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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 (%)

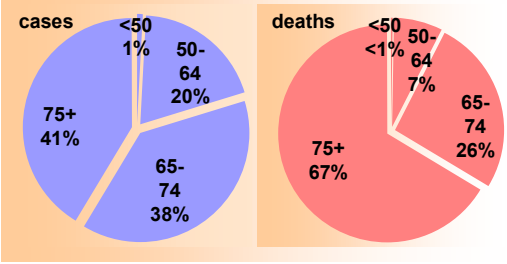
	male		female	
	rate	95% ci	rate	95% ci
ireland	64.5	62.4, 66.7	----	----
europe (eurocare)	65.4	64.4, 66.4	----	----
united states (seer)	98.0	97.6, 98.4	----	----

-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)

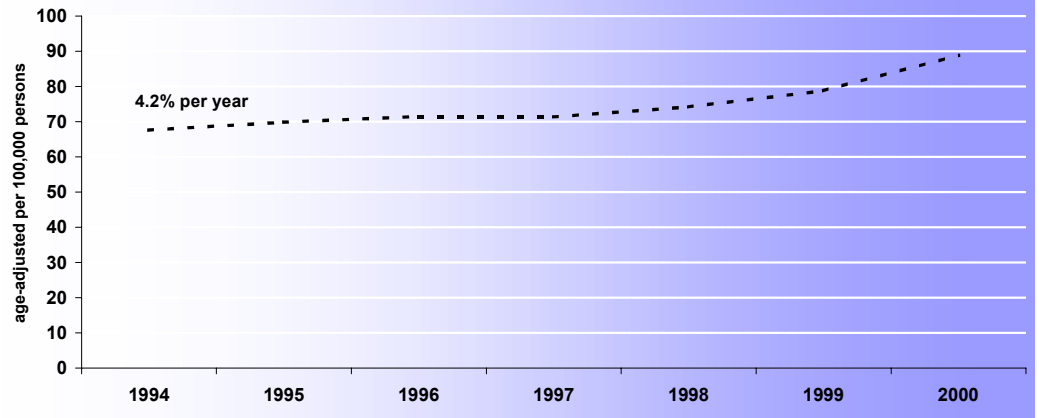
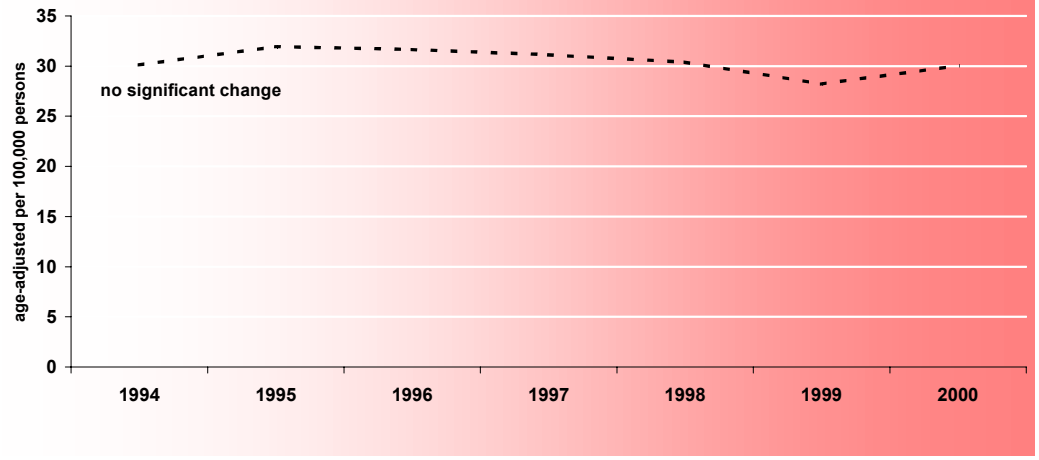


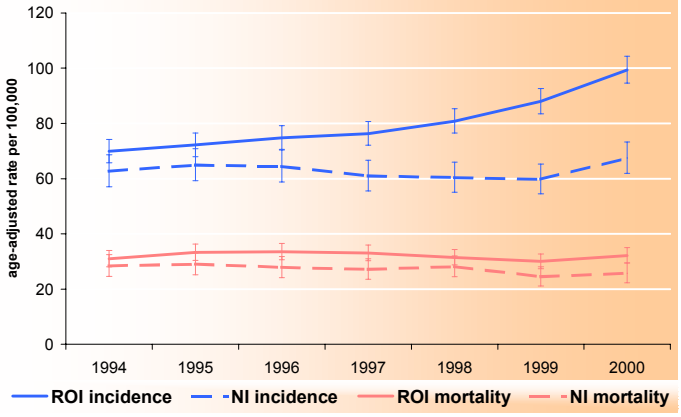
figure 10.3
prostate mortality rates by year (1994-2000)



