

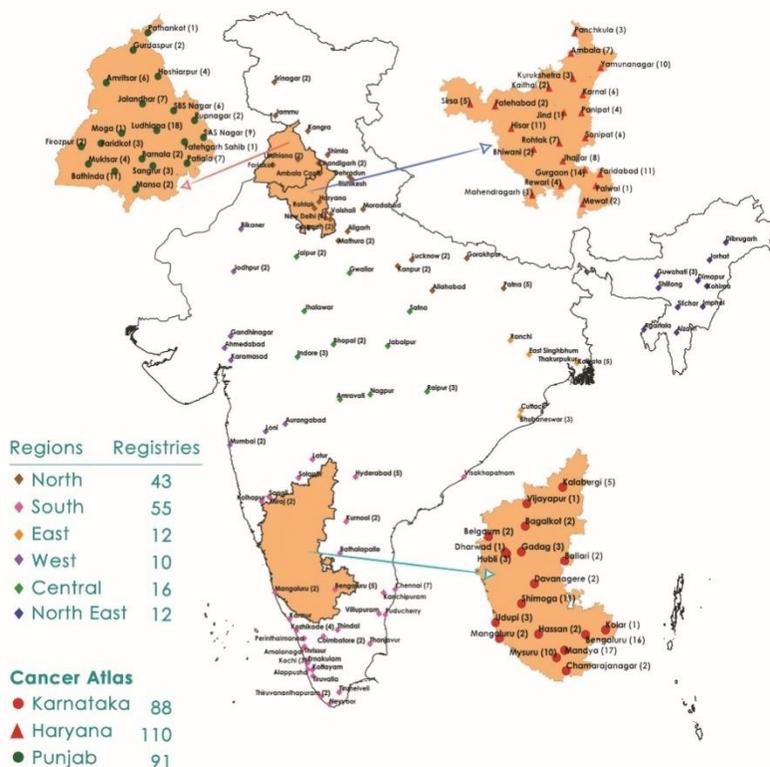
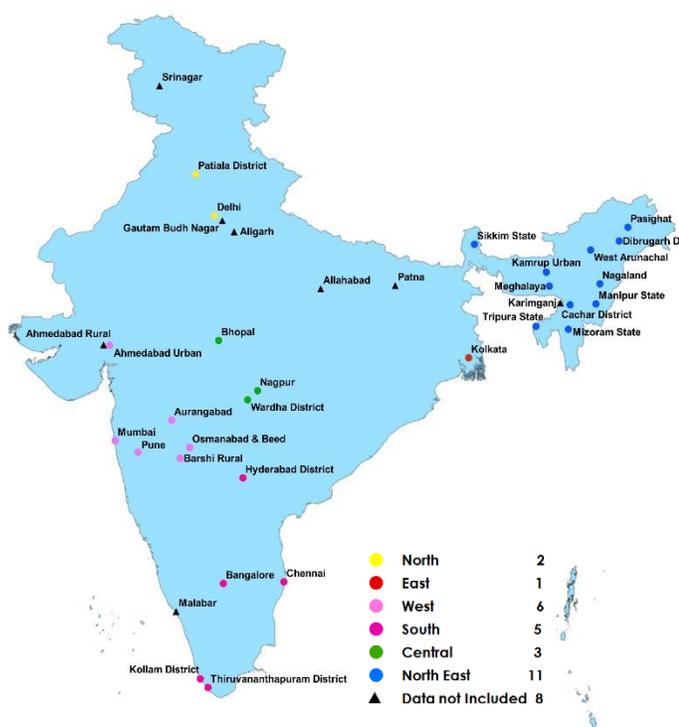
# POLICY BRIEF

## Report of National Cancer Registry Programme, 2020

- NCRP is the largest network of cancer registries in India since 1982.
- Cancer registries form an important component of cancer prevention and control.
- Benefits of using information technology play an important role for cancer registries.

The **National Cancer Registry Programme** (NCRP) was initiated by the Indian Council of Medical Research in 1982 at select hospitals in the country. Now it is a vibrant network of 36 Population and 236 Hospital Based Cancer Registries (PBCR, HBCR respectively) which is coordinated and steered by the ICMR National Center for Disease Informatics and Research, Bengaluru. Since then it has continuously and systematically collected data on cancer incidence, mortality, clinical aspects of cancer, thus allowing for estimation of trends, survival and burden of disease. The information forms the 'health intelligence' for cancer control in India. Cancer registration in India uses active method of case detection and follow up. As cancer is not a notified disease, therefore is not mandatory to be reported upon by healthcare facilities to authorities. The consolidated NCRP report, 2020 is based on the data from 28 PBCRs and 58 HBCRs whose data sets were complete and satisfactory for analysis and reporting for the period 2012-2016.

