



# Cancer in Ireland 1994-2000

## Common cancers

Just over 20,000 new cancers were registered each year between 1994 and 2000. 88% were invasive<sup>†</sup>, the remainder being mainly *in situ*<sup>††</sup> cancers of skin, breast and cervix (Table 1).

Of the invasive cancers, by far the commonest were non-melanoma cancers of skin<sup>††</sup> (5174; 29%). The commonest non-cutaneous cancer was that of the large bowel (colorectal), followed by breast, lung and prostate. The prostate was the commonest site of cancer in men, and breast in women (Figure 1). There were just over 7500 deaths from cancer each year from 1994 to 2000 (Table 2). Lung cancer was by far the commonest cause of death (20% of all deaths overall and 24% for men) (Figure 2). Breast cancer was the commonest cause of cancer death in women (18% of deaths). Stomach, pancreatic and oesophageal cancers, because of their poor survival, contribute much more to cancer mortality than to cancer incidence.

Table 1. Annual number of cancer cases, 1994-2000

	females	males	both sexes
<b>all cancers</b>	<b>10352</b>	<b>9886</b>	<b>20238</b>
<b>invasive cancer</b>	<b>8509</b>	<b>9304</b>	<b>17813</b>
non-melanoma skin	2383	2790	5174
colorectal	788	1016	1803
breast	1683	14	1697
lung	557	1011	1567
prostate	–	1302	1302
lymphoma*	233	270	503
stomach	184	299	484
bladder	130	333	463
melanoma skin	244	148	392
leukaemia	153	215	368
pancreas	174	173	347
ovary	332	–	332
oesophagus	120	180	300
brain	108	151	259
kidney	93	165	258
corpus uteri	221	–	221
cervix	179	–	179
<b>non-invasive</b>	<b>1842</b>	<b>578</b>	<b>2420</b>

Figure 1. Common cancers as a percentage of all cases

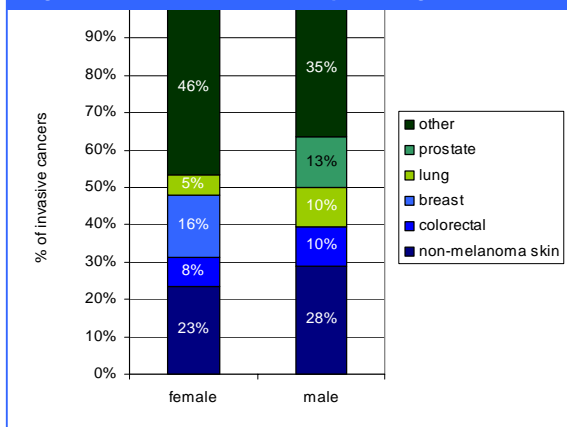


Figure 2. Common cancers as a percentage of all deaths

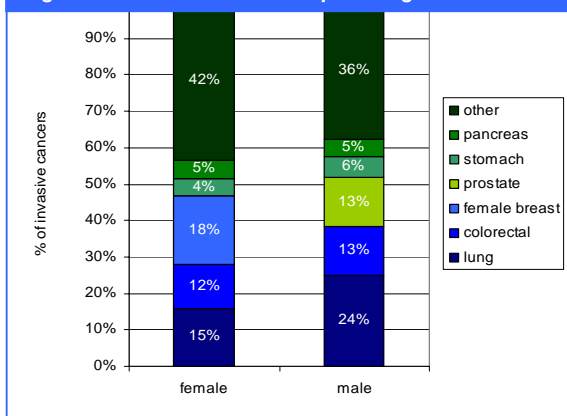


Table 2. Annual number of cancer deaths, 1994-2000

	females	males	both sexes
<b>all cancers</b>	<b>3494</b>	<b>4064</b>	<b>7558</b>
lung	533	970	1503
colorectal	411	520	931
female breast	641	–	641
prostate	–	516	516
stomach	153	228	381
pancreas	176	183	358
oesophagus	116	191	306
lymphoma*	111	136	247
leukaemia	95	127	222
ovary	223	–	223
brain	91	120	212
other digestive	82	88	170
bladder	53	110	164
myeloma	67	79	145
head and neck	38	99	137
kidney	51	85	136
liver	52	76	128
cervix	63	–	63
melanoma skin	34	31	65
larynx	11	46	57

<sup>†</sup> See glossary, page 12

\* "lymphoma", in this report, describes both Hodgkin's and non-Hodgkin's types (ICD10 C81-C85), unless stated otherwise

# Time trends

## All cancers

The total number of cancers increased by about 2% per year between 1994 and 2000 (Table 3). The increase was greater for women than for men. Invasive cancers<sup>¶</sup> (which excludes a small number of conditions, mostly *in situ*<sup>¶</sup> cancers of skin, breast and cervix) also increased, by about 1.6% annually (Table 4). The rate of increase in this subgroup of cancers was also higher for women.

	1994	1995	1996	1997	1998	1999	2000	Annual percentage change
females	9806	9610	10218	10504	10416	10658	11253	<b>2.3%</b>
males	9501	9437	9720	9930	9880	10075	10656	<b>1.8%</b>

	1994	1995	1996	1997	1998	1999	2000	Annual percentage change
females	8164	8064	8382	8610	8588	8655	9101	<b>1.8%</b>
males	9053	8969	9180	9319	9268	9436	9902	<b>1.4%</b>

	1994	1995	1996	1997	1998	1999	2000	Annual percentage change
females	546	529	554	562	545	553	573	<b>0.8%</b>
males	627	615	627	629	616	620	647	<b>0.3%</b>

	1994	1995	1996	1997	1998	1999	2000	Annual percentage change
females	453	442	454	460	448	449	464	<b>0.3%</b>
males	598	584	593	591	578	581	601	<b>-0.1%</b>

	female	male
0-64	0.5%	0.0%
65+	0.2%	-0.1%

Age-standardised rates<sup>¶</sup> (which allow for changes in both population size and average age), increased only slightly, by 0.8% overall (Table 5) and by 0.5% for invasive cancers (Table 6). Rates increased more for women, especially those under 65 (Table 7), while there

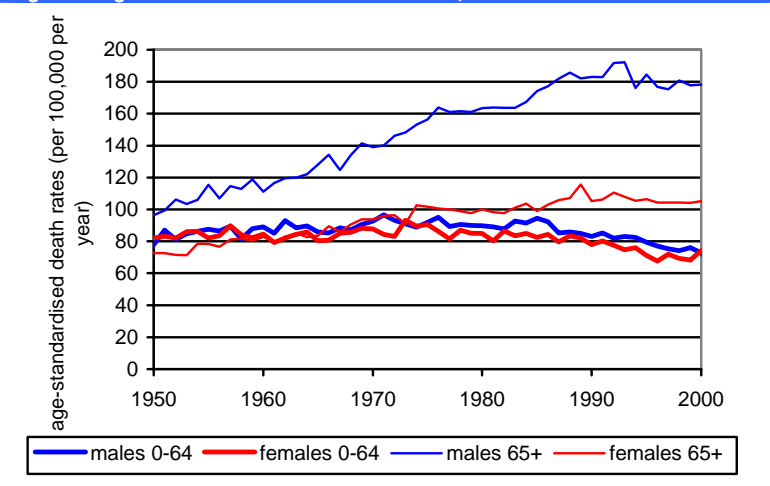
was a decrease in the rate for invasive cancers in men.

	1994	1995	1996	1997	1998	1999	2000	Annual percentage change
females	3440	3426	3400	3496	3463	3489	3587	<b>0.6%</b>
males	3974	4097	3984	3974	4037	4051	4075	<b>0.2%</b>

	1994	1995	1996	1997	1998	1999	2000	Annual percentage change
females	205	178	222	224	172	171	183	<b>-2.5%</b>
males	261	267	257	253	252	250	247	<b>-1.2%</b>

Cancer deaths increased from 7414 in 1994 to 7662 in 2000, an annual increase of 0.4% (Table 8). As with

Figure 3. Age-standardised<sup>¶</sup> cancer death rates, all cancers 1950 to 2000



cancer cases, the rate of increase in women was greater, although the total number of cancer deaths was consistently higher in men. All of the increase in cancer deaths seems to be attributable to population change. Age-standardised rates fell by 2.5% annually for women and by 1.2% for men (Table 9).

