Cancer in Ireland 2011:
Annual report of the National Cancer Registry

National Cancer Registry Ireland

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Contents

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1. Incidence

An annual average of 29,745 cancer cases was registered during the three year period 2007-2009 (Table 1). This represents an increase of 12% from the annual average over the previous three year period (2004-2006) and is approximately 50% more cancers per year than in the mid 1990's when data on cancer in Ireland was first collected on a national basis. This equates to 681 cases per 100,000 persons per year or, in the case of invasive cancers only (and excluding non-melanoma skin cancer, NMSC), approximately 409 cases per 100,000 per year (annual average total of 17,538). Incidence was higher in men than in women: cumulative lifetime risk for invasive cancer (again excluding NMSC) was approximately 1 in 3 for men and 1 in 4 for women.

Table 1: Annual average incidence for the main cancers diagnosed, 2007-2009

	cases			rate			risk %			% of all invasive cancers[#]		
cancer	**females**	**males**	**total**	**females**	**males**	**total**	**females**	**males**	**total**	**females**	**males**	**total**
invasive cancers:												
head & neck	98	206	304	4.3	10.5	7.3	0.4	0.9	0.6	1.2	2.2	1.7
oesophagus	133	255	388	5.4	12.8	8.9	0.4	1.0	0.7	1.6	2.7	2.2
stomach	184	296	480	7.4	14.8	10.8	0.5	1.1	0.8	2.2	3.2	2.7
colorectal	943	1327	2270	40.0	66.6	52.2	3.1	5.1	4.1	11.4	14.3	12.9
pancreas	214	230	444	8.6	11.7	10.1	0.6	0.9	0.8	2.6	2.5	2.5
lung	782	1128	1910	33.8	56.6	44.1	2.7	4.3	3.5	9.5	12.2	10.9
melanoma	392	327	720	17.0	16.1	16.4	1.3	1.2	1.3	4.7	3.5	4.1
breast	2673	20	2692	125.4	1.0	64.6	10.0	0.1	5.2	32.3	0.2	15.4
cervix	287	–	–	12.9	–	–	1.0	–	–	3.5	–	–
corpus uteri	356	–	–	17.0	–	–	1.5	–	–	4.3	–	–
ovary	315	–	–	14.4	–	–	1.2	–	–	3.8	–	–
other gynaecological cancers*	99	–	–	4.2	–	–	0.3	–	–	1.2	–	–
prostate	–	2748	–	–	140.1	–	–	11.9	–	–	29.7	–
testis	–	166	–	–	6.8	–	–	0.5	–	–	1.8	–
kidney	156	278	434	7.0	13.8	10.3	0.6	1.2	0.9	1.9	3.0	2.5
bladder	134	309	443	5.4	15.5	9.9	0.4	1.0	0.7	1.6	3.3	2.5
brain & other CNS	139	192	331	6.2	9.4	7.8	0.5	0.8	0.6	1.7	2.1	1.9
all lymphomas	327	384	711	14.4	18.7	16.4	1.1	1.5	1.3	4.0	4.1	4.1
Hodgkin's disease	*49*	*64*	*113*	*2.2*	*2.9*	*2.5*	*0.2*	*0.2*	*0.2*	*0.6*	*0.7*	*0.6*
non-Hodgkin's lymphoma	*279*	*320*	*598*	*12.2*	*15.7*	*13.9*	*1.0*	*1.2*	*1.1*	*3.4*	*3.5*	*3.4*
multiple myeloma	87	117	203	3.6	5.9	4.7	0.3	0.5	0.4	1.0	1.3	1.2
leukaemia	150	252	402	6.5	12.4	9.2	0.5	1.0	0.7	1.8	2.7	2.3
non-melanoma skin (NMSC)	*3345*	*3987*	*7333*	*140.7*	*199.5*	*167.0*	*10.2*	*14.2*	*12.2*	–	–	–
other invasive cancers not listed	808	1027	1836	33.5	51.2	41.7	2.4	3.8	3.1	9.8	11.1	10.5
all invasive cancers, excluding NMSC	8278	9261	17538	367.0	463.8	408.8	25.6	31.6	28.5	100	100	100
non-invasive cancers	3798	1076	4874	157.7	53.7	105.5	11.4	4.2	7.8	–	–	–
all registered cancers	15421	14324	29745	665.5	716.9	681.3	40.8	43.8	42.2	–	–	–

rate: number of cases per 100,000 population per year (European age standardised)
risk: cumulative lifetime risk (risk of cancer diagnosis to age 75), expressed as a percentage
[#] refers to all invasive cancers, excluding non-melanoma skin cancer
** includes cancers of vulva, vagina, uterus (NOS), other female genital & placenta*

Of the invasive cancers registered, NMSC, colorectal (bowel), lung, breast and prostate together made up over two-thirds of all cases (Figure 1). Excluding NMSC, female breast and prostate cancer alone comprised almost one third of all cancers diagnosed in women and men respectively (Table 2). The next most frequent cancers diagnosed in men and women (after colorectal and lung cancer) were melanoma and lymphoma as well as cancers of the corpus uteri in women and bladder in men.

Figure 1: Relative frequency of the main invasive cancers diagnosed, 2007-2009

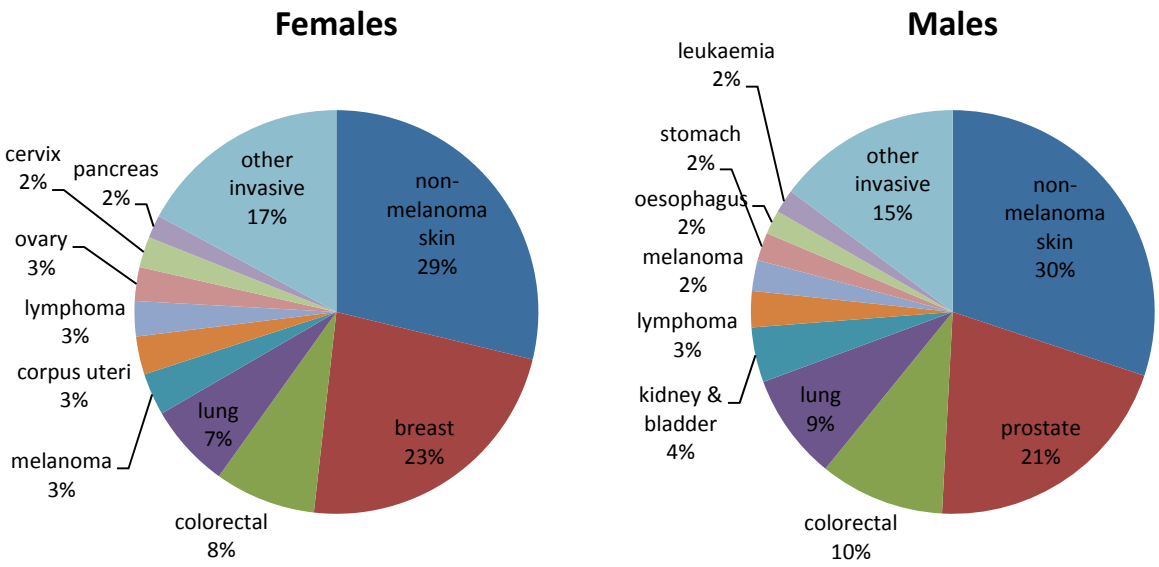


Table 2: Ranking of the most commonly diagnosed invasive cancers (excluding NMSC), 2007-2009

	females		males	
cancer	**%**	**rank**	**%**	**rank**
female breast	32.3	1	–	–
prostate	–	–	29.7	1
colorectal	11.4	2	14.3	2
lung	9.5	3	12.2	3
melanoma	4.7	4	3.5	5
lymphoma	4.0	6	4.1	4
stomach	2.2	10	3.2	7
pancreas	2.6	9	2.5	11
bladder	1.6	14	3.3	6
kidney	1.9	11	3.0	8
leukaemia	1.8	12	2.7	10
oesophagus	1.6	15	2.7	9
corpus uteri	4.3	5	–	–
ovary	3.8	7	–	–
brain & other CNS	1.7	13	2.1	13
cervix	3.5	8	–	–
head & neck	1.2	16	2.2	12
multiple myeloma	1.0	17	1.3	15
testis	–	–	1.8	14
other invasive cancers not listed	11.0	–	11.3	–

2. Mortality

A total of 8,189 cancer deaths occurred in 2007, 7,891 of which were from invasive cancers (Table 3) Lung cancer was by far the commonest cause of cancer death in 2007 overall and for the first time, has now become the main cause of cancer death in women (as well as in men), outnumbering breast cancer deaths in women by 6%.

Table 3: Number of deaths and mortality from the main cancers, 2007

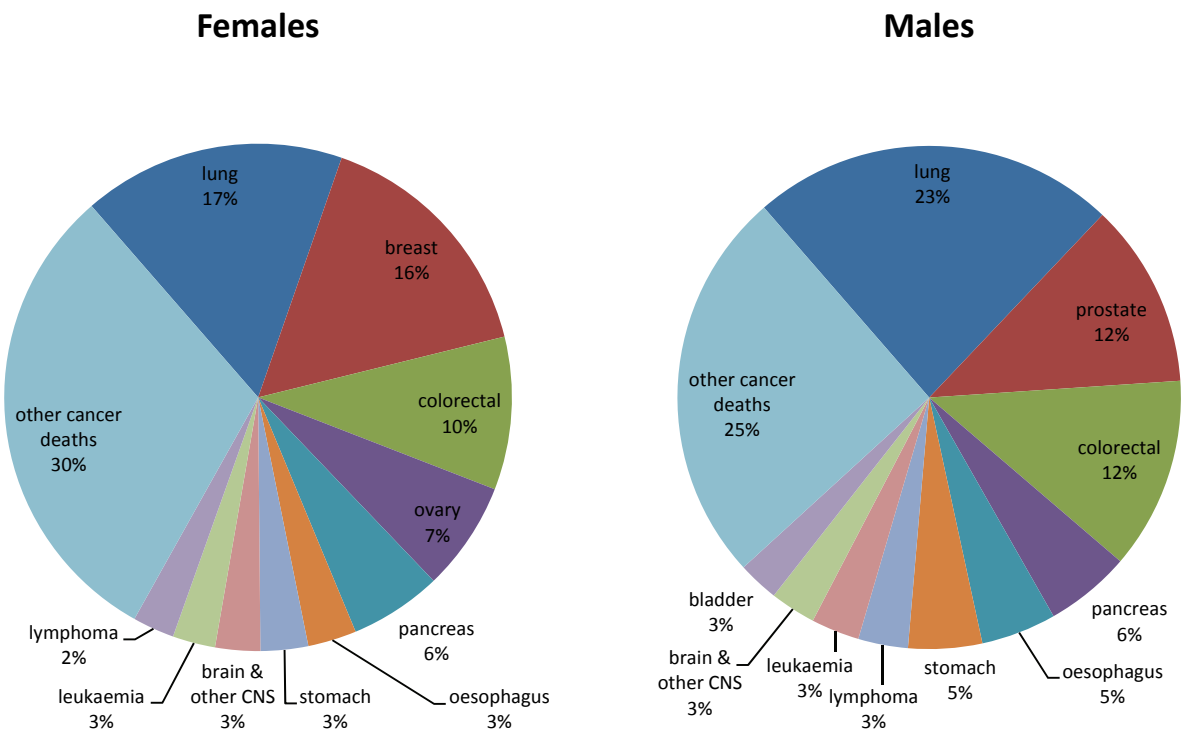
	deaths			rate			risk %			% of all cancer deaths		
cancer	**females**	**males**	**total**	**females**	**males**	**total**	**females**	**males**	**total**	**females**	**males**	**total**
invasive cancers:												
head & neck	37	86	123	1.6	4.6	3.0	0.1	0.4	0.3	1.0	2.0	1.5
oesophagus	120	209	329	4.6	10.8	7.6	0.3	0.8	0.5	3.1	4.8	4.0
stomach	117	205	322	4.6	10.5	7.3	0.3	0.8	0.6	3.0	4.7	3.9
colorectal	377	533	910	15.3	27.3	20.5	1.1	1.8	1.4	9.7	12.3	11.1
pancreas	227	237	464	8.8	12.4	10.5	0.6	0.9	0.7	5.9	5.5	5.7
lung	647	1014	1661	27.6	52.3	38.9	2.2	4.0	3.1	16.7	23.5	20.3
melanoma	49	56	105	2.1	2.7	2.4	0.2	0.2	0.2	1.3	1.3	1.3
breast	611	3	614	27.2	0.1	14.4	2.1	0.0	1.1	15.8	0.1	7.5
cervix	85	–	85	4.0	–	2.1	0.3	–	0.2	2.2	–	1.0
corpus uteri	67	–	67	3.0	–	1.6	0.3	–	0.1	1.7	–	0.8
ovary	269	–	269	12.2	–	6.4	1.1	–	0.6	7.0	–	3.3
other gynaecological cancers*	47	–	47	1.8	–	1.0	0.1	–	0.1	1.2	–	0.6
prostate	–	512	512	–	26.5	10.7	–	1.1	0.5	–	11.8	6.3
testis	–	5	5	–	0.2	0.1	–	0.0	0.0	–	0.1	0.1
kidney	62	100	162	2.6	5.1	3.7	0.2	0.4	0.3	1.6	2.3	2.0
bladder	57	113	170	2.2	5.9	3.7	0.1	0.3	0.2	1.5	2.6	2.1
brain & other CNS	111	127	238	4.9	6.6	5.7	0.4	0.6	0.5	2.9	2.9	2.9
all lymphomas	103	138	241	4.1	7.1	5.5	0.2	0.5	0.4	2.7	3.2	2.9
Hodgkin's disease	9	9	18	0.4	0.5	0.4	0.0	0.0	0.0	0.2	0.2	0.2
non-Hodgkin's lymphoma	94	129	223	3.7	6.7	5.1	0.2	0.5	0.3	2.4	3.0	2.7
multiple myeloma	80	79	159	3.3	4.0	3.6	0.3	0.3	0.3	2.1	1.8	1.9
leukaemia	105	134	239	4.2	6.9	5.3	0.3	0.4	0.3	2.7	3.1	2.9
non-melanoma skin (NMSC)	32	37	69	1.1	1.9	1.4	0.0	0.0	0.0	0.8	0.9	0.8
other invasive cancers not listed	514	586	1100	20.0	30.3	24.7	1.3	2.1	1.7	13.3	13.6	13.4
all invasive cancers	3717	4174	7891	155.2	215.3	180.1	10.9	13.7	12.3	96.1	96.6	96.4
non-invasive cancers	151	147	298	5.4	7.8	6.4	0.2	0.4	0.3	3.9	3.4	3.6
all cancer deaths	3868	4321	8189	160.6	223.2	186.5	11.2	14.0	12.6	100	100	100

rate: number of deaths per 100,000 population per year (European age standardised)
risk: cumulative lifetime risk (risk of cancer death to age 75), expressed as a percentage
** includes cancers of vulva vagina uterus NOS), other female genital & placenta*

As was the case for incidence, colorectal, lung, female breast and prostate cancers together accounted for the bulk of cancer deaths comprising 42% and 48% of cancer deaths in women and men respectively

(Figure 2). Although in terms of case numbers, cancers of the pancreas, oesophagus and ovary were ranked lower than some other cancers; they represented a relatively greater proportion of cancer deaths, a reflection of the comparatively high mortality from these cancers.

Figure 2: Relative frequency of the main causes of cancer death in Ireland, 2007



3. Person years of life lost due to cancer

The average age of death from cancer in 2006 was 71.3 years for women and 71.0 years for men. At these ages, the average woman would expect 14.5 more years of life and the average man 12.3 years. Each death from cancer therefore may represent a loss of years of life. The number of years of life lost due to premature death is known as person-years of life lost (PYLL). We calculated this for all cancers as well as some of the main cancer sites listed in Table 4 and Table 5 below.

The number of years of life lost to cancer was calculated by multiplying the number of deaths at each single year of age by the life expectancy at that age. Life expectancy in Ireland has improved in the fifteen years between 1996 and 2006. In 1996 the life expectancy at birth was 78.5 years for females and 73.0 years for males. By 2006 the life expectancies at birth for females and males were 81.6 and 76.8 years respectively. Thus even though mortality rates are falling, we would not expect PYLL to decrease due to changing life expectancy. In light of this, the reduction in the average number of years of life lost (YLL) per person for lymphoma and leukaemia is notable, in particular for males.

Table 4: Years of life due to cancer, 1996 and 2006, Females

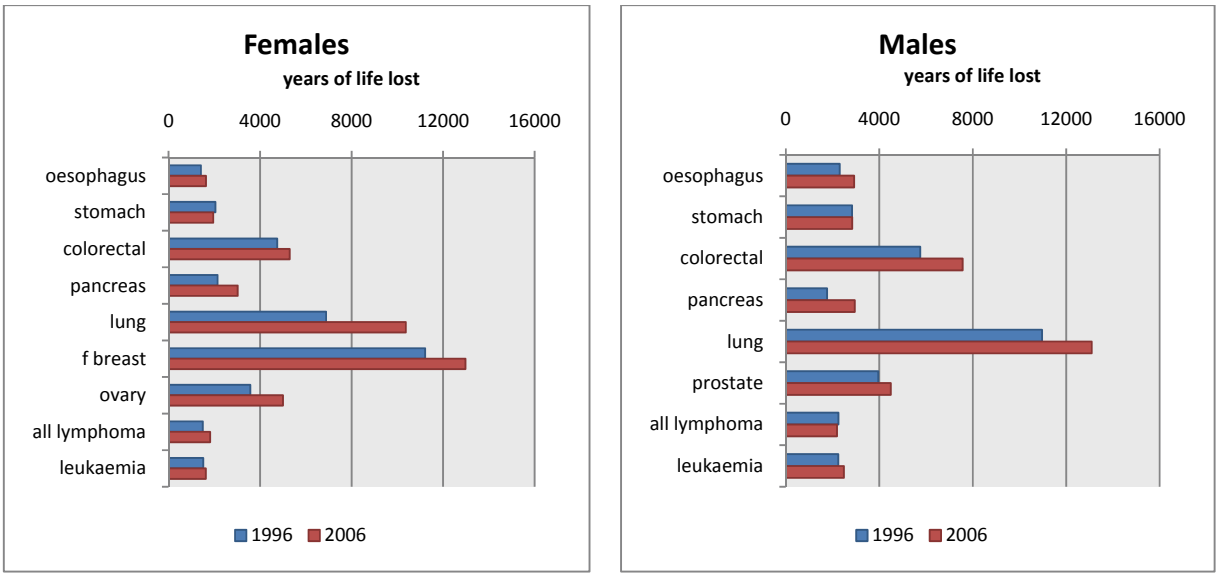
cancer site	PYLL		Average YLL		% of all years of life lost	
	1996	2006	1996	2006	1996	2006
all sites	50655	62050	14.8	16.1	100%	100%
oesophagus	1413	1634	12.4	13.8	3%	3%
stomach	2045	1953	12.5	13.7	4%	3%
colorectal	4753	5297	11.8	12.7	9%	9%
pancreas	2145	3020	12.3	14.2	4%	5%
lung	6884	10373	13.6	15.8	14%	16%
breast	11214	12976	17.7	19.1	22%	21%
ovary	3573	5003	16.9	18.3	7%	8%
lymphoma	1497	1814	16.8	16.5	3%	4%
leukaemia	1517	1627	16.9	15.5	3%	3%

Table 5: Years of life due to cancer, 1996 and 2006, Males

cancer site	PYLL		Average YLL		% of all years of life lost	
	1996	2006	1996	2006	1996	2006
all sites	48567	58138	12.1	13.6	100%	100%
oesophagus	2308	2924	12.2	14.1	5%	5%
stomach	2829	2838	12.0	14.0	6%	5%
colorectal	5753	7570	11.7	13.0	12%	13%
pancreas	1766	2949	11.0	15.1	4%	5%
lung	10965	13093	11.4	13.6	23%	23%
prostate	3955	4488	7.6	8.3	8%	8%
lymphoma	2252	2191	17.3	16.4	5%	4%
leukaemia	2245	2488	18.7	14.8	5%	4%

In 2006, the 8,141 cancer deaths were responsible for over 120,000 years of life lost. Lung cancer had the largest influence on the overall figures, accounting for nearly 23,500 years of life lost. In men, lung cancer accounted for 23% of all years of life lost, while for women that percentage was 16%. Breast cancer had the greatest impact for women, representing 21% of all years of life lost (Table 4 and Table 5; Figure 3).

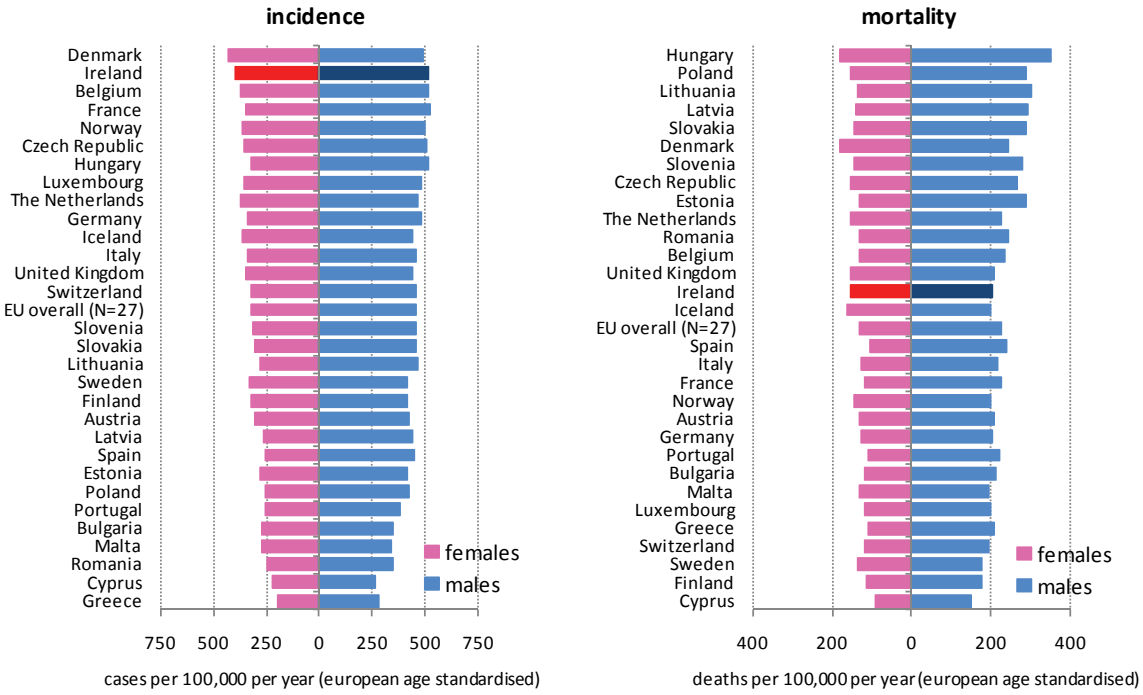
Figure 3: Person-years of life lost due to cancer 1996 and 2006



4. Incidence and mortality: Ireland and other European countries

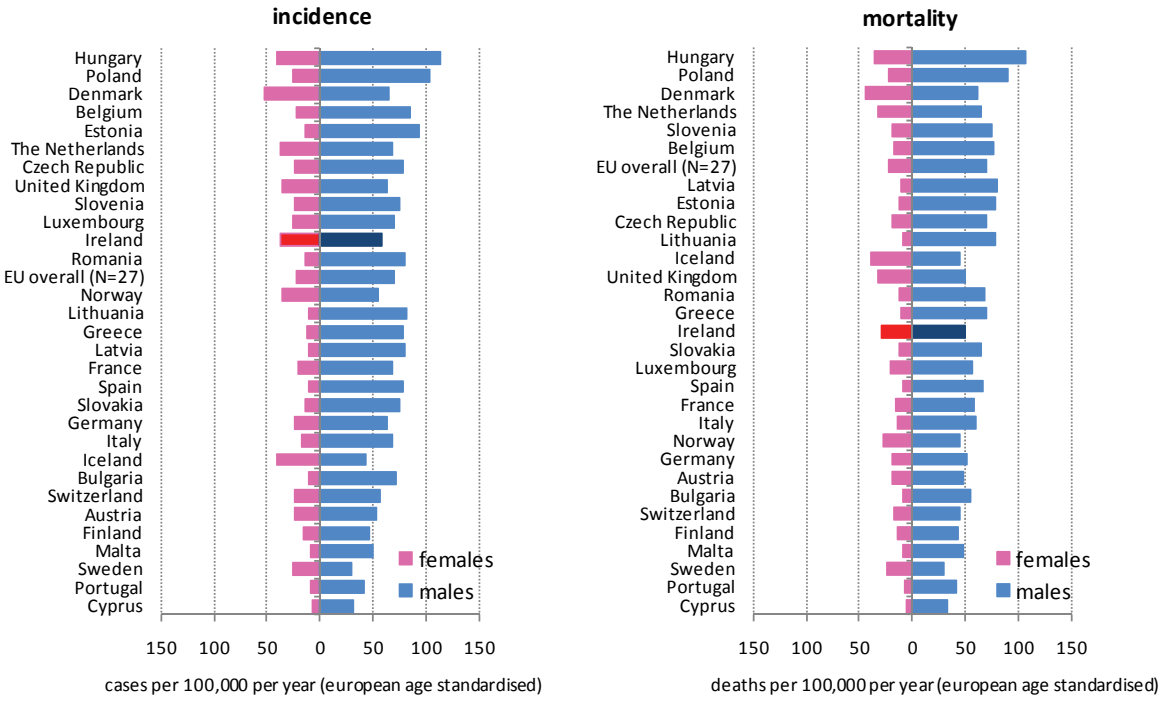
Figure 4 shows cancer incidence and mortality rates for Ireland and other European countries (sorted according to their combined male and female rates), data provided by the European Cancer Observatory.[1] Overall cancer incidence in Ireland was high compared to other European countries with females ranked 2nd and males 4th overall. However cancer mortality rates were closer to the EU average where Irish males were ranked 21st of the 29 countries listed. Variation in female mortality rates was less than that observed for males and Irish females ranked 4th overall.

