Contents

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- The Ireland/N. Ireland/NCI Consortium Board and Implementation Group for their advice and support.
- The staff of both registries for their dedication and expertise, which ensures we have excellent all-island data.
- The Board of the National Cancer Registry (Ireland) and the Management Group and Council of the N. Ireland Cancer Registry for their guidance and advice since the Registries were founded.

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September 2004

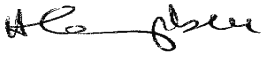
Foreword

I welcome this 2nd All Ireland Cancer Statistics Report and congratulate the authors on its clear style. It provides concrete evidence of the benefits of the NCI, Ireland and N. Ireland Consortium which aims to promote joint programmes of work.

I wish to take this opportunity to commend the Registries on their ongoing collaboration on data harmonisation, data analysis and research which will do much to enhance our understanding of cancer.

This report, the result of several years of collaboration, highlights some areas of success and identifies areas for action to improve cancer outcomes in Ireland. We must take note of its recommendations.

Finally, this proves yet again the importance of cancer registration as one of our most important public health tools.



Dr Henrietta Campbell

Chief Medical Officer, Northern Ireland

I join with my colleague, Dr. Henrietta Campbell, in welcoming the publication of this 2nd All Ireland Cancer Statistics Report. This aspect of the work of the Consortium has proven to be particularly valuable, both in terms of the actual information it gives us in relation to cancer in the island as a whole, and the clear example it provides us of the type of co-operation that lies at the heart of the mission of the Consortium.

The authors of this report deserve our commendation for the excellence of their work which will provide a sound basis for future planning in this most important of public health policy areas.

I look forward to future reports in this series.

Dr Jim Kiely

Chief Medical Officer, Ireland

All Ireland cancer statistics

Second report

A collaborative report by the Northern Ireland Cancer Registry and the National Cancer Registry (Ireland)

A profile of cancer incidence, mortality and survival for the island of Ireland, 1998-2000

Summary

These are highlights from the second collaborative report produced by the Northern Ireland Cancer Registry and the National Cancer Registry (Ireland). Data from both registries have been merged and integrated to profile and assess the cancer incidence and mortality on the island of Ireland. Most information is based on 1998-2000 data; trends are from 1994 to 2000.

New cancers, 1998–2000 (excluding non-melanoma skin cancer)

figure 1.1
1998-2000 percent by site, all Ireland
male cancer incidence
with average annual cases in ( )'s

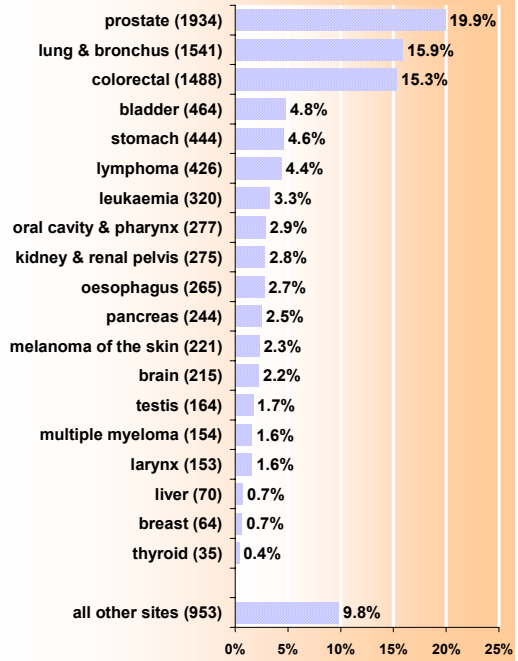
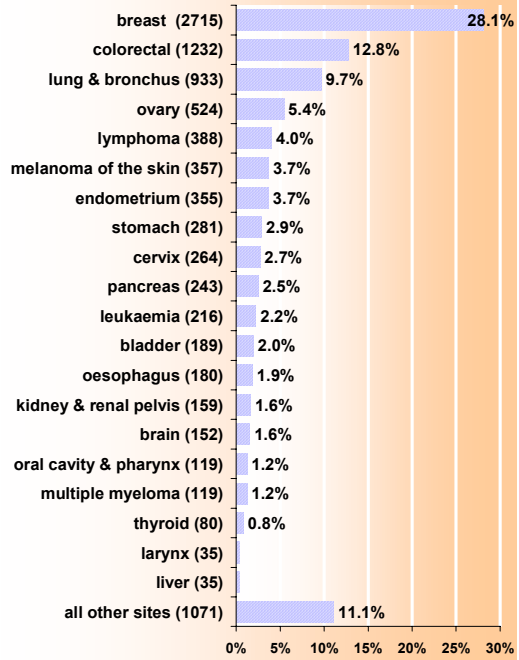


figure 1.2
1998-2000 percent by site, all Ireland
female cancer incidence
with average annual cases in ( )'s



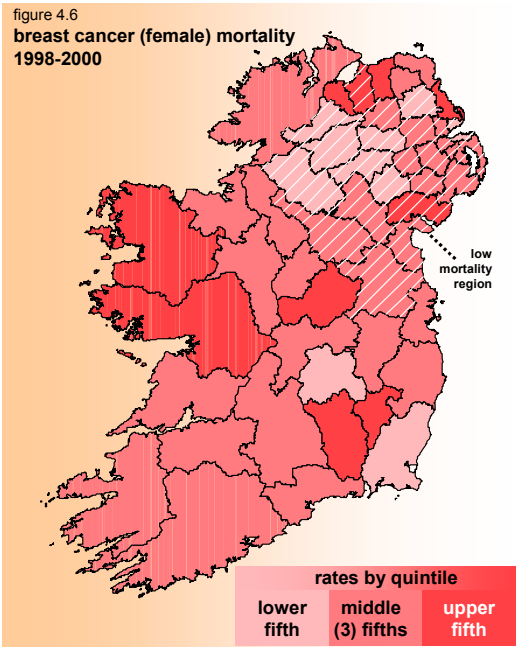
The focus of this report is on cancers that are life-threatening, represent a substantial burden to the general population and can be prevented or cured. These include colorectal, breast, lung, prostate, stomach, and oesophageal cancers, as well as melanoma of the skin. Additionally, all cancer sites combined, all childhood cancers and lymphoma are profiled since these are often a concern to the public, researchers and policy makers.

Each year there are over 19000 new cancer cases and 11000 cancer deaths in Ireland. This excludes 5800 cases of non-melanoma skin cancer, which are rarely life-threatening.

The four commonest cancers— breast, colorectal, lung and prostate —are of the highest concern and the report includes specific recommended actions for these.

The maps below are coloured to show the 20% of counties/district councils with the lowest or highest rates. No statistical significance is implied. The shaded areas show where the incidence or mortality was significantly different from that in Ireland as a whole.

figure 4.6
breast cancer (female) mortality 1998-2000



Colorectal cancer – For both sexes combined, colorectal cancer is the leading type of cancer in Ireland, and the second leading cause of cancer-related death.

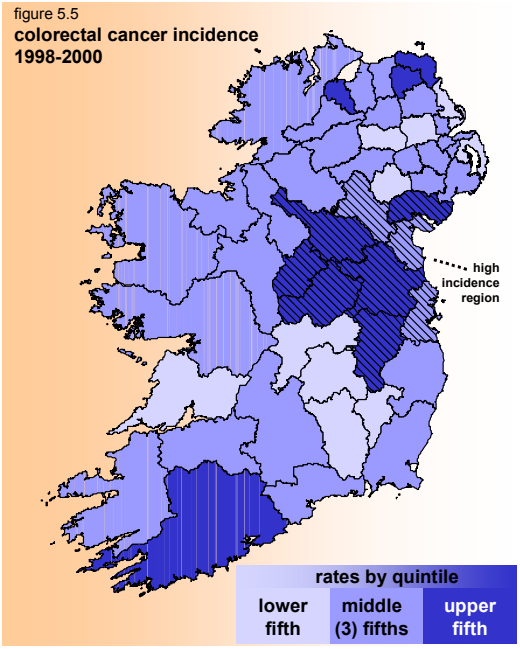
Striking variations by region and by sex exist in Ireland. The eastern seaboard region has significantly more cases than expected. The incidence in men is 1.5 times higher than in women.

Understanding why regional variations exist, and targeting prevention programmes to those regions and populations at highest risk should be a public health priority.

Breast cancer – For women, breast cancer is the leading type of cancer and the leading cause of cancer-related death. Mammography screening can prevent deaths from breast cancer. Mortality rates in Northern Ireland, where nationally sponsored screening programmes are well-established, have fallen by more than 20% between 1994 and 2000. In the Republic of Ireland, breast cancer mortality rates are the same in 2000 as they were in 1994.

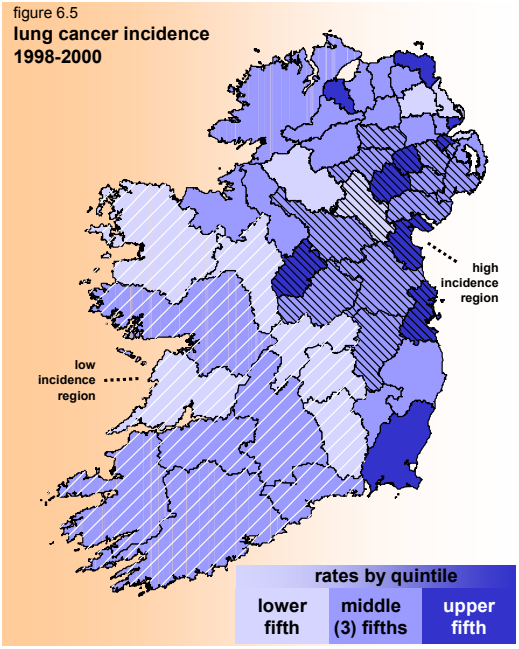
Although all the differences between Northern Ireland and the Republic may not be attributable to screening, the findings suggest a need for increased mammography screening services in the Republic of Ireland.

figure 5.5
colorectal cancer incidence 1998-2000



Lung cancer – The leading cause of cancer death in Ireland is lung cancer. Cigarette smoking is the principal cause of lung cancer. Prevention is the most effective means of reducing lung cancer deaths.

figure 6.5
lung cancer incidence 1998-2000

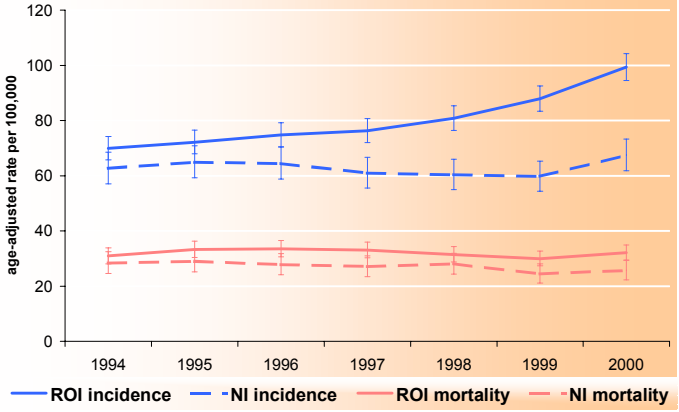


The nationwide effort in the Republic of Ireland to reduce tobacco use, including a ban on smoking in public places, should profoundly lower the rates of lung cancer. Prevention initiatives need to be instituted island-wide, with an emphasis on urban areas, which have the highest incidence.

Prostate cancer – The leading type of cancer in men is prostate cancer. The benefits of screening are unclear. Added to this uncertainty is the widespread and growing use of PSA tests. These can detect non-life threatening prostate cancers, but cannot distinguish them from life-threatening ones.

Between 1994 and 2000, the incidence rates in the Republic of Ireland increased by 33%—with a 22% increase between 1998 and 2000 alone. In Northern Ireland, during that same 1994-2000 period, there was no change in the incidence rate. Why? From 1994 to 2000 the mortality rates in Northern Ireland fell by 12%, but in the Republic of Ireland they have remained unchanged. Why?

figure 10.4
prostate cancer incidence & mortality rates in NI and ROI



Answering these questions has implications for issues as diverse as health care resource utilization, incentives in the health care industry, quality of care, quality of life, and the epidemiology of prostate cancer. They must be explored.

The National Cancer Registry and the Northern Ireland Cancer Registry are the foundations of our understanding of cancer throughout the island. Their collaboration exemplifies the value of partnerships.

A broader coalition of the registries and key medical, advocacy, and public health entities could provide data-driven leadership in reducing cancer incidence, morbidity and mortality through prevention, early detection, treatment, rehabilitation, and palliation. The first steps in building such a coalition have been made through the establishment of the Ireland/Northern Ireland/NCI Cancer Consortium.

The need to develop this coalition may be the highest priority finding of this report.

The full report and this summary are also available on our websites www.qub.ac.uk/nicr www.ncri.ie

Key findings:

1

- Colorectal is the leading type of cancer for both sexes combined. For men only, prostate is the leading type. For women only, breast is the leading cancer.
- Lung cancer is the leading cause of cancer-related death for both sexes combined and for men only. For women, breast cancer is the leading cause of cancer-related death.
- Lung, oesophageal and stomach cancer incidence and mortality rates for men are more than twice those for women. For most other major cancers, with the exception of breast and melanoma of the skin, the incidence and mortality rates for men are significantly higher than those for women.
- Breast, colorectal, lung, lymphoma, oesophageal cancer and melanoma of the skin incidence rates for women in Ireland are significantly higher than the rates for women in the EU. Oesophageal cancer rates are also higher among women here than in the US.
- Breast, colorectal, lung, lymphoma and oesophageal cancer mortality rates for women in Ireland are significantly higher than those in the EU. Breast, colorectal and oesophageal cancer mortality rates in women here are also higher than in the US, as are the rates of melanoma of the skin and stomach cancer.
- Colorectal and oesophageal cancer incidence rates for men in Ireland are significantly higher than the rates in either the EU or the US. The incidence rate for prostate cancer in Ireland is also significantly higher than in the EU, and the incidence rate for stomach cancer is higher for men in Ireland than in the US.
- Colorectal, oesophageal, and prostate cancer mortality rates for men in Ireland are significantly higher than for men in either the EU or the US. The mortality rate for lymphoma in men in Ireland is higher than the rate in the EU, and the mortality rate for stomach cancer is higher than in the US.
- The incidence rate for lymphoma, breast and lung cancers in women is increasing. For lymphoma, the mortality rate for women is also increasing.
- The incidence rate for men is increasing for lymphoma and prostate cancer.
- Prostate cancer incidence rates in the Republic of Ireland are significantly higher than in Northern Ireland, and are becoming increasingly so over time.
- Regions in the east of Ireland have significantly more breast, colorectal, lung, prostate and stomach cancer cases than expected.
- Regions in the east of Ireland have significantly more lung, melanoma of the skin, oesophageal and stomach cancers deaths than expected.
- For nearly the entire Republic of Ireland the number of prostate cancer deaths is significantly higher than expected.
- For children, cancer incidence and mortality in Ireland is rare, and is not significantly different from either the EU or the US.
- No county, district council or region has significantly more or fewer childhood cancers than expected.

1. Introduction and overview

This is the second collaborative report of the Northern Ireland Cancer Registry and the National Cancer Registry (Ireland). As with the first report, *All-Ireland Cancer Statistics 1994-96*, data from both registries have been merged and integrated to profile and assess the cancer incidence and mortality on the island of Ireland as a whole. As an update, the focus of analysis in this report is on data for 1998-2000, although trends are computed from 1994 forward.

Scope and purpose

The reader should note that there have been considerable changes in the design and focus of this report compared to the first. The most substantive of these is the scope. Unlike its predecessor, this report focuses on those major cancer sites that are life-threatening and:

- Represent a substantial burden to the general population and can be prevented or cured, or
- Are of particular interest to the public, researchers and policy makers.

Among the former are colorectal, breast, lung, prostate, stomach, and oesophageal cancers, as well as melanoma of the skin. Among the latter are childhood cancer and lymphoma. Together, these constitute an average of about 12400 cancers per year or approximately 65% of the 19350 average annual total of life-threatening cancer cases.

figure 1.1
1998-2000 percent by site, all Ireland
male cancer incidence
with average annual cases in ( )'s

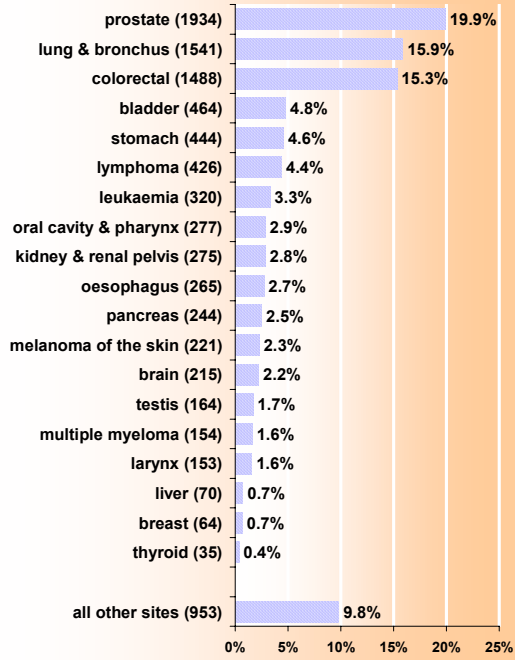
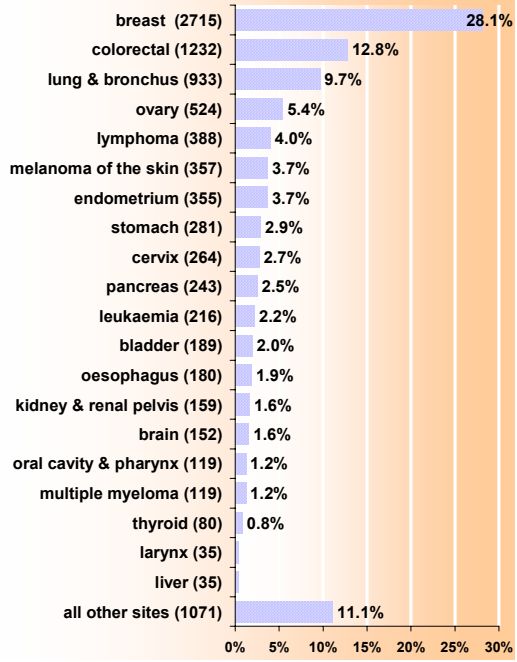


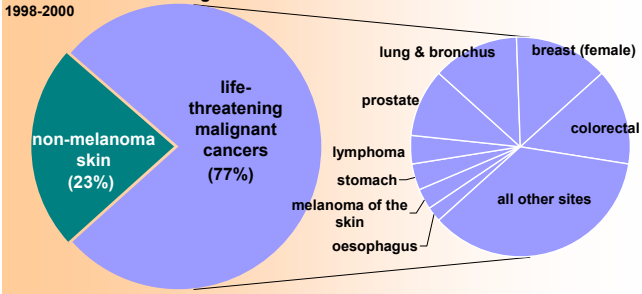
figure 1.2
1998-2000 percent by site, all Ireland
female cancer incidence
with average annual cases in ( )'s



More than half of all cancer cases come from just three of these sites—two of which are the same for both sexes. For men they are prostate, lung and colorectal cancers. For women, they are breast, colorectal and lung cancers.

Absent from this report are the non-melanoma skin cancers (NMS). Between 1998 and 2000, these averaged 5832 cases per year, or 23% of all malignant cancers. They are excluded because they are rarely life-threatening, difficult to collect uniform data on, and, outside of Ireland, rarely monitored. Risk factors, interventions, and incidence patterns for NMS generally mirror those for melanoma of the skin, which is included in this report.

figure 1.3
NMS and life-threatening cancer incidence
1998-2000



As with incidence, the major cancer sites focused on in this report also constitute more than 60% of the cancer-related deaths. That is, out of an average of approximately 11100 cancer-related deaths per year, slightly more than 7000 are from lung, colorectal, breast, prostate, stomach and oesophageal cancers plus lymphoma and melanoma of the skin.

Similarly, too, with incidence, the three leading cancer mortality sites for men and women constitute approximately 50% of the cancer-related deaths for each of the sexes. Moreover, they are the same three sites as with incidence: lung, colorectal and prostate for men, and breast, lung and colorectal for women.

figure 1.4
1998-2000 percent by site, all Ireland
male cancer mortality
with average annual deaths in ( )'s

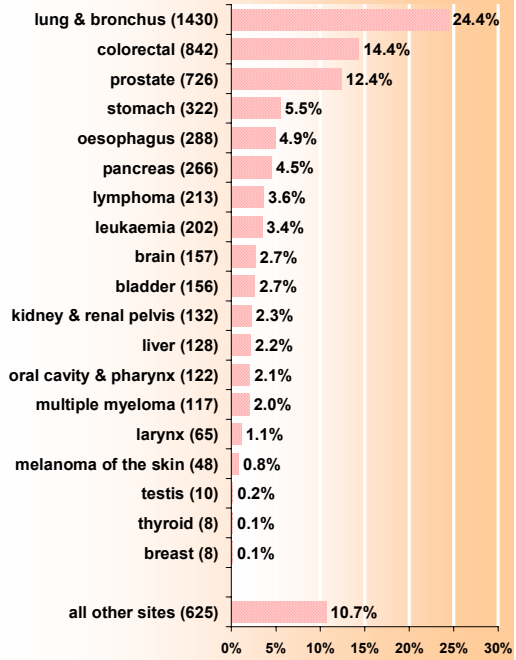
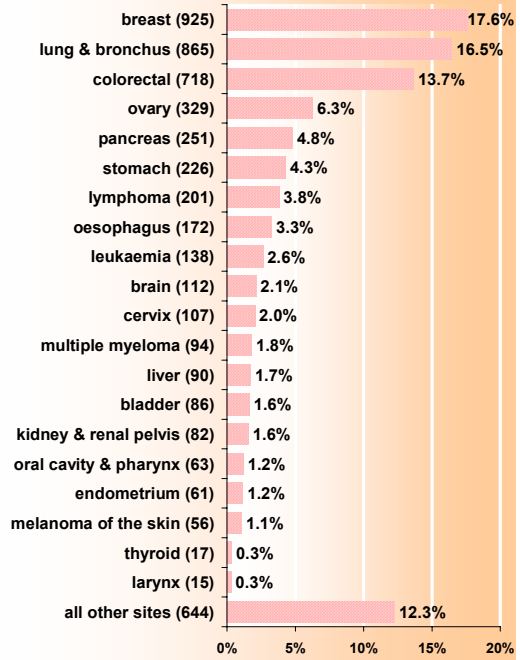


figure 1.5
1998-2000 percent by site, all Ireland
female cancer mortality
with average annual deaths in ( )'s



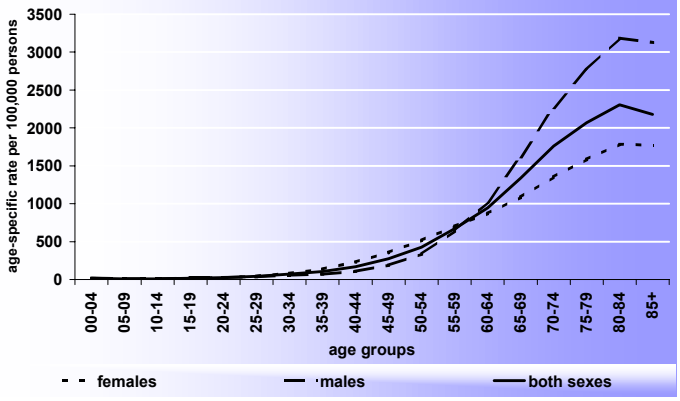
By focusing on these cancers, our intent is to address the concerns of the public—as well as add clarity to the issues which face policy-makers and researchers. By doing so through a collaborative process, our hope is to further existing joint efforts in the Republic of Ireland and Northern Ireland in reducing the burden of cancer throughout Ireland.

The cancer problem

Most people are well aware that cancer is a disease involving the uncontrolled growth and spread of abnormal cells. Less well known is that cancer comprises a highly diverse group of diseases—some preventable, some curable, some medically manageable, and some fatal.

Also seemingly less well known is that the causes of many cancers are equally diverse. Risk factors for breast, prostate and lung cancers, for instance, all differ from each other, with one exception—age.

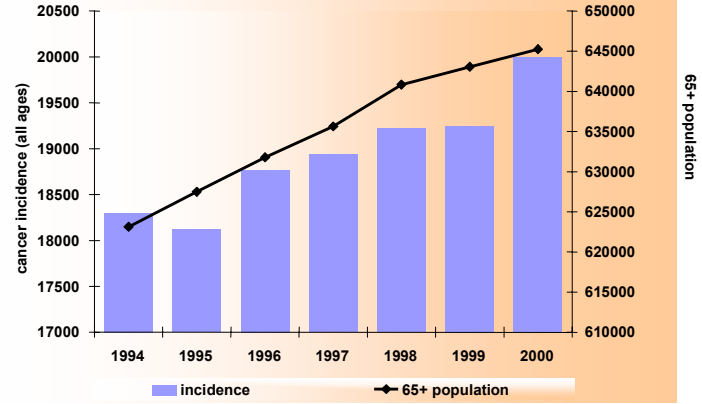
figure 1.6
age-specific incidence rates for all cancers Ireland 1998-2000



The risk of cancer increases markedly with age. Age-specific cancer incidence rates for men and women aged 80 to 84 are, for instance, two to three times higher than the rates for those aged 60 to 64. Rates for men and women aged 60 to 64 are roughly four to ten times higher than those aged 40 to 44.

Given that more and more people are living well past age 65, the number of cancer cases will assuredly increase. This is readily evident in a simple comparison of the 1994 to 2000 annual population estimates for those aged 65 and older, and total cancer incidence.

figure 1.7
cancer incidence and 65+ population Ireland 1994-2000



Age alone, of course, is not the only cancer risk factor; genetics, for instance, contribute as well. Neither of these, unfortunately, are modifiable.

However, among those risk factors that are modifiable, it is estimated that approximately one-third of all cancers are caused by tobacco; one-third by diet (high fat/low fruit and vegetables); and, most of the remaining third by other life-style choices such as excessive drinking, lack of regular exercise, sexual and reproductive patterns, and frequent sunburns. Occupational exposures account for most of the remaining cancer risk, with the final—and very small—outstanding proportion attributable to toxins in the environment.

This is good news, for it suggests many cancers can be prevented simply through healthy life-style choices. Lung, oesophageal and stomach cancers, for instance, are all directly linked to tobacco use; melanoma of the skin, to sun exposure; and, colorectal cancer, to diet and exercise. Moreover, cancers like breast, colorectal and melanoma of the skin, can often be cured if detected early. For these cancers many screening and patient education options exist.

Glossary of terms

Age-adjusted rate: Since age is a major risk factor for cancer, rates are commonly age-adjusted to account for differences in the age composition of district councils, counties, countries or regions being compared. All incidence and mortality rates in this report are age-adjusted to the standard European population, except for childhood cancers which are adjusted to the standard world population.

Confidence intervals, 95% ci: Since two communities rarely have the same incidence or mortality rates, confidence intervals provide a simple means for determining if the differences are more than would be expected by chance alone. As a rule of thumb, if the confidence intervals overlap, then chance alone probably accounts for the difference. If the confidence intervals do not overlap, then the rates are considered to be statistically significantly different—although chance alone could still account for the difference.

Different, significantly different, significant: These terms are only used when the 95% confidence intervals do not overlap or if by some other statistical test the probability that an event happened by chance is less than or equal to 5%.

Eurocare: EUROCARE 3 is a collaborative study among 56 cancer registries in 20 European countries which provides population-based survival data for patients diagnosed between 1990 and 1994.

Incidence, cancer incidence: Terms used to describe the number of new cancer cases diagnosed.

Quintile, upper quintile, lower quintile: The upper and lower quintiles are simply the upper fifth and lower fifth of a rank ordered list of the counties' and district councils' rates. **No statistical significance is implied**.

Relative survival, 5-year survival rates: The percentage of patients who survive for 5 years or longer after being diagnosed. Differences in the expected life-span of those in older or younger age groups are taken into account.

SEER, SEER regions: The SEER program provides nationwide cancer statistics from 11 regions in the US. Incidence and mortality rates for the US are based upon the data from these regions.

Spatial scan statistic: This statistical test looks at all the possible combinations of adjacent counties and district councils and identifies any grouping of areas that have significantly more or fewer cases or deaths than expected. The methodology and software (SaTScan) was developed under contract for the US National Cancer Institute. (http://www.satscan.org/)

Stage at diagnosis, early stage, late stage: How far a cancer has advanced or developed is often described as its stage at diagnosis. Early stage cancer (stage I or II) can often be more effectively treated than late stage cancer (stage III and IV).

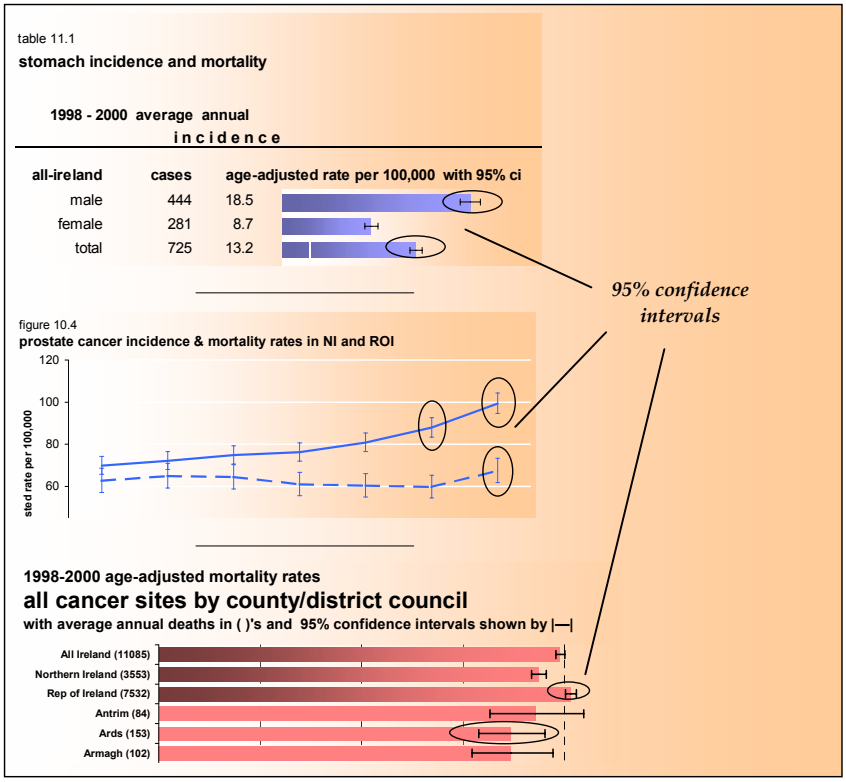
Years of life lost: The rank order of the "years of life lost" for each major cancer site is reported. It is based upon an estimate of the number of years people would have lived had they not died from cancer. The estimate uses the age- and sex-specific life-expectancy table for Ireland.

Guide to the figures and tables

Error bars

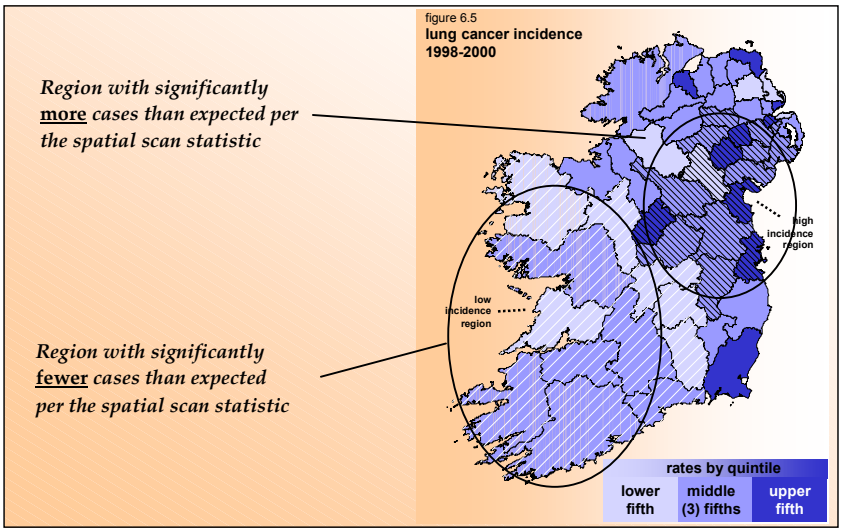
Tables and graphs throughout the report will often include error bars around each rate. These represent the 95% confidence intervals for the rate. As previously noted, if the confidence intervals overlap, the differences between the two rates are not statistically significant. Conversely, if they do not overlap, the differences are significant.

For counties and district councils, rates have not been displayed if there were fewer than 5 cases or deaths in 1998-2000.



Spatial scan statistic

Groups of counties and/or district councils identified through the spatial scan statistic as being significantly different than expected are highlighted on the maps of Ireland. Areas shaded with white diagonals have fewer cases or deaths than expected; areas with black diagonals have more cases or deaths than expected.



2

All cancer sites combined All cancer sites com bined All cancer sites combined All cancer site s combined All cancer sites combined All canc

Key findings:

- *Cancer is a leading cause of serious illness and death in Ireland.*
- *Men have higher incidence and mortality rates than women.*
- *Incidence and mortality rates for women are higher in Ireland than in the EU.*
- *Mortality rates for men and women are higher in Ireland than in the US but incidence rates are lower.*
- *Forty percent of those diagnosed with cancer are under age 65, as are a quarter of those who die from it.*
- *The rate of cancer has not changed appreciably over time.*
- *The cancer mortality rate in the Republic of Ireland is significantly higher than in Northern Ireland.*
- *The northern region has significantly fewer cases than expected.*
- *Eastern seaboard and urban regions have significantly more cases and deaths than expected.*
- *The northern and western regions have significantly fewer deaths than expected.*
- *Differing cancer incidence and mortality rates for men and women, and among areas or regions probably reflect differences in lifestyle choices, health-care system and/or public-health initiatives.*

l cancer sites combined All cancer sites combi ned All cancer sites combined All cancer sites combined All cancer sites combined All cance r sites combined All cancer sites combined All cancer sites combined All cancer sites combin

2. All cancer sites combined

Risks and interventions

- *Lifestyle choices especially tobacco use, high-fat/low fruit and vegetable diets, and sporadic and intense sun exposure are known to increase the risk for many of the most common cancers*
- *Many cancers can be successfully treated, especially if detected early*
- *Early detection through screening can effectively reduce mortality for some, but not all, cancers*

Cancer is a major cause of death in Ireland. More people die from cancer than from heart disease, stroke, respiratory disease, or injuries and poisonings.

Over 19000 new cases of cancer are diagnosed each year, and each year more than 11000 deaths are caused by this disease.

Variation by gender

By and large, the burden of cancer weighs more heavily on men than on women. Specifically, the incidence rate for men is 20% higher than for women. Worse, the mortality rate for men is more than 40% higher.

International comparisons

Nevertheless, for women the incidence and mortality rates in Ireland are significantly higher than in the EU. While for men, they are equivalent to those in the EU.

For both men and women, Ireland's incidence rates are lower than the US. However, for both men and women, Ireland's mortality rates are higher.

table 2.1

all cancer sites combined incidence and mortality

1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	9707	400.6
female	9647	336.7
total	19354	360.1
european union (1998 only)		
male		412.1
female		289.9
total		338.8
united states (11 seer regions)		
male		504.2
female		391.4
total		437.6

1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	5842	241.0
female	5242	168.1
total	11085	197.9
european union (1998 only)		
male		250.1
female		141.2
total		186.5
united states (11 seer regions)		
male		200.6
female		144.7
total		167.3

It is difficult to meaningfully compare overall cancer survival rates between countries. Cancers with a poor survival, such as lung and stomach, may be more common in some countries, leading to poor overall survival. The rates are shown here primarily to allow for future comparisons.

table 2.2

all cancer sites combined 5-year relative survival (%)

	male		female	
	rate	95% ci	rate	95% ci
ireland	40.5	39.8, 41.1	48.7	48.1, 49.3
europe (eurocare)	39.8	39.5, 40.1	51.2	50.9, 51.5
united states (seer)	62.3	62.1, 62.6	63.5	63.2, 63.7

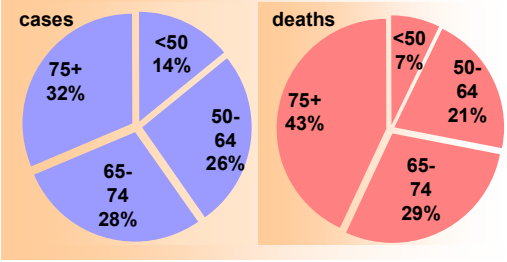
Age distribution

Although cancer is generally thought to be a disease of the elderly, a full 40% of those diagnosed with this disease are under age 65.

In fact, half the people diagnosed with cancer are aged 67 or younger.

Additionally, more than a quarter of those who die from cancer are under age 65.

figure 2.1
all cancers combined age at diagnosis & death 1998-2000



Time trends

The incidence rates have not changed appreciably between 1994 and 2000. For men, and for both sexes combined, the trend is essentially flat. For women, the rate is increasing by less than 1% per year.

Conversely, mortality rates for men, and for both sexes combined, have been decreasing by between 1% and 1.5% per year. For women, however, the trend is essentially flat.

figure 2.2
all cancer sites combined incidence rates by sex and year (1994-2000)

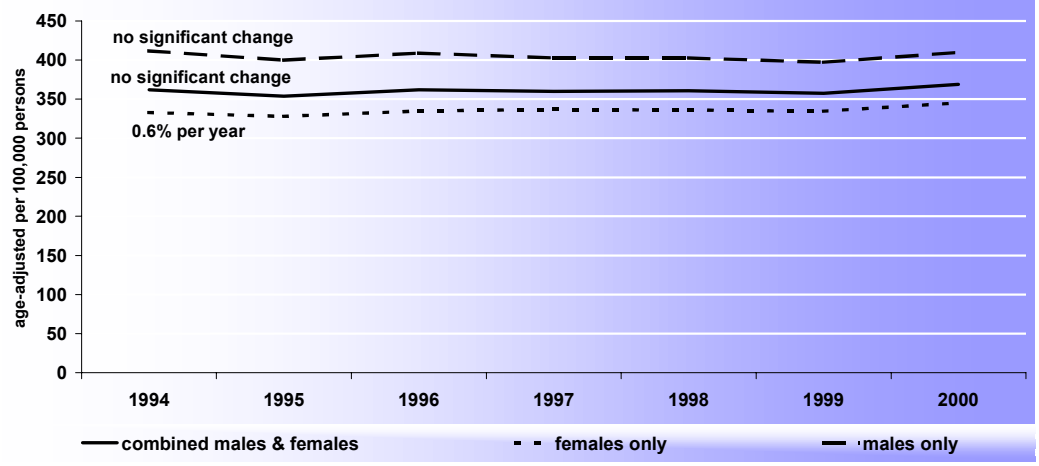
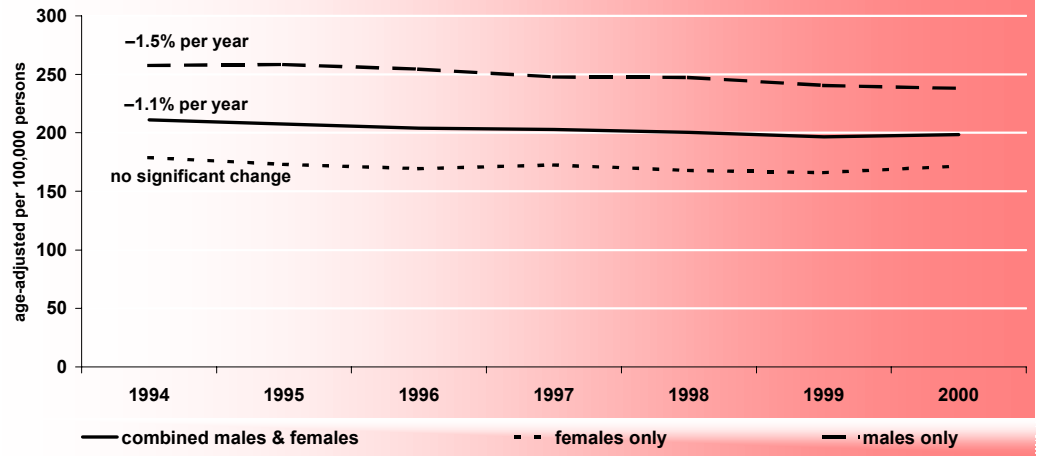


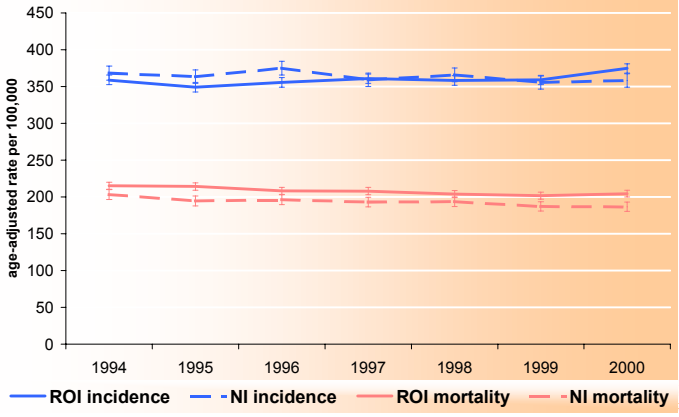
figure 2.3
all cancer sites combined mortality rates by sex and year (1994-2000)



Geographic variations

The incidence rates in Northern Ireland (NI) and the Republic of Ireland (ROI) are statistically the same for any given year.

figure 2.4
all cancers incidence & mortality rates in NI and ROI



There is not a significant change in the incidence rates in NI or ROI over time.

Mortality rates, however, are declining in both NI and ROI. In NI they are decreasing by 1.3% per year; in ROI, by 1% per year.

In addition, the mortality rates in NI are significantly lower than those in ROI in 1995, 1997, 1999 and 2000.

Compared to the all-Ireland incidence rate, Belfast, Derry, Dublin and Kildare have significantly high rates. Compared to the all-Ireland mortality rate, ROI as a whole, Dublin, Kildare, and Belfast have significantly high rates. Northern Ireland, 12 district councils and Clare have significantly low mortality rates. (See figures 2.7 and 2.8)

Counties or district councils in the upper quintile of incidence rates are generally in central east Ireland. Those in the lower quintile are somewhat spread through the island. Counties or district councils in the upper quintile of mortality rates are also mostly in the central east Ireland. Those in the lower quintile are all in the north. (See figures 2.5 and 2.6)

The spatial scan statistic finds that Belfast and the central east region have 8% to 10% more cases than expected. The northern part of Ireland as a whole has 4% fewer cases than expected. The central east region also has 11% more deaths than expected. The northeastern part has 12% to 16% fewer deaths than expected, while the west region has 8% fewer. (See figure 2.5 and 2.6)

figure 2.5
all cancer sites incidence rates 1998-2000

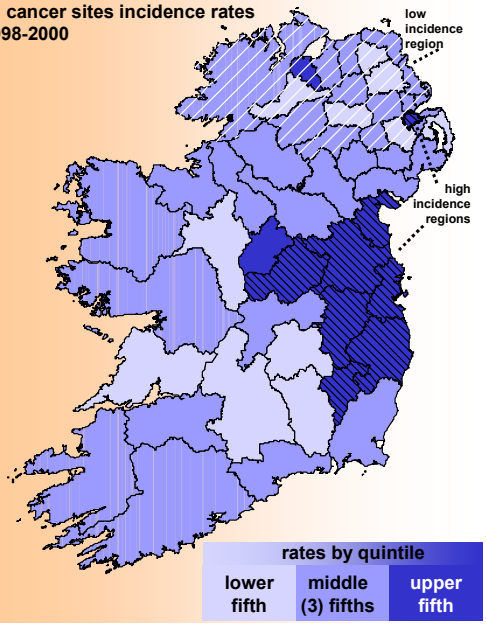


figure 2.6
all cancer sites mortality rates 1998-2000

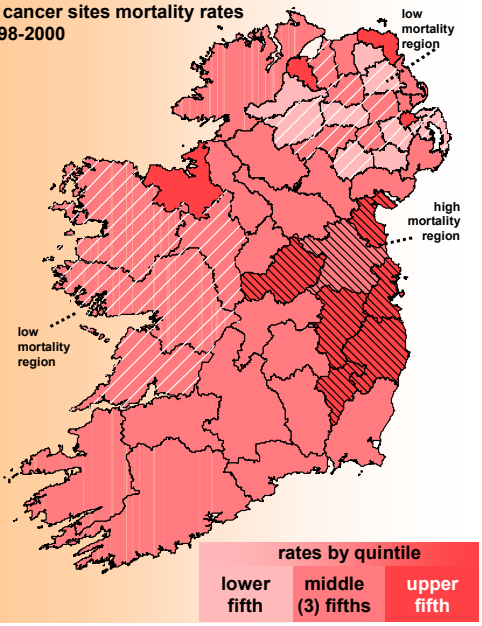


figure 2.7

1998-2000 age-adjusted incidence rates

all cancer sites by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

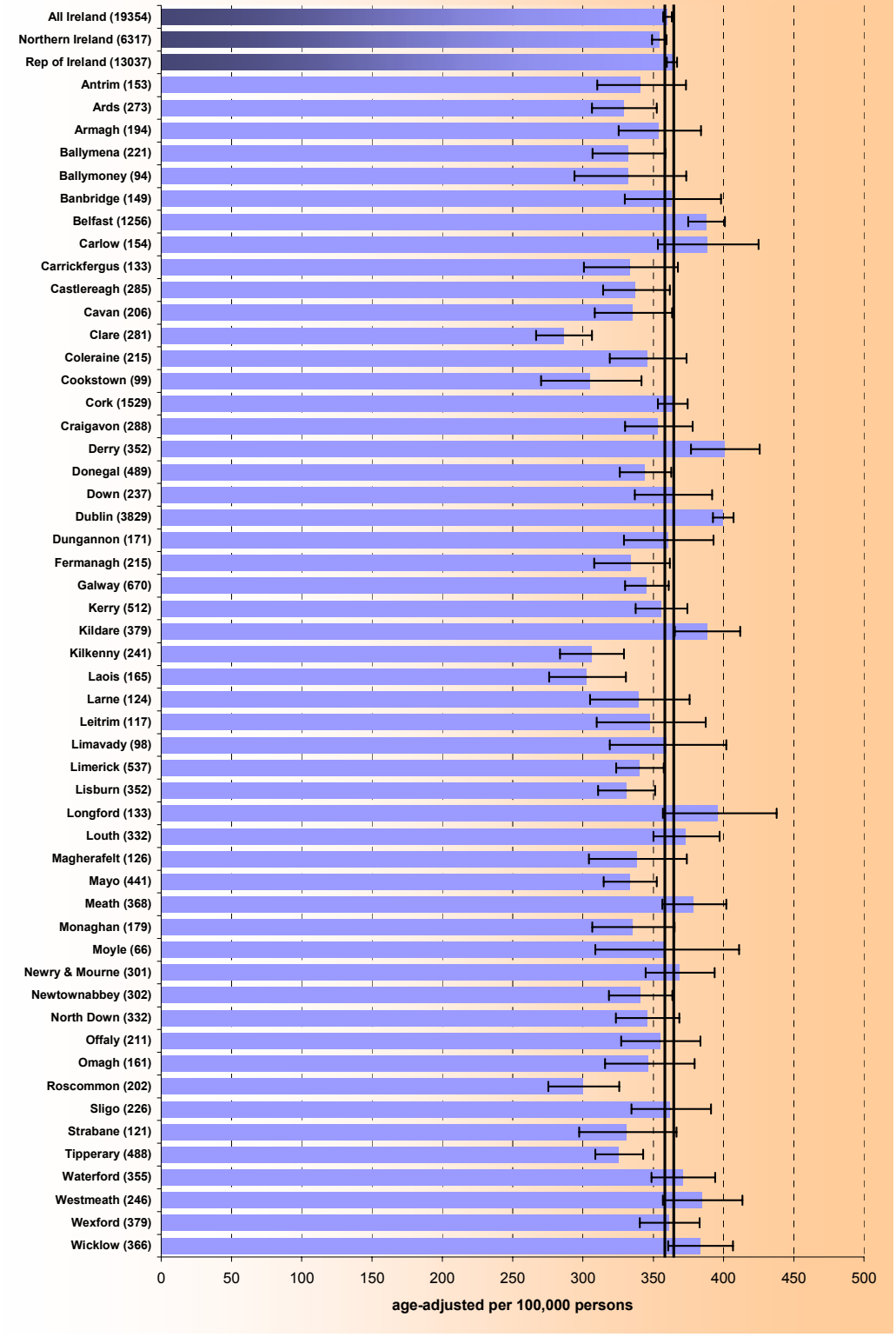
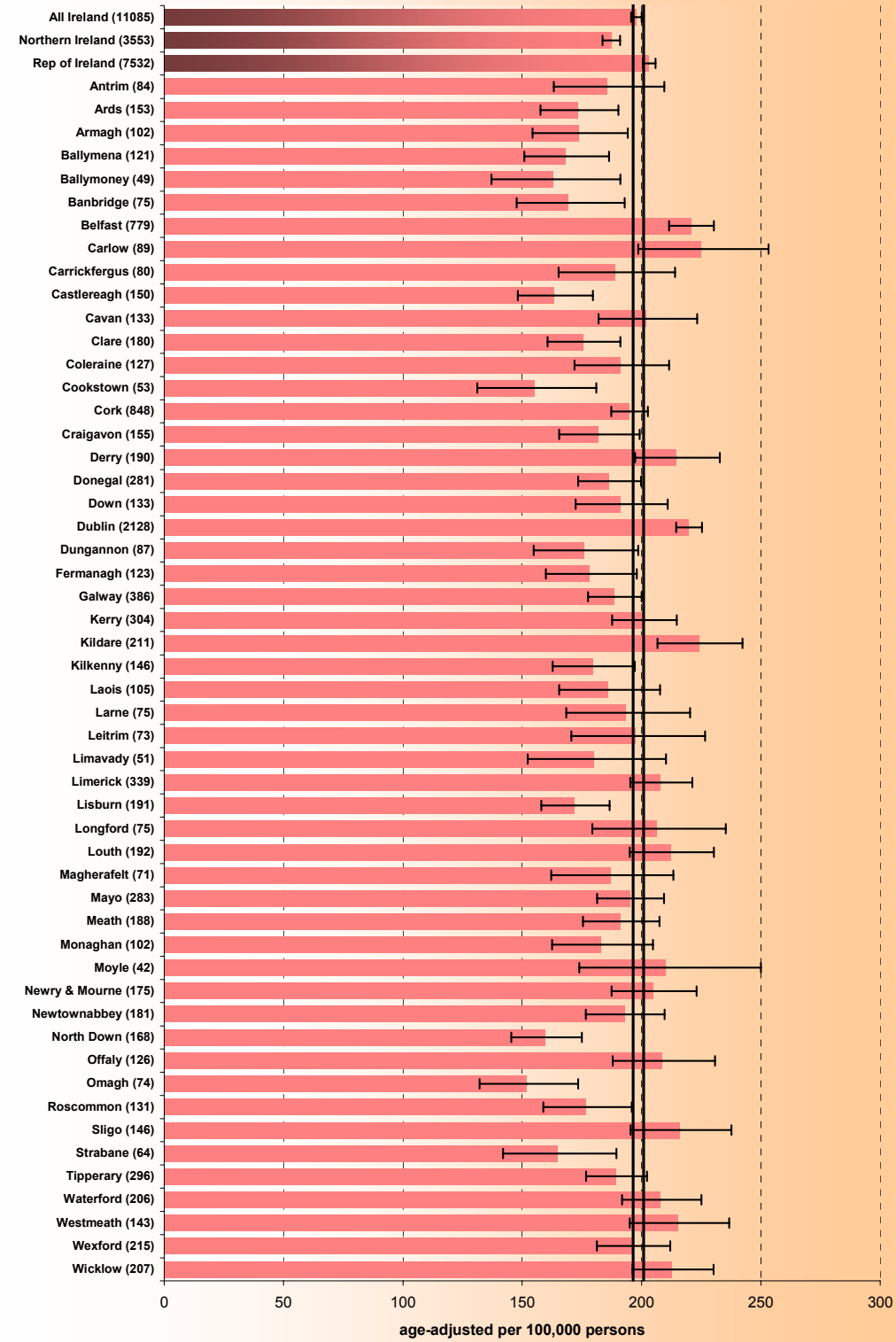


figure 2.8

1998-2000 age-adjusted mortality rates

all cancer sites by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



3 All childhood cancers

Key findings:

- *Cancer in children is rare.*
- *Leukaemia, lymphoma and brain cancers constitute two-thirds of all cancers in children.*
- *Incidence and mortality rates for boys and girls are essentially the same.*
- *Incidence and mortality rates for children in Ireland are the same or lower than in the EU and US.*
- *Survival rates in Ireland are the same as in Europe and US.*
- *The rate of cancer has not appreciably changed over time.*
- *No differences exist in the geographic distribution of incidence or mortality rates.*

3. All childhood cancers

Risks and interventions

- *Outside of certain genetic conditions, such as Down's Syndrome, or direct exposure to ionising radiation, such as x-rays, there are few known risk factors for childhood cancers*
- *Because of the rarity of the disease and the unique needs of the patients, children with cancer should be referred to medical centres with specialists experienced in treating childhood cancers*

Cancer in children is rare. Cancer-related death in children is even rarer. Nearly four times as many children die from injuries as from cancer.