The long-term trend in cancer mortality rates is downwards for those under 65 (Figure 3). For those over 65, there was an upward trend for women until about 1975 and for men until the late 1980s. Cancer death rates in the over 65s have remained fairly steady since then.

<sup>¶</sup> see glossary, page 12

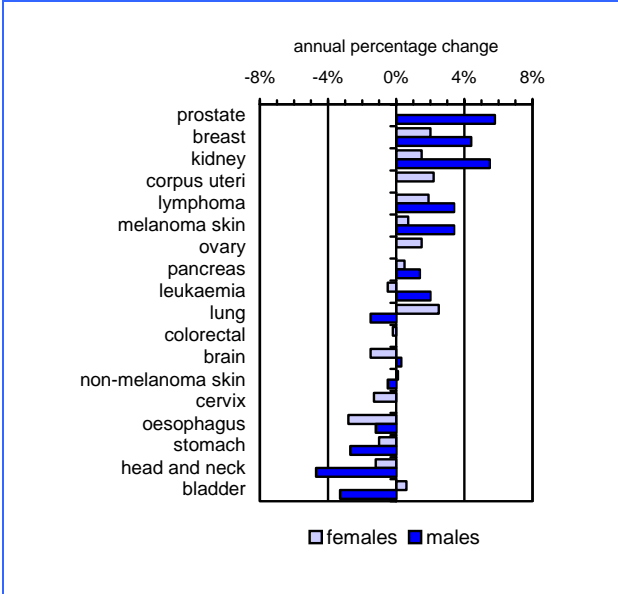
### Time trends: Common cancers

In keeping with the overall increase, most of the common cancers also increased in number between 1994 and 2000 (Figure 4). The largest increase in cancer numbers was in cancer of the prostate, which increased by an average of 7% per year, from 1089 cases in 1994 to 1656 cases in 2000. Cancers of the upper gastrointestinal (GI) tract—head and neck, oesophagus and stomach—were the main exceptions to the overall increase.

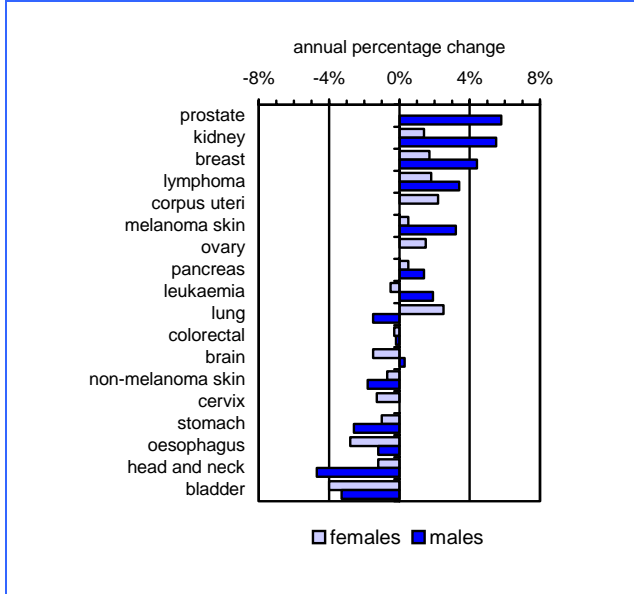
About half of the common cancers increased in age-standardised rate, and half decreased (Figure 5). The largest increases were in cancers of the prostate, breast (in women), kidney and lymphoma\*, while the largest decreases were in upper gastrointestinal cancers.

The number of deaths due to melanoma of the skin, leukaemia and lymphoma\* increased by 4% to 8% annually, while deaths from cancers of the head and neck, brain, bladder and stomach decreased (Figure 6). There was a fall in the age-standardised death rate for most cancers, but an increase in the rate for melanoma of the skin, leukaemia and lymphoma\*, and for cancer of the kidney and liver in men (Figure 7).

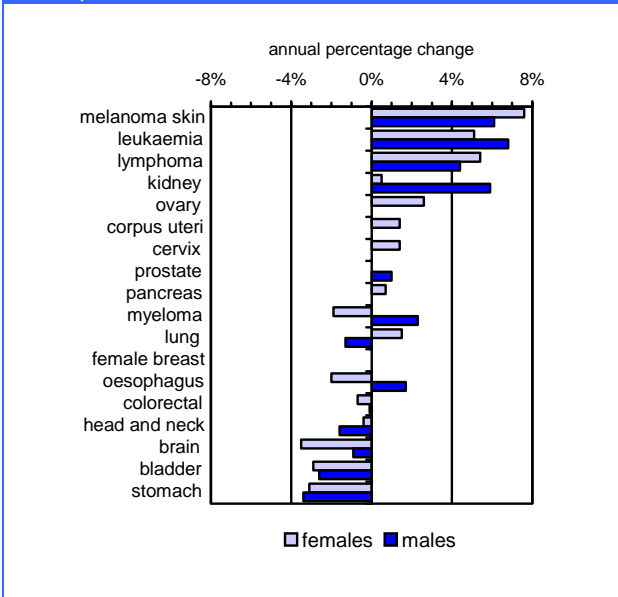
**Figure 4. Annual percentage change in number of new cancer cases, 1994-2000**



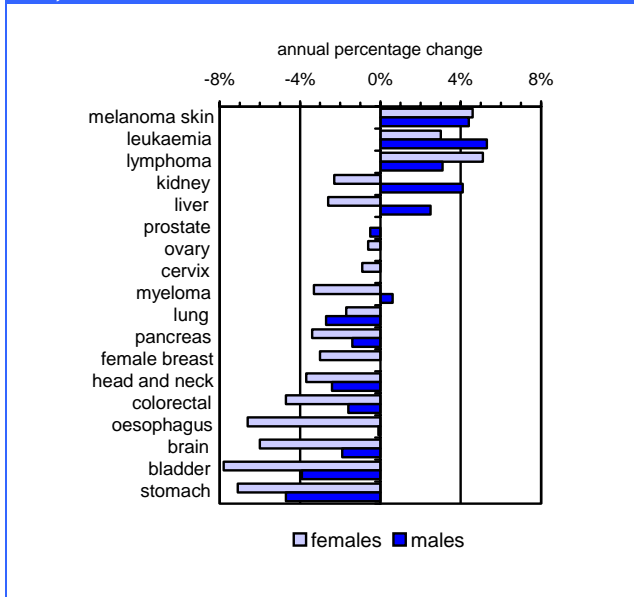
**Figure 5. Annual percentage change in age-standardised<sup>†</sup> incidence rate, 1994-2000**



**Figure 6. Annual percentage change in number of cancer deaths, 1994-2000**



**Figure 7. Annual percentage change in age-standardised death rate, 1994-2000**



\* all lymphomas

<sup>†</sup> See glossary, page 12

## Time trends: Incidence predictions

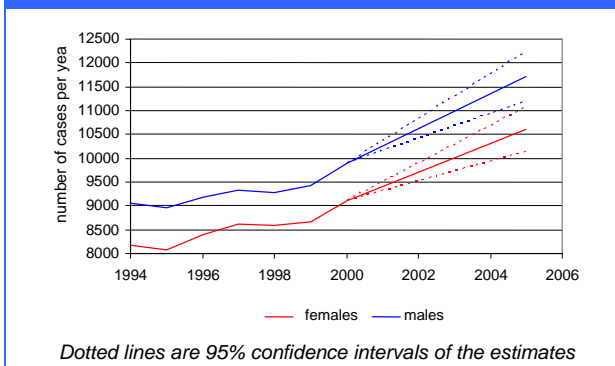
The current trends in incidence can be used to model future expectations of cancer numbers. Because of the relatively short period for which we have data, and the random variation in numbers of cases from year to year, predictions can not be very accurate and there may be large margins of error in the estimates. For all invasive cancers, we expect the total number per year to have increased from 19003 in 2000 to 22313 in 2005, a 17% increase overall, or 3.4% per year (Table 10, Figure 8). This is a more rapid rate of increase than that observed from 1994 to 2000 and highlights the increasing effect of population growth and ageing on cancer incidence. If non-melanoma skin cancers are excluded, the expected increase in incidence is less (12%) (Figure 9).