### The PBCR and HBCR Network



## Informatics Driven NCRP

Cancer registration implies to a continuous systematic collection of cancer data on standardized formats by the cancer registries. Innovation of software application at NCDIR-NCRP has driven the cancer registration in India and the benefits have been substantial. The indigenously developed PBCRDM 2.1 software runs the quality checks, matching and duplicate check in order to clean the data for analysis. An additional Phonetics software is also used in PBCR only to capture the similar sounding duplicate names, spelt differently. Development of bulk deletion software has made the task of duplicate deletion much easier by deleting huge number of duplicates rapidly. HBCRDM software is being used widely to capture the cancer patients identifying, diagnostic and treatment information of cases registered in registered hospitals.

- Data assessments by PBCR provide important insights of leading sites of cancer in different areas.

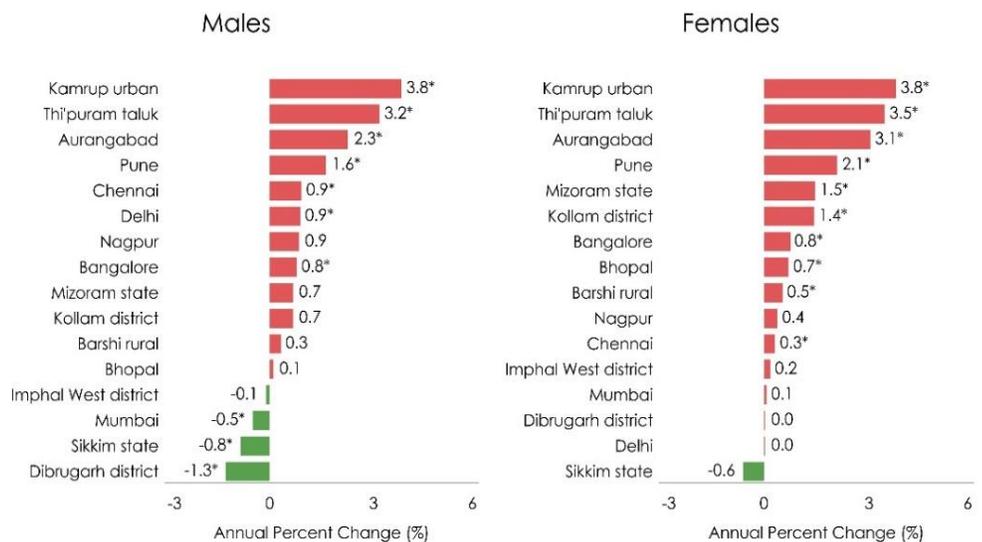
## Summary of Population Based Cancer Registries

A PBCR collects data throughout the year from all facilities which diagnose and treat cancer in a well- defined geographic area (as per census), and includes persons of all age groups and gender who have been residing there for at least 1 year.

## Changing Incidence of Cancer

16 PBCRs had consistent data of more than a decade for all sites of cancer, and were considered for generating evidence of rising incidence of cancer calculated as the Annual Percentage Change (APC). In males, 4 PBCRs and 1 PBCR for females showed declining overall rates of cancer, while the others had rising rates.

- Sikkim state has shown decreasing trend of cancer (combining all sites) for both sexes.

