR Germany OR German OR Gibraltar OR Greece OR Greek OR Hungary OR Hungarian OR Iceland OR Icelandic OR Ireland OR Irish OR Italy OR Italian OR Latvia OR Latvian OR Liechtenstein OR Lithuania OR Lithuanian OR Luxembourg OR Malta OR Maltese OR Moldova OR Moldovan OR Monaco OR Montenegro OR Netherlands OR Dutch OR Macedonia OR Macedonian OR Norway OR Norwegian OR Poland OR Polish OR Portugal OR Portuguese OR Romania OR Romanian OR Russia OR Russian OR San Marino OR Serbia OR Serbian OR Slovakia OR Slovak OR Slovenia OR Slovenian OR Slovene OR Spain OR Spanish OR Sweden OR Swedish OR Switzerland OR Swiss OR Turkey OR Turkish OR Ukraine OR Ukrainian OR United Kingdom OR England OR Scotland OR Scottish OR Wales OR Welsh OR Vatican City
#4	Registries OR registry OR register OR registers OR Registry-based OR register-based OR Cancer Regist* OR Tumor Regist* OR Tumour Regist* OR Oncological Regist* OR Oncology Regist*
#3	Socioeconomic Factors OR Residence characteristics OR Inequality OR Inequalities OR Inequity OR Inequities OR Disparity OR Disparities OR Socio-economic OR Socioeconomic OR Social* OR Econom* OR Depriv*
#2	Incidence* OR Occurrence*
#1	Cancer* OR Tumor* OR Tumour* OR Malignan* OR Neoplasm* OR Neoplasia* OR Neoplastic OR Carcinoma*

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SUPPLEMENTARY TABLES 2-29: Cancer location-specific relative risk estimates

Supplementary table 2: Lung and tracheal cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator	Sub-analysis	Sex	Results
Dalton[13], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, sex, period, education and income	education (lowest vs highest)		male	**1.54 (1.34–1.64)**
					female	**1.85 (1.69–2.00)**
			income (lowest vs highest)		male	**1.83 (1.76–1.92)**
					female	**1.49 (1.42–1.58)**
			work affiliation (unemployed vs working)		male	**4.69 (4.41–4.99)**
					female	**3.03 (2.81–3.26)**
			occupation-based social class (manual vs creative core)		male	**1.35 (1.18–1.56)**
					female	**0.48 (0.35–0.65)**
			housing tenure (renter vs owner)		male	**1.67 (1.61–1.74)**
					female	**1.57 (1.50–1.64)**
			size of dwelling (smallest vs largest)		male	**2.62 (2.38–2.88)**
					female	**3.47 (3.00–4.01)**
Meijer[14], 2013, Denmark, 2004-2008	C, 50-83 (start of follow-up), shared frailty models (multilevel), HR	age, sex, marital status, population density, income, education, social class, % unemployment	education (lowest vs highest)		both	**1.35 (1.28–1.45)**
			income (lowest vs highest)		both	**1.75 (1.64–1.89)**
			occupation-based social class (semi/unskilled vs salariat)		both	**1.33 (1.25–1.43)**
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age, sex	education (lowest vs all population)		male	**1.14 (1.02–1.27)**
					female	1.18 (1.09–1.28)
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	education (lowest vs highest)		male	**1.75 (1.62–1.89)**
					female	0.89 (0.75–1.06)
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	education (lowest vs highest)		male	**1.68 (1.44–1.96)**
					female	**0.59 (0.42–0.81)**
			occupation-based social class (lowest vs highest)		male	**1.16 (1.01–1.32)**
					female	1.08 (0.83–1.41)
			housing characteristics (best vs worst)		male	**1.38 (1.25–1.53)**
					female	**1.42 (1.15–1.75)**
Smailyte[31], 2012, Lithuania, 2001-2004	C, 40-79 (start of follow-up), Poisson regression, IRR	age, sex	education (lowest vs highest)		male	**2.86 (2.51–3.26)**
					female	**1.29 (0.98–1.70)**
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age, sex	education (lowest vs all population)		male	**1.26 (1.23–1.30)**
					female	**1.05 (0.98–1.13)**
Lowman[26], 2004, Netherlands, 1991-1998	C, 15-75 (start of follow-up), Cox regression, HR	age, sex, marital status, religious affiliation, degree of urbanization	education (lowest vs highest)		both	**2.7 (1.3–5.3)**
		as above + smoking, alcohol intake, physical activity				1.6 (0.8–3.3)
Braaten[33], 2005, Norway, 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age				**3.33 (1.43–7.69)**
		age + smoking status, age started smoking, no. pack-years, perceived health, total intake of fat	education (lowest vs highest)		female	1.72 (0.75–4.00)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age, sex	individual level Slovenian EDI		both	**1.04 (1.03–1.05)**
Li[34], 2015, Sweden, 2000-2010	C, 50 and above, logistic regression (multilevel), OR	age, sex, income, education, marital status, country of birth, region of residence, COPD, tobacco abuse, alcoholism or alcohol-related liver disease, neighbourhood deprivation, length of stay in the neighbourhood	education (lowest vs highest)		both	**1.59 (1.53–1.66)**
			income quartiles (middle-low vs highest)		both	**1.24 (1.20–1.28)**
			immigrant status (immigrant vs native)		both	1.01 (0.99–1.03)

Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	education (lowest vs highest)		male	**2.13 (2.00–2.27)**
					female	**2.33 (2.00–2.70)**
Ekberg-Aronsson[35], 2006 Sweden 1974 /1992-2003	C, start of follow-up 27-61 for males 28-58 for females Cox regression, HR	age, sex, marital status, as well as tobacco consumption and inhalation habits for smokers	occupation-based social class (manual vs non-manual)	NEVER SMOKER	male	**3.43 (1.59–7.41)**
					female	0.70 (0.20–2.47)
				FORMER SMOKER	male	1.64 (0.88–3.06)
					female	0.93 (0.29–2.95)
				CURRENT SMOKER	male	**1.39 (1.11-1.73)**
					female	**1.56 (1.04–2.34)**
		age, sex, marital status (smokers only)		ADENOCARCINOMA	male	1.14 (0.75—1.73)
					female	1.61 (0.82—3.15)
				SCC	male	**1.80 (1.16—2.81)**
					female	**7.10 (1.63—30.86)**
				SMALL-CELL	male	1.13 (0.65—1.97)
					female	0.89 (0.36—2.18)
				UNDIFFERENTIATED	male	1.20 (0.78—1.85)
					female	1.36 (0.56—3.28)
				MESOTHELIOMA	male	**9.97 (1.29—76.96)**
					female	/
Sharpe[15], 2014, UK (Scotland), 1991-2006	C, 15 and above (start of follow-up), Poisson regression, RR	age, sex, country of birth, marital status, area deprivation, economic activity, education, occupational social class, car ownership, household tenure	economic activity (inactive vs active)		male	**1.68 (1.61–1.76)**
					female	**1.29 (1.22–1.36)**
			education (lowest vs highest)		male	**3.05 (2.68–3.47)**
					female	**1.94 (1.60–2.37)**
			car ownership (no vs yes)		male	**1.68 (1.62–1.74)**
					female	**1.27 (1.21–1.33)**
			housing tenure (renter vs owner)		male	**1.76 (1.70–1.82)**
					female	**1.34 (1.28–1.40)**
			occupation-based social class (lowest vs highest)		male	**1.84 (1.68–2.02)**
					female	**1.36 (1.25–1.48)**
Menvielle[23], 2009 9 EU countries 1990/2002-2006	C, mostly 40-65 (start of follow-up), Cox regression, HR	age, sex, smoking (status, age at starting, duration, quantity), total fruits and vegetables consumption	education (lowest vs highest)		male	**1.78 (1.44–2.20)**
					female	**1.42 (1.07–1.88)**
Menvielle[24], 2010 9 EU countries 1990/2002-2006	C, mostly 40-65 (start of follow-up), Cox regression, HR	same as above as well as exposure to asbestos, heavy metals and polycyclic aromatic hydrocarbons	education (lowest vs highest)		male	**1.53 (1.20–1.97)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, COPD – chronic obstructive pulmonary disease. *RR for 1 unit increase in continuous EDI

Supplementary table 3: Lung and tracheal cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Sex	Results
Meijer[14], 2013, Denmark, 2004-2008	C, 50-83 (start of follow-up), shared frailty models (multilevel), HR	age, sex, marital status, population density, income, education, social class, % unemployment	% unemployed quartiles	both	**1.14 (1.09–1.19)**
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	male	**1.59 (1.50–1.68)**
				female	**1.35 (1.22–1.49)**
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	male	**1.44 (1.29–1.61)**
				female	**1.37 (1.11–1.71)**
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age, sex	Bremen discrimination index quintiles	male	**1.81 (1.66–1.96)**
				female	**1.53 (1.35–1.73)**
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	male	**1.33 (1.26–1.41)**
				female	1.06 (0.97–1.16)
Kuznetsov[20], 2012, Germany, 2003-2006	P, all ages, Poisson regression (multilevel), RR	age, sex	Bavarian IMD quintiles	male	**1.39 (1.29–1.49)**
				female	0.96 (0.87–1.07)
				both	**1.25 (1.17–1.33)**
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above, standardisation, ASR ratio	age, sex	Pobal Haase-Pratschke ID quintiles	male	**1.62 (1.49–1.75)**
				female	**1.56 (1.42–1.72)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	area DI quintiles	male	**1.21 (1.10–1.32)**
				female	1.09 (0.90–1.31)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	both	**1.02 (1.01–1.03)**
Li[34], 2015, Sweden, 2000-2010	C, 50 and above, logistic regression (multilevel), OR	age, sex, income, education, marital status, country of birth, region of residence, COPD, tobacco abuse, alcoholism or alcohol-related liver disease, neighbourhood deprivation, length of stay in the neighbourhood	neighbourhood deprivation index 3 groups according to SD deviance	both	**1.28 (1.23–1.32)**
Shack[21], 2008, UK (England), 1998-2003	P, all ages, standardisation, ASR ratio	age, sex	English IMD quintiles	male	**2.53 (2.48–2.58)**
				female	**2.73 (2.66–2.80)**
Tweed[22], 2018, UK (Scotland), 2010-2012	P, 15 and above, Poisson regression, RR	age, sex	Scottish IMD quintiles	male	**2.83 (2.42–3.31)**
				female	**2.91 (2.54–3.33)**
Sharpe[15], 2014, UK (Scotland), 1991-2006	C, 15 and above (start of follow-up), Poisson regression, RR	age, sex, country of birth, marital status, area deprivation, economic activity, education, occupational social class, car ownership, household tenure	Carstairs DI deciles	male	**3.35 (3.05–3.68)**
				female	**1.53 (1.38–1.69)**
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	male	**2.66** (p for trend sig.)
				female	**2.73** (p for trend sig.)