**Table 10. Total number of cancers predicted for 2005**

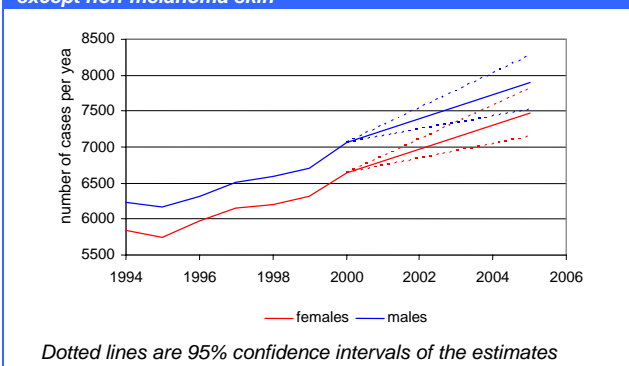
		1994	1995	1996	1997	1998	1999	2000	2005 (95% CI <sup>†</sup> )	Change 2000-2005
All invasive cancers	both	17217	17033	17562	17929	17856	18091	19003	22313 (21337; 23289)	17% (12%; 22%)
	females	8164	8064	8382	8610	8588	8655	9101	10608 (10150; 11065)	12% (7%; 17%)
	males	9053	8969	9180	9319	9268	9436	9902	11706 (11187; 12224)	18% (13%; 23%)
All invasive cancers, excluding non-melanoma skin	both	12087	11907	12277	12671	12792	13034	13711	15372 (14656; 16088)	12% (6%; 17%)
	females	5847	5740	5968	6157	6199	6323	6647	7476 (7142; 7810)	17% (12%; 23%)
	males	6240	6167	6309	6514	6593	6711	7064	7896 (7514; 8278)	12% (7%; 17%)

For the common cancers, the largest expected increases are in non-melanoma skin cancer in both sexes (6.2% annually), in prostate cancer in men (7.3% annually) and in lung (4.7%) and breast (4.5%) cancers in women (Figure 10). Percentage increases of a similar magnitude are expected in the less common melanoma, lymphoma and kidney cancer.

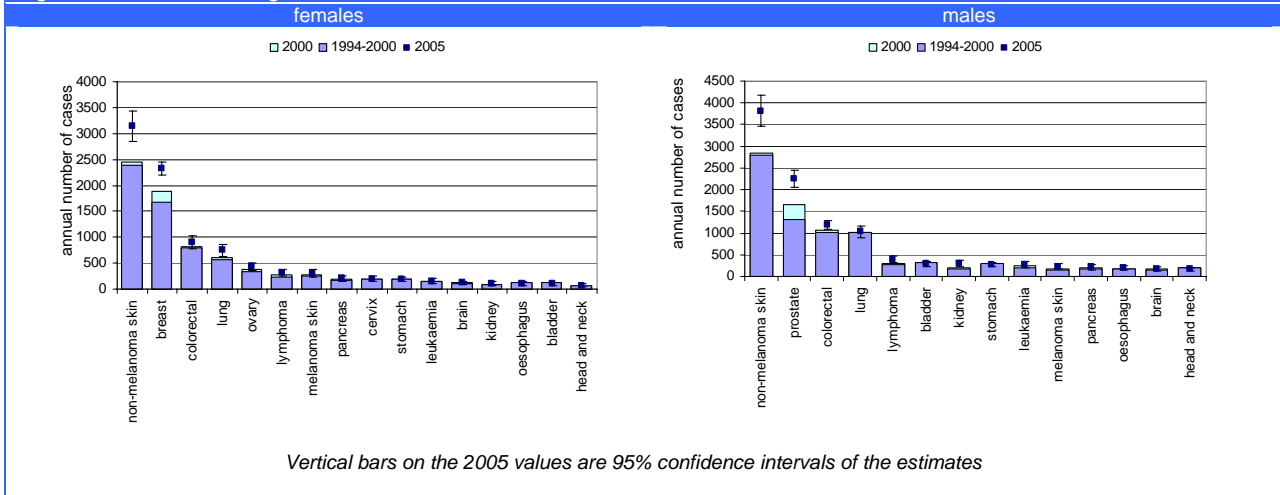
**Figure 8. Predicted number of cases, all invasive cancers**



**Figure 9. Predicted number of cases, all invasive cancers except non-melanoma skin**



**Figure 10. Predicted change in numbers of cancer cases 2000-2005**



<sup>†</sup> 95% confidence intervals—see glossary, page 12.

# Prevalence

Prevalence is a measure of the number of cancer patients who are alive at any time. Although many cancer patients are fully cured of their disease, in most cases they continue to be followed up for the rest of their lives. As a consequence, cancer prevalence usually describes everyone in the community who has ever had a diagnosis of cancer. To measure prevalence exactly, we need to have followed up each cancer patient for a full lifetime. This is not possible at present, so the figures presented here are rough estimates for 1997, the midpoint in the period 1994-2000. Non-melanoma skin cancer is excluded, as it is not possible to estimate its prevalence by the method used.

We estimate that there are over 110000 cancer patients or ex-patients (3.1% of the population) in Ireland, excluding those with non-melanoma skin cancer (Table 11).

There are an estimated 22446 prevalent breast cancer cases, representing 1.2% of the female population (Table 11, Figure 11). Lung cancer, although one of the most commonly diagnosed cancers, has a relatively low prevalence due to the very short survival of many lung cancer patients, while the ratio of prevalent cases to new cases (prevalence/incidence ratio) is highest for melanoma, at 17 (Table 11, Figure 12) because of its good survival.

site	sex	prevalence	prevalence/incidence	% of population
all	females	63900	10.4	3.5%
	males	49166	7.5	2.7%
breast	females	22446	13.2	1.2%
	males	190	13.1	<0.1%
colorectal	females	7098	8.9	0.4%
	males	8433	8.2	0.5%
prostate	males	9024	6.9	0.5%
melanoma	female	4541	18.5	0.2%
	males	2134	14.3	0.1%
leukaemia	females	1539	11.9	0.1%
	males	1757	9.4	0.1%
uterus	females	3253	14.7	0.2%
cervix	females	2870	16.0	0.2%
lymphoma	females	1403	9.9	0.1%
	males	1460	8.6	0.1%
ovary	females	2754	8.3	0.2%
lung	females	635	1.1	<0.1%
	males	956	0.9	0.1%

Figure 11. Estimated number of prevalent cases, 1997

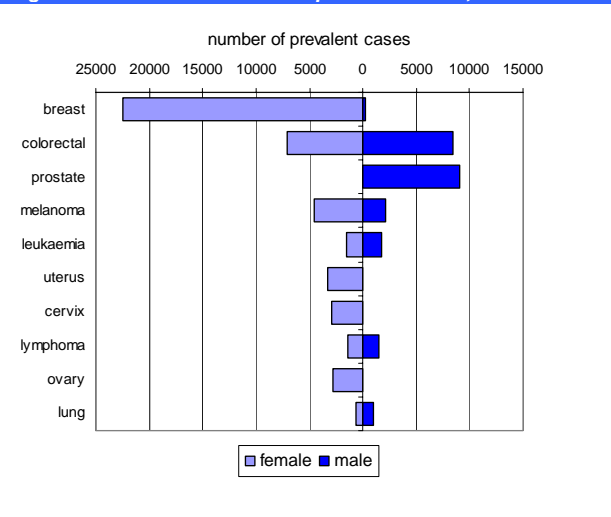
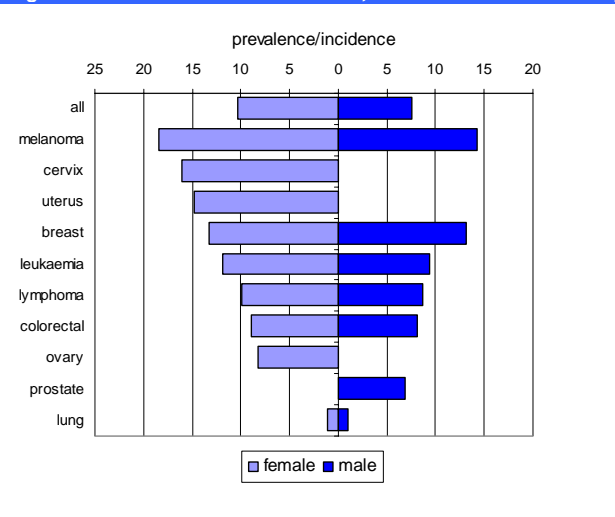


Figure 12. Prevalence/incidence ratio, 1997



# Treatment

Overall figures for the period 1995 to 2000 (Table 12) show that 68% of patients had surgery, 20% radiotherapy and 15% chemotherapy. Hormone therapy was administered to 7% of patients during this time. It should be noted that during 1994, hormone treatment was not registered separately but was included under chemotherapy, and so 1994 is not included in the tables below.

