

Supplementary table 1: Population and number of areas (wards and EDs) included in each SES category

	Republic of Ireland			Northern Ireland			Ireland		
	Number of areas	Population*	% of total population	Number of areas	Population*	% of total population	Number of areas	Population*	% of total population
Highest SES (Q1)	967	754,815	19%	114	358,345	21%	1,081	1,113,160	20%
Quintile 2	695	894,496	23%	78	225,691	13%	773	1,120,187	20%
Quintile 3	672	831,031	21%	104	283,577	17%	776	1,114,608	20%
Quintile 4	593	803,616	21%	121	320,098	19%	714	1,123,713	20%
Lowest SES (Q5)	428	610,592	16%	165	507,827	30%	593	1,118,419	20%
Total	3,355	3,894,549		582	1,695,538		3,937	5,590,087	

* Annual average of combined 1995-2007 population.

Supplementary table 2: Cancer incidence rate ratios (with 95% confidence intervals) for SES quintiles adjusted for age, all Ireland, 1995-2007*

Cancer site	Sex	Cancer incidence rate ratio				
		Quintile 1 (highest SES)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (lowest SES)
Head & neck	Male	1.00	1.03 (0.94,1.14)	1.13 (1.02,1.24)	1.31 (1.19,1.43)	1.65 (1.51,1.81)
	Female	1.00	1.09 (0.94,1.26)	1.07 (0.93,1.24)	1.24 (1.08,1.43)	1.58 (1.38,1.81)
Oesophagus	Male	1.00	1.13 (1.02,1.26)	1.14 (1.02,1.26)	1.22 (1.10,1.35)	1.18 (1.06,1.31)
	Female	1.00	0.99 (0.87,1.13)	0.99 (0.87,1.13)	1.01 (0.89,1.15)	1.00 (0.88,1.14)
Stomach	Male	1.00	1.11 (1.01,1.22)	1.12 (1.02,1.23)	1.22 (1.11,1.33)	1.46 (1.34,1.60)
	Female	1.00	1.06 (0.94,1.19)	1.06 (0.94,1.19)	1.21 (1.08,1.35)	1.45 (1.30,1.62)
Colorectal	Male	1.00	1.07 (1.02,1.12)	1.08 (1.04,1.13)	1.10 (1.05,1.15)	1.13 (1.08,1.18)
	Female	1.00	1.02 (0.97,1.08)	1.01 (0.96,1.06)	1.01 (0.96,1.06)	1.04 (0.99,1.09)
Lung	Male	1.00	1.14 (1.07,1.21)	1.15 (1.08,1.22)	1.41 (1.33,1.49)	1.75 (1.65,1.85)
	Female	1.00	1.14 (1.06,1.23)	1.19 (1.10,1.28)	1.46 (1.36,1.57)	1.78 (1.66,1.91)
Melanoma	Male	1.00	1.04 (0.95,1.15)	0.88 (0.80,0.98)	0.84 (0.76,0.93)	0.73 (0.65,0.81)
	Female	1.00	0.91 (0.84,0.99)	0.82 (0.75,0.90)	0.82 (0.75,0.89)	0.67 (0.61,0.73)
Breast	Female	1.00	1.00 (0.96,1.03)	0.95 (0.92,0.99)	0.97 (0.93,1.00)	0.93 (0.90,0.97)
Cervix Uteri	Female	1.00	1.12 (1.00,1.26)	1.20 (1.07,1.34)	1.43 (1.28,1.60)	1.63 (1.46,1.82)
Corpus Uteri	Female	1.00	1.01 (0.93,1.11)	1.03 (0.94,1.12)	1.03 (0.94,1.12)	1.01 (0.93,1.11)