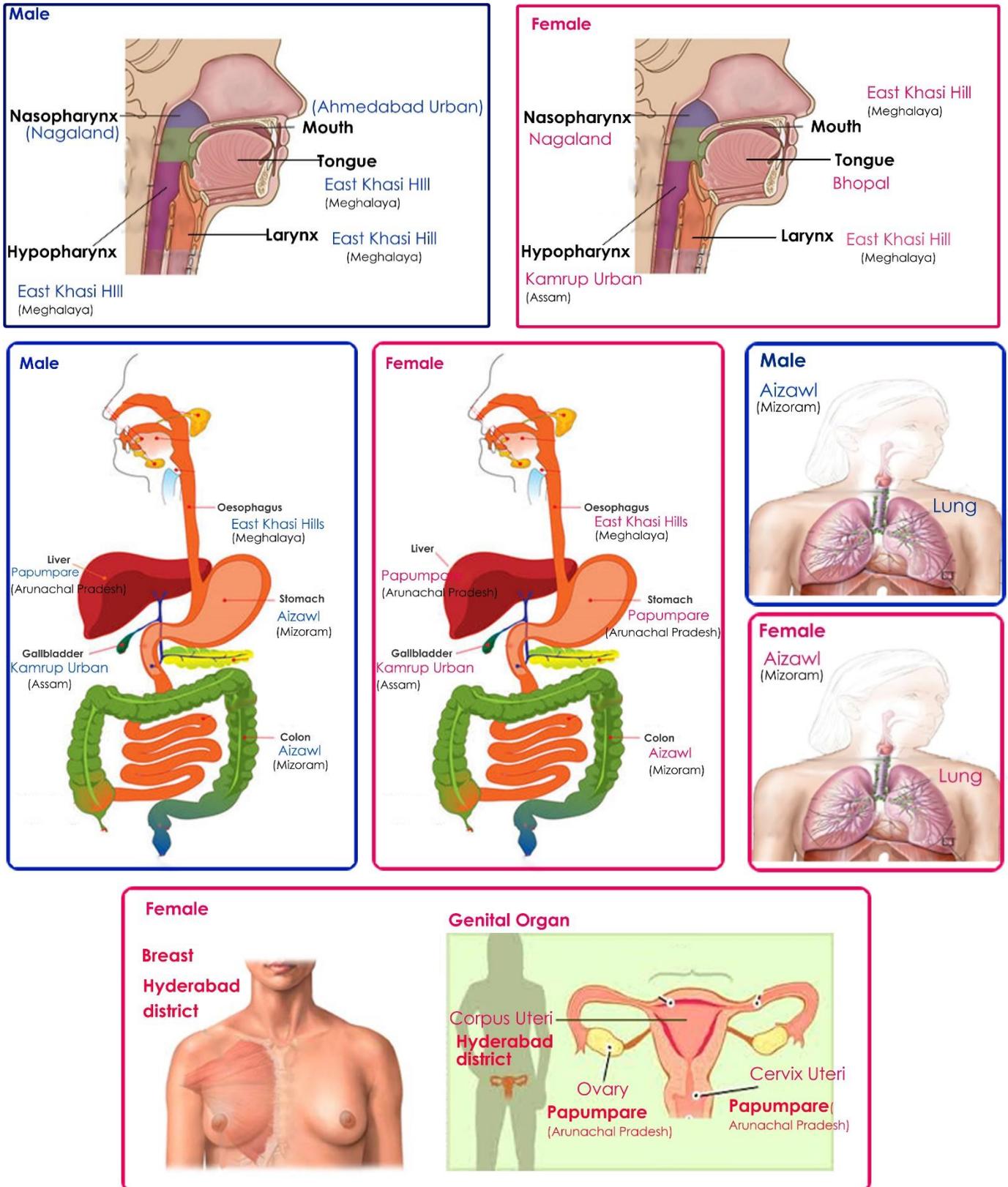


Increase in APC, Decrease in APC ; \*Significant increase or decrease in APC at 95% confidence level

## Evidence of Geographic Variation in Pattern of Cancer

Data assessments by PBCR provide important information on the leading sites of cancer in males and females.