**Table 12. Percentage of patients treated, all cancers, 1995 to 2000**

	both sexes	females	males
surgery	68%	69%	66%
radiotherapy	20%	20%	19%
chemotherapy	15%	17%	13%
hormone	7%	9%	6%

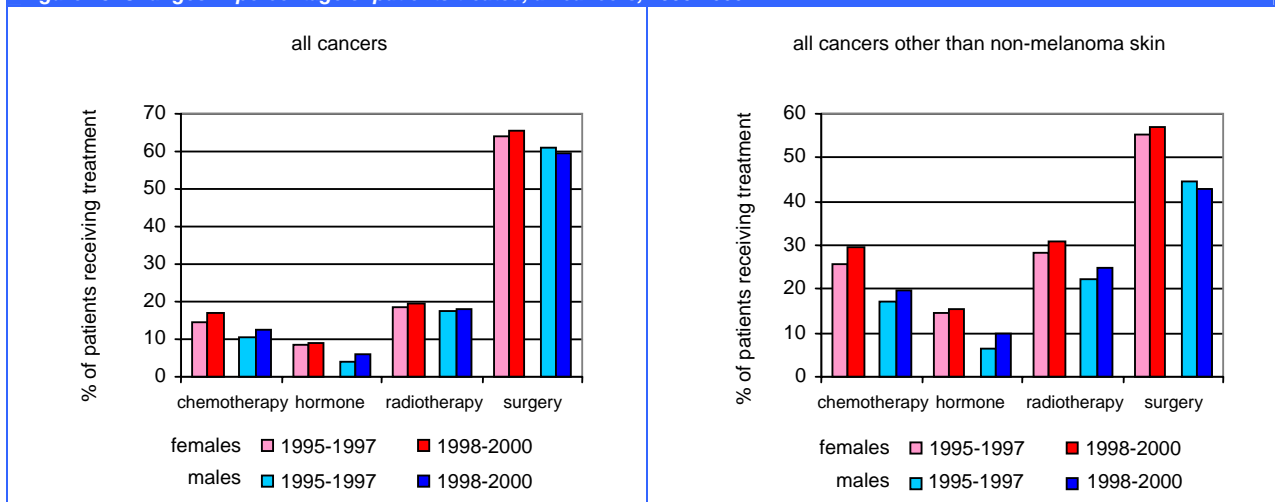
All treatment types increased in number between 1995 and 2000 (Table 13). From 1995 to 2000 the number of female patients having surgery increased by 3.3% annually and the number of male patients increased by 1.3% annually. The largest annual increases were seen in chemotherapy (7% for females and 6.5% for males).

**Table 13. Number of treatments, all cancers 1995 to 2000**

females	1995	1996	1997	1998	1999	2000	annual percentage change †
surgery	6470	6852	7336	7543	7473	7651	3.3%
radiotherapy	1952	2023	2068	2184	2231	2365	3.8%
chemotherapy	1614	1434	1636	1710	1901	2176	7.0%
hormone	644	1043	1031	1076	1015	986	6.2%
males	1995	1996	1997	1998	1999	2000	annual percentage change †
surgery	5890	6510	6924	6907	6828	6266	1.3%
radiotherapy	1886	1834	1817	1941	1993	2096	2.4%
chemotherapy	1132	1110	1114	1235	1339	1542	6.5%
hormone	296	451	532	616	656	784	19.2%

Comparing the period 1995-1997 with 1998-2000, there were small overall increases in all treatment types for both sexes, with the exception of surgery in men, which fell slightly (Figure 13). The exclusion of non-melanoma skin cancers does not affect these conclusions (Figure 13).

**Figure 13. Changes in percentage of patients treated, all cancers, 1995-2000**



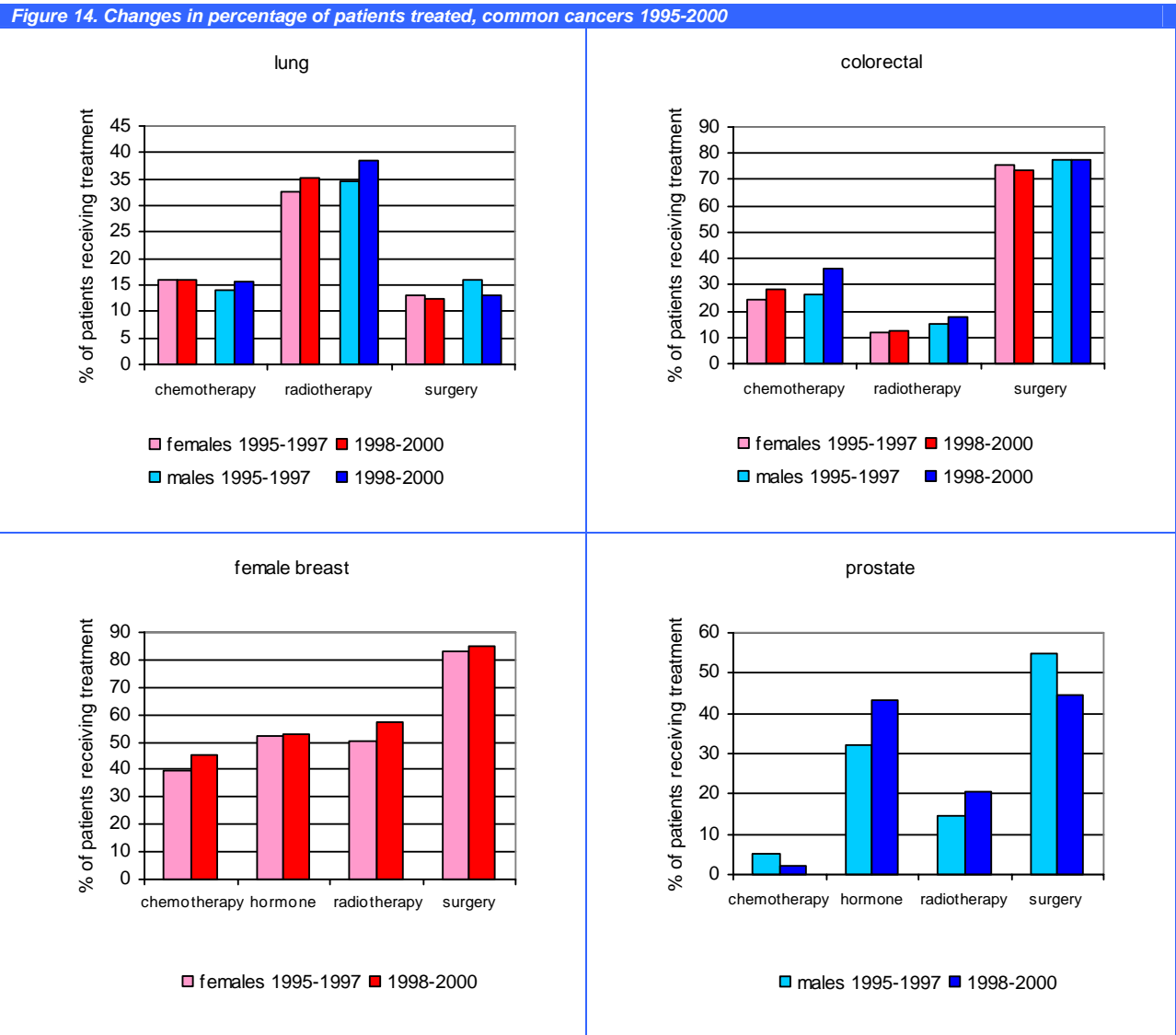
† see glossary, page 12

The percentage of patients having chemotherapy for lung cancer increased slightly, from 14% in 1995-1997 to 15% in 1998-2000 for males, and remained at 16% for females, while the percentage having radiotherapy increased from 34% to 39% for males and from 33% to 35% for females (Figure 14). By contrast, the percentage having surgery fell from 13% to 12% for males and from 16% to 13% for females.