P – population-based estimate of exposure time, C – individual level person-years (cohort), HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, SD – standard deviation, COPD – chronic obstructive pulmonary disease, PHE – Public Health England. *RR for 1 unit increase in continuous EDI

Supplementary table 4: Head and neck cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sex	Results
Jovanovic Andersen[43], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, sex, period, education and income	MOUTH and PHARYNX	education (lowest vs highest)	male	**1.43 (1.23–1.67)**
					female	1.25 (0.98–1.56)
				income (lowest vs highest)	male	**2.72 (2.51–3.01)**
					female	**2.12 (1.78–2.49)**
				work affiliation (unemployed vs working)	male	**2.98 (2.36–3.37)**
					female	**2.24 (1.83–2.75)**
				occupation-based social class (manual vs creative core)	male	**1.45 (1.11–1.92)**
					female	0.96 (0.50–1.89)
				housing tenure (renter vs owner)	male	**2.83 (2.59–3.09)**
					female	**2.19 (1.90–2.54)**
				size of dwelling (smallest vs largest)	male	**4.80 (4.08–5.64)**
					female	**3.25 (2.24–2.99)**
			LARYNX	education (lowest vs highest)	male	**1.67 (1.39–2.04)**
					female	**3.23 (1.92–5.26)**
				income (lowest vs highest)	male	**2.12 (1.88–2.40)**
					female	**1.64 (1.26–2.13)**
				work affiliation (unemployed vs working)	male	**1.96 (1.67–2.30)**
					female	1.19 (0.84–1.67)
				occupation-based social class (manual vs creative core)	male	**1.75 (1.20–2.56)**
					female	1.02 (0.23–4.55)
				housing tenure (renter vs owner)	male	**2.27 (2.04–2.52)**
					female	**2.02 (1.60–2.54)**
				size of dwelling (smallest vs largest)	male	**3.34 (2.66–4.19)**
					female	0.84 (0.27–2.65)
Svahn[44], 2016, Denmark, 1978-2011	P, all ages, Poisson regression (log-linear), IRR	age, sex	OROPHARYNX, squamous cell carcinoma	education (lowest vs highest)	male	**1.75 (1.33–2.31)**
					female	1.05 (0.62–1.77)
				income quintiles (lowest vs highest)	male	**2.65 (2.02–3.47)**
					female	1.53 (0.91–2.56)
Bryere[37], 2017, France, 2001-2007	case-control, 75 and less, logistic regression (multilevel), OR	age, sex, marital status, education, occupational class, area deprivation	HEAD AND NECK	education (lowest vs highest)	both	**2.25 (1.76–2.86)**
				occupation-based social class (manual vs manager)		**3.04 (2.33–3.97)**
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	UADT	education (lowest vs highest)	male	**1.96 (1.74–2.21)**
					female	1.07 (0.80–1.42)
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	UADT	education (lowest vs highest)	male	**1.96 (1.53–2.51)**
					female	1.10 (0.62–1.92)
				occupation-based social class (lowest vs highest)	male	**1.45 (1.17–1.80)**
					female	1.23 (0.81–1.87)
				housing characteristics (best vs worst)	male	**1.52 (1.30–1.79)**
					female	1.14 (0.79–1.65)
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74, (start of follow-up) standardisation, SIR	age, sex	LIPS, MOUTH, PHARYNX	education (lowest vs all population)	male	**1.33 (1.26–1.42)**
					female	1.10 (0.96–1.27)
			LARYNX		male	**1.36 (1.26–1.46)**
					female	1.21 (0.81–1.76)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age, sex	HEAD AND NECK	individual level Slovenian EDI	both	**1.07 (1.06–1.09)**
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	UADT, without oesophagus	education (lowest vs highest)	male	**1.67 (1.49–1.85)**
					female	**1.45 (1.12–1.96)**
Sharpe[15], 2014, UK (Scotland), 1991-2006	C, 15 and above (start of follow-up), Poisson regression, RR	age, sex, country of birth, marital status, area deprivation, economic activity, education, occupational social class, car ownership, household tenure	UADT	economic activity (inactive vs active)	male	**1.67 (1.59–1.75)**
					female	**1.20 (1.12–1.28)**
				education (lowest vs highest)	male	**1.82 (1.63–2.03)**
					female	**1.42 (1.20–1.69)**
				car ownership (no vs yes)	male	**1.67 (1.60–1.74)**
					female	**1.23 (1.16–1.29)**
				housing tenure (renter vs owner)	male	**1.50 (1.44–1.56)**
					female	1.02 (0.97–1.07)
				occupation-based social class (lowest vs highest)	male	**2.27 (2.07–2.49)**
					female	1.22 (1.10–1.36)

Conway[42], 2010, 10 EU countries, 2002-2005 (Paris: 1987-1992)	case-control, all ages, logistic regression (unconditional), OR	age, sex, centre, alcohol, tobacco, fresh fruit and fresh vegetables consumption (1/3 unexplained)	UADT	education (no vs university)	both	**1.68 (1.08–2.61)**
				years of education (<10 vs >16)	both	**1.55 (1.15–2.07)**
				education (primary vs tertiary)	both	**1.29 (1.06–1.57)**
					male	**1.34 (1.07–1.68)**
					female	1.06 (0.71–1.58)
				occupation-based social class for longest occupation quartiles (lowest vs highest)	both	0.84 (0.64–1.09)
					male	1.18 (0.85–1.65)
					female	1.18 (0.48–2.88)
				occupation-based social class for longest occupation (manual vs non-manual)	both	1.16 (0.98–1.37)
					male	1.16 (0.95–1.40)
					female	1.02 (0.72–1.46)
Conway[41], 2015, several European countries, various lengths (1984-2007)	case-control, all ages, logistic regression (unconditional), OR	age, sex, centre, alcohol, tobacco consumption (25% unexplained)	HEAD AND NECK	education (lowest vs highest)		1.30 (0.88–1.93)
			ORAL CAVITY			1.10 (0. 69–1.75)
			OROPHARYNX		both	1.51 (0.99–2.30)
			HYPOPHARYNX			**2.23 (1.28– 3.88)**
			LARYNX			1.29 (0.79–2.10)

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, UADT – upper aerodigestive tract, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI

Supplementary table 5: Head and neck cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator	Cancer location	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	LARYNX	male	**1.67 (1.43–1.95)**
				LIPS, MOUTH, PHARYNX	male	**1.89 (1.72–2.07)**
					female	**1.56 (1.30–1.86)**
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	LARYNX	male	**1.91 (1.49–2.45)**
					female	no association found
				LIPS, MOUTH, PHARYNX	male	**2.05 (1.77–2.05)**
					female	**1.67 (1.34–2.11)**
Bryere[37], 2017, France, 2001-2007	case-control, 75 and less, logistic regression (multilevel), OR	age, sex, marital status, education, occupational class, area deprivation	French EDI quintiles	HEAD AND NECK	both	**1.51 (1.23–1.85)**
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age, sex	Bremen discrimination index quintiles	ORAL CAVITY and PHARYNX	male	**2.07 (1.72–2.44)**
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	ORAL CAVITY and UPPER RESPIRATORY TRACT	male	**1.24 (1.16–1.33)**
					female	1.06 (0.96–1.17)
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	area DI quintiles	UADT	male	**1.38 (1.19–1.61)**
					female	1.15 (0.84–1.58)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	HEAD AND NECK	both	**1.02 (1.00–1.02)**
Saurina[38], 2010, Spain, 1994-2004	P, all ages, Bayesian GLMM (BYM), RR	age	MEDEA DI (for Girona province) quartiles	LARYNX	male	**1.91 (1.38–2.65)**
Sharpe[15], 2014, UK (Scotland), 1991-2006	C, 15 and above (start of follow-up), Poisson regression, RR	age, sex, country of birth, marital status, economic activity, education, occupational social class, car ownership, household tenure	Carstairs DI deciles	UADT	male	**1.72 (1.55–1.99)**
					female	1.09 (0.98–1.21)
Purkayastha[39], 2016, UK (Scotland), 1975-2012 (Carstairs DI), 2001-2012 (Scottish IMD)	P, all ages, Poisson regression, RR	age, sex, geographical region, year of diagnosis	Carstairs DI deciles	OROPHARYNX	both	**2.49 (2.18–2.86)**
				MOUTH		**2.40 (2.18–2.65)**
				LARYNX		**3.34 (3.02–3.69)**
				HEAD AND NECK		**2.59 (2.45–2.74)**
			Scottish IMD deciles	OROPHARYNX		**3.33 (2.72–4.07)**
				MOUTH		**2.69 (2.31–3.13)**
				LARYNX		**4.98 (4.15–5.97)**
				HEAD AND NECK		**3.30 (3.01–3.62)**

PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	OROPHARYNX	male	**3.72** (p for trend sig.)
					female	**3.57** (p for trend sig.)
				MOUTH	male	**2.35** (p for trend sig.)
					female	**1.45** (p for trend sig.)
				SALIVARY GLANDS	male	1.15 (p for trend not sig.)
					female	1.21 (p for trend not sig.)
				LARYNX	male	**2.88** (p for trend sig.)
					female	**3.88 (**p for trend sig.)

P – population-based estimate of exposure time, C – individual level person-years (cohort), OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, GLMM – generalised linear mixed models, BYM - Besag, York and Mollié, PHE – Public Health England. *RR for 1 unit increase in continuous EDI

Supplementary table 6: Oesophagogastric cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sex	Results
Baastrup[45], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, sex, period, education and income	OESOPHAGUS	education (lowest vs highest)	male	**1.30 (1.10–1.54)**
					female	0.87 (0.65–1.16)
				income (lowest vs highest)	male	**1.78 (1.58–2.00)**
					female	**1.75 (1.42–2.17)**
				work affiliation (unemployed vs working)	male	**1.87 (1.60–2.17)**
					female	**1.79 (1.34–2.40)**
				occupation-based social class (manual vs creative core)	male	**1.37 (1.01–1.89)**
					female	1.25 (0.47–3.33)
				housing tenure (renter vs owner)	male	**1.90 (1.71–2.10)**
					female	**1.54 (1.27–1.85)**
				size of dwelling (smallest vs largest)	male	**2.75 (2.18–2.56)**
					female	**2.12 (1.17–3.82)**
			STOMACH	education (lowest vs highest)	male	**1.43 (1.16–1.59)**
					female	1.23 (0.98–1.56)
				income (lowest vs highest)	male	**1.50 (1.34–1.68)**
					female	**1.32 (1.13–1.56)**
				work affiliation (unemployed vs working)	male	1.06 (0.90–1.24)
					female	1.13 (0.91–1.41)
				occupation-based social class (manual vs creative core)	male	**1.43 (1.06–1.92)**
					female	1.39 (0.65–2.94)
				housing tenure (renter vs owner)	male	**1.19 (1.08–1.32)**
					female	**1.21 (1.04–1.40)**
				size of dwelling (smallest vs largest)	male	**1.38 (1.08–1.76)**
					female	0.99 (0.53–1.86)
Weiderpass[46], 2006, Finland, 1971-1995	C, 45-64 (start of follow-up), standardisation, SIR	age, sex, calendar period, birth cohort	OESOPHAGUS (adenocarcinoma)	occupation-based social class (lowest vs all population)	male	1.05 (0.60–1.71)
					female	1.24 (0.40–2.89)
			OESOPHAGUS (squamous cell carcinoma)		male	**1.45 (1.23–1.70)**
					female	**1.38 (1.16–1.63)**
			STOMACH CARDIA		male	**1.19 (1.01–1.39)**
					female	**1.19 (0.90–1.55)****
			STOMACH NON-CARDIA		male	**1.20 (1.12–1.27)**
					female	**1.03 (0.95–1.11)****
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age, sex	STOMACH	education (lowest vs all population)	male	1.04 (0.88–1.22)
					female	1.05 (0.89–1.24)
Spadea[30], 2009 Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	STOMACH	education (lowest vs highest)	male	**2.02 (1.72–2.38)**
					female	**1.59 (1.23–2.07)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	STOMACH	education (lowest vs highest)	male	**2.19 (1.61–3.00)**
					female	1.48 (0.94–2.32)
				occupation-based social class (lowest vs highest)	male	**1.48 (1.10–1.99)**
					female	1.09 (0.77–1.54)
				housing characteristics (best vs worst)	male	**1.35 (1.11–1.65)**
					female	1.23 (0.96–1.58)
Smailyte[31], 2012, Lithuania, 2001-2004	C, 40-79 (start of follow-up), Poisson regression, IRR	age, sex	STOMACH	education (lowest vs highest)	male	**1.54 (1.31–1.83)**
					female	1.17 (0.95–1.45)
Smailyte[32], 2015 Lithuania 2001-2009	C, 30-74 (start of follow-up) standardisation SIR	age, sex	OESOPHAGUS	education (lowest vs all population)	male	**1.32 (1.22–1.44)**
					female	1.15 (0.91–1.44)
			STOMACH		male	**1.11 (1.06–1.16)**
					female	1.04 (0.99–1.11)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age, sex	OESOPHAGUS	individual level Slovenian EDI	both	**1.06 (1.03–1.09)**
			STOMACH			**1.03 (1.02–1.04)**