Ovary	Female	1.00	1.04 (0.96,1.12)	1.10 (1.01,1.19)	1.07 (0.99,1.15)	0.96 (0.88,1.04)
Prostate	Male	1.00	1.04 (0.99,1.08)	0.97 (0.93,1.01)	0.95 (0.91,1.00)	0.87 (0.83,0.91)
Kidney	Male	1.00	1.04 (0.94,1.15)	1.01 (0.91,1.12)	1.16 (1.05,1.27)	1.01 (0.92,1.12)
	Female	1.00	1.17 (1.03,1.33)	1.10 (0.96,1.25)	1.11 (0.98,1.27)	1.16 (1.02,1.32)
Bladder	Male	1.00	1.05 (0.96,1.14)	1.02 (0.94,1.11)	1.09 (1.01,1.18)	1.16 (1.07,1.26)
	Female	1.00	1.04 (0.91,1.19)	1.05 (0.92,1.19)	1.07 (0.94,1.21)	1.22 (1.08,1.39)
Brain	Male	1.00	1.09 (0.97,1.21)	1.09 (0.97,1.22)	0.96 (0.86,1.08)	0.94 (0.85,1.07)
	Female	1.00	1.07 (0.94,1.22)	1.05 (0.93,1.20)	0.95 (0.83,1.08)	0.95 (0.84,1.09)
Non-Hodgkin's Lymphoma	Male	1.00	1.07 (0.98,1.16)	1.03 (0.95,1.13)	0.99 (0.91,1.08)	1.00 (0.92,1.09)
	Female	1.00	0.97 (0.89,1.06)	0.97 (0.89,1.07)	0.92 (0.84,1.01)	0.94 (0.86,1.03)
Leukaemia	Male	1.00	0.96 (0.88,1.05)	0.96 (0.88,1.06)	0.96 (0.88,1.05)	0.91 (0.83,1.00)
	Female	1.00	0.96 (0.86,1.08)	0.98 (0.88,1.09)	0.99 (0.88,1.10)	0.95 (0.85,1.06)

* IRRs shown in bold font are statistically significantly different from 1 (p<0.05)

Supplementary table 3: Cancer incidence rate ratios (with 95% confidence intervals) - Northern Ireland compared to Republic of Ireland adjusted for (a) age and (b) age and socio-economic status (SES)

Cancer site	Cancer incidence rate ratio (NI vs. RoI)			
	Male		Female	
	Age-adjusted	Age and SES adjusted	Age-adjusted	Age and SES adjusted
Head & neck	1.05 (0.99,1.12)	0.99 (0.93,1.05)	1.21 (1.10,1.32)	1.15 (1.05,1.26)
Oesophagus	1.02 (0.96,1.10)	1.02 (0.95,1.10)	0.92 (0.84,1.00)	0.91 (0.83,1.00)
Stomach	1.06 (0.99,1.12)	1.02 (0.96,1.08)	1.01 (0.94,1.09)	0.97 (0.90,1.04)
Colorectal	0.97 (0.94,1.00)	0.97 (0.94,1.00)	1.03 (1.00,1.07)	1.03 (1.00,1.07)
Lung	1.11 (1.06,1.16)	1.03 (0.99,1.07)	1.07 (1.01,1.13)	0.98 (0.94,1.03)
Melanoma	0.92 (0.85,0.99)	0.95 (0.88,1.02)	0.86 (0.81,0.92)	0.88 (0.83,0.94)
Breast			1.01 (0.98,1.03)	1.01 (0.99,1.04)
Cervix Uteri			0.90 (0.84,0.97)	0.85 (0.79,0.92)
Corpus Uteri			1.11 (1.05,1.18)	1.12 (1.06,1.19)
Ovary			1.00 (0.95,1.06)	1.02 (0.96,1.07)
Prostate	0.71 (0.69,0.74)	0.72 (0.70,0.74)		
Kidney	0.95 (0.89,1.02)	0.96 (0.89,1.02)	1.04 (0.96,1.13)	1.04 (0.95,1.13)
Bladder	0.92 (0.87,0.97)	0.91 (0.85,0.96)	0.86 (0.79,0.93)	0.83 (0.76,0.91)
Brain	0.90 (0.83,0.97)	0.91 (0.84,0.99)	0.80 (0.73,0.88)	0.81 (0.73,0.89)
Non-Hodgkin's Lymphoma	1.04 (0.98,1.10)	1.05 (0.98,1.11)	1.14 (1.08,1.22)	1.15 (1.08,1.22)
Leukaemia	0.77 (0.72,0.82)	0.77 (0.72,0.82)	0.83 (0.77,0.89)	0.82 (0.76,0.89)

* IRRs shown in bold font are statistically significantly different from 1 ($p < 0.05$)