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2021

Profile of Cancer and Related Health Indicators in the North East Region of India

10
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ICMR - National Centre for Disease Informatics and Research, Bengaluru

Profile of Cancer and Related Health Indicators in the North East Region of India

ICMR – National Centre for Disease Informatics and Research, Bengaluru

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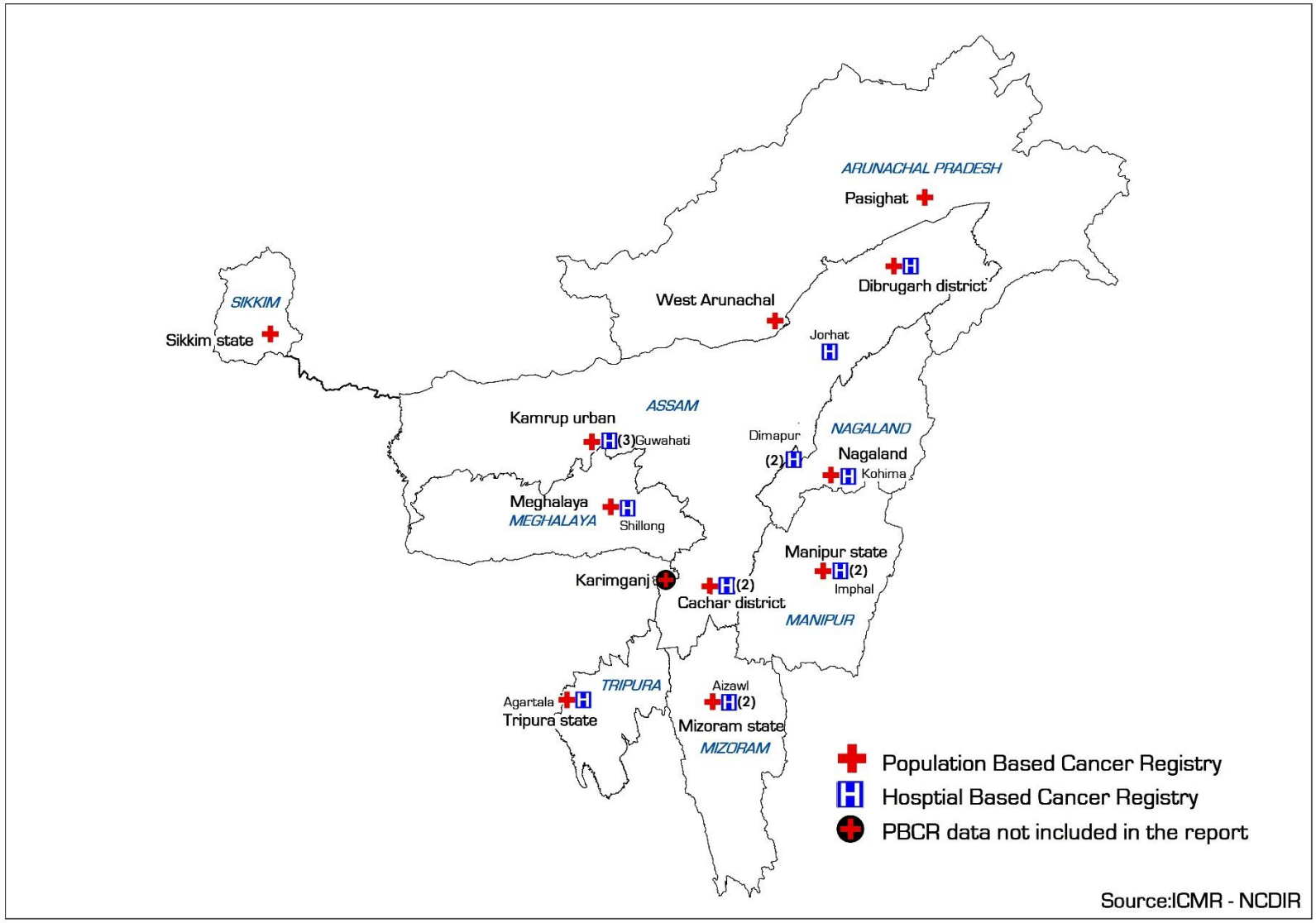
Network of PBCRs and HBCRs in North East India



Message

सत्यमेव जयते

प्रोफेसर (डा.) बलराम भार्गव, पदम श्री
एमडी, डीएम, एफआरसीपी (जी.), एफआरसीपी (ई.), एफएसीसी,
एफएएसए, एफएनमएस, एफएनएएस, एफएएससी, एफ.एन.ए., डी.एस.सी.
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महानिदेशक, आई सी एम आर

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MESSAGE

I am pleased that ICMR-National Center for Disease Informatics and Research (NCDIR), Bengaluru has prepared a report on **'Profile of cancer and related health indicators in the Northeast Region of India'**. The National Cancer Registry Program (NCRP) network has been progressively improved its coverage since its inception in 1981, and at present, comprehensively covers the eight states in the region.