Lagergren[47], 2016, Sweden, 1991-2010	C, 50 and above (start of follow-up), Poisson regression, IRR	age, sex, marital status, education, income	OESOPHAGUS (adenocarcinoma)	education (lowest vs highest)	male	**1.49 (1.27–1.79)**
					female	1.35 (0.90–2.04)
				income quintile (lowest vs highest)	male	**1.20 (1.03–1.41)**
					female	1.08 (0.74–1.56)
			OESOPHAGUS (squamous cell carcinoma)	education (lowest vs highest)	male	**1.54 (1.27–1.85)**
					female	**1.35 (1.05–1.75)**
				income quintile (lowest vs highest)	male	**1.82 (1.54–2.13)**
					female	1.20 (0.97–1.52)
			STOMACH CARDIA (adenocarcinoma)	education (lowest vs highest)	male	**1.35 (1.15–1.59)**
					female	1.27 (0.92–1.72)
				income quintile (lowest vs highest)	male	**1.33 (1.16–1.54)**
					female	1.08 (0.82–1.41)
			STOMACH NON-CARDIA (adenocarcinoma)	education (lowest vs highest)	male	**1.69 (1.52–1.85)**
					female	**1.56 (1.37–1.79)**
				income quintile (lowest vs highest)	male	**1.27 (1.16–1.37)**
					female	**1.23 (1.10–1.37)**
			OESOPHAGUS and STOMACH	education (lowest vs highest)	male	**1.56 (1.45–1.67)**
					female	**1.47 (1.33–1.64)**
				income quintile (lowest vs highest)	male	**1.35 (1.27–1.43)**
					female	**1.20 (1.10–1.32)**
Jansson[48], 2005, Sweden, 1995-1997	case-control, less than 80, logistic regression (conditional), OR	age, sex, reflux symptoms, BMI, tobacco smoking***	OESOPHAGUS (adenocarcinoma)	occupational social class (lowest vs highest)		2.0 (0.9–4.5)
				education (lowest vs highest)		1.0 (0.6–1.8)
			STOMACH CARDIA (adenocarcinoma)	occupational social class (lowest vs highest)	both	1.0 (0.6–1.8)
				education (lowest vs highest)		1.3 (0.8–2.1)
		age, sex, tobacco smoking, alcohol use***	OESOPHAGUS (squamous cell carcinoma)	occupational social class (lowest vs highest)		2.1 (0.9–4.9)
				education (lowest vs highest)		2.0 (1.1–3.6)
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	OESOPHAGUS	education (lowest vs highest)	male	**1.89 (1.54–2.33)**
					female	1.25 (0.79–2.13)
			STOMACH		male	**2.00 (1.79–2.22)**
					female	**1.75 (1.43–2.22)**
Nagel[49], 2007, 10 EU countries, 1992-2000	C, 35-70 (start of follow-up), Cox regression, HR	age, sex, centre, alcohol, tobacco consumption, height, weight, physical activity, energy intake, fruit, vegetable, meat intake	STOMACH (adenocarcinoma)	education (lowest vs highest)	both	**1.56 (1.02–2.33)**
			STOMACH CARDIA (adenocarcinoma)			**2.38 (1.12–5.00)**
			STOMACH NON-CARDIA (adenocarcinoma)			1.52 (0.82–2.78)
			STOMACH (intestinal type)			**7.69 (2.27–25.00)**
			STOMACH (diffuse type)			1.41 (0.71–2.70)
			OESOPHAGUS (adenocarcinoma)			1.49 (0.66–3.33)
	nested case-control, 35-70 (start of follow-up), logistic regression (conditional), OR	same as above as well as Helicobacter pylori seroprevalence	STOMACH (adenocarcinoma)	education (lowest vs highest)		1.89 (0.85–4.17)
			STOMACH CARDIA (adenocarcinoma)			**8.33 (1.18–50.00)**
			STOMACH NON-CARDIA (adenocarcinoma)		both	1.09 (0.36–3.33)
			STOMACH (intestinal type)			**16.67 (1.59–100.00)**
			STOMACH (diffuse type)			1.20 (0.31–4.76)
Rota[57], 2019, 6 EU countries, between 1981-2012	case-control, all ages, logistic regression, (unconditional) and pooled meta-analysis, OR	age, sex, centre, alcohol, tobacco consumption, race, fruit and vegetables	STOMACH	education (lowest vs highest)	both	**2.17 (1.32–3.57)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, BMI – body mass index, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI, ** clear trend is observable, *** H. pylori seropositivity and fruit and vegetable intake showed no effect and were not included in final models

Supplementary table 7: Oesophagogastric cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator	Cancer location	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	OESOPHAGUS	male	**1.48 (1.31–1.68)**
				STOMACH	male	**1.24 (1.11–1.39)**
					female	**1.40 (1.20–1.63)**
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	OESOPHAGUS	male	**1.44 (1.29–1.61)**
					female	no association found
				STOMACH	male	no association found
					female	no association found
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	OESOPHAGUS	male	**1.19 (1.11–1.28)**
					female	0.90 (0.79–1.02)
				STOMACH	male	**1.22 (1.16–1.29)**
					female	**1.17 (1.10–1.24)**
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above, standardisation, ASR ratio	age, sex	Pobal Haase-Pratschke ID quintiles	STOMACH	male	**1.40 (1.20–1.63)**
					female	**1.39 (1.13–1.71)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	area DI quintiles	STOMACH	male	1.00 (0.84–1.20)
					female	1.11 (0.89–1.39)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	OESOPHAGUS	both	**1.06 (1.02–1.10)**
				STOMACH		1.01 (0.99–1.03)
Aguilar[54], 2013, Spain, 1993-2002	P, all ages, GLMM, RR	age, sex	MEDEA DI (for Zaragoza city) quartiles	STOMACH	male	**1.93 (1.22–2.98)**
					female	1.33 (0.78–2.08)
PHE[59], 2014 UK (England) 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	OESOPHAGUS	male	**1.59** (p for trend sig.)
					female	**1.50** (p for trend sig.)
				STOMACH	male	**1.86** (p for trend sig.)
					female	**1.93** (p for trend sig.)

P – population-based estimate of exposure time, C – individual level person-years (cohort), SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, GLMM – generalised linear mixed models, PHE – Public Health England. *RR for 1 unit increase in continuous EDI

Supplementary table 8: Liver and pancreatic cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sex	Results
Baastrup[45], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, sex, education, disposable income	PANCREAS	education (lowest vs highest)	male	**1.20 (1.04–1.39)**
					female	**1.22 (1.04–1.45)**
				income (lowest vs highest)	male	1.05 (0.94–1.17)
					female	1.03 (0.91–1.15)
				work affiliation (unemployed vs working)	male	**1.30 (1.12–1.51)**
					female	1.15 (0.99–1.34)
				occupation-based social class (manual vs creative core)	male	0.94 (0.74–1.20)
					female	1.07 (0.65–1.79)
				housing tenure (renter vs owner)	male	**1.40 (1.27–1.54)**
					female	**1.33 (1.21–1.47)**
				size of dwelling (smallest vs largest)	male	**1.64 (1.28–2.09)**
					female	1.07 (0.70–1.62)
Weiderpass[46], 2006, Finland, 1971-1995	C, 45-64 (start of follow-up), standardisation, SIR	age, sex, calendar period, birth cohort	LIVER	occupation-based social class (lowest vs all population)	male	1.07 (0.91–1.24)
					female	1.02 (0.84–1.23)
			GALLBLADDER		male	1.09 (0.87–1.35)
					female	1.09 (0.96–1.23)
			PANCREAS		male	**1.16 (1.06–1.26)**
					female	1.04 (0.95–1.15)
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	LIVER and GALLBLADDER	education (lowest vs highest)	male	**1.53 (1.29–1.80)**
					female	**1.44 (1.10–1.88)**
			PANCREAS		male	0.97 (0.80–1.19)
					female	1.02 (0.77–1.35)
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	LIVER	education (lowest vs highest)	male	**1.30 (1.00–1.70)**
					female	1.05 (0.70–1.60)
				occupation-based social class (lowest vs highest)	male	**1.53 (1.16–2.02)**
					female	1.39 (0.97–1.99)
				housing characteristics (best vs worst)	male	1.17 (0.95–1.44)
					female	**1.29 (1.00–1.65)**
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age, sex	PANCREAS	education (lowest vs all population)	male	**1.05 (0.98–1.12)***
					female	**0.92 (0.85–1.00)***
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR**	age, sex	PANCREAS	individual level Slovenian EDI	both	**1.04 (1.03–1.05)**
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	LIVER	education (lowest vs highest)	male	**1.47 (1.30–1.69)**
					female	**1.92 (1.56–2.38)**
			PANCREAS		male	**1.20 (1.09–1.35)**
					female	**1.56 (1.28–1.92)**
van Boeckel[66], 2010, 9 EU countries, 1990/2002-2006	C, mostly 40-65 (start of follow-up), Cox regression, HR	age, sex, centre	PANCREAS	education (lowest vs highest)	male	0.99 (0.69–1.41)
					female	1.09 (0.72–1.63)
		age, sex, centre + smoking duration, height, weight, waist, diabetes			male	1.02 (0.69–1.50)
					female	0.92 (0.60–1.44)
Cirera[67], 2019, 9 EU countries, 1990/2002-2019	C, mostly 40-65 (start of follow-up), Cox regression, HR	age, sex, centre	PANCREAS	education (lowest vs highest)	male	1.27 (0.98–1.64)
					female	1.13 (0.89–1.44)
		age, sex, centre + smoking intensity, alcohol consumption, BMI, diabetes, physical activity			male	1.18 (0.91–1.54)
					female	1.03 (0.81–1.31)

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, SIR – standardised incidence ratio, RR – risk ratio, EDI – European Deprivation Index. *p for trend sig. for both, **RR for 1 unit increase in continuous EDI

Supplementary table 9: Liver and pancreatic cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	LIVER	male	**1.25 (1.13–1.37)**
					female	**1.45 (1.19–1.77)**
				PANCREAS	male	1.10 (0.98–1.23)
					female	1.11 (0.99–1.26)
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	LIVER	male	**1.40 (1.15–1.71)**
					female	no association
				GALLBLADDER	male	**1.88 (1.11–3.24)**
					female	no association
				PANCREAS	male	no association
					female	no association
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	LIVER	male	1.02 (0.93–1.12)
					female	**1.16 (1.06–1.27)**
				PANCREAS	male	**1.07 (1.01–1.27)**
					female	0.98 (0.94–1.03)
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics	area DI quintiles	LIVER	male	1.00 (0.83–1.20)
					female	0.94 (0.72–1.22)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	PANCREAS	both	1.00 (0.98–1.02)
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	LIVER	male	**2.07** (p for trend sig.)
					female	**1.71** (p for trend close to sig.)
				PANCREAS	male	**1.23** (p for trend sig.)
					female	**1.29** (p for trend sig.)

P – population-based estimate of exposure time, C – individual level person-years (cohort), RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, PHE – Public Health England. *RR for 1 unit increase in continuous EDI

Supplementary table 10: Gynaecological cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sub-analysis	Results
Jensen[68], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, education, disposable income	CERVIX	education (lowest vs highest)		**1.33 (1.19–1.47)**
				income (lowest vs highest)		**1.38 (1.26–1.50)**
				work affiliation (unemployed vs working)		**1.14 (1.03–1.27)**
				occupation-based social class (manual vs creative core)		1.03 (0.78–1.37)
				housing tenure (renter vs owner)		**1.51 (1.40–1.63)**
				size of dwelling (smallest vs largest)		**1.70 (1.54–1.79)**
			ENDOMETRIUM	education (lowest vs highest)		0.98 (0.89–1.09)
				income (lowest vs highest)		**0.85 (0.79–0.93)**
				work affiliation (unemployed vs working)		1.00 (0.91–1.11)
				occupation-based social class (manual vs creative core)		1.11 (0.81–1.54)
				housing tenure (renter vs owner)		0.94 (0.88–1.01)
				size of dwelling (smallest vs largest)		0.86 (0.63–1.15)
			OVARY	education (lowest vs highest)		0.97 (0.88–1.08)
				income (lowest vs highest)		0.92 (0.86–1.01)
				work affiliation (unemployed vs working)		1.01 (0.91–1.11)
				occupation-based social class (manual vs creative core)		0.94 (0.72–1.25)
				housing tenure (renter vs owner)		1.05 (0.98–1.13)
				size of dwelling (smallest vs largest)		1.00 (0.76–1.33)
Svahn[44], 2016, Denmark, 1978-2011	P, all ages, Poisson regression (log-linear), IRR	age	CERVIX, all epithelial	education (lowest vs highest)		**1.42 (1.12–1.82)**
				income quintiles (lowest vs highest)		**1.61 (1.29–2.02)**
			VAGINA, squamous cell carcinoma	education (lowest vs highest)		1.75 (0.31–9.38)
				income quintiles (lowest vs highest)		/
			VULVA, squamous cell carcinoma	education (lowest vs highest)		1.44 (0.96–2.16)
				income quintiles (lowest vs highest)		**2.41 (1.47–3.95)**
Pukkala[69], 2010, Finland, 1971-1995	C, 45-64 (start of follow-up), standardisation, SIR	age, birth year, period	CERVIX, adenocarcinoma	occupation-based social class (lowest vs all population)		**1.29 (1.21–1.36)**
			CERVIX, squamous cell carcinoma			1.07 (0.87–1.28)
Riska[94], 2003, Finland, 1953-1997	P, all ages, standardisation, SIR	age	FALLOPIAN TUBE	occupation-based social class (lowest vs all population)		0.73 (0.51–1.02)
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age	CERVIX	education (lowest vs all population)		**1.09 (0.91–1.30)** sig. trend
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, area of birth	CERVIX	education (lowest vs highest)		**1.95 (1.52–2.49)**
			ENDOMETRIUM			1.09 (0.92–1.30)
			OVARY			**0.82 (0.69–0.98)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, area of birth, education, occupational class, housing characteristics, area deprivation	CERVIX	education (lowest vs highest)		**2.13 (1.27–3.58)**
				occupation-based social class (lowest vs highest)		1.14 (0.80–1.62)
				housing characteristics (best vs worst)		**1.94 (1.46–2.58)**
Smailyte[31], 2012, Lithuania, 2001-2004	C, 40-79 (start of follow-up), Poisson regression, IRR	age	CERVIX	education (lowest vs highest)		**1.56 (1.28–1.91)**
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age	CERVIX	education (lowest vs all population)		**1.18 (1.11–1.26)**
			ENDOMETRIUM			**0.94 (0.89–0.99)**
			OVARY			0.99 (0.93–1.06)