The rate of chemotherapy also increased for colorectal cancer, from 27% to 36% for males and from 24% to 29% for females. Radiotherapy also became more frequent for males, increasing from 15% to 18%, but there was only a small rise for females, from 12% to 13%. Rates of surgery were changed little, increasing from 77% to 78% for males and decreasing from 75% to 74% for females.

Chemotherapy was more frequent for female breast cancer in 1998-2000 than in 1995-1997, increasing from 40% to 45%, while radiotherapy also increased, from 51% to 58%. Hormone therapy increased only from 52% to 53% of cases. Surgery also increased slightly, from 83% to 85% of cases.

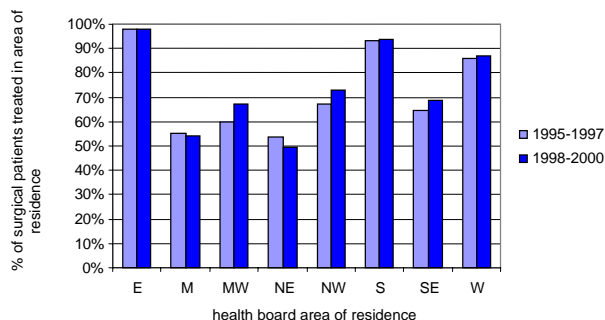
Chemotherapy was uncommon for prostate cancer, and fell from 5% to 2% of cases. Hormone therapy increased from 32% to 43%, radiotherapy from 14% to 20%, while surgery fell from 55% to 45% of cases.



## Place of treatment

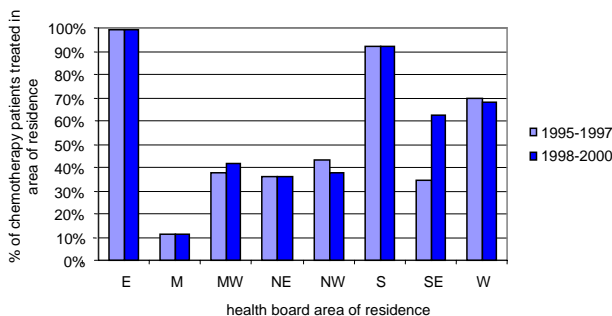
As expected, most patients having surgery were treated in their area of residence (Figure 15), although almost half of those in the Midland and Northeastern areas (the closest to Dublin) had surgery outside their health board area of residence. In general, the proportion having treatment in their home health board increased somewhat over the 1995-2000 period, but declined in the Midland and Northeastern regions.

**Figure 15. Percentage of patients having surgery in their health board of residence**



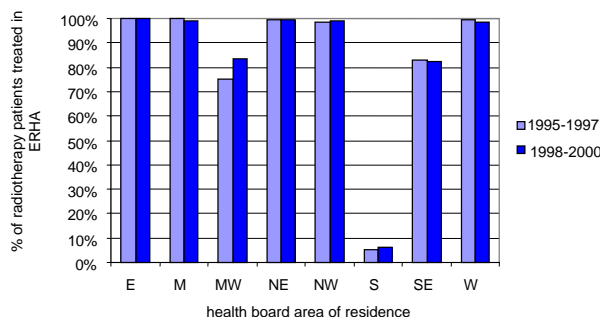
Most patients living in the Eastern Region and Southern Health Board areas had chemotherapy in these areas, and the percentages treated outside the area did not change much between 1994 and 2000 (Figure 16). There was a decline in the percentage of patients living in the North Western Health Board who were treated within the health board, while for those patients living in the South Eastern Health Board, and to a lesser extent those in the Mid Western Health Board, the percentage having chemotherapy in their own area increased substantially.

**Figure 16. Percentage of patients having chemotherapy in their health board of residence**



Radiotherapy is provided in two areas, the Eastern Region (ERHA) and Southern Health Board area. Patients resident in these areas generally had radiotherapy there (Figure 17). Patients from the rest of the country mainly had radiotherapy in Dublin, but about 20% of patients from the Midwestern and Southeastern areas had radiotherapy in Cork. During the period from 1995-1997 to 1998-2000, this proportion increased slightly for those in the Midwest, but not for those in the Southeast. Fewer than 6% of Southern Health Board area residents traveled to Dublin for radiotherapy treatment.

**Figure 17. Percentage of patients having radiotherapy in the ERHA**



<sup>†</sup> See glossary, page 12



# Survival

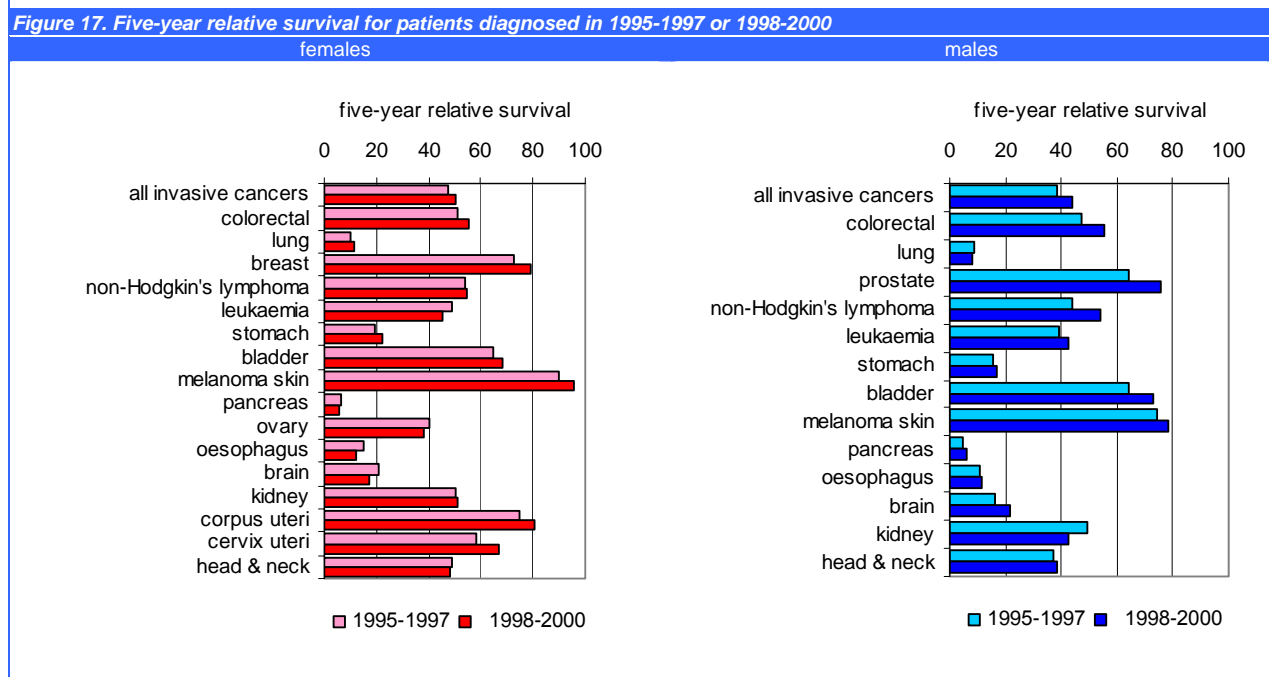
Between 1995-1997 and 1998-2000, overall relative survival<sup>¶</sup> from cancer (excluding non-melanoma skin cancer) increased from 48% to 50% for women and from 38% to 44% for men (Table 11, Figure 17). Both of these increases were statistically significant. However, this improvement in overall survival may have been due to a fall in the proportion of cancers with a poor outlook (e.g. lung cancer) so the figures for survival for individual cancers are more informative.

