

# Introduction

D.M. Parkin

International Agency for Research on Cancer  
Lyon,  
France

The World Health Organization's guidelines for preparing national cancer control programmes (WHO, 1995) emphasize the different approaches to cancer control — (primary) prevention and early diagnosis and treatment. While primary prevention reduces the incidence of cancer, early detection strategies and treatment regimes aim to improve the outcome of incident cancer cases, by curing the cancer or by improving the quality and/or duration of life after diagnosis. Alongside information on incidence and mortality, survival statistics are a means of quantifying the effectiveness of these two interventions at the population level. Thus, information on survival has long been recognized as an important component in monitoring cancer control activities (WHO/IARC, 1979).

Like all other health indices, survival statistics are useful primarily as comparative measures — showing how survival differs between different populations over time, and between population subgroups (defined by, for example, age, sex, ethnicity or socioeconomic status). It is these comparisons that help us to suggest possible reasons for the variations and provide targets for improvement and a means of monitoring progress towards them.

For all these reasons, there has long been an interest in comparative statistics on survival from different countries. Because, as discussed below, it is essential to ensure that the different datasets really are comparable, the only meaningful comparisons concern outcome (survival) for the entire patient population, as obtained from population-based cancer registries, rather than statistics from single institutions. The factors governing admission to particular hospitals introduce a selection bias which invalidates any comparison of the effectiveness of therapy, which is generally the main concern of such hospital-based analyses, at least implicitly.

Of course, population-based survival cannot normally be used to assess the efficacy of specific anticancer therapies. That is the role of the randomized controlled clinical trial, in which the effect of therapy can be evaluated irrespective of other prognostic factors. Population-based cancer registries also provide very limited information on

variations in survival with respect to different prognostic factors (size and spread of the tumour, presence or absence of tumour markers, etc.) compared with data derived from specialized oncology services. Rather, population-based data summarize the experience of the totality of cancer patients — including those who receive no treatment whatsoever — and so permit valid and unbiased comparisons between populations and over time. Their weakness lies in the limited information available about the reasons for the differences observed. This point is discussed further in Chapter 4 'Interpretation of population-based cancer survival data'.

Compilations of population-based survival statistics from several countries have been published over the years (Cutler *et al.*, 1964; Logan, 1978; Berrino *et al.*, 1995). All concern data from cancer registries in Europe and the USA. To date, there have been no comparative analyses of data from other areas of the world, although by 1990 about 55% of new cancer cases annually were occurring in Asia, Africa, Latin America and the Caribbean. This volume aims to fill this important gap by providing such data, which have been analysed using a common methodology, and are presented so as to facilitate comparisons both within the volume, and with data from cancer registries elsewhere. As well as being important for the planning and evaluation of cancer control activities in the countries concerned, the datasets presented in this volume permit comparison with statistics from countries where facilities for diagnosis and treatment are more readily available to cancer patients, as well as being more advanced technologically. This should highlight areas where improvement in outcome is technically feasible. Whether resources should be devoted to securing improvements, and the optimum mix of services to achieve them, will require careful weighing of priorities in the face of limited resources.

## References

Berrino, F., Sant, M., Verdecchia, A., Capocaccia, R., Hakulinen, T. & Estève, J., eds. (1995) *Survival of Cancer*

- Patients in Europe: the EURO CARE Study* (IARC Scientific Publications No. 132). Lyon, International Agency for Research on Cancer
- Cutler, S.J. (1964) *International Symposium on End Results of Cancer Therapy*. (National Cancer Institute Monograph No. 15). Washington, DC, National Cancer Institute
- Logan, W.P.D. (1978) Cancer survival statistics: international data. *World Health Statistics Quarterly*, **31**, 62-73
- WHO (1995) *National Cancer Control Programmes: Policies Managerial Guidelines*. Geneva, World Health Organization
- WHO/IARC (1979) *Cancer Statistics: Report of a WHO/IARC Expert Committee* (WHO Technical Report Series, No. 632). Geneva, World Health Organization