Braaten[33], 2005, Norway, 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age	CERVIX	education (lowest vs highest)		**2.63 (1.18–5.88)**
		age + smoking status, age at first birth, change in BMI since age 18 y, participation in cytologic screening				1.96 (0.85–4.55)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age	CERVIX	individual level Slovenian EDI		1.02 (1.00–1.05)
			ENDOMETRIUM			**1.03 (1.02–1.05)**
Svanvik[98], 2019, Sweden, 1995-2006	P, 30-74, Poisson regression, IRR	age, year of diagnosis	ENDOMETRIUM	education (lowest vs highest)	EEC all	**1.11 (1.01–1.22)**
					EEC stage I	1.00 (0.90–1.12)
					EEC stage II	**1.65 (1.13–2.42)**
					EEC stage III-IV	**1.82 (1.33–2.49)**
					NEC all/stages	no association
Li[70], 2012, Sweden, 1990-2008	C, 25-74 (start of follow-up), logistic regression (multilevel), OR	age, marital status, family income, education, immigration status, urban/rural status, mobility, comorbidities, parity, number. of partners, neighbourhood deprivation	CERVIX	education (lowest vs highest)		**1.16 (1.06–1.26)**
				income quartiles (lowest vs highest)		**1.11 (1.01–1.22)**
				immigrant status (immigrant vs native)		**0.69 (0.61–0.77)**
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	CERVIX	education (lowest vs highest)		**2.33 (1.96–2.70)**
			ENDOMETRIUM			0.96 (0.88–1.05)
			OVARY			**1.22 (1.11–1.35)**
			OTHER GYNECOLOGICAL			**1.72 (1.22–2.50)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, BMI – body mass index, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI

Supplementary table 11: Gynaecological cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age	French EDI quintiles	CERVIX	**1.62 (1.40–1.88)**
				ENDOMETRIUM	**0.79 (0.70–0.90)**
				OVARY	0.97 (0.87–1.07)
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age	French EDI quintiles	CERVIX	**1.40 (1.10–1.80)**
				ENDOMETRIUM	no association
				OVARY	no association
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age	Bremen discrimination index quintiles	CERVIX	**1.33 (1.03–1.67)**
				ENDOMETRIUM	0.95 (0.79–1.12)
				OVARY	0.85 (0.68–1.03)
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	CERVIX	**1.12 (1.03–1.21)**
				OVARY	**0.93 (0.87–0.99)**
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above standardisation, ASR ratio	age	Pobal Haase-Pratschke ID quintiles	CERVIX	**2.23 (1.88–2.64)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, area of birth, education, occupational class, housing characteristics	area DI quintiles	CERVIX	**1.33 (1.02–1.74)**
van der Aa[72], 2008, Netherlands, 1989-2003	P, all ages, logistic regression (ecological level), OR*	age, area, population density, % immigrants, % people on welfare	% of immigrants quintiles	CERVIX	**7.9 (1.4–46.7)**
			% of people on welfare quintiles		**8.6 (1.7–43.0)**
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age	area level Slovenian EDI	CERVIX	1.00 (0.96–1.03)
				ENDOMETRIUM	0.98 (0.96–1.00)
Renart Vicens[71], 2014, Spain, 1993-2006	P, all ages, spatial autoregression, Bayesian (BYM), RR	age	MEDEA DI (for Girona province) quartiles	CERVIX	1.15 (0.17–13.19)

Li[70], 2012, Sweden, 1990-2008	C, 25-74 (start of follow-up), logistic regression(multilevel), OR	age, marital, immigration, urban/rural status, family income, education, mobility, comorbidities, parity, number of partners, neighbourhood deprivation	Neighbourhood deprivation index 3 groups according to SD deviance	CERVIX	**1.25 (1.13–1.38)**
Currin[76], 2009, UK (England), 2001-2005	P, 25-64, Poisson regression (ecological level), IRR	age, area, teenage conception rates, smoking rates, screening coverage	IMD (income domain) quintiles	CERVIX, squamous cell carcinoma	1.00 (1.00–1.00)
Shack[21], 2008, UK (England), 1998-2003	P, all ages, standardisation, ASR ratio	age	English IMD quintiles	CERVIX	**2.08 (1.97–2.19)**
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age	IMD (income domain) quintiles	VULVA	**1.82** (p for trend sig.)
				VAGINA	**1.85** (p for trend sig.)
				CERVIX	**1.72** (p for trend sig.)
				ENDOMETRIUM	1.11 (p for trend not sig.)
				OVARY	1.03 (p for trend not sig.)

P – population-based estimate of exposure time, C – individual level person-years (cohort), OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, IRR – incidence rate ratio, BYM - Besag, York and Mollié, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, SD – standard deviation, PHE – Public Health England. *OR for a municipality to be in the highest compared to lowest quartile of incidence rates, **RR for 1 unit increase in continuous EDI

Supplementary table 12: Breast cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator	Sub-analysis	Results
Carlsen[81], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, education, disposable income	education (lowest vs highest)		**0.88 (0.78–0.99)**
			income (lowest vs highest)		**0.85 (0.82–0.98)**
			work affiliation (unemployed vs working)		**1.05 (1.01–1.09)**
			occupation-based social class (manual vs creative core)		**0.84 (0.76–0.93)**
			housing tenure (renter vs owner)		**1.04 (1.01–1.07)**
			size of dwelling (smallest vs largest)		1.04 (0.94–1.16)
Danø[82], 2004, Denmark, 1970-1998	C, 20-39 (start of follow-up), Poisson regression, IRR	age, birth cohort, parity, age at first birth, education, occupation	education (lowest vs highest)		**0.82 (0.78–0.86)**
			occupation-based social class (unskilled vs salariat)		**0.92 (0.89–0.96)**
Danø[89], 2003, Denmark, 1970-1995	C, 20-64 (start of follow-up), standardisation, SIR	age	occupation-based social class (unskilled vs all population)		**0.89 (0.87–0.91)**
Meijer[14], 2013, Denmark, 2004-2008	C, 50-83 (start of follow-up), shared frailty models (multilevel), HR	age, breast cancer screening, marital status, population density, income, education, social class	education (lowest vs highest)		**0.93 (0.88–0.97)**
			income (lowest vs highest)		**0.93 (0.88–0.98)**
			occupation-based social class (semi/unskilled vs salariat)		**0.83 (0.78–0.88)**
Larsen[83], 2011, Denmark, 1993-1997 to 2006	C, 50-64 (start of follow-up), Cox regression, HR	age	education (lowest vs highest)		**0.83 (0.70–0.99)**
		as above + HRT use, parity, alcohol, BMI			0.94 (0.79–1.14)
		age, education, occupation	income quartiles (lowest vs highest)		**0.72 (0.56–0.93)**
		as above + HRT use, parity, alcohol, BMI			0.81 (0.63–1.04)
		age, education	occupation-based social class (unskilled vs higher official)		0.89 (0.71–1.12)
		as above + HRT use, parity, alcohol, BMI			0.93 (0.75–1.18)
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age	education (lowest vs all population)		**0.95 (0.90–1.01)**
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, area of birth	education (lowest vs highest)	INVASIVE	**0.74 (0.69–0.78)**
				IN SITU	**0.41 (0.32–0.53)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, area of birth, education, occupational class, housing characteristics, area deprivation	education (lowest vs highest)		**0.66 (0.58–0.75)**
			occupation-based social class (lowest vs highest)		0.92 (0.84–1.00)
			housing characteristics (best vs worst)		0.98 (0.89–1.08)
Smailyte[31], 2012, Lithuania, 2001-2004	C, 40-79 (start of follow-up), Poisson regression, IRR	age	education (lowest vs highest)		**0.59 (0.54–0.66)**
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age	education (lowest vs all population)		**0.86 (0.83–0.90)**
Lowman[26], 2004, Netherlands, 1991-1998	C, 15-75 (start of follow-up), Cox regression, HR	age, sex, marital status, religious affiliation, degree of urbanization	education (lowest vs highest)		0.9 (no CI but includes 1)
		as above + smoking, alcohol intake, physical activity			0.9 (no CI but includes 1)
Braaten[84], 2004, Norway, Sweden, 1991/1992-1999	C, NO: 34-49 (start of follow-up), SE: 30-50 (start of follow-up), Cox regression, HR	age	education (lowest vs highest)		**0.74 (0.59–0.91)**
		age + parity, age at first birth, BMI, height, age at menarche, menopausal status, ever use of hormonal contraceptives, alcohol			0.96 (0.76–1.22)
Braaten[33], 2005, Norway, 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age	education (lowest vs highest)		**0.68 (0.56–0.84)**
		age + parity, age at first birth, BMI, height, menopausal status, ever use of hormonal contraceptives, alcohol, HRT use, participation in screening			0.90 (0.72–1.12)
Bjerkaas[85], 2015, Norway, 1974/2003-2007	C, born 1899-1975, Cox regression, HR	age, parity, age at first birth, BMI, age at enrolment, physical activity	education (lowest vs highest)		**0.65 (0.61–0.70)**

Trewin[86], 2017, Norway, 1971-1979 → 1980-1989 → 1990-1999 → 2000-2009	C, 35 and above (start of follow-up), Poisson regression, RII	age, period	education (lowest vs highest)		**0.63 (0.58–0.68)** → **0.65 (0.60–0.68)** → **0.67 (0.63–0.71)** → **0.72 (0.69–0.76)**
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age	individual level Slovenian EDI		1.01 (0.99–1.01)
Hussain[87], 2008, Sweden, 1990-2004	C, 30-64 (start of follow-up), Cox regression, HR	age, period, parity, age at first birth, county of residence, family history of breast cancer	education (lowest vs highest)	INVASIVE	**0.78 (0.74–0.83)**
				IN SITU	**0.69 (0.61–0.78)**
Beiki[88], 2012, Sweden, 1961-2007	C, all ages (native Swedes only), Poisson regression, RR	age, period, area of residence	education (lowest vs highest)		**0.85 (0.83–0.86)**
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	education (lowest vs highest)		**0.73 (0.70–0.76)**
Menvielle[92], 2011, 9 EU countries, 1990/2002-2006	C, mostly 40-65 (start of follow-up), Cox regression, HR	age, centre	education (lowest vs highest)	INVASIVE	**0.84 (0.76–0.93)**
				IN SITU	**0.64 (0.48–0.85)**
		age, centre + reproductive history, breastfeeding, age at menarche, oral contraceptives, height, BMI, alcohol, physical activity, HRT, menopause		INVASIVE	0.99 (0.89–1.10)
				IN SITU	**0.71 (0.53–0.97)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, SIR – standardised incidence ratio, RR – risk ratio, RII – relative index of inequality, BMI – body mass index, HRT – hormone replacement therapy, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI

Supplementary table 13: Breast cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age	French EDI quintiles	**0.93 (0.89–0.96)**
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age	French EDI quintiles	no association
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age	Bremen discrimination index quintiles	**0.83 (0.77–0.90)**
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	**0.95 (0.92–0.99)**
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above, standardisation, ASR ratio	age	Pobal Haase-Pratschke ID quintiles	**0.85 (0.80–0.90)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, area of birth, education, occupational class, housing characteristics	area DI quintiles	**0.91 (0.84–0.98)**
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age	area level Slovenian EDI	**0.98 (0.97–1.00)**
Shack[21], 2008, UK (England), 1998-2003	P, all ages, standardisation, ASR ratio	age	English IMD quintiles	**0.84 (0.82–0.85)**
Tweed[22], 2018, UK (Scotland), 2010-2012	P, 15 and above, Poisson regression, IRR	age	Scottish IMD quintiles	**0.82 (0.76–0.89)**
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age	IMD (income domain) quintiles	**0.86** (p for trend sig.)