For women, there were increases in survival for the four commonest cancers—breast, lung, colorectal and lymphoma. Only breast cancer showed a statistically significant increase, but there seems to be a clear positive trend in cancer survival. For men, survival improved for almost all cancers, notably for cancers of the prostate and stomach, as well as for lymphoma and leukaemia, but there was a small decrease in survival from lung cancer. This decrease in survival was small and not statistically significant, but is notable in the context of an improvement in survival from most other common cancers.

**Table 11. Five-year relative survival<sup>¶</sup> (95% confidence intervals<sup>¶</sup>) for patients diagnosed in 1995-1997 or 1998-2000**

Cancer type	females		males	
	1995-1997	1998-2000	1995-1997	1998-2000
all invasive cancers (except non-melanoma skin)	47.7 (46.8; 48.6)	<b>50.4 (49.3; 51.6)</b>	38.4 (37.4; 39.4)	<b>43.9 (42.5; 45.2)</b>
colorectal	50.8 (48.0; 53.5)	55.4 (52.0; 58.7)	47.4 (44.6; 50.2)	55.1 (51.7; 58.6)
breast	72.8 (71.1; 74.5)	<b>78.9 (76.6; 81.2)</b>		
lung	10.0 (8.2; 11.7)	11.2 (9.3; 13.1)	8.5 (7.3; 9.7)	8.0 (6.3; 9.7)
prostate			64.1 (61.2; 67.0)	<b>75.9 (71.7; 80.2)</b>
non-Hodgkin's lymphoma	53.6 (48.7; 58.5)	54.7 (48.6; 60.8)	43.7 (38.4; 49.0)	54.3 (46.9; 61.7)
leukaemia	48.8 (42.5; 55.1)	45.3 (36.3; 54.2)	39.0 (33.3; 44.6)	42.8 (35.4; 50.2)
stomach	19.2 (15.0; 23.4)	22.2 (17.6; 26.8)	15.6 (12.6; 18.7)	16.9 (13.2; 20.6)
bladder	64.5 (58.6; 70.3)	68.7 (59.0; 78.4)	64.3 (52.1; 76.5)	72.7 (65.8; 79.7)
melanoma skin	89.7 (86.1; 93.3)	95.8 (91.7; 99.9)	74.3 (68.4; 80.3)	78.2 (69.8; 86.7)
pancreas	6.6 (4.3; 9.5)	5.6 (2.8; 9.7)	4.8 (2.8; 7.6)	5.9 (3.6; 9.1)
ovary	40.0 (36.4; 43.5)	38.1 (33.9; 42.2)		
oesophagus	14.8 (10.9; 19.3)	12.2 (7.4; 18.3)	10.9 (7.5; 14.3)	11.4 (7.6; 15.2)
brain	20.7 (16.8; 24.7)	17.3 (12.4; 22.2)	16.3 (12.9; 19.7)	21.6 (17.2; 26.0)
kidney	50.7 (44.1; 57.3)	51.0 (41.5; 60.6)	49.2 (42.8; 55.6)	42.9 (35.5; 50.2)
corpus uteri	74.6 (69.8; 79.4)	80.6 (74.7; 86.6)		
cervix	58.6 (53.3; 63.8)	66.7 (60.8; 72.6)		

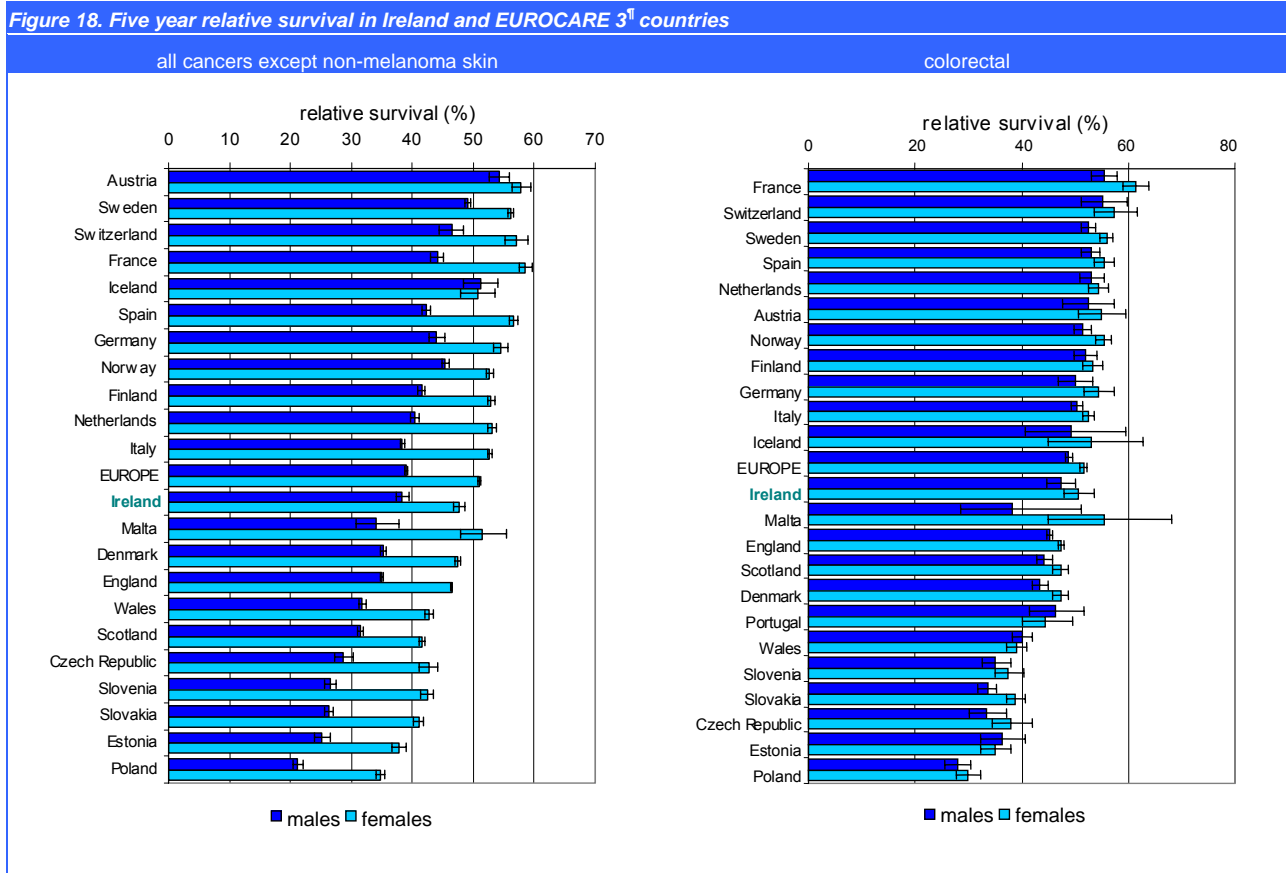
*Figures in bold indicate a statistically significant increase in survival*



