

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)	
			occupation-based social class (lowest vs highest)	female	0.59 (0.42–0.81)	
				male	1.16 (1.01–1.32)	
housing characteristics (best vs worst)	female	1.08 (0.83–1.41)				
	male	1.38 (1.25–1.53)				
female	1.42 (1.15–1.75)					
	male	2.86 (2.51–3.26)				
Smailyte ³¹ , 2012, Lithuania, 2001-2004	C, 40-79 (start of follow-up), Poisson regression, IRR	age, sex	education (lowest vs highest)	female	1.29 (0.98–1.70)	
				male	2.86 (2.51–3.26)	
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 as above + smoking, alcohol intake, physical activity	education (lowest vs highest)	both	2.7 (1.3–5.3)	
				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	education (lowest vs highest)	3.33 (1.43–7.69)		
				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)	
				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)
				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 quintiles	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)	male	2.25 (1.76–2.86)				
					female	3.04 (2.33–3.97)				
					both					
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)	male	1.29 (1.06–1.57)	
					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			1.30 (0.88–1.93)	
				ORAL CAVITY		1.10 (0.69–1.75)	
				OROPHARYNX	education (lowest vs highest)	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)
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)
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)
Hoebe 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)
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) quintiles	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)
				OROPHARYNX		3.33 (2.72–4.07)
				MOUTH		2.69 (2.31–3.13)
Scottish IMD deciles	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)				
			STOMACH		female	1.15 (0.91–1.44)				
					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)			
				education (lowest vs highest)	male	1.54 (1.27–1.85)			
					female	1.35 (1.05–1.75)			
			OESOPHAGUS (squamous cell carcinoma)	income quintile (lowest vs highest)	male	1.82 (1.54–2.13)			
					female	1.20 (0.97–1.52)			
				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 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)						
	education (lowest vs highest)	male	1.56 (1.45–1.67)						
		female	1.47 (1.33–1.64)						
STOMACH NON-CARDIA (adenocarcinoma)	income quintile (lowest vs highest)	male	1.35 (1.27–1.43)						
		female	1.20 (1.10–1.32)						
	occupational social class (lowest vs highest)		2.0 (0.9–4.5)						
	education (lowest vs highest)		1.0 (0.6–1.8)						
	occupational social class (lowest vs highest)	both	1.0 (0.6–1.8)						
	education (lowest vs highest)		1.3 (0.8–2.1)						
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)			
				occupational social class (lowest vs highest)	both	1.0 (0.6–1.8)			
			STOMACH CARDIA (adenocarcinoma)	education (lowest vs highest)		1.3 (0.8–2.1)			
				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)			1.56 (1.02–2.33)
							STOMACH CARDIA (adenocarcinoma)		
STOMACH NON-CARDIA (adenocarcinoma)	education (lowest vs highest)	both					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)			
Rota ⁵⁷ , 2019, 6 EU countries, 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 (adenocarcinoma)			1.89 (0.85–4.17)			
				STOMACH CARDIA (adenocarcinoma)			8.33 (1.18–50.00)		
				STOMACH NON-CARDIA (adenocarcinoma)	education (lowest vs highest)	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)			
			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)		
Smalyte 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)
						age, sex, centre	male	1.27 (0.98–1.64)
							female	1.13 (0.89–1.44)
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	1.18 (0.91–1.54)		
						female	1.03 (0.81–1.31)	
					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
Hoebe 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)
				education (lowest vs highest)		0.98 (0.89–1.09)
			ENDOMETRIUM	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)
				education (lowest vs highest)		0.97 (0.88–1.08)
				income (lowest vs highest)		0.92 (0.86–1.01)
OVARY	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)			
	education (lowest vs highest)		1.42 (1.12–1.82)			
Svahn ⁴⁴ , 2016, Denmark, 1978-2011	P, all ages, Poisson regression (log-linear), IRR	age	CERVIX, all epithelial	education (lowest vs highest)		1.61 (1.29–2.02)
				income quintiles (lowest vs highest)		1.75 (0.31–9.38)
			VAGINA, squamous cell carcinoma	education (lowest vs highest)		/