This report will be a prime source of information on cancer data for the region and be widely used by health officials, programme managers of state government and other sectors to frame cancer control measures. The previous report in 2017 proved to be very useful advocacy tool in engaging with relevant stakeholders.

I congratulate the NCRP investigators and staff in NER and at ICMR-NCDIR, Bengaluru for bringing out this useful report which is vital for addressing cancer control in NER. It would also encourage appropriate research activities to be undertaken to find solutions to the high cancer burden.

Balram Bhargava

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Foreword

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11th January, 2021

Foreword

Since its inception in 1981, the ICMR National Cancer Registry Programme (NCRP), run by the ICMR- National Center for Disease Informatics and Research (NCDIR), Bengaluru, has played a crucial role in cancer surveillance in India by generating robust and timely cancer epidemiology data. The NCRP has expanded over the years and is presently functioning through a network of 238 Hospital-based and 38 Population-based cancer registries (HBCRs' and PBCRs). The programme has succeeded in achieving comprehensive coverage of the eight states in the Northeast Region (NER), through the 12 PBCRs' and 15 HBCRs'. The NER reports the highest incidence of cancer in the country for several decades.

The report **'Profile of cancer and related health indicators in the Northeast Region of India'** is an outcome of the relentless efforts of all the cancer registry investigators and staff in NER who have collected the data. It provides a broad overview of the magnitude of cancer in the region through incidence, mortality, leading sites and clinical data on staging and treatment for the data collected by the NER registries from 2012-2016. It also describes the health indicators concerning cancer, which could be associated with cancer incidence and disease outcome. The inclusion of Geographical Information System (GIS) based maps on projected age-adjusted rates of leading cancer sites is a new feature of the report.

I hope that this report will receive wide acceptance among relevant stakeholders and the community to culminate into effective cancer prevention and control in the region.

Prof. G.K. Rath

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Preface

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ICMR - National Centre for Disease Informatics and Research
Department of Health Research, Ministry of Health and Family Welfare, Government of India

Preface

The ICMR National Cancer Registry Program (NCRP) was initiated in 1981, and is presently run by the ICMR-National Center for Disease Informatics and Research, Bengaluru. NCRP has expanded in phases in India's North Eastern states since 2003. At present, there are 12 population based and 15 hospital based cancer registries collecting cancer-related data for all groups and both genders. The PBCRs' cover a varying proportion of rural and urban areas and fully cover Sikkim, Manipur, Tripura, and Mizoram.

The report **'Profile of cancer and related health indicators in the Northeast Region of India'** provides cancer data for all NER states for the period 2012-2016. It also includes data on the health indicators from reliable data sources for each state. The cancer statistics are provided for the region in pooled figures and according to state. The indicators of health-related behaviour and health system status in the state could be related to the magnitude of cancer. This data combination will reflect the regional disparity in the distribution of cases and inequities in the health system.

The report contains a section on implications for officials involved in programme implementation and policymaking, and will also find use with cancer care professionals, including clinicians, researchers, academicians and stakeholders from other sectors. It will be a useful tool to drive policy and program towards improving cancer prevention and control advocacy efforts in the entire NER.
This report is a contribution to the 40th year celebrations of NCRP.

Prashant Mathur

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Acknowledgement

We are pleased to bring the Report on '**Profile of cancer and related health indicators in the Northeast Region of India**'.
At the outset, we acknowledge the role of all Principal Investigators, Co-Principal Investigators and registry staff of the population and hospital-based registries, for their constant and diligent efforts in running the registries and playing an essential role in cancer surveillance in the region.

We are grateful to all the esteemed members of the Research Area Panel for Cancer and Scientific Advisory Committee of NCDIR for their constant support and guidance for the National Cancer Registry Programme and providing vital inputs for strengthening registry activities in the country, especially in the Northeast Region.

We would like to heartily acknowledge the visionary guidance and support of Dr Balram Bhargava, Secretary, DHR and DG ICMR, for his encouragement and support to expand and strengthen cancer surveillance in the country to address cancer control.
We sincerely acknowledge Dr Prashant Mathur's leadership role, for encouraging and enthusing the NCDIR team to translate cancer data into meaningful actions that could enable robust programmatic and policy measures for cancer prevention and control.