Nonetheless, cancer in children does occur. In Ireland each year about 155 children are diagnosed, and each year, approximately 28 children die from some form of this disease.

Variation by gender

The incidence and mortality rates (per million children) for boys generally run higher than for girls, although the differences between the two are not statistically significant.

International comparisons

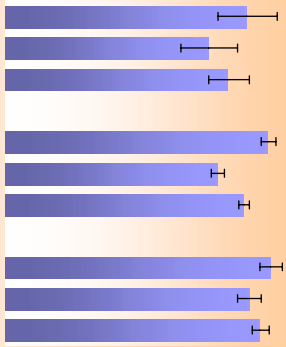
Regardless of gender, the incidence rates in Ireland are the same or lower than the incidence rates in either the EU or the US. Similarly, the mortality rates here are the same or lower than the rates in the EU or the US. This is true for boys and girls separately and for both sexes combined

table 3.1

all childhood cancers incidence and mortality

1998 - 2000 average annual incidence

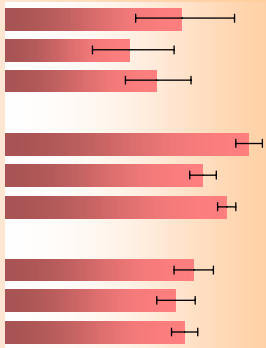
all-ireland	cases	age-adjusted* rate per 1,000,000 with 95% ci
male	87	144.5
female	68	121.9
total	155	133.5
european union (1996 only)		
male		157.7
female		127.2
total		142.9
united states (11 seer regions)		
male		159.2
female		146.0
total		152.8



* per World Standard Population

1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted* rate per 1,000,000 with 95% ci
male	16	26.8
female	12	18.8
total	28	22.9
european union (1996 only)		
male		37.0
female		30.0
total		33.6
united states (11 seer regions)		
male		28.5
female		25.7
total		27.1



* per World Standard Population

So, too, the 5-year survival rate for all children in Ireland is essentially the same as the US and better than in Europe

More than 75% of children with cancer in Ireland are alive five years or longer after being diagnosed. Long-term survival is also generally high.

table 3.2

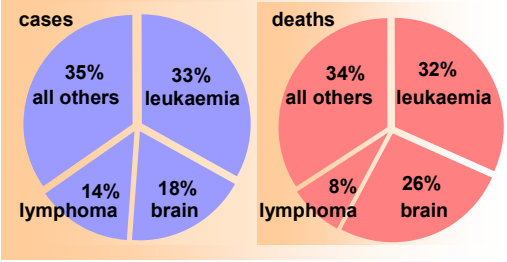
all childhood cancers 5-year relative survival (%)

	children (0-14)	
	rate	95% ci
ireland	76.7	73.7, 79.7
europe (eurocare)	71.8	70.7, 72.8
united states (seer)	76.8	75.6, 77.9

Distribution by type

The classification scheme for childhood cancers includes 12 broad categories and 48 sub-categories. Most childhood cancers, however, fall into three major groups: leukaemia, brain cancer, and lymphoma.

figure 3.1
all childhood cancer sites at diagnosis & death 1998-2000



Approximately one-third of all childhood cancers diagnosed are leukaemia, although these are only a small fraction of all leukaemias in the general population. Similarly, about one-third of all childhood cancer death is caused by leukaemia. Lymphoma and brain cancer together make-up another third of cases and deaths, while all other types constitute the remainder.

Time trends

Neither the incidence nor the mortality rates have changed appreciably between 1994 and 2000. That is, the trend for all childhood cancer incidence and mortality—for boys, girls and all children combined—is essentially flat.

figure 3.2
all childhood cancers incidence rates by sex and year (1994-2000)

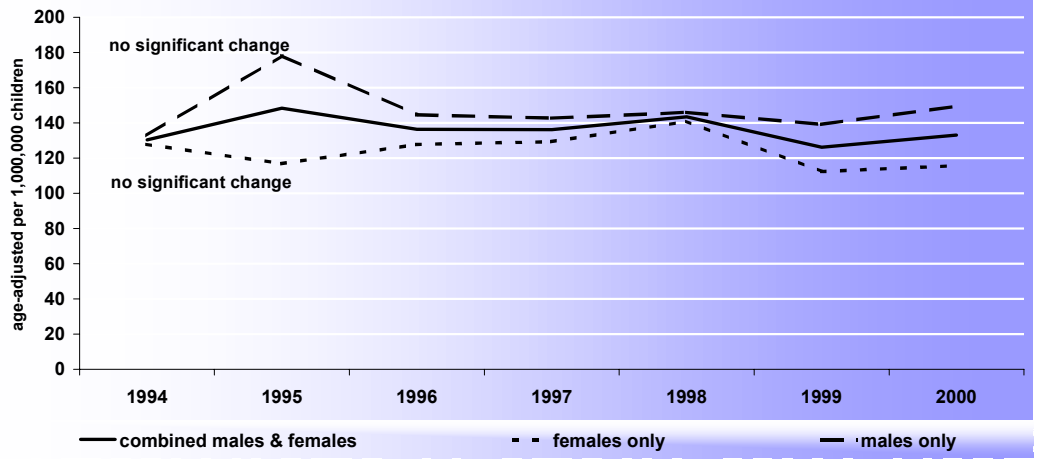
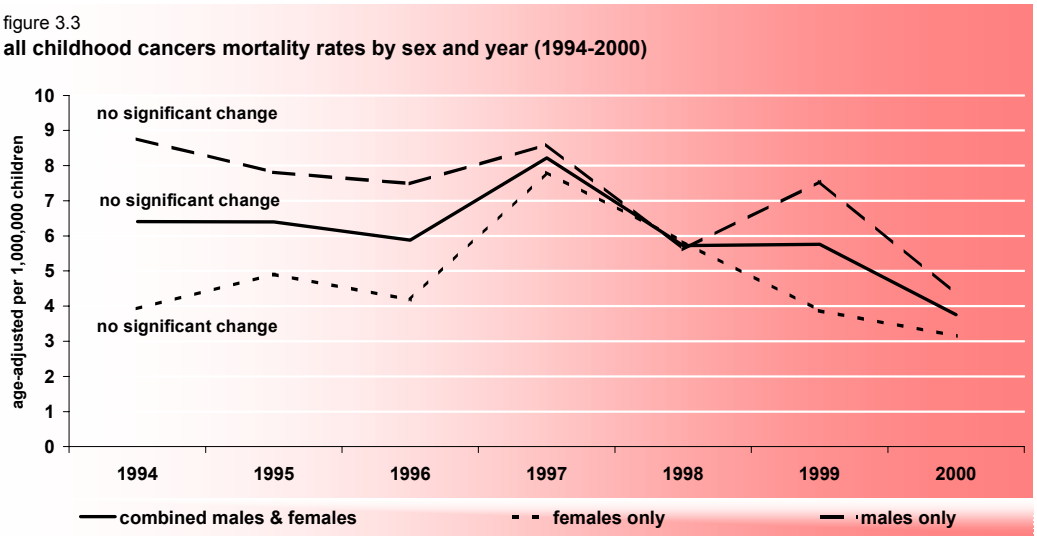


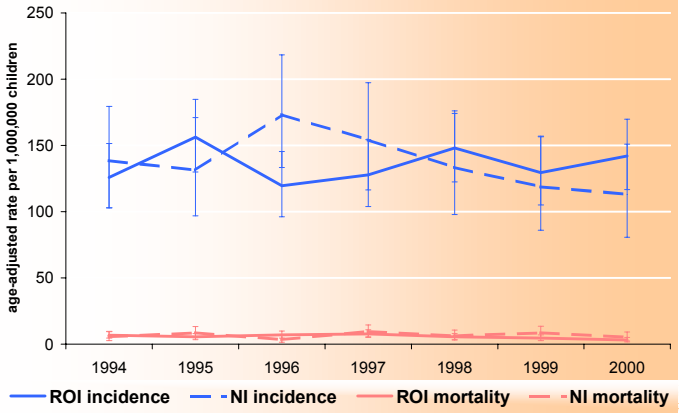
figure 3.3
all childhood cancers mortality rates by sex and year (1994-2000)



Geographic variations

The incidence and mortality rates in Northern Ireland (NI) and the Republic of Ireland (ROI) are statistically the same for any given year.

figure 3.4
all childhood cancers incidence & mortality rates in NI & ROI



There is no significant change in the incidence rates in NI or ROI over time.

Similarly, there is no significant change in the mortality rates in NI or ROI over time.

For boys and girls separately, there is no change in their rates over time in either ROI or NI for incidence or mortality.

No county or district council has an incidence rate that is statistically significantly different from the all-Ireland rate. In fact, no county or district council has a rate that is significantly different from any other county or district council. Approximately half the counties/district councils, however, have too few cases to compute a rate. Similarly, for mortality, only Dublin, Belfast and Cork have enough deaths to compute rates; none are significantly high or low. (See figures 3.7 and 3.8)

Counties or district councils in the upper quintile of incidence rates appear randomly spread across the island. All those in the lower quintile averaged one or fewer cases per year. Because there are too few deaths to map for Ireland, incidence rates across Europe are shown instead. Ireland's rate fits into the middle quintile. (See figures 3.5 and 3.6)

The spatial scan statistic does not find any region within Ireland with more or fewer cases than expected.

figure 3.5
all childhood cancers incidence 1998-2000

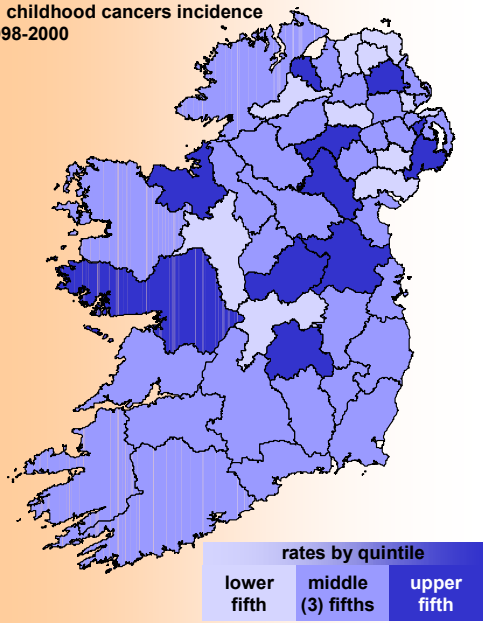


figure 3.6
all childhood cancers incidence europe

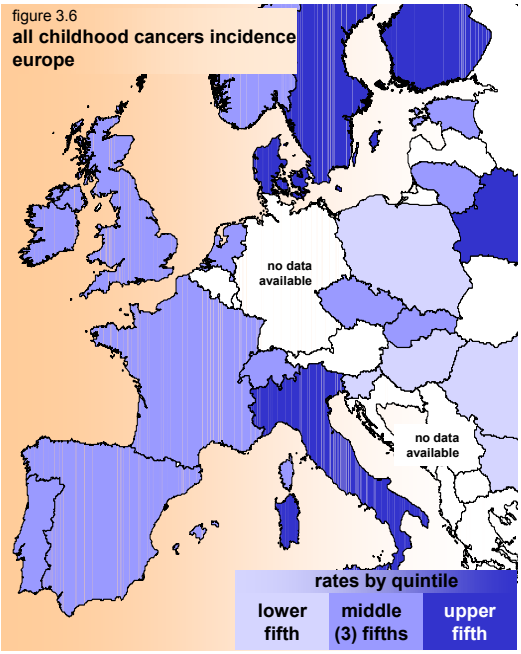


figure 3.7

1998-2000 age-adjusted incidence rates

all childhood cancers by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

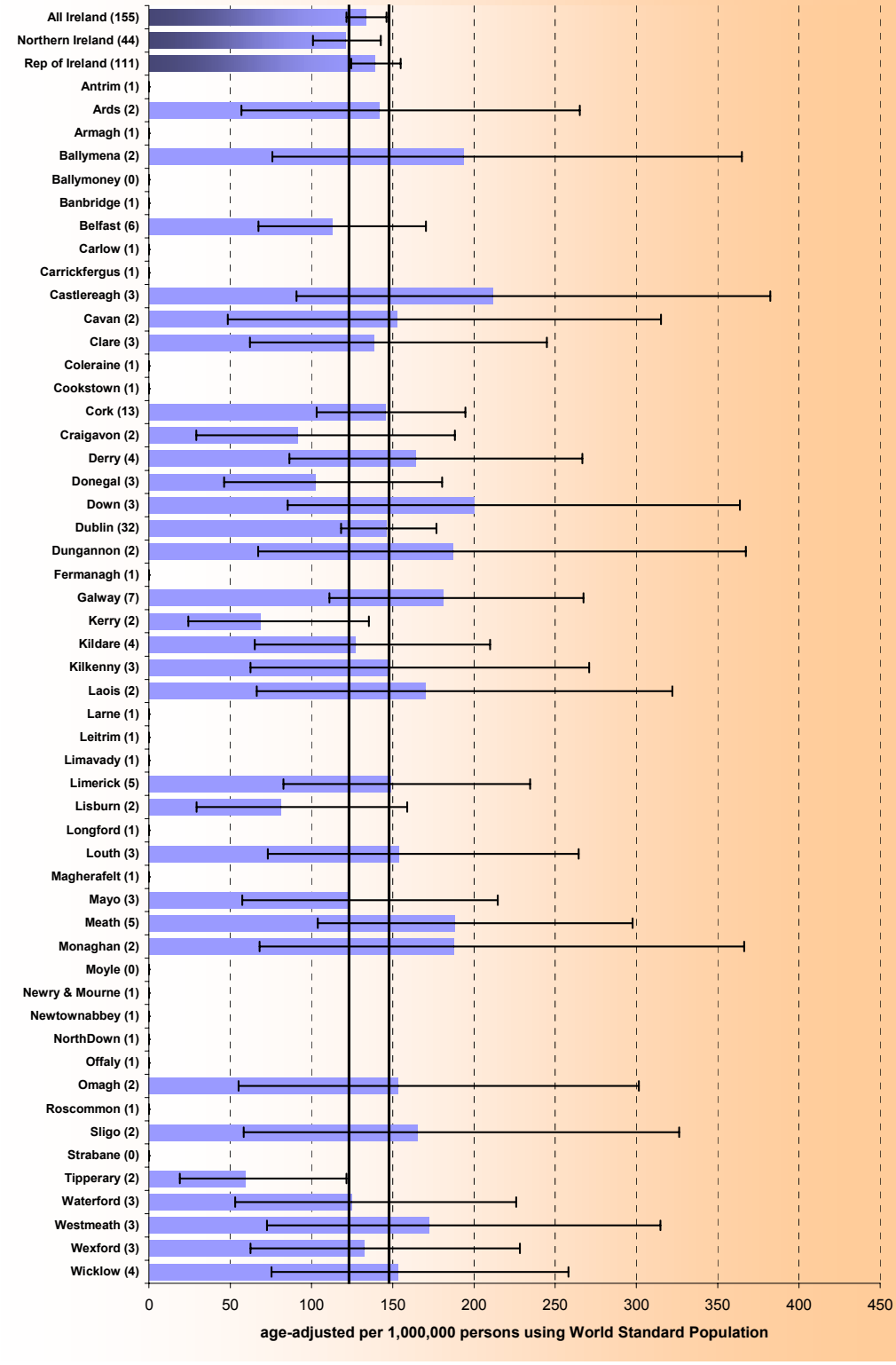
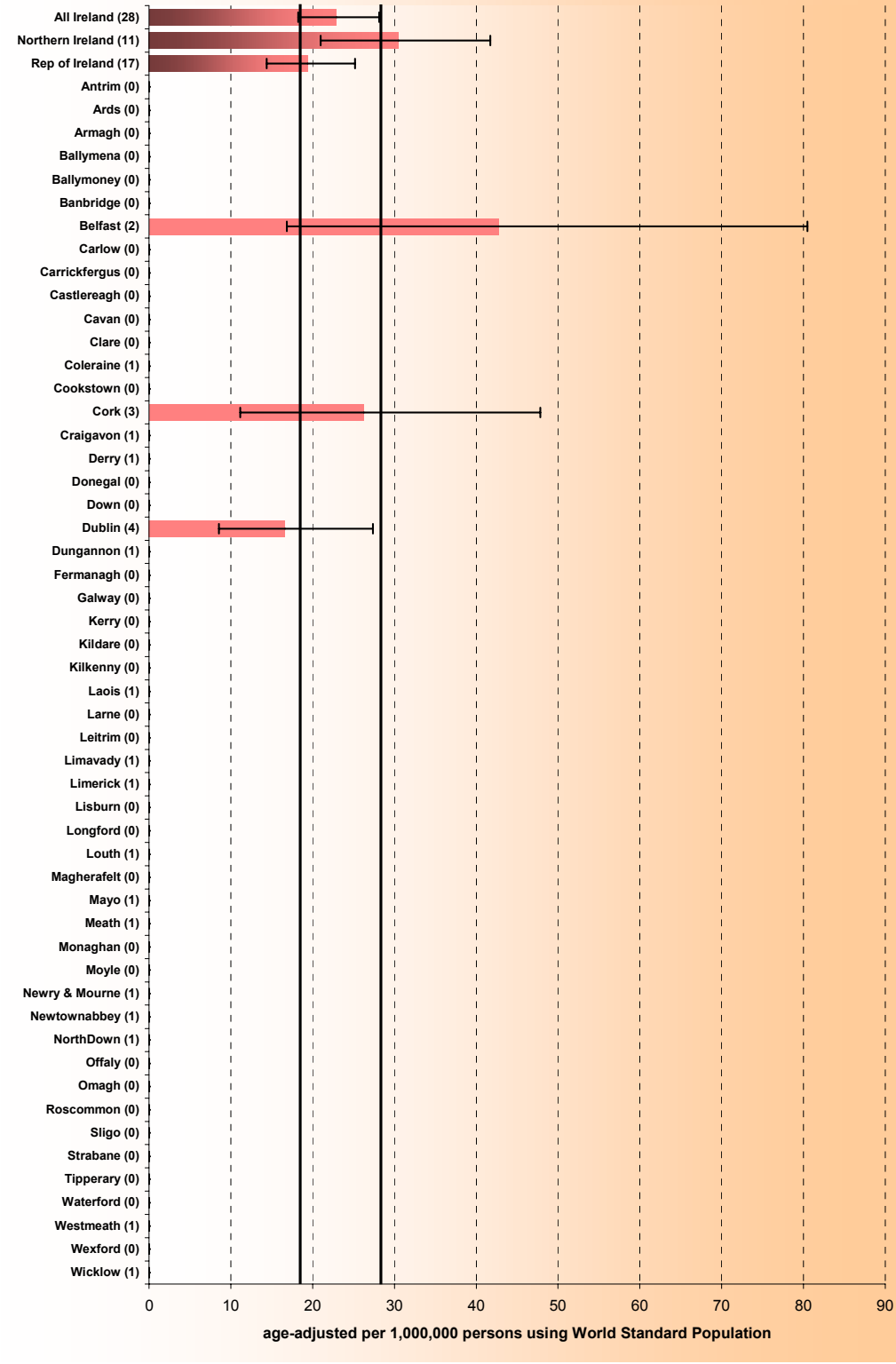


figure 3.8

1998-2000 age-adjusted mortality rates

all childhood cancers by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



4

Breast cancer (female) Breast cancer (female)
Breast cancer (female) Breast cancer (female)
Breast cancer (female) Breast cancer (female)

Key findings:

- *Breast cancer is the leading cause of cancer and of cancer-related death in women.*
- *Breast cancer ranks third among cancers in years of life lost. Half of the women diagnosed are aged 58 or younger.*
- *Ireland's mortality rate is higher than the EU or US.*
- *Ireland's survival rate is lower than Europe or US.*
- *Mortality rates for all Ireland had been declining but have now levelled off.*
- *The mortality rate for the Republic of Ireland is significantly higher than the rate for all Ireland.*
- *The mortality rate for Northern Ireland is significantly lower than the rate for all Ireland.*
- *Regions in the north have significantly fewer cases and deaths than expected.*
- *Regions in the east have significantly more cases and deaths than expected.*
- *Established screening programmes in Northern Ireland, and the lack of such programmes until recently in the Republic of Ireland may have contributed to the regional differences observed.*

Breast cancer (female) Breast cancer (female)
Breast cancer (female) Breast cancer (female)
Breast cancer (female) Breast cancer (female)
Breast cancer (female) Breast cancer (female)
Breast cancer (female) Breast cancer (female)

4. Breast cancer (female)

Risks and interventions

- *Increased risk is associated with a first pregnancy late in life or never being pregnant, obesity, and the use of hormone replacement therapy. Exercise and breast-feeding may reduce risk.*
- *Mammography screening can detect breast cancer early when it can be more effectively treated.*
- *Breast cancer can often be cured if detected early*

For women, breast cancer is first in new cases diagnosed and first in cancer-related death. On average 2700 women a year are diagnosed with this disease, and over 900 die from it.

International comparisons

Ireland's incidence rate is more than 10% higher than the EU rate. It is, however, only 80% of the US rate.

Ireland's mortality rate is 15% higher than the EU rate. It is over 30% higher than the US rate.

Why our incidence *and* mortality rates are higher than the EU is unclear. High incidence rates are typically associated with intensive screening efforts which can lead to lower mortality rates. Ireland's higher rates for incidence and mortality may be due to our mix of established screening in Northern Ireland, and new or no services elsewhere. Patients' treatment decisions or their quality of care could also play a role, as could differences in behavioural risks or genetic susceptibility.

table 4.1

breast cancer (female) incidence and mortality

1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
female	2715	102.7
european union (1998 only)		
female		92.0
united states (11 seer regions)		
female		132.1

1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
female	923	32.6
european union (1998 only)		
female		28.3
united states (11 seer regions)		
female		24.6

Nonetheless, Ireland's low incidence and high mortality rates compared to the US does suggest a need for greater screening efforts. In fact, Ireland's significantly low survival rate may be due to more women being diagnosed with late-stage disease—when treatments are less effective—because of this lack of screening.

table 4.2

breast cancer (females) 5-year relative survival (%)

	male		female	
	rate	95% ci	rate	95% ci
ireland	----	----	75.6	74.4, 76.8
europe (eurocare)	----	----	76.1	75.6, 76.6
united states (seer)	----	----	86.8	86.4, 87.1

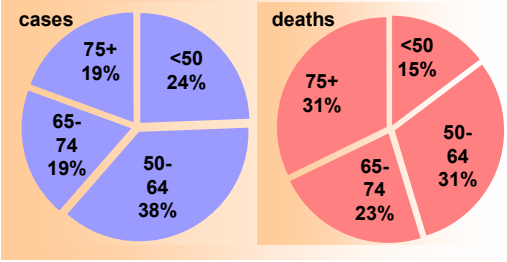
Age distribution

Breast cancer affects middle-aged women more than any other major cancer. Over 60% of the women diagnosed with this disease are under age 65. Half of all women diagnosed are aged 58 or younger.

Breast cancer ranks third among the major sites in years of life lost.

More than 45% of the women who die from breast cancer are under age 65.

figure 4.1
breast cancer (females) age at diagnosis & death 1998-2000



Time trends

Incidence rates for Ireland are increasing by 1.5% per year. Mortality rates had been decreasing by about 4% per year until 1998. They have since levelled off and are now essentially flat.

The modest rise in incidence rates, and the levelling off of mortality rates may add to concerns over the adequacy of existing screening efforts.

figure 4.2
breast cancer incidence rates for females only by year (1994-2000)

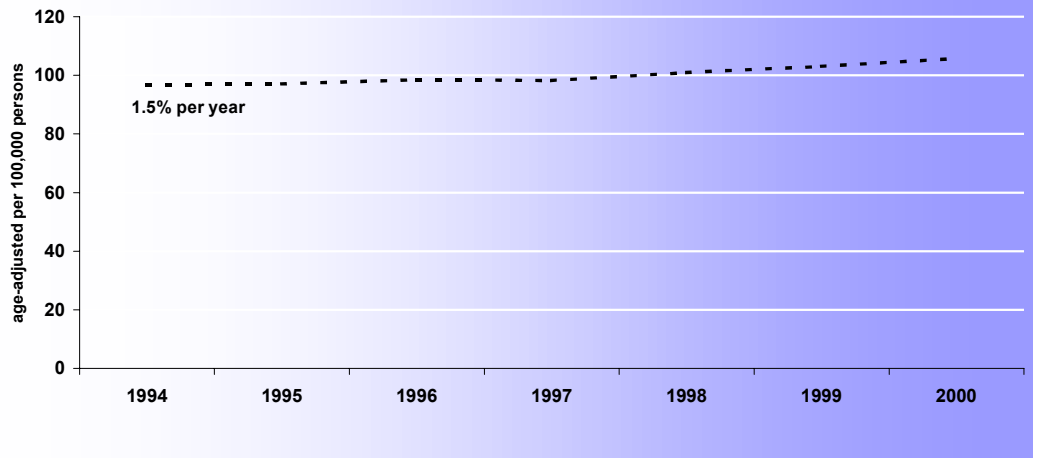
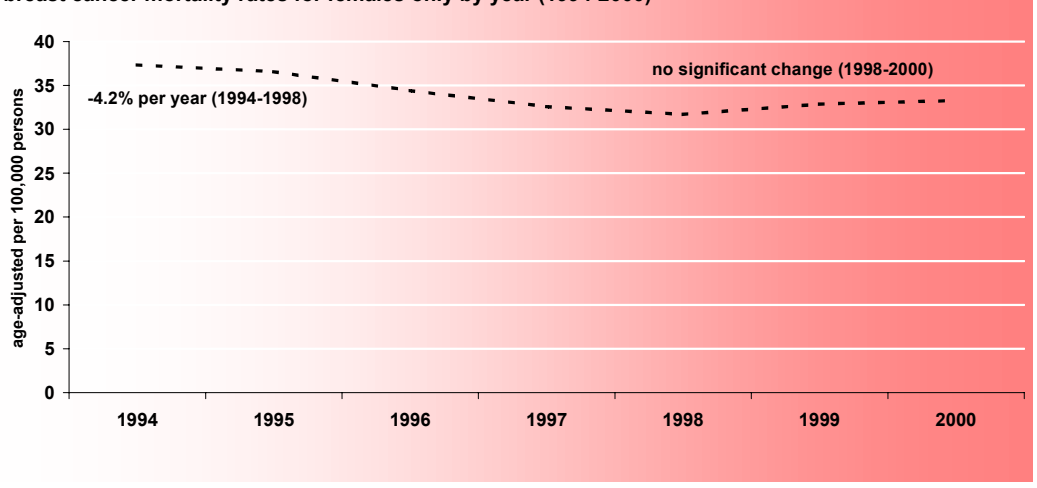


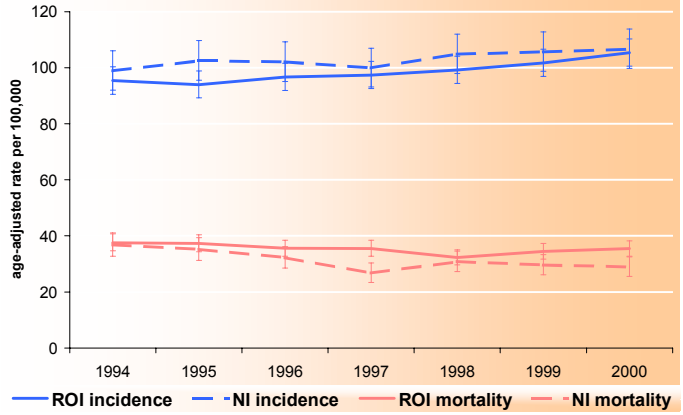
figure 4.3
breast cancer mortality rates for females only by year (1994-2000)



Geographic variations

For each year between 1994 and 2000 the incidence rates in Northern Ireland (NI) and the Republic of Ireland (ROI) have not differed significantly.

figure 4.4
breast cancer (female) incidence & mortality rates in NI & ROI



The incidence rates are increasing by about 1% per year in NI, and by about 2% per year in ROI.

In NI the mortality rates are decreasing by 4% per year. In ROI there is no change. While significant in 1997 only, the rates in NI are consistently below those in ROI. The screening programme in NI may contribute to the lower rates.

Among the counties and district councils, only Dublin has a significantly high incidence rate. Newly initiated screening services or recent increases in public health screening messages may account for this. No area has a significantly high mortality rate. (See figures 4.7 and 4.8)

Areas in the lower quintile for incidence rates seem dispersed throughout the island. Areas in the upper quintile are mostly in the east. Conversely, areas in the lower quintile for mortality rates seem highly clustered in the north inland region, whereas areas in the upper quintile seem somewhat dispersed. (See figures 4.5 and 4.6)

For incidence, nearly the entire central and western region is identified by the spatial scan statistic as having 10% fewer cases than expected. The south eastern region is found to have 10% more cases than expected. For deaths, the northeast region is seen to have nearly 12% fewer than expected. No region, however, is identified by the spatial scan statistic as having more deaths than expected. (See figures 4.5 and 4.6)

figure 4.5
breast cancer (female) incidence 1998-2000

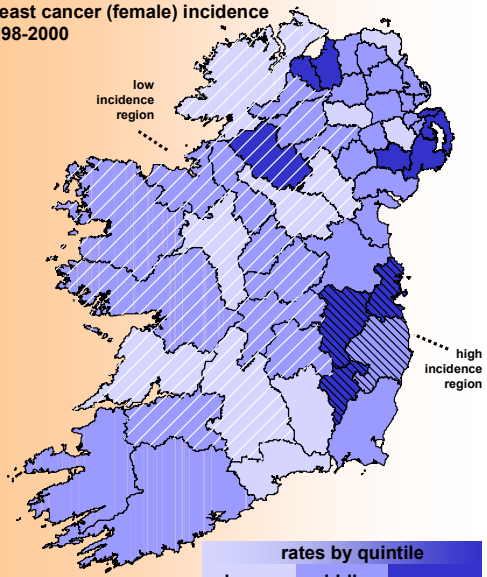


figure 4.6
breast cancer (female) mortality 1998-2000

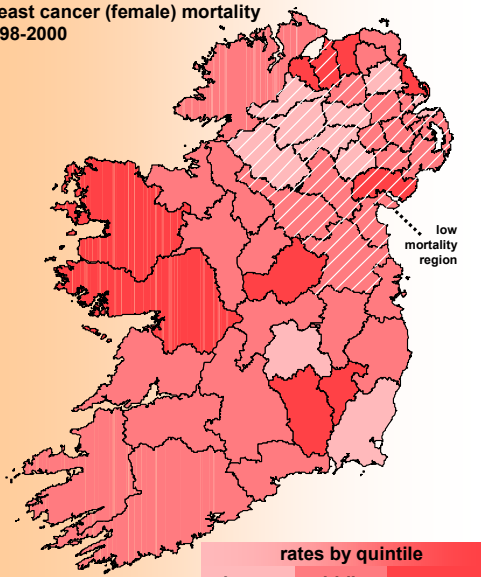


figure 4.7

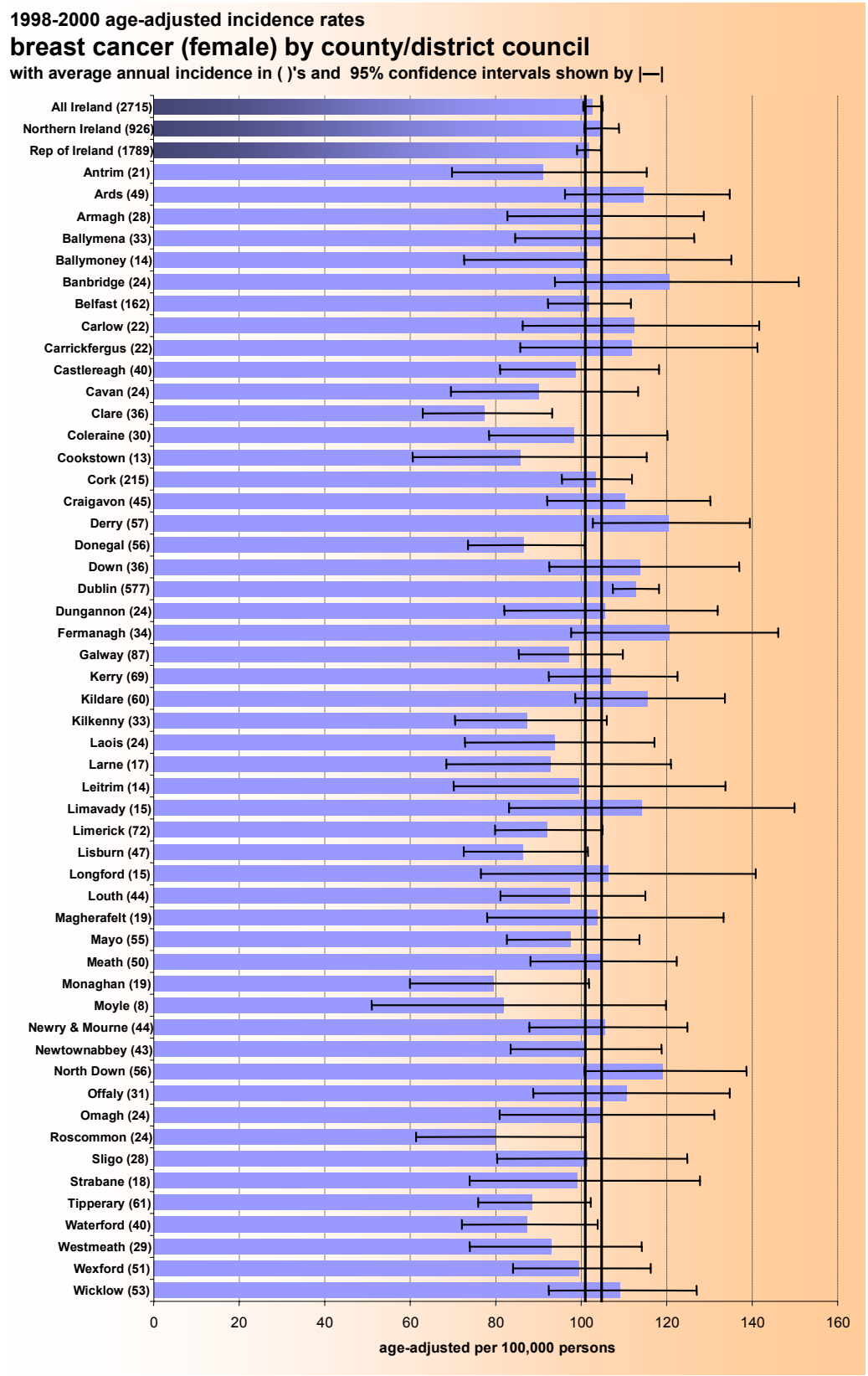
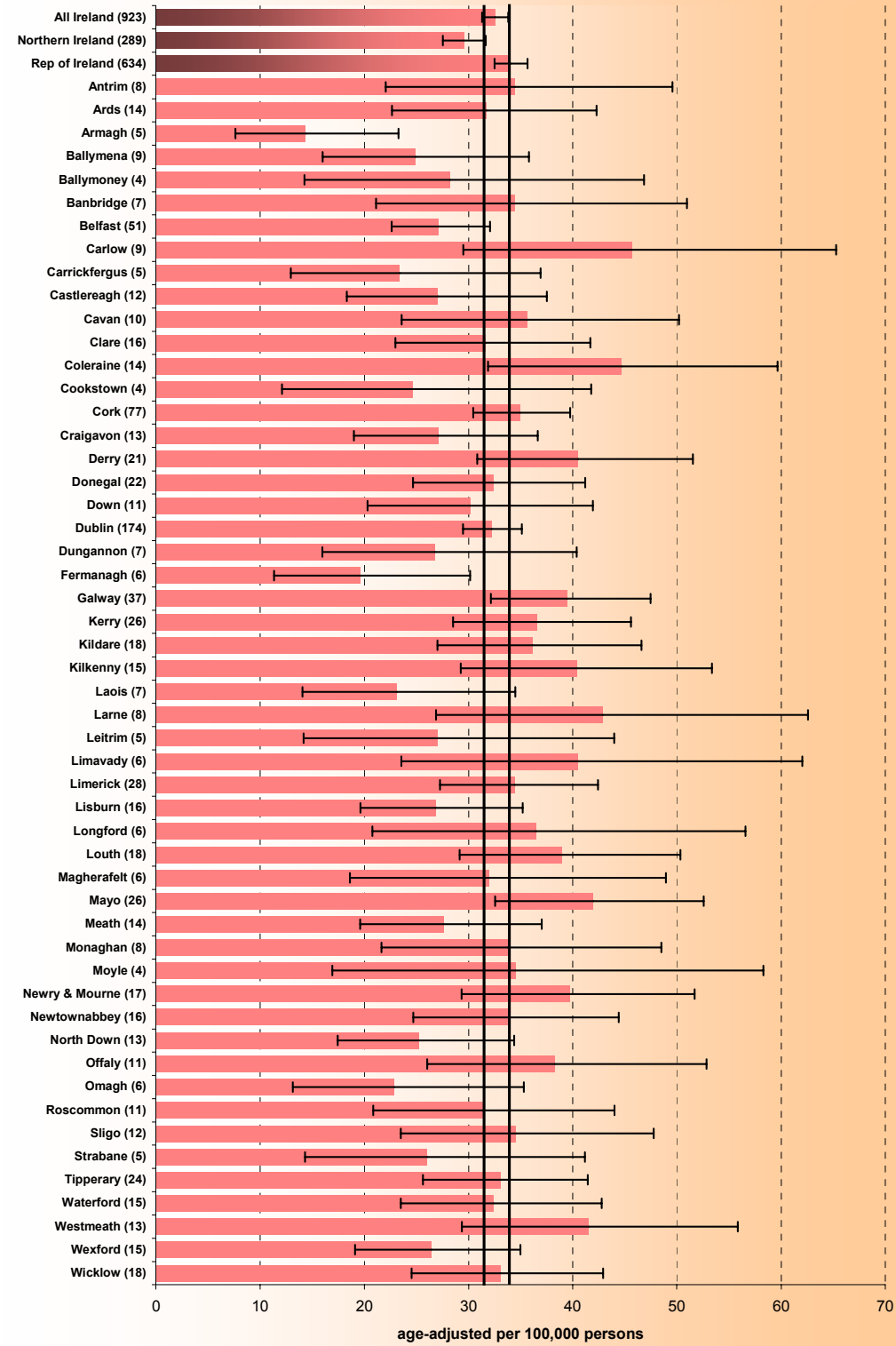

1998-2000 age-adjusted incidence rates
breast cancer (female) by county/district council
with average annual incidence in ( )'s and 95% confidence intervals shown by |—|
All Ireland (2715)
Northern Ireland (926)
Rep of Ireland (1789)
Antrim (21)
Ards (49)
Armagh (28)
Ballymena (33)
Ballymoney (14)
Banbridge (24)
Belfast (162)
Carlow (22)
Carrickfergus (22)
Castlereagh (40)
Cavan (24)
Clare (36)
Coleraine (30)
Cookstown (13)
Cork (215)
Craigavon (45)
Derry (57)
Donegal (56)
Down (36)
Dublin (577)
Dungannon (24)
Fermanagh (34)
Galway (87)
Kerry (69)
Kildare (60)
Kilkenny (33)
Laois (24)
Larne (17)
Leitrim (14)
Limavady (15)
Limerick (72)
Lisburn (47)
Longford (15)
Louth (44)
Magherafelt (19)
Mayo (55)
Meath (50)
Monaghan (19)
Moyle (8)
Newry & Mourne (44)
Newtownabbey (43)
North Down (56)
Offaly (31)
Omagh (24)
Roscommon (24)
Sligo (28)
Strabane (18)
Tipperary (61)
Waterford (40)
Westmeath (29)
Wexford (51)
Wicklow (53)
0
20
40
60
80
100
120
140
160
age-adjusted per 100,000 persons

figure 4.8

1998-2000 age-adjusted mortality rates

breast cancer (female) by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



5

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Key findings:

- *Colorectal cancer is the leading type of cancer in Ireland.*
- *Colorectal cancer is the second leading cause of cancer-related death in Ireland.*
- *Incidence and mortality rates for men are significantly higher than those for women.*
- *Colorectal cancer ranks second among cancers in years of life lost. Nearly one-third of those diagnosed are under age 65.*
- *Ireland's incidence and mortality rates are significantly higher than in the EU or the US.*
- *Ireland's survival rate is significantly lower than in the US.*
- *Incidence and mortality rates for all Ireland and Northern Ireland are decreasing. Rates in the Republic of Ireland remain unchanged.*
- *The northern region has significantly fewer deaths than expected.*
- *The eastern seaboard region and the south have significantly more cases and/or significantly higher incidence or mortality rates than expected.*
- *The magnitude of this disease, and the fact that it is preventable and often curable when caught early, suggest that prevention programmes addressing diet and early detection should be promoted.*

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5. Colorectal cancer

Risks and interventions

- *Regular exercise and low-fat, high-fruit-and-vegetable diets help prevent colorectal cancer.*
- *If detected early, colorectal cancer can often be cured.*
- *Various options for detecting early-stage colorectal cancer exist including better patient education and screening*

Colorectal cancer is the leading cause of cancer in Ireland. It is the second leading cause of cancer death. Each year approximately 2700 new cases are diagnosed and more than 1500 lives are taken by this disease.

Variation by gender

Although the incidence and mortality rates for men are significantly higher than for women, colorectal cancer is a major concern for both sexes.

For women, it ranks second in new cases diagnosed and third in cancer death. For men it is third in new cases and second in deaths.

International comparisons

The incidence rates for men and women in Ireland are higher than in the EU. Men here also have a significantly higher rate than in the US.

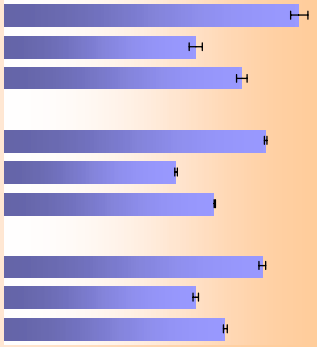
For both sexes the mortality rates in Ireland are significantly higher than in the EU or the US. Ireland's overall mortality rate is one and a half times the US rate.

table 5.1

colorectal incidence and mortality

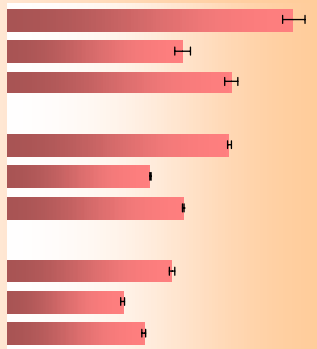
1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	1488	61.8
female	1232	40.1
total	2720	49.8
european union (1998 only)		
male		54.7
female		35.9
total		44.0
united states (11 seer regions)		
male		54.1
female		40.2
total		46.3



1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	840	34.8
female	716	21.3
total	1556	27.2
european union (1998 only)		
male		26.9
female		17.4
total		21.4
united states (11 seer regions)		
male		20.0
female		14.0
total		16.6



Half the patients diagnosed in Ireland and Europe are still alive after 5 years. So, too, are nearly two-thirds of the US patients. Early diagnosis through active screening may explain the higher US survival rate. Aggressive treatment may also be a factor.

table 5.2

colorectal cancer 5-year relative survival (%)

	male		female	
	rate	95% ci	rate	95% ci
ireland	49.8	47.9, 51.7	50.9	49.2, 52.7
europe (eurocare)	47.6	46.7, 48.4	50.5	49.7, 51.3
united states (seer)	62.5	61.7, 63.3	62.0	61.2, 62.7

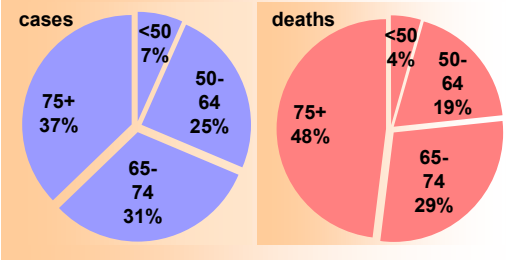
Age distribution

More than 30% of the cases—or nearly 900 people per year—are under age 65 when they are diagnosed with colorectal cancer. Approximately half the people with colorectal cancer are under age 70.

Colorectal cancer ranks second among the major cancers in terms of years of life lost.

More than a fifth of the people who die from colorectal cancer are under age 65.

figure 5.1
colorectal cancer age at diagnosis & death 1998-2000



Time trends

Little change is seen in the incidence and mortality rates between 1994 and 2000. For men and women separately there is no significant change in either rate.