<sup>¶</sup> See glossary on page 12

## Survival: International comparisons

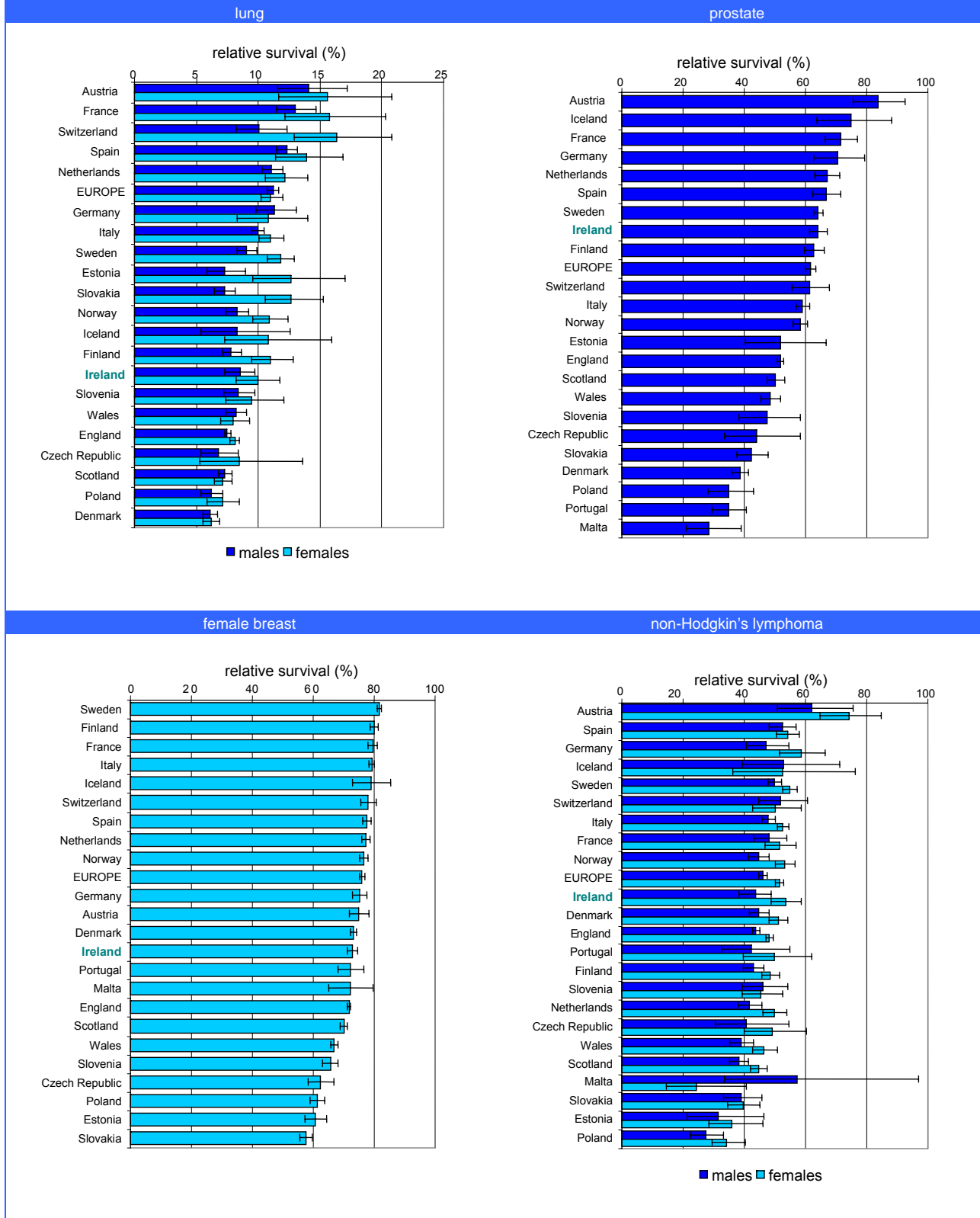
Survival in Ireland, for patients diagnosed in 1994-1996, was close to the European average\* for all cancers combined (Figure 18). With the exception of Iceland, survival across Europe was much worse for males than for females, mainly because of the preponderance of lung cancer in the male cases. For colorectal and prostate cancer and for non-Hodgkin's lymphoma, relative survival in Ireland was close to the European average. However, for lung and breast cancer, survival was significantly below average.



<sup>¶</sup> See glossary on page 12

\* as reported by the EUROCARE group for cancers diagnosed between 1991 and 1994

Figure 18. Five year relative survival in Ireland and EUROCARE 3<sup>1</sup> countries (continued)



**Data source:** EUROCARE-3: survival of cancer patients diagnosed 1990-94—results and commentary. Sant M, Aareleid T, Berrino F, Bielska Lasota M, Carli PM, Faivre J, Grosclaude P, Hedelin G, Matsuda T, Moller H, Moller T, Verdecchia A, Capocaccia R, Gatta G, Micheli A, Santaquilani M, Roazzi P, Lisi D; EUROCARE Working Group. *Ann Oncol.* 2003;14 Suppl 5:v61-118.

We would like to thank the EUROCARE group for permission to use their published data in this report.

<sup>1</sup> See glossary on page 12

# Glossary of terms

## Age-standardised rate

Age is a major risk factor for cancer, so in comparing rates between two populations we must eliminate the effects of any difference in age structure. This is done by calculating “age-standardised” rates for each population based on a population of known standard age composition. All incidence and mortality rates in this report are age-adjusted to the “European” standard population.

## Annual percentage change

This measures the annual percentage increase or decrease in cancer numbers, deaths or rates compared to the base year.

## Confidence interval/95% confidence interval

There is a specified probability (usually 95%) that the confidence interval contains the true value of the quantity being measured.

## EUROCARE 3

EUROCARE 3 is a collaborative study among cancer registries in 17 European countries which provides population-based survival data for patients diagnosed between 1991 and 1994.

*Reference: EUROCARE-3: survival of cancer patients diagnosed 1990-94—results and commentary.*

*Sant M, Aareleid T, Berrino F, Bielska Lasota M, Carli PM, Faivre J, Grosclaude P, Hedelin G, Matsuda T, Moller H, Moller T, Verdecchia A, Capocaccia R, Gatta G, Micheli A, Santaquilani M, Roazzi P, Lisi D; EUROCARE Working Group. Ann Oncol. 2003;14 Suppl 5: v61-118.*

We would like to thank the EUROCARE group for permission to use their published data in this report.

## Incidence/incidence rate

An incident case is a new cancer case. Incidence rate is the number of new cancers in a population during a specific period (usually a year), divided by the number of people in the same population.

## Invasive

An invasive cancer is one which has the potential to spread outside the area where it first arose.

## In situ

An “in situ” cancer is one which is confined to the small area in which it first arose. In situ cancers may go on to become invasive.

## Non-melanoma skin cancer

Skin cancers are of two main kinds—melanoma and non-melanoma. Non-melanoma cancers are by far the commonest cancer, but are rarely fatal and almost always easily treated.

## Prevalence

This is a measure of the total number of cases of a disease (in this case cancer) in a population at any given time.

## Survival/relative survival

Survival describes the proportion of patients who survive for a specified period after diagnosis, for instance five-year survival is the proportion of cancer patients still alive five years after diagnosis.

Relative survival is the survival of a group of cancer patients relative to the survival of a group of individuals of the same age and sex who do not have cancer.

# The National Cancer Registry Board

The National Cancer Registry was established by the Minister for Health in 1991 under the *National Cancer Registry Board (Establishment) Order* (Statutory Instrument 19/1991). This order was amended in 1996 (S.I. no 293/1996) to increase the number of Board members.

The functions of the Board are laid down in its Establishment Order as follows:

- 1. to identify, collect, classify, record, store and analyse information relating to the incidence and prevalence of cancer and related tumours in Ireland;**
- 2. to collect, classify, record and store information in relation to each newly diagnosed individual cancer patient and in relation to each tumour which occurs;**
- 3. to promote and facilitate the use of the data thus collected in approved research and in the planning and management of services;**
- 4. to publish an annual report based on the activities of the Registry;**
- 5. to furnish advice, information and assistance in relation to any aspect of such service to the Minister.**

The Third National Cancer Registry Board (2002-2006) was appointed by the Minister for Health and Children in March 2002, as follows:

**Dr. Elizabeth Keane (Chair), Director of Public Health Medicine, Southern Health Board.**

**Ms. Margaret Codd, Cancer Liaison Nurse, St. James's Hospital, Dublin.**

**\*Dr. Thomas Crotty, Consultant Histopathologist, St. Vincent's University Hospital, Dublin.**

**\*Dr. Helen Enright, Consultant Haematologist, AMNCH Hospital, Dublin.**

**Dr. David Fennelly, Consultant Oncologist, St. Vincent's University Hospital, Dublin.**

**Professor Bernadette Herity, formerly at Department of Epidemiology and Public Health, University College, Dublin.**

**Dr. Tony Holohan, Deputy Chief Medical Officer, Department of Health and Children.**

**Dr. Mary Hynes, Deputy CEO, Western Health Board.**

**Dr. Elaine Kay, Consultant Pathologist, Beaumont Hospital, Dublin.**

**Dr. Joseph Moran, General Practitioner, Fermoy, Co Cork.**

**Professor Ivan Perry, Department of Epidemiology and Public Health, University College, Cork.**

*\*Dr Enright resigned from the Board in March 2003 and was replaced in October 2003 by Dr Crotty.*

## Mission statement

The aim of the National Cancer Registry is to collect high quality information on cancer and to promote the use of this information in reducing cancer incidence and improving survival.

