Population-based incidence and mortality cancer trends (1986–1997) from the network of Italian cancer registries

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The objective of this study was to analyse incidence and mortality cancer trends in the Italian Network of Cancer Registries (about 8 000 000 inhabitants) during the period 1986–1997. Included were 525 645 newly diagnosed cancers and 269 902 cancer deaths (subjects > 14 years). Joinpoints (points in time where trend significantly changes from linearity) were found and estimated annual percentage changes (EAPC) used to summarize tendencies. Overall cancer incidence increased in both sexes and cancer mortality significantly decreased (since 1991 among men). Lung cancer showed significantly decreasing incidence (EAPC = −1.4%) and mortality (EAPC = −1.6%) among men and increasing trends among women. In women, breast cancer incidence significantly increased (EAPC = +1.7%) and mortality decreased since 1989 (EAPC = −2.0%). Stomach cancer incidence and mortality decreased in both sexes. Prostate incidence sharply increased since 1991 and mortality decreased. Colon cancer incidence increased and rectum mortality decreased significantly in both sexes. Significant increases in incidence were also found for kidney (up to 1991 among men), urinary bladder, skin epithelioma, melanoma, liver (up to 1993 among men), pancreas, mesothelioma, Kaposi’s sarcoma (up to 1995 among men), testis, thyroid, non-Hodgkin’s lymphomas and multiple myeloma. Mortality significantly decreased for cancers of the oral cavity and pharynx, oesophagus, liver (women), larynx (men), bone, cervix (since 1990), central nervous system, urinary bladder, thyroid, Hodgkin’s lymphomas and leukaemias (men). Non-Hodgkin’s lymphoma mortality increased in both sexes. In conclusion, most of the changes seen can be explained as the effect of changes in smoking habits and of the extension of secondary prevention activities. The Italian health care system will also have to cope with growing cancer diagnostic and therapeutic needs due to population ageing.

Keywords: Cancer incidence, epidemiology, mortality, population-based, registry, trends

Introduction

Monitoring of cancer incidence and mortality trends is crucial for evaluating changes in population lifestyle, environmental risks and health care effectiveness. Reports showing significant recent changes in cancer incidence and mortality trends have been published in North America (Weir et al., 2003; http://seer.cancer.gov; http://www.cancercare.on.ca) and in some western countries (Quinn et al., 2001; Van Dijck et al., 2002; Levi et al., 2003). The epidemiology of some relevant cancer sites is changing due to modification of risk factor exposure, such as for lung and other smoking-related cancers, but also due to the diffusion of early diagnosis activity [e.g. prostate specific antigen (PSA) testing for prostate cancer] or organized screening programmes (Quinn, 2003). Moreover, progression in therapy have contributed to decreasing mortality for some cancers (e.g. testis) (Classen et al., 2003) and breast neoplasms (Collaborative Group on Hormonal Factors in Breast Cancer, 1997).

Cancer registration started in Italy during the late 1970s relying on local registries; now more than 13 000 000 inhabitants, almost a quarter of the overall Italian population, live in areas where a cancer registry is active (Zanetti et al., 2002). The Network of the Italian Cancer Registries (AIRT) has already published incidence, mortality and survival reports (Zanetti et al., 1997; Rosso et al., 2001; Zanetti et al., 2002).