For both sexes combined, however, there is a modest but significant downward trend by 1% per year for incidence and by about 2% per year for mortality.

figure 5.2
colorectal cancer incidence rates by sex and year (1994-2000)

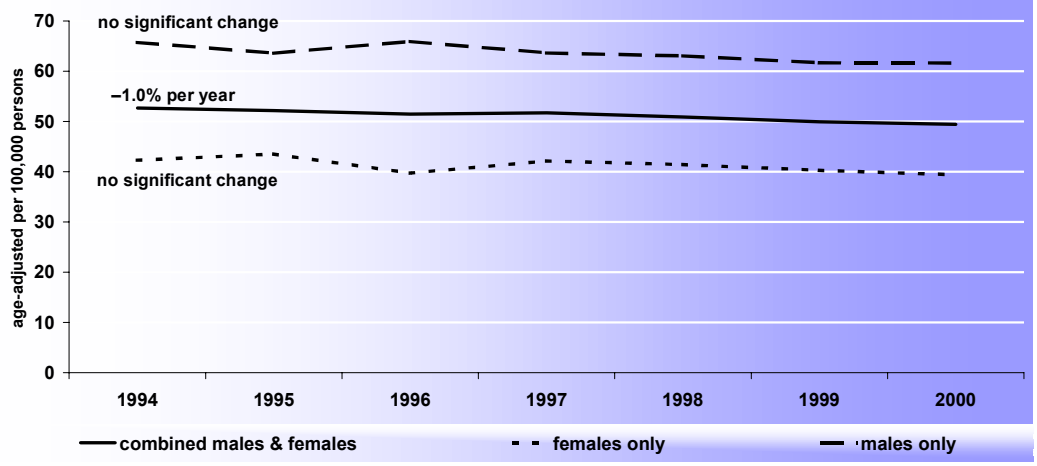
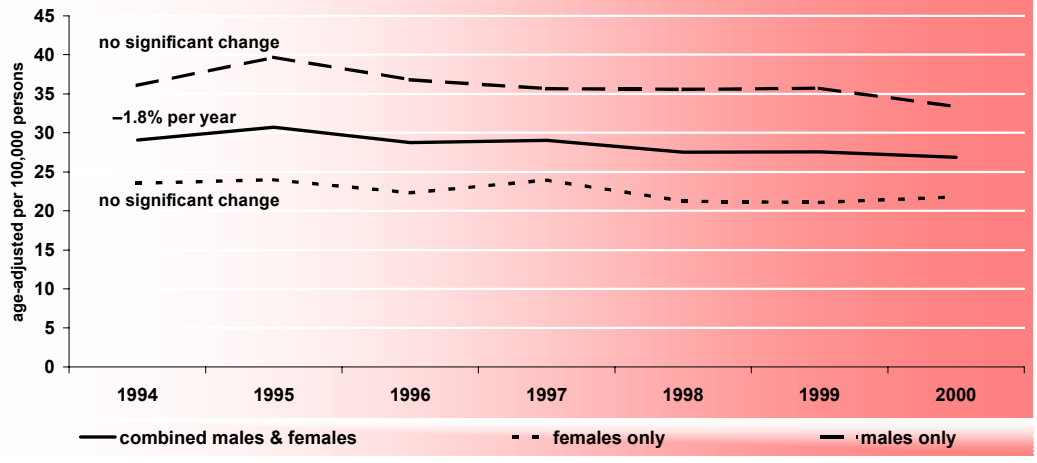


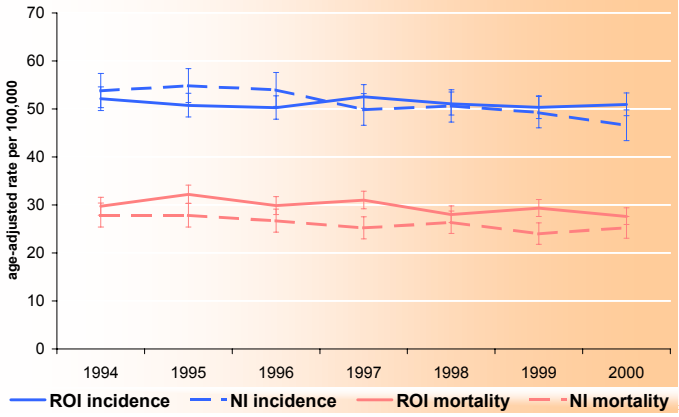
figure 5.3
colorectal cancer mortality rates by sex and year (1994-2000)



Geographic variations

For each year individually, the incidence rates in Northern Ireland (NI) and the Republic of Ireland (ROI) are essentially the same.

figure 5.4
colorectal cancer incidence & mortality rates for NI and ROI



Over time, there is no change in the incidence rates in ROI. In NI the rates are falling by 2.5% per year.

Mortality rates in ROI remain unchanged. In NI, they are going down by 2% per year.

For each individual year the mortality rates in NI are below those in ROI, although the differences are significant in 1997 and 1999 only.

Among the counties and district councils, Cork and Newry & Mourne have significantly high incidence rates. In Carrickfergus, Clare, Kilkenny and Laois the incidence rates are significantly low. Mortality rates in Cork, Kildare and Moyle are significantly high. In Carrickfergus and Cookstown the rates are significantly low. (See figures 5.7 and 5.8)

Counties in the northern midlands of ROI tend to be in the upper quintile for incidence, mortality or both. Cork is also in the upper quintile for both. Counties and district councils in the central region or the north tend to be in the lower quintile for incidence. Many of those in the north are also in the lower quintile for mortality rates. (See figures 5.5 and 5.6)

The eastern counties and district councils in figure 5.5 are identified through the spatial scan statistic as a region with 8% more cases than expected. No region was found to have fewer cases or more deaths than expected. However, the northern region is seen to have about 8% fewer deaths than expected. (See figure 5.6)

figure 5.5
colorectal cancer incidence 1998-2000

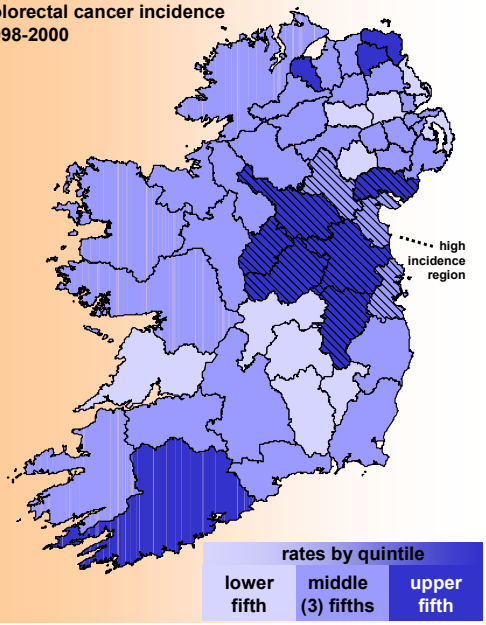


figure 5.6
colorectal cancer mortality 1998-2000

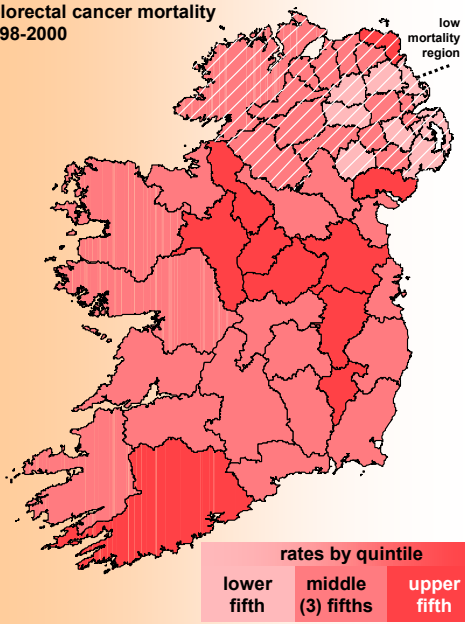


figure 5.7

1998-2000 age-adjusted incidence rates

colorectal cancer by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

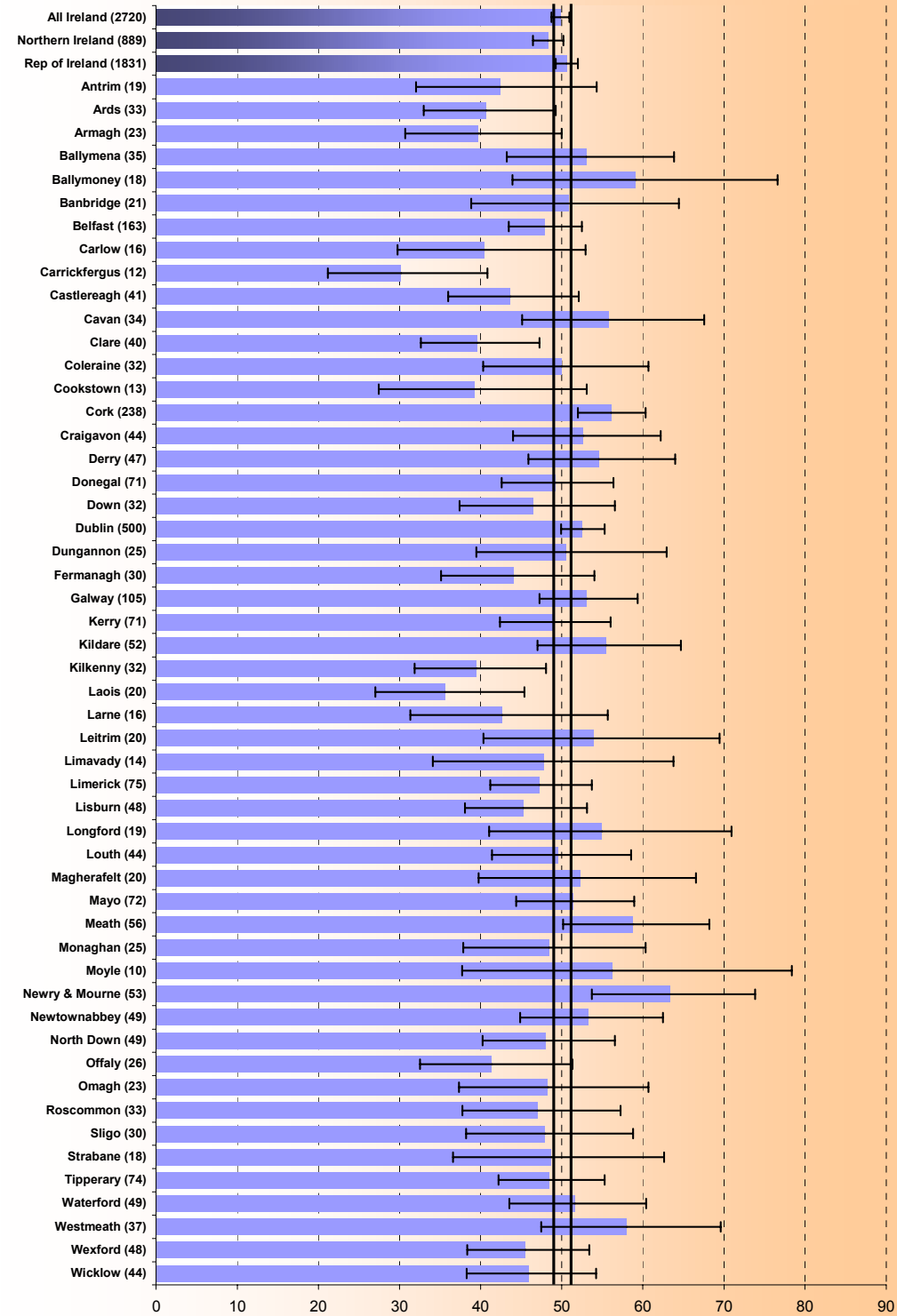
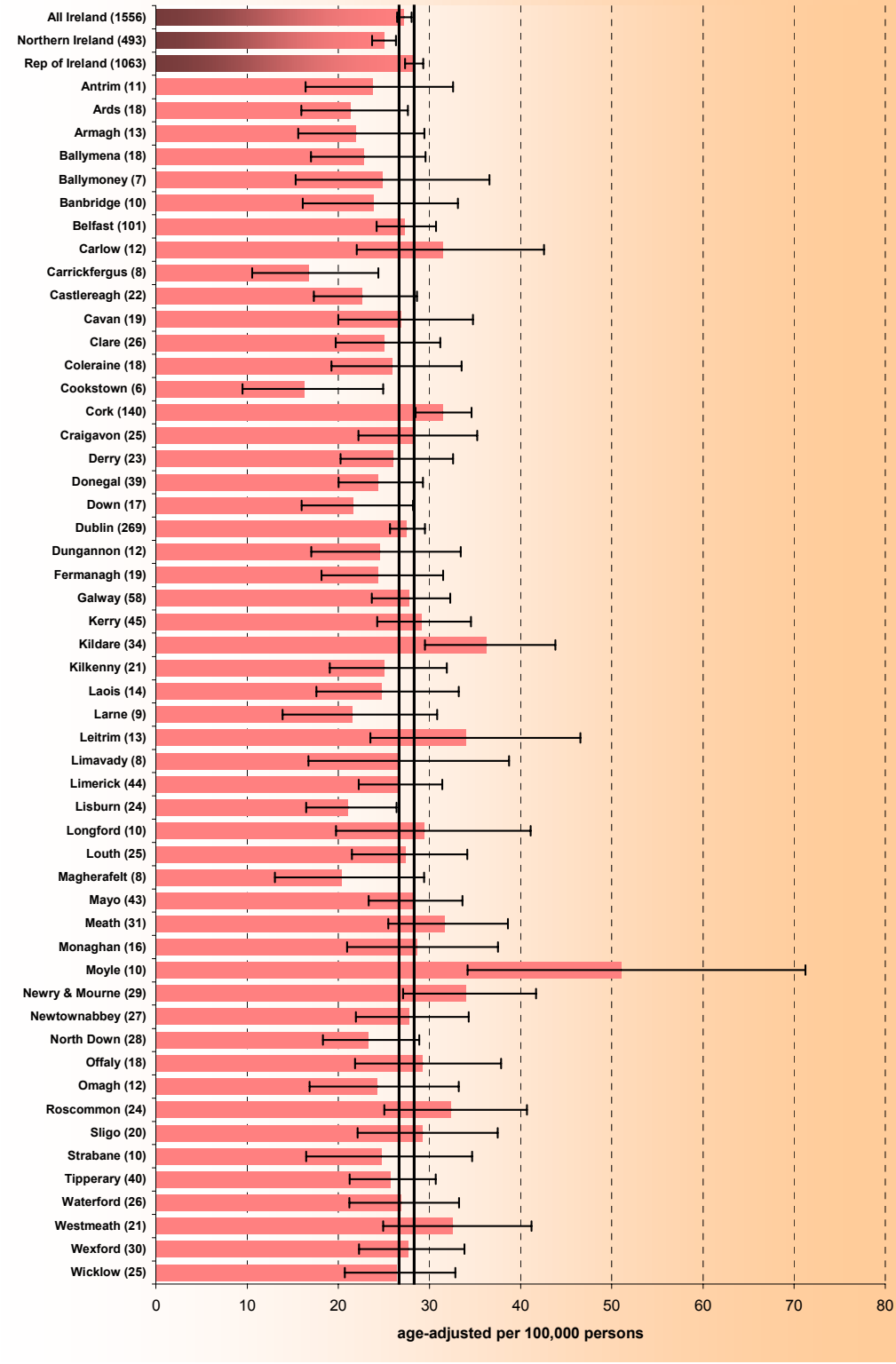


figure 5.8

1998-2000 age-adjusted mortality rates

colorectal cancer by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



6 Lung cancer

Key findings:

- *Lung cancer is the third leading type of cancer in Ireland.*
- *Lung cancer is the leading cause of cancer death in Ireland.*
- *Incidence and mortality rates for men are twice those for women.*
- *Lung cancer ranks first among cancers in years of life lost. More than 700 of those diagnosed each year are under age 65.*
- *Incidence and mortality rates for women in Ireland are nearly twice those in the EU.*
- *Ireland's survival rates are lower than in the US.*
- *Incidence rates in all Ireland and the Republic of Ireland are rising for women.*
- *Incidence rates in all Ireland and Northern Ireland are falling for men.*
- *The northern, eastern seaboard and urban regions have significantly more cases and deaths, and significantly higher incidence and mortality rates than average.*
- *Prevention is the most effective means for reducing lung cancer death, and targeting women and high-risk regions should be a priority.*

6. Lung cancer

Risks and interventions

- *Tobacco exposure, particularly cigarette smoking, is the primary cause of lung cancer.*
- *Smoking prevention and cessation reduces deaths.*
- *Surgery may prolong life for some lung cancer patients.*

Lung (and bronchus) cancer is the leading cause of cancer death in Ireland. Nearly 2300 people die from this disease each year.

Lung cancer ranks third in new cases diagnosed. Close to 7 people a day, about 2500 per year, are diagnosed with this disease.

Variation by gender

The incidence and mortality rates for men are more than twice those for women.

Nonetheless, for women lung cancer is the second leading cause of cancer death, and third in new cases diagnosed. For men it is the leading cause of cancer death, and second in new cases.

The incidence and mortality rates for lung cancer are high for both sexes.

International comparisons

The incidence and mortality rates for men in Ireland are lower than in the EU. For women, however, the rates in Ireland are nearly twice as high as in the EU. Ireland's incidence and mortality rates are lower or essentially the same as in the US for both men and women.

Survival rates in Ireland are lower than in the US for both sexes and lower than Europe for men, possibly be due to less active investigation and treatment of lung cancer.

Age distribution

table 6.1

lung cancer incidence and mortality

1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	1541	63.7
female	933	31.2
total	2474	45.6
european union (1998 only)		
male		74.0
female		17.3
total		42.2
united states (11 seer regions)		
male		71.1
female		46.1
total		56.8

1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	1424	58.5
female	862	27.9
total	2286	41.3
european union (1998 only)		
male		68.3
female		15.5
total		38.3
united states (11 seer regions)		
male		58.0
female		34.4
total		44.5

table 6.2

lung cancer 5-year relative survival (%)

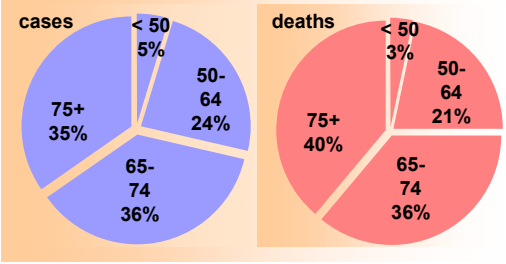
	male		female	
	rate	95% ci	rate	95% ci
ireland	8.3	7.5, 9.1	10.5	9.4, 11.6
europe (eurocare)	9.7	9.3, 10.0	9.6	9.0, 10.2
united states (seer)	13.2	13.1, 13.6	16.8	16.3, 17.3

Three out of 10 people diagnosed with lung cancer—more than 700 people per year—are under age 65. Half are under age 70.

Lung cancer ranks first among cancers in years of life lost.

Almost a quarter of all lung cancer deaths occur among people under age 65.

figure 6.1
lung cancer age at diagnosis and death 1998-2000



Time trends

Among men there is a significant decline in the rates of lung cancer. For incidence, the rates are falling by 2.5% per year. For mortality, they are falling by about 3% per year.

Incidence rates in women are increasing by nearly 2% per year. Their mortality rates have not changed. However, given the rising trend in incidence rates, and the fatal nature of the disease, a significant increase in their death rates is likely to occur.

figure 6.2
lung cancer incidence rates by sex and year (1994-2000)

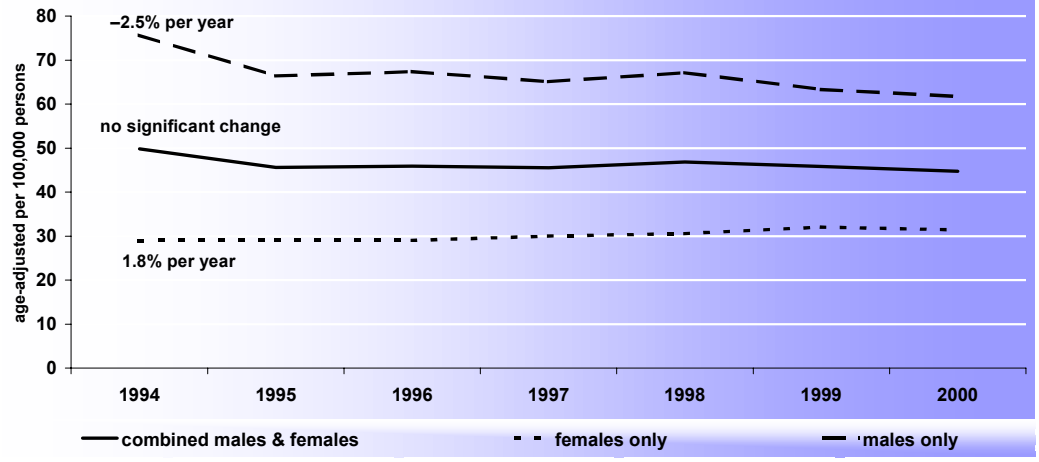
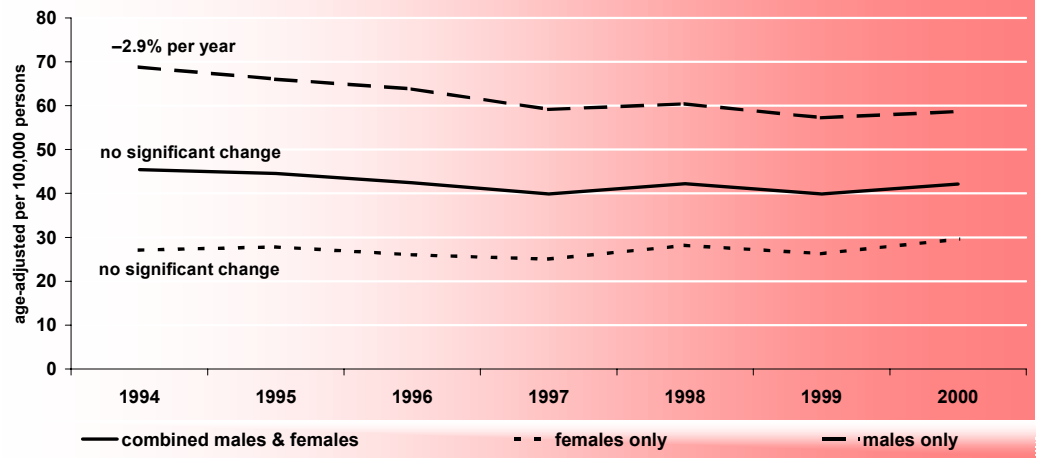


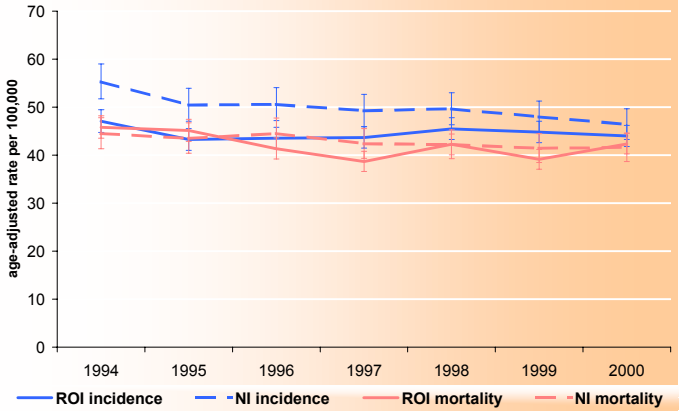
figure 6.3
lung cancer mortality rates by sex and year (1994-2000)



Geographic variations

Prior to 1997 the incidence rates in Northern Ireland (NI) were significantly higher than in the Republic of Ireland (ROI). Today they are essentially the same. This convergence is due to the rates falling by about 2% per year in NI, whilst remaining unchanged in ROI. Differences in sex-specific trends generally account for this. Although not shown in figure 6.4, men's incidence rates in NI are falling by 4% per year; women's are rising by 2% per year in ROI.

figure 6.4
lung cancer incidence & mortality rates for NI and ROI



Mortality rates are also falling in NI, but only by 1% per year. No change is seen in ROI.

Among the counties and district councils, only Belfast, Derry and Dublin have significantly high rates—for both incidence and mortality. This is consistent with previous reports and potentially reflects higher tobacco use common to low-income groups in inner city areas. About a dozen counties or district councils have significantly low rates, with ten having both low incidence and low mortality rates. (See figures 6.7 and 6.8)

Consistent with the findings above for both incidence and mortality rates, figures 6.5 and 6.6 generally indicate that the lowest quintiles are in the central and western counties and district councils, whilst the highest are in the eastern and northern areas.

The spatial scan statistic shows an Ireland clearly divided by this disease. The northeast regions in figures 6.5 and 6.6 have about 20% more cases and deaths than expected. The southwest regions have about 20% fewer cases and deaths than expected.

figure 6.5
lung cancer incidence 1998-2000

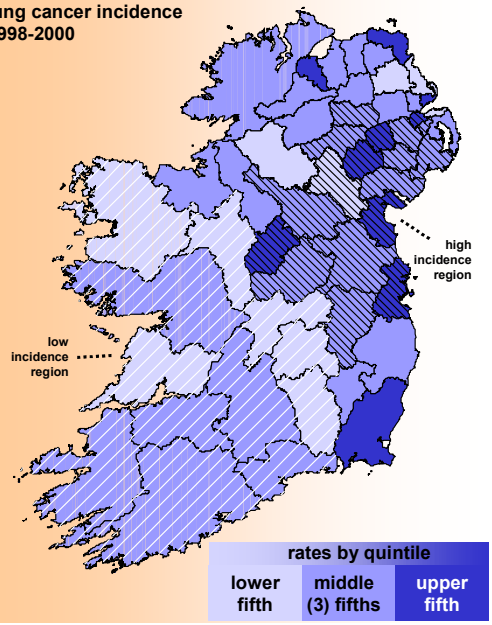


figure 6.6
lung cancer mortality 1998-2000

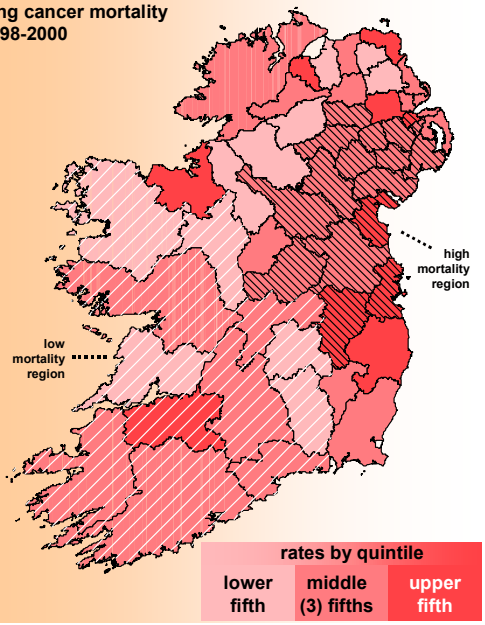


figure 6.7

1998-2000 age-adjusted incidence rates

lung cancer by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

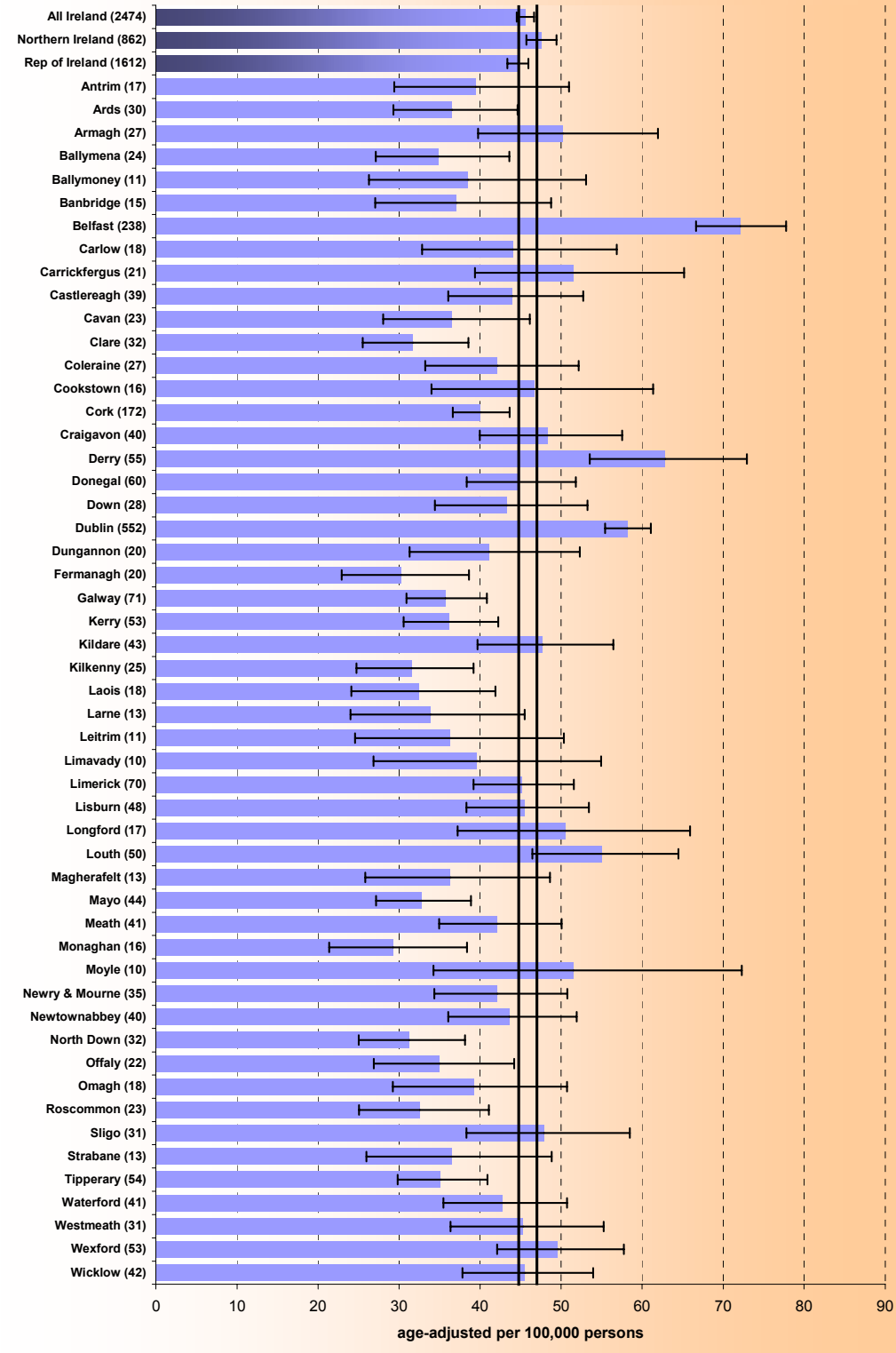
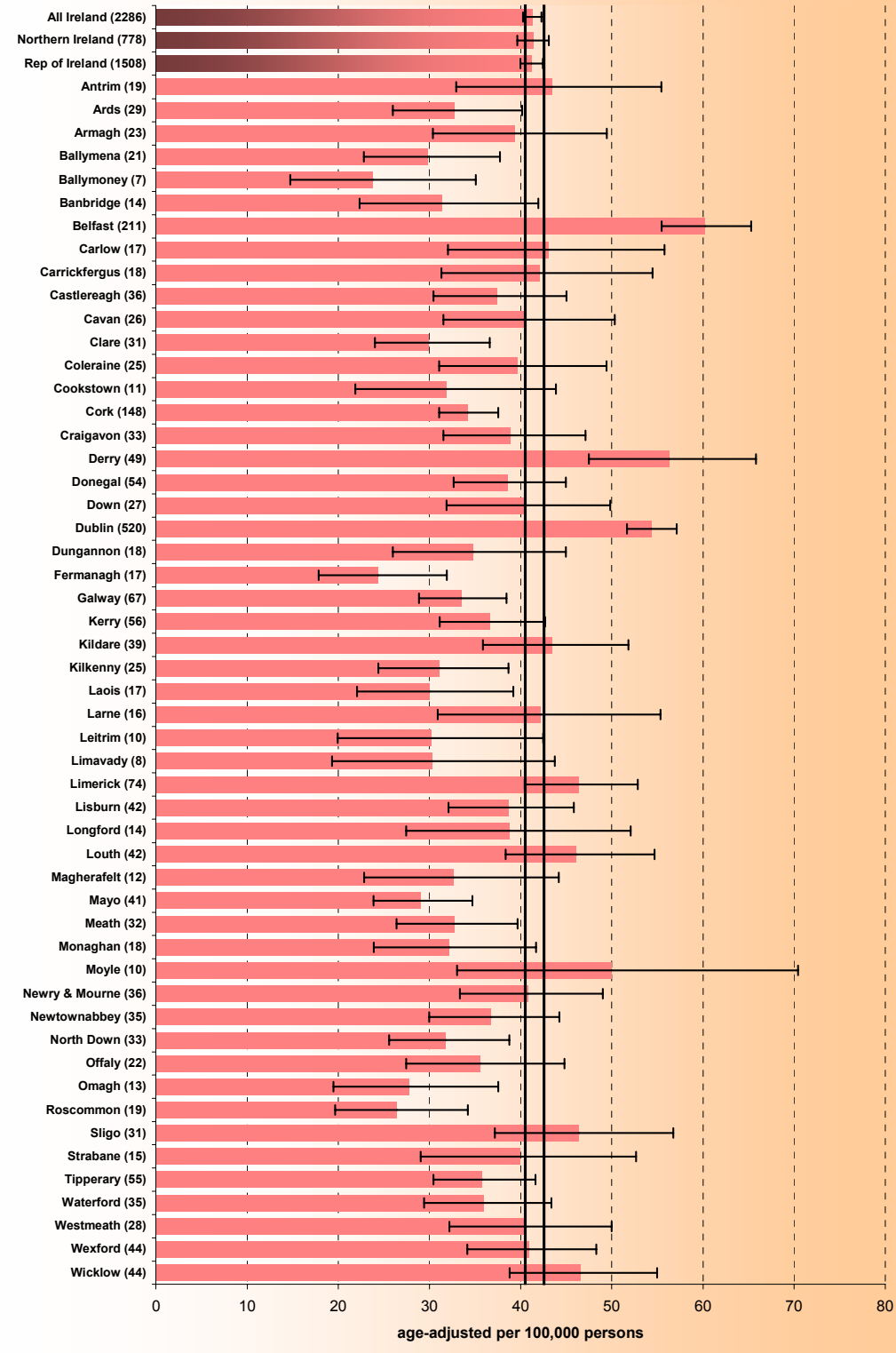


figure 6.8

1998-2000 age-adjusted mortality rates

lung cancer by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



7 Lymphoma

Key findings:

- *Lymphoma ranks fifth among the major cancer sites in new cases diagnosed, and eighth in cancer-related death.*
- *Incidence and mortality rates for men are 25% to 33% higher than for women. The differences are statistically significant.*
- *Lymphoma ranks fourth among cancers in years of life lost. Half those diagnosed are under age 62.*
- *Ireland's female, and total, incidence rates are higher than in the EU.*
- *Ireland's mortality rates are higher than in the EU.*
- *Incidence rates for all Ireland are increasing for men and for both sexes combined.*
- *Mortality rates for all Ireland are increasing for women.*
- *Incidence rates in Northern Ireland are for some years significantly higher than in the Republic of Ireland.*
- *Incidence rates in the Republic of Ireland are increasing while those in Northern Ireland remain unchanged.*
- *No region is found to have significantly more cases or deaths than expected.*
- *Increasing incidence and mortality rates warrant further study.*

7. Lymphoma

Risks and interventions

- *Causes of lymphoma are not well understood although viruses, particularly Epstein-Barr, appear to play a role, and individuals with compromised immune systems are at higher risk.*
- *Occupational exposure to chemicals may also be a risk factor.*
- *Because lymphomas comprise a broad array of differing sub-types, treatments and their efficacy vary.*

Lymphomas, which are of many types, but often categorized as Hodgkin's and non-Hodgkin's, rank fifth among the major cancers in new cases diagnosed, and eighth in the number of cancer deaths.

On average, over 800 individuals are diagnosed with lymphoma each year. About half that number die from it annually.

Variation by gender

Incidence and mortality rates for men are between 25% and 33% higher than the rates for women.

For women, however, lymphoma ranks fifth in incidence and seventh in death rates relative to the other major cancer sites; for men it is sixth and eighth.

International comparisons

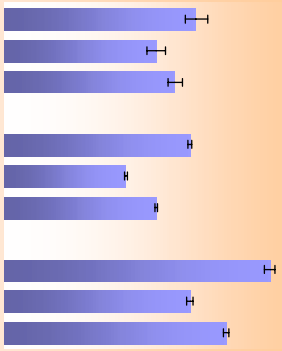
Compared to the EU, incidence and mortality rates for women are significantly higher. For men, incidence rates are similar, whilst mortality rates are higher. Ireland's rates are lower or about the same as in the US .

table 7.1

lymphoma incidence and mortality

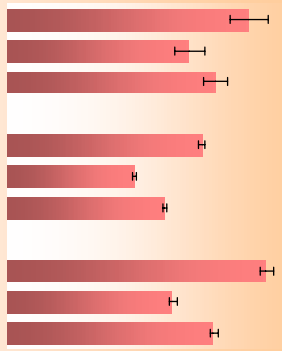
1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	426	17.2
female	388	13.6
total	814	15.4
european union (1998 only)		
male		16.7
female		10.9
total		13.6
united states (11 seer regions)		
male		23.9
female		16.7
total		20.0



1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	212	8.8
female	200	6.6
total	413	7.6
european union (1998 only)		
male		7.1
female		4.6
total		5.7
united states (11 seer regions)		
male		9.4
female		6.0
total		7.5



Since this cancer includes subtypes with different survival, comparisons of survival rates can be affected by differences in the proportion of each type. Nonetheless, survival rates in Ireland are similar to those in the EU, but lower than in the US.

table 7.2

lymphoma 5-year relative survival (%)

	male		female	
	rate	95% ci	rate	95% ci
ireland	51.4	48.2, 54.7	58.1	55.4, 60.9
europe (eurocare)	52.3	50.9, 53.7	57.8	56.3, 59.3
united states (seer)	57.7	56.7, 58.6	64.8	63.7, 65.8

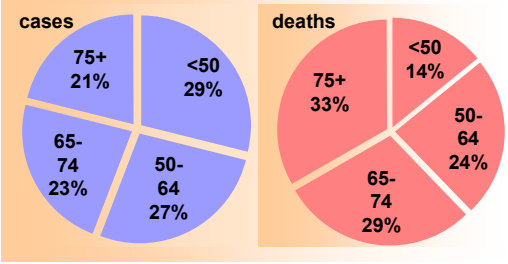
Age distribution

While lymphomas affect children more than do the other major cancers, only 3% of the cases are under age 15. About 55% are under age 65, and half are under age 62.

Lymphoma ranks fourth among the major cancers in terms of years of life lost.

Nearly 40% of the people who die from lymphoma are under age 65.

figure 7.1
lymphoma age at diagnosis and death 1998-2000



Time trends

For incidence, men's rates are increasing on average by 2.6% per year. Women's rates are generally moving in an upward direction, but the trend is not significant. The combined rates for men and women are increasing by 3% per year.

The increasing death rate for women is significant—and somewhat substantial. On average their rates are increasing by more than 5% per year. For men, the trend is essentially flat.

figure 7.2
lymphoma incidence rates by sex and year (1994-2000)

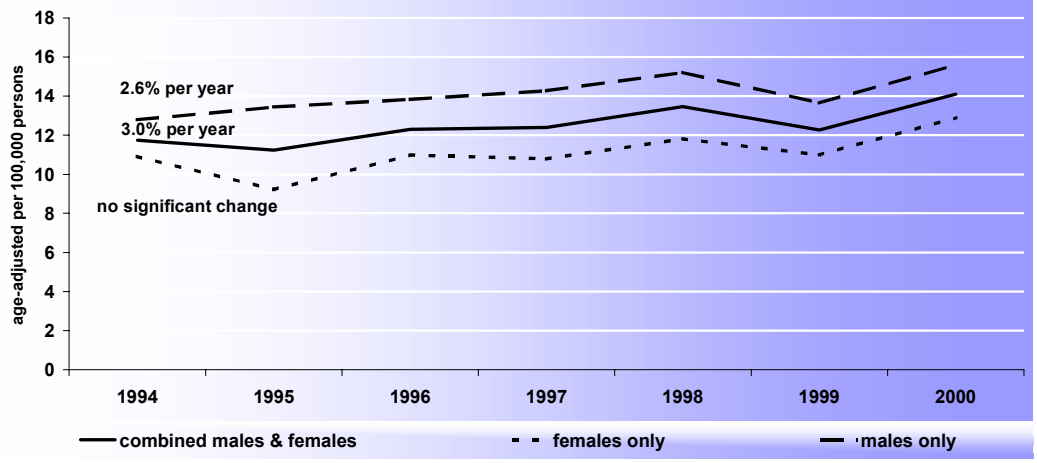
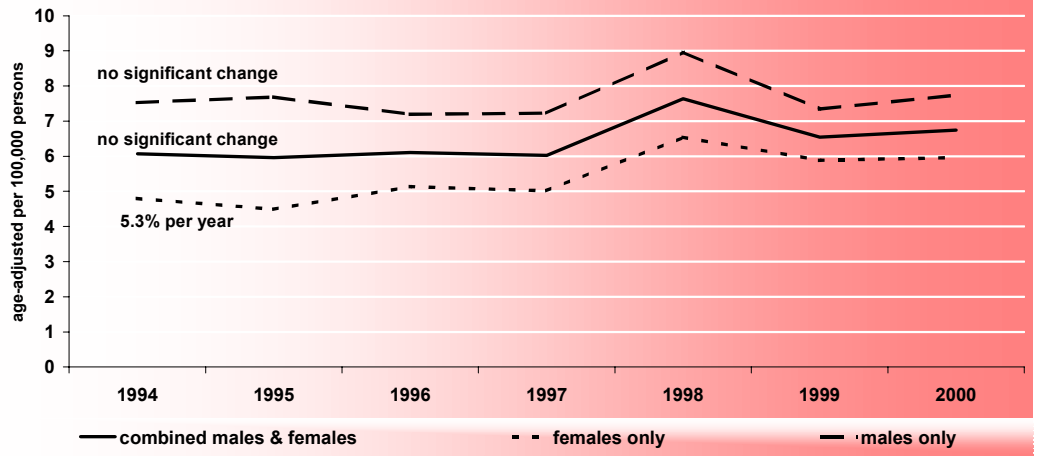


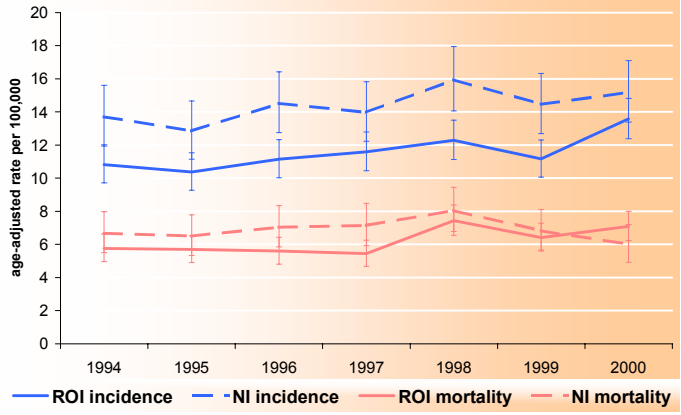
figure 7.3
lymphoma mortality rates by sex and year (1994-2000)



Geographic variations

Year to year, the incidence rates in Northern Ireland (NI) are consistently above the rates in the Republic of Ireland (ROI). For 1996, 1998 and 1999 those differences are significant.

figure 7.4
lymphoma incidence & mortality rates in NI and ROI



This gap between NI and ROI may be narrowing since the trend in incidence rates in NI is flat while it rising 3.5% per year in ROI.

For mortality, there is no significant difference between the NI and ROI annual rates.

So, too, the mortality rate trends for NI and ROI are essentially flat.

