National Cancer Registry Ireland

Cancer in Ireland 1994-2005
a summary

Incidence and mortality

In 2005, 26776 new cancers were registered, 21% more than the 1994-2005 average. The commonest cancer overall (apart from non-melanoma skin cancer; 6196 cases) was cancer of the prostate (2407 cases), followed by breast cancer (2379 cases) and colorectal cancer (2184 cases). The risk of developing cancer was roughly 6 per 1000 persons per year over the period 1994-2005.

Table 1. Number of cancers registered, 1994-2005

	number of cases						*incidence rate*[#]	
	2005			*average 1994-2005*			*1994-2005*	
	female	*male*	*both sexes*	*female*	*male*	*both sexes*[‡]	*female*	*male*
all cancers	13901	12875	26776	11341	10706	22046	577.9	646.6
all invasive cancers except NMS*	8001	8578	16579	6624	7128	13752	343.1	429.9
non-melanoma skin	2860	3336	6196	2510	2888	5398	123.0	175.3
prostate	–	2407	2407	–	1687	1687	–	102.7
breast	2352	27	2379	1895	14	1910	105.7	0.9
colorectal	936	1248	2184	826	1073	1899	40.5	65.0
lung	750	1092	1842	611	1035	1646	30.3	62.7
unknown site	444	362	806	344	330	674	15.8	20.0
lymphoma	292	350	642	254	294	548	13.2	17.2
melanoma of skin	360	238	598	279	176	454	14.6	10.4
bladder	159	345	504	135	331	466	6.6	20.1
stomach	173	296	469	182	293	475	8.5	17.7
pancreas	200	186	386	181	180	361	8.4	10.9
kidney	154	221	375	111	191	302	5.8	11.7
leukaemia	147	224	371	160	233	393	7.9	13.8
ovary	367	–	367	348	–	348	18.9	–
oesophagus	131	222	353	122	193	316	5.6	11.8
brain and ONS*	138	207	345	127	169	296	6.6	9.8
corpus uteri	297	–	297	243	–	243	13.6	–
cervix uteri	253	–	253	191	–	191	10.5	–

Lung cancer was the most frequent cause of cancer death overall in 2004, as it was in 1994-2004, with roughly 1600 deaths per year, and was also the commonest cause of death from cancer in men. Breast cancer was the commonest cause of cancer death in women, at over 660 deaths per year.

Table 2. Number of cancer deaths, 1994-2004

	number of deaths						*mortality rate**	
	2004			*average 1994-2004*			*1994-2004*	
	female	*male*	*both sexes*	*female*	*male*	*both sexes‡*	*female*	*male*
all cancers	3673	4197	7870	3531	4064	7595	171.7	249.2
lung	624	982	1606	548	963	1511	26.7	58.8
colorectal	400	557	957	404	524	928	18.6	32.2
breast	663	3	666	642	4	646	34.0	0.3
unknown primary site	172	182	354	208	219	427	9.6	13.4
stomach	109	196	305	144	216	360	6.6	13.3
prostate	–	547	547	–	520	520	0.0	32.1
pancreas	194	185	379	182	185	367	8.3	11.4
oesophagus	124	203	327	117	193	310	5.3	11.8
lymphoma	124	131	255	115	133	248	5.6	8.1
ovary	252	–	252	230	–	230	12.0	–
brain and ONS*	105	162	267	94	127	221	5.0	7.6
leukaemia	110	185	295	100	138	238	4.6	8.4
bladder	50	99	149	52	111	163	2.3	6.8
liver	75	97	172	60	82	142	2.8	5.0
kidney	49	131	180	51	95	146	2.5	6.0
mouth and pharynx	43	81	124	37	94	132	1.8	5.9
multiple myeloma	60	77	137	67	79	146	3.1	4.9
other digestive	83	75	158	80	87	167	3.5	5.3

[#] cases/deaths per 100,000 persons per year; age-standardised to European standard population
* NMS: non-melanoma skin cancer; ONS: other central nervous system
[‡] Figures may not exactly equal the total of "male" + "female", because of rounding

Note: Incidence data for 2004 and 2005 are provisional.
More detailed tables of cancer incidence and mortality by age, cancer site and county are on our website at www.ncri.ie

Time trends

Table 3. Number of invasive cancer cases (including non-melanoma skin cancer) and age-standardised incidence rate 1994-2005

	cases			*cases per 100,000 per year*		*deaths*			*deaths per 100,000 per year*	
	female	*male*	*both*	*female*	*male*	*female*	*male*	*both*	*female*	*male*
1994	8133	9015	17148	452	595	3439	3971	7410	182	262
1995	8031	8935	16966	441	582	3419	4094	7513	178	267
1996	8354	9155	17509	453	591	3399	3983	7382	173	257
1997	8573	9290	17863	458	589	3502	3982	7484	178	255
1998	8553	9259	17812	446	577	3453	4022	7475	172	252
1999	8633	9425	18058	446	583	3487	4049	7536	170	252
2000	9078	9903	18981	462	601	3589	4076	7665	174	248
2001	9242	10111	19353	464	601	3593	4034	7627	170	242
2002	9599	10492	20091	475	610	3446	4051	7497	159	237
2003	10115	10959	21074	488	623	3585	4006	7591	163	229
2004	10429	11742	22171	492	651	3642	4179	7821	161	232
2005	10861	11914	22775	503	645	*Official mortality data is not yet available for 2005*				

The number of new cases of invasive cancer increased from 17148 in 1994 to 22775 in 2005, an annual increase of 2.7% in both women and men. The incidence rate (adjusted for age) increased by 1.1% annually for women and 0.9% for men over the same period.