P – population-based estimate of exposure time, C – individual level person-years (cohort), SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, IRR- incidence rate ration, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, PHE – Public Health England

Supplementary table 14: Penile and testicular cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sub-analysis	Results
Marsså[102], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, sex, education, disposable income	TESTIS	education (lowest vs highest)		1.00 (0.87–1.14)
				income (lowest vs highest)		1.00 (0.89–1.13)
				work affiliation (unemployed vs working)		0.87 (0.73–1.03)
				occupation-based social class (manual vs creative core)		0.96 (0.77–1.20)
				housing tenure (renter vs owner)		1.10 (0.99–1.22)
				size of dwelling (smallest vs largest)		0.89 (0.70–1.15)
Svahn[44], 2016, Denmark, 1978-2011	P, all ages, Poisson regression (log-linear), IRR	age	PENIS, squamous cell carcinoma, including *in situ*	education (lowest vs highest)		**3.02 (1.57–5.81)**
				income quintiles (lowest vs highest)		**3.26 (1.45–7.32)**
Pukkala[106], 2002, Finland, 1971-1995	C,45-64 (start of follow-up), standardisation, SIR	age	TESTIS	occupation-based social class (lowest vs all population)	OVERALL	**0.91 (0.55–1.40)***
					SEMINOMA	**0.79 (0.42–1.36)**
					NON-SEMINOMA	**0.60 (0.33–1.01)****
			PENIS			1.02 (0.62–1.60)
Schmeisser[103], 2013, Germany, 1995-1997	case-control, 15-69, logistic regression (conditional), OR	age, region	TESTIS	education - years (lowest vs highest)	OVERALL	0.9 (0.6–1.3)
				education - training (lowest vs highest)		0.6 (0.4–1.1)
				occupational - max. ISEI score (lowest vs highest)		1.1 (0.7–1.7)
				occupational - sector for longest held job (lowest vs highest)		0.9 (0.6–1.3)
				education - years (lowest vs highest)	SEMINOMA	1.0 (0.6–1.4)
				education - training (lowest vs highest)		0.5 (0.3–1.0)
				occupational - max. ISEI score (lowest vs highest)		1.2 (0.7–2.2)
				occupational - sector for longest held job (lowest vs highest)		1.0 (0.5–1.2)
				education - years (lowest vs highest)	NON-SEMINOMA	0.9 (0.5–1.7)
				education - training (lowest vs highest)		0.9 (0.4–2.0)
				occupational - max. ISEI score (lowest vs highest)		0.9 (0.4–1.9)
				occupational - sector for longest held job (lowest vs highest)		1.0 (0.7–1.4)
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, area of birth	TESTIS	education (lowest vs highest)		0.88 (0.58–1.34)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age	TESTIS	individual level Slovenian SES		**0.99 (0.98–0.99)**
Torbrand[108], 2017, Sweden, 2000-2012	case-control, all ages, logistic regression, OR	age, county of residence, marital status, comorbidity	PENIS, squamous cell carcinoma, including *in situ*	education (lowest vs highest)	OVERALL	1.05 (0.91–1.22)
				income (lower vs higher 50 %)		1.04 (0.93–1.17)
				education (lowest vs highest)	IN SITU	0.82 (0.63–1.05)
				income (lower vs higher 50 %)		0.82 (0.67–1.00)
				education (lowest vs highest)	INVASIVE	**1.25 (1.02–1.54)**
				income (lower vs higher 50 %)		**1.23 (1.05–1.45)**
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	TESTIS	education (lowest vs highest)		**0.69 (0.58–0.83)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI * sig. trend, ** second-lowest vs all population

Supplementary table 15: Penile and testicular cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression, (Bayesian), RR	age	French EDI quintiles	TESTIS	0.85 (0.71–1.01)
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression, (Bayesian), RR	age	French EDI quintiles	TESTIS	no association
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression, (multilevel), SRR	age, calendar year, population size	German ISD quintiles	TESTIS	1.04 (0.96–1.13)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age	area level Slovenian EDI	TESTIS	0.95 (0.9–1.00)
McNally[104], 2015, UK (England), 1968-2006	P, 20-24, negative binomial regression, RR for % increase	age	% households overcrowding	TESTIS, non-seminoma	**0.79 (0.66–0.94)**
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age	IMD (income domain) quintiles	PENIS, invasive	**1.59** (p for trend sig.)
				TESTIS	**0.84** (p for trend sig.)
Toledano[105], 2001, UK (Great Britain), 1974-1991	P, 20-49, Poisson regression, RR	age, region	Carstairs DI quintiles	TESTIS	**0.76 (0.72–0.81)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, PHE – Public Health England EDI. *RR for 1 unit increase in continuous EDI

Supplementary table 16: Prostate cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator	Results
Marsà[102], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, education, disposable income	education (lowest vs highest)	**0.81 (0.76–0.86)**
			income (lowest vs highest)	**0.83 (0.78–0.87)**
			work affiliation (unemployed vs working)	0.99 (0.92–1.07)
			occupation-based social class (manual vs creative core)	**0.88 (0.79–0.99)**
			housing tenure (renter vs owner)	0.98 (0.93–1.03)
			size of dwelling (smallest vs largest)	0.85 (0.74–1.00)
Meijer[14], 2013, Denmark, 2004-2008	C, 50-83 (start of follow-up). shared frailty models (multilevel). HR	age, marital status, income, social class, % unemployment	income (lowest vs highest)	**0.66 (0.62–0.69)**
			occupation-based social class (semi/unskilled vs salariat)	**0.92 (0.87–0.96)**
Nielsen[112], 2007, Denmark, 1981/1983 -2002	C, 20 and above (start of follow-up), Cox regression, HR	age	education (lowest vs highest)	0.82 (0.51–1.32)
			income (lowest vs highest)	0.85 (0.57–1.28)
Pukkala[106], 2002, Finland, 1971-1995	C,45-64 (start of follow-up), standardisation, SIR	age, ALL DISEASE	occupation-based social class (lowest vs all population)	**0.86 (0.80–0.92)**
		age, LOCALISED DISEASE		**0.85 (0.77–0.93)**
		age, NON-LOCALISED DISEASE		0.92 (0.81–1.03)
Kilpeläinen[113], 2016, Finland, 1996/1999 -2011	randomized trial, 55-67 (start of trial), logistic regression, OR	LOW-RISK DISEASE	education (lowest vs highest)	**CA 0.85 (0.76–0.96) → SA 0.82 (0.74–0.92)**
		MODERATE-RISK DISEASE		CA 0.92 (0.79–1.05) → SA 0.87 (0.73–1.03)
		HIGH-RISK DISEASE		CA 1.01 (0.85–1.22) → SA 1.16 (0.90–1.49)
		ADVANCED DISEASE		**CA 2.22 (1.67–2.94) → SA 2.13 (1.45–3.13)**
		LOW-RISK DISEASE	income (lowest vs highest)	**CA 0.92 (0.71–0.92) → SA 0.83 (0.73–0.94)**
		MODERATE-RISK DISEASE		**CA 0.83 (0.70–0.98)** → SA 0.88 (0.72–1.09)
		HIGH-RISK DISEASE		CA 1.03 (0.83–1.27) → SA 1.20 (0.91–1.61)
		ADVANCED DISEASE		**CA 2.17 (1.59–2.94) → SA 1.28 (0.85–1.92)**
		LOW-RISK DISEASE	housing tenure (renter vs owner)	**CA 0.76 (0.67–0.87) → SA 0.69 (0.61–0.79)**
		MODERATE-RISK DISEASE		**CA 0.84 (0.72–0.99)** → SA 0.88 (0.73–1.06)
		HIGH-RISK DISEASE		**CA 0.78 (0.63–0.94)** → SA 1.01 (0.78–1.30)
		ADVANCED DISEASE		CA 1.05 (0.82–1.33) → **SA 1.41 (1.01–1.96)**
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age	education (lowest vs all population)	**0.92 (0.84–0.99)**
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression RR	age, area of birth	education (lowest vs highest)	**0.70 (0.63–0.78)**
Smailyte[31], 2012, Lithuania, 2001-2004	C, 40-79 (start of follow-up), Poisson regression IRR	age	education (lowest vs highest)	**0.49 (0.46–0.53)**
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age	education (lowest vs all population)	**0.90 (0.88–0.92)**
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age	individual level Slovenian EDI	**0.99 (0.98–0.99)**
Lowman[26], 2004, Netherlands, 1991-1998	C, 15-75 (start of follow-up), Cox regression, HR	age, marital status, religious affiliation, degree of urbanization	education (lowest vs highest)	1.06 (no CI but includes 1)
Hemminki[36], 2003 Sweden 1970-1998	C, unclear standardisation SIR	age, sex, period, region	education (lowest vs highest)	**0.88 (0.85–0.91)**
Lund Nilsen[114], 2000, Norway, 1984/1986 -1995	C, 40 and above (start of follow-up), Cox regression, IRR	age	education (lowest vs highest)	**0.64 (0.45–0.90)**
			occupation-based social class (lowest vs highest)	**0.77 (0.62–0.95)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI

Supplementary table 17: Prostate cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Results
Meijer[14], 2013, Denmark, 2004-2008	C, 50-83 (start of follow-up), shared frailty models (multilevel), HR	age, marital status, income, social class, % unemployment	% unemployed quartiles	**0.88 (0.83–0.93)**
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age	French EDI quintiles	**0.86 (0.83–0.90)**
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age	French EDI quintiles	**0.84 (0.78–0.92)**
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age	Bremen discrimination index quintiles	**0.86 (0.79–0.94)**
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, calendar year, population size	German ISD quintiles	1.03 (0.98–1.07)
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above, standardisation, ASR ratio	age	Pobal Haase-Pratschke ID quintiles	0.97 (0.92–1.02)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age	area level Slovenian EDI	**0.98 (0.97–1.00)**
Renart Vicens[71], 2014, Spain, 1993-2006	P, all ages, spatial autoregression - Bayesian (BYM), RR	age	MEDEA DI (for Girona province) quartiles	**0.60 (0.47–0.76)**
Shafique[115], 2012, UK (Scotland), 1997-2002 ↓ 2003-2007	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, ALL DISEASE	Carstairs DEPCAT rank groups	**0.79** (p for trend sig) ↓ **0.62** (p for trend sig)
		age, LOW-GRADE DISEASE		0.83 (p for trend not sig) ↓ **0.81** (p for trend sig)
		age, HIGH-GRADE DISEASE		0.94 (p for trend not sig) ↓ 0.80 (p for trend not sig)
Morgan[116], 2013, UK (Scotland), 2003-2008	C, 40 and above (start of follow-up), logistic regression, OR	age, number of Prostate Specific Antigen tests	Scottish IMD quintiles	**0.68 (0.25–0.87)**
Tweed[22], 2018, UK (Scotland), 2010-2012	P, 15 and above, Poisson regression, IRR	age	Scottish IMD quintiles	**0.87 (0.79 – 0.96)** lowering of inequalities since 2008
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age	IMD (income domain) quintiles	**0.83** (p for trend sig.) increase of inequalities over time

P – population-based estimate of exposure time, C – individual level person-years (cohort), HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, IRR – incidence rate ratio, BYM - Besag, York and Mollié, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, PHE – Public Health England. *RR for 1 unit increase in continuous EDI