Because of a potential link between lymphoma and certain chemicals, concerns about lymphoma clusters are not uncommon. Among the counties and district councils, however, only one area, Roscommon, had a rate significantly different from the all Ireland rate. For both incidence and mortality, the rates in Roscommon are significantly *lower* than the all Ireland rate. (See figures 7.7 and 7.8)

In ranking the counties and district councils by their incidence rates, those areas in the upper quintile appear to be grouped in the northeast, whilst those in the lower quintile seem randomly dispersed. For mortality rates, counties and district councils in either the upper or lower quintiles show no apparent regional grouping. (See figures 9.5 and 9.6)

Despite the apparent grouping in the northeast of areas in the upper quintile of incidence rates, the spatial scan statistic does not identify any region as having either more or fewer cases or deaths than expected.

figure 7.5
lymphoma incidence 1998-2000

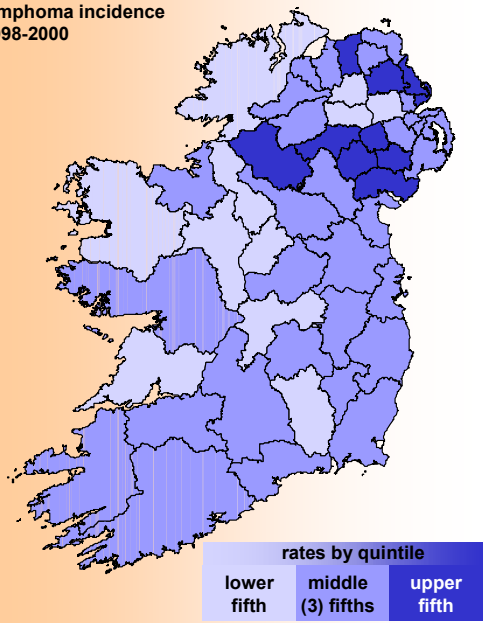


figure 7.6
lymphoma mortality 1998-2000

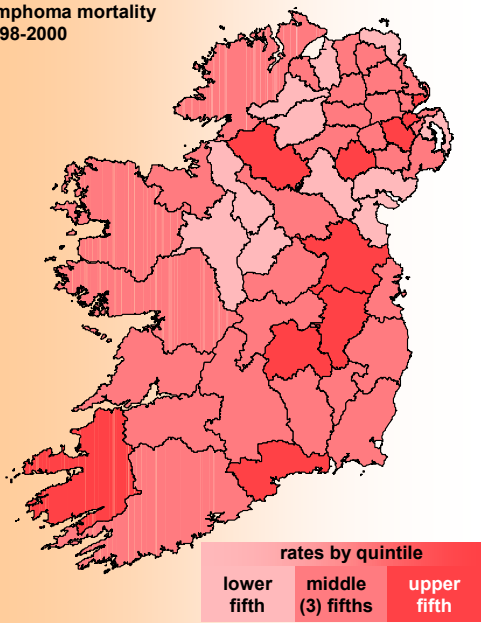


figure 7.7

1998-2000 age-adjusted incidence rates

lymphoma by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

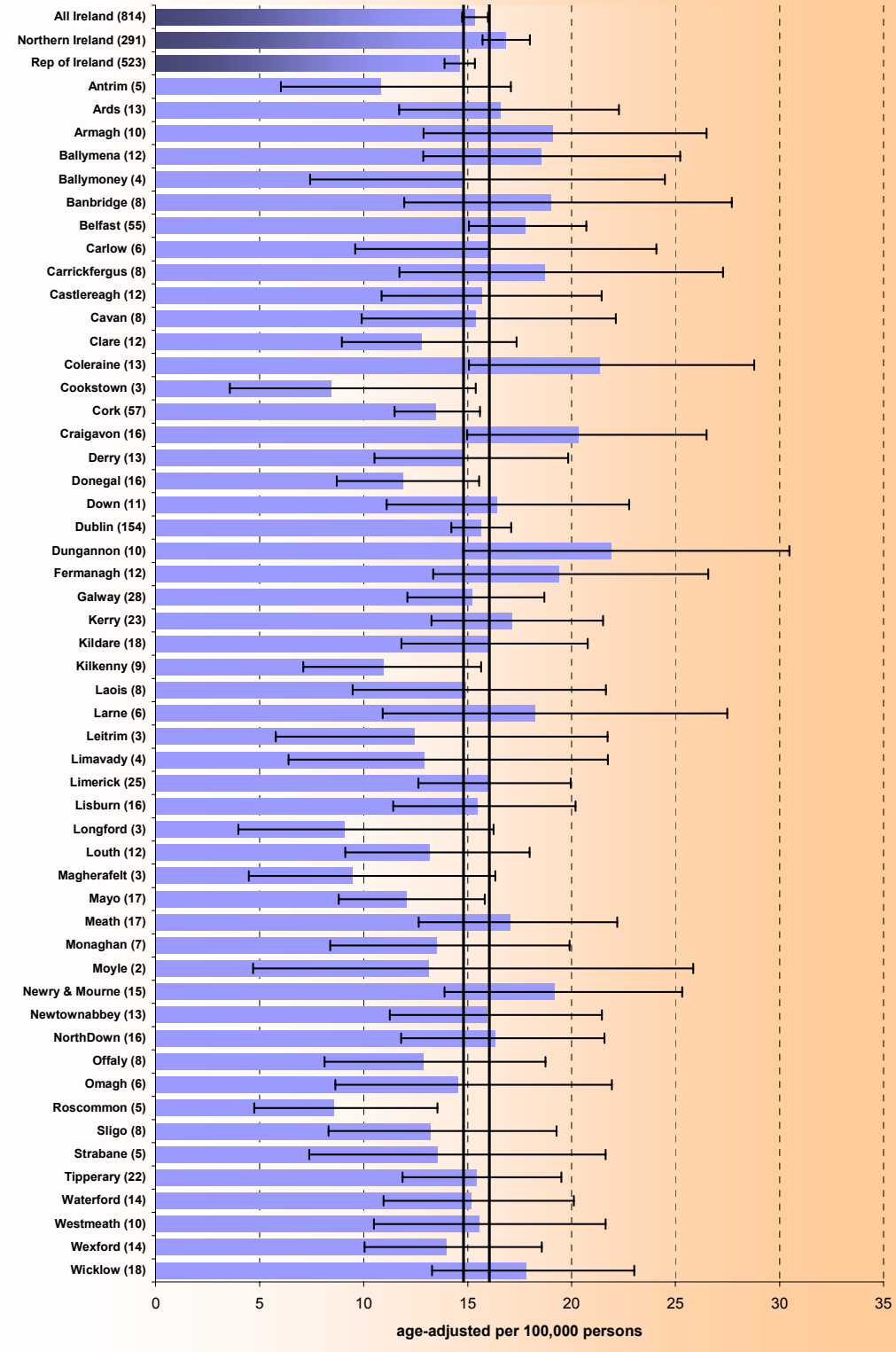
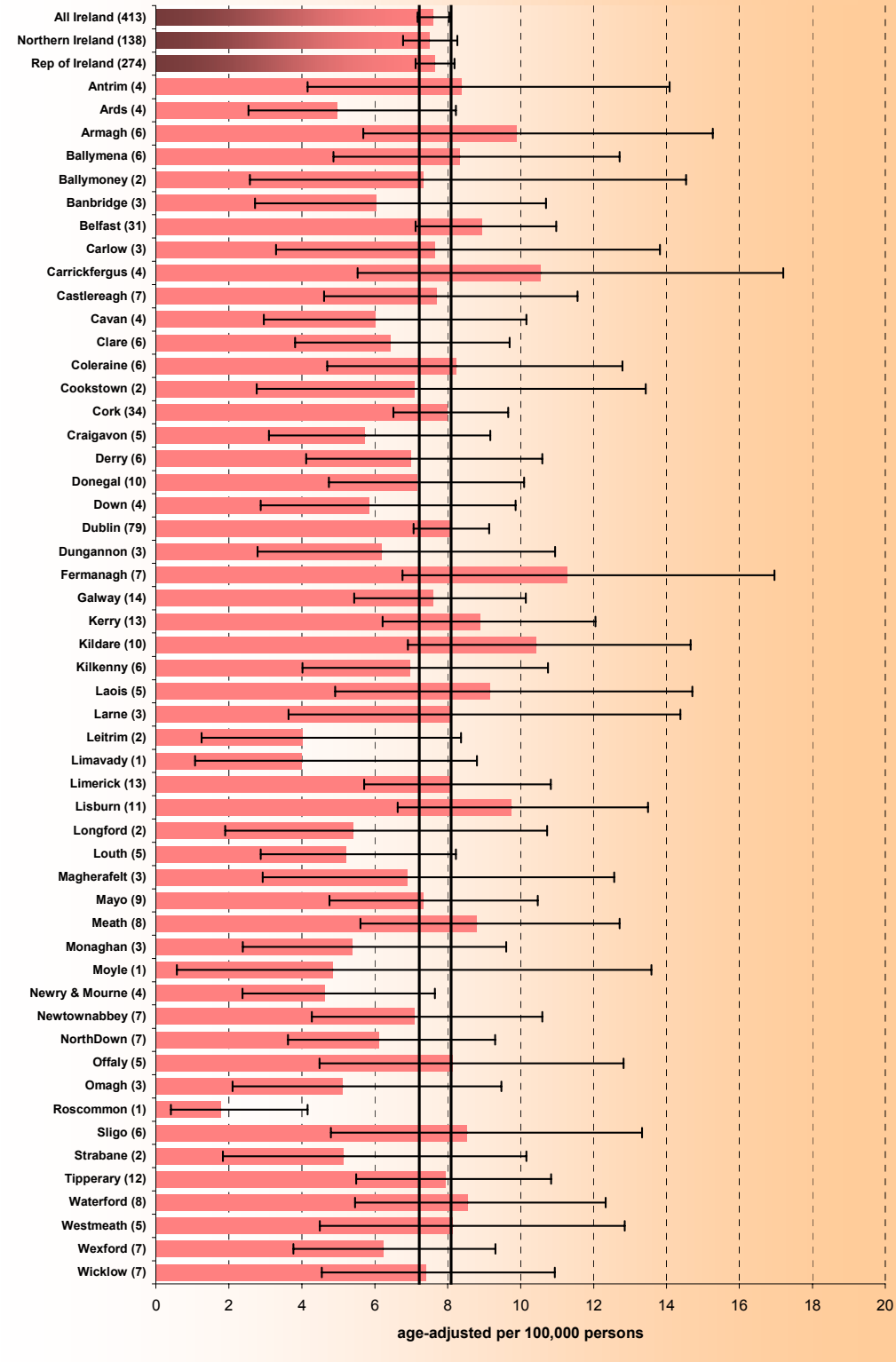


figure 7.8

1998-2000 age-adjusted mortality rates

lymphoma by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



8 Melanoma of the skin

Key findings:

- *Melanoma of the skin ranks eighth among the major cancers in new cases diagnosed and eighteenth in cancer-related death.*
- *The incidence rate for women is significantly higher than that for men.*
- *Melanoma of the skin ranks eighteenth among cancers in years of life lost, and more than a third of those diagnosedare under age 50.*
- *Ireland's female, and total, incidence rates are significantly higher than those in the EU .*
- *Survival rates for men in Ireland, Europe and the US are significantly lower than those for women.*
- *Incidence and mortality rate trends for men and women in all Ireland, for the Republic of Ireland and for Northern Ireland are essentially flat.*
- *The central eastern seaboard region has significantly more deaths than expected.*
- *The high incidence rates among women and low survival rates among men point toward the need for increased education about the risks of ultraviolet light exposure and the importance of checking for early signs.*

8. Melanoma of the skin

Risks and interventions

- *Frequent sunburns, especially in childhood and adolescence, increases the risk for melanoma of the skin.*
- *Individuals with fair skin, red hair and freckles appear to be at greatest risk.*
- *If detected early, melanoma of the skin can often be cured.*
- *Surgery is an effective treatment for early stage melanoma of the skin.*

Melanoma of the skin ranks eighth among the major cancer sites in terms of new cases diagnosed each year, and eighteenth in terms of cancer related death. Nonetheless, each year nearly 600 new cases are diagnosed and over 100 individuals die from it.

Variation by gender

Unlike most cancers, the incidence rate among women is significantly higher than the rate for men. Mortality rates for men and women are essentially the same.

For women, melanoma of the skin ranks sixth in new cases diagnosed; for men it is twelfth. For women it is eighteenth in terms of cancer-related death; for men, sixteenth.

International comparisons

Incidence among women is higher than the EU and the same as the US. Mortality for women is higher in Ireland than in the US while incidence and mortality rates for men in Ireland are lower than in the US.

table 8.1

melanoma of the skin incidence and mortality

1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	221	9.0
female	357	12.7
total	578	10.9
european union (1998 only)		
male		8.3
female		9.4
total		8.9
united states (11 seer regions)		
male		19.4
female		12.9
total		15.7

1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	47	2.0
female	56	1.9
total	104	1.9
european union (1998 only)		
male		2.3
female		1.6
total		1.9
united states (11 seer regions)		
male		3.1
female		1.5
total		2.2

Survival rates for melanoma of the skin are high. Among women in Ireland, 90% are still alive after 5 years; better than Europe and the same as the US. Among men, the rate is lower, around 80%; about the same as the EU but lower than the US.

table 8.2

melanoma of the skin 5-year relative survival (%)

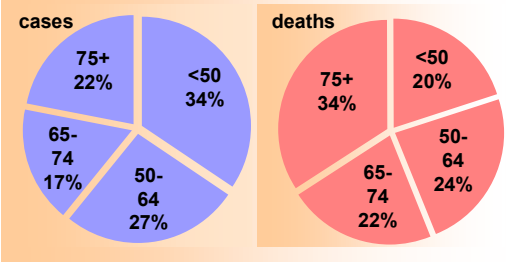
	male		female	
	rate	95% ci	rate	95% ci
ireland	80.4	76.2, 84.5	92.4	89.9, 94.9
europe (eurocare)	74.8	72.7, 77.0	84.3	83.1, 85.6
united states (seer)	86.9	85.9, 88.0	91.5	92.4, 90.6

Age distribution

While melanoma is rare among young people, a large proportion of people diagnosed with melanoma of the skin are young: more than a third are under age 50, and nearly two-thirds are under age 65. Half are under age 57.

But since survival rates are relatively high, melanoma of the skin ranks eighteenth among major sites in terms of years of life lost to cancer.

figure 8.1
melanoma of the skin age at diagnosis & death 1998-2000



Nonetheless, approximately 44% of the people who die from melanoma of the skin are under age 65.

Time trends

No significant change is seen in the male, female or combined rates for either incidence or mortality.

figure 8.2
melanoma of the skin incidence rates by sex and year (1994-2000)

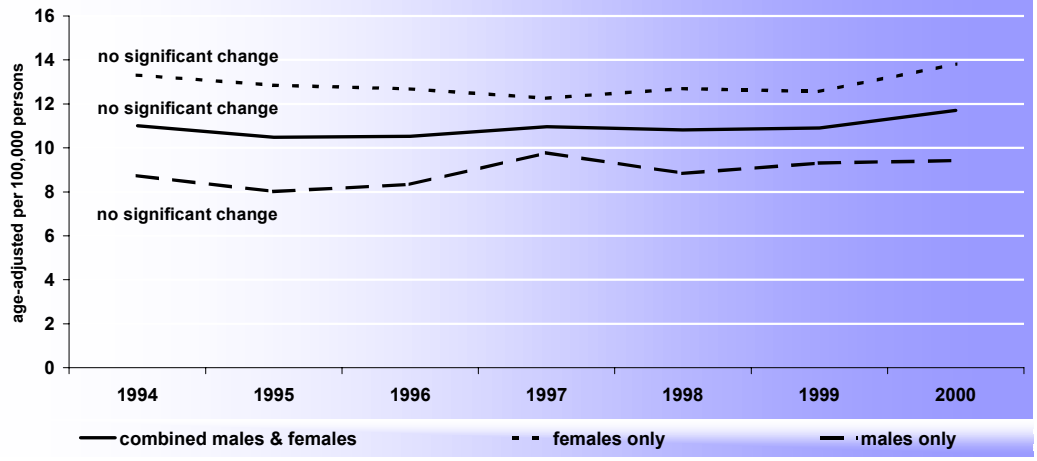
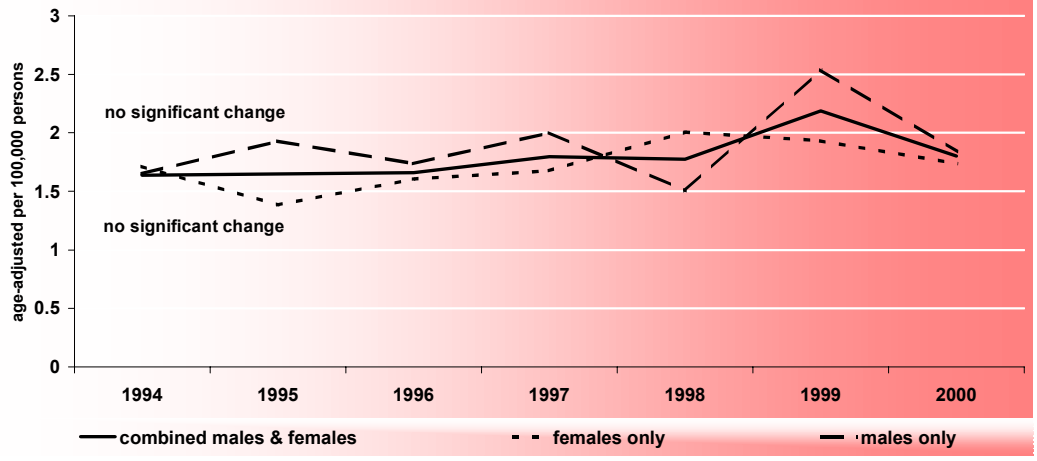


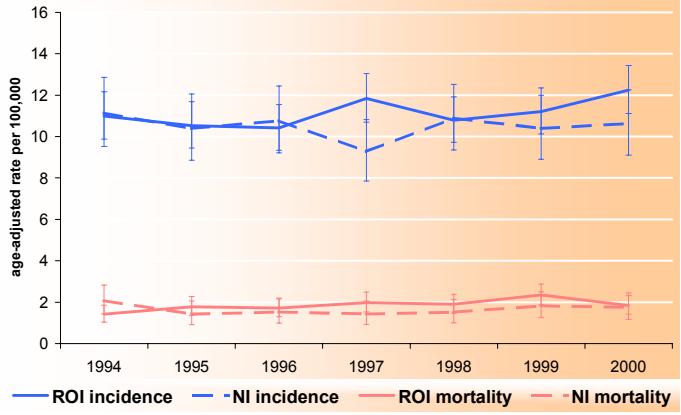
figure 8.3
melanoma of the skin mortality rates by sex and year (1994-2000)



Geographic variations

Incidence rates in Northern Ireland (NI) and the Republic of Ireland (ROI) are essentially the same for each individual year.

figure 8.4
melanoma of the skin incidence & mortality rates in NI & ROI



Similarly, there is no change over time in the incidence rates in either ROI or in NI. This is true for both sexes combined as well as men and women separately.

So, too, mortality rates in ROI and NI remain unchanged. Again, this is true for sex-specific rates as well as for both sexes combined. Annual mortality rates in NI and ROI, are also essentially equal.

In comparing the counties' and district councils' incidence rates with the all Ireland rate, only Waterford is significantly high. Both Ballymena and Clare are significantly low. In comparing the mortality rates, no county or district council is significantly high or low. Dublin, however, is very close to being significantly high. (See figures 8.7 and 8.8)

When ranked by their incidence rates, those counties and district councils in the lowest quintile are mostly in the central north region. Those in the upper quintile seem generally spread throughout the island. For mortality, those in the lower quintile are within central and northern parts of the island; those in the upper quintile are on the eastern, western and southern shoreline. (See figures 8.5 and 8.6)

The north central region is identified by the spatial scan statistic as having significantly fewer cases than expected (see figure 8.5). The central eastern coast is seen to have significantly more deaths than expected (see figure 8.6).

figure 8.5
melanoma of skin incidence rates 1998-2000

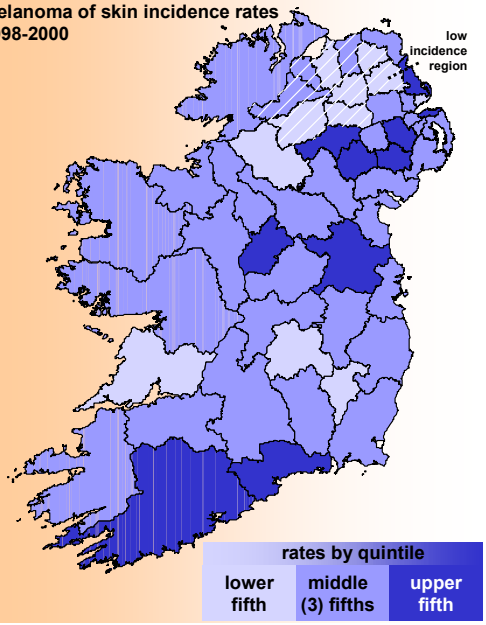


figure 8.6
melanoma of skin mortality rates 1998-2000

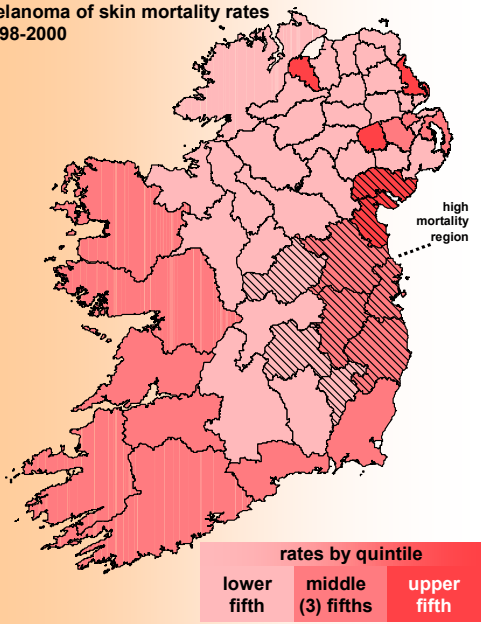


figure 8.7

1998-2000 age-adjusted incidence rates

melanoma of the skin by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

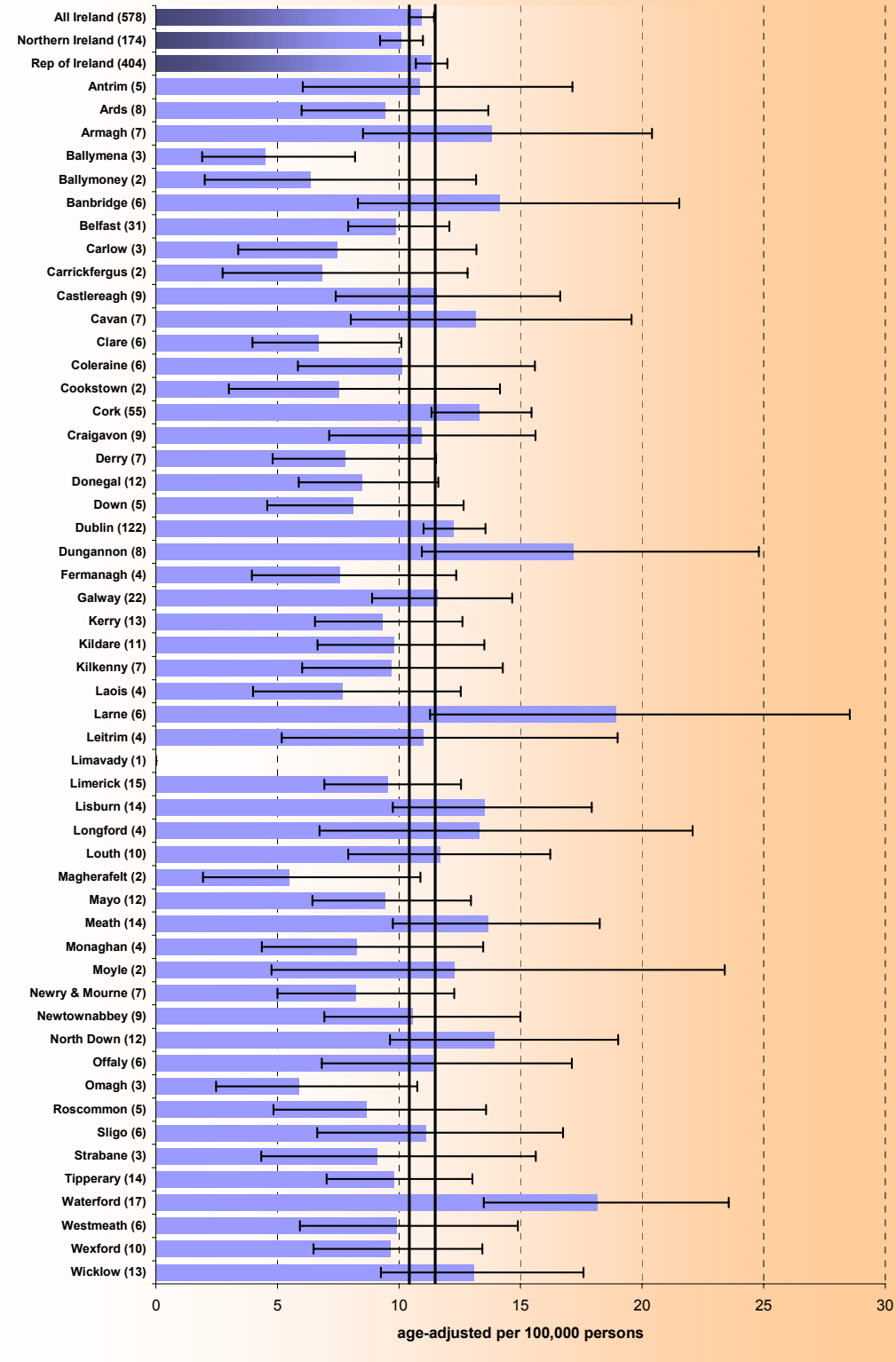
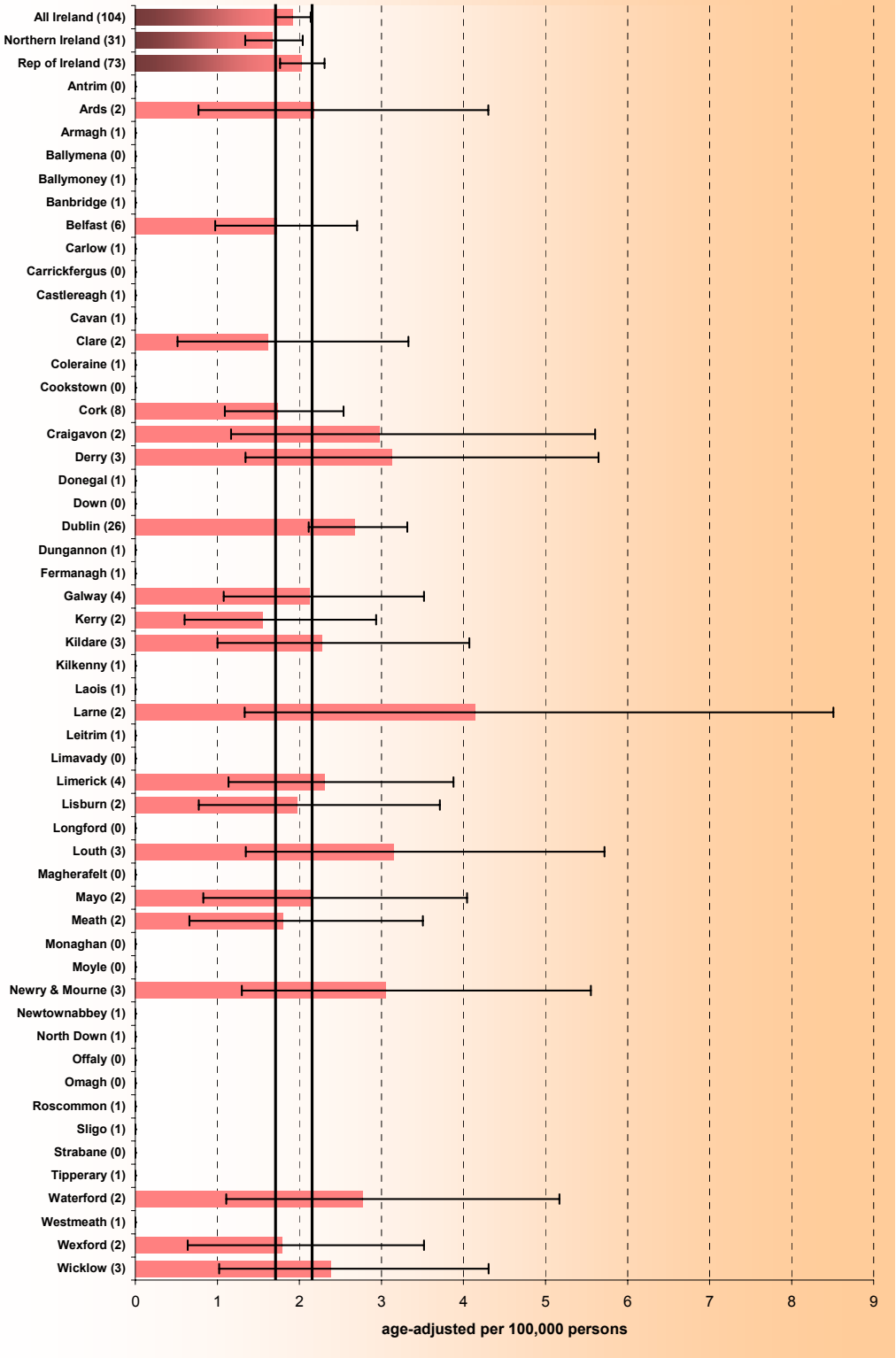


figure 8.8

1998-2000 age-adjusted mortality rates

melanoma of the skin by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



9

Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer

Key findings:

- *Oesophageal cancer ranks twelfth in new cases diagnosed and seventh in cancer-related deaths.*
- *Incidence and mortality rates for men are more than twice those for women.*
- *Oesophageal cancer ranks eighth in years of life lost. Half those diagnosed are aged 70 or younger.*
- *Incidence and mortality rates in Ireland are 1.2 to 3 times higher than in the EU and the US.*
- *Survival rates in Ireland, Europe and the US are low and essentially the same.*
- *Mortality rates for women are increasing in Northern Ireland and decreasing in the Republic of Ireland.*
- *Regions in the central and western seaboard have significantly fewer cases than expected.*
- *Regions on the eastern seaboard have significantly more deaths than expected.*
- *Differences in trends and geographic distributions point to a need for further study.*

Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer Oesophageal cancer

9. Oesophageal cancer

Risks and interventions

- *Tobacco use combined with alcohol increases the risk for squamous carcinoma of the oesophagus*
- *Obesity is associated with an increased risk for adenocarcinoma of the oesophagus*
- *Early diagnosis and state-of-the-art treatments have not yet appreciably improved survival*
- *Prevention appears to be the most viable means for reducing deaths*

Cancer of the oesophagus ranks twelfth among the major cancers in the number of new cases diagnosed, and seventh in the number of cancer deaths. Its high mortality rate makes it a major concern.

Each year nearly 450 people are diagnosed with oesophageal cancer. Each year approximately the same number die from it.

Variation by gender

Oesophageal cancer incidence and mortality rates for men are more than twice those for women.

For men it ranks tenth in incidence and fifth in mortality relative to the other major cancer sites. For women it ranks thirteenth in incidence and eighth in mortality.

International comparisons

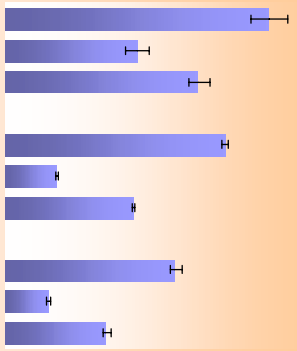
Compared to the EU and the US, the incidence rate for men in Ireland is 1.2 to 1.5 times higher. For women, it is 2.5 to 3 times higher. Similarly, for mortality, the rate for men in Ireland is 1.4 to 1.8 times higher than in the EU or US, whilst the rate for women is 2.5 to 3 times higher than in the EU or US.

table 9.1

oesophageal cancer incidence and mortality

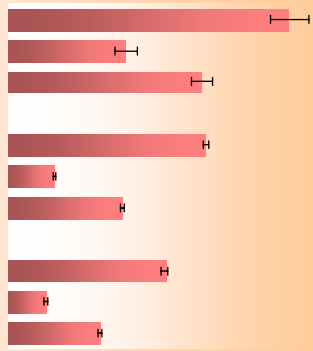
1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	265	11.1
female	180	5.5
total	445	8.1
european union (1998 only)		
male		9.2
female		2.2
total		5.4
united states (11 seer regions)		
male		7.1
female		1.8
total		4.2



1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	288	11.9
female	172	5.0
total	460	8.2
european union (1998 only)		
male		8.4
female		1.9
total		4.9
united states (11 seer regions)		
male		6.7
female		1.6
total		3.9



Oesophageal cancer is often fatal. Treatment is usually directed toward palliation rather than prolonging life. Female survival rates in Ireland are better than in Europe but male rates are essentially the same.

table 9.2

oesophageal cancer 5-year relative survival (%)

	male		female	
	rate	95% ci	rate	95% ci
ireland	10.7	8.4, 13.0	17.6	14.5, 20.7
europe (eurocare)	8.5	7.5, 9.7	10.5	9.2, 11.9
united states (seer)	13.6	12.3, 14.9	13.3	11.1, 15.5

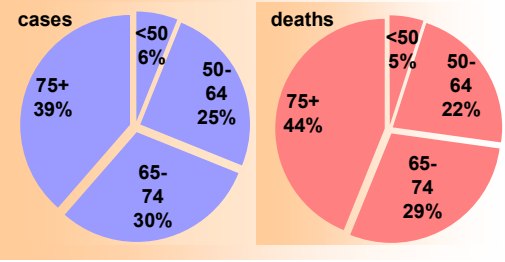
Age distribution

Roughly 30% of the people with oesophageal cancer are under age 65 when they are diagnosed. Half are under age 70.

Oesophageal cancer ranks eighth among the major cancers in terms of years of life lost, putting it ahead of prostate cancer and melanoma of the skin.

More than a quarter of the people who die from oesophageal cancer are under age 65.

figure 9.1
oesophageal cancer age at diagnosis and death 1998-2000



Time trends

There is no significant trend in either incidence or mortality rates between 1994 and 2000.

This is true for men and women separately and for both sexes combined

figure 9.2
oesophageal cancer incidence rates by sex and year (1994-2000)

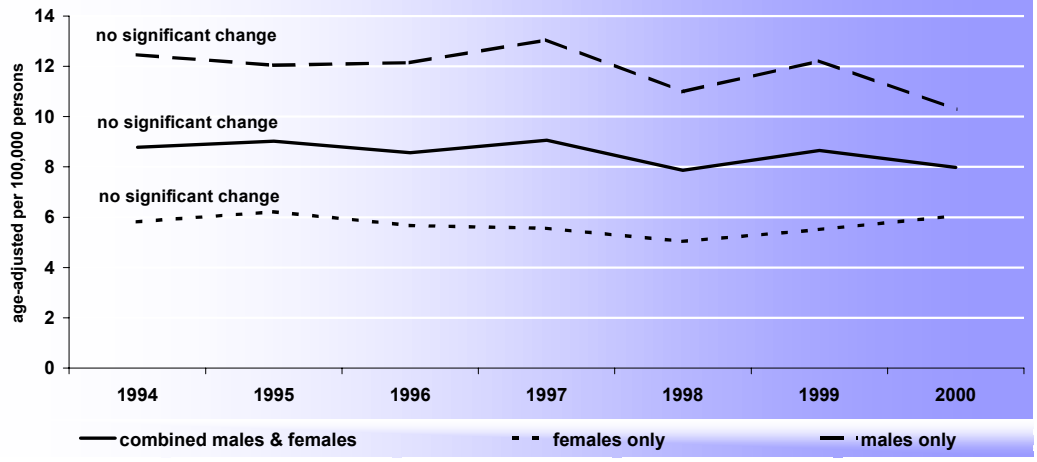
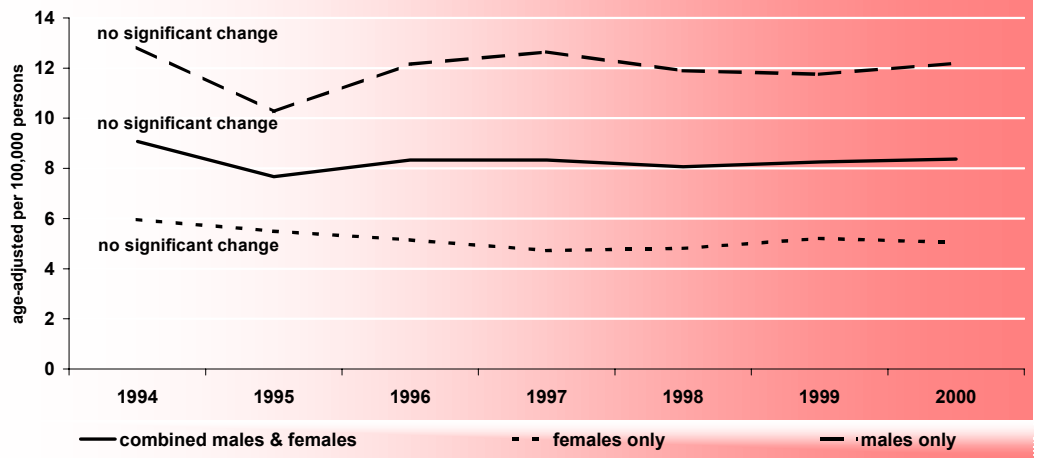


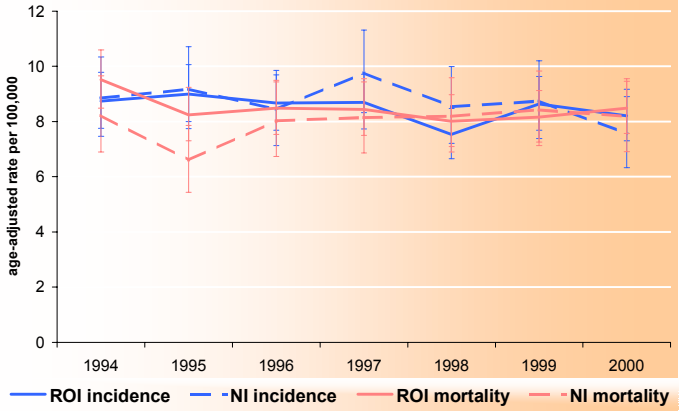
figure 9.3
oesophageal cancer mortality rates by sex and year (1994-2000)



Geographic variations

Year to year, the incidence rates in Northern Ireland (NI) and the Republic of Ireland (ROI) are essentially the same. So, too, are the mortality rates.

figure 9.4
oesophageal cancer incidence & mortality rates in NI & ROI



For both incidence and mortality rates in NI and ROI the overall trends are flat.

However, for women in ROI mortality rates are decreasing by 4.2% per year, whilst in NI they are increasing by 4.5% per year. The trends for women's incidence rates and for men's incidence and mortality rates are flat in both ROI and NI. (Note: sex-specific rates are not shown in figure 9.4)

Among the counties and district councils, Carrickfergus has a significantly high incidence rate, and Newry & Mourne has a significantly low incidence rate. For mortality, Craigavon and Wicklow are significantly high, while Sligo is significantly low. Rates are not computed for areas with fewer than 5 cases or deaths between 1998 and 2000. (See figures 9.7 and 9.8)

For both incidence and mortality rates, counties and district councils in the upper quintile are generally grouped in north eastern or south eastern Ireland. Counties and district councils with rates in the lower quintile are generally in western or central Ireland. (See figures 9.5 and 9.6)

Consistent with that pattern, the spatial scan statistic identifies the eastern region in figure 9.6 as having 15% more deaths than expected, while identifying the western region in figure 9.5 as having 18% fewer cases than expected.

figure 9.5
oesophageal cancer incidence 1998-2000

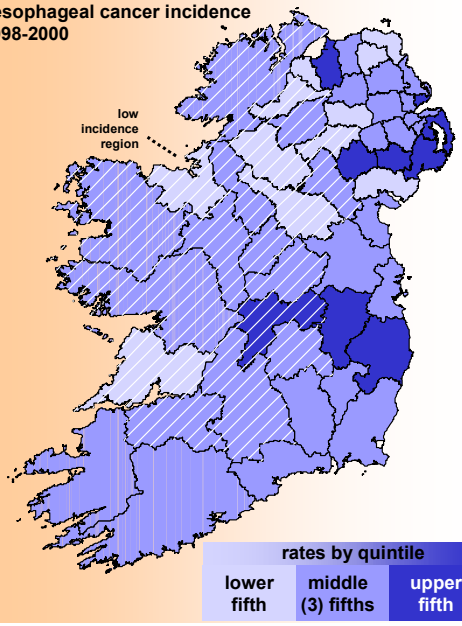


figure 9.6
oesophageal cancer mortality 1998-2000

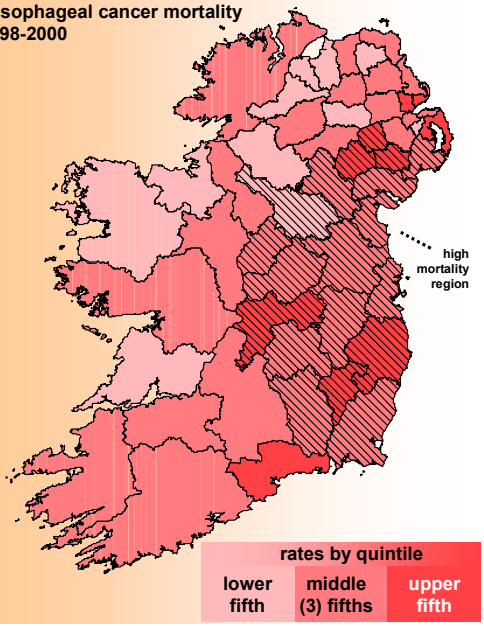


figure 9.7

1998-2000 age-adjusted incidence rates

oesophageal cancer by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

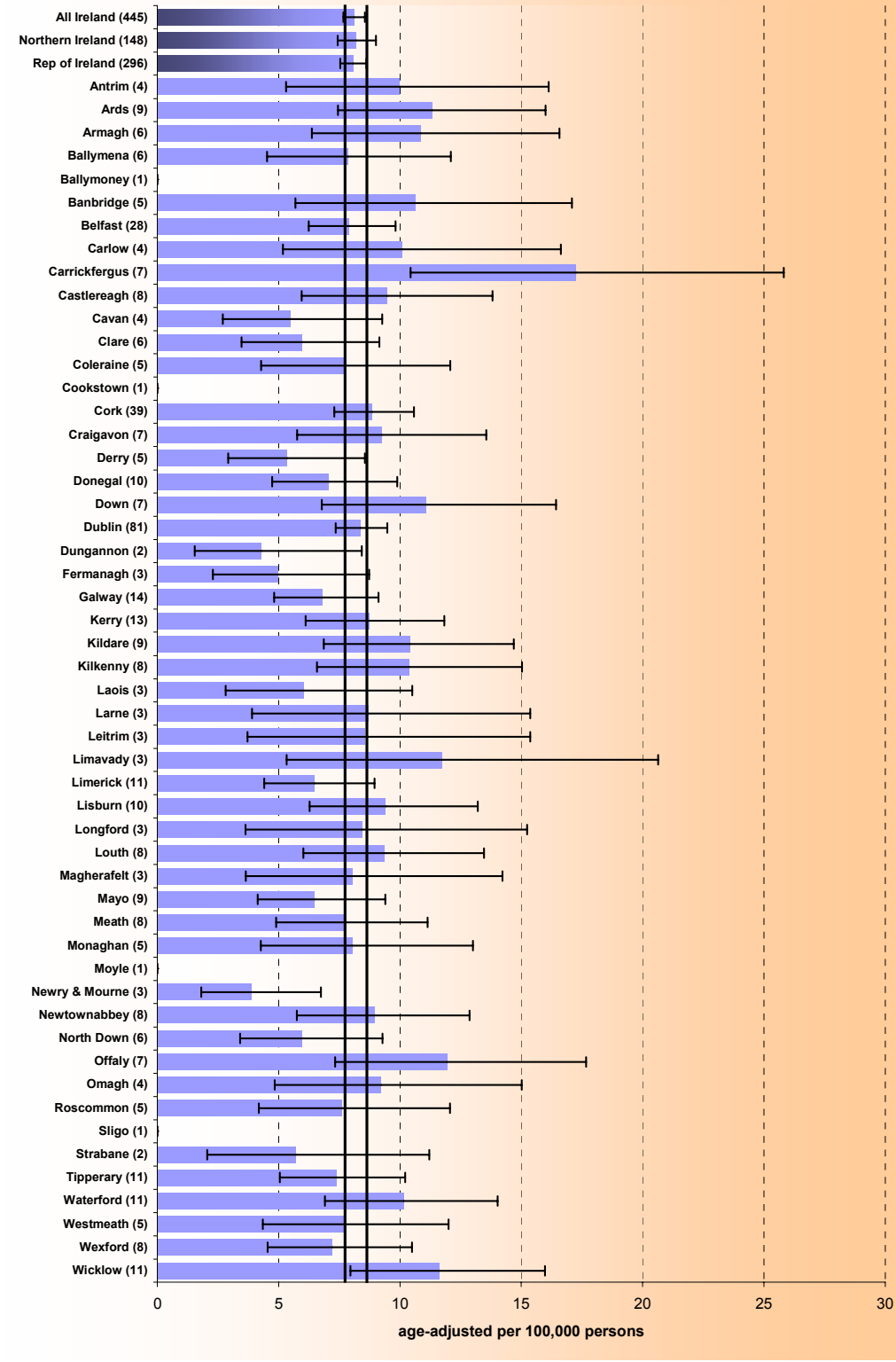
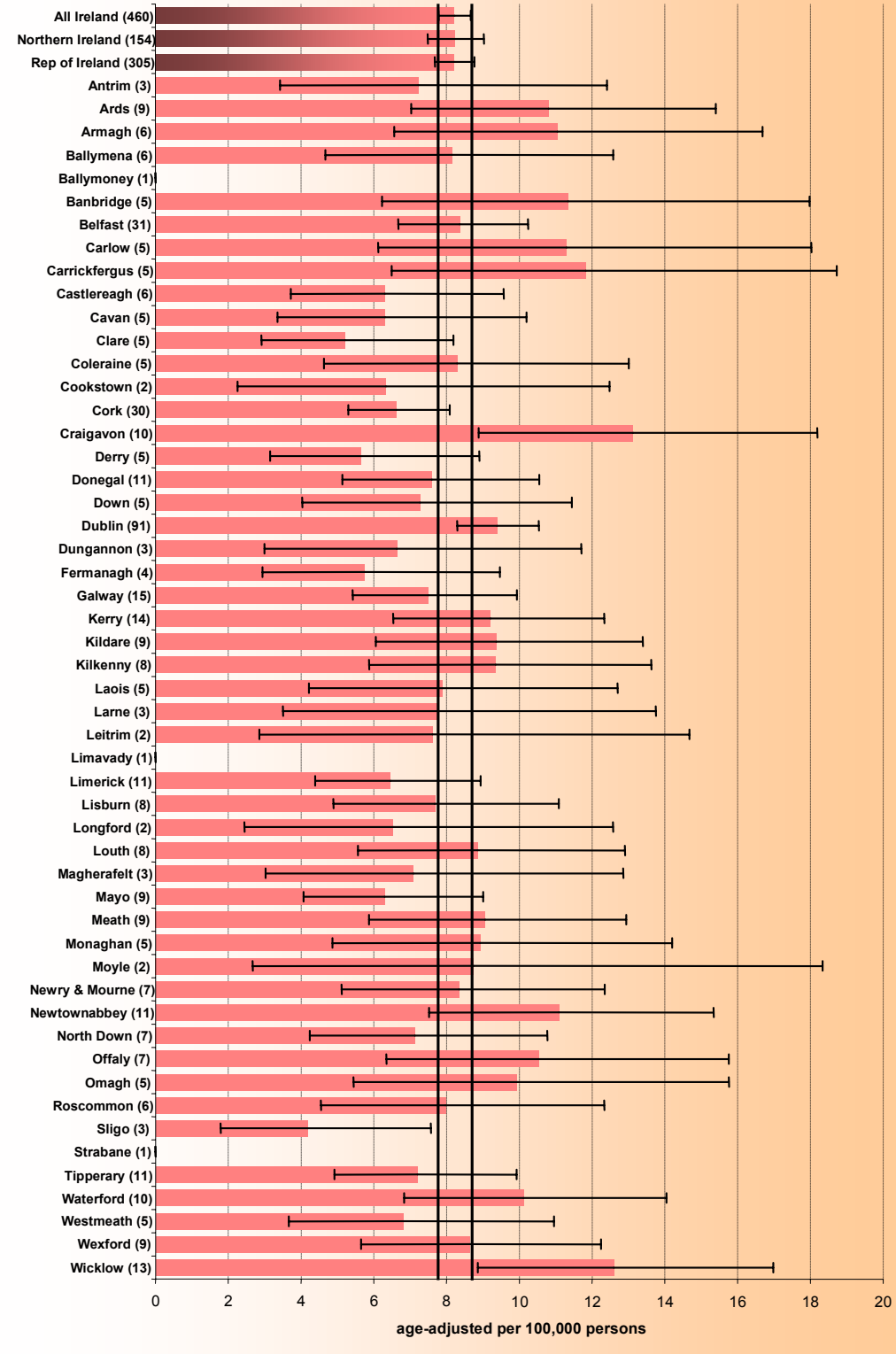


figure 9.8

1998-2000 age-adjusted mortality rates

oesophageal cancer by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



10

Prostate cancer Prostate cancer Prostate cancer
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Key findings:

- *Prostate cancer is the leading type of cancer in men.*
- *Prostate cancer ranks third in men for cancer-related deaths.*
- *Prostate cancer ranks tenth in years of life lost. Nearly 80% of the men diagnosed are 65 years old or older*
- *Ireland's mortality rate is higher than the EU and US rates*
- *Survival rates for Ireland, Europe and the US are strongly influenced by differing proportions of screen-detected cancer.*
- *Incidence rates for all Ireland and the Republic of Ireland are increasing.*
- *Mortality rates in Northern Ireland are declining.*
- *Incidence and mortality rates in the Republic of Ireland are significantly higher than those in Northern Ireland.*
- *Increased PSA testing is probably responsible for the sharp rise in incidence rates as well as the wide variation in incidence rates among regions.*
- *With the benefits of PSA screening unproven, and the risk of unwarranted worries and unneeded treatments high, policy guidelines on screening should be examined.*

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10. Prostate cancer

Risks and interventions

- *Studies on prevention are mixed. Low fat, high fruit and vegetable diets may reduce risk.*
- *Studies on screening are mixed. The benefits of early detection through PSA tests are not proven.*
- *Studies on treatment are mixed. For some, surgery may be worth the risk of serious side effects. For others, non-surgical treatments or close monitoring with no treatment may be more appropriate.*

For men, prostate cancer ranks first in new cases diagnosed, and third in cancer-related deaths. Each year more than 1900 men are diagnosed, and more than 700 die from it.

International comparisons

Ireland's incidence rate is nearly 20% higher than the EU rate, but it is less than half the rate in the US—even when excluding high at-risk African-American men.

Yet the differing rates may be misleading. Prostate specific antigen (PSA) tests can detect non-life threatening cancers typically not found by clinical examination. In doing so, PSA tests increase the number of cases reported, and increase the rates.

Since the value of PSA testing is still unproven, there is wide variation in its use. Differing incidence rates in Ireland, EU and the US may be a reflection of this variation in PSA testing.

table 10.1:

prostate incidence and mortality

1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	1934	79.7
european union (1998 only)		
male		67.6
united states (11 seer regions)		
male		164.3

1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	722	29.4
european union (1998 only)		
male		25.6
united states (11 seer regions)		
male		22.0

Ireland's mortality rate is about 15% higher than in the EU, and 30% higher than in the US.

Widespread PSA testing also leads to high survival rates—simply by adding more non-fatal cases. The high US survival rate may reflect this. It is difficult, therefore, to compare survival in Ireland, Europe and the US.

Age distribution

table 10.2

prostate cancer 5-year relative survival (%)

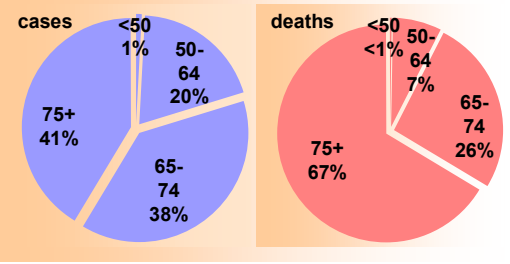
	male		female	
	rate	95% ci	rate	95% ci
ireland	64.5	62.4, 66.7	----	----
europe (eurocare)	65.4	64.4, 66.4	----	----
united states (seer)	98.0	97.6, 98.4	----	----

-Nearly 80% of the men diagnosed with prostate cancer in Ireland are 65 years old or older. Half the men are age 71 or older. In general, this is a disease of the elderly.

Prostate cancer ranks tenth among the major cancer sites in terms of years of life lost.

More than 90% of the men who die from prostate cancer are 65 or older. Two-thirds are aged 75 and older.

figure 10.1
prostate cancer age at diagnosis & death 1998-2000



Time trends

Incidence rates are increasing by about 4% per year. The sharpest rise, however, occurs from 1998 to 2000.

