Young adults: a unique group in cancer epidemiological research

We read with great interest the results of the population-based study by Miranda Fidler and colleagues,[1] quantifying the global cancer burden among young adults. The authors show that cancer incidence and mortality among 20–39 year-olds differs from that of younger and older age groups. They also illustrate the heterogeneity of cancer types in young adults when stratified by age, sex, national development level, and geographical region. However, on the basis of the 10th revision of the International Classification of Diseases (ICD-10), the authors describe the cancer burden of the 27 major cancer types in adults, resulting in an over-representation of tumours common among older adults (eg, prostate cancer) and under-representation of paediatric tumours and cancers that are typical in young adults. For example, sarcomas other than Kaposi's sarcoma are not described, despite being among the ten most common cancer types in young adults.[2,3]

In people aged 20–39 years, the overall incidence of cancer increases exponentially as a function of age, with most tumours, including carcinomas and non-Hodgkin lymphoma, following this pattern. By contrast, paediatric cancers, such as acute lymphocytic leukaemia and (embryonal and alveolar) rhabdomyosarcoma, show decreasing incidence in young adults, whereas other tumours have a peak incidence between 20–39 years of age (eg, Hodgkin's lymphoma and germ cell testicular malignancies).[4] ICD-10 categorises malignancies according to organ of origin, because adult cancers are predominantly epithelial neoplasms arising from a certain organ. However, this approach does not accurately depict the distribution of malignancies in the young adult age group. For example, ICD-10 registers ovarian cancer but does not have a specific category of germ-cell tumours, which are more typical among young adults and have a distinct biology, chemosensitivity, and prognosis. The histology-based adolescent and young adult tumour classification system, developed by Birch and colleagues, takes into account the unique features of this age group[4,5] and should be recommended in epidemiological research about young adult cancer.

Although the authors mention their cancer selection and classification as a study limitation, they do not acknowledge that it might lead to underestimation of malignancies that are common and well known in this age group. In view of the challenges of early detection, diagnosis, treatment, and follow-up in young adult patients with cancer, and the need to develop cost-effective young adult care programmes, the number and distribution of tumours must reflect the reality. This emphasis could also help to determine appropriate resource allocation for age-adjusted research and ultimately improve outcomes for this unique population.

We declare no competing interests.

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