

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

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 3.1
all childhood cancers incidence and mortality

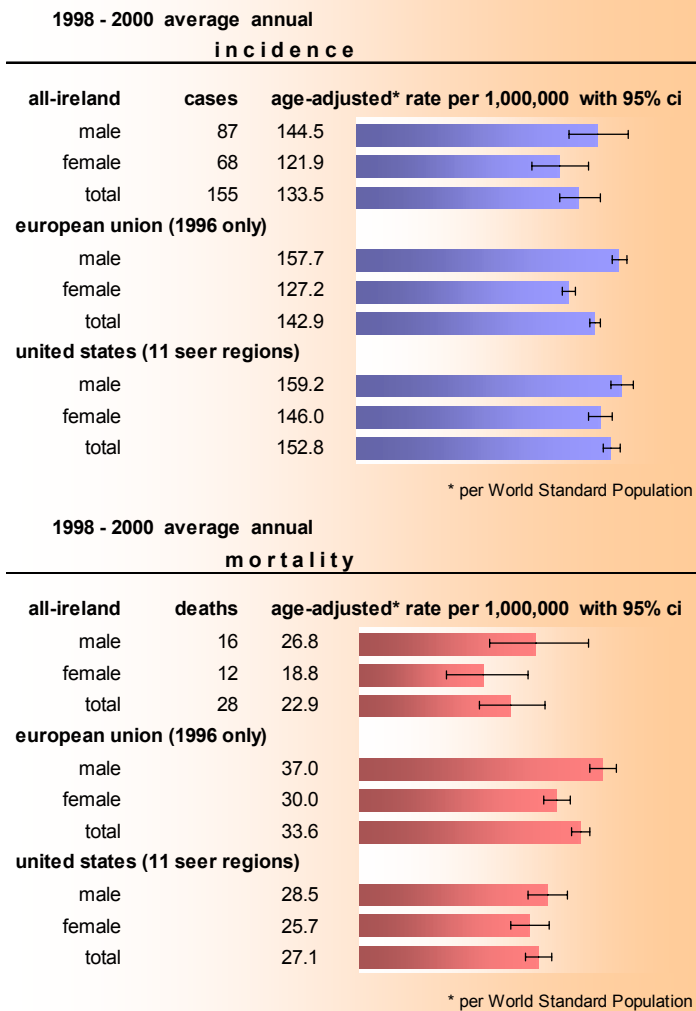


table 3.2
all childhood cancers 5-year relative survival (%)
children (0-14)

	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

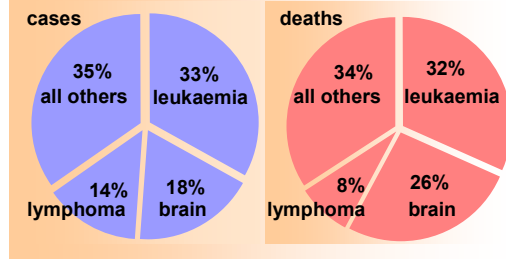
Distribution by type

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.

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.

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



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)