The mortality rate trend is flat.

figure 10.2
prostate cancer incidence rates by year (1994-2000)

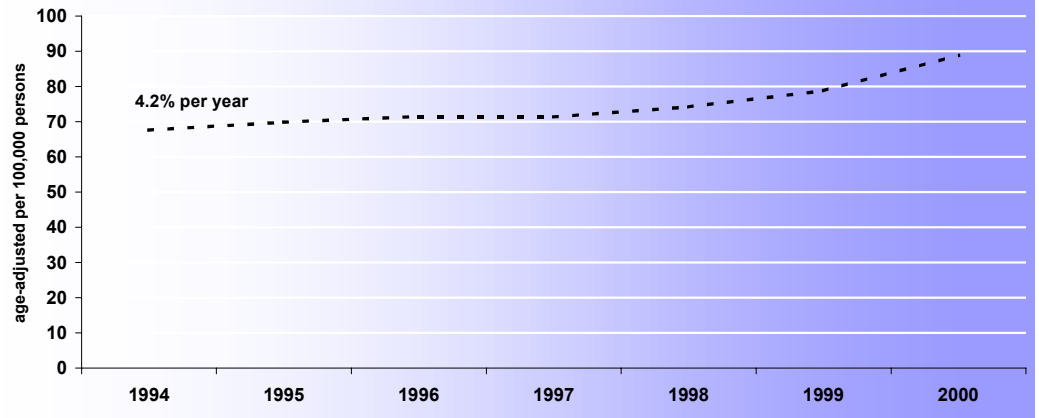
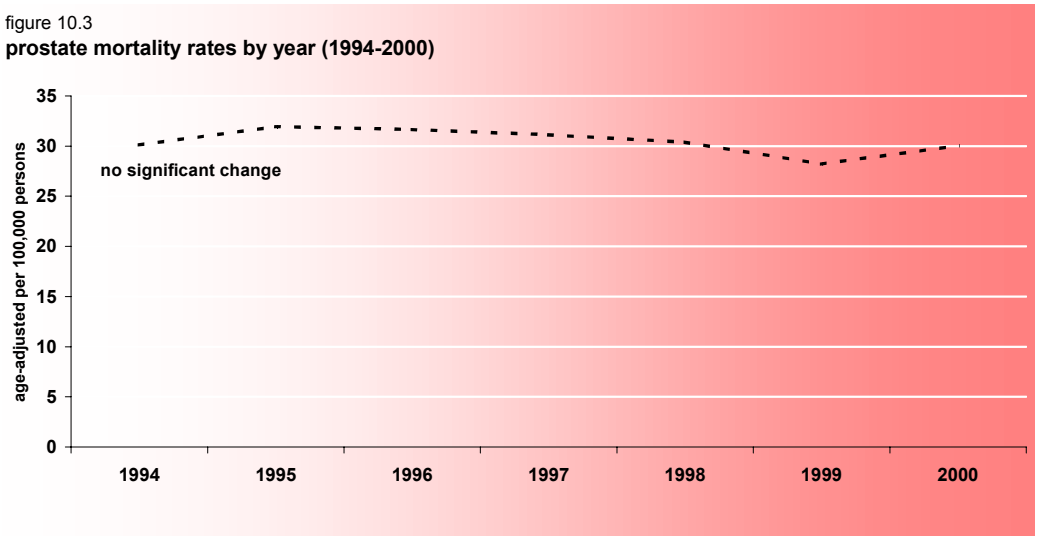


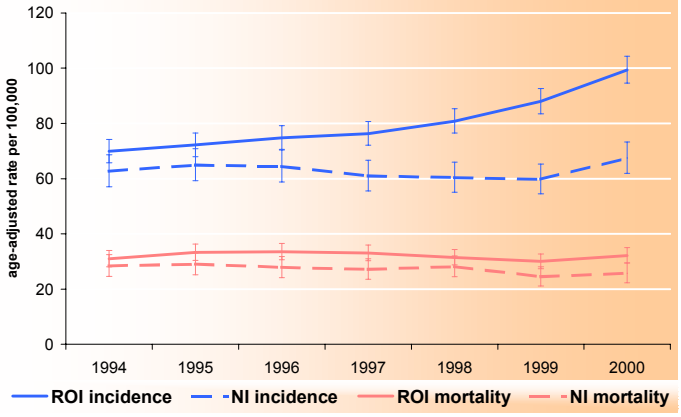
figure 10.3
prostate mortality rates by year (1994-2000)



Geographic variations

Beginning in 1997 and continuing each year afterwards, the incidence rates in the Republic of Ireland (ROI) and Northern Ireland (NI) differ significantly.

figure 10.4
prostate cancer incidence & mortality rates in NI and ROI



From 1994 to 1998, the rates in ROI rise by about 3% per year; from 1998 to 2000, they increase by 11% per year. Such an upsurge is probably due to increased PSA testing and follow-up biopsies. In NI the rates remain unchanged, although PSA testing is on the rise there as well.

For mortality, the NI rates are decreasing by 2% per year. In ROI they remain unchanged.

For each individual year the mortality rates in ROI and NI are essentially equal.

Significantly high incidence rates are seen in Dublin, Carlow, Cork, Donegal, Wicklow and Waterford. In fact, the incidence rate for ROI is significantly higher than the all-Ireland rate. No county or district council has a significantly high mortality rate (see figures 10.7 and 10.8)

Many district councils in NI are in the lower quintile for incidence and mortality rates. Counties in the upper quintile for incidence rates are mostly in the east. Areas in the upper quintile for mortality rates seem randomly dispersed. (See figures 10.5 and 10.6)

The spatial scan statistic identified the northern regions as having about 30% fewer cases and about 25% fewer deaths than expected. The southeast region is found to have 16% more cases than expected. The whole southern region highlighted has 10% more deaths than expected. (See figures 10.5 and 10.6)

figure 10.5
prostate cancer incidence 1998-2000

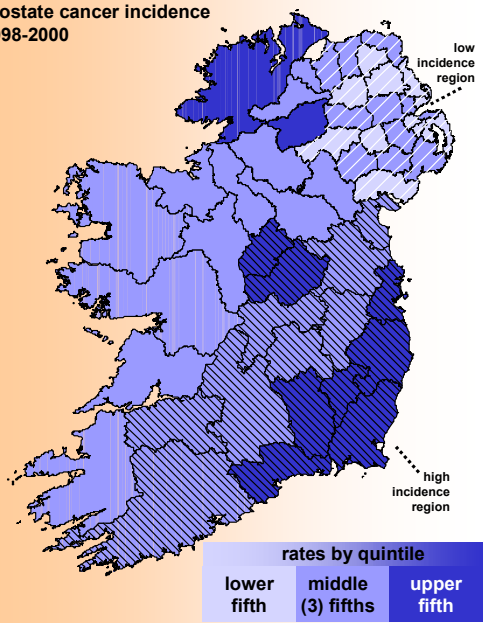


figure 10.6
prostate cancer mortality 1998-2000

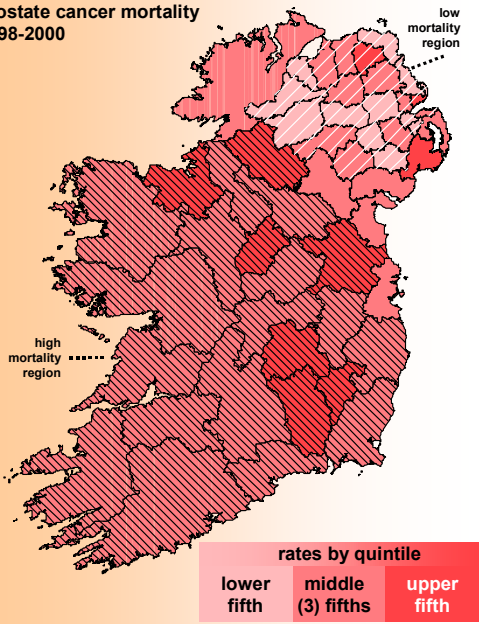


figure 10.7

1998-2000 age-adjusted incidence rates

prostate cancer by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

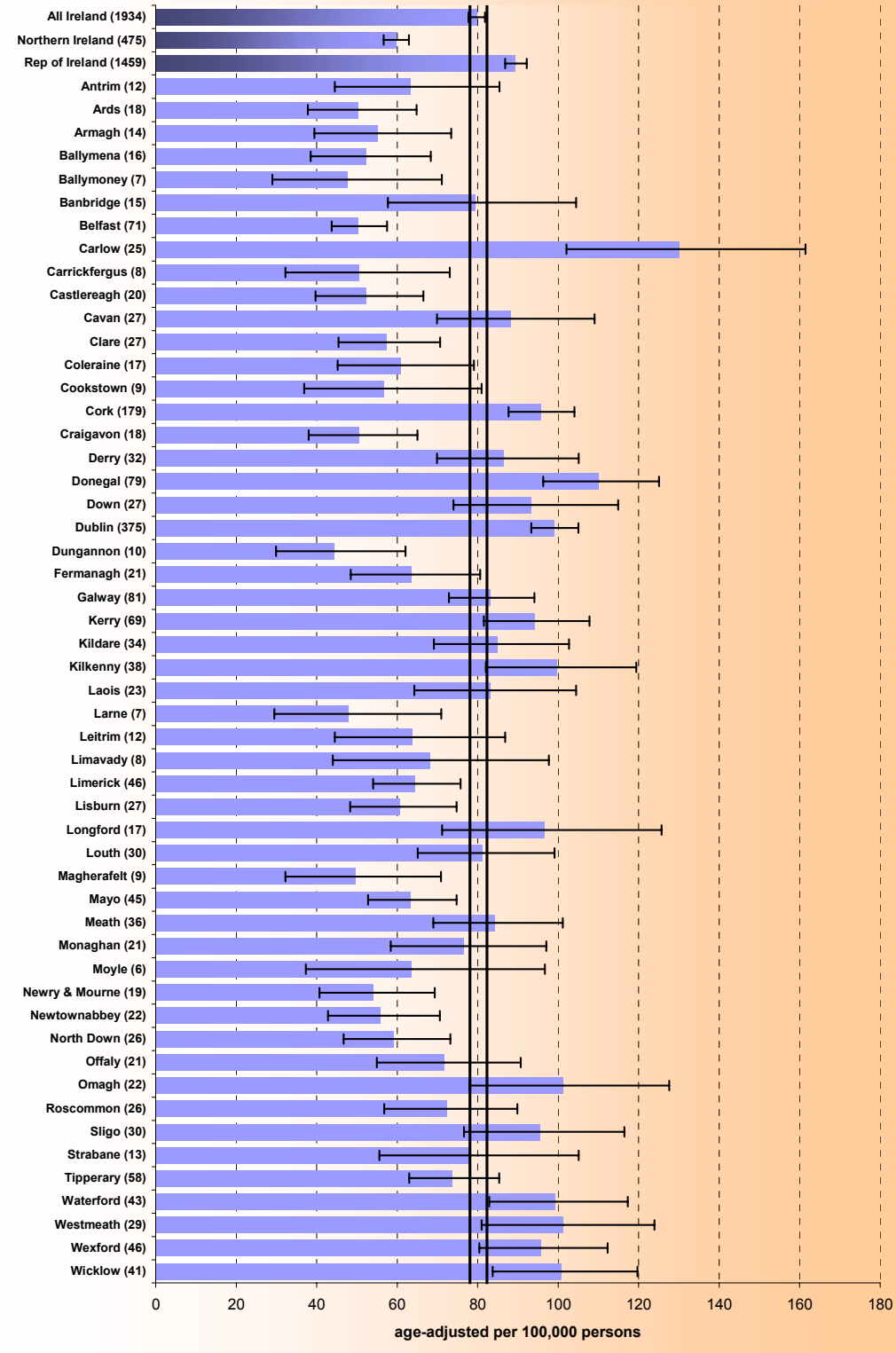
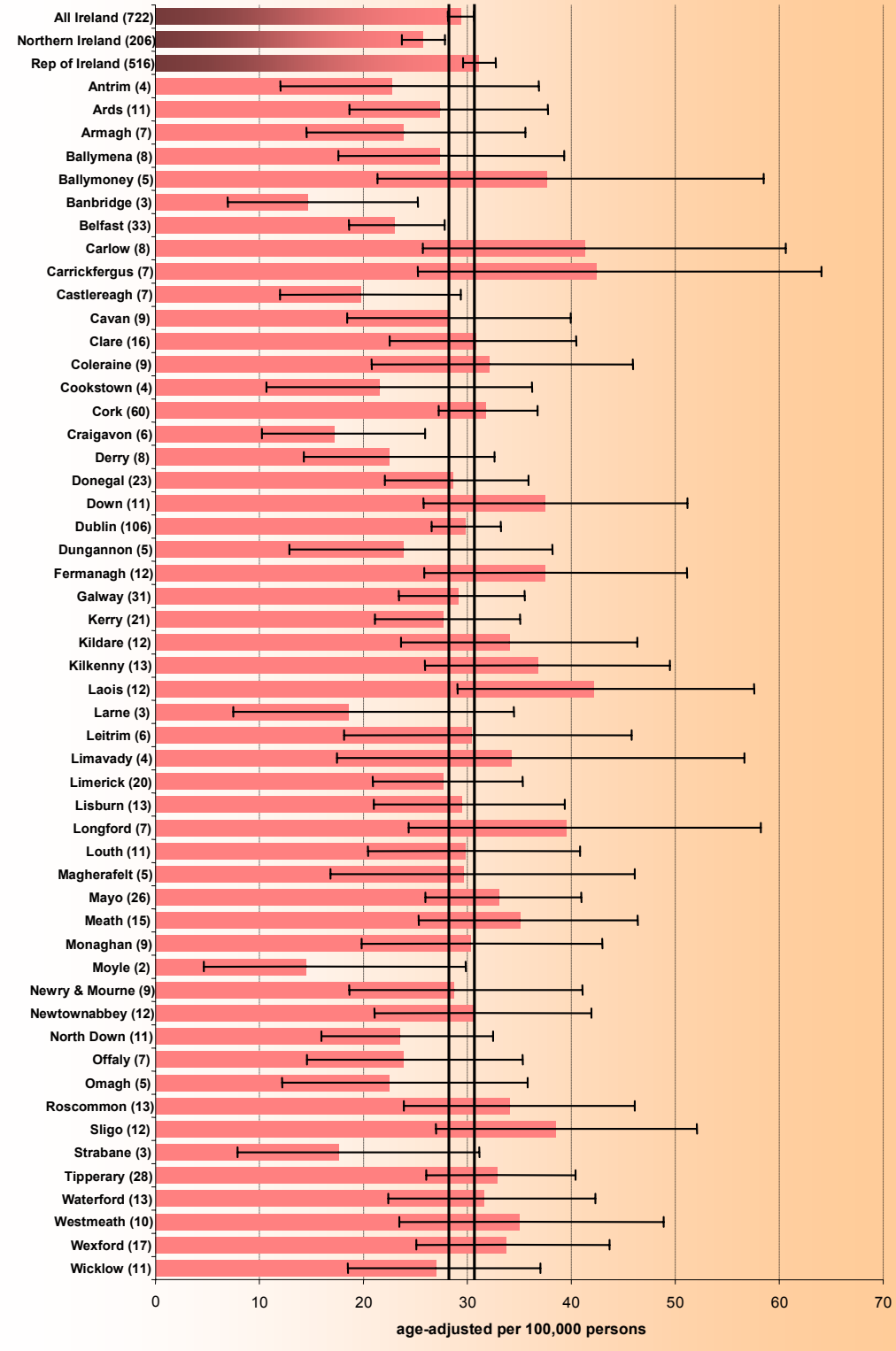


figure 10.8

1998-2000 age-adjusted mortality rates

prostate cancer by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



11 Stomach cancer

Key findings:

- *Stomach cancer is the sixth leading type of cancer, and the fifth leading cause of cancer death.*
- *Incidence and mortality rates for men are twice those for women.*
- *Stomach cancer ranks fifth in years of life lost. Nearly 30% of those diagnosed are under age 65.*
- *Survival rates for stomach cancer are low in Ireland, the EU and the US.*
- *Ireland's mortality rate is twice the US rate .*
- *Incidence and mortality rates in all Ireland and the Republic of Ireland are falling. Rates in Northern Ireland remain unchanged.*
- *Regions in the east have significantly more cases and deaths than expected.*
- *Prevention initiatives, focusing on diet and tobacco control, and particularly targeting populations in high risk areas, should be continued and strengthened.*

11. Stomach cancer

Risks and interventions

- *Changes in diet—less salt, more fruit and vegetables—can prevent stomach cancer.*
- *Control of Helicobacter pylori infections may prevent stomach cancers, but studies are not definitive.*
- *Smoking increases risk.*
- *Few treatment options exist.*

Stomach cancer ranks sixth among the major cancers in both new cases diagnosed and fifth in cancer-related death. Each year, more than 700 people are diagnosed with stomach cancer and about 550 die from it.

Variation by gender

For men stomach cancer ranks fifth in incidence and fourth in cancer death. For women it ranks eighth in incidence and sixth in cancer death.

Like many cancers, men tend to be at greater risk. With stomach cancer, the incidence and mortality rates for men are more than twice those for women.

International comparisons

For both men and women, the incidence and mortality rates in Ireland are about the same as in the EU.

However, for both men and women the incidence rates here are about 70% higher than in the US. Moreover, the mortality rates in Ireland are double the US rates.

table 11.1

stomach incidence and mortality

1998 - 2000 average annual incidence

all-ireland	cases	age-adjusted rate per 100,000 with 95% ci
male	444	18.5
female	281	8.7
total	725	13.2
european union (1998 only)		
male		20.2
female		9.5
total		14.1
united states (11 seer regions)		
male		11.1
female		5.4
total		7.9

1998 - 2000 average annual mortality

all-ireland	deaths	age-adjusted rate per 100,000 with 95% ci
male	321	13.3
female	225	6.6
total	546	9.6
european union (1998 only)		
male		15.1
female		7.3
total		10.6
united states (11 seer regions)		
male		6.5
female		3.4
total		4.7

Stomach cancer survival rates are low everywhere. In Ireland and Europe about 20% of the patients diagnosed live five years or longer. In the US, it is about a quarter. Ireland's survival rates are, however, significantly lower than in either Europe or the US.

table 11.2

stomach cancer 5-year relative survival (%)

	male		female	
	rate	95% ci	rate	95% ci
ireland	16.8	14.6, 19.0	19.5	16.9, 22.2
europe (eurocare)	20.0	19.2, 20.9	25.4	24.3, 26.6
united states (seer)	22.2	21.0, 23.4	25.4	23.8, 26.9

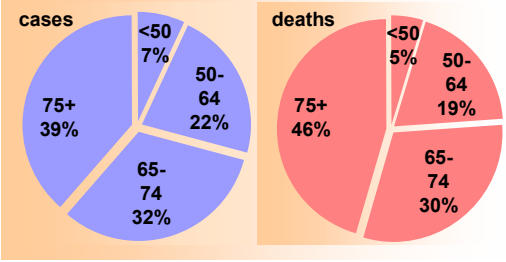
Age distribution

Stomach cancer is generally thought to be a disease of the elderly only. However, nearly 30% of the people diagnosed are under age 65. In fact, half are under age 70.

Among the major cancer sites, stomach cancer ranks fifth in years of life lost.

Almost 25% of the people who die from stomach cancer are under age 65.

figure 11.1
stomach cancer age at diagnosis & death 1998-2000



Time trends

Incidence rates are falling by about 3% per year for men, and by 2% per year for both sexes combined. The rates for women have not changed.

Mortality rates are falling for both men and women. For men they are going down by about 4% per year. For women, the rates are falling by about 3% per year.

figure 11.2
stomach cancer incidence rates by sex and year (1994-2000)

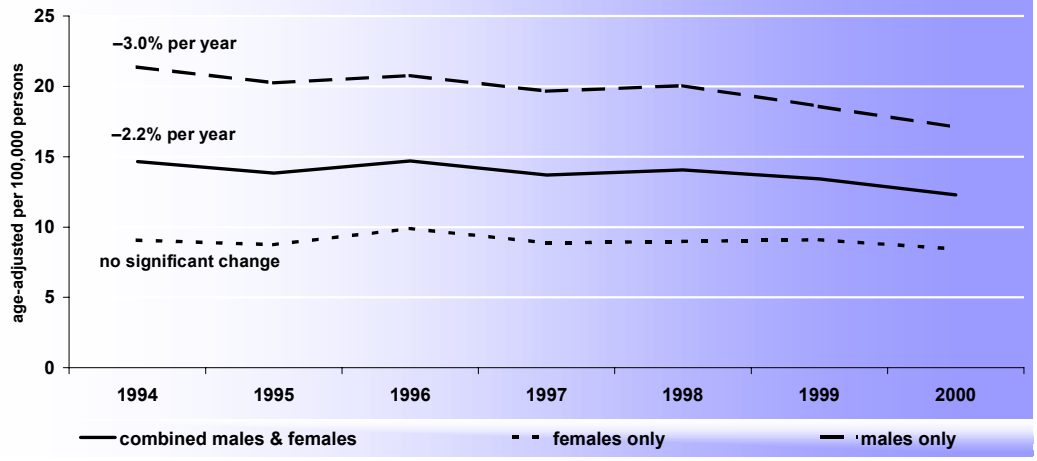
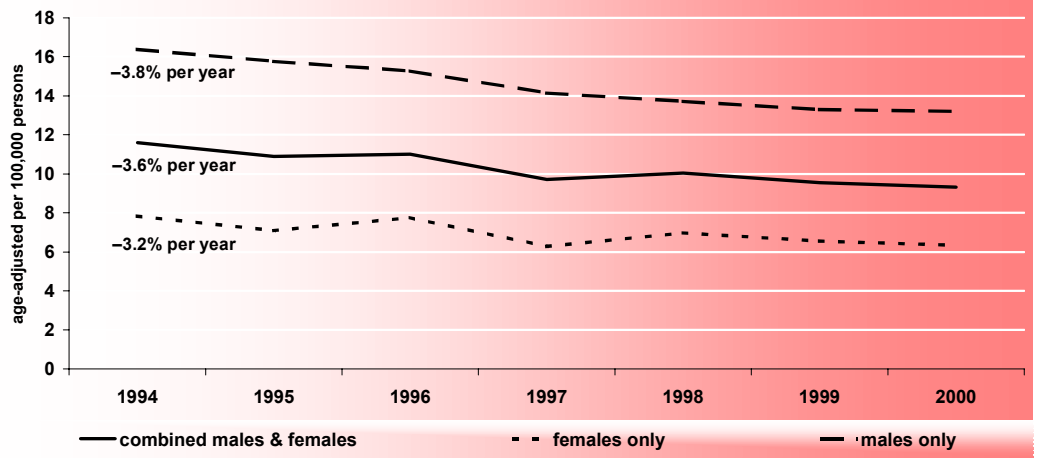


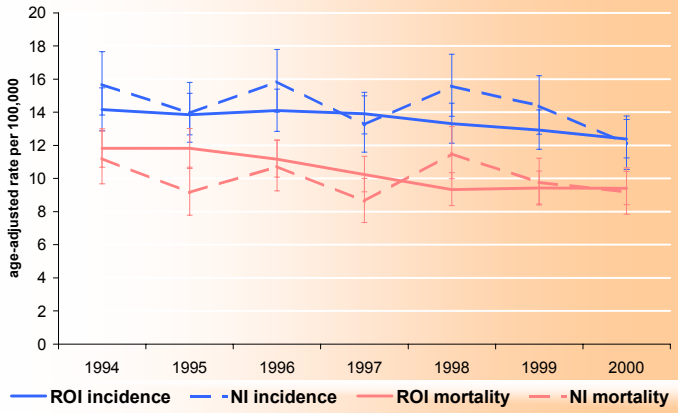
figure 11.3
stomach cancer mortality rates by sex and year (1994-2000)



Geographic variations

For each year between 1994 and 2000, the incidence rates in Northern Ireland (NI) and the Republic of Ireland (ROI) have been essentially the same.

figure 11.4
stomach cancer incidence & mortality rates in NI and ROI



The incidence rates in ROI are falling by about 2% per year. The rates in NI have not changed.

The mortality rates in ROI are falling by about 5% per year. The rates in NI have not changed significantly.

Year by year the mortality rates in ROI and NI are essentially the same.

For each county or district council individually, only Dublin and Newry & Mourne have incidence rates that are significantly high. Newry & Mourne also has a significantly high mortality rate, as does Belfast. (See figures 11.7 and 11.8) Previous reports have noted this.

Counties or district councils in the upper quintile for incidence and mortality are generally in the east or inland. Counties or district councils in the lower quintile for incidence and mortality are generally in the south or west. (See figures 11.5 and 11.6)

The spatial scan statistic finds that the northeast region has 17% more cases than expected. A similar region is seen as having 16% more deaths than expected. A large region encompassing most of the southern counties is identified as having 25% fewer cases than expected. A similar but somewhat broader region encompassing the southwest is found to have 20% fewer deaths than expected. (See figures 11.5 and 11.6)

figure 11.5
stomach cancer incidence 1998-2000

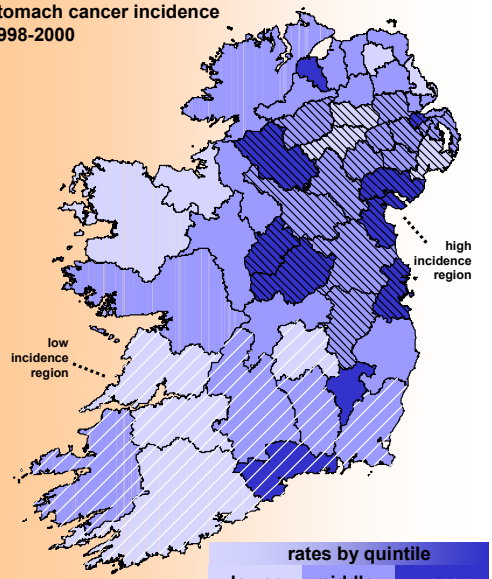


figure 11.6
stomach cancer mortality 1998-2000

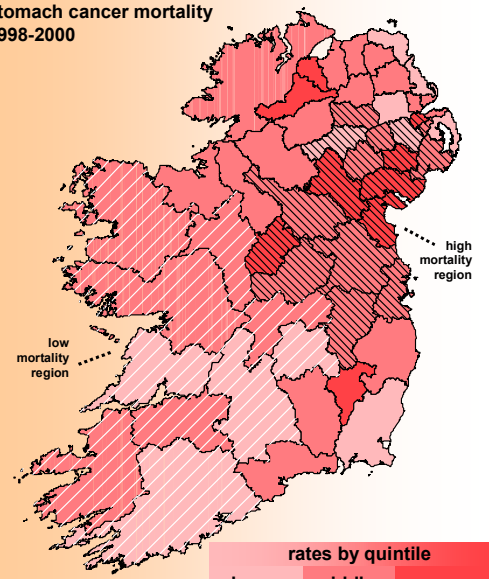


figure 11.7

1998-2000 age-adjusted incidence rates

stomach cancer by county/district council

with average annual incidence in ( )'s and 95% confidence intervals shown by |—|

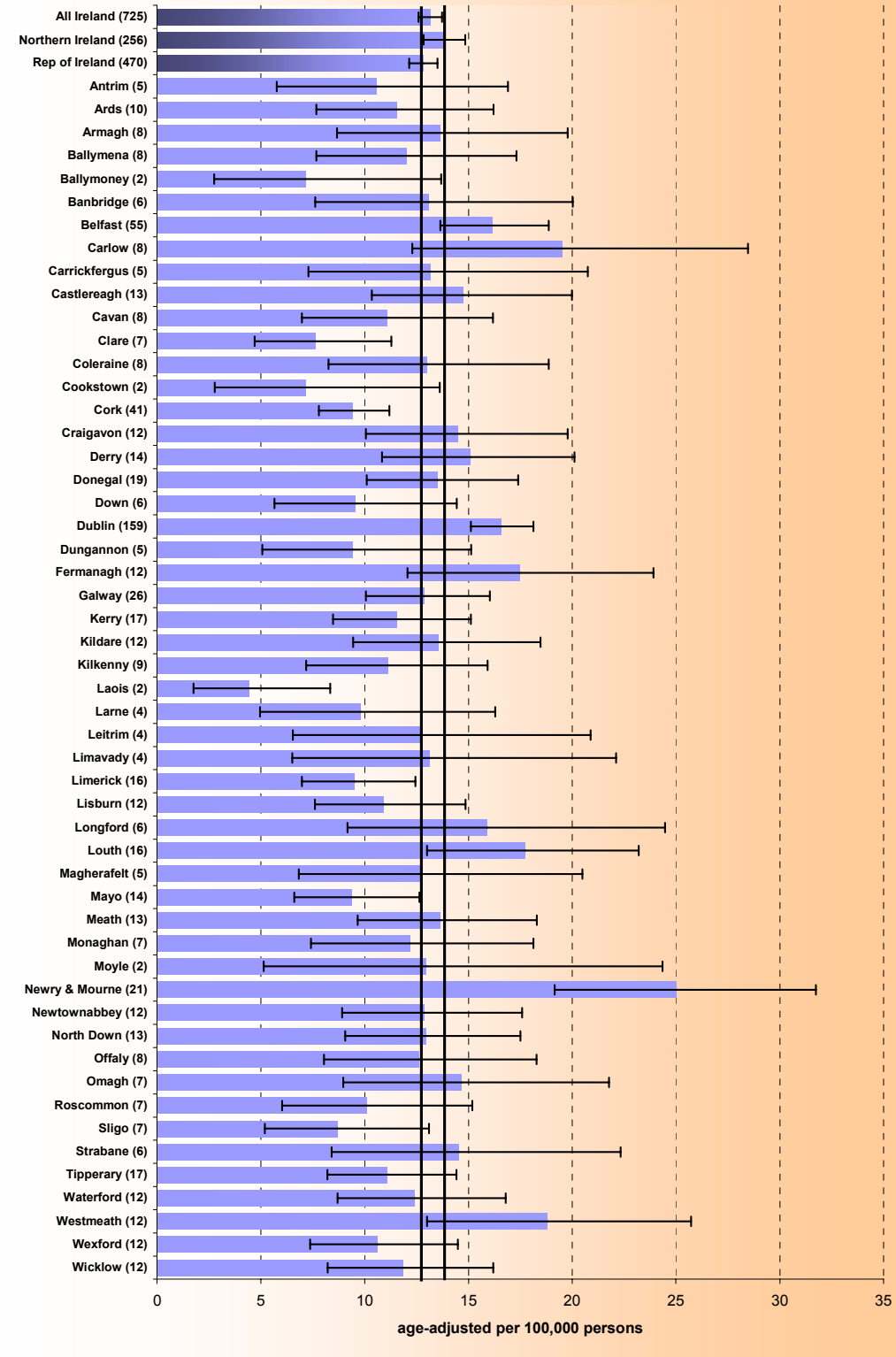
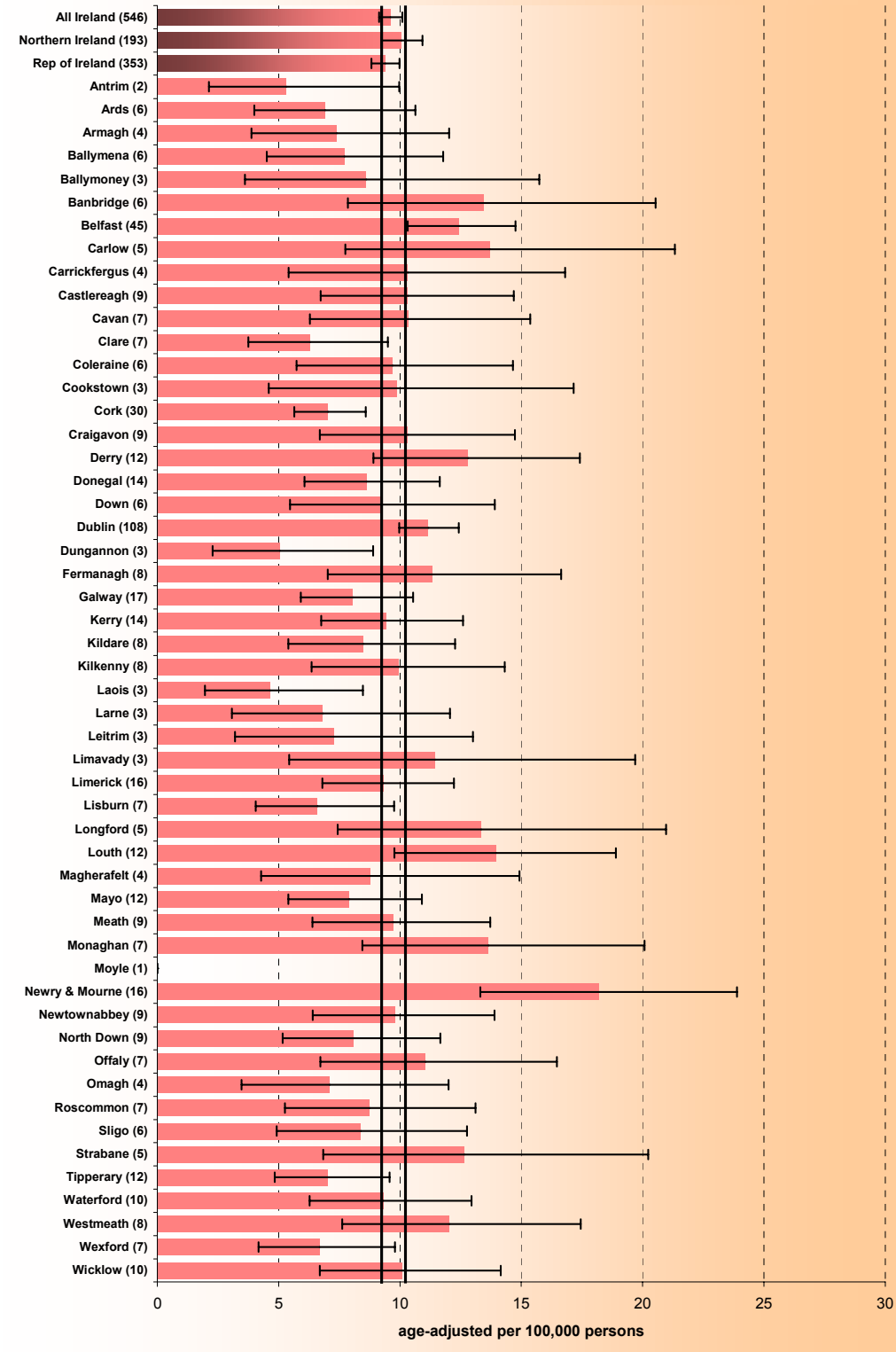


figure 11.8

1998-2000 age-adjusted mortality rates

stomach cancer by county/district council

with average annual deaths in ( )'s and 95% confidence intervals shown by |—|



12

Priority issues and actions:

- *Increase mammography screening in the Republic of Ireland.*
- *Understand regional variations in colorectal cancer and target colorectal prevention to high-risk regions and populations.*
- *Reduce tobacco use throughout Ireland.*
- *Determine the impact of PSA testing on health care resource use, identify incentives for its use, and assess its likely effects on quality of care, quality of life, and regional variations.*
- *Stomach and oesophageal cancers would benefit from a tobacco reduction initiative. Stomach cancer would also benefit from any dietary initiative.*
- *Initiatives focusing on preventing sunburns in children and taking care in the sun, while avoiding sunbeds, would be worthwhile in reducing melanoma.*
- *Much could be accomplished through a broader coalition of the registries with cancer research centres, medical oncology groups and other key medical, advocacy, and public health groups.*

12. Priority issues and actions

Cancer is a large and, as the population ages, growing problem in Ireland. But it is not insurmountable. To deal with such a large problem, however, the first steps should involve identifying priorities. This report provides one avenue for doing so.

Most of the cancer sites focused on in this report were chosen because they represent a major burden to the general population, and because interventions or actions exist to prevent or cure them. In this respect all such cancers highlighted in the report are high priority concerns. Even so, some are clearly a higher priority than others.

Four cancers readily fall into this highest priority group: breast, colorectal, lung and prostate. Together they constitute more than half of all the cancers in Ireland. Individually, they are unique in the combination of the problems they pose, the populations they affect, and the strategies best suited to overcome them. These are highlighted and discussed below.

Increase mammography screening in the Republic of Ireland.

Breast cancer – For women, breast cancer is the leading type of cancer and the leading cause of cancer-related death. Few prevention options exist, and their impact may be limited and not be felt for many years. Screening—specifically mammography screening—is the preferred intervention because it can prevent breast cancer deaths now.

Ireland's regional variations in breast cancer incidence and mortality appear to correspond to differences in the availability and use of such screening services. A region encompassing most of Northern Ireland, where nationally sponsored screening programmes are well-established, is found to have fewer breast cancer-related deaths than expected. Moreover, cancer mortality rates in Northern Ireland have fallen by more than 20% between 1994 and 2000. In the Republic of Ireland, where there was no state-sponsored programme before 2000, breast cancer mortality rates are the same in 2000 as they were in 1994.

These findings strongly suggest a need for an increase in the use and/or availability of mammography screening services in the Republic of Ireland.

Understand regional variations and . . .

Colorectal cancer – For both sexes combined, colorectal cancer is the leading cause of cancer in Ireland, and the second leading cause of cancer-related death. Actions that prevent colorectal cancer are similar to those that prevent cardiovascular disease: regular exercise, and low-fat, high fruit and vegetable diets. This dual benefit alone makes prevention a highly desirable strategy. Screening for colorectal cancer is under investigation and looks promising. Options for screening for colorectal cancers run the gamut from inexpensive home-administered faecal occult blood tests (FOBT), to varyingly invasive and

. . . target prevention to high-risk regions and populations.

sophisticated procedures such as sigmoidoscopy or colonoscopy. Each has its benefits and shortcomings.

This report has identified striking variations by region and by sex for incidence and mortality rates in Ireland. Incidence and/or mortality rates are significantly high in certain counties and district councils. Rates are falling in Northern Ireland, but not in the Republic of Ireland. Incidence in men is 1.5 times higher than in women. The eastern region has significantly more cases than expected.

Understanding why regional variations in colorectal cancer exist should be a priority focus of future epidemiological analyses. Targeting those regions and populations at highest risk should be the priority focus of prevention initiatives.

Lung cancer – The leading cause of cancer death in Ireland is lung cancer. Tobacco exposure, particularly cigarette smoking, is the principal cause of lung cancer. Prevention is the most effective means available today for reducing lung cancer incidence and mortality.

Reduce tobacco use throughout Ireland.

Confirming what has been reported elsewhere, the incidence and mortality rates for lung cancer are highest in those urban regions where smoking rates are typically the highest.

The nationwide effort in the Republic of Ireland to reduce tobacco use, including a ban on smoking in public places, should profoundly lower the rates of lung cancer. Such an initiative needs to be instituted island-wide.

Determine impact of PSA testing on health care resource use, identify incentives for its use, and . . .

Prostate cancer – The leading cause of cancer in men is prostate cancer. Low-fat, high fruit and vegetable diets may reduce a man's risk for prostate cancer, but the evidence is not conclusive. The relative benefits of screening and subsequent treatment are, in many instances, unclear. The widespread and growing use of prostate specific antigen (PSA) tests—which can detect non-life threatening prostate cancers, but cannot distinguish them from life threatening ones—adds to the complexity.

The implications of all this uncertainty appear to be reflected in the differences in Northern Ireland and the Republic of Ireland. Between 1994 and 2000, the incidence rates in the Republic of Ireland increased by 33%—with a 22% increase between 1998 and 2000 alone. In Northern Ireland, during that same 1994-2000 period, there is no change in the incidence rate. This suggests an increase in PSA testing and follow-up biopsies in the Republic of Ireland, but not in Northern Ireland. Is that what occurred? Why? What are the implications?

Equally intriguing, from 1994 to 2000 the mortality rates in Northern Ireland fell by 12%, but in the Republic of Ireland they have remained unchanged. Moreover,

regions that encompass large sections of the Republic of Ireland are seen to have significantly more cases and more deaths than expected. Why?

. . . assess quality of care, quality of life, and regional variations.

Understanding these differences between the Republic of Ireland and Northern Ireland has important implications on issues as diverse as health care resource utilization, incentives in the health care system, quality of care, quality of life, and the epidemiology of prostate cancer. They should be explored. With the benefits of PSA screening unproven, and the risk of unwarranted worries and unneeded treatments high, policy guidelines on screening should be examined.

Among the remaining cancers, two, ***stomach*** and ***oesophageal cancers***, would benefit from the tobacco reduction initiative. The geographic distribution of both cancers, in fact, loosely mirrors that of lung cancer. Stomach cancer would also benefit from any dietary initiative; diets high in fruits and vegetables and low in salt help prevent stomach cancer.

Ultraviolet exposure is well documented as the primary cause of ***melanoma of the skin***. Although not currently a major burden to the general population, and showing no increase between 1994 and 2000, the general characteristics of a large proportion of the population of Ireland correspond to those most at-risk: fair skin, red-hair, and freckles. Initiatives focusing on preventing sunburns in children and taking care in the sun, while avoiding sunbeds, would be worthwhile and would also reduce incidence of the most common cancer, non-melanoma skin cancer.

For ***childhood cancer*** and ***lymphoma***, the findings that there are no geographic variations in their distribution is encouraging. Monitoring of these cancers is important, but "cluster" analyses and other resource expenditures should be tempered with a sense of the relative impact these cancers have on the population.

The cancer registries of the Republic of Ireland and Northern Ireland are the foundations of our understanding of cancer throughout the island. The collaboration of these two entities, together with participation from the United States, exemplifies once again the value inherent in partnerships.

Much more, however, could be accomplished through a broader coalition of the registries with cancer research centres, medical oncology groups and other key medical, advocacy, and public health entities. Such a coalition could provide the most efficient and effective means for identifying and implementing priority initiatives to reduce incidence, morbidity and mortality through prevention, early detection, treatment, rehabilitation, and palliation. The first steps in building such a coalition have been made through the establishment of the Ireland/Northern Ireland/NCI Cancer Consortium.

The need to develop this coalition further may be the highest priority finding of this report.

Appendices

Appendix A Definitions of cancer sites

Cancer	Incidence Codes ICD-0-2 (malignant behaviour only)	Mortality Codes ICD-9 or ICD-10
All sites combined	C00.0 - C80.9, all morphology codes	ICD-9: 140-208 ICD-10: C00-C97
Bladder	C67.0-C67.9, excluding morphology codes 9590-9989	ICD-9: 188.0-188.9 ICD-10: C67
Brain	C71.0-C71.9, excluding morphology codes 9530-9539 and 9590-9989	ICD-9: 191.0-191.9 ICD-10: C71
Breast (Female)	C50.0-C50.9, excluding morphology codes 9590-9989	ICD-9: 174.0-174.9 ICD-10: C50
Cervix	C53.0-C53.9, excluding morphology codes 9590-9989	ICD-9: 180.0-180.9 ICD-10: C53
Colorectal	C18.0-C18.9, C19.9, C20.9, C26.0, excluding morphology codes 9590-9989	ICD-9: 153, 153.0-154.1, 159, 159.0 ICD-10: C18-C20, C26.0
Endometrium	C54.0-C54.9, excluding morphology codes 9590-9989	ICD-9: 182, 182.0-182.1, 182.8 ICD-10: C54
Oesophagus	C15.0-C15.9, excluding morphology codes 9590-9989	ICD-9: 150.0-150.9 ICD-10: C15
Hodgkin's Lymphoma	All primary sites with morphology codes 9650-9667	ICD-9: 201.0-201.9 ICD-10: C81
Kaposi's Sarcoma	All primary sites with morphology code 9140	ICD-9: 176 ICD-10: C46
Kidney and Renal Pelvis	C64.9, C65.9, excluding morphology codes 9590-9989	ICD-9: 189, 189.0, 189.1 ICD-10: C64-C65
Larynx	C32.0-C32.9, excluding morphology codes 9590-9989	ICD-9: 161.0-161.9 ICD-10: C32
Leukaemia	All primary sites with morphology codes 9800-9941	ICD-9: 204.0-208.9 ICD-10: C90.1, C91-C95
Liver	C22.0, excluding morphology codes 9590-9989	ICD-9: 155, 155.0, 155.2 ICD-10: C22.0, C22.2-C22.4, C22.7, C22.9
Lung and Bronchus	C34.0-C34.9, excluding morphology codes 9590-9989	ICD-9: 162, 162.2-162.9 ICD-10: C34
Melanoma of the Skin	C44.0-C44.9, including only morphology codes 8720-8790	ICD-9: 172.0-172.9 ICD-10: C43
Multiple Myeloma	All primary sites with morphology codes 9731-9732	ICD-9: 203, 203.0, 203.2-203.8 ICD-10: C90.0, C90.2
Non-Hodgkin's Lymphoma	All primary sites with morphology codes 9590-9595, 9670-9719	ICD-9: 200, 200.0-200.8, 202, 202.0-202.2, 202.8-202.9 ICD-10: C82-C85
Oral Cavity and Pharynx	C00.0-C14.8, excluding morphology codes 9590-9989	ICD-9: 140.0-149.9 ICD-10: C00-C14
Ovary	C56.9, excluding morphology codes 9590-9970	ICD-9: 183, 183.0 ICD-10: C56
Pancreas	C25.0-C25.9, excluding morphology codes 9590-9989	ICD-9: 157.0-157.9 ICD-10: C25
Prostate	C61.9, excluding morphology codes 9590-9989	ICD-9: 185 ICD-10: C61
Stomach	C16.0-C16.9, excluding morphology codes 9590-9989	ICD-9: 151.0-151.9 ICD-10: C16
Testis	C62.0-C62.9, excluding morphology codes 9590-9989	ICD-9: 186.0-186.9 ICD-10: C62
Thyroid	C73.9, excluding morphology codes 9590-9989	ICD-9: 193 ICD-10: C73

Appendix B Statistical formulae and special terminology

Most formulae used in this report are described in Appendix 2 of the *All-Ireland cancer statistics report 1994-96*, March 2001. Two exceptions are described below:

Confidence intervals: The confidence intervals in this report are calculated using the gamma distribution as described in these formulae:

$$\text{LowerLimit} = \frac{v}{2y}(\chi^2)^{-1}_{\frac{2y^2}{v}}(\alpha/2)$$

$$\text{UpperLimit} = \frac{v+w_M^2}{2(y+w_M)}(\chi^2)^{-1}_{\frac{2(y+w_M)^2}{v+w_M^2}}(1-\alpha/2)$$

where y is the age-adjusted rate, v is the variance as calculated in the equation,

$$v = \sum_{i=1}^{m} d_i(s_i/P_i)^2$$

wM is the maximum of the weights s_i/P_i, $1-\alpha$ is the confidence level desired (i.e. if 95% confidence intervals are needed, use $\alpha = 0.05$), and $(\chi^2)^{-1}{}_x$ is the inverse of the χ^2 distribution with x degrees of freedom.

Spatial Scan Statistic: The spatial scan statistic is described by Kulldorff (2002) as the following process:

> The purely spatial scan statistic imposes a circular window on the map. The window is in turn centred on each of several possible grid points positioned throughout the study region. For each grid point, the radius of the window varies continuously in size from zero to some upper limit. In this way, the circular window is flexible both in location and size. In total, the method creates an infinite number of distinct geographical circles with different sets of neighbouring data locations within them. Each circle is a possible candidate for a cluster.
>
> For each location and size of the scanning window, the alternative hypothesis is that there is an elevated rate within the window as compared to outside. Under the Poisson assumption, the likelihood function for a specific window is then proportional to:
>
> $(c/n)^c([C-c]/[C-n])^{(C-c)}I()$
>
> where C is the total number of cases over the whole area, c is the number of cases within the window, and n is the covariate adjusted expected number of cases within the window under the null-hypothesis.
>
> I() is an indicator function. When SaTScan is set to scan only for clusters with high rates, I() is equal to 1 when the window has more cases than expected under the null-

hypothesis, and 0 otherwise. The opposite is true when SaTScan is set to scan only for clusters with low rates. When the program scans for clusters with either high or low rates, then I()=1 for all windows.