Figure 4: Estimated cancer incidence and mortality in Europe 2008 - all invasive cancers excluding non-melanoma skin cancer



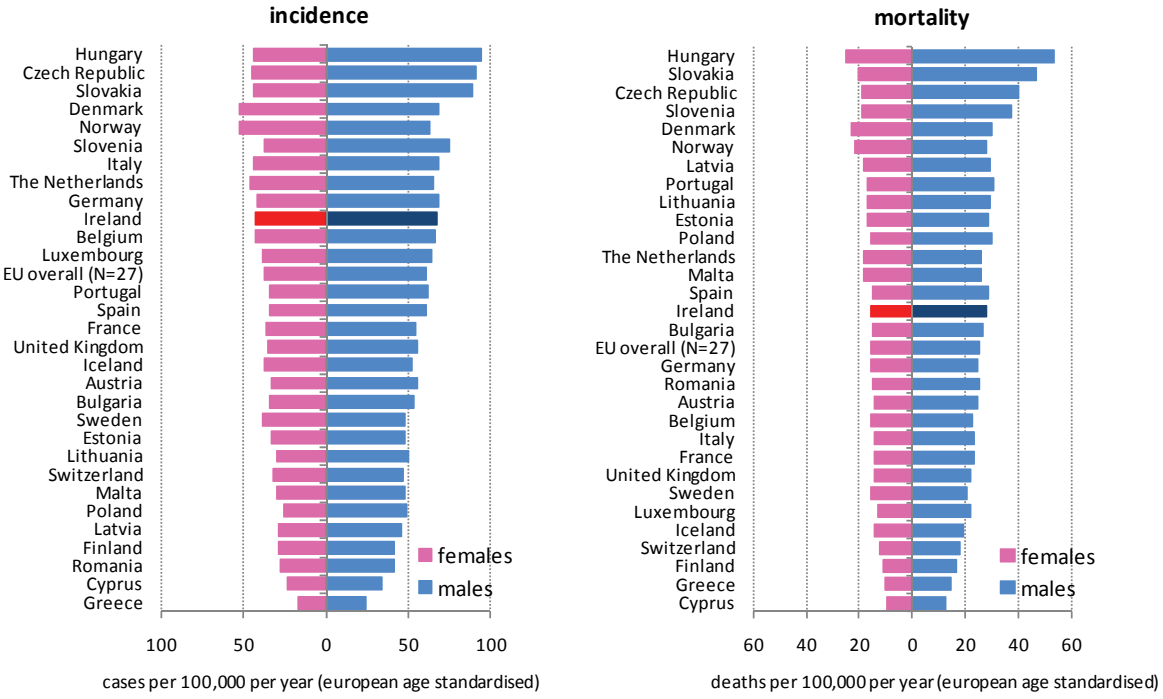
Female lung cancer incidence and mortality were high in Ireland relative to other European countries, ranking 5th and 6th respectively (Figure 5). However male rates, although clearly higher than females, were lower than the EU male average and ranked 21st in terms of both incidence and mortality. The relationship between lung cancer and smoking is well known and recent figures on smoking rates across Europe have shown Irish females to be ranked 6th highest and males 22nd highest of 25 EU countries where smoking rates were measured separately for each sex – rankings very similar to the lung cancer incidence.[2]

Figure 5: Estimated cancer incidence and mortality in Europe 2008 - lung cancer



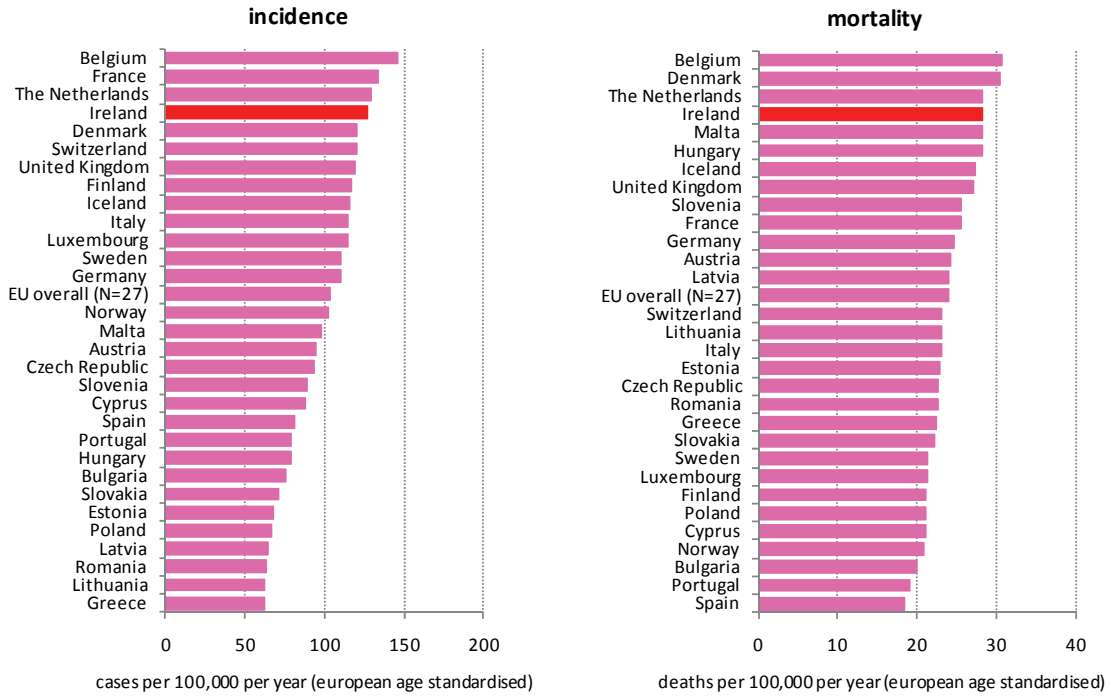
Female and male colorectal cancer incidence were both ranked 8th highest of the 30 European countries shown (Figure 6). Irish female colorectal cancer incidence was 15% higher than the EU average but female mortality rates were only 1% higher. Incidence and mortality rates for Irish males were 11% and 9% higher than the EU average respectively.

Figure 6: Estimated cancer incidence and mortality in Europe 2008 - colorectal cancer



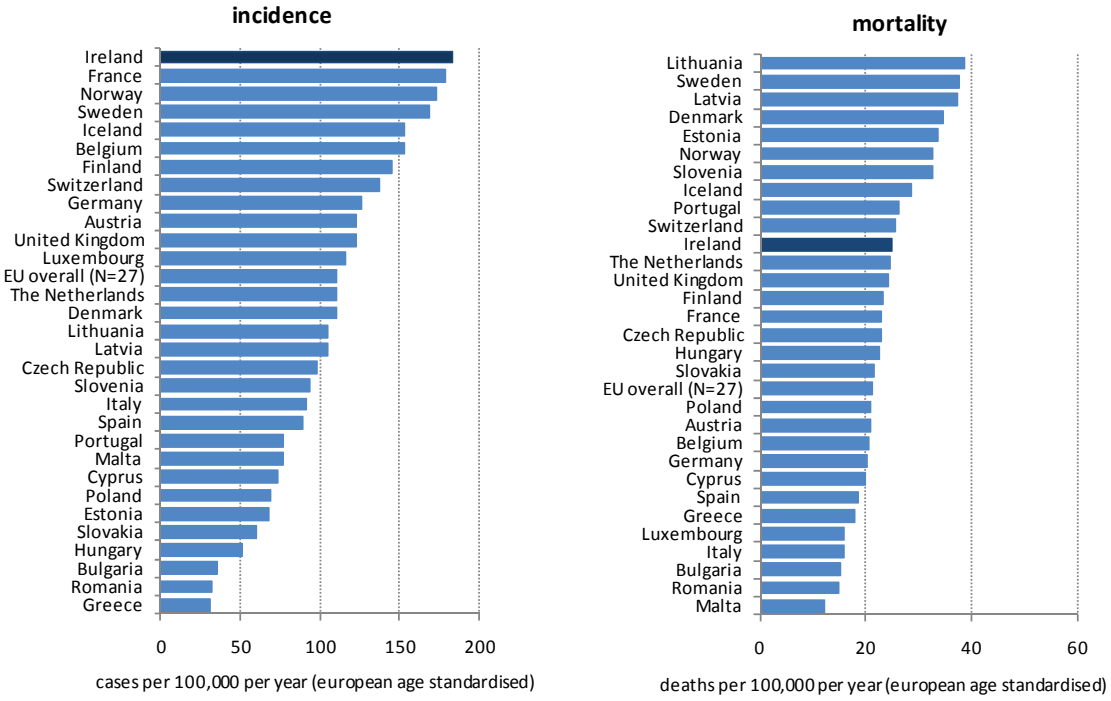
Female breast cancer incidence in Ireland ranked 4th highest of the 30 European countries surveyed, after Belgium, France and the Netherlands (Figure 7). Some of the lowest European incidence rates were found in eastern European countries. It is likely that the comparatively high incidence rates in Ireland are linked to the development of organised screening here in recent years – some of the lowest ranked countries have recently been identified as not having yet introduced a national screening programme. [3] Ireland also ranked 4th highest in terms of mortality, behind Belgium, Denmark and Netherlands with the same mortality rate as Malta and Hungary.

Figure 7: Estimated cancer incidence and mortality in Europe 2008 – female breast cancer



Prostate cancer incidence in Ireland ranked highest of all 30 European countries and was over 60% higher than the EU average (Figure 8). However mortality rates were much lower in relative terms and Ireland ranked 11th highest overall or 18% higher than the EU average. The relatively high incidence rate in Ireland may, as for female breast, be related to the very large increase in PSA testing here in recent years resulting in a sharp rise in cancer numbers.

Figure 8: Estimated cancer incidence and mortality in Europe 2008 - prostate cancer



5. Prevalence

Complete prevalence (defined as the number of people ever diagnosed with cancer who are still alive at a specific date) in Ireland is unknown as data collection at the National Cancer Registry commenced in 1994. However it is known that 90,750 people diagnosed with invasive cancer (excluding NMSC) between 1994 and 2008 were still alive on 31/12/2008, 52.2% of whom were female (Table 6). Such limited duration prevalence may be useful for ascertaining cancer burden, e.g. initial treatment (one-year), clinical follow-up (three-year) and cure, where mortality rates revert back to background population levels (five-year). Overall there were 13,832 cancer patients still alive within one year of diagnosis representing 90% of all patients first diagnosed with any cancer during 2008 or 80% of patients first diagnosed with an invasive cancer in 2008. Tables containing prevalence numbers and proportions per 100,000 are available in the appendix as well as a technical note on the calculation methods.

Table 6: Prevalence of cancer in Ireland on 31/12/2008

	15 year	10 year	5 year	3 year	1 year
all invasive cancers excluding NMSC					
female	47,391	38,579	24,470	16,714	6,770
male	43,359	37,706	25,899	17,771	7,062
<=65	42,961	36,984	25,287	17,703	7,140
>65	47,789	39,301	25,082	16,782	6,692
total	**90,750**	**76,285**	**50,369**	**34,485**	**13,832**
lung					
female	1,393	1,265	1000	805	456
male	1,563	1378	1,101	904	550
<=65	1,081	1009	843	689	401
>65	1,875	1634	1258	1020	605
total	**2,956**	**2643**	**2101**	**1709**	**1006**
breast					
female	20,827	17041	10403	6915	2674
male	123	107	72	49	18
<=65	12,252	10523	6764	4586	1848
>65	8,698	6625	3711	2378	844
total	**20,950**	**17148**	**10475**	**6964**	**2692**
prostate					
female	–	–	–	–	–
male	17,430	16074	11,098	7118	2518
<=65	4,461	4417	3633	2602	999
>65	12,969	11657	7,465	4516	1519
total	**17,430**	**16074**	**11,098**	**7118**	**2518**
colorectal					
female	5,487	4,401	2,843	1,968	765
Male	6,787	5,700	3,874	2,706	1,076
<=65	3,723	3,334	2,424	1,773	693
>65	8,551	6,767	4,293	2,901	1,148
total	12,274	10,101	6,717	4,674	1,841

While lung cancer accounts for a large proportion of cancer incidence in Ireland, it only made up 7% of one-year prevalence and 3% of the fifteen-year prevalence (Figure 9). In contrast, breast, prostate and

colorectal cancers made up half the one-year prevalence and 54% of the 15-year prevalence, indicating different survival rates for these cancers.

Figure 9: Percentage prevalence of cancer in Ireland on 31/12/2008 by cancer site (excluding NMSC)

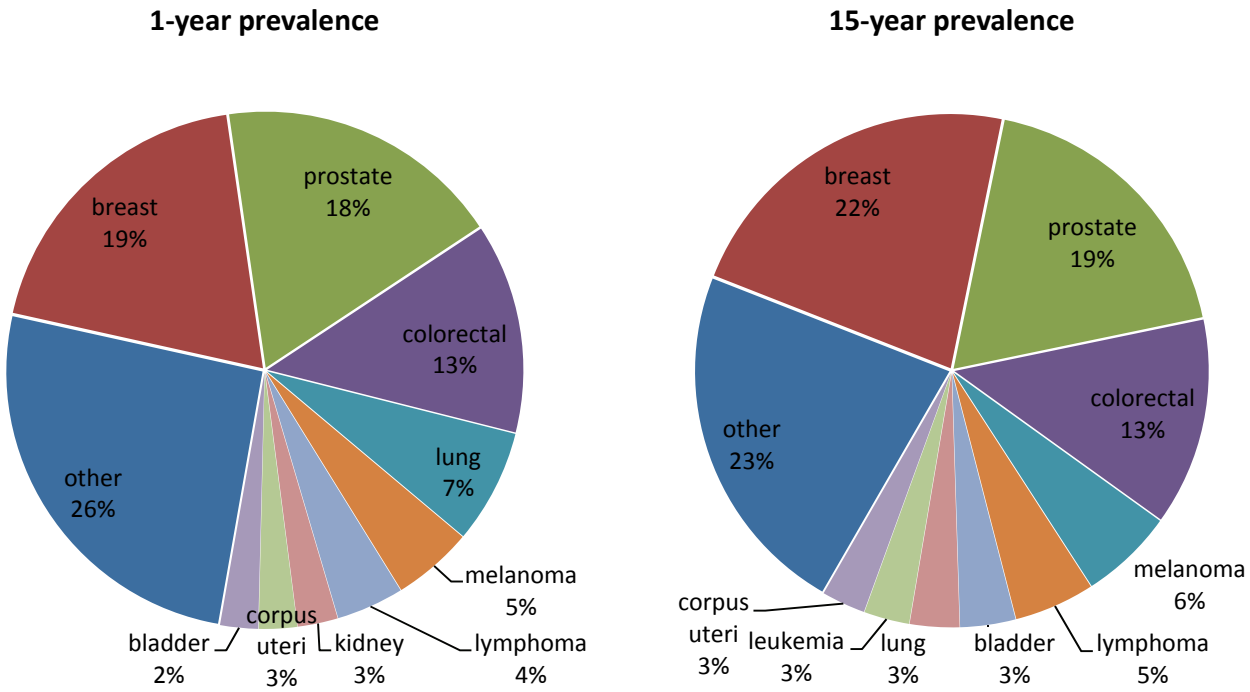


Table 7: 15 year prevalence of invasive cancers (excluding NMSC) by cancer site at 31/12/2008

main cancers	<=65	>65	male	female	total
breast	12,252	8,698	123	20,827	20,950
prostate	4,461	12,969	17,430	–	17,430
colorectal	3,723	8,551	6,787	5,487	12,274
other	4,005	4,000	4,209	3,796	8,005
melanoma	3,239	2,359	2,073	3,525	5,598
lymphoma	3,009	1,805	2,539	2,275	4,814
bladder	883	2,430	2,344	969	3,313
lung	1,081	1,875	1,563	1,393	2,956
leukaemia	1,522	1,205	1,612	1,115	2,727
corpus uteri	1,204	1,419	–	2,623	2,623
kidney	1,160	1,088	1,366	882	2,248
cervix	1,710	265	–	1,975	1,975
testis	1,721	43	1,764	–	1,764
ovary	995	569	–	1,564	1,564
head & neck	826	665	949	542	1,491
stomach	403	819	746	476	1,222
brain & other CNS	874	165	571	468	1,039
myeloma	316	485	433	368	801
oesophagus	289	454	454	289	743
pancreas	172	265	198	239	437

Table 7 lists the 15-year prevalence of the main cancer sites (excluding NMSC) by gender, age-group and overall, ordered by the total number of prevalent cases. Over 58% of prevalent breast cancer patients were aged 65 or younger compared to 47% for all cancers combined. Less than 30% of men still alive after a diagnosis of prostate cancer were aged 65 or less, reflecting the generally older age profile at diagnosis for this cancer.

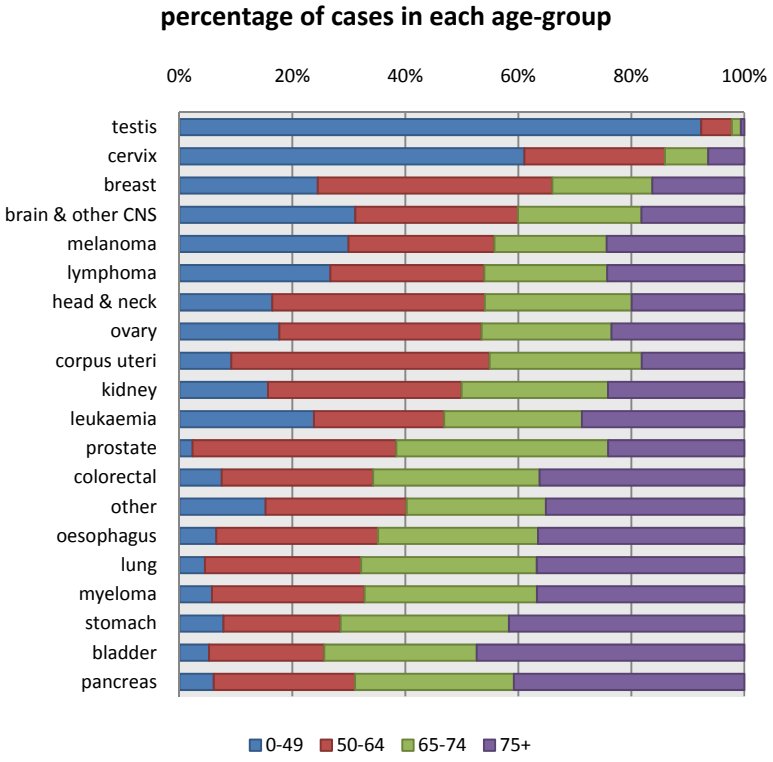
6. Age profile of patients at diagnosis and death

The majority of patients were over 65 years of age when first diagnosed with most cancers (Table 8). Over two thirds of patients diagnosed with cancer of the prostate, oesophagus, lung, myeloma, stomach, pancreas and bladder were at least 65 years at diagnosis (Figure 10). In contrast, 93% of patients diagnosed with testicular cancer and 60% of patients diagnosed with cervical cancer were under the age of 50 at the time of diagnosis. Cancers where at least 25% of patients were under 50 years at time of diagnosis include breast, brain and other CNS, melanoma, and lymphoma.

Table 8: Median age at diagnosis, 2007-2009

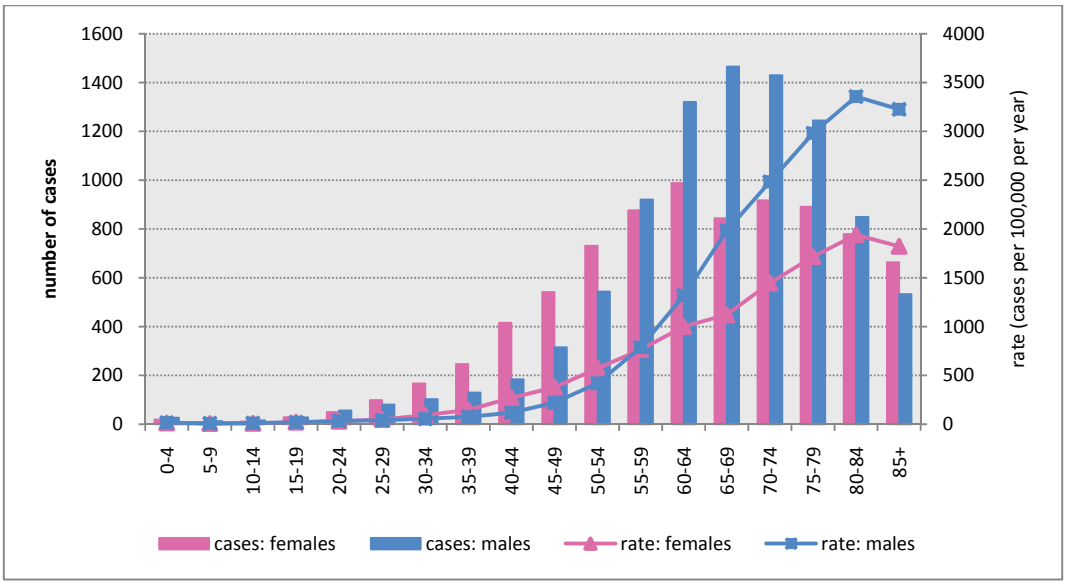
Cancer	median age
testis	32
cervix	45
breast	59
brain & other CNS	60
melanoma	60
lymphoma	61
head & neck	62
ovary	63
corpus uteri	63
kidney	65
leukaemia	67
prostate	69
colorectal	70
other	70
oesophagus	71
lung	71
myeloma	71
stomach	72
bladder	72
pancreas	72

Figure 10: Age of patients at diagnosis, 2007-2009



The increase in cancer numbers with age can be seen in the gradual increase in incidence rates as patients get older with males having greater case numbers and higher rates than females in most age groups (Figure 11). Female rates and case numbers were higher than for males at ages 25-54 and this was mostly due to the fact that breast cancer (which comprised approximately one-third of all female cancers) and some of the gynaecological cancers have a somewhat younger profile than other cancer types. Although case numbers reached peak values at 60-64 in females and at 65-69 in males, risk of diagnosis continued to increase to a maximum at age 80-84 in both sexes.

Figure 11: Annual average numbers of cases and incidence rates 2007-2009 by 5-year age group for all invasive cancers (excluding non-melanoma skin cancer) in males and females

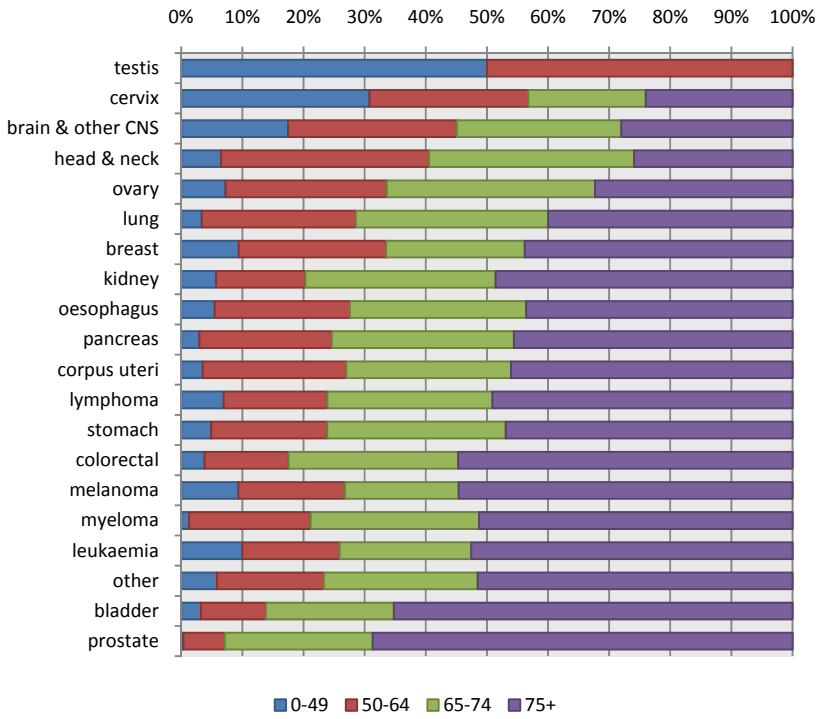


Although 37% of patients diagnosed with prostate cancer were under 65 years at diagnosis, only 7% of deaths of prostate cancer patients were in this age group (Figure 12). Similarly, 27% of patients diagnosed with lymphoma were under 50 years at diagnosis, but only 8% of lymphoma patients were in the under 50 age-group at death. For other cancers the age distribution of patients at diagnosis and death was more similar, e.g. cancer of the pancreas where 30% of patients were under 50 when diagnosed and 26% were under 50 at death.

Table 9: Median age at death, 2007

Cancer	Median age
testis	34.5
cervix	56
brain & other CNS	65
head & neck	67
ovary	69.5
lung	72
breast	72
kidney	72
oesophagus	73
pancreas	73
corpus uteri	73
lymphoma	73
stomach	74
colorectal	75
melanoma	75
myeloma	75
leukaemia	75
other	75
bladder	78
prostate	79

Figure 12: Age at time of death, 2007



Males and females had fairly similar mortality rates in the younger age groups but increased and diverged from middle-age onwards with male rates increasing more than females (Figure 13). Although numbers of cancer deaths and mortality rates were typically highest in the older age groups, a greater proportion of the deaths in younger people was due to cancer. In 2007, cancer was responsible for 36% of all deaths in people under 65, compared to 27% in people aged 65 or over. Almost half of all deaths in women under 65 were caused by cancer, 29% of deaths in males aged under 65 were cancer deaths.