Recent projections by the Registry* suggest that, if these trends continue, the number of new cancer cases will double between the years 2000 and 2020. The largest increases in rate were in cancers of the prostate (7.1% annual increase), melanoma of the skin (3.3%) and breast cancer (2.4%). Increases in cancer mortality were also seen in melanoma of skin (4.2%) and rectal cancer (1.7%).

An increase in incidence rate occurred for the majority of the commoner cancers, but increases in mortality were seen for very few. This implies an improvement in survival for most cancers, whether through early detection or improved treatment.

Figure 1. Annual percentage change in age-standardised incidence rate, 1994-2005

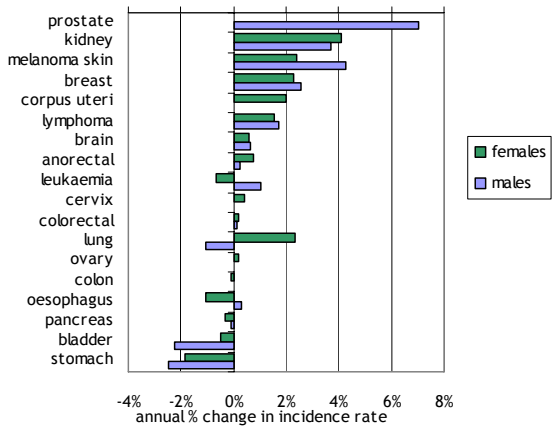
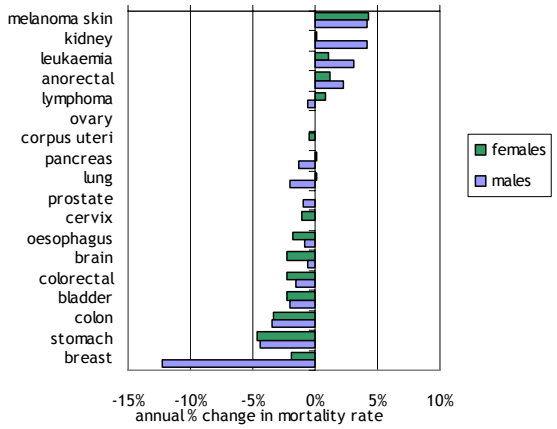