Supplementary table 18: Urological cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sex	Results
Eriksen[120], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, sex, education, disposable income	KIDNEY	education (lowest vs highest)	male	**1.22 (1.05–1.41)**
					female	**1.54 (1.23–1.92)**
				income (lowest vs highest)	male	**1.28 (1.15–1.44)**
					female	**1.41 (1.22–1.63)**
				work affiliation (unemployed vs working)	male	1.11 (0.95–1.31)
					female	1.08 (0.89–1.30)
				occupation-based social class (manual vs creative core)	male	1.06 (0.82–1.39)
					female	1.41 (0.67–2.94)
				housing tenure (renter vs owner)	male	**1.20 (1.09–1.33)**
					female	**1.17 (1.03–1.33)**
				size of dwelling (smallest vs largest)	male	**1.29 (1.01–1.67)**
					female	0.81 (0.45–1.44)
			BLADDER, RENAL PELVIS, URETER	education (lowest vs highest)	male	**1.15 (1.06–1.25)**
					female	**1.37 (1.19–1.59)**
				income (lowest vs highest)	male	**1.07 (1.01–1.13)**
					female	**1.12 (1.02–1.24)**
				work affiliation (unemployed vs working)	male	1.04 (0.96–1.14)
					female	1.10 (0.97–1.25)
				occupation-based social class (manual vs creative core)	male	1.02 (0.89–1.16)
					female	0.87 (0.58–1.30)
				housing tenure (renter vs owner)	male	**1.21 (1.15–1.27)**
					female	**1.34 (1.23–1.46)**
				size of dwelling (smallest vs largest)	male	**1.25 (1.09–1.44)**
					female	1.15 (0.79–1.66)
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age, sex	URINARY TRACT	education (lowest vs all population)	male	**1.05 (0.91–1.21);** p for trend sig.
Spadea[30], 2009 Italy 1985-1999	C, 30-74 (start of follow-up) Poisson regression RR	age, sex, area of birth	KIDNEY AND URINARY ORGANS	education (lowest vs highest)	male	**0.80 (0.67–0.94)**
					female	1.07 (0.79–1.44)
			BLADDER		male	**1.11 (1.01–1.22)**
					female	0.98 (0.76–1.27)
Smailyte[32], 2015 Lithuania 2001-2009	C, 30-74 (start of follow-up) standardisation SIR	age, sex	KIDNEY	education (lowest vs all population)	male	**0.94 (0.88–1.00)**; p for trend sig.
					female	0.94 (0.88–1.01); p for trend not sig.
			BLADDER		male	**1.03 (0.97–1.09)**; p for trend sig.
					female	0.96 (0.85–1.08); p for trend not sig.
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age, sex	KIDNEY	individual level Slovenian EDI	both	1.01 (0.99–1.02)
			BLADDER			**1.02 (1.01–1.04)**
Weibull[121], 2013, Sweden, 1972-2009	C, 40 (start of follow-up), Cox regression, HR	age	BLADDER	education (lowest vs highest)	female	**1.30 (1.15–1.47)**
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	KIDNEY	education (lowest vs highest)	male	**1.27 (1.15–1.41)**
					female	**1.33 (1.12–1.61)**
			BLADDER		male	**1.18 (1.10–1.27)**
					female	**1.25 (1.03–1.54)**
Braaten[33], 2005 Norway 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up) Cox regression HR	age				**3.45 (0.80–14.29)**; p for trend sig.
		age + smoking status, consumption of alcohol	KIDNEY	education (lowest vs highest)	female	2.00 (0.45–9.09); p for trend not sig.

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, SIR – standardised incidence ratio, RR – risk ratio, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI

Supplementary table 19: Urological cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	KIDNEY, RENAL PELVIS, URETER	male	0.96 (0.88–1.05)
					female	1.00 (0.87–1.16)
				BLADDER	male	**1.22 (1.11–1.34)**
					female	1.08 (0.90–1.31)
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	KIDNEY, RENAL PELVIS, URETER, UNSPECIFIED URINARY	male	no association
					female	no association
				BLADDER	male	**1.19 (1.01–1.40)**
					female	no association
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age, sex	Bremen discrimination index quintiles	BLADDER	male	**1.28 (1.12–1.45)**
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	KIDNEY	male	**1.21 (1.14–1.29)**
					female	**1.28 (1.19–1.38)**
				BLADDER	male	**1.20 (1.11–1.29)**
					female	**1.18 (1.08–1.29)**
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	KIDNEY	both	0.99 (0.97–1.01)
				BLADDER		1.00 (0.98–1.03)
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	KIDNEY, RENAL PELVIS, URETER, UNSPECIFIED URINARY	male	**1.28**; p for trend sig.
					female	**1.44**; p for trend sig.
				BLADDER	male	**1.27**; p for trend sig.
					female	**1.43**; p for trend sig.

P – population-based estimate of exposure time, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, ISD – index of socioeconomic deprivation, PHE – Public Health England. *RR for 1 unit increase in continuous EDI

Supplementary table 20: Colorectal cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sex	Results
Egeberg[126], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, sex, education, disposable income	COLON	education (lowest vs highest)	male	0.93 (0.85–1.01)
					female	1.02 (0.93–1.12)
				income (lowest vs highest)	male	0.99 (0.93–1.06)
					female	0.94 (0.88–1.01)
				work affiliation (unemployed vs working)	male	**1.21 (1.10–1.34)**
					female	**1.13 (1.03–1.23)**
				occupation-based social class (manual vs creative core)	male	0.99 (0.85–1.15)
					female	0.87 (0.67–1.14)
				housing tenure (renter vs owner)	male	**1.19 (1.12–1.26)**
					female	0.98 (0.93–1.05)
				size of dwelling (smallest vs largest)	male	**1.30 (1.10–1.52)**
					female	0.86 (0.67–1.11)
			RECTUM and ANUS	education (lowest vs highest)	male	1.02 (0.93–1.12)
					female	1.12 (1.00–1.23)
				income (lowest vs highest)	male	**1.09 (1.01–1.18)**
					female	0.99 (0.90–1.09)
				work affiliation (unemployed vs working)	male	1.11 (1.00–1.24)
					female	1.02 (0.91–1.15)
				occupation-based social class (manual vs creative core)	male	1.14 (0.96–1.33)
					female	1.05 (0.73–1.52)
				housing tenure (renter vs owner)	male	**1.17 (1.01–1.25)**
					female	1.04 (0.96–1.13)
				size of dwelling (smallest vs largest)	male	1.16 (0.97–1.39)
					female	1.07 (0.78–1.45)
Svahn[44], 2016, Denmark, 1978-2011	P, all ages, Poisson regression (log-linear), IRR	age, sex	ANUS, squamous cell carcinoma	education (lowest vs highest)	male	1.00 (0.63–1.59)
					female	0.89 (0.60–1.32)
				income quintiles (lowest vs highest)	male	**2.14 (1.37–3.43)**
					female	1.24 (0.72–2.12)
Savijärvi[127], 2019, Finland, 1976-1984 → 2005-2014	P, 25 and above, Poisson regression, RR	age, sex, period	COLON	education (lowest vs highest)	male	**0.71 (0.63–0.79)** → 0.99 (0.93–1.04)
					female	0.88 (0.78–1.00) → 0.96 (0.91–1.02)
				occupation-based social class (manual vs upper)	male	**0.85 (0.79–0.93)** → 0.95 (0.89–1.02)
					female	0.92 (0.83–1.01) → 0.95 (0.88–1.03)
			COLON (proximal)	education (lowest vs highest)	male	**0.70 (0.60–0.83)** → 0.97 (0.89–1.04)
					female	0.93 (0.79–1.10) → 0.90 (0.83–0.97)
				occupation-based social class (manual vs upper)	male	**0.88 (0.78–0.99)** → 0.91 (0.83–1.01)
					female	0.92 (0.80–1.04) → 0.92 (0.83–1.03)
			COLON (distal)	education (lowest vs highest)	male	**0.68 (0.57–0.82)** → 0.99 (0.91–1.09)
					female	**0.81 (0.67–0.98)** → 1.11 (0.99–1.23)
				occupation-based social class (manual vs upper)	male	**0.83 (0.72–0.94)** → 0.97 (0.87–1.09)
					female	0.88 (0.75–1.04) → 1.06 (0.92–1.23)
			RECTUM and ANUS	education (lowest vs highest)	male	**0.85 (0.75–0.97)** → **1.07 (1.01–1.15)**
					female	1.02 (0.87–1.20) → 1.03 (0.94–1.12)
				occupation-based social class (manual vs upper)	male	1.05 (0.95–1.16) → 1.09 (0.99–1.18)
					female	1.05 (0.92–1.20) → 1.09 (0.96–1.22)
Weiderpass[46], 2006, Finland, 1971-1995	C, 45-64 (start of follow-up), standardisation, SIR	age, sex, calendar period, birth cohort	COLON	occupation-based social class (lowest vs all population)	male	**0.78 (0.69–0.86)**
					female	0.92 (0.85–1.01)
			RECTUM		male	0.92 (0.83–1.02)
					female	0.92 (0.83–1.01)
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age, sex	COLON	education (lowest vs all population)	male	0.88 (0.74–1.02)
					female	1.00 (0.89–1.24)
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	COLON	education (lowest vs highest)	male	0.93 (0.83–1.04)
					female	0.93 (0.80–1.07)
			RECTUM and ANUS		male	**1.27 (1.07–1.50)**
					female	1.16 (0.94–1.43)
Smailyte[31], 2012, Lithuania, 2001-2004	C, 40-79 (start of follow-up), Poisson regression, IRR	age, sex	COLON, RECTUM and ANUS	education (lowest vs highest)	male	0.78 (0.68–0.88)
					female	0.79 (0.68–0.91)

Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age, sex	COLON	education (lowest vs all population)	male	**0.91 (0.86–0.97)**
					female	**0.90 (0.85–0.96)**
			RECTUM and ANUS		male	0.96 (0.91–1.02)
					female	1.02 (0.96–1.09)
Lowman[26], 2004, Netherlands, 1991-1998	C, 15-75 (start of follow-up), Cox regression, HR	age, sex, marital status, religious affiliation, degree of urbanization	COLON and RECTUM	education (lowest vs highest)	both	1.74 (no CI but includes 1)
Braaten[33], 2005, Norway, 1991/2 (or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age	COLON	education (lowest vs highest)	female	0.81 (0.46–1.42)
			RECTUM		female	1.58 (0.83–3.02)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age, sex	COLON and RECTUM	individual level Slovenian EDI	both	**1.03 (1.02–1.03)**
Brooke[128], 2016, Sweden, 1993-2010	C, 30 and above (start of follow-up), Poisson regression, IRR	sex, age, country of birth, healthcare region, marital status, period of follow-up (by 3 years)	COLON and RECTOSIGOMOID	education (lowest vs highest)	male	0.99 (0.96–1.03)
					female	1.03 (0.97–1.10)
				income quintiles (lowest vs highest)	male	0.96 (0.92–1.00)
					female	0.99 (0.95–1.02)
			RECTUM, without rectosigmoid	education (lowest vs highest)	male	**1.15 (1.09–1.21)**
					female	**1.13 (1.03–1.24)**
				income quintiles (lowest vs highest)	male	1.02 (0.97–1.08)
					female	1.03 (0.98–1.09)
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	COLON	education (lowest vs highest)	male	**0.90 (0.85–0.96)**
					female	**1.11 (1.01–1.23)**
			RECTUM		male	**1.20 (1.10–1.32)**
					female	1.09 (0.94–1.25)
			ANUS		male	**1.27 (0.75–2.33)**
					female	**2.44 (1.30–5.56)**
Leufkens[130], 2012, 10 EU countries, 1990-2002 to 2006	C, mostly 40-65 (start of follow-up), Cox regression, RII	age, sex, centre, BMI, physical activity, alcohol, smoking (duration), intake of fruit, vegetables, fibre, energy from fat, energy from non-fat, red meat, processed meat and fish	COLON and RECTUM	education (lowest vs highest)	male	0.91 (0.71–1.18)
					female	**0.75 (0.59–0.96)**
			COLON		male	0.99 (0.71–1.38)
					female	**0.69 (0.51–0.93)**
			COLON (proximal)		male	0.76 (0.46–1.26)
					female	**0.60 (0.39–0.93)**
			COLON (distal)		male	1.44 (0.88–2.36)
					female	0.78 (0.49–1.24)
			RECTUM, with rectosigmoid		male	0.82 (0.55–1.22)
					female	0.91 (0.59–1.41)

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, SIR – standardised incidence ratio, RR – risk ratio, RII – relative index of inequality

Supplementary table 21: Colorectal cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Sex	Results
Bryere[16], 2016 France 2006-2009	P, all ages Poisson regression (Bayesian) RR	age, sex	French EDI quintiles	COLON, RECTUM and ANUS	male	1.04 (0.97–1.10)
					female	1.01 (0.95–1.07)
Bryere[17], 2014 France 1997-2009	P, all ages Poisson regression (Bayesian) RR	age, sex	French EDI quintiles	COLON, RECTUM and ANUS	male	no association
					female	no association
Kuznetsov[20], 2012, Germany, 2003-2006	P, all ages, Poisson regression (multilevel), RR	age, sex	Bavarian IMD quintiles	COLON, RECTUM and ANUS	male	**1.30 (1.22–1.38)**
					female	**1.19 (1.11–1.27)**
					both	**1.25 (1.19–1.31)**
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age, sex	Bremen discrimination index quintiles	COLON and RECTUM	male	**0.88 (0.79–0.99)**
					female	1.02 (0.91–1.12)
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	COLON and RECTUM	male	**1.07 (1.03–1.12)**
					female	1.03 (0.99–1.08)
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above, standardisation, ASR ratio	age, sex	Pobal Haase-Pratschke ID quintiles	COLON and RECTUM	male	1.03 (0.96–1.12)
					female	0.97 (0.88–1.06)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	COLON and RECTUM	both	1.00 (0.99–1.01)

Tweed[22], 2018, UK (Scotland), 2010-2012	P, 15 and above, Poisson regression, IRR	age, sex	Scottish IMD quintiles	COLON and RECTUM	male	**1.24 (1.11–1.39)**
					female	**1.20 (1.06–1.36)**
Oliphant[129], 2011, UK (Scotland), 1991-2001 → 2002-2004 → 2005-2007	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	Scottish IMD quintiles	COLON and RECTUM	male	1.0 (p for trend not sig.) → 1.1 (p for trend not sig.) → **1.2 (p for trend sig.)**
					female	1.0 (p for trend not sig.) → 1.0 (p for trend not sig.) → 1.0 (p for trend not sig.)
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	COLON and RECTUM	male	**1.13** (p for trend sig.)
					female	1.02 (p for trend not sig.)
				ANUS	male	**1.82** (p for trend sig.)
					female	**1.53** (p for trend sig.)