Figure 13: Number of deaths and mortality rates, 2007 by 5-year age group for all cancers in males and females

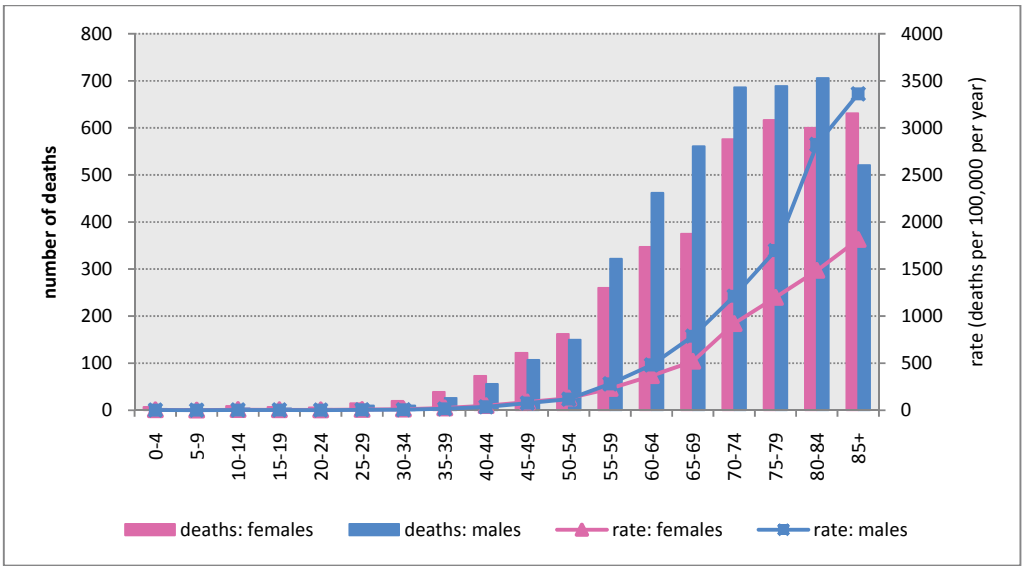
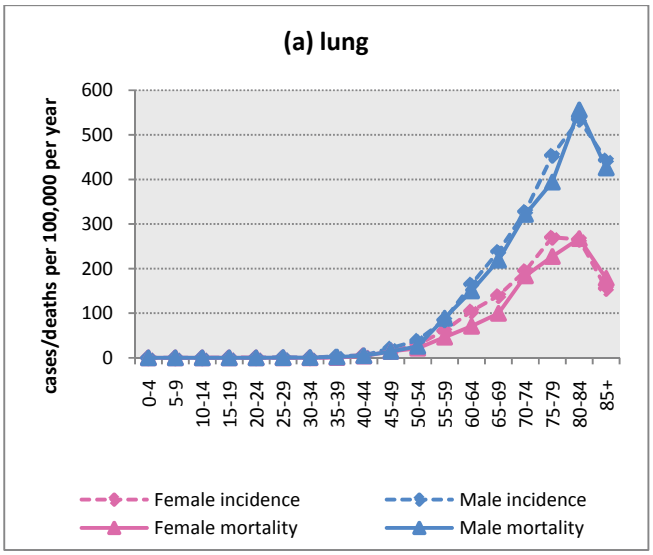
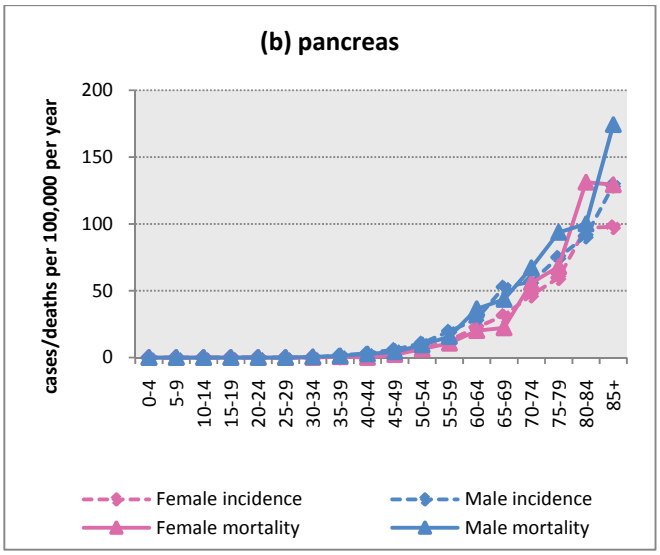


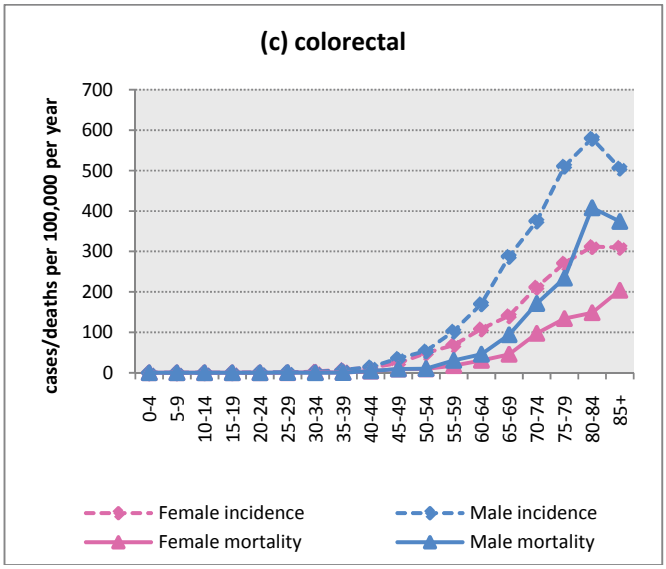
Figure 14(a-h) indicates the age specific incidence and mortality rates for a range of cancer types for males and females. Lung cancer incidence and mortality showed very similar age profiles, both rates increasing to a maximum in the older age groups with higher rates in males throughout (Figure 14a). Cancer of the pancreas also had similar age profiles for incidence and mortality although differences between the sexes here were much less than for lung cancer (Figure 14b). Approximately equal number of cases and deaths and high mortality/incidence ratios in most age groups reflect the poor survival from these cancers.

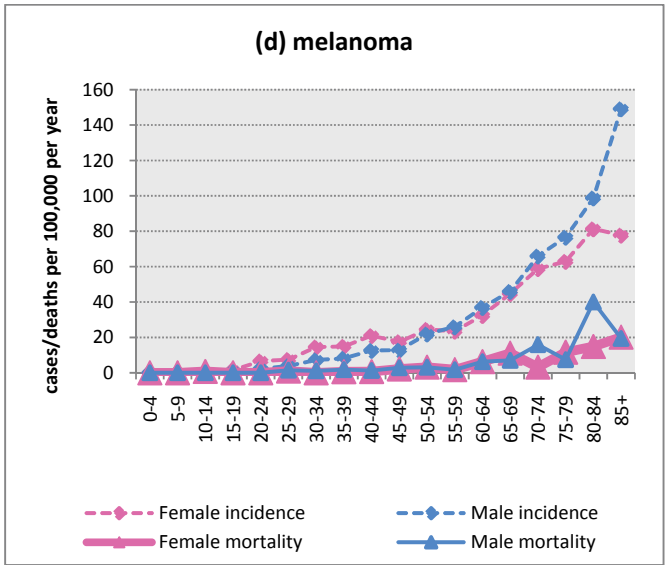
Figure 14 (a-h): Age specific incidence (2007-2009) and mortality (2007) rates by 5-year age group for males and females for selected cancer types





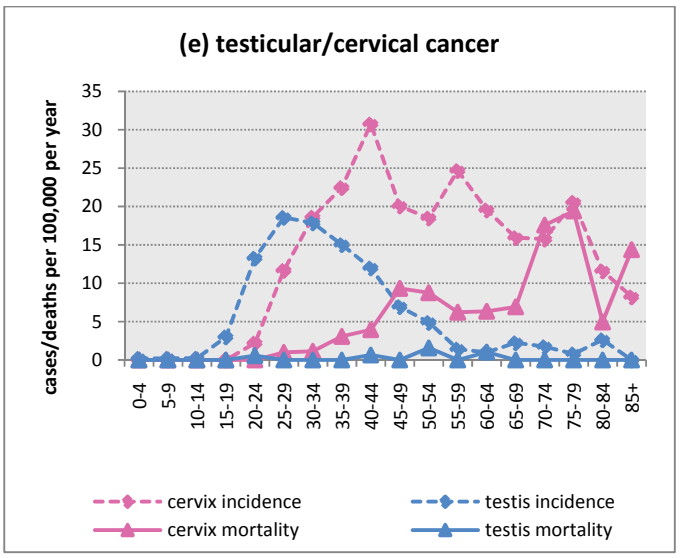
Incidence and mortality rates for colorectal cancer also increased steadily with age (Figure 14c). However unlike lung and pancreatic cancers, mortality rates were lower than incidence rates in all age groups, indicating comparatively better survival from this cancer. Male incidence and mortality were higher than for females at all ages and differences between the sexes increased with age. Melanoma incidence tended to increase at a younger age than either of the above listed cancers (Figure 14d). However due to its relatively good survival, melanoma mortality rates were very low (<10 deaths per 100,000) up to age 65.

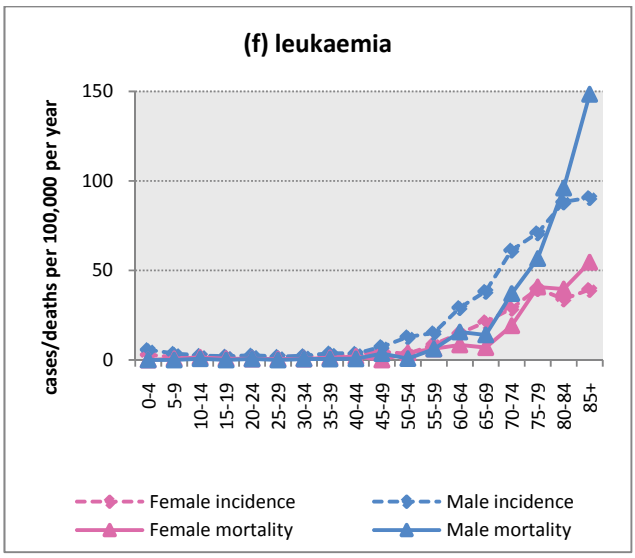




Testicular and invasive cervical cancer have younger age profiles and as already highlighted, were both most commonly diagnosed in younger people (Figure 14e). Testicular cancer in particular had its highest incidence in 20 to 44 year old men, with very low mortality rates (in 2007, there were just 5 deaths from testicular cancer) reflecting its good survival rate. Invasive cervical cancer incidence rates increased from the age of 25 and reached a peak incidence of 31 cases per 100,000 in 40-44 year old women. Incidence rates subsequently declined and were similar to mortality rates in older women (aged over 70). In situ cervical cancers (not shown here) greatly outnumber invasive tumours, with the highest incidence rates for in situ cancers registered in women aged between 25 and 34. Approximately 320 cases per 100,000 women per year were diagnosed with in situ cervical cancer between 2007 and 2009.

Leukaemia was the most common invasive cancer diagnosed in children and in Ireland in 2007-2009, 7 and 16 cases per year were diagnosed in girls and boys under the age of 10 respectively. However, incidence and mortality rates for this cancer, like most others, showed a distinct increase with age, with the highest case numbers per unit of population being in the older age groups with males having higher incidence and mortality than females (Figure 14).

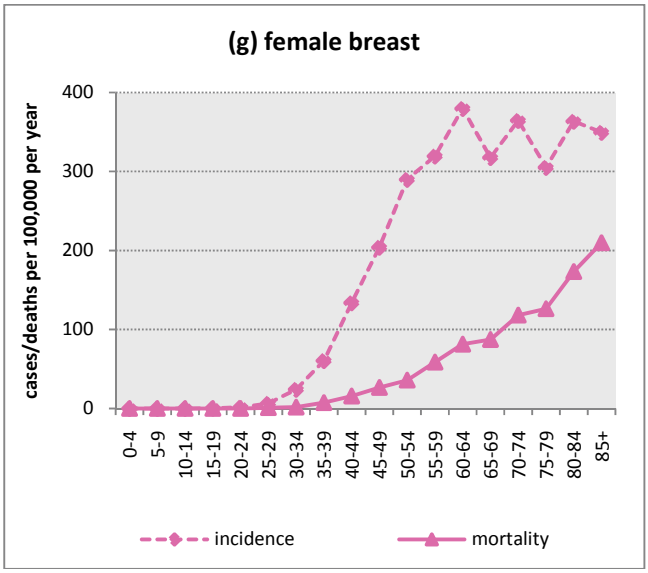


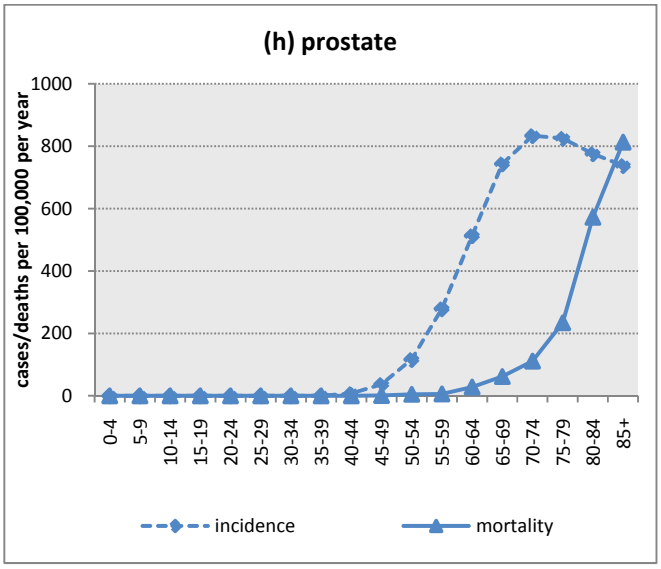


As already shown, female breast and prostate cancer were the most common cancers diagnosed in women and men respectively and in recent years, both are increasingly detected through screening activity. During 2007-2009, incidence rates for female breast cancer increased sharply between ages 35-39 and 60-64 (Figure 14g) with maximum case numbers registered in women between ages 50 and 64, consistent with the age band of women invited for screening by the Breast Check programme. Over the age of 65, incidence rates tended to level off to some extent. Mortality rates, which were for the most part much lower than incidence, showed a steady and continuous increase from 30-34 to a maximum in the 85+ year olds, indicating a continuous and increasing risk of death from this cancer as women get older.

Prostate cancer incidence remained low through to the older age groups (Figure 14h) - very few men under the age of 50 were diagnosed with prostate cancer (64 cases per year compared to >800 men aged 70-79). Following a peak at age 70-74, incidence rates subsequently declined. However,

mortality rates, which remained very low through to the older age groups (70+) then increased rapidly in the older men and overtook incidence rates in the 85+ year olds.





7. Trends

7.1 Incidence trends

The number of new cases of invasive cancer increased from 17,429 in 1994 to 24,809 in 2009, an annual increase of 2.7% for women and 3.0% increase for men (Table 10, Figure 15). However age-standardized incidence rates increased by just 0.9% per year for both sexes indicating that some of the increase in cases was due to ageing in the population (Table 10, Figure 16).

Table 10: Invasive cancer cases and incidence rates per year, 1994-2009

Invasive cancer numbers and rates (including non-melanoma skin cancer)																	
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	APC
Cases																	
female	8255	8123	8447	8680	8634	8711	9195	9345	9761	10188	10545	10502	10852	11560	11816	11493	**2.7%**
male	9174	9083	9295	9458	9412	9599	10093	10336	10817	11152	11996	11932	12589	13262	13166	13316	**3.0%**
Incidence rate (cases per 100,000 persons per year standardized to European population)																	
female	458	445	457	464	450	450	468	468	482	491	497	486	491	516	516	492	**0.9%**
male	606	592	600	600	587	593	613	615	629	636	666	645	660	683	659	649	**0.9%**

Figure 15: Invasive cancer cases, 1994-2009

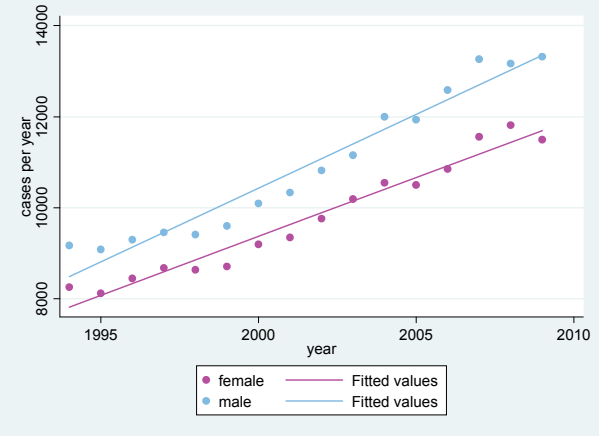
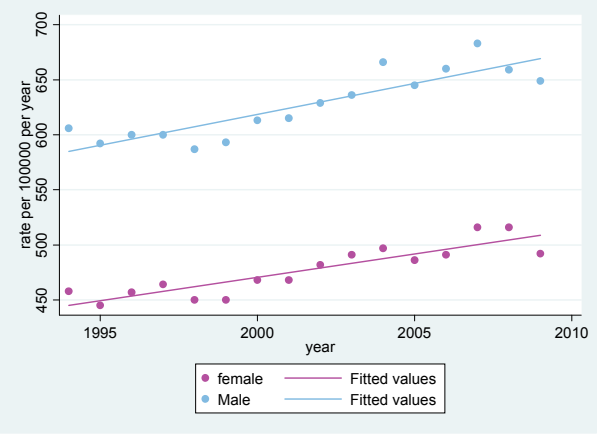


Figure 16: European age-standardised incidence rates, 1994-2009



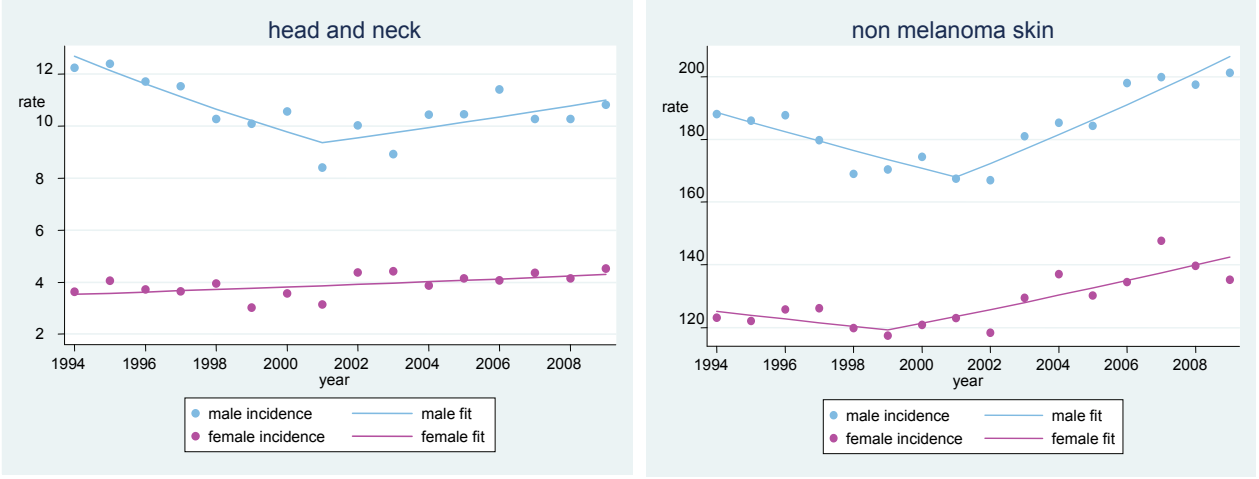
In order to discern whether there was actually a trend over time or whether the changes were due to random variation, we examined the estimated annual percentage change (APC) for various cancer sites using the Joinpoint regression programme.[4] Statistically significant trends (either positive or negative) at the 95% level over the period 1994-2009 are indicated in Table 11. For head and neck and kidney cancers there were consistent overall upward trends in incidence rates for females but varying trends for males (Table 11, Figure 17). The incidence rates of non-melanoma skin cancer for both females and males in the last decade show similar increases in the last decade, with the increase for females starting earlier in 1999 compared to 2001 for males (Table 11, Figure 17).

Table 11: Time trends - annual percentage change (APC) in incidence rates

Cancer site*	Females		Males	
	year of diagnosis	APC	year of diagnosis	APC
lung	1994-2009	+1.8%	1994-2009	-1.2%
breast	1994-2009	+1.9%	1994-2009	0%
prostate		–	1994-2004	+7.6%
			2005-2009	-0.1%
cervix	1994-2009	+1.4%		–
corpus uteri	1994-2009	+2.2%		–
kidney	1994-2009	+3.0%	1994-2002	+5.3%
			2003-2009	-0.3%
non-Hodgkin's lymphoma	1994-2009	+1.4%	1994-2009	+1.5%
head and neck	1994-2009	+1.3%	1994-2001	-4.3%
			2002-2009	+2.0%
stomach	1994-2009	+1.8%	1994-2009	-2.3%
non-melanoma skin	1994-1999	-1.0%	1994-2001	-1.6%
	2000-2009	+1.8%	2002-2009	+2.6%
leukaemia	1994-2008	0%	1994-2004	3.0%
			2005-2008	-6.0%
melanoma	1994-2009	+2.1%	1994-2009	+4.8%
bladder	1994-2009	-1.7%	1994-2009	-2.6%

*The cancers listed have an APC that was significant at the 95% level.

Figure 17: Time trends in (European age standardised) incidence rates, by gender

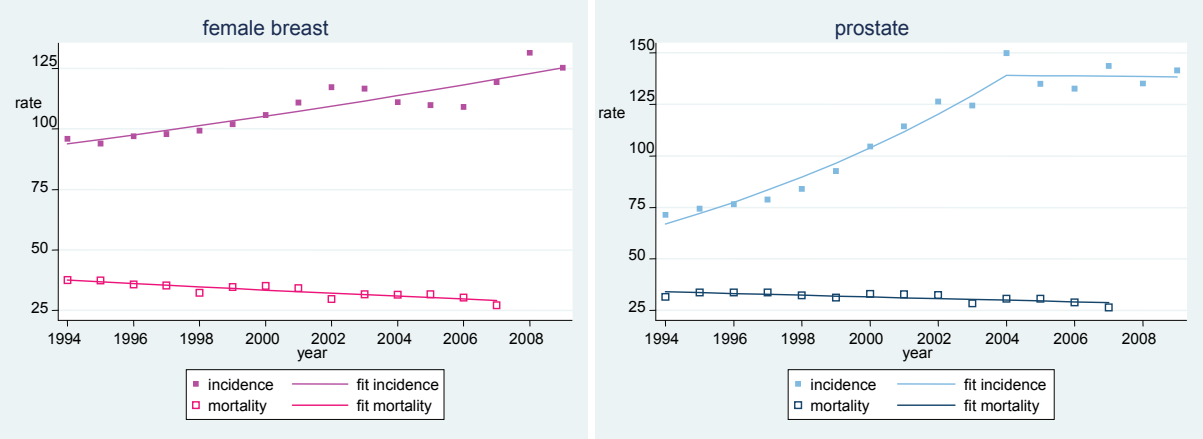


7.2 Comparing incidence and mortality rates for site specific cancers

Breast cancer incidence has been generally increasing with an average APC of 1.9% for the period 1994-2009 (Table 11, Figure 18). There appears to have been an increase in incidence in 2000-2002 at the start of the national breast screening programme in the east of the country, and a second increase in 2007 with the roll-out of this programme to the rest of Ireland. Breast cancer mortality has been declining however, the average annual percentage change in breast cancer death rates was -2.0% for the period 1994-2007. Prostate cancer incidence rates rose consistently (by 7.6% per year) until they reached a peak in 2004 (Table 11, Figure 18), consistent with increases in PSA testing. They have remained fairly level since then, with an annual incidence rate of approximately 139 cases per 100,000.

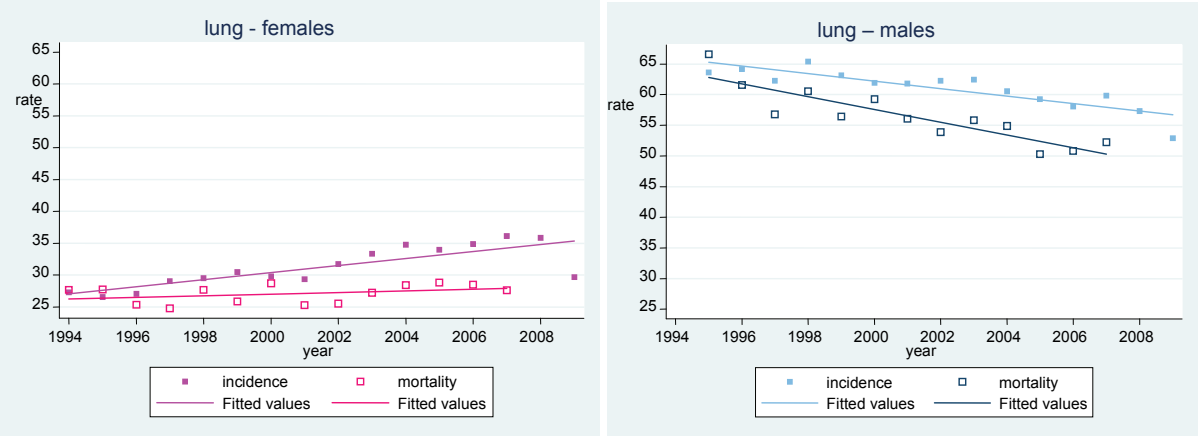
As for breast, prostate cancer mortality rates declined slightly but significantly from 1994 to 2007 with an APC of -1.3%.