				income quintiles (lowest vs highest)		1.44 (0.96–2.16)
Pukkala ⁶⁹ , 2010, Finland, 1971-1995	C, 45-64 (start of follow-up), standardisation, SIR	age, birth year, period	CERVIX, adenocarcinoma	education (lowest vs highest)		2.41 (1.47–3.95)
				income quintiles (lowest vs highest)		1.29 (1.21–1.36)
Riska ⁹⁴ , 2003, Finland, 1953-1997	P, all ages, standardisation, SIR	age	FALLOPIAN TUBE	education (lowest vs highest)		1.07 (0.87–1.28)
				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
				occupation-based social class (lowest vs all population)		1.09 (0.92–1.30)
Spadea ³⁰ , 2009, Italy, 1985-1999	C, 30-74 (start of follow-up), Poisson regression, RR	age, area of birth	CERVIX			1.95 (1.52–2.49)
			ENDOMETRIUM	education (lowest vs highest)		0.82 (0.69–0.98)
			OVARY			1.09 (0.92–1.30)
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)
Smalyte 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)
				education (lowest vs all population)		1.18 (1.11–1.26)
Smalyte ³² , 2015, Lithuania, 2001-2009	C, 30-74 (start of follow-up), standardisation, SIR	age	CERVIX			0.94 (0.89–0.99)
			ENDOMETRIUM	education (lowest vs all population)		0.99 (0.93–1.06)
			OVARY			

Braaten ³³ , 2005, Norway, 1991/2(or 1996/7)-2001	C, 30-69 (start of follow-up), Cox regression, HR	age age + smoking status, age at first birth, change in BMI since age 18 y, participation in cytologic screening	CERVIX	education (lowest vs highest)	2.63 (1.18–5.88)
Lokar ²⁷ , 2019, Slovenia, 2011-2013	P, 16 and above, Poisson regression, RR*	age	CERVIX ENDOMETRIUM	individual level Slovenian EDI	1.02 (1.00–1.05) 1.03 (1.02–1.05)
Svanvik ³⁸ , 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) income quartiles (lowest vs highest) immigrant status (immigrant vs native)	1.16 (1.06–1.26) 1.11 (1.01–1.22) 0.69 (0.61–0.77)
Hemminki ³⁶ , 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	CERVIX ENDOMETRIUM OVARY OTHER GYNECOLOGICAL	education (lowest vs highest)	2.33 (1.96–2.70) 0.96 (0.88–1.05) 1.22 (1.11–1.35) 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 ENDOMETRIUM OVARY	1.62 (1.40–1.88) 0.79 (0.70–0.90) 0.97 (0.87–1.07)
Bryere ¹⁷ , 2014, France, 1997-2009	P, all ages, Poisson regression (Bayesian), RR	age	French EDI quintiles	CERVIX ENDOMETRIUM OVARY	1.40 (1.10–1.80) no association no association
Eberle ¹⁸ , 2010, Germany, 2000-2006	P, all ages, standardisation, SIR	age	Bremen discrimination index quintiles	CERVIX ENDOMETRIUM OVARY	1.33 (1.03–1.67) 0.95 (0.79–1.12) 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 OVARY	1.12 (1.03–1.21) 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 % of people on welfare quintiles	CERVIX	7.9 (1.4–46.7) 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 ENDOMETRIUM	1.00 (0.96–1.03) 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)
Curran 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 ⁷¹ , 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 as above + HRT use, parity, alcohol, BMI	education (lowest vs highest)		0.83 (0.70–0.99)
			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 as above + smoking, alcohol intake, physical activity	education (lowest vs highest)		0.9 (no CI but includes 1)
					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 age + parity, age at first birth, BMI, height, age at menarche, menopausal status, ever use of hormonal contraceptives, alcohol	education (lowest vs highest)		0.74 (0.59–0.91)
					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 age + parity, age at first birth, BMI, height, menopausal status, ever use of hormonal contraceptives, alcohol, HRT use, participation in screening	education (lowest vs highest)		0.68 (0.56–0.84)
					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				0.63 (0.58–0.68) →
			education (lowest vs highest)			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		education (lowest vs highest)	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 ratio, 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	
Marså 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 <i>in situ</i>	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)		1.0 (0.6–1.4)	
				education - training (lowest vs highest)		0.5 (0.3–1.0)	
				occupational - max. ISEI score (lowest vs highest)		SEMINOMA	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)		0.9 (0.5–1.7)	
				education - training (lowest vs highest)		0.9 (0.4–2.0)	
				occupational - max. ISEI score (lowest vs highest)		NON-SEMINOMA	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 <i>in situ</i>	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.)
