



Population-based study of cancer survival shows inequalities in Africa, Asia and Central America

LYON, FRANCE---A major new study led by the International Agency for Research on Cancer and published in *The Lancet Oncology* has illustrated the stark inequalities in cancer survival depending on where a person lives in the world. Those in less-developed countries have markedly poorer life expectancy after diagnosis with cancer than do those in more-developed ones; for example, breast cancer survival 5 years post-diagnosis ranged from a mere 12% in The Gambia to nearly 80% in South Korea. The study examined cancer survival across entire populations using information from cancer registries, as opposed to estimates made from selected groups of patients, for example those attending particular hospitals. The study highlights the need for urgent, adequate investment in comprehensive cancer control, including improving public and professional awareness, early detection, prompt treatment, health services infrastructure, and human resources development, and ensuring referral pathways and equitable accessibility to health services.

Cancer survival data: a key indicator of success in the fight against cancer

Almost all cancers kill unless detected early and treated adequately. Long-term survival from cancer, such as surviving for five years or more after diagnosis, may reflect cure and is a positive-sounding measure that can be used by planners, the public, doctors and patients to measure and discuss the outcome of cancer diagnosis and success of treatment. However, survival rates estimated from specific hospitals and clinical trials reflect only the experience of selected groups of patients seeking care in those settings, and thus cannot be generalised as reflecting the overall efficiency of cancer health services in a given region or country.

Population-based cancer survival rates reflect the efficiency of cancer health services

On the other hand, population-based survival, which is estimated from cancer registries recording all cancer patients diagnosed in a given geographical region or country, captures the influence of different socio-economic factors, natural histories of disease, health-seeking behaviours, awareness, early detection practices and treatment availability and accessibility in the public health services. Such estimates reflect the general efficiency of cancer health services and provide a key indicator for progress in cancer control in a given region. Traditionally, systematic, population-based cancer survival information has been regularly published for Europe, the USA and other more-developed countries. However, these types of studies were relatively rare from developing countries in Africa, Asia and South America. This paucity of data was in part offset by the publication of the first volume of the International Agency for Research on Cancer (IARC) monograph on cancer survival in developing countries in 1998.



Dire need for population-based cancer survival information from developing countries

The new IARC study is the second in a series that has systematically and centrally analysed survival experience of cancer patients diagnosed with one of the 10 cancers studied during 1990–2001 in 25 regions from 12 countries, mainly low-income or middle-income countries, from Africa, Asia and Central America. “This study involving 340 000 cancer patients from a wider geographical region of the world provides important insights into cancer survival patterns in developing countries and is a unique example of cooperation at the international level for improvements in cancer control,” said Dr Christopher Wild, Director of the IARC. Considerable efforts were taken to improve follow-up for vital status of included cancer patients and data quality; however, some level of overestimation of survival cannot be ruled out. The understanding and applicability of cancer survival estimates can be further improved by better collection of data for clinical stages and treatment of cancer, as well as for vital status by the population-based cancer registries.

Variations in cancer survival reflect degree of awareness and detection practices as well as disease management

“Five-year survival ranged from 12% for breast cancer in The Gambia to 80% in South Korea; and for large bowel cancer it ranged between 60% in South Korea to less than 10% in The Gambia and Uganda in sub-Saharan Africa,” said Dr Rengaswamy Sankaranarayanan, the principal author of this study and head of the IARC Early Detection and Prevention Section. “These striking differences in cancer survival between countries and within countries are largely related to differences in general awareness, early detection practices, availability of trained human resources, diagnosis and treatment, and development and accessibility to cancer health services, and to a lesser extent to data quality and reliability issues,” added Dr Wild. “A key message for oncologists and health planners must be that cancer survival in many developing countries is abysmally low,” concludes Dr Michael Coleman from the London School of Hygiene and Tropical Medicine in an accompanying invited commentary in *The Lancet Oncology*.

Overall investment called for in comprehensive cancer control

The findings described in this paper emphasise the need for urgent and adequate investment in comprehensive cancer control, including improving public and professional awareness, early detection, prompt treatment using locally-feasible yet effective regimens, health services infrastructure, human resources development, and ensuring referral pathways and improved and equitable accessibility to health services. Unfortunately, to date, such investments have not been made in many sub-Saharan African countries, and the poor survival rates there confirm this. The differences in cancer survival reported in populations observed between and within the countries studied provide valuable insights for future planning and investments by governments in primary prevention activities, early detection initiatives and tertiary care to achieve meaningful cancer control.

Acknowledgements

This study was conducted with active collaboration from population-based cancer registries in the 12 countries included in the study. The study was supported by the Association for

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LYON, FRANCE**

International Cancer Research (AICR; St Andrews, UK), Association pour la Recherche sur le Cancer (ARC, Villejuif, France), and the Bill & Melinda Gates Foundation (Seattle, USA).

Article reference: Sankaranarayanan R, Swaminathan R, Brenner H, et al. Cancer survival in Africa, Asia, and Central America: a population-based study. *The Lancet Oncology*, Early Online Publication, 10 December 2009. doi:10.1016/S1470-2045(09)70335-3

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The International Agency for Research on Cancer (IARC) is part of the World Health Organization. Its mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The Agency is involved in both epidemiological and laboratory research and disseminates scientific information through publications, meetings, courses, and fellowships. If you wish your name to be removed from our press release e-mailing list, please write to com@iarc.fr.

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