Figure 18: Time trends in (European age standardised) incidence and mortality rates



Female lung cancer incidence increased significantly by 1.8% per year in the period 1994-2009. Female lung cancer mortality also increased by 0.5% per year, but this was not statistically significant (Figure 19). Since 1994, male incidence and mortality rates have fallen significantly. The APC for incidence was -1.2% for the period 1994-2009, while that for mortality in the period 1994-2007 was -2.0%.

Figure 19: Time trends in (European age standardised) incidence and mortality



The average female incidence rate for colorectal cancer in the period 1994-2009 was 40.5 cases per 100,000 per annum with no significant change over time. Female mortality from this disease was 27 per 100,000 in 1994, but the APC in mortality was -2.1% over the period 1994-2007. Even though both incidence and mortality rates were much higher for men than for women, the patterns of incidence and mortality were very similar (Figure 20). The average male incidence in the period 1994-2009 was 65.5 per 100,000 per annum. The male mortality rate was 34 per 100,000 in 1994 and had an annual percentage change in the period 1994-2007 of -1.6%.

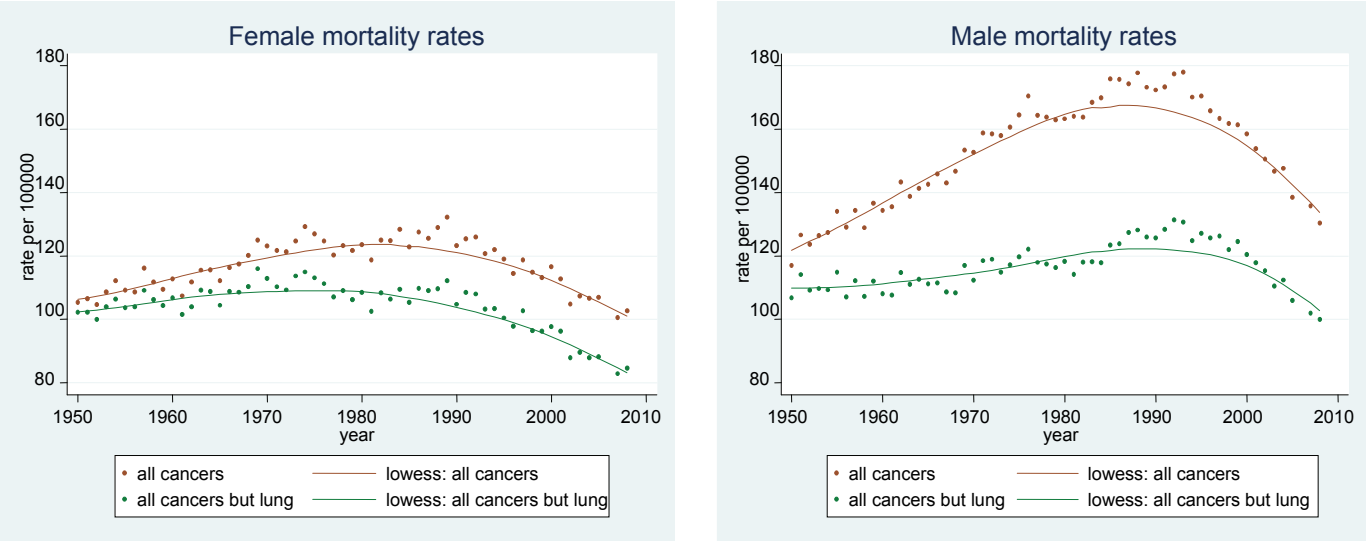
Figure 20: Time trends in (European age standardised) incidence and mortality

Incidence and mortality rates are standardised to the European population

7.3 Mortality - long term trends

Overall cancer mortality rates were lower for women than for men (Figure 21). Men have a higher proportion of lung cancer cases and related mortality. Excluding lung cancer, women still have lower mortality rates than men, though since 2000 the mortality rates have been decreasing faster for men. Various factors can influence cancer mortality rates. Some of these include better treatment, earlier diagnosis, general fall in death rates and a decrease in co-morbidity (national statistics show that deaths from cardiovascular disease and respiratory disease are falling[5]) so patients are more fit for treatment.

Figure 21: Mortality rates (world age-standardised) for all cancer deaths including and excluding lung cancer



lowess: locally weighted scatterplot smoothing curve

8. Geographical variation in incidence

Table 12 shows the annual average number of cancers diagnosed per county in Ireland between 2007 and 2009, overall and for the main four cancer sites, colorectal, lung, prostate and female breast. Counties with large populations and city boroughs such as Dublin, Cork, Galway, Limerick and Waterford predictably have the highest case numbers with approximately 28% of all cancer patients diagnosed in Ireland resident in Dublin city or county alone. Further detailed information on cancer incidence by county and region is available in the appendix and on the Registry website (www.ncri.ie).

Table 12: Annual average number of cancer cases diagnosed per county, 2007-2009

County	All Cancers*	Colorectal	Lung	Prostate	Female Breast
Clare	429	64	37	68	70
Cork	2142	285	202	351	340
Cavan	257	38	25	39	34
Carlow	194	31	26	24	31
Donegal	676	85	79	135	82
Dublin	4711	601	593	606	745
Galway	990	134	83	187	148
Kildare	574	60	69	80	84
Kilkenny	339	45	42	54	47
Kerry	637	82	60	118	81
Longford	164	18	22	23	28
Louth	447	70	55	64	66
Limerick	702	87	75	102	115
Leitrim	166	22	14	40	21
Laois	266	30	26	53	40
Meath	538	61	54	89	90
Monaghan	213	32	25	35	25
Mayo	676	85	51	143	103
Offaly	279	36	29	47	41
Roscommon	316	32	31	66	45
Sligo	324	38	34	67	53
Tipperary-North	269	41	27	35	52
Tipperary-South	366	47	47	52	61
Waterford	492	61	50	68	85
Westmeath	322	49	39	45	45
Wicklow	518	62	55	86	73
Wexford	533	73	61	71	72
IRELAND	17538	2270	1910	2748	2673

** all invasive cancers excluding non-melanoma skin cancer*

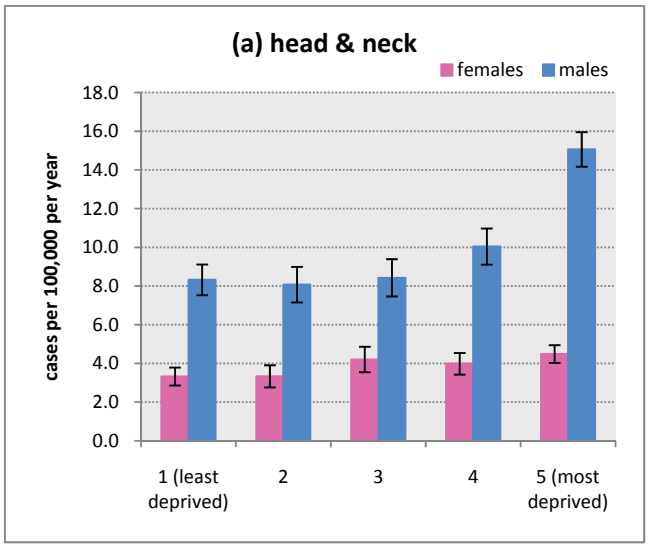
The relationship between cancer incidence and socio-economic status has been well documented.[6] Figure 22 indicates the incidence of cancer by deprivation index[7] where deprivation index ranges from 1 (least deprived/most affluent) to 5 (most deprived) for a number of cancer sites.

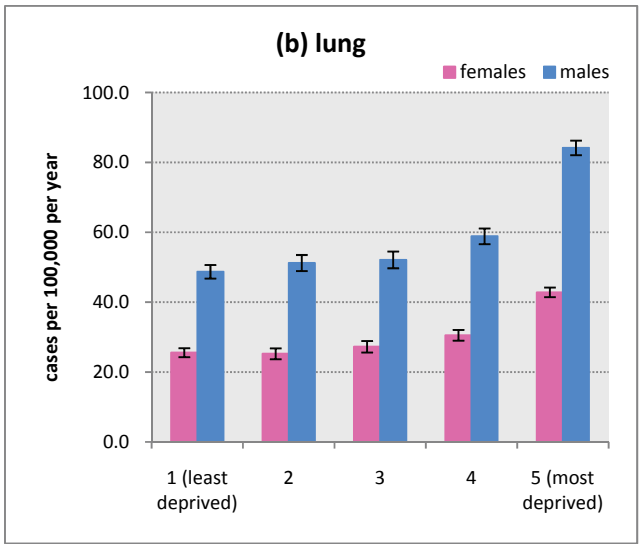
Cancers of the head and neck, lung and cervix all displayed a strong relationship with deprivation index, populations in more deprived areas having a higher incidence of these cancers than populations

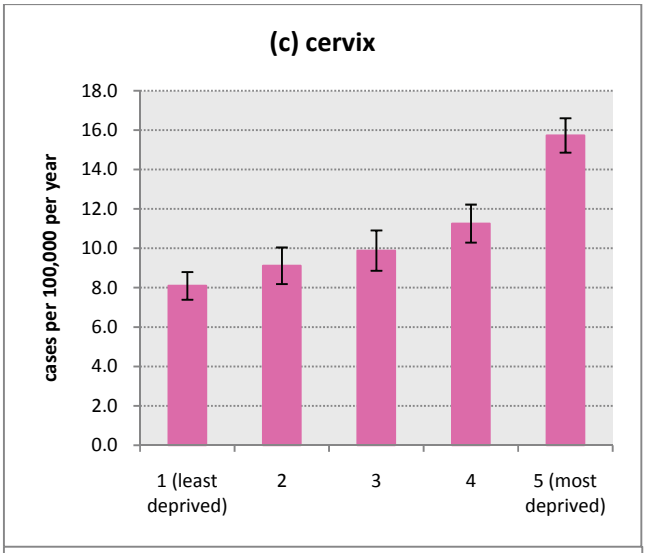
in less deprived/more socially advantaged areas (Figure 22a-c). This was particularly evident in the case of head and neck and lung cancer in males. Smoking and alcohol are important risk factors for both of these cancers and this higher incidence rate corresponds to higher rates of smoking and alcohol in socio-economically deprived areas.[8] As for invasive cancers, the incidence of *in situ* cervical cancer (not shown) was also higher in women from socio-economically deprived areas.

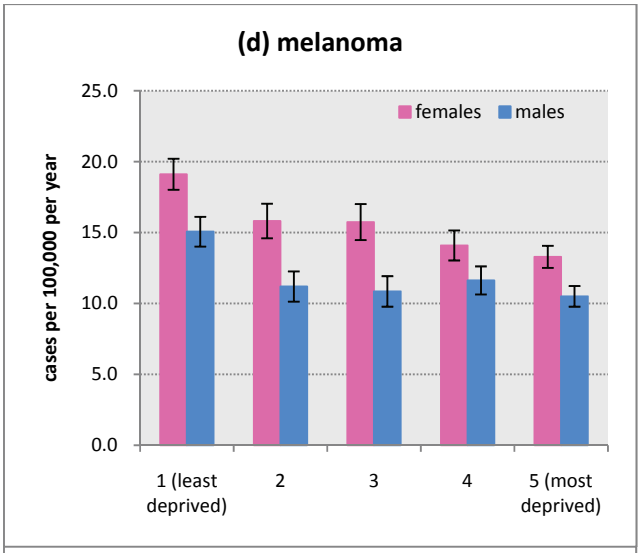
Melanoma, female breast and prostate cancer all showed an inverse relationship with deprivation index compared to that described above - highest incidence rates were found in populations with lowest deprivation scores. This was particularly clear in the case of female melanoma (Figure 22d) and breast cancer (Figure 22e). Higher incidence of melanoma in socio-economically advantaged populations has been observed in other countries and may be related to greater levels of non-occupational exposure to UV radiation.[9] Greater incidence rates of both invasive and in situ (not shown) breast cancer in less deprived areas are likely to be influenced by a greater participation in breast cancer screening by women in more advantaged areas, which has been previously documented elsewhere.[10,11] Prostate cancer incidence was also highest in men from the least deprived areas, although differences in rates were less than that observed for female breast cancer. It is possible that uptake of prostate cancer screening is also higher in males from socio-economically advantaged areas. Similar trends in breast and prostate cancer incidence in relation to socioeconomic status were observed in a previous study in Ireland.[10]

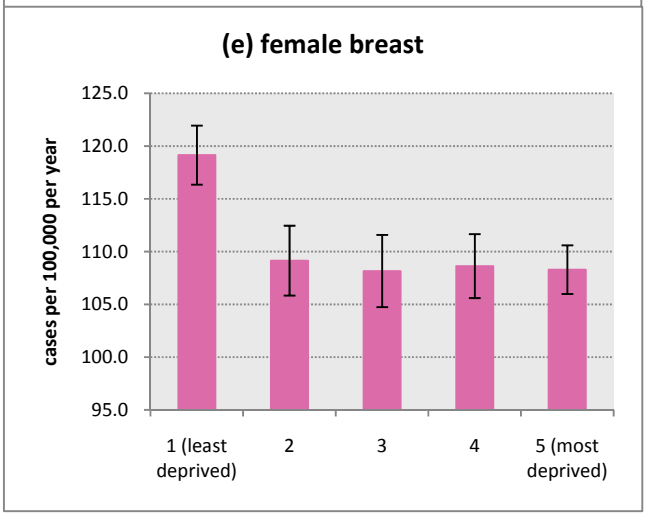
Figure 22(a-f): Age standardised incidence rates by deprivation category of patient residence, 2007-2009

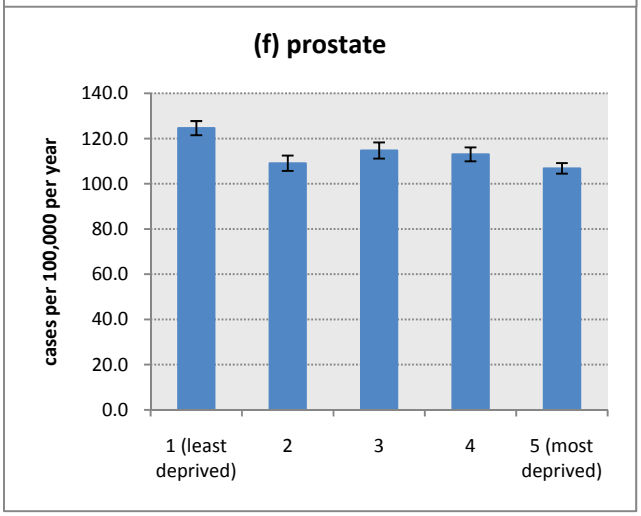





(c) cervix
cases per 100,000 per year
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1 (least deprived)
2
3
4
5 (most deprived)


(d) melanoma
cases per 100,000 per year
females
males
25.0
20.0
15.0
10.0
5.0
0.0
1 (least deprived)
2
3
4
5 (most deprived)


(e) female breast
cases per 100,000 per year
125.0
120.0
115.0
110.0
105.0
100.0
95.0
1 (least deprived)
2
3
4
5 (most deprived)


(f) prostate
cases per 100,000 per year
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
1 (least deprived)
2
3
4
5 (most deprived)

9. Treatments

Table 13: Percentage of patients having tumour directed treatment, 1999-03 and 2004-08.

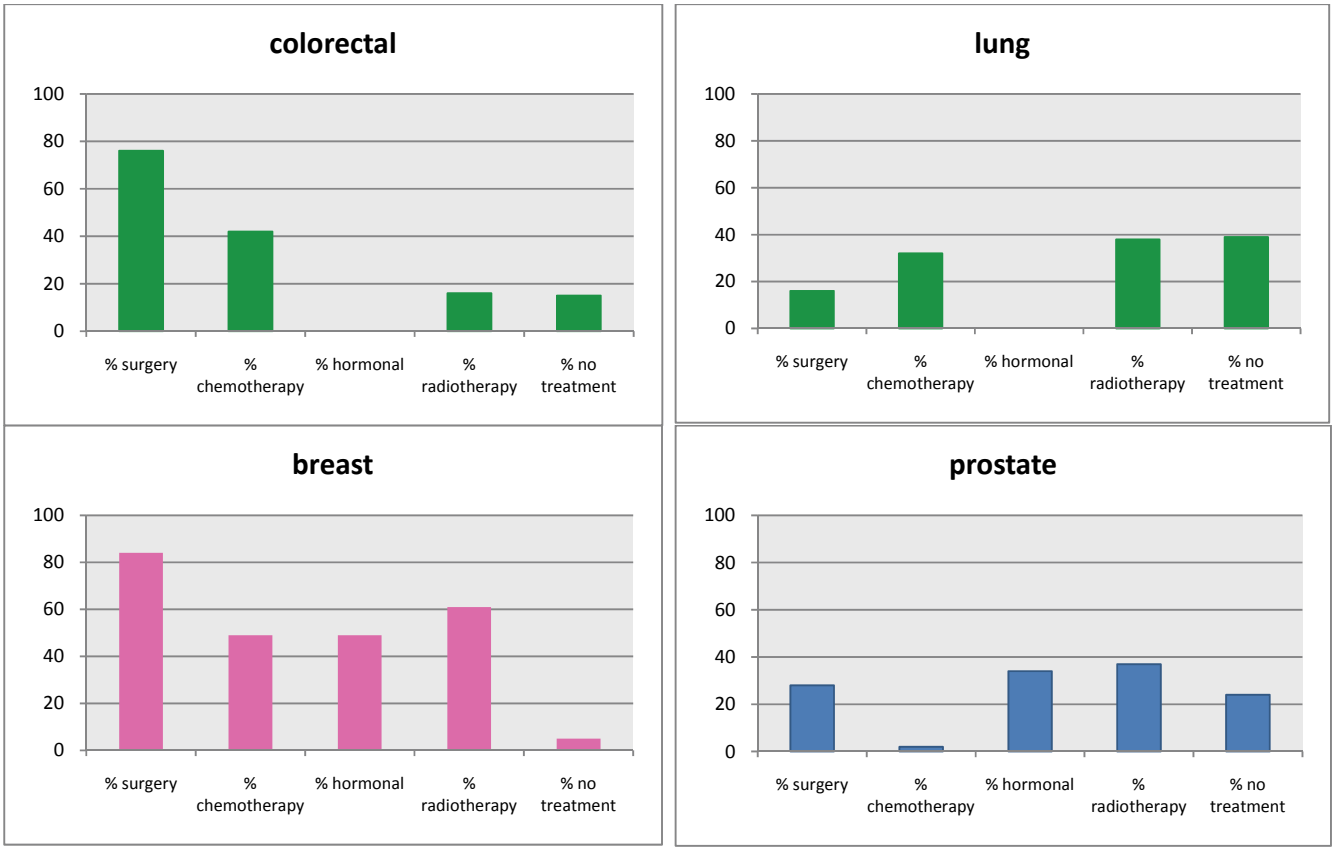
	females		males		total	
	1999 -2003	2004 -2008	1999 -2003	2004 -2008	1999 -2003	2004 -2008
all cancers*						
% surgery	56	57	39	38	47	47
% chemotherapy	32	36	21	25	26	30
% hormone therapy	15	16	11	11	13	13
% radiotherapy	32	33	24	28	28	31
% no treatment	26	23	31	28	29	25
lung						
% surgery	13	15	12	12	14	16
% chemotherapy	19	32	20	32	19	32
% hormone therapy	0	0	0	0	0	0
% radiotherapy	33	37	37	39	35	38
% no treatment	49	39	45	39	47	39
prostate						
% surgery	–	–	37	28	37	28
% chemotherapy	–	–	2	2	2	2
% hormone therapy	–	–	40	34	40	34
% radiotherapy	–	–	24	37	24	37
% no treatment	–	–	22	24	22	24
colorectal						
% surgery	73	76	76	77	75	76
% chemotherapy	33	39	40	44	36	42
% hormone therapy	0	0	0	0	0	0
% radiotherapy	13	13	19	19	16	16
% no treatment	20	16	16	13	18	15
breast						
% surgery	85	84	90	92	85	84
% chemotherapy	49	49	37	32	49	49
% hormone therapy	48	49	37	60	47	49
% radiotherapy	61	61	42	60	61	61
% no treatment	5	5	7	2	5	5

*all invasive cancers excluding non-melanoma skin cancer

Surgery was the most common modality of treatment for invasive cancers overall, with almost half of all diagnosed cases having had tumour directed surgery in both 1999-03 and 2004-08 (Table 13). Over one quarter of all cancer cases did not receive any tumour directed treatment within 12 months of diagnosis.

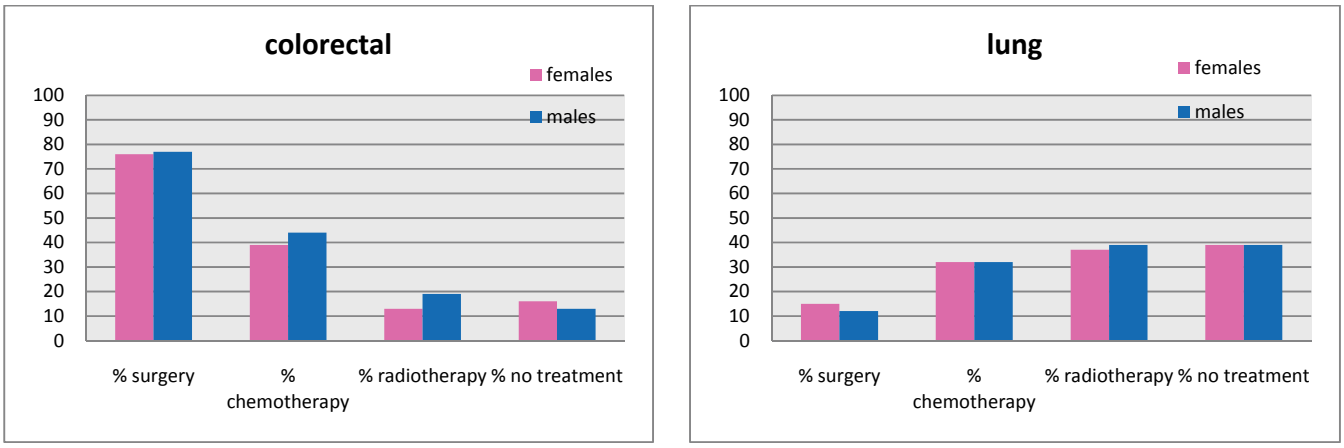
Treatments varied considerably depending on the cancer site. Figure 23 displays the treatments received by patients for the four most common cancers. Hormonal therapy was mainly used for breast and prostate cancer and in 2004-2008; the percentages receiving this treatment for these cancers was 49% and 34% respectively. Surgery was performed on 84% of breast and 76% of colorectal cancer patients. A high proportion of breast cancer patients also received chemotherapy (49%), hormonal therapy (49%) and radiotherapy (61%) indicating a combination of treatments has been received by these patients. The proportion not receiving cancer-directed treatment was lowest for breast cancer at 5% and highest for lung cancer at 39%.

Figure 23: Cancer-directed treatments for the period 2004-2008



In the period 2004-2008, 38% of women received chemotherapy for colorectal cancer, compared to 44% of men (Figure 24). In the same period, 13% of women received radiotherapy as compared to 19% of men. The proportion (16%) of women who did not receive treatment was higher than that for men (13%). In contrast, for lung cancer, the percentages' receiving the various treatments was similar though surgery was performed on more women (15%) in 2004-2008 than men (12%).

Figure 24: Comparison of treatments received by colorectal and lung cancer patients, 2004-2008



9.1 Treatment by age-group

Table 14 shows the percentages of patients receiving various treatments by three age groups for invasive cancers and separately for the four major cancers – lung, prostate, colorectal and breast (Figure 25).