In pursuit of these objectives, the Registry collects comprehensive information on all newly diagnosed cancers in Ireland and summarises the information gathered in an annual report on cancer incidence and mortality.

## Publications

In addition to annual reports on cancer incidence and mortality, the Registry has produced a number of publications, which are available from the Registry offices.

### Recent registry publications:

1. Patterns of care and survival from cancer in Ireland 1994 to 1998. NicAmhlaoihb R, Mahmud S, Comber H, National Cancer Registry, 2004.
2. All-Ireland cancer statistics 1994-1996. Walsh PM, Comber H, Gavin AT. National Cancer Registry/Northern Ireland Cancer Registry, 2001.

### Peer-reviewed publications:

1. Montanaro, F, et al., Pleural mesothelioma incidence in Europe: evidence of some deceleration in the increasing trends. *Cancer Causes Control*, 2003. 14(8): p. 791-803.
2. Mahmud, SM, Reilly, M and Comber, H. Patterns of initial management of lung cancer in the Republic of Ireland: a population-based observational study. *Lung Cancer*, 2003. 41(1): p. 57-64.
3. Comber, H and Perry, IJ. Observational studies for intervention assessment. *Lancet*, 2001. 357(9274): p. 2141-2.
4. Comber, H, Some patients with colorectal cancer may have been missed by Northern Ireland registry. *BMJ*, 1999. 319(7206): p. 385.
5. Codd, MB, et al., Mortality from breast cancer in Ireland prior to the introduction of population-based mammographic screening. *Ir J Med Sci*, 1999. 168(2): p. 87-92.

### Forthcoming publications:

1. Campo J, Comber H, Gavin AT. All-Ireland cancer statistics 1998-2000. National Cancer Registry/Northern Ireland Cancer Registry, 2004.
2. Cancer Atlas of UK and Ireland. Office of National Statistics, UK. *Due for publication in 2004.*

## Projects

### Online access to data

The Registry will soon be able to provide on-line access to data. At present we have data from 1994 to 2000, and later years will be added as soon as they are available. Users will have instant on-line access to a wide variety of cancer data, by site and place of residence and will be able to design their own tables, based on cancer type, age, county and health board. The output will include numbers of cases and deaths from cancer, age-specific, crude and adjusted rates. The existing data query service will continue to be provided, as will the ability to download the dataset.

### Electronic data collection

The Registry is expanding data collection from the current manual system to allow us to register cases directly from electronic pathology reports, HIPE data and death certificates.

This will help us to provide our users with data earlier than at present and also allow our tumour registration officers to concentrate on extracting more detailed information from medical records.

### Geocoding

We are also beginning a process of geocoding all records to add an electoral division (DED) of residence for each case. This will enable us to rapidly identify areas of high cancer risk and to look at the links between cancer and deprivation.

# Staff

## Head office staff

<b>Name</b>	<b>Job title</b>
Mary Chambers	Supervisor
Harry Comber	Director
Deirdre Cronin	Cancer Epidemiology Fellow
Eleanor Crowley	Systems Manager
Sandra Deady	Data Analyst
Fiona Dwane	Data Manager
Bryan Feeney	IT Projects Officer
Geraldine Finn	Communications & HR officer
Majella Gallagher	Research Nurse
Anne Griffin	IT Administrator
Tracey Kelleher	Data Quality Officer
Maria Kelly	Senior Analyst/Programmer
Ali Magnier	Senior Analyst/Programmer
Eilish Manley	Data Entry Clerk
Vera McCarthy	Data Entry Clerk
Neil McCluskey	Geo-coding Researcher
Irene O'Driscoll	Administrator
Colm Quinn	Project Co-ordinator
Siobhan Reynolds	Research Nurse
Martina Roche	Researcher
Linda Sharp	Epidemiologist
Christopher Smith	Executive Assistant
Paul Walsh	Epidemiologist

## Tumour registration officers

<b>Name</b>	<b>Area of responsibility</b>
Liz Behan	ERHA
Kathleen Bergin	ERHA
Margaret Burgess	SEHB
Kate Burke	SHB
Mairead Casey	ERHA
Margaret Cawley	WHB
Anne Cooney	ERHA
Ursula Cullen	ERHA
Maria Duane	SHB
Mary Geoghegan	MWHB
Sharon Glynn	NEHB
Eve Horan	ERHA
Katherine Leonard	ERHA
Martina McCarthy	ERHA
Michelle McClintock	MHB
Eileen Menarry	NWHB
Celine O'Keeffe	WHB
Denise Smith	ERHA
Terry Stapleton	WHB

**Staff email addresses are of the form initial.surname@ncri.ie e.g. h.comber@ncri.ie**

# Annual accounts

## Income and Expenditure Account for the year ended 31 December 2002

	<b>2002</b>	<b>2001</b>
	€	€
<b>Income</b>		
Department of Health & Children grants	1,403,983	1,222,990
Superannuation contributions	46,622	44,457
Statistical income	1,747	13,342
<b>Total Income</b>	<u>1,452,352</u>	<u>1,280,789</u>
<b>Expenditure</b>		
Staff costs	1,082,525	1,018,957
Administration costs	150,946	179,282
Travel and subsistence	49,834	70,234
<b>Total Expenditure</b>	<u>1,283,305</u>	<u>1,268,473</u>
<b>Surplus/(Deficit) for year</b>	169,047	12,316
Balance Brought Forward 1st January	(66,144)	(78,460)
Balance Carried Forward 31st December	<u>102,903</u>	<u>(66,144)</u>

All gains and losses for the year have been recognised in arriving at the Surplus of Income over Expenditure.



## Balance Sheet as at 31 December 2002

	2002		2001	
	€	€	€	€
<b>Fixed Assets</b>		46,206		26,426
<b>Current Assets</b>				
Debtors	15,764		26,544	
Cast at bank and in hand	<u>274,707</u>		<u>5,095</u>	
	<u>290,471</u>		<u>31,639</u>	
<b>Current Liabilities</b>				
Amounts due to U.C.C.	75,237		21,243	
Other creditors	80,000		-	
Accruals	<u>32,331</u>		<u>76,540</u>	
	<u>187,568</u>		<u>97,783</u>	
<b>Net Current Assets</b>		<u>102,903</u>		<u>(66,144)</u>
<b>Total Assets Less Current Liabilities</b>		<u>149,109</u>		<u>(39,718)</u>
<b>Financed by:</b>				
Capital grants		46,206		26,426
Income and Expenditure Account		102,903		(66,144)
		<u>149,109</u>		<u>(39,718)</u>

# Key findings

- Over 20000 new cancers are diagnosed each year.
- 7500 people die of cancer each year.
- Cancer of the bowel (colorectal) is the commonest cancer and lung cancer is the leading cause of cancer death.
- New cancer cases are increasing by about 2% every year. More than half of this increase is due to population growth and ageing.
- Cancer deaths are increasing by 0.4% per year, but the risk of death from cancer is falling.
- The risk of dying of cancer has been falling for men since 1970, but for women only in the last ten years.
- Cancers of the prostate, kidney, breast and lymphoma are on the increase; cancers of the mouth, oesophagus and stomach are decreasing.
- Cancer numbers are expected to reach 22000 by 2005, with the biggest increases in cancer of skin, breast and prostate.
- The number of patients treated for cancer is increasing by about 3% per year. The number having chemotherapy is increasing by about 7% per year.
- Over 60% of all cancer patients, but only 10% of lung cancer patients, have surgery.
- Most patients had cancer surgery in the health board where they lived.
- Most patients outside the ERHA and SHB had chemotherapy elsewhere. The proportion of patients having chemotherapy in their area of residence increased substantially in the SEHB.
- Five year relative survival for all cancers combined was 48% in 1994-97 for women and had increased to 50% by 1998-2000. For men survival improved from 38% to 44% over the same period.
- Survival improved for most common cancers over the same period, with the exception of lung cancer in men.
- Cancer survival in Ireland is close to the European average for the common cancers, with the exception of breast and lung cancer, for which survival was well below the average.