The likelihood function is maximized over all window locations and sizes, and the one with the maximum likelihood constitutes the most likely cluster. This is the cluster that is least likely to have occurred by chance. The likelihood ratio for this window constitutes the maximum likelihood ratio test statistic. Its distribution under the null-hypothesis is obtained by repeating the same analytic exercise on a large number of random replications of the data set generated under the null hypothesis. The p-value is obtained through Monte Carlo hypothesis testing, by comparing the rank of the maximum likelihood from the real data set with the maximum likelihoods from the random data sets. If this rank is R, then p = R / (1 + #simulation). In order for p to be a 'nice looking' number, the number of simulations is restricted to 999 or some other number ending in 999 such as 1999, 9999 and 29999. That way it is always possible to reject or not reject the null hypothesis for typical cut-off values such as 0.05, 0.01 and 0.001. Additional information and the software is available at: http://www.satscan.org/

Kulldorff M and Information Management Services, Inc (2002). *SaTScan v.3.05: Software for the spatial and space-time scan statistic*
Bethesda, MD USA: National Cancer Institute

Appendix C1 Total incidence and age-adjusted rates for the

county or district council	all sites combined			colorectal			lung & bronchus			lymphoma		
	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci
Antrim	153	341.1	(310.2, 373.3)	19	42.4	(32.0, 54.3)	17	39.5	(29.4, 51.0)	5	10.9	(6.0, 17.1)
Ards	273	329.1	(306.4, 352.6)	33	40.7	(33.0, 49.3)	30	36.6	(29.3, 44.6)	13	16.6	(11.7, 22.3)
Armagh	194	354.1	(325.4, 384.0)	23	39.8	(30.7, 50.0)	27	50.3	(39.8, 62.0)	10	19.1	(12.9, 26.5)
Ballymena	221	332.3	(306.9, 358.7)	35	53.0	(43.2, 63.8)	24	34.9	(27.1, 43.6)	12	18.5	(12.9, 25.2)
Ballymoney	94	332.5	(293.8, 373.4)	18	59.1	(43.9, 76.6)	11	38.5	(26.3, 53.1)	4	14.7	(7.4, 24.5)
Banbridge	149	363.2	(329.8, 398.3)	21	50.8	(38.8, 64.4)	15	37.1	(27.1, 48.7)	8	19.0	(12.0, 27.7)
Belfast	1256	387.9	(375.0, 401.0)	163	47.9	(43.5, 52.5)	238	72.1	(66.7, 77.7)	55	17.8	(15.1, 20.7)
Carlow	154	388.3	(353.3, 424.9)	16	40.5	(29.8, 52.9)	18	44.0	(32.8, 56.9)	6	16.0	(9.6, 24.1)
Carrickfergus	133	333.4	(300.8, 367.5)	12	30.2	(21.1, 40.8)	21	51.5	(39.4, 65.2)	8	18.7	(11.7, 27.3)
Castlereagh	285	337.7	(314.4, 361.7)	41	43.7	(36.0, 52.1)	39	44.0	(36.0, 52.7)	12	15.7	(10.9, 21.4)
Cavan	206	335.5	(308.5, 363.6)	34	55.8	(45.1, 67.6)	23	36.5	(28.0, 46.1)	8	15.4	(9.9, 22.1)
Clare	281	286.3	(266.7, 306.4)	40	39.6	(32.6, 47.3)	32	31.7	(25.5, 38.5)	12	12.8	(9.0, 17.4)
Coleraine	215	345.9	(319.1, 373.7)	32	50.0	(40.3, 60.7)	27	42.2	(33.2, 52.2)	13	21.4	(15.1, 28.8)
Cookstown	99	305.0	(270.3, 341.7)	13	39.2	(27.5, 53.1)	16	46.7	(34.0, 61.4)	3	8.4	(3.6, 15.4)
Cork	1529	363.9	(353.2, 374.6)	238	56.1	(52.0, 60.3)	172	40.0	(36.6, 43.6)	57	13.5	(11.5, 15.6)
Craigavon	288	353.7	(330.1, 378.0)	44	52.7	(44.0, 62.2)	40	48.4	(40.0, 57.5)	16	20.3	(15.0, 26.5)
Derry	352	400.9	(376.9, 425.7)	47	54.6	(45.9, 64.0)	55	62.9	(53.5, 72.9)	13	14.8	(10.5, 19.8)
Donegal	489	344.3	(326.3, 362.9)	71	49.2	(42.6, 56.4)	60	44.8	(38.3, 51.8)	16	11.9	(8.7, 15.6)
Down	237	363.9	(337.0, 391.8)	32	46.5	(37.4, 56.5)	28	43.4	(34.4, 53.3)	11	16.4	(11.1, 22.8)
Dublin	3829	399.7	(392.4, 407.2)	500	52.6	(49.9, 55.3)	552	58.2	(55.4, 61.1)	154	15.6	(14.2, 17.1)
Dungannon	171	360.5	(329.4, 393.0)	25	50.5	(39.5, 62.9)	20	41.1	(31.3, 52.3)	10	21.9	(14.8, 30.5)
Fermanagh	215	334.3	(308.0, 361.7)	30	44.1	(35.1, 54.0)	20	30.3	(22.9, 38.6)	12	19.4	(13.4, 26.6)
Galway	670	345.4	(330.0, 361.1)	105	53.1	(47.2, 59.4)	71	35.7	(30.9, 40.8)	28	15.2	(12.1, 18.7)
Kerry	512	355.7	(337.5, 374.3)	71	49.0	(42.4, 56.0)	53	36.2	(30.6, 42.2)	23	17.1	(13.3, 21.5)
Kildare	379	388.4	(365.5, 411.9)	52	55.5	(47.0, 64.7)	43	47.7	(39.7, 56.4)	18	16.0	(11.8, 20.8)
Kilkenny	241	306.1	(283.7, 329.3)	32	39.5	(31.9, 48.0)	25	31.6	(24.7, 39.2)	9	11.0	(7.1, 15.7)
Laois	165	302.6	(276.0, 330.6)	20	35.6	(27.0, 45.4)	18	32.4	(24.1, 41.9)	8	14.9	(9.5, 21.6)
Larne	124	339.6	(305.1, 375.9)	16	42.7	(31.4, 55.7)	13	33.9	(24.0, 45.5)	6	18.3	(10.9, 27.5)
Leitrim	117	347.5	(309.9, 387.3)	20	53.9	(40.3, 69.5)	11	36.3	(24.6, 50.3)	3	12.5	(5.8, 21.7)
Limavady	98	359.3	(319.0, 401.9)	14	47.8	(34.1, 63.8)	10	39.7	(26.8, 54.9)	4	12.9	(6.4, 21.7)
Limerick	537	340.3	(323.7, 357.4)	75	47.3	(41.2, 53.7)	70	45.2	(39.2, 51.6)	25	16.1	(12.6, 20.0)
Lisburn	352	330.8	(310.9, 351.4)	48	45.3	(38.1, 53.1)	48	45.6	(38.3, 53.4)	16	15.5	(11.4, 20.2)
Longford	133	396.3	(357.0, 437.7)	19	55.0	(41.0, 70.9)	17	50.6	(37.2, 65.9)	3	9.1	(4.0, 16.3)
Louth	332	373.3	(350.1, 397.2)	44	49.6	(41.4, 58.6)	50	55.1	(46.4, 64.5)	12	13.2	(9.1, 18.0)
Magherafelt	126	338.3	(304.3, 374.0)	20	52.3	(39.7, 66.5)	13	36.3	(25.8, 48.6)	3	9.5	(4.5, 16.3)
Mayo	441	333.4	(314.7, 352.7)	72	51.4	(44.4, 58.9)	44	32.7	(27.1, 38.9)	17	12.1	(8.8, 15.8)
Meath	368	378.9	(356.4, 402.0)	56	58.8	(50.2, 68.2)	41	42.2	(34.9, 50.1)	17	17.1	(12.7, 22.2)
Monaghan	179	335.3	(306.8, 365.1)	25	48.5	(37.9, 60.3)	16	29.3	(21.4, 38.4)	7	13.5	(8.4, 19.9)
Moyle	66	358.1	(308.7, 411.2)	10	56.2	(37.7, 78.3)	10	51.5	(34.2, 72.3)	2	13.1	(4.7, 25.8)
Newry & Mourne	301	368.8	(344.7, 393.6)	53	63.4	(53.7, 73.8)	35	42.2	(34.3, 50.7)	15	19.2	(13.9, 25.3)
Newtownabbey	302	340.8	(318.6, 363.7)	49	53.3	(44.9, 62.5)	40	43.6	(36.1, 51.9)	13	16.0	(11.3, 21.5)
North Down	332	345.6	(323.5, 368.5)	49	48.1	(40.2, 56.6)	32	31.2	(25.0, 38.2)	16	16.3	(11.8, 21.6)
Offaly	211	354.8	(327.2, 383.5)	26	41.4	(32.5, 51.4)	22	35.0	(26.9, 44.2)	8	12.9	(8.1, 18.7)
Omagh	161	346.9	(315.9, 379.4)	23	48.3	(37.3, 60.7)	18	39.2	(29.2, 50.7)	6	14.5	(8.6, 21.9)
Roscommon	202	300.0	(275.3, 325.7)	33	47.0	(37.7, 57.2)	23	32.6	(25.0, 41.1)	5	8.6	(4.7, 13.5)
Sligo	226	362.3	(334.6, 391.0)	30	48.0	(38.2, 58.8)	31	47.9	(38.3, 58.5)	8	13.2	(8.3, 19.3)
Strabane	121	331.1	(297.5, 366.5)	18	48.7	(36.6, 62.6)	13	36.5	(25.9, 48.8)	5	13.6	(7.4, 21.6)
Tipperary	488	325.6	(308.8, 342.9)	74	48.5	(42.2, 55.3)	54	35.1	(29.8, 40.9)	22	15.5	(11.9, 19.5)
Waterford	355	371.1	(348.9, 394.0)	49	51.6	(43.5, 60.4)	41	42.8	(35.5, 50.7)	14	15.2	(11.0, 20.1)
Westmeath	246	384.6	(356.9, 413.4)	37	58.0	(47.4, 69.6)	31	45.3	(36.4, 55.3)	10	15.6	(10.5, 21.6)
Wexford	379	361.5	(340.5, 383.1)	48	45.6	(38.3, 53.4)	53	49.6	(42.1, 57.8)	14	14.0	(10.0, 18.6)
Wicklow	366	383.3	(360.7, 406.7)	44	45.9	(38.3, 54.2)	42	45.5	(37.8, 53.9)	18	17.8	(13.3, 23.0)
Rep of Ireland	13037	363.3	(359.7, 367.0)	1831	50.6	(49.3, 52.0)	1612	44.7	(43.4, 45.9)	523	14.6	(13.9, 15.4)
Northern Ireland	6317	354.3	(349.2, 359.5)	889	48.3	(46.4, 50.2)	862	47.6	(45.7, 49.5)	291	16.8	(15.7, 18.0)
All Ireland	19354	360.1	(357.1, 363.1)	2720	49.8	(48.7, 50.9)	2474	45.6	(44.5, 46.7)	814	15.4	(14.7, 16.0)

Rates adjusted to European standard population

major cancer sites by county and district council, 1998-2000 annual average

melanoma of skin			oesophagus			stomach			
cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	county or district council
5	10.9	(6.0, 17.1)	4	10.0	(5.3, 16.1)	5	10.6	(5.8, 16.9)	Antrim
8	9.4	(6.0, 13.7)	9	11.3	(7.4, 16.0)	10	11.5	(7.7, 16.2)	Ards
7	13.8	(8.5, 20.4)	6	10.9	(6.4, 16.6)	8	13.7	(8.7, 19.8)	Armagh
3	4.5	(1.9, 8.2)	6	7.9	(4.5, 12.1)	8	12.0	(7.7, 17.3)	Ballymena
2	6.4	(2.0, 13.2)	1	—	—	2	7.17	(2.7, 13.7)	Ballymoney
6	14.2	(8.3, 21.5)	5	10.6	(5.7, 17.1)	6	13.1	(7.6, 20.0)	Banbridge
31	9.9	(7.9, 12.1)	28	7.9	(6.2, 9.8)	55	16.2	(13.6, 18.9)	Belfast
3	7.5	(3.4, 13.2)	4	10.1	(5.2, 16.6)	8	19.6	(12.3, 28.5)	Carlow
2	6.9	(2.7, 12.8)	7	17.3	(10.4, 25.8)	5	13.2	(7.3, 20.7)	Carrickfergus
9	11.6	(7.4, 16.6)	8	9.5	(6.0, 13.8)	13	14.8	(10.3, 20.0)	Castlereagh
7	13.2	(8.0, 19.6)	4	5.5	(2.7, 9.3)	8	11.1	(7.0, 16.2)	Cavan
6	6.7	(4.0, 10.1)	6	6.0	(3.5, 9.1)	7	7.6	(4.7, 11.3)	Clare
6	10.1	(5.8, 15.6)	5	7.7	(4.3, 12.1)	8	13.0	(8.3, 18.9)	Coleraine
2	7.5	(3.0, 14.2)	1	—	—	2	7.18	(2.8, 13.6)	Cookstown
55	13.3	(11.3, 15.4)	39	8.9	(7.3, 10.6)	41	9.4	(7.8, 11.2)	Cork
9	11.0	(7.1, 15.6)	7	9.2	(5.8, 13.5)	12	14.5	(10.1, 19.8)	Craigavon
7	7.8	(4.8, 11.5)	5	5.4	(2.9, 8.6)	14	15.1	(10.8, 20.1)	Derry
12	8.5	(5.9, 11.6)	10	7.1	(4.7, 9.9)	19	13.5	(10.1, 17.4)	Donegal
5	8.1	(4.6, 12.6)	7	11.1	(6.8, 16.4)	6	9.5	(5.7, 14.4)	Down
122	12.2	(11, 13.5)	81	8.4	(7.3, 9.5)	159	16.6	(15.1, 18.1)	Dublin
8	17.2	(10.9, 24.8)	2	4.3	(1.5, 8.4)	5	9.4	(5.1, 15.1)	Dungannon
4	7.6	(3.9, 12.3)	3	5.0	(2.3, 8.7)	12	17.5	(12.1, 23.9)	Fermanagh
22	11.6	(8.9, 14.7)	14	6.8	(4.8, 9.1)	26	12.9	(10.1, 16.0)	Galway
13	9.3	(6.5, 12.6)	13	8.7	(6.1, 11.8)	17	11.6	(8.5, 15.1)	Kerry
11	9.8	(6.6, 13.5)	9	10.4	(6.9, 14.7)	12	13.6	(9.4, 18.5)	Kildare
7	9.7	(6.0, 14.3)	8	10.4	(6.6, 15)	9	11.1	(7.2, 15.9)	Kilkenny
4	7.7	(4.0, 12.5)	3	6.0	(2.8, 10.5)	2	4.44	(1.8, 8.3)	Laois
6	18.9	(11.3, 28.5)	3	8.7	(3.9, 15.4)	4	9.8	(5.0, 16.3)	Larne
4	11.0	(5.2, 19.0)	3	8.5	(3.7, 15.4)	4	12.7	(6.5, 20.9)	Leitrim
1	—	—	3	11.7	(5.3, 20.6)	4	13.2	(6.5, 22.1)	Limavady
15	9.5	(6.9, 12.6)	11	6.5	(4.4, 9.0)	16	9.5	(7.0, 12.4)	Limerick
14	13.5	(9.8, 17.9)	10	9.4	(6.3, 13.2)	12	10.9	(7.6, 14.9)	Lisburn
4	13.3	(6.7, 22.1)	3	8.4	(3.6, 15.2)	6	15.9	(9.2, 24.5)	Longford
10	11.7	(7.9, 16.2)	8	9.4	(6.0, 13.5)	16	17.7	(13.0, 23.2)	Louth
2	5.5	(1.9, 10.9)	3	8.1	(3.6, 14.2)	5	12.8	(6.8, 20.5)	Magherafelt
12	9.4	(6.4, 13.0)	9	6.5	(4.1, 9.4)	14	9.4	(6.6, 12.6)	Mayo
14	13.7	(9.7, 18.2)	8	7.7	(4.9, 11.1)	13	13.6	(9.7, 18.3)	Meath
4	8.3	(4.3, 13.5)	5	8.0	(4.3, 13.0)	7	12.2	(7.4, 18.1)	Monaghan
2	12.3	(4.7, 23.4)	1	—	—	2	13	(5.1, 24.4)	Moyle
7	8.2	(5.0, 12.3)	3	3.9	(1.8, 6.7)	21	25.1	(19.2, 31.7)	Newry & Mourne
9	10.6	(6.9, 15.0)	8	9.0	(5.7, 12.9)	12	12.9	(8.9, 17.6)	Newtownabbey
12	13.9	(9.6, 19.0)	6	6.0	(3.4, 9.3)	13	13.0	(9.1, 17.5)	North Down
6	11.4	(6.8, 17.1)	7	11.9	(7.3, 17.7)	8	12.6	(8.0, 18.3)	Offaly
3	5.9	(2.5, 10.7)	4	9.2	(4.8, 15.0)	7	14.7	(9.0, 21.8)	Omagh
5	8.7	(4.8, 13.6)	5	7.6	(4.2, 12.1)	7	10.1	(6.0, 15.2)	Roscommon
6	11.1	(6.6, 16.7)	1	—	—	7	8.7	(5.2, 13.1)	Sligo
3	9.1	(4.3, 15.6)	2	5.7	(2.1, 11.2)	6	14.5	(8.4, 22.3)	Strabane
14	9.8	(7.0, 13.0)	11	7.4	(5.0, 10.2)	17	11.1	(8.2, 14.4)	Tipperary
17	18.2	(13.5, 23.6)	11	10.2	(6.9, 14.0)	12	12.4	(8.7, 16.8)	Waterford
6	9.9	(5.9, 14.9)	5	7.7	(4.3, 12.0)	12	18.8	(13.0, 25.7)	Westmeath
10	9.6	(6.5, 13.4)	8	7.2	(4.5, 10.5)	12	10.6	(7.4, 14.5)	Wexford
13	13.1	(9.3, 17.6)	11	11.6	(7.9, 16.0)	12	11.9	(8.2, 16.2)	Wicklow
404	11.3	(10.7, 12.0)	296	8.1	(7.5, 8.6)	470	12.8	(12.2, 13.5)	Rep of Ireland
174	10.1	(9.2, 11.0)	148	8.2	(7.4, 9.0)	256	13.8	(12.8, 14.8)	Northern Ireland
578	10.9	(10.4, 11.4)	445	8.1	(7.7, 8.6)	725	13.2	(12.6, 13.7)	All Ireland

Rates adjusted to European standard population

Appendix C2 Female incidence and age-adjusted rates for the

county or district council	àll sites combined			breast			colorectal			lung & bronchus			lymphoma		
	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci
Antrim	80	331.7	(290.2, 375.9)	21	91.2	(69.8, 115.3)	10	39.5	(26.3, 55.4)	7	27.7	(16.7, 41.5)	4	13.8	(6.7, 23.5)
Ards	147	328.0	(296.8, 360.7)	49	114.7	(96.2, 134.7)	16	35.7	(25.9, 47.0)	13	28.2	(19.8, 38.0)	5	13.0	(7.3, 20.4)
Armagh	101	341.1	(302.3, 382.2)	28	104.4	(82.7, 128.6)	11	34.2	(23.3, 47.3)	10	33.5	(22.3, 46.9)	5	16.8	(9.3, 26.6)
Ballymena	122	346.7	(310.7, 384.7)	33	104.5	(84.6, 126.4)	19	50.5	(37.7, 65.2)	8	24.0	(15.3, 34.7)	8	22.4	(14, 32.7)
Ballymoney	46	304.4	(253.3, 360.1)	14	101.5	(72.6, 135.1)	7	40.8	(23.9, 62.0)	1	—	—	2	11.4	(3.5, 23.9)
Banbridge	78	359.8	(313.9, 408.9)	24	120.7	(93.9, 150.9)	11	48.6	(33.1, 67.1)	5	23.3	(13.1, 36.3)	3	11.8	(5, 21.4)
Belfast	659	362.4	(345.2, 379.9)	162	101.7	(92.3, 111.6)	80	38.7	(33.5, 44.3)	104	55.2	(48.8, 62.0)	26	14.3	(11.1, 18)
Carlow	78	381.2	(332.9, 432.8)	22	112.3	(86.3, 141.6)	6	25.4	(14.6, 39.2)	6	26.7	(15.5, 40.9)	3	15.2	(6.8, 26.8)
Carrickfergus	73	332.1	(288.0, 379.3)	22	111.8	(85.8, 141.2)	6	26.4	(15.6, 40.0)	8	35.2	(22.2, 51.0)	5	20.2	(10.7, 32.6)
Castlereagh	147	325.4	(293.8, 358.6)	40	98.8	(81.0, 118.2)	18	33.2	(24.4, 43.3)	14	25.2	(17.6, 34.0)	9	20.9	(13.4, 30.1)
Cavan	87	283.8	(248.1, 321.8)	24	90.1	(69.5, 113.3)	15	46.8	(33.3, 62.6)	7	20.9	(12.6, 31.3)	4	16.3	(8.6, 26.5)
Clare	131	263.5	(236.9, 291.4)	36	77.3	(62.9, 93.2)	12	23.7	(16.3, 32.5)	8	15.7	(10.0, 22.8)	5	9.0	(4.8, 14.5)
Coleraine	120	355.1	(317.8, 394.4)	30	98.2	(78.5, 120.2)	17	44.6	(32.5, 58.5)	12	33.7	(23.2, 46.2)	7	22.1	(13.5, 32.6)
Cookstown	50	295.5	(248.2, 346.8)	13	85.8	(60.6, 115.3)	6	36.9	(21.5, 56.3)	4	23.7	(12.2, 39.1)	2	11.7	(4.1, 23.3)
Cork	746	333.8	(319.6, 348.2)	215	103.5	(95.5, 111.8)	107	44.6	(39.6, 49.8)	62	26.7	(22.9, 30.8)	24	11.0	(8.6, 13.7)
Craigavon	154	347.7	(315.6, 381.3)	45	110.3	(92.1, 130.2)	20	41.5	(31.3, 53.0)	16	35.9	(26.2, 47.0)	8	18.6	(11.9, 26.8)
Derry	185	385.7	(353.6, 419.1)	57	120.4	(102.8, 139.4)	20	41.0	(31.1, 52.3)	21	43.6	(33.3, 55.2)	6	12.5	(7.3, 19.1)
Donegal	219	304.5	(280.3, 329.6)	56	86.7	(73.5, 100.9)	31	39.2	(31.1, 48.2)	23	32.7	(25.1, 41.4)	7	9.4	(5.8, 14)
Down	123	354.3	(317.5, 393.0)	36	113.7	(92.5, 137.0)	15	38.0	(27.2, 50.7)	11	31.3	(21.3, 43.1)	7	20.3	(12.2, 30.3)
Dublin	1969	360.7	(351.3, 370.1)	577	112.8	(107.4, (118.2)	225	40.0	(37.0, 43.2)	230	41.2	(38.1, 44.4)	75	13.3	(11.6, 15.2)
Dungannon	91	364.3	320.8, 410.5)	24	105.5	(82.0, 131.9)	13	49.2	(34.6, 66.3)	5	18.2	(10.2, 28.4)	4	17.6	(9.2, 28.8)
Fermanagh	105	323.2	(286.4, 362.2	34	120.7	(97.7, 146.1)	13	35.1	(24.4, 47.8)	6	16.7	(9.5, 25.9)	5	15.1	(8.1, 24.1)
Galway	300	304.6	(284.1, 325.8)	87	97.2	(85.4, 109.8)	39	36.1	(29.5, 43.3)	19	17.3	(12.9, 22.3)	10	10.7	(7.2, 15)
Kerry	232	321.8	(297.1, 347.4)	69	106.9	(92.4, 122.5)	30	38.4	(30.4, 47.2)	18	22.8	(16.8, 29.8)	9	14.0	(9.1, 19.9)
Kildare	193	372.0	(341.3, 404.1)	60	115.5	(98.6, 133.6)	24	45.5	(35.3, 56.9)	14	31.3	(22.4, 41.6)	10	17.5	(11.5, 24.7)
Kilkenny	116	289.6	(259.0, 322.0)	33	87.3	(70.5, 106.0)	15	34.9	(25.0, 46.3)	8	19.1	(12.0, 27.9)	5	11.2	(6.2, 17.7)
Laois	83	307.3	(269.1, 347.9)	24	93.7	(72.8, 117.2)	11	37.4	(25.2, 52.0)	6	22.8	(13.3, 34.9)	5	17.3	(9.3, 27.8)
Larne	68	344.6	(296.9, 395.8)	17	92.9	(68.4, 121.0)	10	44.5	(29.3, 62.7)	4	20.2	(10.3, 33.4)	4	18.0	(8.7, 30.5)
Leitrim	58	359.7	(303.5, 420.5)	14	99.5	(70.2, 133.7)	10	51.4	(32.6, 74.3)	2	13.6	(4.9, 26.6)	2	13.2	(4.0, 28.0)
Limavady	54	387.7	(329.3, 450.8)	15	114.1	(83.1, 149.9)	8	50.3	(31.5, 73.6)	2	18.3	(7.2, 34.4)	2	16.4	(6.4, 30.9)
Limerick	259	308.9	286.9, 331.7)	72	92.0	(79.9, 105.0)	27	32.0	(25.2, 39.6)	25	30.4	(23.8, 37.9)	13	15.5	(10.9, 20.9)
Lisburn	193	330.7	(303.6, 359.0)	47	86.5	(72.5, 101.6)	27	44.9	(35.3, 55.6)	21	35.2	(26.8, 44.7)	8	14.0	(8.9, 20.2)
Longford	59	364.4	(309.9, 423.1)	15	106.3	(76.5, 140.9)	9	50.4	(32.2, 72.6)	6	35.2	(20.0, 54.5)	1	—	—
Louth	166	336.7	(306.8, 368.0)	44	97.3	(81.1, 115.0)	19	35.4	(26.5, 45.6)	17	31.7	(23.3, 41.3)	5	11.0	(6.1, 17.3)
Magherafelt	68	345.1	(297.8, 395.9)	19	103.9	(78.0, 133.3)	11	49.5	(33.3, 68.9)	3	18.0	(8.4, 31.2)	1	—	—
Mayo	200	310.4	284.3, 337.7)	55	97.5	(82.6, 113.6)	27	36.5	(28.4, 45.7)	14	18.9	(13.1, 25.7)	7	9.1	(5.3, 13.9)
Meath	170	333.0	(303.9, 363.4)	50	104.5	(88.1, 122.3)	22	42.2	(32.4, 53.2)	17	31.5	(23.1, 41.2)	7	13.6	(8.2, 20.4)
Monaghan	81	310.2	(271.0, 352.0)	19	79.5	(60.0, 101.8)	11	39.6	(26.5, 55.1)	4	14.1	(7.3, 23.1)	4	14.8	(7.4, 24.8)
Moyle	32	325.0	(260.5, 396.5)	8	81.8	(51.0, 119.9)	5	52.9	(29.4, 83.2)	5	49.3	(26.8, 78.4)	1	—	—
Newry & Mourne	158	357.3	(324.9, 391.4)	44	105.6	(87.9, 124.9)	23	46.9	(36.1, 59.1)	15	32.6	(23.4, 43.1)	7	17.7	(10.9, 26.2)
Newtownabbey	150	307.8	279.0, 338.1)	43	100.4	(83.5, 118.8)	21	39.7	(30.1, 50.6)	17	30.6	(22.4, 40.1)	6	15.4	(9.2, 23.1)
North Down	187	359.0	(327.7, 391.8)	56	119.0	(100.8, (138.7)	26	45.9	(35.5, 57.5)	15	27.2	(19.3, 36.4)	8	11.5	(6.9, 17.4)
Offaly	104	345.9	(307.5, 386.6)	31	110.6	(88.8, 134.7)	11	30.6	(20.7, 42.5)	8	26.9	(17.0, 39.0)	3	9.5	(4.3, 16.8)
Omagh	74	298.7	(258.9, 341.2)	24	104.6	(81.0, 131.2)	11	38.9	(26.3, 53.9)	6	25.1	(14.4, 38.7)	4	15.2	(7.3, 25.9)
Roscommon	93	275.8	(241.9, 312.0)	24	80.0	(61.4, 101.0)	15	39.5	(28.0, 53.0)	8	19.6	(12.2, 28.6)	2	7.3	(2.5, 14.7)
Sligo	104	329.7	292.2, 369.5)	28	101.4	(80.3, 124.8)	15	42.1	(29.8, 56.5)	12	36.4	(25.0, 50.0)	4	15.2	(7.9, 24.9)
Strabane	60	307.9	(263.5, 355.7)	18	99.0	(73.9, 127.8)	9	41.9	(27.5, 59.5)	5	23.7	(12.8, 38.0)	2	11.5	(4.2, 22.6)
Tipperary	233	320.2	(296.2, 345.1)	61	88.6	(75.9, 102.2)	36	47.6	(38.8, 57.4)	18	24.5	(18.1, 31.7)	10	14.9	(10, 20.8)
Waterford	173	345.5	(315.6, 376.8)	40	87.3	(72.1, 103.8)	21	40.6	(31.0, 51.5)	14	26.6	(19.0, 35.5)	7	13.9	(8.4, 20.8)
Westmeath	109	328.9	(293.0, 366.7)	29	93.0	(73.9, 114.1)	17	49.8	(36.4, 65.3)	9	22.7	(14.5, 32.6)	4	10.9	(5.3, 18.5)
Wexford	178	328.1	300.2, 357.3)	51	99.5	(84.1, 116.3)	21	36.6	(27.8, 46.6)	22	37.8	(29.0, 47.9)	7	13.6	(8.3, 20.1)
Wicklow	182	352.2	(322.4, 383.2)	53	109.0	(92.4, 127.0)	23	43.5	(33.6, 54.7)	16	31.2	(22.7, 41.0)	6	11.5	(6.8, 17.3)
Rep of Ireland	6321	333.2	328.3, 338.1)	1789	101.8	(99.0, 104.6)	797	39.7	(38.1, 41.4)	593	30.1	(28.6, 31.5)	239	12.6	(11.7, 13.6)
Northern Ireland	3326	344.1	(337.0, 351.2)	926	104.8	(100.8, 108.8)	434	41.0	(38.6, 43.3)	340	33.7	(31.5, 35.8)	149	15.6	(14.1, 17.1)
All Ireland	9647	336.7	(332.7, 340.7)	2715	102.7	(100.5, 105.0)	1232	40.1	(38.8, 41.5)	933	31.2	(30.0, 32.4)	388	13.6	(12.8, 14.4)

Rates adjusted to European standard population

major cancer sites by county and district council, 1998-2000 annual average

melanoma of skin			oesophagus			stomach			
cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	county or district council
4	15.4	(7.5, 26.0)	1	—	–	1	—	—	Antrim
6	13.3	(7.8, 20.3)	3	5.2	(2.1, 9.8)	3	5.3	(2.2, 9.8)	Ards
4	15.5	(7.9, 25.7)	3	9.5	(4.1, 17.1)	2	5.7	(1.9, 11.6)	Armagh
2	4.7	(1.4, 9.9)	2	3.7	(1.3, 7.3)	3	5.1	(2.1, 9.4)	Ballymena
1	—	–	1	—	–	1	—	–	Ballymoney
4	16.7	(8.4, 27.8)	1	—	–	3	10.2	(4.4, 18.4)	Banbridge
19	10.2	(7.5, 13.2)	13	5.3	(3.7, 7.3)	22	10.7	(8.1, 13.8)	Belfast
3	13.2	(5.6, 24.1)	3	11.8	(5.0, 21.6)	4	23.2	(12.1, 37.8)	Carlow
2	9.4	(3.0, 19.4)	3	12.3	(5.4, 22.0)	1	—	–	Carrickfergus
5	13.7	(7.4, 22.0)	3	6.7	(3.0, 11.7)	5	8.3	(4.4, 13.5)	Castlereagh
3	8.9	(3.7, 16.4)	1	—	–	3	8.4	(3.7, 15.1)	Cavan
4	9.3	(4.8, 15.2)	3	4.9	(2.1, 8.8)	3	6.3	(2.8, 11.1)	Clare
4	12.2	(5.9, 20.7)	2	3.8	(1.5, 7.1)	4	11.2	(5.5, 19.0)	Coleraine
1	—	–	1	—	–	1	—	–	Cookstown
34	15.7	(12.7, 19.0)	17	6.6	(4.8, 8.6)	14	5.2	(3.7, 7.1)	Cork
6	15.0	(8.8, 22.8)	2	5.1	(2.0, 9.5)	3	7.1	(3.3, 12.4)	Craigavon
5	9.4	(5.1, 15.1)	2	3.3	(1.0, 7.0)	7	12.4	(7.5, 18.6)	Derry
7	9.7	(5.8, 14.6)	4	4.9	(2.4, 8.3)	8	10.7	(6.7, 15.6)	Donegal
3	7.9	(3.4, 14.2)	1	—	–	3	7.1	(2.9, 13.1)	Down
77	13.9	(12.2, 15.8)	34	5.6	(4.5, 6.8)	64	10.9	(9.4, 12.5)	Dublin
6	23.1	(13.3, 35.5)	2	6.3	(1.9, 13.4)	2	5.0	(1.5, 10.5)	Dungannon
2	8.0	(2.9, 15.7)	1	—	–	4	11.9	(6.1, 19.7)	Fermanagh
13	13.2	(9.2, 17.8)	7	6.0	(3.5, 9.1)	10	9.2	(6.1, 13.0)	Galway
6	10.1	(6.0, 15.2)	5	6.9	(3.8, 10.8)	5	6.2	(3.3, 10.1)	Kerry
5	8.5	(4.8, 13.2)	3	6.9	(3.2, 11.9)	4	8.5	(4.3, 14.2)	Kildare
5	12.2	(6.6, 19.5)	3	7.3	(3.3, 13.0)	3	8.1	(3.7, 14.1)	Kilkenny
3	8.5	(3.5, 15.7)	1	—	–	1	—	–	Laois
3	15.3	(6.4, 28.0)	2	8.5	(2.6, 18.1)	2	7.4	(2.3, 15.5)	Larne
2	15.7	(5.8, 30.5)	0	—	–	1	—	–	Leitrim
1	—	–	2	13.7	(4.4, 28.1)	1	—	–	Limavady
9	10.4	(6.7, 14.9)	5	4.6	(2.4, 7.3)	6	5.0	(2.9, 7.8)	Limerick
8	14.7	(9.4, 21.2)	4	7.7	(4.0, 12.6)	5	7.0	(3.7, 11.3)	Lisburn
2	14.6	(5.7, 27.6)	1	—	–	2	8.6	(3.1, 16.8)	Longford
8	15.8	(9.9, 23.1)	3	4.7	(1.9, 8.7)	6	10.4	(6.0, 16.0)	Louth
1	—	–	1	—	–	3	13.5	(5.5, 25.1)	Magherafelt
7	11.0	(6.6, 16.5)	2	2.8	(0.9, 5.9)	5	4.6	(2.5, 7.4)	Mayo
8	15.8	(10.1, 22.8)	2	3.4	(1.2, 6.8)	2	4.7	(1.8, 8.9)	Meath
2	9.1	(3.5, 17.3)	3	6.8	(2.7, 12.7)	2	9.3	(3.6, 17.8)	Monaghan
2	20.4	(7.0, 40.9)	0	—	–	1	—	–	Moyle
4	9.9	(5.1, 16.1)	1	—	–	7	14.9	(9.2, 22.0)	Newry & Mourne
5	11.1	(6.1, 17.5)	3	5.5	(2.4, 9.8)	4	6.4	(3.3, 10.5)	Newtownabbey
8	17.7	(11.0, 26)	2	3.0	(1.0, 5.9)	7	9.6	(5.5, 14.8)	North Down
4	14.7	(7.5, 24.2)	4	11.0	(5.3, 18.7)	4	12.2	(6.2, 20.3)	Offaly
2	6.5	(2.0, 13.6)	2	6.0	(1.8, 12.6)	3	12.6	(5.9, 21.9)	Omagh
4	12.0	(5.7, 20.7)	2	3.7	(1.3, 7.1)	3	9.2	(3.8, 16.8)	Roscommon
2	7.6	(2.9, 14.6)	1	—	–	3	6.8	(2.7, 12.7)	Sligo
2	12.1	(4.8, 22.7)	1	—	–	2	8.0	(2.9, 15.8)	Strabane
10	14.5	(9.7, 20.2)	4	5.8	(3.0, 9.4)	6	7.8	(4.6, 11.9)	Tipperary
12	24.8	(17.1, 33.9)	5	8.5	(4.7, 13.6)	5	9.4	(5.1, 15.0)	Waterford
5	14.9	(8.2, 23.6)	2	4.1	(1.3, 8.5)	5	14.7	(7.9, 23.7)	Westmeath
6	10.9	(6.4, 16.7)	2	2.4	(0.7, 5.1)	6	9.4	(5.3, 14.5)	Wexford
7	14.2	(8.8, 21.0)	4	6.9	(3.5, 11.5)	7	11.7	(7.0, 17.5)	Wicklow
249	13.3	(12.3, 14.3)	120	5.6	(5.0, 6.2)	183	8.7	(8.0, 9.5)	Rep of Ireland
108	11.7	(10.4, 13.1)	60	5.3	(4.6, 6.2)	98	8.7	(7.7, 9.8)	Northern Ireland
357	12.7	(12, 13.5)	180	5.5	(5.0, 6.0)	281	8.7	(8.1, 9.4)	All Ireland

Rates adjusted to European standard population

Appendix C3 Male incidence and age-adjusted rates for the

county or district council	all sites combined			colorectal			lung & bronchus			lymphoma		
	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci
(Antrim	(72))	358.3	(311.8, 407.9)	9	46.4	(30.4, 65.6)	11	53.2	(36.4, 73.2)	1	—	—
(Ards	(125))	344.3	(310.0, 380.3)	18	48.8	(36.4, 62.9)	17	47.0	(35.0, 60.8)	8	20.8	(13.1, 30.2)
(Armagh	(94))	383.5	(339.6, 430.0)	11	46.5	(32.1, 63.6)	17	70.5	(52.4, 91.2)	5	21.7	(12.3, 33.6)
(Ballymena	(99)	332.1	(295.1, 371.4)	17	56.4	(41.8, 73.2)	16	51.6	(37.8, 67.5)	4	14.0	(7.2, 23.0)
Ballymoney	49)	377.1	(317.6, 441.6)	11	83.3	(57.0, 114.5)	10	77.3	(51.5, 108.3)	2	18.2	(7.2, 34.2)
Banbridge	71)	376.9	(327.6, 429.7)	10	52.1	(34.7, 72.9)	10	54.0	(36.3, 75.1)	5	26.8	(14.9, 42.1)
Belfast	597)	440.1	(419.6, 461.1)	83	61.6	(54.1, 69.7)	134	97.8	(88.3, 107.8)	29	22.2	(17.7, 27.1)
Carlow	76)	408.4	(356.4, 463.9)	10	59.3	(39.8, 82.6)	12	63.8	(44.1, 87.0)	3	18.1	(8.4, 31.3)
Carrickfergus	60)	349.6	(299.6, 403.4)	6	33.8	(20.0, 51.2)	13	73.4	(52.0, 98.5)	3	16.3	(7.4, 28.7)
Castlereagh	138)	370.0	(334.3, 407.5)	23	58.4	(45.1, 73.5)	25	68.6	(53.6, 85.5)	3	9.8	(4.6, 16.9)
Cavan	119)	394.0	(353.3, 436.9)	19	64.6	(48.7, 82.7)	15	51.7	(37.6, 68.1)	4	14.6	(7.5, 24.0)
Clare	150)	315.0	(286.2, 345.2)	28	57.1	(45.3, 70.2)	24	49.3	(38.4, 61.6)	8	16.4	(10.4, 23.9)
Coleraine	95)	350.3	(310.4, 392.5)	16	58.3	(42.7, 76.3)	15	54.0	(39.1, 71.3)	6	21.1	(12.2, 32.4)
Cookstown	49)	329.9	(278.0, 386.2)	6	43.8	(26.2, 65.8)	11	75.5	(52.1, 103.2)	1	—	—
Cork	783	412.7	(396.0, 429.7)	131	69.9	(63.1, 77.0)	109	56.6	(50.6, 62.9)	32	16.5	(13.3, 20.0)
Craigavon	134	371.9	(336.1, 409.4)	24	67.8	(52.9, 84.6)	24	65.9	(51.3, 82.2)	8	22.6	(14.4, 32.6)
Derry	166	441.7	(403.1, 482.1)	27	73.7	(58.3, 90.7)	34	91.0	(73.9, 109.8)	7	17.9	(11.1, 26.2)
Donegal	270	392.3	(365.1, 420.4)	41	59.8	(49.4, 71.1)	37	57.0	(46.8, 68.3)	9	13.9	(9.1, 19.7)
Down	114	396.2	(355.0, 439.7)	17	58.6	(43.5, 75.9)	17	61.0	(45.4, 78.8)	4	12.4	(6.1, 20.9)
Dublin	1860	472.2	(459.8, 484.8)	274	70.4	(65.6, 75.3)	323	83.4	(78.2, 88.7)	79	18.4	(16.1, 20.9)
Dungannon	80	371.3	(325.3, 420.2)	11	53.2	(36.7, 72.6)	15	69.3	(50.4, 91.1)	6	28.0	(16.5, 42.5)
Fermanagh	110	362.7	(323.9, 403.7)	17	55.8	(41.3, 72.4)	14	47.0	(33.8, 62.3)	7	23.6	(14.3, 35.2)
Galway	370	395.9	(372.6, 419.9)	66	71.1	(61.4, 81.5)	51	55.4	(46.9, 64.7)	18	19.7	(14.8, 25.4)
Kerry	280	402.1	(374.8, 430.3)	41	60.5	(50.1, 71.9)	35	50.9	(41.4, 61.2)	14	20.5	(14.7, 27.3)
Kildare	186	424.8	(389.2, 461.9)	28	65.9	(52.5, 80.8)	28	69.3	(55.1, 85.1)	8	15.1	(9.4, 22.3)
Kilkenny	125	334.9	(301.3, 370.2)	17	45.2	(33.5, 58.6)	17	44.8	(33.3, 57.9)	4	10.1	(5.0, 17.0)
Laois	82	303.3	(266.0, 343.1)	9	33.2	(22.0, 46.8)	12	43.6	(30.3, 59.3)	3	12.6	(5.9, 21.7)
Larne	56	353.5	(300.8, 410.4)	6	40.1	(23.9, 60.4)	9	56.3	(36.6, 80.2)	3	17.0	(7.3, 30.6)
Leitrim	59	343.3	(292.7, 397.7)	10	57.3	(38.3, 79.9)	9	57.3	(37.1, 81.9)	2	11.7	(3.6, 24.4)
Limavady	44	343.0	(286.7, 404.3)	6	45.8	(27.0, 69.3)	8	65.7	(42.0, 94.6)	1	—	—
Limerick	278	388.8	(362.6, 415.9)	48	66.8	(56.3, 78.3)	45	63.2	(52.9, 74.4)	12	16.4	(11.5, 22.1)
Lisburn	158	344.8	(314.3, 376.7)	21	45.9	(35.3, 58.0)	27	59.5	(47.2, 73.3)	8	16.5	(10.6, 23.8)
Longford	74	444.5	(386.5, 506.4)	10	61.7	(40.9, 86.8)	11	68.1	(46.5, 93.8)	2	11.0	(3.8, 21.8)
Louth	166	434.4	(396.4, 474.0)	25	68.2	(53.3, 84.8)	33	85.8	(69.5, 103.7)	6	15.9	(9.4, 24.2)
Magherafelt	58	338.1	(289.2, 390.8)	10	54.6	(36.4, 76.4)	10	58.3	(39.3, 81.1)	2	12.7	(4.6, 24.8)
Mayo	241	366.4	(339.3, 394.5)	45	67.2	(55.9, 79.6)	31	47.3	(37.9, 57.7)	10	15.1	(10.0, 21.1)
Meath	198	441.5	(406.2, 478.3)	34	76.6	(62.3, 92.3)	25	56.1	(43.9, 69.7)	10	20.8	(14.0, 28.8)
Monaghan	98	378.2	(335.3, 423.5)	15	58.4	(42.1, 77.2)	12	46.7	(32.2, 63.8)	3	13.4	(6.4, 23.0)
Moyle	34	406.1	(330.0, 490.0)	5	61.0	(33.7, 96.3)	5	55.3	(30.1, 87.9)	1	—	—
Newry & Mourne	143	397.5	(360.2, 436.7)	29	84.5	(67.5, 103.3)	20	53.9	(41.0, 68.5)	8	20.6	(13.0, 29.9)
Newtownabbey	152	400.1	(363.6, 438.2)	28	74.0	(58.6, 91.1)	24	59.9	(46.7, 74.7)	6	16.6	(10.0, 25.0)
North Down	145	346.9	(314.5, 380.8)	23	52.5	(40.6, 65.9)	17	38.7	(28.6, 50.3)	8	20.8	(13.2, 30.0)
Offaly	107	371.1	(331.2, 413.2)	15	51.9	(37.7, 68.3)	14	45.2	(32.3, 60.3)	5	16.3	(8.9, 25.9)
Omagh	87	413.6	(364.4, 466.0)	23	48.3	(37.3, 60.7)	18	39.2	(29.2, 50.7)	6	14.5	(8.6, 21.9)
Roscommon	109	328.4	(292.6, 366.2)	33	47.0	(37.7, 57.2)	23	32.6	(25.0, 41.1)	5	8.6	(4.7, 13.5)
Sligo	123	407.9	(366.6, 451.5)	30	48.0	(38.2, 58.8)	31	47.9	(38.3, 58.5)	8	13.2	(8.3, 19.3)
Strabane	60	362.9	(311.6, 418.0)	18	48.7	(36.6, 62.6)	13	36.5	(25.9, 48.8)	5	13.6	(7.4, 21.6)
Tipperary	256	332.8	(309.3, 357.2)	74	48.5	(42.2, 55.3)	54	35.1	(29.8, 40.9)	22	15.5	(11.9, 19.5)
Waterford	183	415.5	(381.2, 451.3)	49	51.6	(43.5, 60.4)	41	42.8	(35.5, 50.7)	14	15.2	(11.0, 20.1)
Westmeath	137	459.8	(415.9, 505.8)	37	58.0	(47.4, 69.6)	31	45.3	(36.4, 55.3)	10	15.6	(10.5, 21.6)
Wexford	200	411.9	(379.5, 445.7)	48	45.6	(38.3, 53.4)	53	49.6	(42.1, 57.8)	14	14.0	(10.0, 18.6)
Wicklow	184	436.1	(400.2, 473.6)	44	45.9	(38.3, 54.2)	42	45.5	(37.8, 53.9)	18	17.8	(13.3, 23.0)
Rep of Ireland	6716	409.4	(403.8, 415.2)	1831	50.6	(49.3, 52.0)	1612	44.7	(43.4, 45.9)	523	14.6	(13.9, 15.4)
Northern Ireland	2991	382.4	(374.4, 390.4)	889	48.3	(46.4, 50.2)	862	47.6	(45.7, 49.5)	291	16.8	(15.7, 18.0)
All Ireland	9707	400.6	(396.0, 405.2)	2720	49.8	(48.7, 50.9)	2474	45.6	(44.5, 46.7)	814	15.4	(14.7, 16.0)