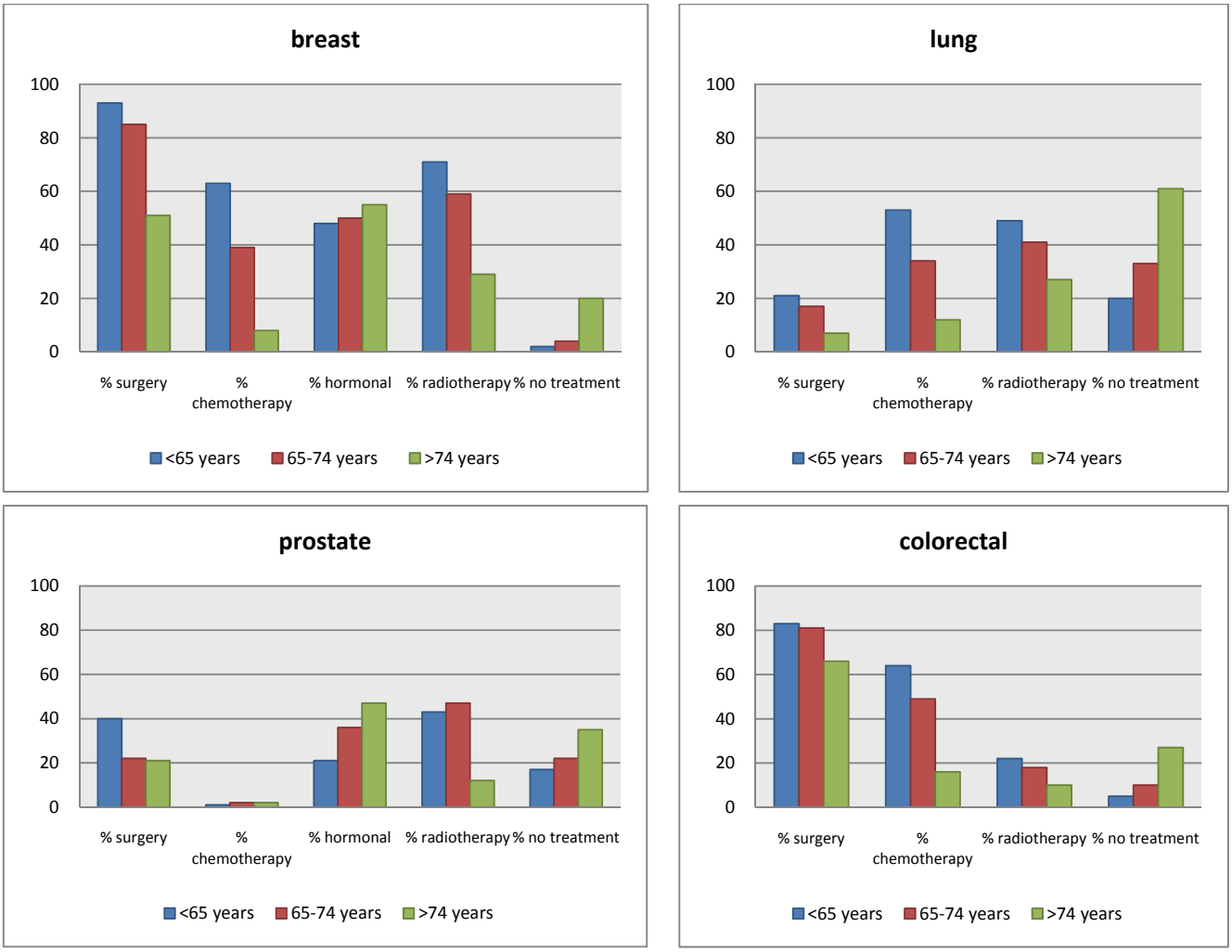
The proportion receiving a cancer directed treatment in general decreased with age, e.g. the proportion not receiving treatment for lung cancer in the over 74s was treble the proportion not receiving treatment in the under 65s. However there were some exceptions to this. The percentage of patients who received hormonal treatment for breast and prostate cancer increased with age. A higher proportion of prostate cancer patients in the 65-74 age group received radiotherapy than the under 65s and surgery was almost as likely to be performed on those in the over 74 age group as the 65-74 age-group.

Table 14: Treatments by age-group, 2004-2008

	<65 years	65-74 years	>74 years
All cancers*			
% surgery	60	43	31
% chemotherapy	44	29	12
% hormone therapy	13	14	12
% radiotherapy	39	33	15
% no treatment	13	24	46
lung			
% surgery	21	17	7
% chemotherapy	53	34	12
% hormone therapy	0	0	0
% radiotherapy	49	41	27
% no treatment	20	33	61
prostate			
% surgery	40	22	21
% chemotherapy	1	2	2
% hormone therapy	21	36	47
% radiotherapy	43	47	12
% no treatment	17	22	35
colorectal			
% surgery	83	81	66
% chemotherapy	64	49	16
% hormone therapy	0	0	0
% radiotherapy	22	18	10
% no treatment	5	10	27
breast			
% surgery	93	85	51
% chemotherapy	63	39	8
% hormone therapy	48	50	55
% radiotherapy	71	59	29
% no treatment	2	4	20

***all invasive cancers excluding non-melanoma skin cancer**

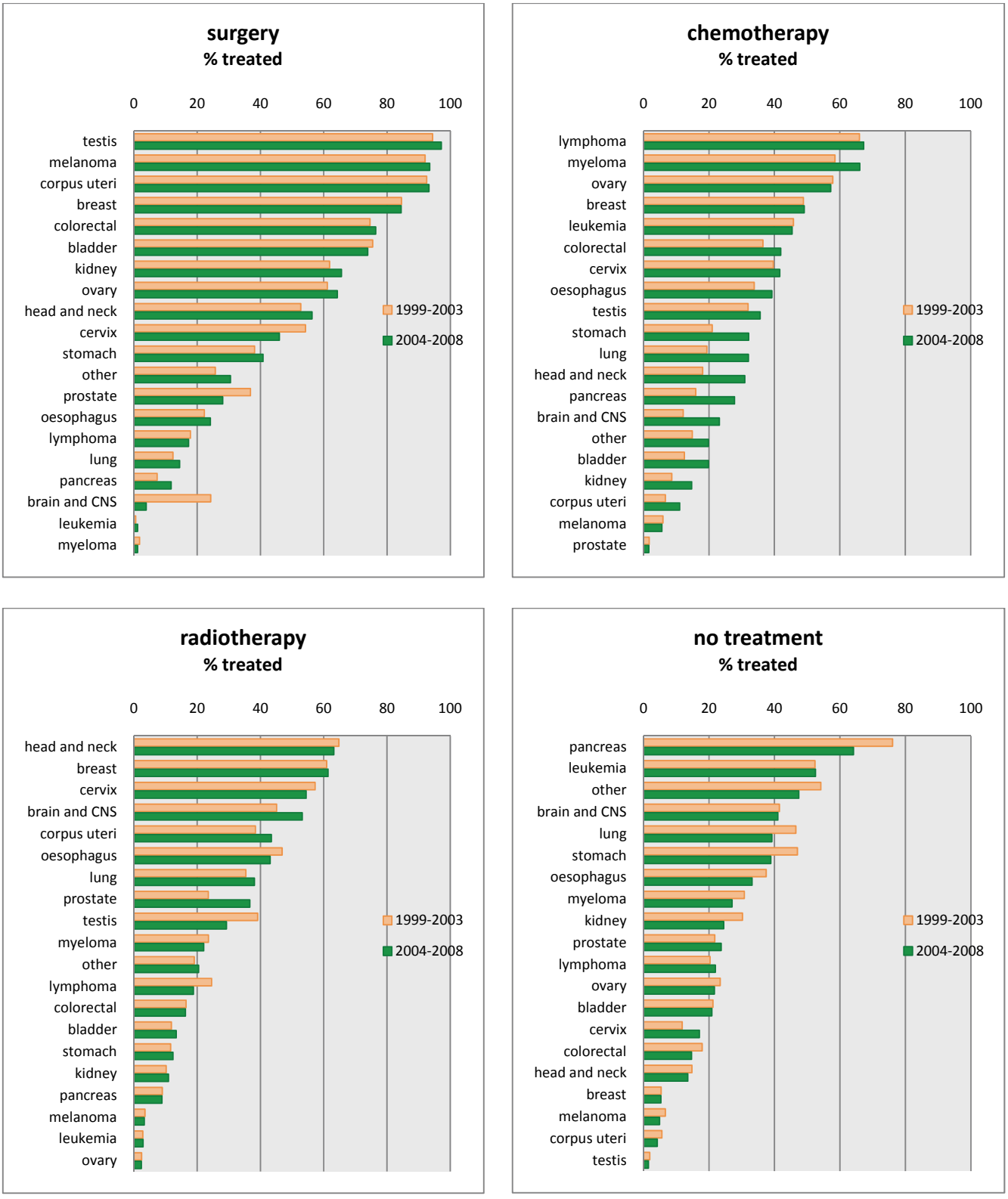
Figure 25: Treatments by age-group for the four principal cancers, 2004-2008



9.2 Treatment by period

While the overall proportion (47%) receiving surgery for all invasive cancers remained static between the periods 1999-2003 and 2004-2008 (Table 13), there were modest increases for many of the cancers and some sharp declines for a few, namely brain and other CNS, prostate and cervix (Figure 26). The percentage of patients receiving chemotherapy treatment rose between periods for most cancers with the largest increases for brain and other CNS, pancreas, head and neck and kidney. The change in percentages receiving radiotherapy between the two periods was variable depending on cancer site. The biggest declines were in testicular cancer (39% to 29%) and lymphoma (25% to 19%) while the largest increases occurred amongst brain and CNS patients (45% to 53%) and prostate (24% to 37%).

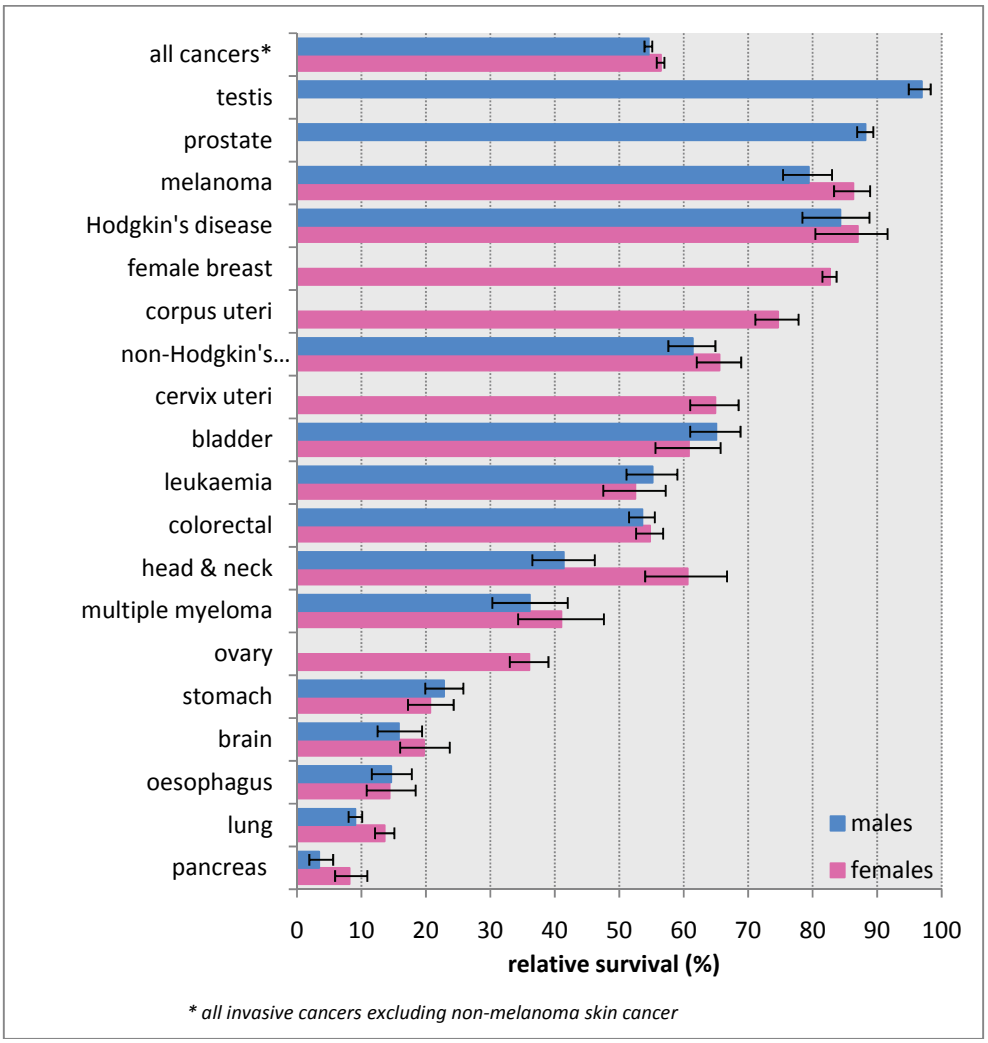
Figure 26: Percentage of invasive cancers treated 1999-2003 and 2004-2008



10. Survival

Figure 27 shows the five-year relative survival (RS) for various cancer types diagnosed during the five-year period 2003-2007. For all invasive cancers combined (excluding NMSC), five-year RS for men and women were 54.6% and 56.5% respectively. Testicular and prostate cancer had the highest survival rates, RS =97% and 88% respectively. Five year survival rates for melanoma and Hodgkin's disease were also over 80% for both sexes, with higher survival rates in females. Cancers of the pancreas, lung, oesophagus, brain and stomach had poor survival for both sexes however, with RS less than 25%.
For most of the cancers which occurred in both sexes, survival was higher in females, with the exception of leukaemia, bladder, stomach and oesophageal cancers where survival was higher for men. The most notable differences between the sexes were in head & neck, melanoma, lung and pancreatic cancers, where 5 year survival in females was statistically significantly higher than for males.

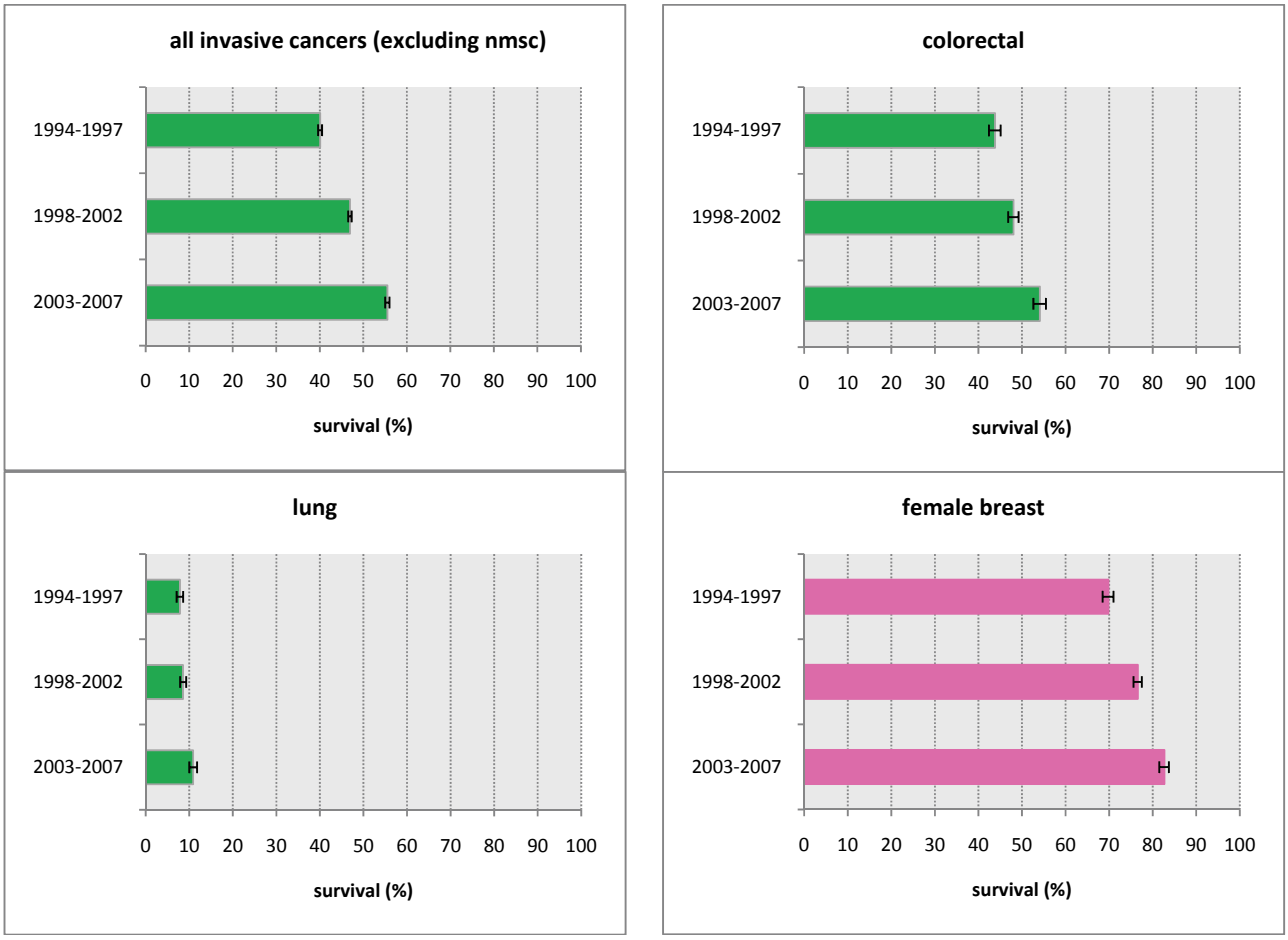
Figure 27: Five-year relative survival for cancers diagnosed in men and women, 2003-2007

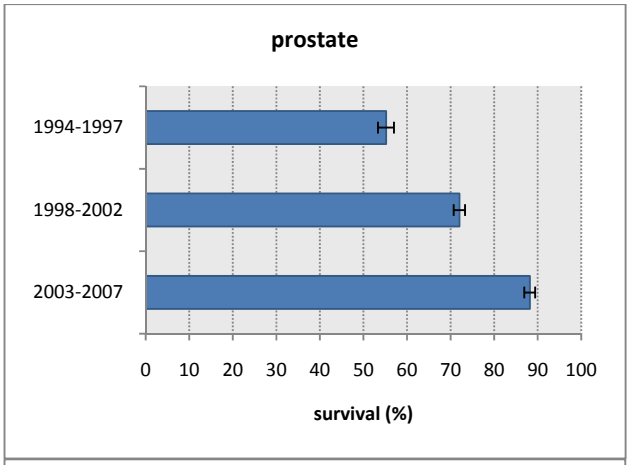


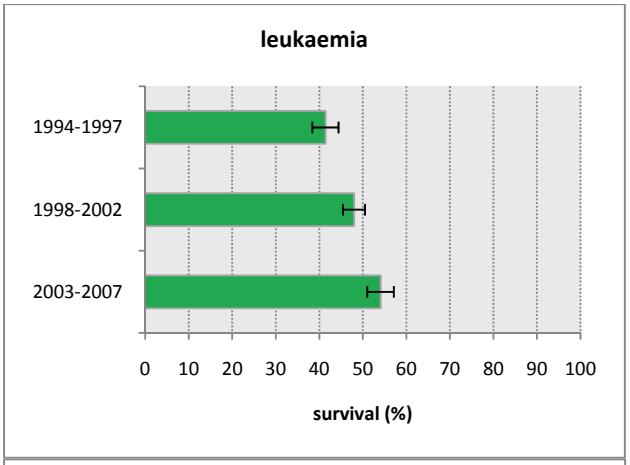
Cancer survival has improved over time. For all cancers combined and for the main four cancer sites (colorectal, lung, female breast and prostate), five-year relative survival has improved significantly between 1994-1997 and 2003-2007 (Figure 28). Prostate cancer survival alone has improved by 60% from 1994-97 and like female breast and colorectal cancer, is likely due to improvements in detection rates resulting in earlier diagnoses as well as improved treatment methods. Cancers of the blood and lymphatic systems have also shown significant improvements in survival over time, particularly for multiple myeloma and non-Hodgkin's lymphoma, whose five-year survival rates have increased by over 60% and 30% respectively since 1994-1997.

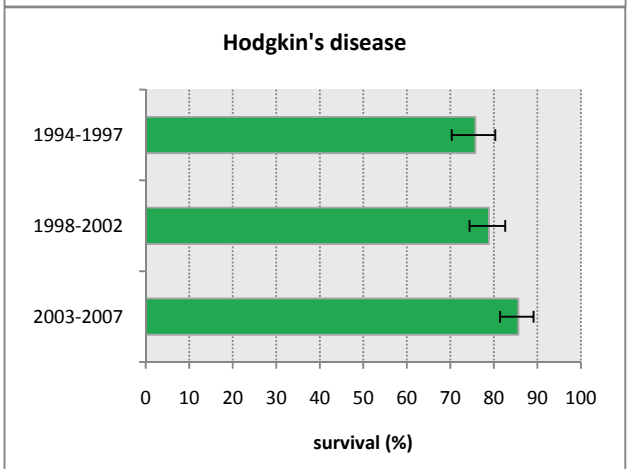
Survival has also improved significantly for cancers which have poor survival rates relative to some others. For example, stomach and lung cancer survival has increased from 15% to 22% and from 8% to 11% respectively between 1994-1997 and 2003-2007. Further detailed information on relative survival by cancer type is available on the registry website (www.ncri.ie).

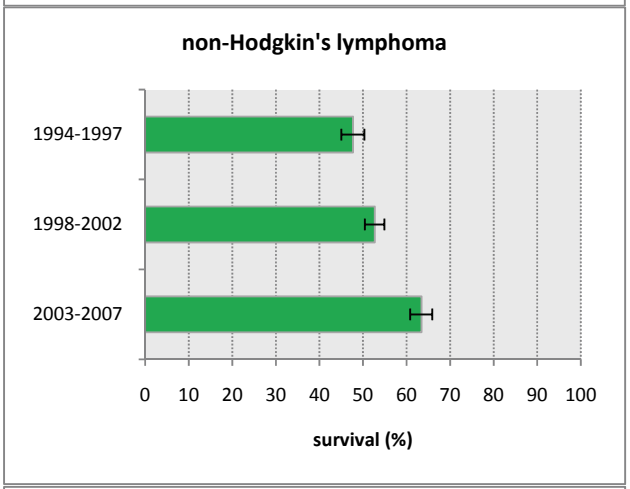
Figure 28: Five-year relative survival for cancers diagnosed during the periods 1994-1997, 1998-2002 and 2003-2007

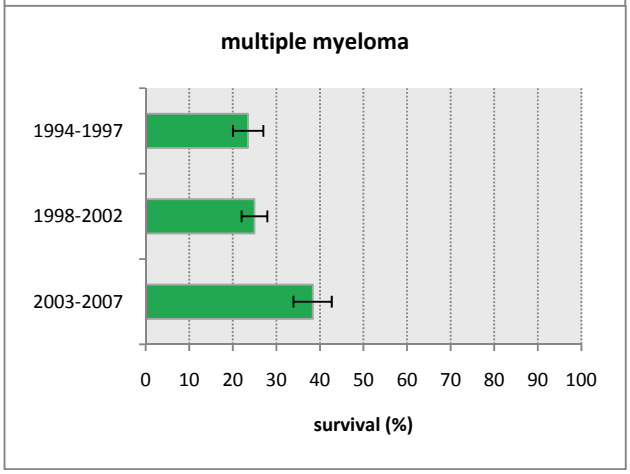



prostate
1994-1997
1998-2002
2003-2007
0 10 20 30 40 50 60 70 80 90 100
survival (%)


leukaemia
1994-1997
1998-2002
2003-2007
0 10 20 30 40 50 60 70 80 90 100
survival (%)


Hodgkin's disease
1994-1997
1998-2002
2003-2007
0 10 20 30 40 50 60 70 80 90 100
survival (%)


non-Hodgkin's lymphoma
1994-1997
1998-2002
2003-2007
0 10 20 30 40 50 60 70 80 90 100
survival (%)


multiple myeloma
1994-1997
1998-2002
2003-2007
0 10 20 30 40 50 60 70 80 90 100
survival (%)