Figure 2. Annual percentage change in age-standardised mortality rate, 1994-2004

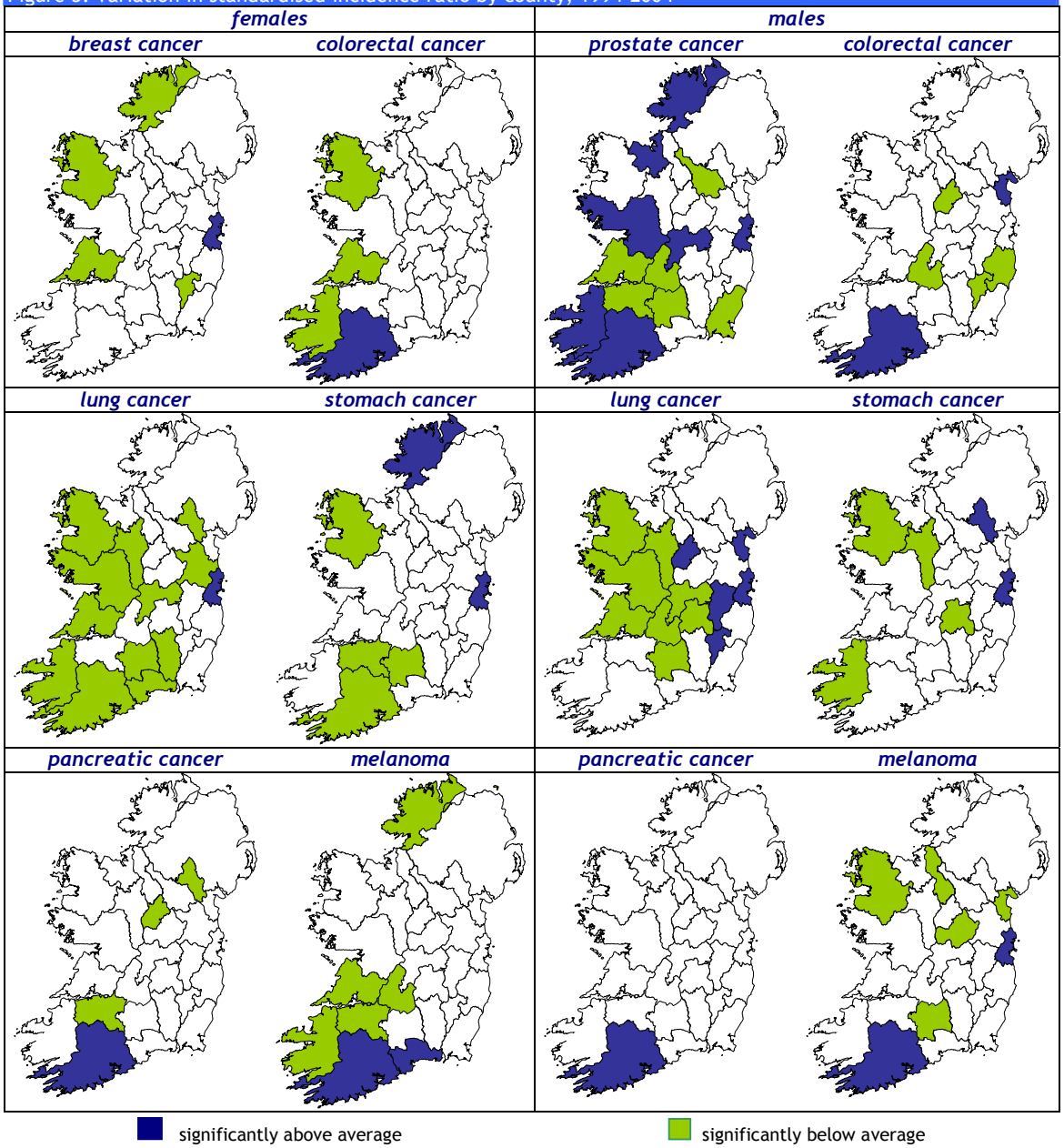


*Trends in Irish cancer incidence 1994-2002 with projections to 2020. O Lorcain P Comber H Walsh PM. National Cancer Registry 2006.

Variation in incidence by county

Figure 3 shows counties for which the incidence rate* for the 7 commonest cancers (excluding non-melanoma skin cancer) was significantly different from the national average. Counties in blue had a significantly raised incidence rate and those in green, significantly low. The most consistent geographical pattern was the higher incidence of many cancers in Dublin, including breast, prostate cancer, lung and stomach cancer, and of melanoma in men. Colorectal, prostate, pancreatic cancer and melanoma were at above average incidence in Cork. For lung and stomach cancer there was some evidence of an east-west gradient, but otherwise no consistent pattern emerged. Rates based on larger numbers of cases are more likely to be statistically significant and this accounts, in part, for the higher number of significantly high rates in Dublin and Cork.

Figure 3. Variation in standardised incidence ratio by county, 1994-2004



* corrected for differences between counties in the age structure of the population.

Treatments given

Surgery was the commonest treatment modality (Table 4). Radiotherapy, chemotherapy and hormonal therapy all increased in frequency between 1995-1998 and 1999-2003 (data for 1994 are incomplete for chemotherapy and hormone therapy and have been omitted).

Table 4. Treatments for all cancers combined, 1995-2003

	surgery		*radiotherapy*		*chemotherapy*		*hormone therapy*	
	1995-1998	*1999-2003*	*1995-1998*	*1999-2003*	*1995-1998*	*1999-2003*	*1995-1998*	*1999-2003*
all cancers	60%	60%	20%	22%	14%	18%	7%	8%
all invasive cancers except non-melanoma skin	49%	48%	26%	32%	22%	28%	11%	13%

Of the commoner cancers, the percentages of patients having surgery were highest for breast cancer (85%) and melanoma (94%) (Figure 4). Surgical intervention fell for prostate, brain and oesophageal cancer by 20-30%, and increased for ovarian cancer by 27%.

Although the overall percentage of patients having radiotherapy increased only modestly, the use of radiotherapy increased for the majority of cancers, most strikingly for stomach cancer, for which it more than doubled between 1995-1998 and 1999-2003. Large increases were also registered in radiotherapy for prostate cancer (a 82% increase) and oesophageal cancer (46%).

Chemotherapy use also increased for most cancers, especially for cancers of the oesophagus. Stomach and pancreatic cancer were also more than twice as likely to be treated with chemotherapy in 1999-2003 than in 1995-1998. Falls in chemotherapy use were seen only for prostate cancer (45% decrease) and melanoma (15%).

The use of hormone therapy for breast cancer fell from 54% to 49% of cases, while it rose for prostate cancer, from 35% to 42% (data not shown).

The percentage of patients recorded as having no cancer-directed treatment fell for most cancers, large decreases occurring for oesophageal and pancreatic cancers. Where increases were noted in the percentage of patients having no specific treatment, this was mostly for cancers where the great majority of patients were treated, and the changes are unlikely to be of significance.

Figure 4. Percentage of invasive cancers treated, 1995-1998 and 1999-2003