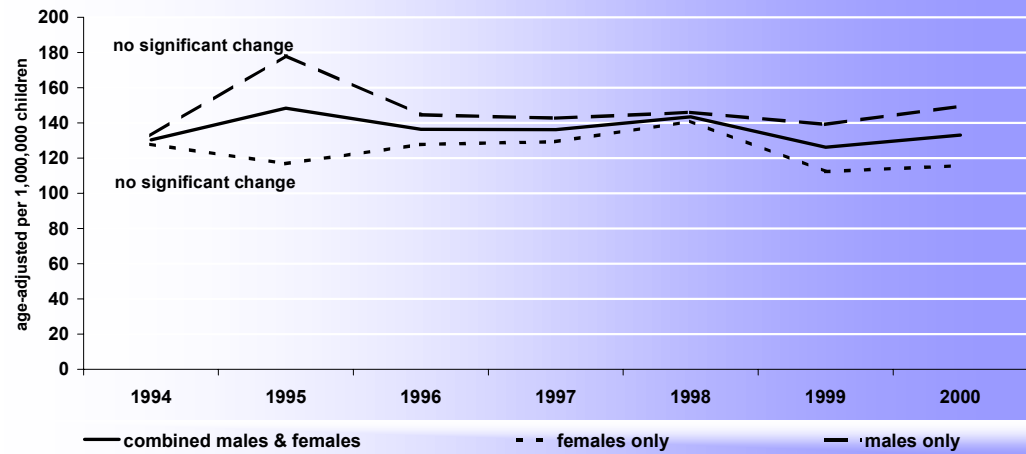
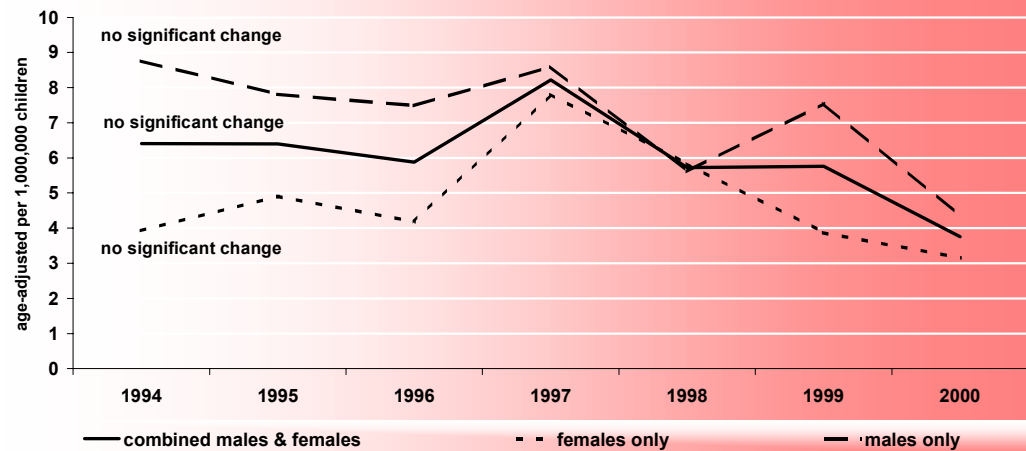
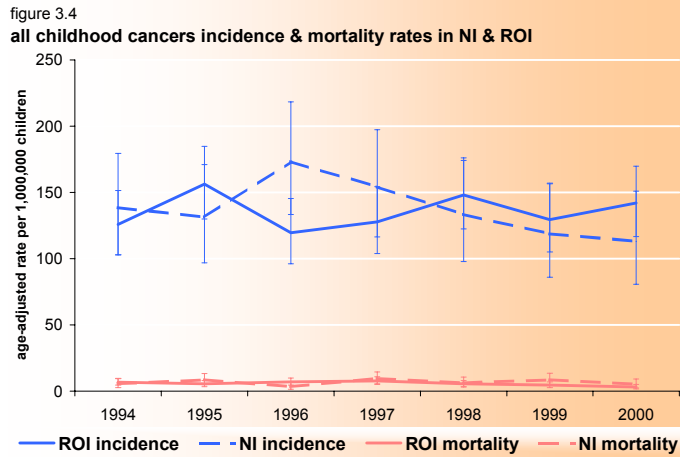


figure 3.3
all childhood cancers mortality rates by sex and year (1994-2000)



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.



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.

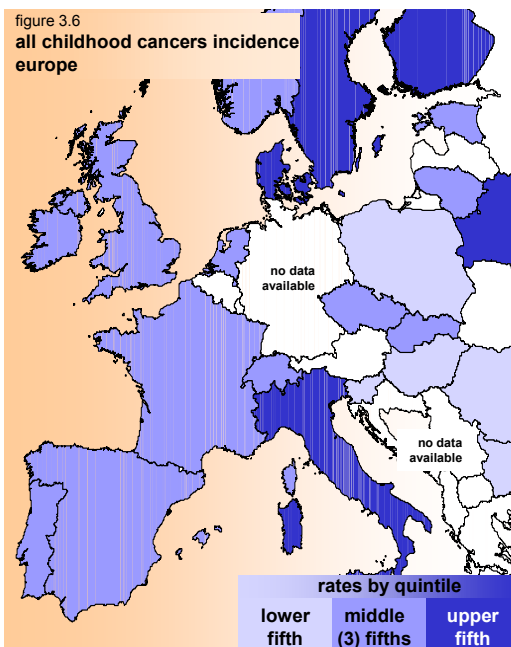
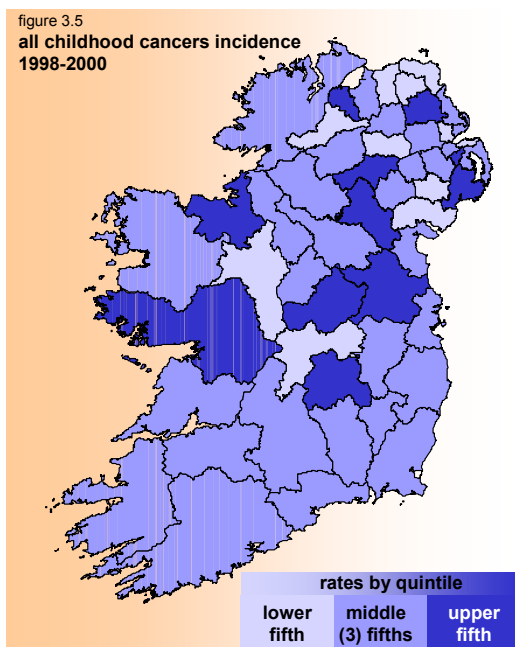