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

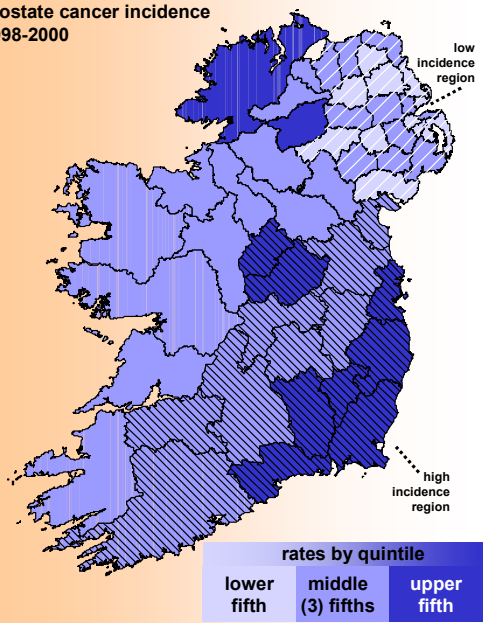


figure 10.6
prostate cancer mortality 1998-2000

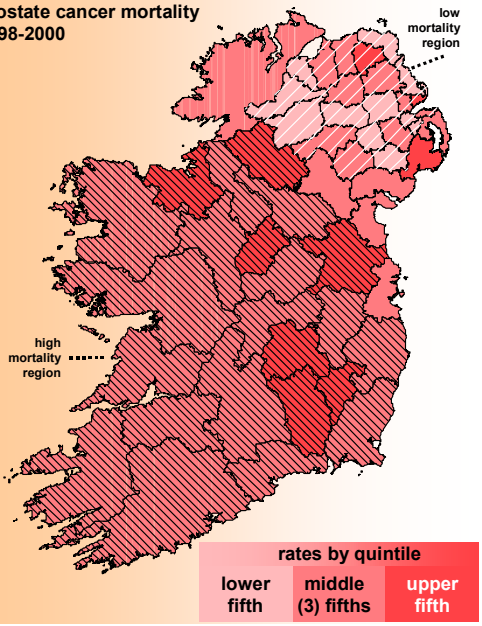


figure 10.7

1998-2000 age-adjusted incidence rates

prostate cancer by county/district council

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

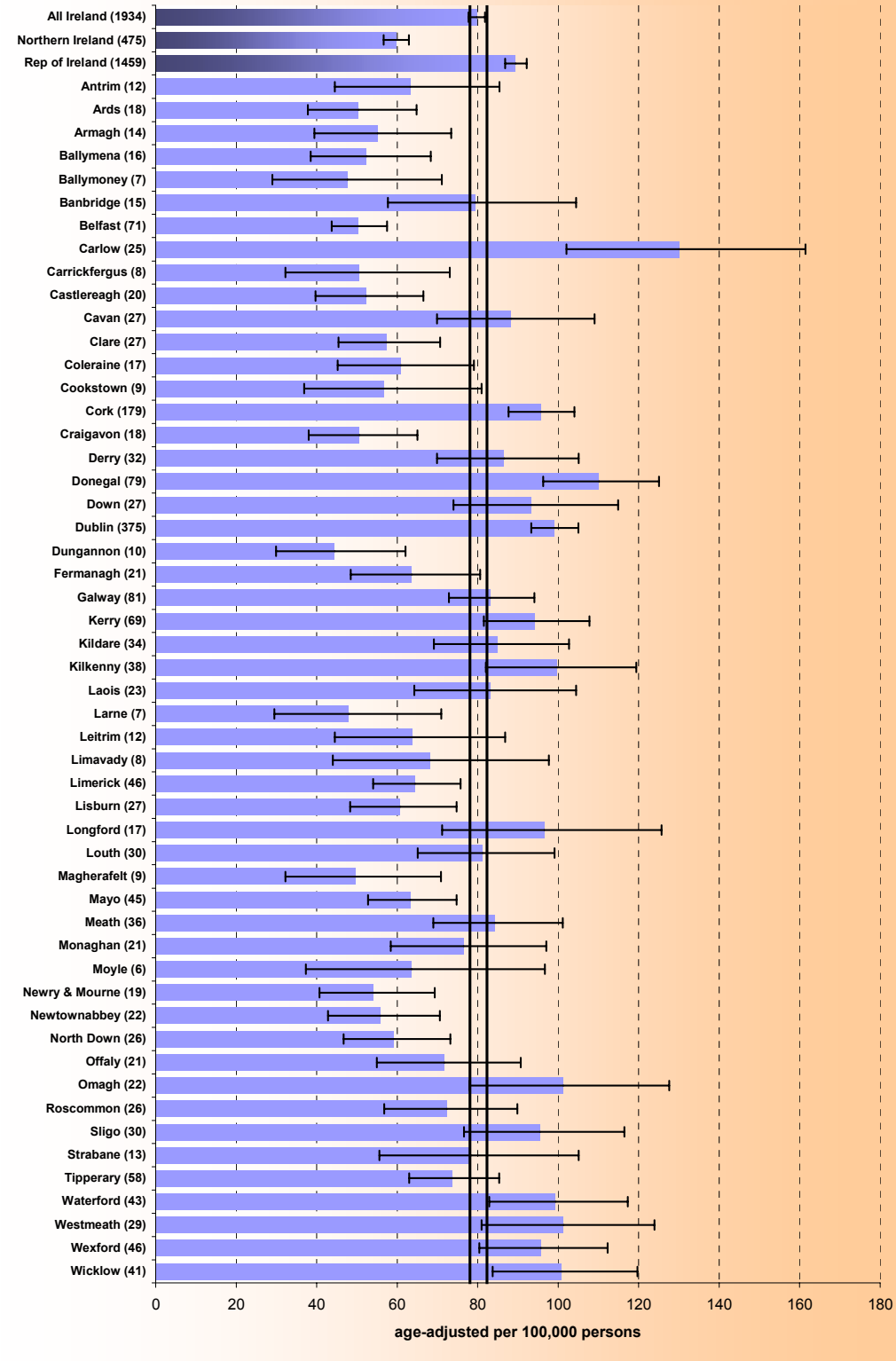


figure 10.8

1998-2000 age-adjusted mortality rates

prostate cancer by county/district council

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