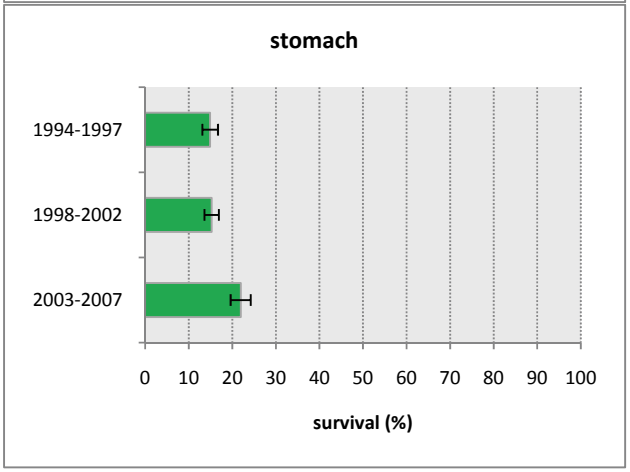
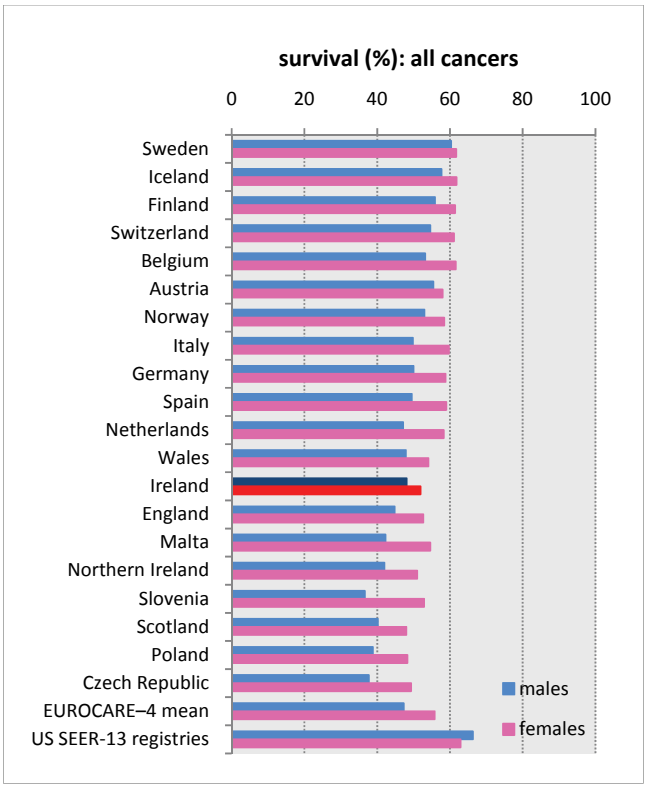
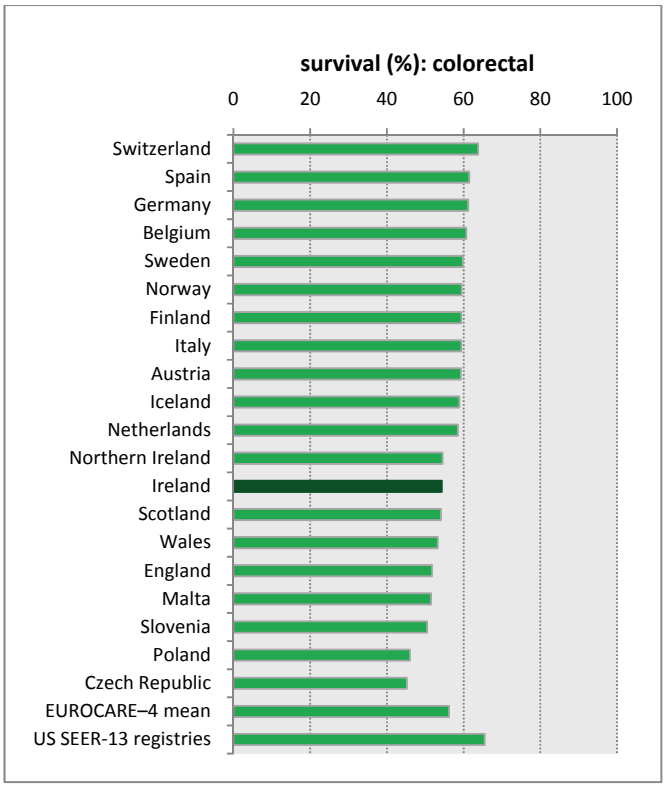
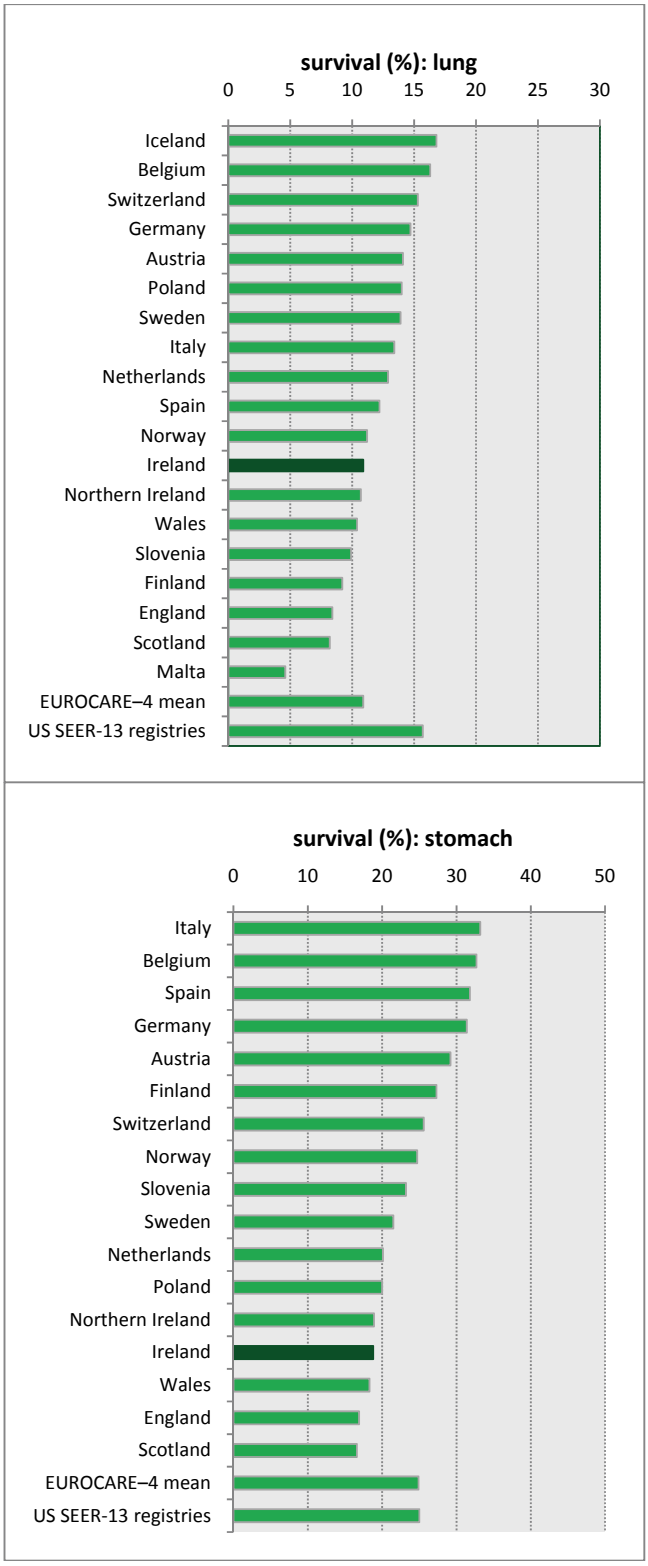

stomach
1994-1997
1998-2002
2003-2007
0 10 20 30 40 50 60 70 80 90 100
survival (%)

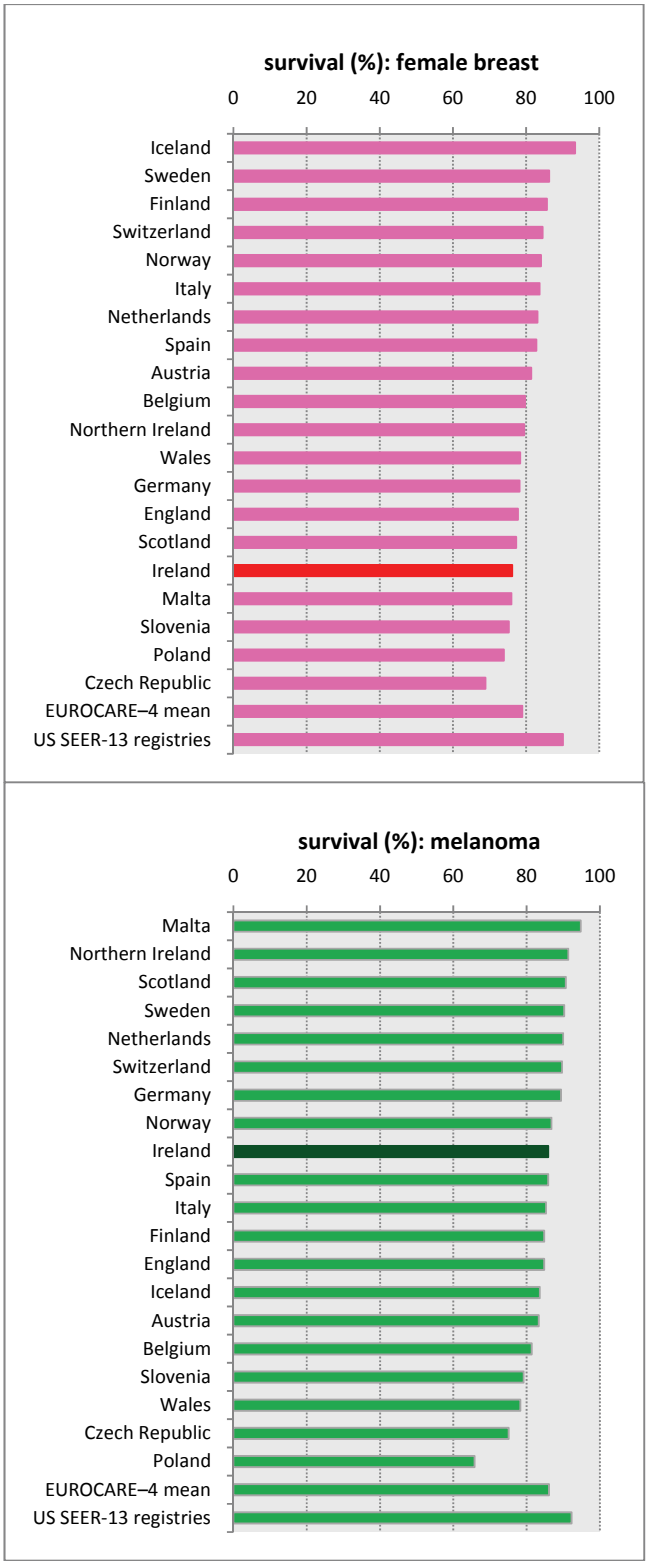
Figure 29 illustrates five-year relative survival by country/region for all cancers and for a number of the more commonly diagnosed cancers between 2000 and 2002 (EUROCARE, period analysis[12]). For all malignant cancers combined, Ireland ranked 13th highest of 20 countries listed, 16th for females and 11th for males. Survival rate for colorectal cancer in Ireland ranked 13th overall and was 3% below the EUROCARE average rate. The rate of lung cancer survival in Ireland was equal to the overall EUROCARE average rate and ranked 12th of 19 countries. Female breast cancer survival in Ireland was 4% below the EUROCARE average and ranked 16th out of 20 countries. Although survival from stomach cancer in Ireland was poor in relation to other European countries, ranking 14th of 17 countries, survival from melanoma of skin in Ireland at 86% was almost identical to the EUROCARE average and ranked Ireland as 9th of 20 countries listed.

Figure 29: Age adjusted five-year relative survival for all cancers and for specified cancers in Ireland and other countries/regions, EUROCARE period analysis; 2000-2002






survival (%): lung
0
5
10
15
20
25
30
Iceland
Belgium
Switzerland
Germany
Austria
Poland
Sweden
Italy
Netherlands
Spain
Norway
Ireland
Northern Ireland
Wales
Slovenia
Finland
England
Scotland
Malta
EUROCARE–4 mean
US SEER-13 registries


survival (%): female breast
0
20
40
60
80
100
Iceland
Sweden
Finland
Switzerland
Norway
Italy
Netherlands
Spain
Austria
Belgium
Northern Ireland
Wales
Germany
England
Scotland
Ireland
Malta
Slovenia
Poland
Czech Republic
EUROCARE–4 mean
US SEER-13 registries

survival (%): stomach
0
10
20
30
40
50
Italy
Belgium
Spain
Germany
Austria
Finland
Switzerland
Norway
Slovenia
Sweden
Netherlands
Poland
Northern Ireland
Ireland
Wales
England
Scotland
EUROCARE–4 mean
US SEER-13 registries

survival (%): melanoma
0
20
40
60
80
100
Malta
Northern Ireland
Scotland
Sweden
Netherlands
Switzerland
Germany
Norway
Ireland
Spain
Italy
Finland
England
Iceland
Austria
Belgium
Slovenia
Wales
Czech Republic
Poland
EUROCARE–4 mean
US SEER-13 registries

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Appendix: Tables

Table A1: Summary table - cancer incidence 2007-2009

* all invasive cancers excluding non-melanoma skin C00-C43, C45-C96

EASR: cases per 100,000 per year, standardized to the European population

	females					males					total				
Cancer (ICD10 code)	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75
invasive cancers:															
lip (C00)	3	0.04%	0.02%	0.13	0.01	20	0.22%	0.14%	1.00	0.07	23	0.13%	0.08%	0.53	0.04
base of tongue (C01)	4	0.05%	0.03%	0.19	0.01	17	0.18%	0.12%	0.87	0.09	21	0.12%	0.07%	0.53	0.05
other tongue (C02)	24	0.29%	0.16%	1.08	0.08	31	0.33%	0.22%	1.55	0.13	55	0.32%	0.19%	1.30	0.11
gum (C03)	8	0.10%	0.05%	0.34	0.03	9	0.10%	0.07%	0.47	0.04	17	0.10%	0.06%	0.41	0.04
floor of mouth (C04)	7	0.08%	0.04%	0.30	0.03	18	0.19%	0.13%	0.94	0.09	25	0.14%	0.08%	0.61	0.06
palate (C05)	7	0.09%	0.05%	0.32	0.03	11	0.12%	0.08%	0.58	0.06	19	0.11%	0.06%	0.45	0.04
other mouth (C06)	11	0.13%	0.07%	0.45	0.03	12	0.13%	0.08%	0.61	0.05	23	0.13%	0.08%	0.53	0.04
parotid (C07)	9	0.11%	0.06%	0.38	0.02	20	0.22%	0.14%	1.01	0.08	30	0.17%	0.10%	0.66	0.05
other salivary (C08)	3	0.04%	0.02%	0.14	0.01	3	0.03%	0.02%	0.15	0.01	6	0.03%	0.02%	0.14	0.01
tonsil (C09)	10	0.12%	0.06%	0.47	0.04	27	0.30%	0.19%	1.39	0.11	37	0.21%	0.12%	0.92	0.08
oropharynx (C10)	2	0.02%	0.01%	0.10	0.01	7	0.07%	0.05%	0.35	0.03	9	0.05%	0.03%	0.22	0.02
nasopharynx (C11)	3	0.04%	0.02%	0.13	0.01	10	0.10%	0.07%	0.48	0.04	13	0.07%	0.04%	0.31	0.02
pyriform (C12)	3	0.03%	0.02%	0.11	0.01	17	0.19%	0.12%	0.88	0.09	20	0.11%	0.07%	0.49	0.05
hypopharynx (C13)	5	0.06%	0.03%	0.25	0.03	10	0.10%	0.07%	0.50	0.05	15	0.09%	0.05%	0.37	0.04
other mouth/ pharynx (C14)	2	0.02%	0.01%	0.09	0.01	13	0.14%	0.09%	0.68	0.06	15	0.09%	0.05%	0.37	0.03
head & neck (C01-C14)	*98*	*1.19%*	*0.64%*	*4.34*	*0.35*	*206*	*2.22%*	*1.44%*	*10.47*	*0.91*	*304*	*1.73%*	*1.02%*	*7.31*	*0.63*
oesophagus (C15)	133	1.61%	0.86%	5.41	0.39	255	2.75%	1.78%	12.83	1.01	388	2.21%	1.30%	8.94	0.70
stomach (C16)	184	2.23%	1.20%	7.40	0.53	296	3.19%	2.06%	14.78	1.14	480	2.74%	1.61%	10.79	0.83
small intestine (C17)	24	0.29%	0.16%	1.04	0.08	32	0.34%	0.22%	1.58	0.12	56	0.32%	0.19%	1.29	0.10
colon (C18)	665	8.03%	4.31%	28.01	2.19	812	8.77%	5.67%	40.76	3.11	1477	8.42%	4.96%	33.76	2.64

	females					males					total				
Cancer (ICD10 code)	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75
rectosigmoid (C19)	59	0.71%	0.38%	2.56	0.19	101	1.09%	0.71%	5.08	0.41	160	0.91%	0.54%	3.71	0.30
rectum (C20)	196	2.37%	1.27%	8.38	0.64	399	4.31%	2.79%	20.02	1.63	595	3.39%	2.00%	13.89	1.13
anus (C21)	23	0.28%	0.15%	1.07	0.09	15	0.16%	0.10%	0.73	0.05	38	0.22%	0.13%	0.89	0.07
colorectal (C18-C21)	*943*	*11.39%*	*6.12%*	*40.02*	*3.09*	*1327*	*14.33%*	*9.26%*	*66.59*	*5.12*	*2270*	*12.94%*	*7.63%*	*52.25*	*4.09*
liver (C22)	62	0.75%	0.40%	2.48	0.17	120	1.30%	0.84%	6.04	0.50	182	1.04%	0.61%	4.20	0.33
gallbladder (C23)	35	0.42%	0.22%	1.41	0.10	11	0.12%	0.08%	0.57	0.04	46	0.26%	0.15%	1.02	0.07
other biliary (C24)	35	0.43%	0.23%	1.38	0.10	43	0.47%	0.30%	2.16	0.16	79	0.45%	0.26%	1.73	0.13
pancreas (C25)	214	2.59%	1.39%	8.61	0.63	230	2.49%	1.61%	11.68	0.90	444	2.53%	1.49%	10.07	0.76
other digestive (C26)	19	0.23%	0.12%	0.66	0.02	16	0.17%	0.11%	0.81	0.05	35	0.20%	0.12%	0.73	0.03
nasal cavity/ middle ear (C30)	7	0.08%	0.05%	0.32	0.03	5	0.06%	0.04%	0.26	0.02	12	0.07%	0.04%	0.29	0.02
sinuses (C31)	3	0.04%	0.02%	0.14	0.01	5	0.05%	0.03%	0.24	0.02	8	0.05%	0.03%	0.19	0.02
larynx (C32)	22	0.26%	0.14%	1.00	0.08	125	1.35%	0.87%	6.30	0.54	146	0.83%	0.49%	3.54	0.31
trachea (C33)	1	0.02%	0.01%	0.07	0.01	2	0.02%	0.01%	0.09	0.01	3	0.02%	0.01%	0.08	0.01
lung (C34)	782	9.45%	5.07%	33.82	2.74	1128	12.18%	7.87%	56.61	4.34	1910	10.89%	6.42%	44.08	3.53
thymus (C37)	1	0.02%	0.01%	0.05	0.00	4	0.05%	0.03%	0.22	0.02	6	0.03%	0.02%	0.13	0.01
mediastinum (C38)	7	0.08%	0.04%	0.29	0.03	12	0.13%	0.09%	0.62	0.04	19	0.11%	0.06%	0.43	0.04
other chest (C39)	0	0.00%	0.00%	0.00	0.00	1	0.01%	0.00%	0.04	0.00	1	0.00%	0.00%	0.02	0.00
bones, joints of limbs (C40)	5	0.06%	0.03%	0.22	0.01	8	0.09%	0.06%	0.36	0.03	13	0.07%	0.04%	0.29	0.02
bones, joints head and trunk (C41)	10	0.12%	0.06%	0.41	0.03	13	0.14%	0.09%	0.60	0.05	23	0.13%	0.08%	0.51	0.04
melanoma skin (C43)	392	4.74%	2.54%	17.01	1.33	327	3.53%	2.29%	16.10	1.21	720	4.10%	2.42%	16.37	1.27
non-melanoma skin (C44)	3345	–	21.69%	140.73	10.25	3987	–	27.84%	199.49	14.24	7333	–	24.65%	166.98	12.21
mesothelioma (C45)	4	0.05%	0.03%	0.16	0.01	27	0.29%	0.19%	1.34	0.12	31	0.17%	0.10%	0.72	0.06
Kaposi's sarcoma (C46)	1	0.01%	0.01%	0.04	0.00	5	0.05%	0.03%	0.21	0.02	6	0.03%	0.02%	0.12	0.01
peripheral nerves (C47)	6	0.07%	0.04%	0.26	0.02	4	0.05%	0.03%	0.20	0.01	10	0.06%	0.03%	0.23	0.01
peritoneum (C48)	17	0.20%	0.11%	0.75	0.07	6	0.06%	0.04%	0.29	0.03	23	0.13%	0.08%	0.54	0.05

	females					males					total				
Cancer (ICD10 code)	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75
connective tissues (C49)	41	0.50%	0.27%	1.81	0.14	63	0.68%	0.44%	3.03	0.24	104	0.59%	0.35%	2.37	0.19
breast (C50)	2673	32.29%	17.33%	125.42	9.97	20	0.21%	0.14%	1.00	0.07	2692	15.35%	9.05%	64.59	5.18
vulva (C51)	46	0.55%	0.30%	1.90	0.14	–	–	–	–	–	46	0.26%	0.15%	1.02	0.07
vagina (C52)	10	0.12%	0.07%	0.45	0.03	–	–	–	–	–	10	0.06%	0.03%	0.24	0.02
cervix (C53)	287	3.46%	1.86%	12.88	1.00	–	–	–	–	–	287	1.63%	0.96%	6.47	0.50
corpus uteri (C54)	356	4.30%	2.31%	16.97	1.52	–	–	–	–	–	356	2.03%	1.20%	8.70	0.77
uterus NOS (C55)	29	0.35%	0.19%	1.29	0.10	–	–	–	–	–	29	0.17%	0.10%	0.67	0.05
ovary (C56)	315	3.80%	2.04%	14.37	1.20	–	–	–	–	–	315	1.79%	1.06%	7.43	0.61
other female genital (C57)	12	0.14%	0.08%	0.51	0.04	–	–	–	–	–	12	0.07%	0.04%	0.27	0.02
placenta (C58)	2	0.02%	0.01%	0.08	0.01	–	–	–	–	–	2	0.01%	0.01%	0.04	0.00
penis (C60)	–	–	–	–	–	24	0.26%	0.17%	1.20	0.10	24	0.13%	0.08%	0.57	0.05
prostate (C61)	–	–	–	–	–	2748	29.68%	19.19%	140.05	11.88	2748	15.67%	9.24%	66.31	6.04
testis (C62)	–	–	–	–	–	166	1.79%	1.16%	6.78	0.49	166	0.94%	0.56%	3.40	0.25
other male genital (C63)	–	–	–	–	–	2	0.03%	0.02%	0.12	0.01	2	0.01%	0.01%	0.05	0.00
kidney (C64)	156	1.88%	1.01%	7.00	0.58	278	3.00%	1.94%	13.81	1.15	434	2.47%	1.46%	10.27	0.86
renal pelvis (C65)	5	0.06%	0.03%	0.21	0.02	10	0.10%	0.07%	0.49	0.03	15	0.08%	0.05%	0.34	0.03
ureter (C66)	5	0.06%	0.03%	0.18	0.01	10	0.11%	0.07%	0.51	0.04	15	0.08%	0.05%	0.34	0.03
bladder (C67)	134	1.62%	0.87%	5.41	0.37	309	3.34%	2.16%	15.54	1.03	443	2.53%	1.49%	9.87	0.69
other urinary (C68)	3	0.03%	0.02%	0.11	0.01	3	0.03%	0.02%	0.13	0.01	5	0.03%	0.02%	0.12	0.01
eye (C69)	20	0.24%	0.13%	0.85	0.07	20	0.22%	0.14%	1.01	0.08	40	0.23%	0.13%	0.94	0.08
meninges (C70)	4	0.05%	0.03%	0.16	0.01	5	0.06%	0.04%	0.25	0.02	10	0.06%	0.03%	0.21	0.01
brain (C71)	129	1.56%	0.84%	5.76	0.47	182	1.97%	1.27%	8.94	0.77	311	1.78%	1.05%	7.32	0.62
spinal cord (C72)	6	0.07%	0.04%	0.27	0.02	4	0.04%	0.03%	0.20	0.01	10	0.06%	0.03%	0.23	0.01
thyroid (C73)	107	1.29%	0.69%	4.77	0.37	36	0.39%	0.25%	1.73	0.14	143	0.82%	0.48%	3.26	0.26
adrenal (C74)	5	0.06%	0.03%	0.26	0.02	6	0.06%	0.04%	0.29	0.02	11	0.06%	0.04%	0.27	0.02
other endocrine (C75)	4	0.05%	0.03%	0.18	0.01	5	0.05%	0.03%	0.22	0.02	9	0.05%	0.03%	0.20	0.01

	females					males					total				
Cancer (ICD10 code)	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75
ill-defined site (C76)	11	0.13%	0.07%	0.42	0.03	6	0.07%	0.04%	0.33	0.02	17	0.10%	0.06%	0.37	0.02
lymph nodes (C77)	8	0.10%	0.05%	0.34	0.03	9	0.10%	0.06%	0.43	0.03	17	0.10%	0.06%	0.39	0.03
unknown primary site (C80)	246	2.97%	1.59%	9.76	0.70	257	2.77%	1.79%	12.86	0.87	502	2.86%	1.69%	11.12	0.78
Hodgkin's disease (C81)	49	0.59%	0.32%	2.17	0.16	64	0.69%	0.45%	2.94	0.24	113	0.64%	0.38%	2.54	0.20
follicular non-Hodgkin's lymphoma (C82)	65	0.79%	0.42%	3.03	0.27	65	0.70%	0.45%	3.21	0.28	130	0.74%	0.44%	3.12	0.28
diffuse non-Hodgkin's lymphoma (C83)	101	1.22%	0.66%	4.35	0.34	128	1.38%	0.89%	6.25	0.49	229	1.31%	0.77%	5.26	0.41
peripheral and cutaneous T cell lymphoma (C84)	18	0.22%	0.12%	0.80	0.06	30	0.32%	0.21%	1.43	0.11	48	0.27%	0.16%	1.10	0.08
other and unspecified NHL (C85)	94	1.14%	0.61%	4.01	0.29	98	1.05%	0.68%	4.83	0.36	192	1.09%	0.64%	4.38	0.32
lymphoma (total) (C81-C85)	*327*	*3.95%*	*2.12%*	*14.36*	*1.12*	*384*	*4.14%*	*2.68%*	*18.65*	*1.47*	*711*	*4.05%*	*2.39%*	*16.40*	*1.29*
non-Hodgkin's lymphoma (C82-C85)	*279*	*3.37%*	*1.81%*	*12.18*	*0.96*	*320*	*3.45%*	*2.23%*	*15.72*	*1.23*	*598*	*3.41%*	*2.01%*	*13.85*	*1.09*
malignant immunoproliferative disease (C88)	4	0.05%	0.03%	0.18	0.01	7	0.07%	0.05%	0.34	0.03	11	0.06%	0.04%	0.26	0.02
multiple myeloma (C90)	87	1.05%	0.56%	3.64	0.29	117	1.26%	0.81%	5.88	0.47	203	1.16%	0.68%	4.66	0.38
lymphoid leukaemia (C91)	68	0.82%	0.44%	3.02	0.26	138	1.49%	0.97%	6.86	0.53	206	1.18%	0.69%	4.81	0.39
myeloid leukaemia (C92)	58	0.70%	0.38%	2.53	0.19	83	0.90%	0.58%	4.06	0.34	141	0.81%	0.48%	3.25	0.27
monocytic leukaemia (C93)	1	0.02%	0.01%	0.06	0.00	1	0.01%	0.01%	0.07	0.00	3	0.02%	0.01%	0.06	0.00
other specified leukaemia (C94)	5	0.06%	0.03%	0.21	0.02	5	0.05%	0.03%	0.21	0.01	9	0.05%	0.03%	0.21	0.02
unspecified leukaemia (C95)	18	0.21%	0.11%	0.65	0.03	25	0.27%	0.17%	1.22	0.07	42	0.24%	0.14%	0.91	0.05
leukaemia (total) (C91-C95)	*150*	*1.81%*	*0.97%*	*6.47*	*0.50*	*252*	*2.72%*	*1.76%*	*12.43*	*0.96*	*402*	*2.29%*	*1.35%*	*9.24*	*0.73*
other lymphoid and haematopoietic (C96)	87	1.05%	0.56%	3.59	0.26	111	1.20%	0.78%	5.56	0.42	198	1.13%	0.67%	4.46	0.34