figure 3.7

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 |—|

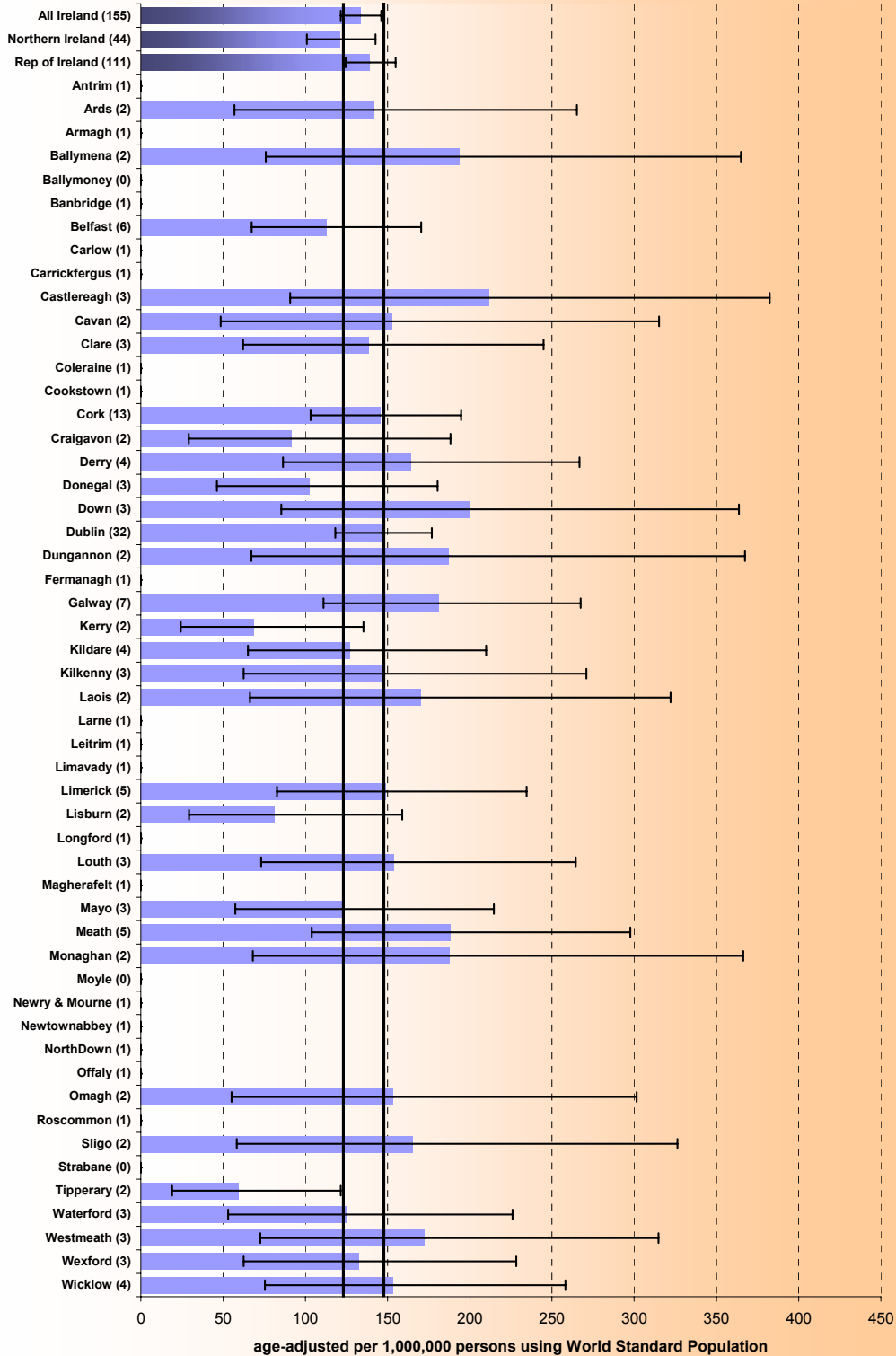


figure 3.8

**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 |—|