We also thank the scientific, technical and administrative team of ICMR-NCDIR for running the NCRP efficiently.

Anita Nath, Scientist E
Priyanka Das, Scientist D
Sathish Kumar, Scientist C

Executive Summary

About NCRP

The National Cancer Registry Programme (NCRP) has been an integral part of cancer surveillance in the country since 1981. The ICMR - National Center for Disease Informatics & Research (NCDIR) at Bengaluru is the managing and co-ordinating institute and provides the necessary technical, financial and logistic support to the NCRP. There has been a steady increase in the number of registry sites over the years. At present, NCRP is functioning through a network of 238 Hospital based Cancer Registries (HBCRs') and 38 Population Based Cancer Registries (PBCRs'). The PBCR has a range of sources of registrations (hospitals/laboratory and diagnostics centres/ peripheral health centres and hospices) within a well-defined geographic area. The HBCR compiles information on cancer cases from the concerned departments within a hospital. The registry provides comprehensive coverage in all the Northeast Region's eight states through twelve PBCRs' and fifteen HBCRs'. The NCRP has played a vital role in estimating and monitoring the incidence, mortality, patterns and projected number of cancer cases, evaluate the quality of care and cancer control programmes and essential inputs for programme, policy and research.

NER report of 2012-2016

The NER report of 2012 to 2016 includes cancer data compiled by eleven PBCRs in all the eight states, and seven HBCRs in four states (Assam, Manipur, Mizoram and Tripura) in the region. The report presents a state-wide cancer profile based on a pooled analysis of PBCR and HBCR data, and state-wise cancer profile estimated from PBCR data. The state-wide report of pooled data also includes analysis of cancer incidence for specified districts-Imphal West (Manipur), Aizawl (Mizoram), East Khasi Hills (Meghalaya) and Papumpare (Arunachal Pradesh). The state-wise presentation of cancer data is supported by a preceding description of relevant health indicators obtained from reliable data sources. The health indicators include socio-demographic profile, behavioural and metabolic risk factors, health-seeking behaviour and health system status in terms of infrastructure and medical certification of cause of death. While these health indicators could determine the cancer incidence, type and disease outcome, it provides further scope for planning cancer-directed planning and control strategies and strengthening the health system. The cancer data for each state is based on PBCR data analysis and is presented registry wise for those states having more than one PBCR. The cancer data in this report is a subset of the Report of National Cancer Registry Programme 2020.

Key findings

- The highest age-adjusted cancer incidence rate in males (269.4 per 100,000) has been recorded in the Aizawl district in Mizoram, among females (219.8 per 100,000) in Papumpare district, Arunachal Pradesh, which happens to be the highest in the region and the country.
- In males, the leading sites include cancer of the oesophagus (13.6%) followed by lung (10.9%), while in females, the breast is the leading site (14.5%), followed by the cervix uteri (12.2%).
- The probability of developing any cancer over a lifetime is highest in Kamrup urban (1 in every 4 males and 1 in every 6 females). In males, the probability of developing oesophageal cancer (1 in every 54 males) is highest, while in females, it is breast cancer (1 in every 76 females).
- The proportion of tobacco-related cancer sites is 49.3% in males and 22.8 % in females.
- Less than one-third of breast, cervix, head and neck, stomach and lung cancer is localized at the time of diagnosis.
- The age-specific incidence rate in both genders is highest in 70 to 74 years in most of the registry sites.
- The proportion of cancer patients seeking treatment outside NER is highest for Sikkim (95.3%) followed by Nagaland (58.1%).
- The projected number of cancer cases for 2020 was calculated to be 50317, while for the year 2025, is estimated to be 57,131.
- In all the states, the age-adjusted incidence is higher in males than females except in Manipur and Sikkim.
- Among females in Arunachal Pradesh and Tripura, the age-specific incidence rate is highest in the 60-64 years age group, unlike other registry sites where maximal rates are recorded in higher age groups.
- The most common leading sites in males include cancer of the oesophagus, lung and stomach.
- Cancer of the gall bladder is observed to be one of the top five leading cancer site among women in Assam, and there is a significant increase in gall bladder cancer incidence in Kamrup urban.
- In females, cancers of the breast and cervix are the first leading sites in most registry sites, except for stomach cancer in West Arunachal and oesophageal cancer in Meghalaya.
- The case-fatality ratio is higher in males than in females.

The report highlights that cancer continues to be a major public health concern in the region. The findings call for proactive initiatives from all concerned stakeholders to assess the efficacy of existing measures and plan and develop evidence-based strategies to address the region's growing cancer burden. This report should be able to provide a background to develop a comprehensive cancer prevention and control plan for the entire North East Region.