Rates adjusted to European standard population

major cancer sites by county and district council, 1998-2000 annual average

melanoma of skin			oesophagus			prostate			Stomach			
cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	county or district council
1	—	—	3	15.6	(7.1, 27.3)	12	63.3	(44.4, 85.4)	4	18.2	(9.1, 30.5)	Antrim
2	4.4	(1.4, 9.1)	7	19.0	(11.6, 28.3)	18	50.4	(37.8, 64.8)	7	19.1	(11.8, 28.2)	Ards
3	12.1	(5.5, 21.1)	3	12.4	(5.6, 21.7)	14	55.1	(39.4, 73.4)	6	24.8	(14.7, 37.7)	Armagh
1	—	—	4	12.3	(6.1, 20.6)	16	52.4	(38.5, 68.3)	6	19.4	(11.2, 29.7)	Ballymena
0	—	—	1	—	—	7	47.7	(28.9, 71.0)	1	—	—	Ballymoney
2	10.4	(3.8, 20.3)	3	18.2	(8.6, 31.4)	15	79.4	(57.7, 104.4)	3	17.1	(7.8, 30.2)	Banbridge
12	9.3	(6.5, 12.6)	15	10.9	(7.8, 14.4)	71	50.3	(43.7, 57.4)	32	23.8	(19.2, 28.8)	Belfast
0	—	—	1	—	—	25	130	(102.0, 161.4)	3	16.7	(8.0, 28.7)	Carlow
1	—	—	4	22.2	(11.0, 37.1)	8	50.6	(32.2, 73.0)	4	22.9	(11.3, 38.5)	Carrickfergus
4	10.1	(5.1, 16.6)	5	13.3	(7.2, 21.4)	20	52.2	(39.7, 66.5)	8	23.0	(14.7, 33.1)	Castlereagh
4	16.6	(8.8, 27)	3	9.2	(3.9, 16.7)	27	88.4	(69.9, 109)	5	14.4	(7.7, 23.0)	Cavan
2	4.3	(1.6, 8.4)	3	6.8	(3.1, 11.9)	27	57.3	(45.4, 70.6)	4	9.0	(4.6, 14.8)	Clare
2	7.7	(2.8, 15.1)	3	11.1	(5.0, 19.5)	17	60.9	(45.2, 79.0)	4	16.4	(8.7, 26.6)	Coleraine
1	—	—	0	—	—	9	56.8	(36.8, 80.9)	2	11.8	(3.8, 24.4)	Cookstown
21	10.8	(8.3, 13.7)	22	11.3	(8.7, 14.3)	179	95.7	(87.7, 104.0)	27	14.5	(11.5, 17.9)	Cork
3	7.3	(3.1, 13.3)	5	14.1	(7.9, 22.2)	18	50.6	(38, 65)	8	23.1	(15.0, 33.1)	Craigavon
2	5.5	(2.2, 10.3)	3	9.1	(4.0, 16.3)	32	86.6	(69.9, 105.1)	7	18.3	(11.3, 26.9)	Derry
5	7.3	(4.0, 11.5)	6	9.2	(5.5, 13.9)	79	110	(96.3, 125)	11	16.2	(10.9, 22.4)	Donegal
2	7.9	(3.1, 14.8)	6	19.7	(11.4, 30.3)	27	93.3	(73.9, 114.9)	4	12.7	(6.3, 21.3)	Down
45	10.5	(8.8, 12.4)	47	12.2	(10.2, 14.3)	375	99	(93.3, 105)	95	24.4	(21.7, 27.4)	Dublin
2	10.5	(4.2, 19.6)	0	—	—	10	44.5	(29.9, 62.0)	3	14.0	(6.3, 24.5)	Dungannon
2	8.1	(3.2, 15.2)	2	8.7	(3.5, 16.2)	21	63.5	(48.5, 80.6)	8	24.7	(15.5, 35.9)	Fermanagh
9	9.9	(6.5, 14.1)	7	7.4	(4.6, 11.0)	81	83.1	(72.8, 94.1)	15	16.6	(12.1, 21.9)	Galway
6	9.1	(5.4, 13.7)	7	10.8	(6.7, 15.9)	69	94.2	(81.5, 107.8)	12	17.4	(12.1, 23.6)	Kerry
6	10.8	(6.2, 16.8)	6	15.1	(8.7, 23.3)	34	85.1	(69.1, 102.6)	8	19.4	(12.2, 28.2)	Kildare
3	7.4	(3.2, 13.6)	5	13.4	(7.4, 21.1)	38	99.8	(82.0, 119.4)	5	14.7	(8.3, 22.9)	Kilkenny
2	6.6	(2.1, 13.6)	2	7.4	(2.6, 14.6)	23	83.1	(64.2, 104.5)	1	—	—	Laois
4	26.2	(12.8, 44.2)	1	—	—	7	48	(29.5, 70.9)	2	13.0	(5.2, 24.4)	Larne
1	—	—	3	14.6	(6.1, 26.6)	12	63.9	(44.5, 86.8)	3	18.7	(8.3, 33.1)	Leitrim
0	—	—	1	—	—	8	68.2	(44.0, 97.7)	3	20.3	(8.7, 36.6)	Limavady
6	8.4	(5.0, 12.7)	6	8.4	(4.9, 12.7)	46	64.4	(54.0, 75.7)	10	14.7	(10.0, 20.4)	Limerick
6	12.2	(7.2, 18.6)	5	11.8	(6.7, 18.2)	27	60.8	(48.3, 74.7)	7	16.6	(10.4, 24.2)	Lisburn
2	11.8	(3.7, 24.5)	2	10.6	(3.8, 20.9)	17	96.5	(71.1, 125.7)	4	24.0	(12.1, 40.0)	Longford
3	6.7	(2.9, 12.1)	6	14.1	(8.2, 21.6)	30	81.2	(65.1, 99.1)	10	26.5	(17.8, 37.0)	Louth
1	—	—	2	12.6	(4.6, 24.6)	9	49.7	(32.2, 70.9)	2	11.6	(4.2, 22.7)	Magherafelt
5	8.0	(4.3, 12.9)	7	10.3	(6.2, 15.5)	45	63.3	(52.7, 74.8)	9	13.8	(9.0, 19.7)	Mayo
5	11.0	(6.2, 17.1)	6	12.5	(7.4, 18.9)	36	84.3	(69.0, 101.1)	11	24.3	(16.6, 33.3)	Meath
2	7.5	(2.7, 14.7)	2	8.5	(3.1, 16.6)	21	76.5	(58.4, 97.0)	5	16.2	(8.8, 25.8)	Monaghan
0	—	—	0	—	—	6	63.6	(37.3, 96.7)	1	—	—	Moyle
2	6.5	(2.5, 12.4)	2	5.3	(1.9, 10.4)	19	54.1	(40.7, 69.3)	14	37.4	(26.7, 49.8)	Newry & Mourne
4	10.9	(5.5, 17.9)	5	13.1	(7.5, 20.4)	22	55.8	(42.8, 70.6)	8	20.5	(12.9, 29.8)	Newtownabbey
4	11.0	(5.8, 17.8)	4	9.2	(4.5, 15.5)	26	59.2	(46.6, 73.2)	7	16.4	(9.9, 24.5)	North Down
2	9.5	(3.7, 17.8)	3	12.1	(5.8, 20.8)	21	71.7	(55.0, 90.7)	4	13.7	(7.0, 22.6)	Offaly
1	—	—	3	13.0	(5.6, 23.6)	22	101	(77.9, 127.6)	4	18.0	(8.9, 30.3)	Omagh
2	5.5	(1.8, 11.3)	3	11.2	(5.2, 19.3)	26	72.4	(56.8, 89.8)	4	11.2	(5.6, 18.7)	Roscommon
4	14.7	(7.6, 24.2)	0	—	—	30	95.5	(76.6, 116.4)	4	12.1	(6.1, 20.0)	Sligo
1	—	—	1	—	—	13	78.4	(55.6, 105.1)	4	22.4	(11.1, 37.6)	Strabane
4	5.4	(2.8, 8.9)	7	8.9	(5.4, 13.4)	58	73.7	(63.0, 85.3)	11	14.2	(9.7, 19.6)	Tipperary
5	11.7	(6.6, 18.1)	6	13.3	(7.7, 20.4)	43	99.3	(82.8, 117.3)	7	16.3	(10.2, 23.8)	Waterford
1	—	—	4	11.6	(5.7, 19.4)	29	101	(81, 123.9)	7	23.5	(14.5, 34.7)	Westmeath
4	8.0	(4.1, 13.1)	6	12.4	(7.4, 18.8)	46	95.7	(80.4, 112.3)	6	12.3	(7.3, 18.7)	Wexford
6	11.6	(6.7, 17.8)	7	16.9	(10.4, 24.9)	41	101	(83.7, 119.7)	5	11.7	(6.5, 18.3)	Wicklow
155	9.3	(8.5, 10.2)	177	10.9	(9.9, 11.8)	1459	89.4	(86.8, 92.1)	287	17.6	(16.4, 18.8)	Rep of Ireland
65	8.4	(7.3, 9.6)	88	11.6	(10.2, 13.0)	475	59.7	(56.6, 62.9)	158	20.2	(18.4, 22.1)	Northern Ireland
221	9.0	(8.3, 9.7)	265	11.1	(10.3, 11.9)	1934	79.7	(77.7, 81.8)	444	18.5	(17.5, 19.5)	All Ireland

Rates adjusted to European standard population

Appendix C4 Total mortality and age-adjusted rates for the

county or district council	all sites combined			colorectal			lung & bronchus			lymphoma		
	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	y	95% ci	cases per year	rate	95% ci
Antrim	84	185.6	(163.2, 209.5)	11	23.8	(16.4, 32.6)	19	43.5	(32.9, 55.4)	4	8.4	(4.2, 14.1)
Ards	153	173.6	(157.6, 190.3)	18	21.4	(15.9, 27.6)	29	32.7	(26.0, 40.2)	4	5.0	(2.5, 8.2)
Armagh	102	173.7	(154.3, 194.2)	13	22.0	(15.6, 29.5)	23	39.4	(30.4, 49.5)	6	9.9	(5.7, 15.3)
Ballymena	121	168.1	(150.9, 186.3)	18	22.9	(17.0, 29.6)	21	29.8	(22.8, 37.7)	6	8.3	(4.9, 12.7)
Ballymoney	49	163.0	(137.1, 191.1)	7	24.8	(15.3, 36.6)	7	23.8	(14.7, 35.1)	2	7.3	(2.6, 14.5)
Banbridge	75	169.5	(147.6, 192.9)	10	23.8	(16.1, 33.1)	14	31.4	(22.4, 41.9)	3	6.1	(2.7, 10.7)
Belfast	779	220.8	(211.5, 230.3)	101	27.4	(24.2, 30.7)	211	60.3	(55.5, 65.3)	31	8.9	(7.1, 11.0)
Carlow	89	225.1	(198.6, 253.3)	12	31.5	(22.0, 42.6)	17	43.1	(32.0, 55.8)	3	7.7	(3.3, 13.8)
Carrickfergus	80	188.9	(165.2, 214.1)	8	16.8	(10.5, 24.4)	18	42.1	(31.3, 54.5)	4	10.6	(5.5, 17.2)
Castlereagh	150	163.5	(148.1, 179.6)	22	22.6	(17.3, 28.7)	36	37.4	(30.4, 45.0)	7	7.7	(4.6, 11.6)
Cavan	133	202.1	(181.9, 223.3)	19	26.9	(20.0, 34.8)	26	40.4	(31.5, 50.3)	4	6.0	(3.0, 10.2)
Clare	180	175.6	(160.6, 191.2)	26	25.1	(19.7, 31.2)	31	30.0	(24.0, 36.6)	6	6.4	(3.8, 9.7)
Coleraine	127	191.2	(171.9, 211.5)	18	25.9	(19.3, 33.5)	25	39.7	(31.1, 49.4)	6	8.3	(4.7, 12.8)
Cookstown	53	155.1	(131.2, 181.1)	6	16.3	(9.5, 24.9)	11	31.9	(21.9, 43.9)	2	7.1	(2.8, 13.4)
Cork	848	194.9	(187.3, 202.7)	140	31.5	(28.5, 34.6)	148	34.2	(31.1, 37.5)	34	8.0	(6.5, 9.7)
Craigavon	155	182.0	(165.5, 199.2)	25	28.4	(22.2, 35.3)	33	38.9	(31.5, 47.1)	5	5.7	(3.1, 9.2)
Derry	190	214.7	(197.3, 232.8)	23	26.1	(20.2, 32.6)	49	56.3	(47.5, 65.8)	6	7.0	(4.1, 10.6)
Donegal	281	186.4	(173.5, 199.7)	39	24.4	(20.0, 29.3)	54	38.6	(32.7, 45.0)	10	7.2	(4.7, 10.1)
Down	133	191.1	(172.3, 210.9)	17	21.7	(16.0, 28.2)	27	40.4	(31.9, 49.8)	4	5.8	(2.9, 9.9)
Dublin	2128	219.9	(214.5, 225.3)	269	27.5	(25.7, 29.5)	520	54.4	(51.7, 57.1)	79	8.1	(7.1, 9.1)
Dungannon	87	176.0	(154.8, 198.6)	12	24.6	(17.1, 33.4)	18	34.8	(26.0, 45.0)	3	6.2	(2.8, 11.0)
Fermanagh	123	178.5	(159.9, 198.0)	19	24.4	(18.2, 31.5)	17	24.4	(17.9, 31.9)	7	11.3	(6.8, 17.0)
Galway	386	188.7	(177.6, 200.1)	58	27.8	(23.7, 32.3)	67	33.5	(28.9, 38.4)	14	7.6	(5.4, 10.1)
Kerry	304	201.0	(187.7, 214.7)	45	29.2	(24.3, 34.5)	56	36.7	(31.1, 42.7)	13	8.9	(6.2, 12.1)
Kildare	211	224.1	(206.6, 242.3)	34	36.3	(29.5, 43.8)	39	43.5	(35.9, 51.8)	10	10.4	(6.9, 14.7)
Kilkenny	146	179.6	(162.8, 197.2)	21	25.1	(19.1, 31.9)	25	31.1	(24.4, 38.7)	6	7.0	(4.0, 10.8)
Laois	105	186.0	(165.5, 207.7)	14	24.8	(17.6, 33.2)	17	30.0	(22.1, 39.2)	5	9.2	(4.9, 14.7)
Larne	75	193.6	(168.5, 220.4)	9	21.5	(13.9, 30.8)	16	42.3	(30.9, 55.3)	3	8.1	(3.6, 14.4)
Leitrim	73	197.6	(170.6, 226.6)	13	34.1	(23.5, 46.5)	10	30.2	(20.0, 42.5)	2	4.0	(1.2, 8.4)
Limavady	51	180.1	(152.3, 210.2)	8	26.6	(16.7, 38.7)	8	30.3	(19.3, 43.7)	1	4.0	(1.1, 8.8)
Limerick	339	208.1	(195.3, 221.3)	44	26.6	(22.2, 31.4)	74	46.4	(40.4, 52.9)	13	8.1	(5.7, 10.8)
Lisburn	191	172.0	(158.0, 186.6)	24	21.1	(16.5, 26.4)	42	38.7	(32.1, 45.8)	11	9.8	(6.6, 13.5)
Longford	75	206.4	(179.4, 235.3)	10	29.5	(19.7, 41.1)	14	38.8	(27.4, 52.1)	2	5.4	(1.9, 10.7)
Louth	192	212.3	(195.0, 230.3)	25	27.5	(21.5, 34.1)	42	46.2	(38.3, 54.7)	5	5.2	(2.9, 8.2)
Magherafelt	71	186.9	(162.1, 213.3)	8	20.4	(13.1, 29.4)	12	32.7	(22.8, 44.2)	3	6.9	(2.9, 12.6)
Mayo	283	195.1	(181.4, 209.4)	43	28.3	(23.3, 33.6)	41	29.0	(23.9, 34.7)	9	7.3	(4.8, 10.5)
Meath	188	191.1	(175.4, 207.5)	31	31.7	(25.5, 38.6)	32	32.7	(26.4, 39.7)	8	8.8	(5.6, 12.7)
Monaghan	102	183.1	(162.5, 204.8)	16	28.6	(20.9, 37.5)	18	32.2	(23.9, 41.7)	3	5.4	(2.4, 9.6)
Moyle	42	210.2	(173.8, 250.0)	10	51.1	(34.2, 71.3)	10	50.0	(33.0, 70.4)	1	4.9	(0.6, 13.6)
Newry & Mourne	175	204.8	(187.4, 223.0)	29	34.0	(27.1, 41.7)	36	40.8	(33.3, 49.0)	4	4.6	(2.4, 7.6)
Newtownabbey	181	192.8	(176.7, 209.7)	27	27.8	(21.9, 34.3)	35	36.8	(30.0, 44.3)	7	7.1	(4.3, 10.6)
North Down	168	159.9	(145.4, 175.0)	28	23.3	(18.3, 28.9)	33	31.8	(25.6, 38.7)	7	6.1	(3.6, 9.3)
Offaly	126	208.8	(187.9, 230.8)	18	29.3	(21.8, 37.8)	22	35.6	(27.5, 44.8)	5	8.1	(4.5, 12.8)
Omagh	74	152.1	(132.1, 173.4)	12	24.3	(16.8, 33.2)	13	27.8	(19.5, 37.6)	3	5.1	(2.1, 9.5)
Roscommon	131	176.8	(158.8, 195.9)	24	32.4	(25.0, 40.7)	19	26.5	(19.7, 34.2)	1	1.8	(0.4, 4.2)
Sligo	146	216.0	(195.4, 237.6)	20	29.3	(22.1, 37.5)	31	46.4	(37.2, 56.8)	6	8.5	(4.8, 13.3)
Strabane	64	164.9	(142.0, 189.4)	10	24.7	(16.5, 34.7)	15	40.0	(29.0, 52.7)	2	5.2	(1.8, 10.2)
Tipperary	296	189.3	(176.8, 202.3)	40	25.8	(21.3, 30.7)	55	35.8	(30.4, 41.6)	12	7.9	(5.5, 10.8)
Waterford	206	208.1	(191.8, 225.1)	26	26.9	(21.2, 33.2)	35	36.0	(29.4, 43.4)	8	8.6	(5.5, 12.3)
Westmeath	143	215.3	(195.0, 236.7)	21	32.5	(24.9, 41.2)	28	40.6	(32.2, 50.0)	5	8.1	(4.5, 12.9)
Wexford	215	196.3	(181.2, 212.0)	30	27.7	(22.3, 33.8)	44	40.9	(34.2, 48.3)	7	6.2	(3.8, 9.3)
Wicklow	207	212.8	(196.2, 230.2)	25	26.5	(20.7, 32.9)	44	46.5	(38.8, 55.0)	7	7.4	(4.6, 10.9)
Rep of Ireland	7532	203.1	(200.4, 205.8)	1063	28.3	(27.3, 29.3)	1508	41.2	(40.0, 42.4)	274	7.6	(7.1, 8.2)
Northern Ireland	3553	187.3	(183.6, 191.0)	493	25.0	(23.7, 26.3)	778	41.3	(39.6, 43.1)	138	7.5	(6.8, 8.3)
All Ireland	11085	197.9	(195.7, 200.0)	1556	27.2	(26.4, 28.0)	2286	41.3	(40.3, 42.3)	413	7.6	(7.2, 8)

Rates adjusted to European standard population

major cancer sites by county and district council, 1998-2000 annual average

melanoma of skin			oesophagus			stomach			
cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	county or district council
0	—	—	3	7.2	(3.4, 12.4)	2	5.3	(2.1, 10.0)	Antrim
2	2.2	(0.8, 4.3)	9	10.8	(7.0, 15.4)	6	6.9	(4.0, 10.6)	Ards
1	—	—	6	11.0	(6.6, 16.7)	4	7.4	(3.9, 12.0)	Armagh
0	—	—	6	8.2	(4.7, 12.6)	6	7.7	(4.5, 11.8)	Ballymena
1	—	—	1	—	—	3	8.6	(3.6, 15.7)	Ballymoney
1	—	—	5	11.3	(6.2, 18.0)	6	13.5	(7.9, 20.5)	Banbridge
6	1.7	(1.0, 2.7)	31	8.4	(6.7, 10.2)	45	12.4	(10.3, 14.8)	Belfast
1	—	—	5	11.3	(6.1, 18.0)	5	13.7	(7.7, 21.3)	Carlow
0	—	—	5	11.8	(6.5, 18.7)	4	10.3	(5.4, 16.8)	Carrickfergus
1	—	—	6	6.3	(3.7, 9.6)	9	10.3	(6.7, 14.7)	Castlereagh
1	—	—	5	6.3	(3.4, 10.2)	7	10.3	(6.3, 15.4)	Cavan
2	1.6	(0.5, 3.3)	5	5.2	(2.9, 8.2)	7	6.3	(3.7, 9.5)	Clare
1	—	—	5	8.3	(4.6, 13.0)	6	9.7	(5.7, 14.7)	Coleraine
0	—	—	2	6.3	(2.3, 12.5)	3	9.9	(4.6, 17.2)	Cookstown
8	1.7	(1.1, 2.5)	30	6.6	(5.3, 8.1)	30	7.0	(5.6, 8.6)	Cork
2	3.0	(1.2, 5.6)	10	13.1	(8.9, 18.2)	9	10.3	(6.7, 14.7)	Craigavon
3	3.1	(1.3, 5.6)	5	5.7	(3.1, 8.9)	12	12.8	(8.9, 17.4)	Derry
1	—	—	11	7.6	(5.1, 10.6)	14	8.6	(6.1, 11.6)	Donegal
0	—	—	5	7.3	(4.0, 11.4)	6	9.2	(5.5, 13.9)	Down
26	2.7	(2.1, 3.3)	91	9.4	(8.3, 10.5)	108	11.2	(10.0, 12.4)	Dublin
1	—	—	3	6.6	(3.0, 11.7)	3	5.0	(2.3, 8.9)	Dungannon
1	—	—	4	5.7	(2.9, 9.5)	8	11.3	(7.0, 16.6)	Fermanagh
4	2.1	(1.1, 3.5)	15	7.5	(5.4, 9.9)	17	8.1	(5.9, 10.5)	Galway
2	1.5	(0.6, 2.9)	14	9.2	(6.5, 12.3)	14	9.4	(6.7, 12.6)	Kerry
3	2.3	(1.0, 4.1)	9	9.4	(6.1, 13.4)	8	8.5	(5.4, 12.3)	Kildare
1	—	—	8	9.4	(5.9, 13.6)	8	9.9	(6.4, 14.3)	Kilkenny
1	—	—	5	7.9	(4.2, 12.7)	3	4.6	(2.0, 8.5)	Laois
2	4.1	(1.3, 8.5)	3	7.8	(3.5, 13.8)	3	6.8	(3.1, 12.1)	Larne
1	—	—	2	7.6	(2.9, 14.7)	3	7.3	(3.2, 13.0)	Leitrim
0	—	—	1	—	—	3	11.5	(5.4, 19.7)	Limavady
4	2.3	(1.1, 3.9)	11	6.5	(4.4, 8.9)	16	9.3	(6.8, 12.2)	Limerick
2	2.0	(0.8, 3.7)	8	7.7	(4.9, 11.1)	7	6.6	(4.1, 9.8)	Lisburn
0	—	—	2	6.5	(2.4, 12.6)	5	13.3	(7.4, 21)	Longford
3	3.2	(1.3, 5.7)	8	8.9	(5.6, 12.9)	12	14.0	(9.8, 18.9)	Louth
0	—	—	3	7.1	(3.0, 12.9)	4	8.8	(4.3, 14.9)	Magherafelt
2	2.1	(0.8, 4.0)	9	6.3	(4.1, 9.0)	12	7.9	(5.4, 10.9)	Mayo
2	1.8	(0.7, 3.5)	9	9.1	(5.9, 12.9)	9	9.7	(6.4, 13.7)	Meath
0	—	—	5	8.9	(4.9, 14.2)	7	13.6	(8.4, 20.1)	Monaghan
0	—	—	2	8.7	(2.7, 18.3)	1	—	—	Moyle
3	3.1	(1.3, 5.6)	7	8.3	(5.1, 12.4)	16	18.2	(13.3, 23.9)	Newry & Mourne
1	—	—	11	11.1	(7.5, 15.3)	9	9.8	(6.4, 13.9)	Newtownabbey
1	—	—	7	7.1	(4.2, 10.8)	9	8.1	(5.2, 11.7)	North Down
0	—	—	7	10.5	(6.3, 15.8)	7	11.1	(6.7, 16.5)	Offaly
0	—	—	5	9.9	(5.4, 15.8)	4	7.1	(3.5, 12.0)	Omagh
1	—	—	6	8.0	(4.6, 12.3)	7	8.7	(5.3, 13.1)	Roscommon
1	—	—	3	4.2	(1.8, 7.6)	6	8.4	(4.9, 12.8)	Sligo
0	—	—	1	—	—	5	12.7	(6.8, 20.2)	Strabane
1	—	—	11	7.2	(4.9, 9.9)	12	7.0	(4.8, 9.6)	Tipperary
2	2.8	(1.1, 5.2)	10	10.1	(6.8, 14.0)	10	9.3	(6.3, 12.9)	Waterford
1	—	—	5	6.8	(3.7, 11.0)	8	12.0	(7.6, 17.4)	Westmeath
2	1.8	(0.6, 3.5)	9	8.6	(5.7, 12.2)	7	6.7	(4.2, 9.8)	Wexford
3	2.4	(1.0, 4.3)	13	12.6	(8.9, 17.0)	10	10.1	(6.7, 14.1)	Wicklow
73	2.0	(1.8, 2.3)	305	8.2	(7.7, 8.8)	353	9.4	(8.8, 10.0)	Rep of Ireland
31	1.7	(1.3, 2.0)	154	8.2	(7.5, 9.0)	193	10.1	(9.2, 10.9)	Northern Ireland
104	1.9	(1.7, 2.1)	460	8.2	(7.8, 8.7)	546	9.6	(9.1, 10.1)	All Ireland

Rates adjusted to European standard population

Appendix C5 Female mortality and age-adjusted rates for the

county or district council	all sites combined			breast			colorectal			lung & bronchus			lymphoma		
	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci
Antrim	48	189.7	(159.2, 222.7)	8	34.5	(22.1, 49.6)	7	26.2	(16.1, 38.7)	9	36.4	(23.7, 51.8)	2	7.4	(2.6, 14.7)
Ards	72	143.9	(124.4, 164.8)	14	31.7	(22.7, 42.3)	8	15.9	(9.8, 23.4)	11	23.1	(15.6, 32.0)	2	4.0	(1.4, 8.1)
Armagh	49	147.9	(123.9, 173.9)	5	14.4	(7.6, 23.3)	6	15.3	(8.9, 23.4)	9	27.4	(17.7, 39.2)	3	8.7	(3.6, 15.9)
Ballymena	61	149.6	(127.7, 173.3)	9	24.9	(16.0, 35.8)	10	21.8	(14.4, 30.7)	6	16.2	(9.5, 24.6)	4	10.7	(5.5, 17.6)
Ballymoney	24	143.6	(110.8, 180.5)	4	28.2	(14.3, 46.8)	4	21.9	(10.4, 37.7)	2	11.1	(3.4, 23.3)	1	—	—
Banbridge	38	152.4	(124.7, 182.9)	7	34.4	(21.1, 51.0)	7	25.2	(15.1, 38.0)	4	18.7	(9.7, 30.5)	1	—	—
Belfast	387	184.2	(172.8, 196.1)	51	27.1	(22.6, 32.0)	48	20.8	(17.2, 24.7)	93	46.2	(40.6, 52.3)	16	7.8	(5.6, 10.4)
Carlow	47	231.5	(193.9, 272.4)	9	45.7	(29.5, 65.3)	6	29.6	(17.5, 45.0)	7	33.2	(20.2, 49.5)	2	11.8	(4.3, 23.1)
Carrickfergus	38	152.1	(124.2, 182.7)	5	23.4	(12.9, 36.9)	4	12.7	(6.5, 21.1)	7	27.8	(16.5, 42.0)	2	6.8	(2.1, 14.3)
Castlereagh	73	141.1	(121.8, 161.9)	12	27.1	(18.3, 37.5)	10	16.8	(10.9, 23.8)	13	20.5	(14.2, 28.0)	5	10.3	(5.5, 16.5)
Cavan	52	150.0	(125.8, 176.3)	10	35.7	(23.6, 50.2)	8	19.9	(12.3, 29.2)	9	25.0	(15.8, 36.2)	1	—	—
Clare	80	151.2	(131.8, 172.0)	16	31.7	(23.0, 41.7)	8	15.4	(9.7, 22.3)	10	18.7	(12.3, 26.4)	3	6.2	(2.8, 10.8)
Coleraine	65	169.9	(145.5, 196.3)	14	44.7	(31.9, 59.7)	9	20.1	(12.8, 29.1)	11	31.9	(21.7, 44.2)	3	9.6	(4.3, 16.8)
Cookstown	24	129.9	(100.3, 163.1)	4	24.7	(12.1, 41.8)	3	13.8	(6.4, 24.2)	4	19.1	(9.2, 32.7)	1	—	—
Cork	403	167.4	(157.7, 177.4)	77	34.9	(30.4, 39.8)	68	26.1	(22.5, 29.9)	53	22.1	(18.6, 25.8)	15	6.5	(4.7, 8.7)
Craigavon	76	158.2	(137.6, 180.2)	13	27.1	(19.0, 36.6)	11	21.6	(14.6, 29.8)	14	29.2	(20.7, 39.2)	3	6.5	(2.9, 11.6)
Derry	94	185.7	(164.1, 208.5)	21	40.5	(30.8, 51.5)	14	27.0	(19.3, 36.0)	16	33.5	(24.6, 43.7)	2	3.8	(1.3, 7.5)
Donegal	133	170.6	(153.1, 188.9)	22	32.4	(24.7, 41.2)	20	22.6	(16.9, 29.2)	22	29.5	(22.4, 37.5)	5	7.4	(4.1, 11.8)
Down	61	158.8	(135.5, 183.9)	11	30.2	(20.3, 41.9)	7	15.7	(9.5, 23.5)	10	26.1	(17.2, 36.8)	2	6.3	(2.3, 12.3)
Dublin	1048	182.6	(176.1, 189.2)	174	32.2	(29.5, 35.1)	118	19.8	(17.7, 21.9)	215	37.9	(35.0, 40.9)	40	6.9	(5.7, 8.2)
Dungannon	42	148.1	(122.0, 176.7)	7	26.8	(16.0, 40.4)	7	26.0	(15.9, 38.7)	6	18.2	(10.3, 28.3)	2	8.3	(2.9, 16.4)
Fermanagh	54	140.4	(117.9, 164.9)	6	19.6	(11.3, 30.2)	9	21.3	(13.6, 30.6)	6	14.0	(7.7, 22.0)	3	8.2	(3.3, 15.4)
Galway	165	154.2	(140.2, 169.0)	37	39.4	(32.1, 47.5)	22	19.6	(14.9, 25.0)	17	15.1	(11.0, 19.8)	5	5.1	(2.8, 8.1)
Kerry	131	165.9	(149.0, 183.7)	26	36.6	(28.5, 45.6)	19	23.1	(17.2, 29.9)	17	20.4	(14.9, 26.8)	5	6.1	(3.2, 10.0)
Kildare	98	191.4	(169.4, 214.7)	18	36.2	(27.0, 46.6)	16	30.6	(22.3, 40.2)	12	25.9	(18.0, 35.2)	5	10.4	(5.7, 16.4)
Kilkenny	67	159.4	(137.3, 183.2)	15	40.4	(29.3, 53.4)	10	22.6	(15.0, 31.8)	8	19.6	(12.4, 28.4)	2	3.0	(1.0, 6.1)
Laois	43	148.2	(123.0, 175.8)	7	23.1	(14.1, 34.5)	6	20.3	(11.8, 31.1)	4	15.9	(8.2, 26.2)	2	6.3	(1.9, 13.2)
Larne	41	185.1	(152.0, 221.3)	8	42.9	(26.9, 62.6)	6	23.8	(13.5, 37.0)	6	28.5	(16.4, 43.9)	2	10.9	(4.2, 20.8)
Leitrim	32	175.3	(138.8, 216.0)	5	27.0	(14.2, 44.0)	6	33.1	(18.3, 52.1)	2	8.2	(2.8, 16.3)	1	—	—
Limavady	24	160.9	(124.7, 201.7)	6	40.5	(23.5, 62.0)	3	19.8	(8.8, 35.3)	2	17.7	(7.0, 33.3)	0	—	—
Limerick	158	173.5	(157.6, 190.1)	28	34.4	(27.3, 42.4)	17	18.1	(13.3, 23.6)	28	31.9	(25.3, 39.4)	7	7.3	(4.4, 11.0)
Lisburn	97	152.8	(135.1, 171.5)	16	26.9	(19.6, 35.2)	12	16.9	(11.6, 23.2)	17	27.6	(20.3, 35.9)	7	11.5	(7.0, 17.0)
Longford	34	185.5	(149.6, 225.1)	6	36.5	(20.8, 56.6)	7	35.9	(21.2, 54.6)	5	29.7	(16.6, 46.7)	0	—	—
Louth	94	182.4	(160.9, 205.2)	18	39.0	(29.1, 50.3)	11	19.6	(13.3, 27.0)	15	29.1	(21.0, 38.4)	2	4.0	(1.5, 7.8)
Magherafelt	34	164.5	(132.8, 199.5)	6	32.0	(18.6, 49.0)	4	15.8	(7.7, 27.0)	4	21.3	(11.1, 34.7)	0	—	—
Mayo	118	157.9	(140.2, 176.5)	26	42.0	(32.6, 52.6)	15	16.9	(11.9, 22.7)	11	13.7	(9.1, 19.3)	4	5.1	(2.3, 8.9)
Meath	86	160.7	(141, 181.7)	14	27.6	(19.6, 37.0)	15	27.2	(19.7, 36.0)	14	27.6	(19.7, 36.7)	4	9.4	(4.9, 15.2)
Monaghan	45	154.6	(128.4, 183.3)	8	33.7	(21.6, 48.5)	7	22.9	(13.7, 34.3)	5	17.3	(9.6, 27.2)	2	5.8	(1.7, 12.4)
Moyle	22	198.4	(150.5, 252.9)	4	34.5	(16.9, 58.3)	6	52.5	(30.3, 80.7)	5	50.5	(27.5, 80.4)	0	—	—
Newry & Mourne	84	174.4	(152.8, 197.5)	17	39.7	(29.3, 51.7)	12	23.7	(16.4, 32.4)	14	28.6	(20.3, 38.2)	3	5.3	(2.2, 9.7)
Newtownabbey	88	160.0	(140.4, 180.8)	16	33.8	(24.7, 44.4)	14	25.0	(17.8, 33.4)	15	26.1	(18.8, 34.7)	3	5.1	(2.1, 9.5)
North Down	86	135.6	(117.9, 154.6)	13	25.2	(17.4, 34.4)	15	18.8	(13.2, 25.3)	16	26.0	(18.6, 34.6)	4	5.2	(2.3, 9.3)
Offaly	61	195.7	(167.5, 226.0)	11	38.3	(26.0, 52.8)	8	23.9	(14.9, 34.9)	9	29.5	(19.3, 41.9)	2	6.6	(2.6, 12.5)
Omagh	32	114.7	(91.8, 140.0)	6	22.9	(13.1, 35.3)	5	15.9	(8.6, 25.5)	2	9.8	(3.7, 18.6)	2	4.9	(1.4, 10.7)
Roscommon	58	148.7	(125.6, 173.7)	11	31.4	(20.8, 44)	11	24.0	(15.9, 33.7)	6	14.7	(8.5, 22.6)	1	—	—
Sligo	67	187.6	(160.7, 216.6)	12	34.6	(23.5, 47.8)	8	17.7	(10.9, 26.2)	11	31.3	(20.9, 43.8)	2	6.2	(2.1, 12.6)
Strabane	29	136.0	(108.3, 166.8)	5	26.0	(14.3, 41.2)	5	20.8	(11.4, 32.9)	6	26.9	(15.4, 41.6)	1	—	—
Tipperary	131	170.5	(153.5, 188.3)	24	33.1	(25.6, 41.5)	16	20.6	(15.1, 26.9)	19	26.1	(19.5, 33.6)	5	6.9	(3.7, 11)
Waterford	93	174.1	(153.5, 195.9)	15	32.4	(23.5, 42.8)	11	19.9	(13.4, 27.7)	11	19.4	(13.0, 27.1)	5	9.3	(5.0, 14.8)
Westmeath	59	166.3	(141.9, 192.6)	13	41.6	(29.4, 55.8)	8	21.8	(13.7, 31.8)	9	23.2	(15.0, 33.2)	1	—	—
Wexford	94	157.4	(138.9, 177.1)	15	26.4	(19.1, 35.0)	14	22.8	(16.2, 30.4)	17	28.4	(20.9, 37.2)	3	5.5	(2.5, 9.6)
Wicklow	99	184.3	(163.2, 206.5)	18	33.1	(24.5, 42.9)	12	21.5	(14.8, 29.3)	17	32.6	(24.0, 42.6)	3	5.7	(2.5, 10.1)
Rep of Ireland	3498	172.0	(168.6, 175.5)	634	34.1	(32.5, 35.7)	469	21.7	(20.5, 22.9)	554	27.5	(26.1, 28.8)	127	6.4	(5.8, 7.1)
Northern Ireland	1745	160.4	(155.9, 165.1)	289	29.6	(27.5, 31.7)	248	20.6	(19.1, 22.2)	308	28.9	(27.0, 30.9)	74	7.0	(6.0, 8.0)
All Ireland	5242	168.1	(165.4, 170.9)	923	32.6	(31.3, 33.8)	716	21.3	(20.4, 22.3)	862	27.9	(26.8, 29.1)	200	6.6	(6.1, 7.2)

Rates adjusted to European standard population

major cancer sites by county and district council, 1998-2000 annual average

melanoma of skin			oesophagus			stomach			
cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	county or district council
0	—	—	2	5.9	(1.8, 12.4)	1	—	—	Antrim
1	—	—	2	2.7	(0.8, 5.9)	3	5.5	(2.3, 10.2)	Ards
1	—	—	3	8.0	(3.3, 14.7)	1	—	—	Armagh
0	—	—	2	3.8	(1.3, 7.7)	3	4.5	(1.9, 8.3)	Ballymena
0	—	—	0	—	—	2	10.4	(3.2, 21.8)	Ballymoney
0	—	—	2	7.7	(2.7, 15.4)	3	9.1	(3.7, 16.8)	Banbridge
3	1.3	(0.5, 2.4)	14	4.9	(3.4, 6.6)	21	8.6	(6.4, 11.2)	Belfast
1	—	—	2	8.3	(3.0, 16.3)	3	17.3	(8.1, 30.0)	Carlow
0	—	—	3	10.8	(4.8, 19.3)	2	5.7	(1.8, 11.9)	Carrickfergus
1	—	—	2	2.8	(1.0, 5.5)	3	6.3	(2.9, 11.0)	Castlereagh
0	—	—	1	—	—	3	7.4	(3.1, 13.6)	Cavan
1	—	—	2	3.5	(1.3, 6.9)	3	5.5	(2.4, 9.7)	Clare
1	—	—	2	3.4	(1.2, 6.7)	3	8.7	(4.1, 15.2)	Coleraine
0	—	—	1	—	—	2	8.4	(2.5, 17.7)	Cookstown
5	2.0	(1.1, 3.2)	13	4.7	(3.3, 6.4)	12	4.8	(3.3, 6.5)	Cork
1	—	—	3	5.9	(2.5, 10.8)	3	5.6	(2.3, 10.3)	Craigavon
1	—	—	2	3.3	(1.0, 6.9)	5	9.1	(5.0, 14.4)	Derry
1	—	—	4	4.6	(2.2, 8.0)	7	7.2	(4.2, 11.0)	Donegal
0	—	—	1	—	—	2	6.3	(2.4, 11.9)	Down
14	2.5	(1.8, 3.4)	35	5.7	(4.7, 6.9)	48	7.8	(6.5, 9.1)	Dublin
1	—	—	1	—	—	1	—	—	Dungannon
1	—	—	2	5.2	(1.7, 10.7)	2	5.9	(2.2, 11.5)	Fermanagh
3	3.0	(1.2, 5.4)	5	3.8	(2.1, 6.1)	7	6.2	(3.7, 9.4)	Galway
1	—	—	5	6.3	(3.4, 10.0)	4	5.4	(2.7, 9.0)	Kerry
1	—	—	3	5.3	(2.3, 9.6)	2	3.2	(1.2, 6.3)	Kildare
0	—	—	4	7.6	(3.7, 12.8)	3	6.0	(2.5, 11.0)	Kilkenny
1	—	—	2	6.5	(2.3, 12.8)	1	—	—	Laois
2	7.0	(2.2, 14.4)	2	6.9	(2.2, 14.1)	2	6.5	(2.0, 13.6)	Larne
0	—	—	0	—	—	2	7.3	(2.1, 15.8)	Leitrim
0	—	—	0	—	—	1	—	—	Limavady
3	2.9	(1.2, 5.2)	4	3.9	(2.0, 6.5)	7	6.8	(4.2, 10.0)	Limerick
2	2.3	(0.7, 5.0)	3	6.1	(2.9, 10.6)	2	3.7	(1.4, 7.0)	Lisburn
0	—	—	1	—	—	3	13.3	(5.3, 25.0)	Longford
2	3.6	(1.1, 7.6)	3	5.7	(2.5, 10.2)	4	6.8	(3.3, 11.7)	Louth
0	—	—	1	—	—	1	—	—	Magherafelt
1	—	—	2	2.5	(0.9, 5.0)	4	4.3	(2.2, 7.2)	Mayo
1	—	—	2	4.1	(1.4, 8.1)	2	4.0	(1.4, 7.9)	Meath
0	—	—	2	5.9	(2.2, 11.6)	4	12.7	(6.1, 21.9)	Monaghan
0	—	—	0	—	—	1	—	—	Moyle
1	—	—	3	6.5	(2.8, 11.5)	5	10.0	(5.4, 15.9)	Newry & Mourne
1	—	—	4	6.8	(3.4, 11.3)	3	4.5	(2.0, 8.0)	Newtownabbey
1	—	—	4	5.9	(2.7, 10.3)	4	6.6	(3.3, 11.0)	North Down
0	—	—	1	—	—	5	15.2	(8.4, 24.1)	Offaly
0	—	—	2	7.2	(2.8, 13.8)	2	6.2	(1.9, 12.8)	Omagh
0	—	—	1	—	—	3	6.1	(2.4, 11.5)	Roscommon
0	—	—	2	4.2	(1.1, 9.3)	2	3.9	(1.4, 7.7)	Sligo
0	—	—	0	—	—	1	—	—	Strabane
0	—	—	4	4.7	(2.4, 7.8)	5	5.6	(3.2, 8.8)	Tipperary
1	—	—	4	6.0	(2.9, 10.2)	4	6.3	(3.2, 10.5)	Waterford
0	—	—	1	—	—	2	5.5	(2.0, 10.9)	Westmeath
1	—	—	2	2.9	(1.0, 5.7)	4	6.2	(3.0, 10.5)	Wexford
1	—	—	6	10.6	(6.2, 16.2)	4	7.1	(3.4, 12.1)	Wicklow
39	2.0	(1.7, 2.4)	111	5.0	(4.4, 5.6)	147	6.6	(6.0, 7.3)	Rep of Ireland
17	1.6	(1.2, 2.2)	61	5.1	(4.3, 5.9)	78	6.6	(5.7, 7.5)	Northern Ireland
56	1.9	(1.6, 2.2)	172	5.0	(4.6, 5.5)	225	6.6	(6.1, 7.1)	All Ireland

Rates adjusted to European standard population

Appendix C6 Male mortality and age-adjusted rates for the

county or district council	all sites combined cases per year	rate	95% ci	colorectal cases per year	rate	95% ci	lung & bronchus cases per year	rate	95% ci	lymphoma cases per year	rate	95% ci
Antrim	36	182.1	(149.1, 218.4)	4	21.3	(10.9, 35.1)	10	53.6	(36.3, 74.1)	2	8.2	(2.7, 16.9)
Ards	80	218.2	(191.1, 247.0)	10	28.9	(19.4, 40.2)	18	46.4	(34.6, 59.9)	2	5.7	(2.1, 11.1)
Armagh	53	212.9	(180.8, 247.7)	7	30.8	(19.2, 45.2)	14	55.8	(39.9, 74.3)	3	11.7	(5.3, 20.5)
Ballymena	60	198.9	(170.7, 229.3)	8	24.1	(15.2, 35.1)	15	50.1	(36.4, 65.9)	2	6.1	(2.0, 12.5)
Ballymoney	25	193.0	(151.4, 239.6)	4	27.6	(13.6, 46.3)	6	43.6	(25.1, 67.2)	1	—	—
Banbridge	37	193.8	(159.0, 232.0)	4	19.7	(9.8, 33.1)	9	49.1	(32.5, 69.2)	2	8.5	(2.7, 17.5)
Belfast	392	282.4	(266.2, 299.1)	53	38.2	(32.4, 44.4)	118	83.7	(75.1, 92.8)	15	10.9	(7.9, 14.5)
Carlow	42	228.6	(189.6, 271.1)	6	34.0	(19.9, 52.0)	10	56.3	(38.0, 78.3)	1	—	—
Carrickfergus	42	248.3	(205.8, 294.9)	4	21.3	(10.4, 36.0)	11	62.4	(42.8, 85.7)	3	14.9	(6.4, 27.0)
Castlereagh	78	200.2	(174.6, 227.5)	12	30.8	(21.5, 41.9)	23	59.6	(46.2, 74.8)	2	4.9	(1.5, 10.1)
Cavan	81	260.7	(228.0, 295.5)	11	33.0	(22.3, 45.9)	17	56.5	(41.7, 73.4)	2	7.9	(3.1, 14.9)
Clare	100	205.3	(182.4, 229.5)	18	36.3	(27.1, 46.8)	21	42.9	(32.8, 54.3)	3	6.6	(3.0, 11.5)
Coleraine	62	228.5	(196.5, 263.0)	9	34.3	(22.6, 48.3)	14	51.1	(36.7, 67.8)	2	7.3	(2.9, 13.8)
Cookstown	28	189.1	(150.6, 231.9)	3	19.1	(8.2, 34.5)	8	48.8	(30.8, 71.0)	2	12.0	(3.9, 24.7)
Cork	445	235.7	(223.1, 248.7)	72	37.9	(33.0, 43.2)	95	49.9	(44.2, 55.9)	19	9.8	(7.4, 12.5)
Craigavon	79	221.5	(193.7, 251.1)	14	41.0	(29.2, 54.8)	19	54.0	(40.9, 68.9)	2	4.6	(1.5, 9.5)
Derry	96	261.7	(231.8, 293.3)	9	25.2	(16.5, 35.8)	33	88.8	(71.9, 107.5)	4	10.3	(5.3, 17.0)
Donegal	148	207.1	(187.8, 227.3)	19	26.6	(20.0, 34.1)	32	47.8	(38.6, 58.0)	5	6.8	(3.6, 11.0)
Down	72	243.4	(211.6, 277.3)	10	32.5	(21.6, 45.5)	17	59.4	(44.2, 76.7)	2	5.6	(1.8, 11.5)
Dublin	1080	282.0	(272.2, 291.9)	150	39.2	(35.6, 42.9)	305	79.3	(74.2, 84.5)	39	9.7	(8.0, 11.6)
Dungannon	45	213.1	(178.3, 251.0)	5	23.4	(12.7, 37.4)	12	55.8	(39.2, 75.4)	1	—	—
Fermanagh	69	228.9	(198.2, 261.7)	9	29.0	(19.1, 40.9)	11	37.0	(25.3, 50.9)	4	14.4	(7.3, 23.8)
Galway	221	230.1	(212.6, 248.3)	35	37.0	(30.2, 44.5)	49	53.3	(44.9, 62.3)	9	10.1	(6.6, 14.4)
Kerry	173	244.5	(223.5, 266.5)	26	36.1	(28.3, 44.8)	39	54.7	(45.0, 65.3)	8	11.8	(7.5, 17.0)
Kildare	113	271.7	(242.8, 302.2)	18	43.0	(32.1, 55.4)	27	65.5	(51.7, 80.8)	5	10.9	(5.8, 17.6)
Kilkenny	79	212.9	(186.0, 241.5)	10	28.5	(19.2, 39.6)	17	44.1	(32.9, 57.0)	4	10.7	(5.5, 17.6)
Laois	61	227.1	(194.8, 261.9)	8	29.0	(18.2, 42.4)	12	46.0	(32.1, 62.3)	3	11.9	(5.4, 21.0)
Larne	34	220.9	(178.9, 267.3)	3	17.6	(7.4, 32.1)	10	61.9	(41.3, 86.5)	1	—	—
Leitrim	40	222.9	(183.6, 266.0)	7	36.6	(21.9, 54.9)	8	50.3	(31.9, 72.8)	1	—	—
Limavady	27	212.1	(168.1, 261.1)	5	35.6	(19.4, 56.7)	6	45.7	(26.6, 70.0)	1	—	—
Limerick	182	256.2	(234.9, 278.4)	27	37.7	(29.9, 46.4)	46	64.9	(54.4, 76.3)	6	8.7	(5.2, 13.1)
Lisburn	94	207.7	(184.0, 232.8)	12	26.8	(18.7, 36.3)	25	54.8	(43.1, 68.0)	4	8.6	(4.3, 14.4)
Longford	41	236.7	(195.5, 281.8)	4	22.5	(11.1, 38.0)	8	49.0	(31.3, 70.7)	2	11.3	(4.0, 22.1)
Louth	97	258.3	(229.0, 289.3)	14	37.9	(27.0, 50.6)	27	71.7	(56.7, 88.4)	3	6.3	(2.7, 11.4)
Magherafelt	38	218.4	(179.5, 261.0)	5	26.5	(14.3, 42.3)	8	45.8	(29.2, 66.0)	2	12.6	(5.0, 23.5)
Mayo	165	239.4	(218.1, 261.7)	28	40.1	(31.7, 49.5)	30	45.1	(36.0, 55.3)	6	9.4	(5.4, 14.6)
Meath	102	232.8	(207.1, 260.0)	16	35.7	(26.1, 46.7)	18	39.9	(29.8, 51.5)	4	7.9	(3.9, 13.3)
Monaghan	57	220.2	(187.9, 255.0)	9	35.0	(23.0, 49.4)	12	48.9	(34.1, 66.2)	1	—	—
Moyle	20	228.3	(173.5, 290.5)	4	48.3	(24.6, 79.8)	5	52.7	(28.4, 84.3)	0	—	—
Newry & Mourne	91	258.7	(228.2, 291.0)	16	49.9	(36.6, 65.2)	22	58.7	(45.1, 73.9)	1	—	—
Newtownabbey	93	243.7	(215.4, 273.8)	12	33.0	(23.0, 44.8)	20	50.8	(38.6, 64.7)	4	9.8	(5.1, 16.2)
North Down	82	193.6	(169.7, 219.0)	13	28.2	(19.9, 38.0)	17	39.8	(29.4, 51.7)	3	7.4	(3.4, 13.0)
Offaly	65	226.5	(195.3, 259.9)	10	35.0	(23.4, 48.7)	13	42.9	(30.4, 57.5)	3	9.5	(4.1, 17.3)
Omagh	41	198.1	(164.3, 234.9)	7	33.3	(20.5, 49.3)	10	49.0	(33.1, 67.9)	1	—	—
Roscommon	73	207.9	(180.3, 237.4)	14	40.4	(28.7, 54.2)	13	37.7	(26.3, 51.1)	0	—	—
Sligo	79	256.2	(224.0, 290.5)	12	41.9	(29.3, 56.7)	20	63.8	(48.5, 81.3)	4	11.7	(5.7, 19.9)
Strabane	34	206.2	(167.8, 248.4)	5	27.3	(14.9, 43.4)	9	55.5	(36.8, 78.1)	1	—	—
Tipperary	165	208.4	(190.1, 227.5)	24	30.7	(23.9, 38.4)	36	45.5	(37.2, 54.6)	7	8.9	(5.5, 13.2)
Waterford	112	258.7	(231.5, 287.3)	16	36.3	(26.6, 47.5)	24	56.7	(44.4, 70.6)	3	8.3	(4.0, 14.3)
Westmeath	83	280.6	(246.4, 316.9)	13	46.3	(32.9, 61.9)	19	61.0	(45.9, 78.1)	4	13.2	(6.5, 22.2)
Wexford	121	248.2	(223.2, 274.4)	16	33.2	(24.4, 43.2)	27	56.3	(44.8, 69.2)	3	6.9	(3.3, 11.9)
Wicklow	107	256.6	(229.1, 285.6)	13	31.5	(22.3, 42.1)	27	65.4	(51.9, 80.5)	4	9.6	(4.9, 15.8)
Rep of Ireland	4034	246.3	(241.9, 250.7)	595	36.4	(34.7, 38.2)	954	58.2	(56.1, 60.4)	148	9.0	(8.2, 9.9)
Northern Ireland	1808	229.8	(223.6, 236.0)	245	31.3	(29.1, 33.7)	470	59.1	(56.0, 62.2)	65	8.3	(7.2, 9.5)
All Ireland	5842	241.0	(237.4, 244.6)	840	34.8	(33.4, 36.2)	1424	58.5	(56.8, 60.3)	212	8.8	(8.1, 9.5)

