

Priority areas of cancer research in India: the clinician's perspective

Editorial

GLOBOCAN 12 September 2018 released a new global cancer data which suggests that the global cancer burden has risen to 18.1million cases and 9.6million cancer deaths. Asia constitute 48.4%. Europe 23.4% and America 21% of total cancer burden. International Agency for Research on Cancer (IARC) estimate that 1/5 of man and 1/6 of women are going to suffer cancer in their lifetime where 1/8 men and 1/11 women likely to succumb to it. A number of un-modifiable factors appear to be driving this increase, particularly a growing and ageing global population and increase in exposure to cancer risk factors linked to social and economic development. For rapidly-growing economies, the data suggests a shift from poverty- or infection-related cancers to those associated with lifestyles more typical in industrialized countries. Here India is still in medium Human Development index category. The Human Development Index (HDI), a composite measure of educational attainment and life expectancy, as well as level of income, is the best contemporary measure for socioeconomic development of countries. Ironically the high human development index is proportional rise in incidence of cancer. So a bigger and larger question is how the development is inadvertently risking human race into cancer?^{1,2}

In India, in 2018 over 1.1million new cancer patients were registered and 0.78 million people died of cancer. More than 80% of cancers in India present in advanced stages which makes their management a difficult task. Patients with cancer have a poorer prognosis in low- and middle-income countries (LMIC's) including India because of presentation at advanced stages, relatively low cancer awareness and skewed distribution of cancer care facilities.^{3,4}

In contrast to pattern of Global incidence of cancer with Lung, Breast, Colorectum, Prostate and Stomach on top 5, India shows different set of data as the top rankers. Irrespective of sex and age, breast, lip/oral cavity, Uterine Cervix, Lung and Stomach on top of the list. So priority areas of emphasis on research from clinician's point of view have to differ from rest of basic science researchers. The research priority again has to take consideration of the substantial heterogeneity in India the state-level incidence rate and health loss trends of the different types of cancer in last 3 decades. It is highly essential to set the both short term and long term taken into account when setting the objective of cancer research at clinical perspective. One area where very important to look at is to set a goal to encourage research to fill the gaps in some fundamental needs. The infrastructure and human resources for all components of cancer control at both the national and state levels are crucial. It must be only hospital or laboratory oriented research. These efforts should focus on the commonest cancer Region wise such as Esophageal cancers in North Eastern states in India in addition to breast, lip and oral cavity, and cervical cancer, which are currently the focus of screening and early detection programs. The following could be put forward as few priority areas of research⁴⁻⁶

- i. To bring policy to reduce risk factors such as tobacco consumption and food safety with strict regulation in use of chemicals as insecticides in paddy fields or tea plants
- ii. The design and development of simple and low cost screening

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tools to be used in community in Indian context for screening of cancers, Oral Breast, Uterine Cervix, Esophagus, etc keeping in infrastructure and human resource in peripheral health centers

- iii. To understand the diverse risk factors of different regions and its driving biology to carcinogenesis, so collaboration between basic and clinical researchers such as causes of high esophageal cancers in North East, or Gall bladder Cancer in Northern and Eastern India.
- iv. As diagnosis takes place in advanced stage and poor performance status at presentation, so research efforts to develop cost-effective and less toxic protocols for Chemo- palliation, Clinical trials should be Indian data based
- v. High Human Development Index and relation to evolution of cancers or rather how it is risking in carcinogenesis could one of long term research goal of social scientists and Cancer Biologists.

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Conflicts of interest

Author declares that there is no conflict of interest.

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