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
Marså 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 Nilsson 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 quintiles	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) quintiles	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) ↓
				0.83 (p for trend not sig) ↓
				0.81 (p for trend sig) ↓
				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)
				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)				
BLADDER, RENAL PELVIS, URETER	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
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 age + smoking status, consumption of alcohol	KIDNEY	education (lowest vs highest)	female	3.45 (0.80–14.29) ; p for trend sig. 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)
				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)
				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)
				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)			
	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
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)
			RECTUM and ANUS		female	0.90 (0.85–0.96)
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 RECTOSIGMOID	education (lowest vs highest)	male	0.99 (0.96–1.03)
					female	1.03 (0.97–1.10)
			RECTUM, without rectosigmoid	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)
RECTUM, without rectosigmoid	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)
			RECTUM		female	1.11 (1.01–1.23)
					male	1.20 (1.10–1.32)
			ANUS		female	1.09 (0.94–1.25)
					male	1.27 (0.75–2.33)
female	2.44 (1.30–5.56)					
Leufkens ³⁰ , 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)
			COLON		female	0.75 (0.59–0.96)
					male	0.99 (0.71–1.38)
			COLON (proximal)		female	0.69 (0.51–0.93)
					male	0.76 (0.46–1.26)
			COLON (distal)		female	0.60 (0.39–0.93)
					male	1.44 (0.88–2.36)
			RECTUM, with rectosigmoid		male	0.78 (0.49–1.24)
female	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)
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	1.0 (p for trend not sig.) → male 1.1 (p for trend not sig.) → 1.2 (p for trend sig.) 1.0 (p for trend not sig.) → female 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 ANUS	male 1.13 (p for trend sig.) female 1.02 (p for trend not sig.) 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 ratio, 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)
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)
				education (lowest vs highest)		male	0.95 (0.86–1.06)
						female	1.00 (0.87–1.15)
NON-MELANOMA, SCC	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)
					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)
					SOUTH region	0.80 (0.74–0.84)
					WEST region	both 0.93 (0.89–0.98)
					both	approximately 0.87 (0.85–0.89)
Strömberg ¹³⁵ , 2016, Sweden, 2004-2013	P, 15 and above; BYM model; SIR	age, region	MELANOMA	education (lowest vs all population)	both	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, BCC	male	0.87 (0.82–0.92)
					female	0.89 (0.84–0.95)
					male	0.86 (0.80–0.92)
					female	0.86 (0.80–0.93)
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)
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)
				MELANOMA	female	0.7 (no CI)
				NON-MELANOMA, BCC	male	0.8 (no CI)
				NON-MELANOMA, SCC	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)
									1.01 (1.00–1.03)	

Hemminki ³⁶ , 2003, Sweden, 1970-1998	C, unclear, standardisation, SIR	age, sex, period, region	NON-HODGKIN LYMPHOMA	male	1.00 (0.92–1.09)
				female	1.10 (0.94–1.28)
			education (lowest vs highest)	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	CHRONIC MYELOGENOUS LEUKAEMIA	both	no association
			CHRONIC MYELOPROLIFERATIVE NEOPLASMS		no association
			MYELOYDYSPLASTIC 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)			
Smalyte 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)	
						education (lowest vs highest)	male	0.89 (0.75–1.06)	
							female	0.86 (0.79–0.96)	
						MENINGIOMA, benign+malignant	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)		0.8 (0.6–1.1)			
						0.8 (0.6–1.0)			
				income (lowest vs highest)					
						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)	both	0.8 (0.5–1.1)
								0.9 (0.6–1.3)	
				income (lowest vs highest)					
				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 female	0.92 (0.80–1.05) 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 female	1.19 (0.93–1.54)* no association
Hoebel ¹⁸ , 2018, Germany, 2010-2013	P, all ages, Poisson regression (multilevel), SRR	age, sex, calendar year, population size	German ISD quintiles	CNS, malignant	male female	0.99 (0.93–1.06) 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 female	0.95 (p for trend not sig.) 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