	females					males					total				
Cancer (ICD10 code)	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75
all invasive excluding non-melanoma skin cancer (C00-C43, C45-C96)	*8278*	*100%*	*53.68%*	*367.01*	*25.60*	*9261*	*100%*	*64.65%*	*463.77*	*31.58*	*17538*	*100%*	*58.96%*	*408.81*	*28.55*
non-invasive cancers:															
in situ oral cavity, oesophagus & stomach (D00)	10	–	0.07%	0.43	0.03	22	–	0.16%	1.12	0.08	33	–	0.11%	0.74	0.05
in situ other digestive (D01)	22	–	0.14%	0.95	0.08	37	–	0.26%	1.84	0.13	59	–	0.20%	1.36	0.10
in situ middle ear and respiratory (D02)	4	–	0.03%	0.19	0.02	18	–	0.13%	0.92	0.08	22	–	0.07%	0.53	0.05
in situ melanoma (D03)	212	–	1.37%	9.60	0.83	155	–	1.08%	7.74	0.63	367	–	1.23%	8.62	0.73
in situ carcinoma of skin (D04)	751	–	4.87%	30.78	2.40	448	–	3.13%	22.53	1.76	1199	–	4.03%	27.06	2.09
in situ breast (D05)	308	–	2.00%	15.30	1.30	2	–	0.01%	0.10	0.01	310	–	1.04%	7.74	0.66
in situ cervix (D06)	2076	–	13.46%	81.87	5.72	0	–	0.00%	0.00	0.00	2076	–	6.98%	40.71	2.88
in situ other genital (D07)	20	–	0.13%	0.91	0.07	49	–	0.34%	2.50	0.24	69	–	0.23%	1.68	0.15
in situ other sites (D09)	25	–	0.16%	1.05	0.09	59	–	0.41%	2.94	0.24	84	–	0.28%	1.93	0.16
benign meninges (D32)	73	–	0.47%	3.27	0.26	25	–	0.17%	1.21	0.10	98	–	0.33%	2.27	0.18
benign brain (D33)	19	–	0.12%	0.89	0.07	14	–	0.10%	0.67	0.05	33	–	0.11%	0.78	0.06
benign endocrine (D35)	24	–	0.15%	1.07	0.09	28	–	0.19%	1.35	0.12	51	–	0.17%	1.20	0.10
uncertain oral and digestive (D37)	32	–	0.21%	1.45	0.12	27	–	0.19%	1.25	0.10	59	–	0.20%	1.34	0.11
uncertain respiratory (D38)	9	–	0.06%	0.41	0.04	6	–	0.04%	0.26	0.02	15	–	0.05%	0.34	0.03
uncertain female genital (D39)	68	–	0.44%	3.19	0.26	0	–	0.00%	0.00	0.00	68	–	0.23%	1.60	0.13
uncertain male genital (D40)	0	–	0.00%	0.00	0.00	1	–	0.01%	0.06	0.01	1	–	0.00%	0.03	0.00
uncertain urinary (D41)	35	–	0.22%	1.52	0.12	83	–	0.58%	4.17	0.35	118	–	0.40%	2.76	0.23

	females					males					total				
Cancer (ICD10 code)	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75	annual average 2007-2009	% of all invasive cancers*	% of all registered cancers	EASR#	cumulative risk of incidence to age 75
uncertain meninges (D42)	2	–	0.02%	0.11	0.01	2	–	0.01%	0.07	0.01	4	–	0.01%	0.09	0.01
uncertain brain and CNS (D43)	13	–	0.08%	0.60	0.04	15	–	0.10%	0.68	0.05	28	–	0.09%	0.64	0.05
uncertain endocrine (D44)	8	–	0.05%	0.39	0.03	7	–	0.05%	0.31	0.02	15	–	0.05%	0.35	0.03
other uncertain lymphoid, haematopoietic (D47)	59	–	0.38%	2.52	0.21	56	–	0.39%	2.75	0.18	115	–	0.39%	2.59	0.20
uncertain other sites (D48)	28	–	0.18%	1.23	0.09	24	–	0.17%	1.17	0.07	52	–	0.17%	1.15	0.08
all non invasive cancers (D00-D48)	*3798*	–	*24.63%*	*157.72*	*11.39*	*1076*	–	*7.51%*	*53.66*	*4.17*	*4874*	–	*16.39%*	*105.52*	*7.84*
all registered cancers (C00-D48)	15421	–	100%	665.46	40.83	14324	–	100%	716.92	43.76	29745	–	100%	681.31	42.19

* all invasive cancers excluding non-melanoma skin C00-C43, C45-C96

EASR: cases per 100,000 per year, standardized to the European population

Table A2: Summary table - cancer mortality 2007

[#] EASR: deaths per 100,000 per year, standardized to the European population

	FEMALES					MALES					TOTAL				
Cancer (ICD10 code)	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75
invasive cancer deaths:															
lip (C00)	0	0.00%	0.00%	0.00	0.00	2	0.05%	0.05%	0.13	0.00	2	0.03%	0.02%	0.04	0.00
base of tongue (C01)	0	0.00%	0.00%	0.00	0.00	3	0.07%	0.07%	0.15	0.01	3	0.04%	0.04%	0.07	0.01
other tongue (C02)	7	0.19%	0.18%	0.30	0.02	18	0.43%	0.42%	0.95	0.09	25	0.32%	0.31%	0.62	0.05
gum (C03)	0	0.00%	0.00%	0.00	0.00	1	0.02%	0.02%	0.06	0.01	1	0.01%	0.01%	0.03	0.00
floor of mouth (C04)	2	0.05%	0.05%	0.09	0.00	0	0.00%	0.00%	0.00	0.00	2	0.03%	0.02%	0.05	0.00
palate (C05)	4	0.11%	0.10%	0.18	0.02	3	0.07%	0.07%	0.17	0.02	7	0.09%	0.09%	0.18	0.02
other mouth (C06)	5	0.13%	0.13%	0.16	0.01	6	0.14%	0.14%	0.32	0.03	11	0.14%	0.14%	0.26	0.02
parotid (C07)	2	0.05%	0.05%	0.05	0.00	7	0.17%	0.16%	0.38	0.01	9	0.11%	0.11%	0.18	0.01
other salivary (C08)	1	0.03%	0.03%	0.05	0.01	0	0.00%	0.00%	0.00	0.00	1	0.01%	0.01%	0.03	0.00
tonsil (C09)	2	0.05%	0.05%	0.10	0.01	10	0.24%	0.23%	0.53	0.06	12	0.15%	0.15%	0.31	0.03
oropharynx (C10)	2	0.05%	0.05%	0.08	0.01	7	0.17%	0.16%	0.37	0.04	9	0.11%	0.11%	0.23	0.02
nasopharynx (C11)	2	0.05%	0.05%	0.08	0.01	7	0.17%	0.16%	0.35	0.03	9	0.11%	0.11%	0.22	0.02
pyriform (C12)	1	0.03%	0.03%	0.05	0.01	8	0.19%	0.19%	0.42	0.04	9	0.11%	0.11%	0.23	0.02
hypopharynx (C13)	5	0.13%	0.13%	0.23	0.02	4	0.10%	0.09%	0.22	0.02	9	0.11%	0.11%	0.22	0.02
other mouth/pharynx (C14)	4	0.11%	0.10%	0.20	0.02	12	0.29%	0.28%	0.63	0.06	16	0.20%	0.20%	0.39	0.04
head & neck (C01-C14)	*37*	*1.00%*	*0.97%*	*1.58*	*0.13*	*86*	*2.06%*	*2.01%*	*4.56*	*0.40*	*123*	*1.56%*	*1.52%*	*3.01*	*0.26*
oesophagus (C15)	120	3.23%	3.15%	4.58	0.27	209	5.01%	4.88%	10.83	0.81	329	4.17%	4.06%	7.55	0.54
stomach (C16)	117	3.15%	3.07%	4.63	0.34	205	4.91%	4.79%	10.54	0.77	322	4.08%	3.98%	7.34	0.56
small intestine (C17)	10	0.27%	0.26%	0.42	0.02	18	0.43%	0.42%	0.85	0.07	28	0.35%	0.35%	0.62	0.04
colon (C18)	213	5.73%	5.58%	8.36	0.55	298	7.14%	6.96%	15.27	0.98	511	6.48%	6.31%	11.39	0.76
rectosigmoid (C19)	82	2.21%	2.15%	3.68	0.31	127	3.04%	2.97%	6.43	0.49	209	2.65%	2.58%	4.87	0.40
rectum (C20)	77	2.07%	2.02%	3.06	0.20	103	2.47%	2.41%	5.33	0.36	180	2.28%	2.22%	4.00	0.28
anus (C21)	5	0.13%	0.13%	0.19	0.02	5	0.12%	0.12%	0.25	0.00	10	0.13%	0.12%	0.21	0.01

	FEMALES					MALES					TOTAL				
Cancer (ICD10 code)	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR#	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR#	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR#	cumulative risk of death to age 75
colorectal (C18-C21)	*377*	*10.14%*	*9.88%*	*15.28*	*1.08*	*533*	*12.77%*	*12.46%*	*27.28*	*1.82*	*910*	*11.53%*	*11.24%*	*20.47*	*1.44*
liver (C22)	93	2.50%	2.44%	3.60	0.23	110	2.64%	2.57%	5.72	0.44	203	2.57%	2.51%	4.65	0.33
gallbladder (C23)	28	0.75%	0.73%	1.14	0.08	6	0.14%	0.14%	0.31	0.02	34	0.43%	0.42%	0.77	0.05
other biliary (C24)	7	0.19%	0.18%	0.29	0.02	7	0.17%	0.16%	0.38	0.04	14	0.18%	0.17%	0.33	0.03
pancreas (C25)	227	6.11%	5.95%	8.81	0.59	237	5.68%	5.54%	12.39	0.90	464	5.88%	5.73%	10.52	0.74
other digestive (C26)	64	1.72%	1.68%	2.21	0.11	48	1.15%	1.12%	2.46	0.16	112	1.42%	1.38%	2.40	0.13
nasal cavity/middle ear (C30)	1	0.03%	0.03%	0.05	0.00	1	0.02%	0.02%	0.05	0.00	2	0.03%	0.02%	0.05	0.00
sinuses (C31)	3	0.08%	0.08%	0.13	0.01	4	0.10%	0.09%	0.19	0.02	7	0.09%	0.09%	0.17	0.01
larynx (C32)	10	0.27%	0.26%	0.41	0.04	69	1.65%	1.61%	3.64	0.27	79	1.00%	0.98%	1.86	0.15
lung (C34)	647	17.41%	16.96%	27.64	2.18	1014	24.29%	23.70%	52.25	4.05	1661	21.05%	20.52%	38.85	3.10
thymus (C37)	3	0.08%	0.08%	0.12	0.01	2	0.05%	0.05%	0.11	0.02	5	0.06%	0.06%	0.12	0.01
mediastinum (C38)	4	0.11%	0.10%	0.16	0.01	3	0.07%	0.07%	0.17	0.00	7	0.09%	0.09%	0.16	0.01
bones, joints of limbs (C40)	2	0.05%	0.05%	0.06	0.00	4	0.10%	0.09%	0.19	0.01	6	0.08%	0.07%	0.13	0.01
bones, joints head and trunk (C41)	8	0.22%	0.21%	0.35	0.03	11	0.26%	0.26%	0.58	0.04	19	0.24%	0.23%	0.45	0.03
melanoma skin (C43)	49	1.32%	1.28%	2.13	0.15	56	1.34%	1.31%	2.73	0.21	105	1.33%	1.30%	2.40	0.18
non-melanoma skin (C44)	32	0.86%	0.84%	1.07	0.05	37	0.89%	0.86%	1.94	0.04	69	0.87%	0.85%	1.39	0.04
mesothelioma (C45)	2	0.05%	0.05%	0.10	0.01	18	0.43%	0.42%	0.94	0.08	20	0.25%	0.25%	0.48	0.05
peripheral nerves (C47)	1	0.03%	0.03%	0.05	0.00	0	0.00%	0.00%	0.00	0.00	1	0.01%	0.01%	0.02	0.00
peritoneum (C48)	9	0.24%	0.24%	0.39	0.03	3	0.07%	0.07%	0.17	0.01	12	0.15%	0.15%	0.28	0.02
connective tissues (C49)	17	0.46%	0.45%	0.74	0.07	18	0.43%	0.42%	0.94	0.09	35	0.44%	0.43%	0.85	0.08
breast (C50)	611	16.44%	16.02%	27.16	2.15	3	0.07%	0.07%	0.14	0.01	614	7.78%	7.59%	14.45	1.10
vulva (C51)	18	0.48%	0.47%	0.69	0.04	–	–	–	–	–	18	0.23%	0.22%	0.39	0.02
vagina (C52)	8	0.22%	0.21%	0.28	0.01	–	–	–	–	–	8	0.10%	0.10%	0.16	0.01
cervix (C53)	85	2.29%	2.23%	3.98	0.32	–	–	–	–	–	85	1.08%	1.05%	2.05	0.16
corpus uteri (C54)	67	1.80%	1.76%	2.97	0.27	–	–	–	–	–	67	0.85%	0.83%	1.58	0.14
uterus NOS (C55)	14	0.38%	0.37%	0.55	0.04	–	–	–	–	–	14	0.18%	0.17%	0.31	0.02

	FEMALES					MALES					TOTAL				
Cancer (ICD10 code)	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR#	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR#	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR#	cumulative risk of death to age 75
ovary (C56)	269	7.24%	7.05%	12.20	1.10	–	–	–	–	–	269	3.41%	3.32%	6.43	0.56
other female genital (C57)	6	0.16%	0.16%	0.24	0.01	–	–	–	–	–	6	0.08%	0.07%	0.14	0.00
placenta (C58)	1	0.03%	0.03%	0.04	0.00	–	–	–	–	–	1	0.01%	0.01%	0.02	0.00
penis (C60)	–	–	–	–	–	9	0.22%	0.21%	0.45	0.04	9	0.11%	0.11%	0.22	0.02
prostate (C61)	–	–	–	–	–	512	12.27%	11.97%	26.49	1.06	512	6.49%	6.33%	10.65	0.52
testis (C62)	–	–	–	–	–	5	0.12%	0.12%	0.25	0.02	5	0.06%	0.06%	0.12	0.01
kidney (C64)	62	1.67%	1.63%	2.57	0.20	100	2.40%	2.34%	5.08	0.38	162	2.05%	2.00%	3.72	0.29
ureter (C66)	1	0.03%	0.03%	0.05	0.01	1	0.02%	0.02%	0.04	0.00	2	0.03%	0.02%	0.04	0.00
bladder (C67)	57	1.53%	1.49%	2.20	0.15	113	2.71%	2.64%	5.87	0.28	170	2.15%	2.10%	3.67	0.21
other urinary (C68)	3	0.08%	0.08%	0.10	0.01	5	0.12%	0.12%	0.26	0.01	8	0.10%	0.10%	0.17	0.01
eye (C69)	5	0.13%	0.13%	0.21	0.01	4	0.10%	0.09%	0.21	0.02	9	0.11%	0.11%	0.22	0.02
meninges (C70)	3	0.08%	0.08%	0.10	0.00	0	0.00%	0.00%	0.00	0.00	3	0.04%	0.04%	0.06	0.00
brain (C71)	108	2.91%	2.83%	4.81	0.39	125	2.99%	2.92%	6.46	0.56	233	2.95%	2.88%	5.60	0.47
spinal cord (C72)	0	0.00%	0.00%	0.00	0.00	2	0.05%	0.05%	0.11	0.01	2	0.03%	0.02%	0.05	0.00
thyroid (C73)	13	0.35%	0.34%	0.52	0.03	11	0.26%	0.26%	0.56	0.05	24	0.30%	0.30%	0.55	0.04
adrenal (C74)	5	0.13%	0.13%	0.24	0.01	1	0.02%	0.02%	0.06	0.01	6	0.08%	0.07%	0.15	0.01
other endocrine (C75)	2	0.05%	0.05%	0.08	0.00	2	0.05%	0.05%	0.10	0.00	4	0.05%	0.05%	0.09	0.00
ill-defined site (C76)	23	0.62%	0.60%	0.88	0.04	13	0.31%	0.30%	0.68	0.03	36	0.46%	0.44%	0.79	0.04
unknown primary site (C80)	200	5.38%	5.24%	7.68	0.49	213	5.10%	4.98%	10.92	0.67	413	5.23%	5.10%	9.05	0.58
Hodgkin's disease (C81)	9	0.24%	0.24%	0.38	0.03	9	0.22%	0.21%	0.46	0.05	18	0.23%	0.22%	0.43	0.04
follicular non-Hodgkin's lymphoma (C82)	0	0.00%	0.00%	0.00	0.00	4	0.10%	0.09%	0.21	0.02	4	0.05%	0.05%	0.10	0.01
diffuse non-Hodgkin's lymphoma (C83)	15	0.40%	0.39%	0.63	0.05	14	0.34%	0.33%	0.72	0.06	29	0.37%	0.36%	0.68	0.05
peripheral and cutaneous T cell lymphoma (C84)	4	0.11%	0.10%	0.16	0.00	6	0.14%	0.14%	0.31	0.02	10	0.13%	0.12%	0.23	0.01
other and unspecified NHL (C85)	75	2.02%	1.97%	2.92	0.17	105	2.52%	2.45%	5.45	0.36	180	2.28%	2.22%	4.08	0.27

	FEMALES					MALES					TOTAL				
Cancer (ICD10 code)	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75
lymphoma (total) (C81-C85)	*103*	*2.77%*	*2.70%*	*4.08*	*0.25*	*138*	*3.31%*	*3.23%*	*7.14*	*0.51*	*241*	*3.05%*	*2.98%*	*5.51*	*0.38*
non-Hodgkin's lymphoma (C82-C85)	*94*	*2.53%*	*2.46%*	*3.71*	*0.22*	*129*	*3.09%*	*3.01%*	*6.68*	*0.47*	*223*	*2.83%*	*2.76%*	*5.08*	*0.34*
malignant immunoproliferative disease (C88)	0	0.00%	0.00%	0.00	0.00	3	0.07%	0.07%	0.18	0.01	3	0.04%	0.04%	0.06	0.00
multiple myeloma (C90)	80	2.15%	2.10%	3.34	0.26	79	1.89%	1.85%	4.04	0.25	159	2.01%	1.96%	3.59	0.26
lymphoid leukaemia (C91)	37	1.00%	0.97%	1.45	0.08	58	1.39%	1.36%	3.05	0.15	95	1.20%	1.17%	2.08	0.11
myeloid leukaemia (C92)	59	1.59%	1.55%	2.48	0.17	63	1.51%	1.47%	3.17	0.23	122	1.55%	1.51%	2.76	0.20
other specified leukaemia (C94)	2	0.05%	0.05%	0.08	0.00	0	0.00%	0.00%	0.00	0.00	2	0.03%	0.02%	0.04	0.00
unspecified leukaemia (C95)	7	0.19%	0.18%	0.22	0.01	13	0.31%	0.30%	0.70	0.02	20	0.25%	0.25%	0.41	0.01
leukaemia (total) (C91-C95)	105	2.82%	2.75%	4.23	0.26	134	3.21%	3.13%	6.92	0.40	239	3.03%	2.95%	5.29	0.33
all invasive cancer deaths (C00-C96)	3717	100.00%	97.43%	155.16	10.94	4174	100.00%	97.55%	215.31	13.70	7891	100.00%	97.49%	180.04	12.30
non-invasive cancer deaths:															
in situ melanoma (D03)	2	–	0.05%	0.08	0.00	3	–	0.07%	0.15	0.01	5	–	0.06%	0.12	0.00
benign colorectal (D12)	0	–	0.00%	0.00	0.00	1	–	0.02%	0.05	0.01	1	–	0.01%	0.03	0.00
benign other GI (D13)	1	–	0.03%	0.02	0.00	0	–	0.00%	0.00	0.00	1	–	0.01%	0.02	0.00
benign respiratory (D14)	1	–	0.03%	0.04	0.00	0	–	0.00%	0.00	0.00	1	–	0.01%	0.02	0.00
haemangioma (D18)	1	–	0.03%	0.05	0.00	1	–	0.02%	0.06	0.00	2	–	0.02%	0.05	0.00
benign soft tissue (D21)	1	–	0.03%	0.03	0.00	1	–	0.02%	0.06	0.01	2	–	0.02%	0.05	0.00
benign male genital (D29)	0	–	0.00%	0.00	0.00	1	–	0.02%	0.04	0.00	1	–	0.01%	0.02	0.00
benign urinary (D30)	0	–	0.00%	0.00	0.00	1	–	0.02%	0.05	0.00	1	–	0.01%	0.03	0.00
benign meninges (D32)	9	–	0.24%	0.34	0.02	5	–	0.12%	0.26	0.00	14	–	0.17%	0.28	0.01
benign brain (D33)	6	–	0.16%	0.25	0.01	4	–	0.09%	0.23	0.00	10	–	0.12%	0.22	0.01
benign endocrine (D35)	3	–	0.08%	0.10	0.00	1	–	0.02%	0.05	0.01	4	–	0.05%	0.08	0.00
uncertain oral and	8	–	0.21%	0.26	0.01	9	–	0.21%	0.50	0.03	17	–	0.21%	0.37	0.02

	FEMALES					MALES					TOTAL				
Cancer (ICD10 code)	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75	deaths 2007	% of all invasive cancer deaths	% all cancer deaths	EASR[#]	cumulative risk of death to age 75
digestive (D37)															
uncertain respiratory (D38)	10	–	0.26%	0.40	0.03	4	–	0.09%	0.20	0.00	14	–	0.17%	0.31	0.01
uncertain female genital (D39)	2	–	0.05%	0.07	0.00	0	–	0.00%	0.00	0.00	2	–	0.02%	0.04	0.00
uncertain urinary (D41)	4	–	0.10%	0.14	0.01	1	–	0.02%	0.05	0.00	5	–	0.06%	0.10	0.00
uncertain brain and CNS (D43)	9	–	0.24%	0.32	0.02	15	–	0.35%	0.82	0.06	24	–	0.30%	0.53	0.04
uncertain endocrine (D44)	0	–	0.00%	0.00	0.00	2	–	0.05%	0.10	0.00	2	–	0.02%	0.04	0.00
polycythaemia vera (D45)	1	–	0.03%	0.05	0.01	2	–	0.05%	0.11	0.01	3	–	0.04%	0.08	0.01
myelodysplastic syndromes (D46)	20	–	0.52%	0.60	0.00	32	–	0.75%	1.68	0.05	52	–	0.64%	1.04	0.03
other uncertain lymphoid, haematopoietic (D47)	16	–	0.42%	0.56	0.03	19	–	0.44%	1.02	0.05	35	–	0.43%	0.76	0.04
uncertain other sites (D48)	4	–	0.10%	0.17	0.01	3	–	0.07%	0.16	0.02	7	–	0.09%	0.17	0.01
all non invasive cancer deaths (D00-D48)	*98*	–	*2.57%*	*5.43*	*0.24*	*105*	–	*2.45%*	*7.84*	*0.40*	*203*	–	*2.51%*	*6.45*	*0.32*
all cancer deaths (C00-D48)	*3815*	–	*100%*	*160.58*	*11.16*	*4279*	–	*100%*	*223.15*	*14.04*	*8094*	–	*100%*	*186.49*	*12.58*

[#] EASR: deaths per 100,000 per year, standardized to the European population

Table A3: Summary table - cases per year by county, 1994-2009

CE=Clare, CK=Cork, CN=Cavan, CW=Carlow, DL=Donegal, DN=Dublin, GY=Galway, KE=Kildare, KK=Kilkenny, KY=Kerry, LD=Longford, LH=Louth, LK=Limerick, LM=Leitrim, LS=Laois, MH=Meath, MN=Monaghan, MO=Mayo, OY=Offaly, RN=Roscommon, SO=Sligo, TN=Tipperary-North, TS=Tipperary-South, WD=Waterford, WH=Westmeath, WW=Wicklow, WX=Wexford, IRE=Ireland overall