Rates adjusted to European standard population

major cancer sites by county and district council, 1998-2000 annual average

melanoma of skin			oesophagus			prostate			stomach			
cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	cases per year	rate	95% ci	county or district council
0	—	—	2	8.1	(2.6, 16.7)	4	22.8	(12.0, 36.9)	2	8.4	(2.7, 17.3)	Antrim
1	—	—	7	20.5	(12.8, 30.0)	11	27.4	(18.7, 37.8)	3	8.7	(3.9, 15.2)	Ards
0	—	—	4	14.5	(7.2, 24.4)	7	23.9	(14.5, 35.6)	3	13.3	(6.0, 23.3)	Armagh
0	—	—	4	12.7	(6.3, 21.2)	8	27.4	(17.6, 39.3)	3	11.1	(5.3, 19.0)	Ballymena
1	—	—	0	—	—	5	37.7	(21.4, 58.5)	1	—	—	Ballymoney
0	—	—	3	16.3	(7.3, 28.7)	3	14.7	(6.9, 25.2)	3	19.0	(9.1, 32.6)	Banbridge
3	2.4	(1.1, 4.2)	18	12.9	(9.6, 16.6)	33	23.0	(18.6, 27.8)	24	17.6	(13.8, 22.0)	Belfast
0	—	—	3	13.7	(5.9, 24.8)	8	41.3	(25.7, 60.6)	2	11.8	(4.1, 23.3)	Carlow
0	—	—	2	11.8	(4.3, 23.0)	7	42.5	(25.2, 64.1)	3	17.9	(7.5, 32.7)	Carrickfergus
0	—	—	4	11.0	(5.7, 18.0)	7	19.7	(12.0, 29.4)	6	15.8	(9.2, 24.2)	Castlereagh
1	—	—	3	10.5	(4.9, 18.3)	9	28.2	(18.4, 39.9)	4	13.6	(7.1, 22.3)	Cavan
1	—	—	3	6.8	(3.1, 12.0)	16	30.9	(22.5, 40.5)	3	7.0	(3.3, 12.1)	Clare
0	—	—	3	12.9	(6.2, 22.2)	9	32.2	(20.8, 45.9)	3	12.1	(5.5, 21.3)	Coleraine
0	—	—	1	—	—	4	21.6	(10.7, 36.2)	2	11.5	(3.6, 23.8)	Cookstown
3	1.4	(0.6, 2.6)	17	8.8	(6.5, 11.3)	60	31.8	(27.2, 36.8)	18	9.8	(7.3, 12.5)	Cork
1	—	—	8	21.6	(13.7, 31.4)	6	17.2	(10.2, 25.9)	6	16.3	(9.6, 24.6)	Craigavon
2	4.9	(1.5, 10.3)	3	10.0	(4.6, 17.4)	8	22.5	(14.3, 32.6)	7	17.5	(10.7, 26.0)	Derry
1	—	—	7	10.7	(6.6, 15.7)	23	28.6	(22.1, 35.9)	7	10.1	(6.1, 15.0)	Donegal
0	—	—	4	13.0	(6.6, 21.4)	11	37.4	(25.8, 51.2)	4	14.3	(7.4, 23.6)	Down
12	2.8	(2.0, 3.9)	56	14.3	(12.2, 16.6)	106	29.8	(26.6, 33.2)	60	15.9	(13.6, 18.3)	Dublin
1	—	—	2	8.1	(2.6, 16.7)	5	23.9	(12.9, 38.2)	2	6.8	(2.2, 13.9)	Dungannon
1	—	—	2	7.5	(3.0, 14.0)	12	37.4	(25.8, 51.1)	5	17.7	(10.0, 27.6)	Fermanagh
1	—	—	10	11.1	(7.4, 15.4)	31	29.2	(23.4, 35.5)	10	10.1	(6.8, 14.1)	Galway
2	2.3	(0.7, 4.8)	9	12.5	(8.1, 17.9)	21	27.7	(21.1, 35.1)	10	14.3	(9.5, 19.9)	Kerry
2	2.5	(0.8, 5.1)	6	14.8	(8.5, 22.8)	12	34.0	(23.6, 46.4)	6	14.7	(8.5, 22.5)	Kildare
1	—	—	4	10.6	(5.5, 17.5)	13	36.8	(25.9, 49.5)	6	15.8	(9.0, 24.4)	Kilkenny
0	—	—	3	9.2	(3.9, 16.8)	12	42.1	(29.1, 57.6)	2	7.2	(2.6, 14.1)	Laois
0	—	—	1	—	—	3	18.5	(7.5, 34.5)	1	—	—	Larne
0	—	—	2	12.1	(4.2, 24.1)	6	30.4	(18.1, 45.8)	1	—	—	Leitrim
0	—	—	1	—	—	4	34.3	(17.5, 56.6)	2	14.7	(5.4, 28.7)	Limavady
1	—	—	7	9.2	(5.6, 13.6)	20	27.7	(20.9, 35.3)	8	12.3	(7.9, 17.7)	Limerick
1	—	—	5	10.4	(5.6, 16.5)	13	29.5	(21.0, 39.4)	5	10.4	(5.7, 16.6)	Lisburn
0	—	—	2	10.4	(3.2, 21.6)	7	39.5	(24.4, 58.2)	3	15.3	(6.4, 28.0)	Longford
1	—	—	5	12.0	(6.6, 19.2)	11	29.8	(20.5, 40.8)	9	23.1	(15.0, 32.9)	Louth
0	—	—	2	9.7	(3.1, 20.0)	5	29.7	(16.8, 46.1)	3	14.8	(6.3, 27.0)	Magherafelt
2	2.9	(0.9, 6.0)	7	10.2	(6.2, 15.1)	26	33.0	(26.0, 41.0)	8	11.3	(7.0, 16.6)	Mayo
1	—	—	7	14.9	(9.1, 22.3)	15	35.1	(25.3, 46.4)	7	16.1	(10.0, 23.6)	Meath
0	—	—	3	11.2	(4.8, 20.3)	9	30.3	(19.8, 43.0)	4	14.7	(7.3, 24.7)	Monaghan
0	—	—	1	—	—	2	14.5	(4.7, 29.9)	1	—	—	Moyle
2	4.4	(1.4, 8.9)	4	11.3	(5.8, 18.6)	9	28.8	(18.6, 41.1)	11	29.5	(20.0, 40.7)	Newry & Mourne
1	—	—	7	16.4	(10.0, 24.4)	12	30.6	(21.1, 41.9)	6	15.9	(9.3, 24.2)	Newtownabbey
1	—	—	3	8.0	(3.6, 14.1)	11	23.5	(16.0, 32.5)	4	10.0	(5.3, 16.2)	North Down
0	—	—	5	17.8	(10.1, 27.7)	7	23.8	(14.6, 35.3)	2	6.8	(2.2, 14.0)	Offaly
0	—	—	3	13.4	(5.7, 24.4)	5	22.4	(12.2, 35.8)	2	8.5	(3.1, 16.7)	Omagh
1	—	—	5	14.2	(7.7, 22.6)	13	34.1	(23.9, 46.1)	4	11.6	(6.1, 19.0)	Roscommon
1	—	—	1	—	—	12	38.5	(27.0, 52.1)	4	14.2	(7.4, 23.2)	Sligo
0	—	—	1	—	—	3	17.6	(7.9, 31.1)	3	21.3	(10.2, 36.6)	Strabane
1	—	—	7	9.4	(5.8, 13.9)	28	32.8	(26.0, 40.4)	6	8.4	(5.0, 12.6)	Tipperary
1	—	—	7	15.7	(9.5, 23.4)	13	31.6	(22.4, 42.3)	6	12.7	(7.5, 19.2)	Waterford
0	—	—	4	11.8	(5.8, 19.7)	10	35.0	(23.4, 48.9)	6	19.6	(11.5, 29.7)	Westmeath
1	—	—	7	14.7	(9.1, 21.6)	17	33.8	(25.1, 43.7)	4	7.4	(3.7, 12.4)	Wexford
1	—	—	6	14.8	(8.9, 22.2)	11	27.0	(18.5, 37.0)	6	14.4	(8.5, 21.9)	Wicklow
34	2.0	(1.6, 2.4)	194	11.8	(10.9, 12.8)	516	31.1	(29.6, 32.7)	206	12.7	(11.7, 13.8)	Rep of Ireland
14	1.8	(1.3, 2.4)	94	12.2	(10.8, 13.6)	206	25.7	(23.7, 27.8)	114	14.6	(13.1, 16.2)	Northern Ireland
47	2.0	(1.6, 2.3)	288	11.9	(11.2, 12.8)	722	29.4	(28.1, 30.6)	321	13.3	(12.5, 14.2)	All Ireland

Rates adjusted to European standard population

Appendix D1

Incidence rates per 100,000 by site, year and sex for all Ireland, 1994-2000

All rates age-adjusted to European standard population

cancer site	total							male							female						
	1994	1995	1996	1997	1998	1999	2000	1994	1995	1996	1997	1998	1999	2000	1994	1995	1996	1997	1998	1999	2000
bladder	13.7	12.5	14.0	11.7	11.7	12.2	11.6	21.6	21.2	22.6	19.7	19.2	20.2	18.8	7.7	5.9	7.3	5.6	6.0	5.9	6.1
brain	7.3	7.1	7.5	7.1	7.4	6.5	7.2	8.6	8.9	8.8	8.7	8.9	8.3	9.0	6.1	5.4	6.2	5.7	6.0	4.8	5.5
breast (female)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	96.7	97.1	98.5	98.2	101.0	103.1	105.8
cervix	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.2	9.7	12.3	10.2	10.4	9.1	10.7
colorectal	52.7	52.2	51.5	51.7	50.9	50.0	49.4	65.7	63.6	65.9	63.6	63.1	61.7	61.6	42.3	43.5	39.7	42.2	41.4	40.3	39.4
endometrium	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	12.6	12.7	13.6	11.5	13.9	14.8
kidney & renal pelvis	7.5	7.3	8.0	8.6	8.1	8.6	8.3	10.7	9.4	10.8	11.6	11.1	11.8	11.8	4.9	5.6	5.4	6.0	5.7	5.9	5.4
larynx	3.5	3.9	3.5	3.3	3.6	3.9	3.7	6.4	7.1	6.3	6.1	6.4	6.7	6.7	1.1	1.2	1.1	1.0	1.3	1.4	1.2
leukaemia	9.5	9.6	9.3	10.5	10.2	9.0	10.0	12.2	13.0	11.3	12.9	13.1	12.3	13.5	7.6	6.8	7.9	8.6	8.0	6.3	7.1
liver	1.3	1.4	1.4	1.2	1.5	1.4	2.5	2.1	2.4	2.0	1.8	2.3	2.2	3.6	0.6	0.5	0.9	0.7	0.9	0.7	1.5
lung & bronchus	49.8	45.6	45.9	45.5	46.8	45.9	44.7	75.7	66.4	67.4	65.1	67.2	63.3	61.7	29.0	29.1	29.0	30.0	30.6	32.1	31.4
lymphoma	11.7	11.2	12.3	12.4	13.5	12.3	14.1	12.8	13.4	13.8	14.3	15.2	13.6	15.6	10.9	9.2	11.0	10.8	11.8	11.0	12.9
melanoma of the skin	11.0	10.5	10.5	11.0	10.8	10.9	11.7	8.7	8.0	8.3	9.8	8.8	9.3	9.4	13.3	12.8	12.7	12.3	12.7	12.6	13.8
multiple myeloma	5.6	4.5	5.1	6.0	4.9	4.7	5.4	6.5	5.7	6.8	7.3	6.5	5.9	7.0	5.0	3.6	3.8	4.9	3.6	3.9	4.2
oesophagus	8.8	9.0	8.6	9.1	7.9	8.7	8.0	12.5	12.0	12.1	13.1	11.0	12.2	10.3	5.8	6.2	5.7	5.6	5.0	5.5	6.1
oral cavity & pharynx	9.3	9.2	8.9	8.5	7.9	7.8	7.4	15.3	14.4	14.3	13.8	12.0	12.0	11.3	4.1	4.9	4.3	4.1	4.3	4.2	4.1
ovary	—	—	—	—	—	—	—	—	—	—	—	—	—	—	17.4	19.3	17.7	20.1	19.2	19.7	19.5
pancreas	8.9	8.0	9.6	9.7	8.6	8.4	9.1	10.0	8.9	11.3	11.4	10.2	10.3	10.0	8.1	7.2	8.4	8.3	7.1	6.9	8.5
prostate	—	—	—	—	—	—	—	67.6	69.9	71.5	71.3	74.2	78.8	88.9	—	—	—	—	—	—	—
stomach	14.6	13.8	14.7	13.7	14.1	13.4	12.3	21.4	20.2	20.8	19.7	20.0	18.6	17.1	9.1	8.7	9.9	8.9	9.0	9.1	8.4
testis	—	—	—	—	—	—	—	4.4	4.8	6.0	4.9	5.7	6.0	6.0	—	—	—	—	—	—	—
thyroid	2.4	2.1	2.1	2.1	2.2	2.0	2.4	1.7	1.2	1.2	1.3	1.5	1.2	1.4	3.0	2.9	2.8	2.8	2.7	2.8	3.3
all sites combined	361.9	353.8	362.0	360.0	360.6	357.5	368.9	411.8	399.8	408.8	402.6	402.6	397.2	409.7	333.0	327.9	334.9	336.8	336.1	334.4	345.3

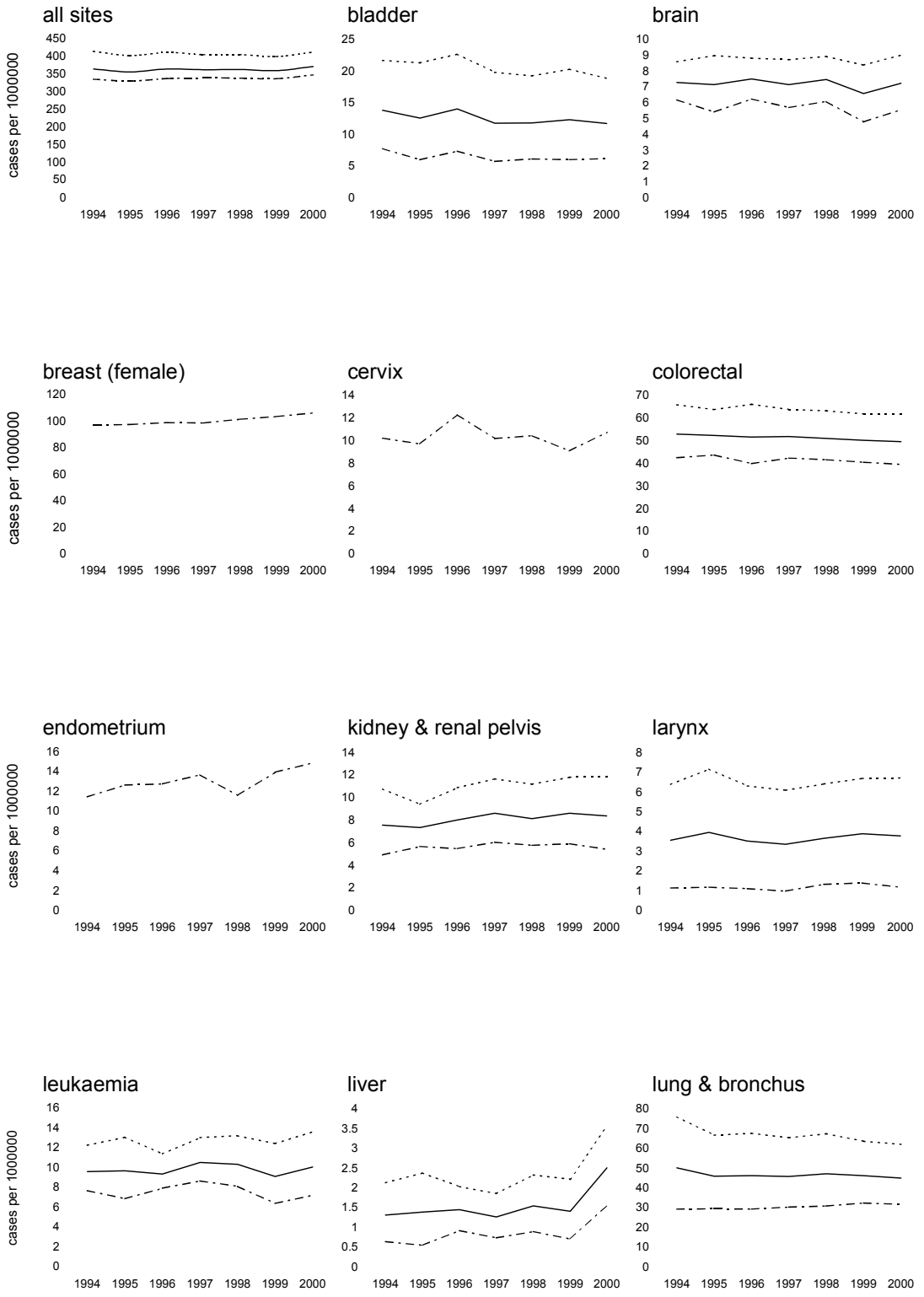
Appendix D2

Mortality rates per 100,000 by site, year and sex for all Ireland, 1994-2000

All rates age-adjusted to European standard population

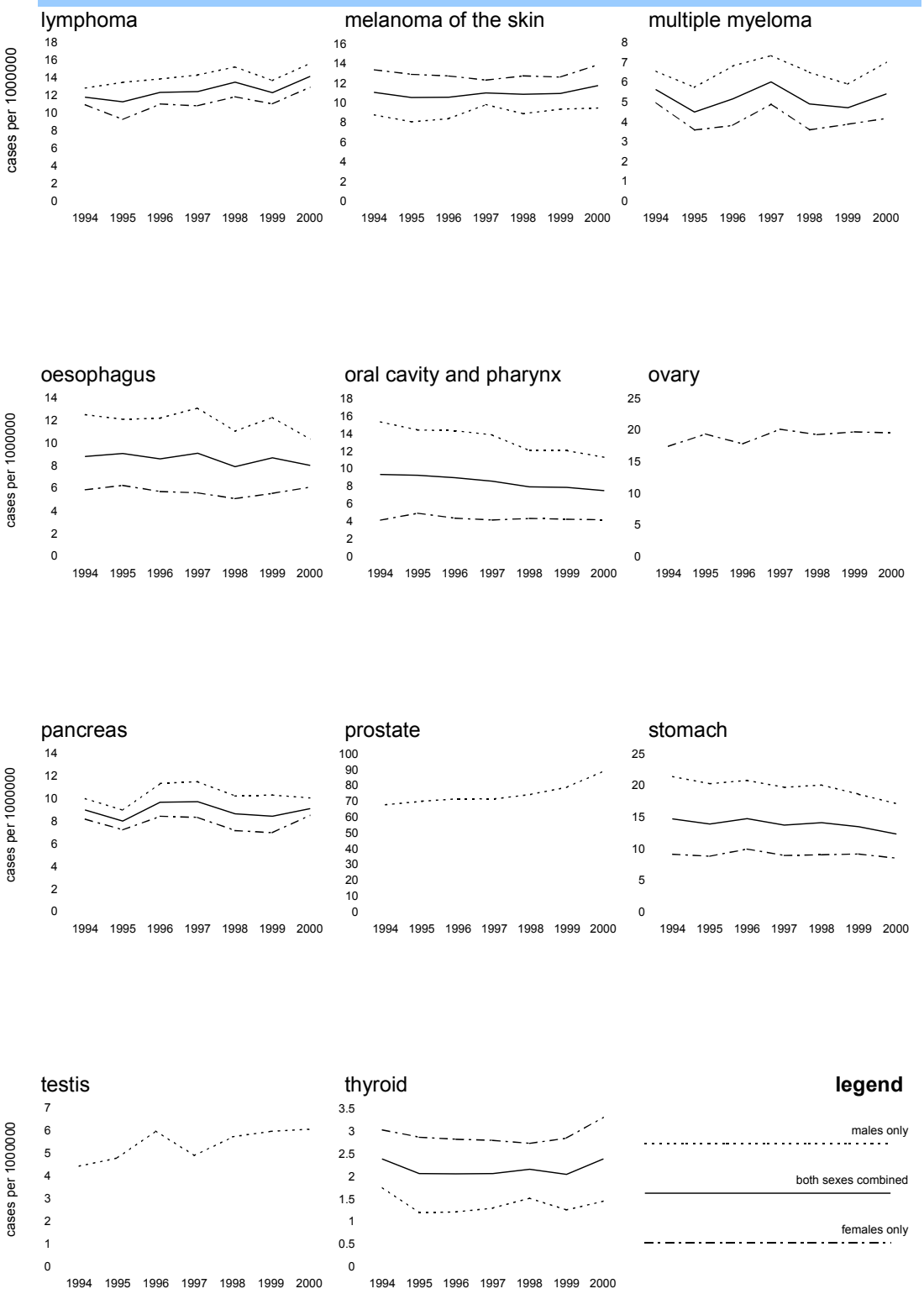
cancer site	total							male							female						
	1994	1995	1996	1997	1998	1999	2000	1994	1995	1996	1997	1998	1999	2000	1994	1995	1996	1997	1998	1999	2000
bladder	4.7	4.7	4.4	4.3	3.9	4.1	4.1	7.1	8.3	7.7	6.4	6.6	6.7	6.0	2.9	2.4	2.2	2.9	2.1	2.3	2.7
brain	6.1	6.0	6.0	6.0	5.3	4.7	5.8	6.8	7.8	7.1	7.2	6.5	6.2	7.0	5.6	4.3	4.9	4.8	4.1	3.4	4.7
breast (female)															37.3	36.6	34.4	32.6	31.7	32.9	33.3
cervix															3.9	3.7	4.8	4.1	4.2	4.1	3.6
colorectal	29.1	30.7	28.7	29.0	27.5	27.6	26.9	36.1	39.7	36.8	35.6	35.6	35.7	33.3	23.5	24.0	22.3	24.0	21.2	21.1	21.8
endometrium															2.2	1.8	2.2	1.6	1.9	1.7	2.3
kidney & renal pelvis	3.4	3.5	3.7	4.3	3.9	3.8	4.0	4.8	5.0	5.3	6.1	5.4	5.3	6.0	2.4	2.2	2.3	2.7	2.7	2.6	2.3
larynx	1.7	1.3	1.5	1.9	1.4	1.6	1.4	2.7	2.1	2.9	3.6	2.8	2.7	2.7	0.9	0.6	0.3	0.5	0.4	0.7	0.3
leukaemia	5.2	4.6	5.2	5.8	5.8	6.3	5.6	6.8	6.1	6.7	7.3	8.2	8.4	8.1	4.1	3.6	4.1	4.7	4.0	4.6	3.7
liver	3.9	3.4	3.2	3.4	3.7	3.7	4.2	5.2	4.8	4.7	4.1	4.9	5.1	5.9	3.0	2.3	2.1	2.9	2.8	2.6	3.0
lung & bronchus	45.4	44.5	42.4	39.9	42.3	39.9	42.1	68.8	66.0	63.8	59.1	60.4	57.2	58.7	27.1	27.8	26.0	25.0	28.2	26.3	29.6
lymphoma	6.8	6.6	6.8	6.7	8.3	7.1	7.4	8.5	8.6	8.2	8.1	9.9	8.2	8.5	5.4	4.8	5.5	5.5	7.1	6.3	6.6
melanoma of the skin	1.6	1.6	1.7	1.8	1.8	2.2	1.8	1.7	1.9	1.7	2.0	1.5	2.5	1.8	1.7	1.4	1.6	1.7	2.0	1.9	1.7
multiple myeloma	4.1	4.1	3.4	3.4	3.6	3.7	3.7	4.7	5.3	4.7	4.4	4.5	4.8	5.0	3.7	3.2	2.5	2.5	2.9	3.0	2.7
oesophagus	9.1	7.7	8.3	8.3	8.1	8.3	8.4	12.8	10.3	12.2	12.6	11.9	11.8	12.2	6.0	5.5	5.1	4.7	4.8	5.2	5.0
oral cavity & pharynx	3.6	3.8	3.9	3.9	3.5	3.6	3.3	5.6	6.0	6.1	6.4	5.2	5.5	4.8	1.9	1.9	2.1	1.8	2.0	2.0	2.1
ovary	6.0	6.0	5.8	6.9	5.9	6.4	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	11.2	10.7	12.8	11.0	11.9	11.5
pancreas	9.6	9.1	8.9	9.6	9.5	8.9	9.0	11.6	10.7	10.5	11.2	11.8	10.8	10.5	7.8	7.8	7.7	8.2	7.5	7.3	7.8
prostate								30.1	31.9	31.6	31.1	30.4	28.2	30.0							
stomach	11.6	10.9	11.0	9.7	10.0	9.5	9.3	16.4	15.8	15.3	14.1	13.7	13.3	13.2	7.8	7.1	7.8	6.3	7.0	6.6	6.3
testis								0.5	0.3	0.5	0.3	0.2	0.5	0.4							
thyroid	0.7	0.6	0.7	0.7	0.4	0.5	0.4	0.6	0.7	0.4	0.7	0.3	0.4	0.3	0.8	0.6	0.9	0.7	0.5	0.7	0.4
all sites combined	211.0	207.4	204.1	203.0	200.4	196.7	198.4	257.6	258.4	254.3	247.7	247.4	240.4	237.9	178.9	173.0	169.4	172.6	167.9	166.0	171.7

Appendix E1 Incidence rate trends

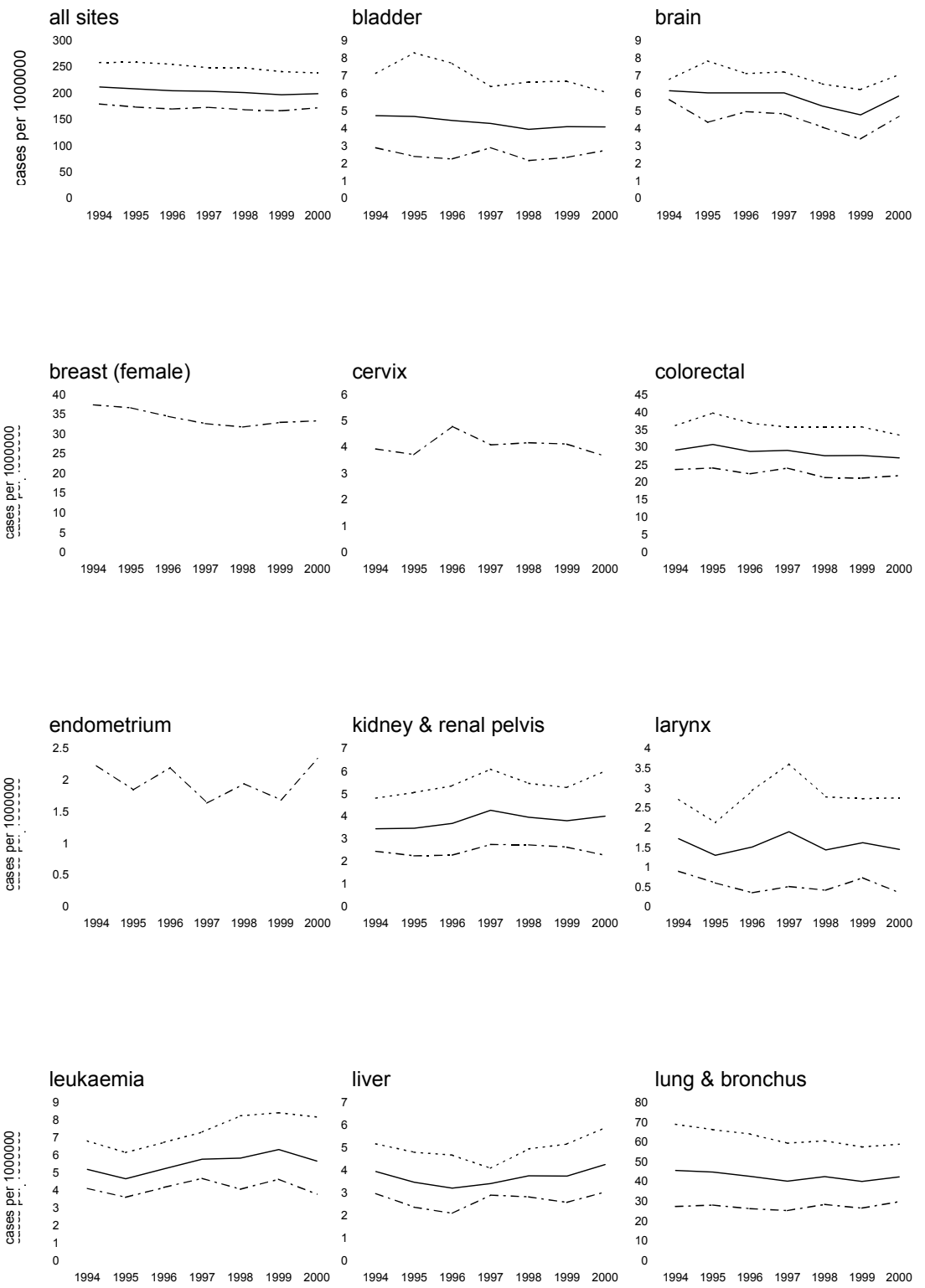


for each site and by sex, 1994 - 2000

age-adjusted to European standard population

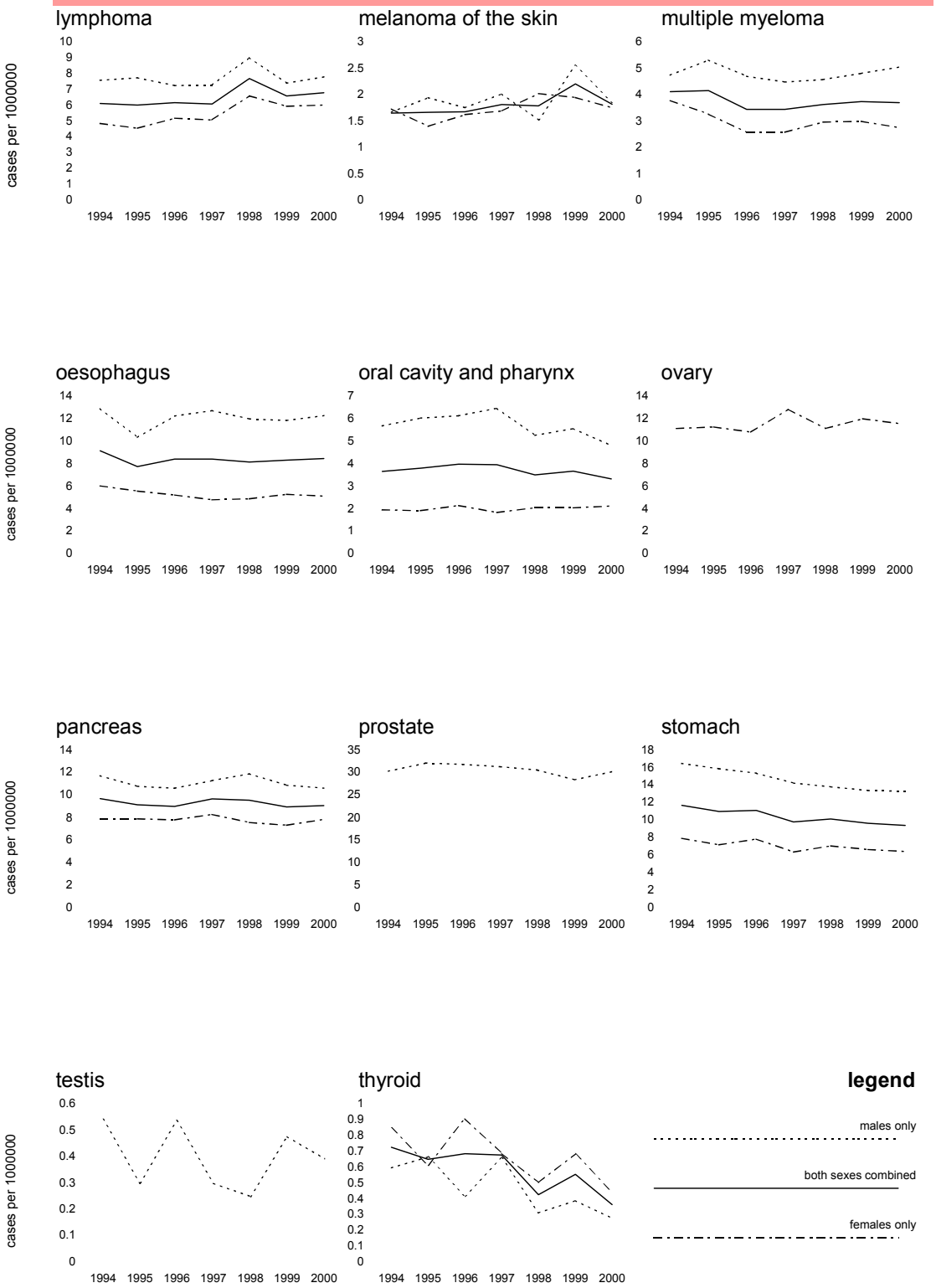


Appendix E2 Mortality rate trends



for each site and by sex, 1994 - 2000

age-adjusted to European standard population



Appendix F1 **Female population estimates by county and district council, 1998-2000 average**

county or district council	age group																	
	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Antrim	1855	1782	1764	1606	1514	1922	2071	1842	1563	1456	1464	1322	967	807	691	610	405	369
Ards	2252	2378	2469	2358	1964	2486	2805	2866	2538	2437	2595	2091	1660	1566	1455	1259	852	820
Armagh	1867	2106	2228	2093	1577	2009	1918	1958	1712	1546	1587	1319	1176	1065	1001	810	539	468
Ballymena	1917	1925	2137	2011	1597	2048	2265	2131	1959	1907	1884	1673	1479	1326	1190	994	681	649
Ballymoney	907	961	1009	900	728	926	1026	982	868	730	751	740	591	558	522	455	293	209
Banbridge	1329	1365	1546	1347	1110	1518	1588	1618	1391	1172	1154	1045	888	817	699	635	423	362
Belfast	8937	9906	10480	11689	12465	10665	10908	10647	9230	7489	7460	6953	6863	6937	6649	5747	3763	3744
Carlow	1420	1579	1830	2041	1645	1531	1475	1556	1389	1279	1200	868	805	709	695	538	330	262
Carrickfergus	1222	1348	1398	1244	1110	1362	1637	1604	1358	1099	1127	968	861	820	691	641	374	369
Castlereagh	2206	2284	2122	1862	1590	2247	3032	2976	2441	1922	1954	1865	1729	1781	1664	1398	838	722
Cavan	1881	2098	2371	2248	1563	1619	1653	1828	1695	1569	1403	1106	1110	1065	1101	1006	614	438
Clare	3356	3577	4081	4198	3176	3152	3113	3380	3346	3287	2774	2082	1691	1721	1576	1422	936	755
Coleraine	1867	1913	1967	2142	2235	1966	2176	2078	1907	1645	1669	1541	1408	1258	1081	962	674	629
Cookstown	1096	1330	1431	1331	1047	1172	1176	1137	1053	948	923	770	631	552	512	479	336	273
Cork	14472	14823	16899	19370	18038	16349	15446	15532	14488	13563	12434	9835	8748	7761	7128	6140	4016	3274
Craigavon	2904	3070	3151	2795	2271	2753	3301	3086	2637	2311	2417	2037	1884	1640	1453	1237	786	724
Derry	4224	4490	4779	4591	3986	4161	4355	4118	3461	3030	2706	2292	1988	1753	1535	1232	736	674
Donegal	4691	5111	5730	6195	4813	4504	4218	4307	4185	4118	3620	2956	2477	2371	2310	2090	1458	1247
Down	2246	2575	2593	2366	1754	2056	2393	2347	2132	1915	1827	1532	1374	1220	1153	971	662	702
Dublin	35918	35592	37567	47230	57352	52927	44616	41135	37665	34706	31827	25771	22016	19100	16433	13334	8867	7635
Dungannon	1795	1952	2048	1818	1527	1724	1693	1655	1491	1339	1316	1123	990	996	863	709	471	366
Fermanagh	1951	2056	2441	2159	1623	1926	1931	1997	1911	1763	1680	1329	1202	1107	1107	985	698	576
Galway	6350	6759	7750	9175	8987	6947	6315	6999	6533	5861	5292	3935	3579	3349	3163	2851	2002	1521
Kerry	4137	4540	5376	5539	4411	4097	4083	4434	4323	4110	3754	2959	2616	2563	2467	2178	1535	1119
Kildare	5397	5513	6001	6255	5752	5445	5492	5719	5255	4630	3708	2500	1840	1514	1484	1238	708	623

Kilkenny	2668	2914	3203	3413	2433	2576	2628	2867	2677	2364	2272	1649	1529	1371	1351	1166	690	549
Laois	1907	2077	2408	2347	1666	1813	1853	1984	1847	1526	1450	1137	1081	961	902	769	460	333
Larne	930	1051	1115	1067	799	1081	1213	1202	1053	948	985	885	790	722	620	550	372	366
Leitrim	761	939	1034	984	620	627	694	865	870	782	677	620	525	587	597	544	368	257
Limavady	1196	1255	1300	1245	1103	1282	1274	1139	958	940	860	723	573	484	469	383	229	205
Limerick	5602	5748	6681	8065	7921	6147	5849	5903	5585	5293	4932	3699	3198	2905	2766	2254	1451	1228
Lisburn	3925	4236	4216	3982	3298	4008	4637	4597	3765	3286	3237	2805	2328	2086	1890	1535	1008	1031
Longford	1066	1122	1369	1371	882	918	873	1034	1009	984	880	630	633	620	599	526	354	247
Louth	3255	3437	3844	4356	3863	3724	3413	3397	3059	3047	2790	2101	1735	1629	1606	1374	795	603
Magherafelt	1538	1594	1693	1538	1252	1501	1452	1391	1258	1091	1035	884	754	717	611	513	369	282
Mayo	3687	4280	4918	4960	3392	3235	3375	3889	3819	3529	3099	2510	2291	2300	2381	2264	1626	1167
Meath	3866	4418	5065	5291	3797	3708	3948	4436	4264	3789	3288	2228	1930	1626	1520	1266	895	663
Monaghan	1828	2113	2300	2297	1766	1719	1706	1796	1622	1622	1359	1100	1042	968	924	763	524	419
Moyle	483	587	642	581	426	522	548	542	527	484	479	423	393	324	352	281	190	191
Newry & Mourne	3443	3531	3818	3455	2623	3164	3216	3156	2791	2539	2297	1936	1755	1635	1488	1216	772	655
Newtownabbey	2520	2758	2785	2649	2745	2956	3226	3189	2754	2517	2474	2164	2001	1834	1724	1325	805	808
North Down	2047	2346	2603	2499	2030	2396	2737	2885	2714	2640	2828	2236	1791	1733	1773	1672	1232	1188
Offaly	2142	2282	2629	2826	2094	2016	2043	2099	1974	1851	1683	1291	1204	1069	1039	877	486	364
Omagh	1767	1894	2093	1928	1510	1813	1718	1736	1622	1413	1236	1090	884	827	760	686	471	404
Roscommon	1646	1882	2237	2259	1412	1327	1537	1832	1788	1590	1453	1187	1208	1224	1134	1019	726	530
Sligo	1798	1994	2258	2644	2199	1849	1836	2110	2002	1871	1590	1300	1154	1065	1129	985	669	502
Strabane	1455	1479	1640	1462	1216	1506	1439	1273	1167	1056	1065	901	789	706	653	496	314	275
Tipperary	4714	4991	5743	6083	4818	4618	4517	4739	4621	4324	3972	3105	2862	2658	2515	1938	1200	913
Waterford	3254	3474	3740	4436	3869	3643	3482	3336	3201	2994	2857	2222	2074	1742	1694	1280	896	731
Westmeath	2309	2365	2800	3107	2551	2283	2216	2286	2226	1955	1729	1388	1231	1183	1123	918	564	434
Wexford	3748	3963	4510	4830	3664	3823	3675	3786	3469	3296	3204	2487	2223	1870	1781	1497	924	810
Wicklow	3748	3924	4399	4729	3818	3876	4021	4016	3842	3524	3201	2340	1881	1717	1546	1330	819	791
Rep of Ireland	125620	131516	146744	166248	156502	144472	134076	135264	126751	117463	106448	83006	72682	65648	60963	51569	33911	27418
Northern Ireland	57881	62171	65467	62717	55100	61170	65737	64149	56261	49625	49012	42644	37752	35270	32604	27779	18293	17060
All-Ireland	183501	193687	212211	228965	211602	205642	199813	199413	183012	167088	155460	125650	110434	100918	93567	79348	52204	44478

Appendix F2 Male population estimates by county and district council, 1998-2000 average

county or district council	age group																	
	00-04	05-09	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Antrim	1927	1863	1882	1772	1701	2312	2316	2027	1611	1461	1458	1230	960	774	571	413	230	145
Ards	2391	2513	2628	2411	2008	2428	2735	2677	2506	2356	2548	2079	1611	1304	1103	865	523	295
Armagh	1976	2200	2389	1983	1642	1895	1950	1965	1826	1629	1570	1323	1102	903	748	551	312	195
Ballymena	1900	2101	2300	2053	1609	2164	2257	2022	1971	1901	1804	1562	1374	1132	938	675	386	250
Ballymoney	960	993	1101	950	736	1004	1036	964	877	783	754	687	547	488	406	325	171	98
Banbridge	1520	1567	1605	1463	1159	1543	1739	1573	1474	1232	1141	995	804	722	594	408	261	149
Belfast	9271	10222	10917	11005	11390	10065	9822	9333	8260	7341	6949	6328	5854	5288	4580	3412	1834	1199
Carlow	1529	1680	1872	2229	1945	1548	1464	1514	1448	1359	1204	991	848	763	595	420	222	109
Carrickfergus	1301	1361	1457	1307	995	1294	1550	1556	1286	1207	1032	973	787	660	542	401	213	107
Castlereagh	2329	2373	2139	2009	1574	2094	2695	2815	2317	1938	1772	1649	1490	1445	1280	988	487	263
Cavan	2016	2146	2448	2445	1899	1840	1803	1933	1902	1786	1626	1302	1253	1193	1034	804	440	237
Clare	3584	3749	4284	4481	3580	3369	3166	3493	3354	3388	3119	2276	1966	1782	1399	1150	699	469
Coleraine	1875	1982	2156	1888	1909	1799	2000	1981	1875	1683	1624	1464	1233	1072	847	654	369	221
Cookstown	1172	1317	1520	1394	1145	1193	1128	1150	1033	955	906	792	601	504	461	334	196	139
Cork	15277	15879	17416	20182	18785	16857	15746	15309	14555	13774	12704	10108	8515	7334	5693	4266	2396	1348
Craigavon	3095	3355	3395	2899	2241	2916	3231	3123	2559	2361	2211	1992	1667	1400	1105	823	448	244
Derry	4439	4529	5107	4915	4146	4034	4098	3850	3198	2868	2661	2182	1881	1477	1173	741	398	212
Donegal	4952	5497	6009	6404	5129	4758	4064	4177	4310	4184	4148	3136	2667	2432	2121	1752	1092	711
Down	2334	2621	2742	2676	2010	2173	2418	2353	2089	1936	1858	1558	1302	1050	853	695	379	252
Dublin	39040	37116	39873	48206	52697	50105	41198	38016	34284	32002	29640	23893	19433	15801	11603	7750	4057	2577
Dungannon	1870	2015	2128	1917	1584	1806	1690	1692	1556	1387	1287	1095	972	820	685	479	268	156
Fermanagh	2070	2229	2546	2268	1747	2031	2019	2060	1991	1856	1715	1384	1202	1035	931	731	427	294
Galway	6761	7254	8155	9463	8573	7162	6201	6566	6546	6128	5685	4533	3800	3353	2842	2263	1381	939
Kerry	4379	4738	5566	5999	4756	4524	4156	4467	4517	4374	4146	3193	2828	2579	2142	1797	1092	599
Kildare	5550	5672	6408	7235	6155	5519	5445	5486	5174	4682	4102	2503	1875	1506	1207	877	434	260

Kilkenny	2753	3079	3356	3672	2900	2714	2656	2879	2765	2587	2381	1744	1547	1449	1222	917	455	251
Laois	1993	2257	2485	2601	2036	2099	1936	2056	1939	1618	1585	1213	1074	1016	882	625	365	203
Larne	992	1111	1148	1066	801	1016	1168	1248	1129	981	1004	883	725	662	488	388	211	98
Leitrim	845	938	1112	1149	829	755	768	932	912	875	856	720	653	628	547	482	278	180
Limavady	1273	1388	1391	1408	1372	1511	1454	1244	1077	964	881	709	576	457	364	285	148	94
Limerick	5864	6238	6948	8508	8283	6522	5755	5924	5788	5380	4944	3948	3301	2738	2219	1537	885	502
Lisburn	4241	4550	4410	4183	3299	4017	4487	4251	3727	3233	3108	2607	2111	1778	1420	1014	500	365
Longford	1051	1221	1405	1622	1119	1020	1013	1007	1114	1081	932	714	732	563	534	423	248	129
Louth	3475	3661	3970	4607	3960	3797	3387	3247	3196	2938	2839	2188	1737	1399	1231	847	414	233
Magherafelt	1617	1636	1794	1575	1540	1609	1557	1385	1249	1154	1029	858	706	648	527	390	234	148
Mayo	3855	4421	5244	5230	3850	3471	3320	3858	3933	3930	3539	2729	2580	2398	2102	1761	1114	728
Meath	4190	4644	5368	5617	4356	3982	3832	4280	4162	3911	3548	2394	1848	1660	1336	1005	542	316
Monaghan	1970	2053	2457	2640	2188	1920	1687	1776	1849	1711	1525	1115	1076	967	834	638	345	200
Moyle	514	573	693	620	434	528	514	547	499	560	477	413	387	299	245	200	128	65
Newry & Mourne	3636	3804	3924	3502	2745	2991	3209	3150	2833	2516	2310	1887	1729	1388	1125	836	467	232
Newtownabbey	2750	2926	2830	2688	2652	2799	3052	2964	2705	2416	2339	2085	1825	1573	1351	901	416	240
North Down	2240	2435	2654	2732	2158	2504	2595	2700	2622	2564	2650	2158	1688	1434	1269	1075	613	435
Offaly	2266	2396	2766	3097	2363	2211	2136	2202	1997	1837	1704	1376	1245	1124	952	689	341	206
Omagh	1864	1958	2205	2145	1754	1886	1774	1748	1663	1503	1279	1047	888	762	625	490	292	180
Roscommon	1715	1975	2384	2448	1743	1727	1566	1854	1982	1696	1657	1363	1303	1285	1087	843	553	340
Sligo	1967	2034	2410	2657	2156	1848	1801	1952	1904	1972	1727	1364	1201	1170	972	722	491	277
Strabane	1550	1513	1741	1535	1266	1496	1526	1385	1151	1136	1067	870	772	650	537	364	212	127
Tipperary	5270	5574	6450	6875	5349	5281	5087	5224	5103	4725	4355	3539	3086	2902	2529	1951	1087	730
Waterford	3489	3566	3936	4722	4066	3757	3458	3263	3247	3058	2980	2400	2025	1716	1389	980	513	315
Westmeath	2408	2397	2908	3231	2597	2355	2216	2267	2230	2020	1831	1458	1300	1113	973	712	344	216
Wexford	3898	4201	4645	5059	4153	4096	3708	3707	3596	3429	3332	2619	2236	1937	1494	1025	573	419
Wicklow	4043	4168	4423	4900	4126	3779	3880	3839	3708	3592	3316	2292	1948	1503	1246	893	470	323
Rep of Ireland	134141	138553	154298	175279	159592	147018	131450	131227	125516	118035	109424	85110	72081	62311	50184	37128	20831	12818
Northern Ireland	61107	65135	68803	64365	55618	61109	64020	61762	55082	49922	47432	40811	34791	29725	24768	18440	10122	6204
All-Ireland	195248	203688	223101	239644	215210	208127	195470	192989	180598	167957	156856	125921	106872	92036	74952	55568	30953	19022

Data sources

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