P – population-based estimate of exposure time, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, IRR – incidence rate ration, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, PHE – Public Health England. *RR for 1 unit increase in continuous EDI

Supplementary table 22: Skin cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sub-analysis	Sex	Results
Birch-Johansen[133], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, RR	age, sex, period, education, disposable income	MELANOMA	education (lowest vs highest)		male	**0.65 (0.59–0.72)**
						female	**0.69 (0.63–0.76)**
				income (lowest vs highest)		male	**0.68 (0.62–0.75)**
						female	**0.75 (0.69–0.82)**
				work affiliation (unemployed vs working)		male	0.91 (0.79–1.03)
						female	**0.82 (0.74–0.91)**
				occupation-based social class (manual vs creative core)		male	**0.72 (0.62–0.85)**
						female	0.86 (0.68–1.11)
				housing tenure (renter vs owner)		male	**0.88 (0.81–0.96)**
						female	**0.85 (0.79–0.92)**
				size of dwelling (smallest vs largest)		male	**0.65 (0.50–0.84)**
						female	**0.69 (0.51–0.94)**
Steding-Jessen[139], 2010, Denmark, 1994-2006	C, 30-69 (start of follow-up), Poisson regression (log-linear), IRR	age, sex, period, education, income	NON-MELANOMA, BCC	education (lowest vs highest)		male	**0.63 (0.61–0.65)**
						female	**0.69 (0.67–0.76)**
				income (lowest vs highest)		male	**0.65 (0.63–0.68)**
						female	**0.63 (0.61–0.65)**
				occupation-based social class (manual vs creative core)		male	**0.72 (0.69–0.76)**
						female	**0.76 (0.71–0.85)**
			NON-MELANOMA, SCC	education (lowest vs highest)		male	0.95 (0.86–1.06)
						female	1.00 (0.87–1.15)
				income (lowest vs highest)		male	**0.89 (0.80–0.99)**
						female	**0.80 (0.69–0.93)**
				occupation-based social class (manual vs creative core)		male	1.03 (0.85–1.20)
						female	0.86 (0.60–1.25)
Vidarsdottir[25], 2008, Iceland, 1982-2004	C, 20-64 (start of follow-up), standardisation, SIR	age, sex	MELANOMA	education (lowest vs all population)		male	**0.57 (0.36–0.85)**
						female	0.91 (0.74–1.10)*
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	MELANOMA	education (lowest vs highest)		male	**0.33 (0.26–0.42)**
						female	**0.44 (0.35–0.55)**
Spadea[29], 2010, Italy, 1985-1999	C, 30-84 (at diagnosis), Poisson regression, RR	age, sex, area of birth, education, occupational class, housing characteristics, area deprivation	MELANOMA	education (lowest vs highest)		male	**0.45 (0.32–0.65)**
						female	**0.49 (0.35–0.70)**
				occupation-based social class (lowest vs highest)		male	**0.69 (0.47–0.99)**
						female	0.96 (0.71–1.30)
				housing characteristics (best vs worst)		male	0.84 (0.56–1.25)
						female	0.89 (0.62–1.29)
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age, sex	MELANOMA	education (lowest vs all population)		male	**0.70 (0.60–0.82)**
						female	**0.74 (0.66–0.84)**
			NON-MELANOMA			male	**0.68 (0.65–0.72)**
						female	**0.78 (0.75–0.81)**

Braaten[33], 2005, Norway, 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age	MELANOMA	education (lowest vs highest)		female	0.88 (0.52–1.52)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age, number of sunburns, latitude	MELANOMA	education (lowest vs highest)		female	0.98 (0.57–1.69)
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	MELANOMA	education (lowest vs highest)		male	**0.53 (0.50–0.57)**
						female	**0.64 (0.58–0.70)**
			NON-MELANOMA, SCC			male	**0.68 (0.63–0.74)**
						female	**0.81 (0.68–0.97)**
Pérez-Gómez[134], 2008, Sweden, 1971-1989	C, 25-64 (start of follow-up), Poisson regression (log-linear), RR	age, sex, period, town size, area	MELANOMA	occupation-based social class (lowest vs all)	OVERALL	male	**0.78 (0.74–0.82)**
						female	**0.86 (0.77–0.95)**
					HEAD&NECK	male	0.90 (0.79–1.03)
						female	0.94 (0.71–1.26)
					TRUNK	male	**0.79 (0.74–0.84)**
						female	0.99 (0.79–1.24)
					UPPER LIMBS	male	**0.71 (0.62–0.82)**
						female	**0.68 (0.53–0.88)**
					LOWER LIMBS	male	**0.71 (0.61–0.82)**
						female	**0.83 (0.70–0.98)**
Strömberg[135], 2016, Sweden, 2004-2013	P, 15 and above; BYM model; SIR	age, region	MELANOMA	education (lowest vs all population)	SOUTH region	both	**0.80 (0.74–0.84)**
					WEST region		**0.93 (0.89–0.98)**
Alfonso[140], 2016, Nordic countries, 1991-2005	C, 30-64 (start of follow-up), standardisation, SIR	age, sex, period, country	NON-MELANOMA, SCC	occupation-based social class (lowest vs all population)		both	approximately **0.87 (0.85–0.89)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, SIR – standardised incidence ratio, RR – risk ratio, BYM - Besag, York and Molli, BCC – basal cell carcinoma, SCC – squamous cell carcinoma. EDI – European Deprivation Index. *clear trend observed, *RR for 1 unit increase in continuous EDI

Supplementary table 23: Skin cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles (highest vs lowest)	MELANOMA	male	**0.85 (0.75–0.96)**
					female	**0.71 (0.64–0.80)**
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles (highest vs lowest)	MELANOMA	male	**0.73 (0.56–0.93)**
					female	no association
Eberle[18], 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age, sex	Bremen discrimination index quintiles	MELANOMA	male	**0.85 (0.65–1.07)****
					female	**0.78 (0.58–1.02)****
				NON-MELANOMA	male	**0.78 (0.71–0.84)****
					female	**0.76 (0.70–0.83)****
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	MELANOMA	male	**0.72 (0.67–0.79)**
					female	**0.78 (0.71–0.86)**
Carsin[141], 2011, Ireland, 1994-2003	P, all ages, negative binomial regression, IRR	age, sex, population density, % early school leavers, % farmers	SAHRU deprivation index	NON-MELANOMA	male	**0.87 (0.82–0.92)**
					female	**0.89 (0.84–0.95)**
				NON-MELANOMA, BCC	male	**0.86 (0.80–0.92)**
					female	**0.86 (0.80–0.93)**
				NON-MELANOMA, SCC	male	**0.88 (0.81–0.97)**
					female	0.96 (0.85–1.07)
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above, standardisation, ASR ratio	age, sex	Pobal Haase-Pratschke ID quintiles (highest vs lowest)	MELANOMA	male	**0.70 (0.60–0.82)**
					female	**0.72 (0.62–0.83)**
Spadea[29], 2010 Italy 1985-1999	C, 30-84 (at diagnosis) Poisson regression RR	age, sex, area of birth, education, occupational class, housing characteristics	area deprivation index quintiles	MELANOMA	male	0.96 (0.69–1.34)
					female	0.93 (0.69–1.26)
van der Aa[136], 2011, Netherlands, 1994-2005	P, all ages, logistic regression (ecological), OR*	age, area, population density, mean annual income, % on welfare	% on welfare quintiles	MELANOMA	both	**0.1 (0.1–0.7)**
			mean annual income quintiles			0.7 (0.2–2.0)

Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	MELANOMA	both	**0.98 (0.96–0.99)**
Shack[21], 2008, UK (England), 1998-2003	P, all ages, standardisation, ASR ratio	age, sex	English IMD quintiles (highest vs lowest)	MELANOMA	male	**0.49 (0.47–0.52)**
					female	**0.48 (0.46–0.51)**
Doherty[137], 2010, UK (Scotland), 2002-2004	P, all ages, standardisation, ASR ratio	age, sex, period	Carstairs DI quintiles	MELANOMA	male	0.6 (no CI)
					female	0.7 (no CI)
				NON-MELANOMA, BCC	male	0.8 (no CI)
					female	0.8 (no CI)
				NON-MELANOMA, SCC	male	0.7 (no CI)
					female	0.8 (no CI)
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	MELANOMA	male	**0.47** (p for trend sig.)
					female	**0.44** (p for trend sig.)

P – population-based estimate of exposure time, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, PHE – Public Health England. *OR for a municipality to be in the highest compared to lowest quartile of incidence rates, *RR for 1 unit increase in continuous EDI, ** significant trend for all

Supplementary table 24: Haematological cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sex	Results
Roswall[144], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, sex, education, disposable income	NON-HODGKIN LYMPHOMA	education (lowest vs highest)	male	1.10 (0.97–1.23)
					female	1.14 (0.98–1.30)
				income (lowest vs highest)	male	0.95 (0.86–1.05)
					female	1.07 (0.97–1.20)
				work affiliation (unemployed vs working)	male	**1.15 (1.01–1.32)**
					female	1.03 (0.90–1.19)
				occupation-based social class (manual vs creative core)	male	0.97 (0.78–1.19)
					female	1.23 (0.79–1.92)
				housing tenure (renter vs owner)	male	1.06 (0.79–1.17)
					female	**1.11 (1.01–1.22)**
				size of dwelling (smallest vs largest)	male	1.01 (0.79–1.28)
					female	0.78 (0.52–1.18)
			HODGKIN LYMPHOMA	education (lowest vs highest)	male	1.05 (0.78–1.43)
					female	1.16 (0.81–1.67)
				income (lowest vs highest)	male	**1.28 (1.00–1.64)**
					female	0.75 (0.53–1.04)
				work affiliation (unemployed vs working)	male	1.12 (0.80–1.56)
					female	0.92 (0.62–1.37)
				occupation-based social class (manual vs creative core)	male	0.99 (0.69–1.67)
					female	1.49 (0.48–4.76)
				housing tenure (renter vs owner)	male	**1.29 (1.04–1.60)**
					female	1.00 (0.76–1.33)
				size of dwelling (smallest vs largest)	male	1.14 (0.67–1.97)
					female	1.50 (0.69–3.26)
			LEUKAEMIA	education (lowest vs highest)	male	0.96 (0.84–1.10)
					female	1.10 (0.93–1.30)
				income (lowest vs highest)	male	1.01 (0.91–1.13)
					female	1.04 (0.92–1.20)
				work affiliation (unemployed vs working)	male	0.90 (0.77–1.06)
					female	1.05 (0.88–1.24)
				occupation-based social class (manual vs creative core)	male	1.03 (0.81–1.30)
					female	1.12 (0.67–1.89)
				housing tenure (renter vs owner)	male	0.97 (0.88–1.07)
					female	0.93 (0.83–1.04)
				size of dwelling (smallest vs largest)	male	**1.33 (1.05–1.68)**
					female	0.83 (0.51–1.35)
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	NON-HODGKIN LYMPHOMA	education (lowest vs highest)	male	0.89 (0.75–1.06)
					female	1.05 (0.83–1.33)
			HODGKIN LYMPHOMA		male	0.86 (0.52–1.40)
					female	0.79 (0.46–1.34)
			MULTIPLE MYELOMA		male	1.11 (0.80–1.54)
					female	0.84 (0.57–1.25)
			LEUKAEMIA		male	0.87 (0.69–1.10)
					female	1.35 (0.98–1.86)
Smailyte[32], 2015 Lithuania 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age, sex	NON-HODGKIN LYMPHOMA	education (lowest vs all population)	male	**0.91 (0.82–1.01)****
					female	**0.93 (0.84–1.02)****
			HODGKIN LYMPHOMA		male	0.94 (0.65–1.36)
					female	1.01 (0.74–1.39)
			MULTIPLE MYELOMA		male	**0.84 (0.72–0.98)**
					female	0.98 (0.87–1.10)
			LEUKAEMIA		male	0.97 (0.89–1.05)
					female	0.95 (0.87–1.03)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above Poisson regression (Bayesian), RR*	age, sex	NON-HODGKIN LYMPHOMA	individual level Slovenian EDI	both	1.01 (1.00–1.03)
			LEUKAEMIA			1.01 (1.00–1.03)

Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	NON-HODGKIN LYMPHOMA	education (lowest vs highest)	male	1.00 (0.92–1.09)
					female	1.10 (0.94–1.28)
			HODGKIN LYMPHOMA		male	1.04 (0.83–1.32)
					female	1.27 (0.82–2.04)
			MULTIPLE MYELOMA		male	1.12 (0.97–1.32)
					female	**1.32 (1.01–1.75)**
			LEUKAEMIA		male	1.04 (0.94–1.15)
					female	**1.23 (1.03–1.49)**

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, SIR – standardised incidence ratio, RR – risk ratio, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI, ** trend significant for both

Supplementary table 25: Haematological cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	LYMPHOCYTIC LEUKAEMIA (CLL)	male	1.00 (0.85–1.18)
					female	0.96 (0.79–1.17)
				NON-HODGKIN LYMPHOMA (DIFFUSE LARGE B-CELL LYMPHOMA)	male	0.97 (0.81–1.15)
					female	/
				MYELOMA	male	1.00 (0.86–1.16)
					female	1.09 (0.92–1.19)
				MYELODYSPLASTIC SYNDROME	male	/
					female	0.93 (0.76–1.14)
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	NON-HODGKIN LYMPHOMA	male	no association
					female	no association
				MYELOMA	male	no association
					female	no association
				LYMPHOCYTIC LEUKAEMIA (CLL)	male	no association
					female	no association
				LEUKAEMIA	male	no association
					female	no association
				HODGKIN LYMPHOMA	male	no association
					female	no association
Hoebel[19], 2018 Germany 2010-2013	P, all ages Poisson regression (multilevel) SRR	age, sex, calendar year, population size	German ISD quintiles	LYMPHOID AND HEMATOPOIETIC NEOPLASMS	male	**1.10 (1.04–1.16)**
					female	**1.11 (1.06–1.17)**
Walsh[28], 2016, Ireland, 2008-2012	P, 15 and above, standardisation, ASR ratio	age, sex	Pobal Haase-Pratschke ID quintiles	LYMPHOMA	male	0.98 (0.85–1.13)
					female	1.56 (1.42–1.72)
				LEUKAEMIA	male	0.86 (0.72–1.02)
					female	0.90 (0.73–1.11)
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	NON-HODGKIN LYMPHOMA	both	0.99 (0.96–1.01)
				LEUKAEMIA		0.99 (0.96–1.02)
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	NON-HODGKIN LYMPHOMA	male	1.01 (p for trend not sig.)
					female	**1.06** (p for trend sig.)
				HODGKIN LYMPHOMA	male	**1.59** (p for trend sig.)
					female	1.36 (p for trend not sig.)
				MULTIPLE MYELOMA	male	1.04 (p for trend not sig.)
					female	1.08 (p for trend not sig.)
				ACUTE LYMPHOBLASTIC LEUKAEMIA	male	**0.86** (p for trend sig.)
					female	0.92 (p for trend not sig.)
				CHRONIC LYMPHOCYTIC LEUKAEMIA	male	0.99 (p for trend not sig.)
					female	0.92 (p for trend not sig.)
				ACUTE MYELOID LEUKAEMIA	male	**1.15** (p for trend sig.)
					female	1.06 (p for trend not sig.)
				CHRONIC MYELOID LEUKAEMIA	male	1.12 (p for trend not sig.)
					female	1.10 (p for trend not sig.)

Smith[143], 2011, UK (England), 2004-2009	P, all ages, standardisation, SIR (ref.=all population)	age, sex	IMD (income domain) quintiles	CHRONIC MYELOGENOUS LEUKAEMIA	both	no association
				CHRONIC MYELOPROLIFERATIVE NEOPLASMS		no association
				MYELODYSPLASTIC SYNDROMES		no association
				ACUTE MYELOID LEUKAEMIA		no association
				PRECURSOR B-LYMPHOBLASTIC LEUKAEMIA		no association
				MONOCLONAL B-CELL LYMPHOCYTOSIS		no association
				MGUS**		no association
				CHRONIC LYMPHOCYTIC LEUKAEMIA		no association
				PLASMA CELL (MULTIPLE) MYELOMA		**0.82 (0.71–0.95)**
				MARGINAL ZONE LYMPHOMA		no association
				FOLLICULAR LYMPHOMA		no association
				MANTLE CELL LYMPHOMA		no association
				DIFFUSE LARGE B-CELL LYMPHOMA		no association
				LYMPHOPROLIFERATIVE DISORDERS NOS***		no association
				T-CELL LYMPHOMA		no association
				CLASSICAL HODGKIN LYMPHOMA		no association

P – population-based estimate of exposure time, SIR – standardised incidence ratio, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, DI – deprivation index, ISD – index of socioeconomic deprivation, PHE – Public Health England. *RR for 1 unit increase in continuous EDI ** monoclonal gammopathy of undetermined significance, *** not otherwise specified

Supplementary table 26: Tumours of the central nervous system, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	Cancer location	SES indicator	Sex	Results
Schmidt[147], 2008, Denmark, 1994-2003	C, 30-69 (start of follow-up), Poisson regression, IRR	age, period, sex, education, disposable income	CNS, benign+malignant	education (lowest vs highest)	male	1.04 (0.93–1.16)
					female	0.92 (0.82–1.02)
				income (lowest vs highest)	male	**0.89 (0.81–0.99)**
					female	1.02 (0.92–1.12)
				work affiliation (unemployed vs working)	male	0.92 (0.80–1.07)
					female	1.00 (0.89–1.12)
				occupation-based social class (manual vs creative core)	male	0.85 (0.70–1.03)
					female	1.06 (0.78–1.45)
				housing tenure (renter vs owner)	male	0.99 (0.91–1.09)
					female	1.05 (0.97–1.14)
				size of dwelling (smallest vs largest)	male	**0.69 (0.54–0.90)**
					female	0.77 (0.54–1.09)
Schüz[148], 2010, Denmark, 1993-2006	C, 30-68 (start of follow-up), Poisson regression (log-linear), IRR	age, sex, period, education, disposable income	ACOUSTIC NEUROMA	education (lowest vs highest)	male	**0.66 (0.51–0.84)**
					female	**0.68 (0.54–0.85)**
				income (lowest vs highest)	male	0.82 (0.64–1.06)
					female	**0.69 (0.53–0.90)**
				occupation-based social class (manual vs creative)	male	0.83 (0.63–1.09)
					female	0.60 (0.34–1.06)
Spadea[30], 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, sex, area of birth	CNS, malignant	education (lowest vs highest)	male	**1.39 (1.08–1.78)**
					female	1.10 (0.80–1.50)
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age, sex	CNS, malignant	education (lowest vs all population)	male	**0.96 (0.85–1.08)**
					female	0.97 (0.87–1.08)
Khanolkar[149], 2016, Sweden, 1993-2010	C, 32-82 (start of follow-up), Poisson regression, IRR	age, sex, healthcare region, period, marital status, education, income	GLIOMA, benign+malignant	education (lowest vs highest)	male	**0.84 (0.75–0.93)**
					female	**0.81 (0.71–0.93)**
				income (lowest vs highest)	male	**0.88 (0.79–0.99)**
					female	1.04 (0.91–1.19)
				occupation-based social class (low manual vs high non-manual)	male	**0.83 (0.75–0.93)**
					female	**0.79 (0.68–0.93)**
			MENINGIOMA, benign+malignant	education (lowest vs highest)	male	0.89 (0.75–1.06)
					female	**0.86 (0.79–0.96)**
				income (lowest vs highest)	male	1.20 (1.00–1.43)
					female	1.11 (1.00–1.25)
				occupation-based social class (low manual vs high non-manual)	male	0.89 (0.74–1.08)
					female	0.88 (0.78–1.01)
			ACOUSTIC NEUROMA	education (lowest vs highest)	male	0.88 (0.64–1.22)
					female	0.88 (0.62–1.25)
				income (lowest vs highest)	male	0.92 (0.65–1.28)
					female	1.08 (0.77–1.52)
				occupation-based social class (low manual vs high non-manual)	male	**0.66 (0.47–0.94)**
					female	1.05 (0.69–1.59)
Wigertz[150], 2010 Sweden, 2000-2002	case-control, 20-69, logistic regression (unconditional), OR	age, sex, region	GLIOMA, benign+malignant	education (lowest vs highest)	both	0.8 (0.6–1.1)
				income (lowest vs highest)		**0.8 (0.6–1.0)**
				occupation-based social class (manual vs non-manual)		1.0 (0.8–1.3)
				work affiliation (unemployed vs working)		0.8 (0.6–1.1)
			MENINGIOMA, benign+malignant	education (lowest vs highest)		0.8 (0.5–1.1)
				income (lowest vs highest)		0.9 (0.6–1.3)
				occupation-based social class (manual vs non-manual)		1.1 (0.8–1.4)
				work affiliation (unemployed vs working)		1.0 (0.7–1.3)
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	CNS, malignant	education (lowest vs highest)	male	**0.89 (0.81–0.97)**
					female	0.94 (0.84–1.05)
Braaten[33], 2005, Norway, 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age	CNS, unspecified	education (lowest vs highest)	female	0.93 (0.35–2.44)

P – population-based estimate of exposure time, C – individual level person-years (cohort), IRR – incident rate ratio, HR – hazard ratio, OR – odds ratio, SIR – standardised incidence ratio, RR – risk ratio, CNS – central nervous system

Supplementary table 27: Tumours of the central nervous system, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Cancer location	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	CNS, malignant	male	0.92 (0.80–1.05)
					female	1.10 (0.97–1.25)
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	CNS, malignant	male	1.19 (0.93–1.54)*
					female	no association
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	CNS, malignant	male	0.99 (0.93–1.06)
					female	1.03 (0.96–1.11)
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	CNS, benign+malignant	male	0.95 (p for trend not sig.)
					female	**0.88** (p for trend sig.)

P – population-based estimate of exposure time, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, ISD – index of socioeconomic deprivation, CNS – central nervous system, PHE – Public Health England. * sig. result for continuous EDI

Supplementary table 28: Thyroid cancer, individual SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator	Sex	Results
Smailyte[32], 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age, sex	education (lowest vs all population)	male	**0.93 (0.75–1.15)****
				female	**0.81 (0.74–0.90)** **
Hemminki[36], 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	education (lowest vs highest)	male	0.87 (0.69–1.10)
				female	**1.32 (1.08–1.64)**
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above Poisson regression, RR*	age, sex	individual level Slovenian EDI	both	**0.93 (0.89–0.96)**
Braaten[33], 2005, Norway, 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age	education (lowest vs highest)	female	0.71 (0.29–1.75)

C – individual level person-years (cohort), HR – hazard ratio, SIR – standardised incidence ratio, EDI – European Deprivation Index. *RR for 1 unit increase in continuous EDI, ** p for trend significant for both

Supplementary table 29: Thyroid cancer, area SES

First author, year of publication, country, study period	Study type, age group, statistical method, relative measure	Adjustment / stratification	SES indicator (deprived vs affluent)	Sex	Results
Bryere[16], 2016, France, 2006-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	male	1.04 (0.85–1.26)
				female	0.96 (0.85–1.08)
Bryere[17], 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age, sex	French EDI quintiles	male	no association
				female	no association
Hoebel[19], 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	male	**0.64 (0.57–0.72)**
				female	**0.76 (0.68–0.85)**
Lokar[27], 2019, Slovenia, 2011-2013	P, 16 and above Poisson regression (Bayesian), RR*	age, sex	area level Slovenian EDI	both	0.98 (0.95–1.02)
PHE[59], 2014, UK (England), 2006-2010	P, all ages, linear regression for trend across deprivation quintiles, ASR ratio	age, sex	IMD (income domain) quintiles	male	0.93 (p for trend not sig.)
				female	1.02 (p for trend not sig.)

P – population-based estimate of exposure time, RR – risk ratio, SRR – standardised rate ratio, ASR – age-standardised rate, EDI – European Deprivation Index, IMD – index of multiple deprivation, ISD – index of socioeconomic deprivation, PHE – Public Health England. *RR for 1 unit increase in continuous EDI