Cancer (ICD10 code)	CE	CK	CN	CW	DL	DN	GY	KE	KK	KY	LD	LH	LK	LM	LS	MH	MN	MO	OY	RN	SO	TN	TS	WD	WH	WW	WX	IRE
invasive cancers:																												
lip (C00)	<1	1	2	<1	1	5	3	0	<1	<1	<1	<1	0	<1	0	<1	0	3	0	3	1	<1	0	0	0	1	<1	23
base of tongue (C01)	<1	3	<1	0	<1	8	2	<1	<1	<1	<1	<1	<1	0	1	0	1	1	0	<1	0	<1	<1	0	0	<1	0	21
other tongue (C02)	3	6	2	<1	2	18	2	<1	1	3	<1	2	4	0	<1	2	0	1	1	1	0	<1	<1	2	<1	2	1	55
gum (C03)	<1	4	0	0	0	5	<1	<1	0	<1	0	<1	<1	<1	<1	0	0	0	0	<1	0	<1	1	<1	<1	0	1	17
floor of mouth (C04)	<1	4	0	0	0	11	<1	1	1	<1	0	<1	1	<1	<1	<1	0	1	0	<1	0	<1	1	0	0	<1	<1	25
palate (C05)	<1	2	<1	<1	<1	6	<1	0	0	<1	<1	0	1	0	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0	19
other mouth (C06)	<1	2	0	0	<1	7	2	<1	0	<1	<1	<1	1	1	<1	1	<1	2	0	<1	<1	0	0	1	<1	0	<1	23
parotid (C07)	1	3	<1	<1	1	8	1	0	<1	2	<1	<1	2	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	1	1	1	30
other salivary (C08)	<1	<1	0	0	0	2	<1	1	0	0	0	0	<1	0	0	0	0	0	0	<1	0	0	<1	<1	0	0	0	6
tonsil (C09)	1	4	<1	1	2	11	4	1	0	1	0	<1	<1	0	<1	2	0	<1	<1	0	1	1	1	1	0	1	2	37
oropharynx (C10)	<1	1	0	0	<1	3	<1	0	0	<1	0	<1	<1	0	0	0	<1	0	<1	<1	0	0	<1	0	0	<1	<1	9
nasopharynx (C11)	0	1	0	0	<1	4	1	<1	<1	<1	0	1	<1	0	0	<1	<1	<1	<1	0	0	<1	0	<1	0	<1	0	13
pyriform (C12)	1	4	0	0	<1	6	1	<1	0	0	<1	0	2	<1	0	<1	<1	0	<1	0	0	0	<1	<1	0	<1	<1	20
hypopharynx (C13)	<1	2	<1	0	<1	5	1	<1	0	<1	0	<1	0	<1	<1	0	0	<1	0	0	<1	0	<1	<1	<1	0	<1	15
other mouth/pharynx (C14)	<1	3	<1	<1	<1	5	1	0	0	1	<1	0	1	0	<1	<1	0	0	0	<1	<1	0	0	0	0	0	0	15
head & neck (C01-C14)	*10*	*40*	*4*	*3*	*9*	*99*	*17*	*7*	*4*	*11*	*3*	*7*	*14*	*3*	*5*	*9*	*4*	*7*	*4*	*5*	*4*	*4*	*7*	*7*	*4*	*7*	*8*	*304*
oesophagus (C15)	9	59	3	2	12	98	19	15	7	13	3	13	14	3	5	10	4	17	5	5	6	8	10	12	9	16	10	388
stomach (C16)	7	47	9	7	20	153	19	14	12	15	5	16	15	4	5	16	7	14	10	10	8	7	13	14	8	13	14	480
small intestine (C17)	<1	10	0	<1	3	12	1	<1	1	4	0	2	2	0	<1	1	1	2	<1	3	<1	<1	2	2	3	2	1	56
colon (C18)	43	182	26	16	53	407	93	39	26	51	13	44	58	12	20	38	22	55	24	17	23	25	27	40	31	44	48	1477
rectosigmoid (C19)	3	24	3	4	9	34	9	6	5	7	<1	4	6	2	2	5	3	5	3	3	5	3	5	5	2	1	4	160
rectum (C20)	17	75	9	10	21	151	30	16	14	22	5	19	22	8	8	18	7	24	9	11	9	11	14	15	14	16	20	595
anus (C21)	1	5	<1	<1	1	9	2	<1	1	2	<1	3	1	0	<1	<1	0	2	<1	<1	1	1	1	1	1	1	1	38
colorectal (C18-C21)	*64*	*285*	*38*	*31*	*85*	*601*	*134*	*60*	*45*	*82*	*18*	*70*	*87*	*22*	*30*	*61*	*32*	*85*	*36*	*32*	*38*	*41*	*47*	*61*	*49*	*62*	*73*	*2270*
liver (C22)	5	19	3	2	9	49	7	6	5	6	<1	6	11	<1	2	8	2	6	2	2	2	3	6	7	2	4	7	182
gallbladder (C23)	<1	5	<1	<1	2	10	2	3	<1	2	0	1	2	1	1	1	1	<1	2	<1	1	<1	1	2	<1	1	3	46

Cancer (ICD10 code)	CE	CK	CN	CW	DL	DN	GY	KE	KK	KY	LD	LH	LK	LM	LS	MH	MN	MO	OY	RN	SO	TN	TS	WD	WH	WW	WX	IRE
other biliary (C24)	2	9	<1	<1	6	19	3	2	2	<1	1	1	2	2	3	4	2	2	1	2	2	2	2	3	2	2	2	79
pancreas (C25)	12	53	7	3	18	104	25	12	13	22	3	11	17	5	6	10	7	23	8	8	11	8	11	14	9	15	10	444
other digestive (C26)	2	2	<1	<1	3	8	1	1	<1	1	<1	1	3	0	1	1	<1	<1	0	1	<1	<1	<1	1	0	1	2	35
nasal cavity/middle ear (C30)	1	<1	<1	<1	0	4	1	0	0	1	<1	0	<1	0	<1	0	<1	0	0	0	0	0	<1	<1	0	<1	<1	12
sinuses (C31)	0	1	<1	0	<1	2	0	0	<1	<1	<1	<1	<1	0	<1	<1	<1	<1	0	0	<1	<1	0	0	0	0	<1	8
larynx (C32)	4	14	2	2	5	41	6	6	3	6	1	6	7	2	2	4	2	8	3	3	2	1	3	4	2	4	2	146
trachea (C33)	0	<1	0	0	0	<1	0	0	0	<1	<1	0	<1	0	0	0	0	0	0	0	0	<1	0	0	0	0	<1	3
lung (C34)	37	202	25	26	79	593	83	69	42	60	22	55	75	14	26	54	25	51	29	31	34	27	47	50	39	55	61	1910
thymus (C37)	0	1	0	0	<1	1	<1	1	0	<1	0	<1	0	0	0	<1	0	0	0	0	0	0	0	0	0	<1	<1	6
mediastinum (C38)	0	<1	<1	<1	0	6	<1	<1	0	0	<1	3	1	<1	1	<1	<1	<1	<1	<1	0	<1	0	<1	<1	0	<1	19
other chest (C39)	<1	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<1
bones, joints of limbs (C40)	<1	1	0	0	<1	2	<1	0	<1	<1	<1	0	1	0	0	0	<1	2	0	<1	0	0	<1	0	<1	<1	<1	13
bones, joints head and trunk (C41)	<1	2	<1	0	<1	6	2	1	0	2	<1	<1	2	<1	0	2	<1	<1	<1	0	<1	0	0	1	<1	1	<1	23
melanoma skin (C43)	18	102	10	9	18	197	40	25	13	26	4	16	29	3	11	24	8	21	8	11	8	11	16	29	12	23	28	720
non-melanoma skin (C44)	174	962	89	81	206	2243	348	224	126	303	59	171	287	43	101	229	70	209	120	119	125	94	156	207	135	250	201	7333
mesothelioma (C45)	<1	4	<1	0	<1	9	1	1	<1	1	<1	<1	2	<1	1	0	<1	2	<1	<1	0	1	<1	1	<1	1	<1	31
Kaposi's sarcoma (C46)	<1	0	0	0	0	4	0	<1	0	0	0	0	0	0	0	0	0	<1	<1	0	0	0	0	0	0	0	0	6
peripheral nerves (C47)	1	2	<1	0	0	2	<1	1	0	<1	0	<1	<1	0	0	0	<1	<1	0	0	0	<1	0	<1	0	<1	0	10
peritoneum (C48)	<1	1	0	0	<1	7	2	0	<1	1	0	1	0	<1	<1	<1	1	1	0	<1	1	0	<1	<1	1	<1	<1	23
connective tissues (C49)	3	13	1	<1	3	31	5	4	<1	5	1	3	5	2	2	1	1	4	2	1	2	1	2	2	2	4	3	104
breast (C50)	70	342	34	31	83	750	149	84	47	81	29	66	115	21	41	90	25	104	41	46	53	52	61	86	45	74	72	2692
vulva (C51)	<1	6	1	1	2	13	1	2	<1	1	<1	1	2	<1	1	<1	1	1	1	<1	<1	<1	1	1	1	1	2	46
vagina (C52)	0	<1	0	0	1	<1	<1	0	<1	<1	0	1	2	<1	0	<1	0	0	0	0	<1	0	1	0	0	<1	<1	10
cervix (C53)	6	37	4	6	7	88	15	11	5	9	1	7	10	2	4	11	3	7	4	4	4	4	3	6	7	10	12	287
corpus uteri (C54)	8	54	6	4	11	92	23	10	8	14	3	9	15	3	7	9	3	11	5	6	6	6	6	10	6	7	14	356
uterus NOS (C55)	<1	1	<1	<1	<1	11	2	2	<1	1	<1	<1	0	<1	<1	<1	<1	2	<1	<1	0	0	<1	<1	0	<1	1	29
ovary (C56)	7	43	5	3	10	83	17	13	8	11	2	5	16	2	6	6	4	11	7	2	7	6	8	8	6	8	9	315
other female genital (C57)	<1	2	<1	0	2	3	<1	<1	<1	0	0	0	<1	0	0	<1	0	<1	<1	0	0	<1	0	<1	0	0	<1	12

Cancer (ICD10 code)	CE	CK	CN	CW	DL	DN	GY	KE	KK	KY	LD	LH	LK	LM	LS	MH	MN	MO	OY	RN	SO	TN	TS	WD	WH	WW	WX	IRE
placenta (C58)	0	0	0	0	0	<1	0	0	<1	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	<1	<1	2
penis (C60)	0	2	<1	0	<1	9	1	0	0	1	0	<1	1	<1	0	<1	0	<1	1	<1	<1	<1	1	<1	1	<1	<1	24
prostate (C61)	68	351	39	24	135	606	187	80	54	118	23	64	102	40	53	89	35	143	47	66	67	35	52	68	45	86	71	2748
testis (C62)	3	23	2	2	5	40	8	11	4	7	2	5	6	<1	3	6	2	4	3	1	4	1	4	6	4	4	5	166
other male genital (C63)	<1	<1	0	0	0	<1	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	0	0	<1	0	0	<1	2
kidney (C64)	10	54	8	5	16	114	25	16	6	17	4	6	14	4	7	14	4	18	7	7	8	7	7	15	8	13	18	434
renal pelvis (C65)	<1	2	0	0	1	4	<1	<1	<1	<1	<1	<1	1	<1	0	<1	0	<1	0	<1	0	<1	0	0	0	<1	1	15
ureter (C66)	0	3	0	0	1	3	<1	<1	0	<1	0	0	<1	0	0	<1	<1	<1	<1	<1	0	0	<1	<1	<1	<1	0	15
bladder (C67)	12	39	6	2	24	124	25	12	6	12	5	13	20	4	5	15	6	26	7	11	10	5	6	12	9	14	14	443
other urinary (C68)	<1	<1	<1	0	0	2	0	0	0	<1	0	0	0	0	<1	0	0	0	0	<1	0	0	<1	0	0	<1	0	5
eye (C69)	1	6	0	2	3	10	2	3	1	2	0	2	0	0	1	2	0	1	0	<1	<1	1	<1	<1	0	<1	1	40
meninges (C70)	<1	2	0	0	0	3	1	0	0	1	0	<1	<1	0	<1	<1	0	0	0	0	0	0	0	0	0	<1	0	10
brain (C71)	9	38	5	2	12	81	16	13	7	12	3	7	15	3	5	13	4	11	6	2	3	5	6	8	6	9	10	311
spinal cord (C72)	<1	2	0	0	<1	4	<1	<1	0	<1	0	0	<1	0	0	0	0	<1	<1	<1	0	0	<1	0	0	0	0	10
thyroid (C73)	4	21	3	2	5	38	7	7	2	4	1	5	5	1	2	6	2	4	1	3	2	2	1	4	2	5	3	143
adrenal (C74)	0	1	1	0	<1	4	<1	1	0	1	<1	0	0	<1	0	0	<1	<1	<1	<1	0	0	<1	<1	0	0	0	11
other endocrine (C75)	<1	<1	0	0	0	3	<1	<1	0	0	0	<1	0	0	0	1	0	0	0	<1	<1	0	<1	<1	<1	0	0	9
ill-defined site (C76)	2	<1	0	0	2	4	<1	1	0	<1	0	<1	1	1	0	<1	<1	1	0	0	<1	0	0	1	0	2	0	17
lymph nodes (C77)	<1	<1	<1	<1	1	5	1	1	<1	0	0	<1	<1	0	0	<1	<1	1	<1	0	0	0	0	0	<1	1	<1	17
unknown primary site (C80)	10	44	5	6	20	142	32	17	12	21	4	10	29	5	8	14	6	23	7	10	7	9	11	11	7	11	20	502
Hodgkin's disease (C81)	1	16	2	2	5	32	6	4	1	3	1	2	3	<1	<1	4	1	4	2	<1	1	2	4	5	3	4	2	113
follicular non-Hodgkin's lymphoma (C82)	3	18	3	2	5	29	8	4	3	6	<1	2	3	<1	1	7	<1	4	1	4	1	1	4	6	4	3	6	130
diffuse non-Hodgkin's lymphoma (C83)	6	28	6	2	8	67	18	8	5	10	2	4	6	2	2	5	1	5	2	5	6	2	4	8	3	7	7	229
peripheral and cutaneous T cell lymphoma (C84)	<1	7	1	0	3	14	3	2	<1	1	<1	<1	<1	<1	0	<1	<1	4	1	2	<1	<1	<1	3	0	2	<1	48
other and unspecified NHL (C85)	4	23	2	1	5	56	9	8	4	6	3	9	10	1	2	7	2	8	4	3	2	2	1	3	5	7	4	192
lymphoma (total) (C81-C85)	*15*	*91*	*15*	*7*	*25*	*198*	*43*	*26*	*13*	*26*	*7*	*18*	*23*	*4*	*5*	*24*	*5*	*25*	*11*	*14*	*12*	*8*	*13*	*25*	*15*	*25*	*19*	*711*
non-Hodgkin's	*14*	*75*	*13*	*5*	*21*	*166*	*37*	*21*	*12*	*23*	*6*	*16*	*20*	*4*	*4*	*20*	*4*	*21*	*9*	*13*	*11*	*6*	*10*	*20*	*12*	*20*	*17*	*598*

Cancer (ICD10 code)	CE	CK	CN	CW	DL	DN	GY	KE	KK	KY	LD	LH	LK	LM	LS	MH	MN	MO	OY	RN	SO	TN	TS	WD	WH	WW	WX	IRE
lymphoma (C82-C85)																												
malignant immunoproliferative disease (C88)	<1	<1	<1	0	<1	3	<1	<1	0	<1	<1	<1	<1	0	0	<1	0	0	<1	<1	0	<1	0	<1	0	<1	<1	11
multiple myeloma (C90)	4	25	4	4	11	48	16	8	3	8	4	2	8	<1	4	5	3	4	3	4	5	4	2	5	3	7	6	203
lymphoid leukaemia (C91)	6	23	2	3	6	50	15	10	2	7	2	3	9	4	3	5	2	12	6	5	5	1	2	4	4	9	8	206
myeloid leukaemia (C92)	3	13	1	<1	7	36	11	6	1	8	2	2	6	2	2	8	1	5	3	4	1	<1	3	3	3	5	4	141
monocytic leukaemia (C93)	0	0	0	0	0	<1	0	<1	0	<1	0	0	0	0	0	0	0	<1	0	0	<1	0	0	<1	0	0	0	3
other specified leukaemia (C94)	<1	2	0	0	<1	2	0	0	0	<1	<1	<1	<1	0	1	<1	0	0	<1	<1	0	0	0	0	<1	0	0	9
unspecified leukaemia (C95)	3	1	<1	0	2	13	1	2	2	<1	<1	<1	3	<1	<1	2	0	2	<1	<1	<1	1	1	<1	<1	1	3	42
leukaemia (total) (C91-C95)	*12*	*40*	*4*	*4*	*14*	*103*	*27*	*17*	*6*	*17*	*4*	*6*	*19*	*6*	*6*	*14*	*3*	*19*	*9*	*10*	*7*	*3*	*6*	*8*	*8*	*15*	*15*	*402*
other lymphoid and haematopoietic (C96)	2	29	2	2	7	59	12	5	3	10	4	1	3	1	8	4	1	7	3	5	4	2	3	3	6	9	4	198
all invasive excluding non-melanoma skin cancer (C00-C43, C45-C96)	*429*	*2142*	*257*	*194*	*676*	*4711*	*990*	*574*	*339*	*637*	*164*	*447*	*702*	*166*	*266*	*538*	*213*	*676*	*279*	*316*	*324*	*269*	*366*	*492*	*322*	*518*	*533*	*17538*
non-invasive cancers:																												
in situ oral cavity, oesophagus and stomach (D00)	0	3	0	2	2	10	2	<1	1	2	<1	<1	<1	<1	<1	1	<1	<1	<1	0	1	0	1	<1	<1	1	1	33
in situ other digestive (D01)	1	4	4	2	3	17	2	2	1	1	0	2	1	<1	<1	3	<1	5	<1	<1	0	2	<1	1	1	2	2	59
in situ middle ear and respiratory (D02)	<1	2	1	0	2	6	<1	0	<1	1	0	<1	<1	0	1	<1	0	<1	<1	<1	<1	0	<1	1	<1	<1	2	22
in situ melanoma (D03)	8	63	4	3	10	99	26	10	6	15	3	6	11	2	3	11	4	10	5	10	8	3	6	13	7	11	8	367
in situ carcinoma of skin (D04)	20	173	13	11	17	386	53	38	18	59	16	28	41	5	24	38	9	32	26	13	10	17	27	29	32	40	23	1199
in situ breast (D05)	4	46	3	4	13	86	20	9	6	9	5	6	7	4	4	12	3	9	4	6	4	8	6	7	7	8	8	310
in situ cervix (D06)	43	272	31	20	56	568	160	55	35	94	20	60	78	17	29	70	20	46	33	29	33	29	38	66	48	66	58	2076
in situ other genital (D07)	1	6	1	<1	6	12	13	4	1	2	0	<1	<1	0	1	2	<1	6	1	1	1	<1	<1	2	2	2	2	69
in situ other sites (D09)	1	12	0	1	<1	33	1	<1	1	7	1	2	3	<1	1	1	<1	1	<1	<1	0	1	1	<1	2	7	3	84
benign meninges (D32)	2	13	1	1	4	26	2	5	3	3	1	2	5	<1	1	2	2	3	2	1	1	3	1	4	3	3	3	98

Cancer (ICD10 code)	CE	CK	CN	CW	DL	DN	GY	KE	KK	KY	LD	LH	LK	LM	LS	MH	MN	MO	OY	RN	SO	TN	TS	WD	WH	WW	WX	IRE
benign brain (D33)	<1	3	1	0	1	8	2	2	0	2	0	<1	2	<1	<1	1	<1	1	<1	1	0	<1	<1	2	1	2	<1	33
benign endocrine (D35)	<1	2	0	<1	1	15	4	2	2	1	<1	3	<1	1	<1	3	1	3	<1	1	<1	1	<1	1	2	1	2	51
uncertain oral and digestive (D37)	2	9	<1	1	3	10	6	<1	<1	2	1	2	<1	<1	1	2	<1	1	3	2	2	1	1	2	1	1	2	59
uncertain respiratory (D38)	<1	1	1	0	1	4	1	<1	<1	<1	0	1	0	<1	0	<1	<1	0	0	<1	0	<1	0	<1	<1	<1	0	15
uncertain female genital (D39)	1	7	1	2	2	15	3	3	1	1	1	2	3	1	2	3	1	2	2	2	<1	<1	<1	2	2	3	3	68
uncertain male genital (D40)	0	0	0	0	0	<1	0	0	<1	0	0	0	0	0	0	0	0	<1	0	0	0	0	0	0	0	0	0	1
uncertain urinary (D41)	3	17	2	1	2	33	2	6	5	6	2	1	6	1	2	4	1	<1	3	1	0	1	5	5	1	1	6	118
uncertain meninges (D42)	0	<1	0	0	<1	<1	0	<1	<1	<1	0	0	0	0	0	0	<1	0	<1	0	<1	0	0	0	0	<1	0	4
uncertain brain and CNS (D43)	<1	4	1	1	<1	6	1	<1	<1	1	<1	<1	1	<1	<1	<1	<1	<1	0	<1	<1	<1	<1	1	0	<1	2	28
uncertain endocrine (D44)	0	1	0	<1	<1	5	0	1	<1	<1	0	<1	<1	0	<1	<1	0	1	<1	1	0	<1	0	0	0	<1	1	15
other uncertain lymphoid, haematopoietic (D47)	<1	21	1	2	3	35	6	6	2	3	1	<1	2	2	2	3	<1	2	5	3	3	<1	2	3	2	3	2	115
uncertain other sites (D48)	<1	7	1	<1	2	16	3	2	0	1	<1	<1	<1	0	<1	3	1	2	<1	<1	1	<1	1	2	1	1	1	52
all non invasive cancers (D00-D48)	*89*	*669*	*68*	*54*	*130*	*1391*	*306*	*149*	*86*	*213*	*53*	*120*	*164*	*36*	*75*	*161*	*47*	*127*	*89*	*74*	*66*	*70*	*95*	*143*	*114*	*156*	*128*	*4874*
all registered cancers (C00-D48)	*691*	*3772*	*414*	*330*	*1013*	*8345*	*1644*	*946*	*551*	*1153*	*277*	*739*	*1153*	*245*	*442*	*928*	*330*	*1012*	*488*	*509*	*515*	*433*	*617*	*842*	*571*	*924*	*863*	*29745*

CE=Clare, CK=Cork, CN=Cavan, CW=Carlow, DL=Donegal, DN=Dublin, GY=Galway, KE=Kildare, KK=Kilkenny, KY=Kerry, LD=Longford, LH=Louth, LK=Limerick, LM=Leitrim, LS=Laois, MH=Meath, MN=Monaghan, MO=Mayo, OY=Offaly, RN=Roscommon, SO=Sligo, TN=Tipperary-North, TS=Tipperary-South, WD=Waterford, WH=Westmeath, WW=Wicklow, WX=Wexford, IRE=Ireland overall

Table A4: Prevalence of cancer in Ireland at the end of 2008

All cancers registered	15 year	10 year	5 year	3 year	1 year
female	104579	84480	53157	35672	13518
male	76152	64838	4005	30239	11718
total	180731	149318	9162	65911	25236
<=65	86065	72775	48381	33184	12702
>65	94666	76543	48781	32727	12534
All invasive cancers					
female	74735	60256	38027	25605	9955
male	70630	60019	40645	27782	10772
total	145365	120275	78672	53387	20727
<=65	60234	51667	35875	24403	9622
>65	85131	68608	45661	28984	11105
All invasive cancers excluding NMSC					
female	47391	38579	24470	16714	6770
male	43359	37706	25899	17771	7062
total	90750	76285	50369	34485	13832
<=65	42961	36984	25287	17703	7140
>65	47789	39301	25082	16782	6692
lung					
female	1393	1265	1000	805	456
male	1563	1378	1101	904	550
total	2956	2643	2101	1709	1006
<=65	1081	1009	843	689	401
>65	1875	1634	1258	1020	605
breast					
female	20826	17041	10403	6915	2674
male	123	107	72	49	18
total	20949	17148	10475	6964	2692
<=65	12251	10523	6764	4586	1848
>65	8698	6625	3711	2378	844
prostate					
female	0	0	0	0	0
male	17430	16074	11098	7118	2518
total	17430	16074	11098	7118	2518
<=65	4461	4417	3633	2602	999
>65	12969	11657	7465	4516	1519
colorectal					
female	5487	4401	2843	1968	765
male	6787	5700	3874	2706	1076
total	12274	10101	6717	4674	1841
<=65	3723	3334	2424	1773	693
>65	8551	6767	4293	2901	1148

Some people may be diagnosed with more than cancer. If a second cancer was diagnosed at the same site then it was only counted once in the evaluation of prevalence for that site. If a person has more than one cancer diagnosis from different sites, the person was included as a prevalent case for each cancer site from the time of diagnosis of that cancer. When counting the prevalence of “all cancers registered” or “all invasive cancers excluding NMSC” just the first cancer diagnosis was counted for each person.

Table A5: Prevalence of cancer - as a proportion of the relevant population, per 100,000, in Ireland at the end of 2008

All cancers registered	15 year	10 year	5 year	3 year	1 year
female	4720	3813	2399	1610	610
male	3452	2939	1995	1371	531
total	4087	377	2197	1491	571
<=65	2184	1847	1228	842	322
>65	19657	15894	10129	6796	2603
All invasive cancers					
female	3373	2719	1716	1156	449
male	3201	2720	1842	1259	488
total	3287	2720	1779	1207	469
<=65	1529	1311	910	619	244
>65	17677	14246	9481	6018	2306
All invasive cancers excluding NMSC					
female	2139	1741	1104	754	306
male	1965	1709	1174	806	320
total	2052	1725	1139	780	313
<=65	1090	939	642	449	181
>65	9923	8161	5208	3485	1390
lung					
female	63	57	45	36	21
male	71	63	50	41	25
total	67	60	48	39	23
<=65	27	26	21	18	10
>65	389	339	261	212	126
breast					
female	940	769	470	312	121
male	6	5	3	2	1
total	474	388	237	158	61
<=65	311	267	172	116	47
>65	1806	1376	771	494	175
prostate					
female	0	0	0	0	0
male	790	729	503	323	114
total	394	364	251	161	57
<=65	113	112	92	66	25
>65	2693	2421	1550	938	315
colorectal					
female	248	199	128	89	35
male	308	258	176	123	49
total	278	228	152	106	42
<=65	95	85	62	45	18
>65	1776	1405	891	602	238

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