4 Incidence and mortality tables

Guide to interpreting incidence and mortality tables

This section provides information to assist in the interpretation of the tables in this report. More detailed information on methods is given in Appendix B.

Table features

- Tables are ordered according to the International Classification of Diseases, 10th Revision.
- All rates are presented per 100,000 population.
- Age-standardised rates are calculated by the 'direct method' (see definition in Appendix B). Age-standardised rates for Australia use both the total 2001 Australian population and the new WHO World Standard Population as the standard populations. Previous Cancer Series publications have used the 1991 Australian Standard Population, thus special care needs to be taken when comparing the age-standardised rates from the current publication with those published in previous years. Age-standardised rates for the States and Territories use only the total 2001 Australian Population as the standard population. Particular care should also be taken not to compare these state and territory rates with previous Cancer Series publications—*Cancer in Australia 1989–1990 (with Projections to 1995)*, *Cancer in Australia 1986–1988* or *Cancer in Australia 1983–1985*—where age standardisation used the old World Standard Population.
- The person-years of life lost (PYLL) and lifetime risk estimates are for the ages 0–74 years.
- The confidence intervals used for crude and age-standardised rates are at the 95% level.
- The 'all cancers' incidence and mortality estimates exclude skin cancers other than melanoma.
- In this publication the term 'cancer site' is used to represent cancers located in specific organs or tissues as well as systemic cancers such as leukaemia and lymphoma.
- In this publication the term 'melanoma' refers to melanoma of the skin only. Melanomas generally occur on the skin, but may also occur on the eye and mucous membranes (such as the vaginal and nasal cavities).

Comparison of rates

Care should be exercised when interpreting a comparison between incidence or mortality rates—for example, when comparing different cancers or when comparing the same cancer

in different years. The confidence intervals indicate the likely range of fluctuation of each rate. Some fluctuations may be within expectations, while others may indicate a change in the patterns of cancer incidence or mortality. Where small annual numbers of cancer cases or deaths are presented in a table, a direct comparison may produce a false perception of dramatic changes over time and, in these instances, averages over a period of time should be used. In general, cancer incidence and mortality rates change relatively slowly over time, although from year to year there may be marked fluctuations due to significant changes in diagnostic procedures. Changes over the longer term may also reflect changing exposures to risk factors.

Combining rates

- Age-specific rates may be summed over cancer sites for a particular age and sex.
- Age-specific rates may not be summed across different ages or sexes, but should be recalculated from the raw data. However, if populations are similar, the crude rates for a 10-year age group will be approximated by the average of the two five-year age-specific rates. For comparison within broader age groups, summary rates should be age standardised.

State and territory data

In May 2003 cancer incidence data were available to 2000 for all states and territories.

The Australian data are presented as annual numbers and rates, while the data for each state and territory are presented as average annual rates and numbers of cases and deaths based on the five-year average 1996–2000. By presenting the data in this manner, natural statistical variation due to small numbers of cases or deaths within each state and territory and cancer site are averaged across the period and provide a more stable and representative rate of incidence or mortality. Nonetheless, care should be taken in the interpretation of these rates, especially for less common cancers or for states and territories with small populations.

All average numbers of cases or deaths per year in the state and territory tables are rounded to the nearest integer. Occasionally, the number of cases or deaths will be zero but a small corresponding rate will appear. This indicates that there were, on average, fewer than 0.5 cases or deaths per year over the five-year period and, although the rounding process has made the entry zero, a rate can still be presented at one decimal point.

The data in this report will not correspond exactly to data published by the individual state and territory cancer registries due to the 5-year annual averaging, the use of different standard populations for age standardisation and the continual updating of data sets by the cancer registries.

State and territory mortality rates in this publication refer to the state and territory in which deaths were registered. This means special care needs to be taken when interpreting these rates, especially for the Australian Capital Territory and the Northern Territory. Of cancer deaths registered in the Australian Capital Territory during the period 1996–2000, 17.3% usually resided in another state or territory. In this same period, 7.1% of cancer deaths of usual residents of the Northern Territory were registered outside the Territory (Table 3).

In this report, state and territory incidence and mortality rates have been directly age standardised to the total estimated resident population of Australia at 30 June 2001. Care should be taken not to compare these state and territory age-standardised rates with

previous Cancer Series publications—*Cancer in Australia 1989–1990 (with Projections to 1995)*, *Cancer in Australia 1986–1988* or *Cancer in Australia 1983–1985*—where age standardisation was done using the old World Standard Population. However, the NCSCH is able to provide state and territory rates that have been age standardised to the new WHO World Standard Population on request or the registries can be contacted directly.

Cancer incidence estimates provided in this publication were made at July 2003. These estimates may be updated at any time as case details are added, modified or deleted in the national database. These modifications may occur several years after the initial diagnosis as additional case details are received by the state and territory cancer registries from data suppliers and then passed to the NCSCH. This may have the impact of making incidence estimates for the same year incompatible between publications, but for the most part these changes are very small.