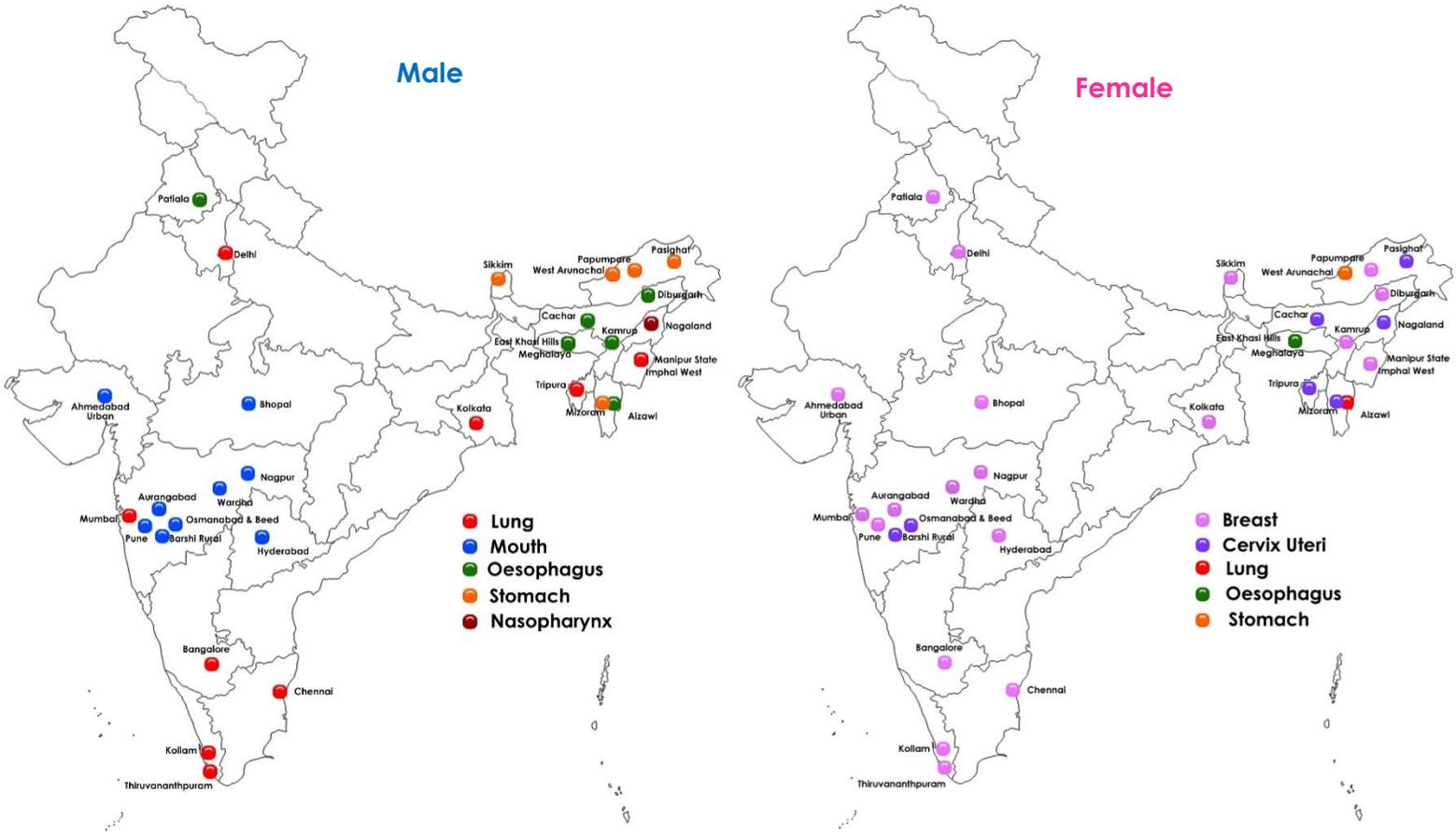
### Leading sites of cancers according to PBCRs



- Lower rates of Cancer were found in rural areas of Barshi and Osmanabad & Beed district.

### Leading Sites of Cancer for each PBCR

The maps below show the leading site of cancer for males and females for each PBCR. Collectively, the leading sites of cancer among males were cancers of lung, mouth, oesophagus and stomach. Among females, cancer of the breast was the leading site of cancer in most registries. Barshi Rural and Osmanabad & Beed districts with predominantly rural coverage showed cancer of cervix as the leading site.



### Cancer Burden in India - 2020 and 2025

Anatomical Site	2020	2025	Anatomical Site	2020	2025
	No. of Cases (%)	No. of Cases (%)		No. of Cases (%)	No. of Cases (%)
Tobacco Related Cancers	377830 (27.1)	427273 (27.2)	Corpus Uteri and Ovary	70400 (5.1)	79765 (5.1)
Gastro Intestinal Tract	273982 (19.7)	310142 (19.8)	Lymphoid & Haemopoietic Malignancies	124931 (9.0)	138592 (8.8)
Cervix	75209 (5.4)	85241 (5.4)	Prostate	41532 (3.0)	47068 (3.0)
Breast	205424 (14.8)	232832 (14.8)	Central Nervous System	32729 (2.4)	36258 (2.3)

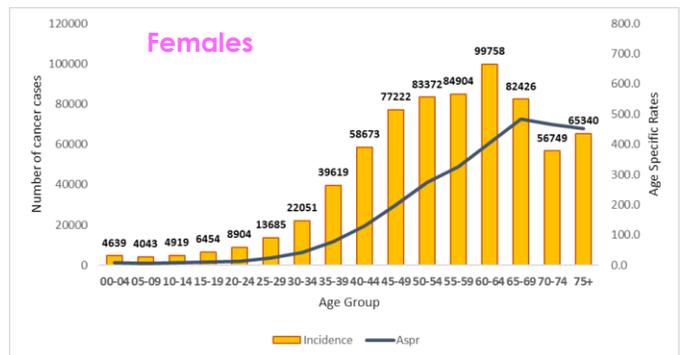
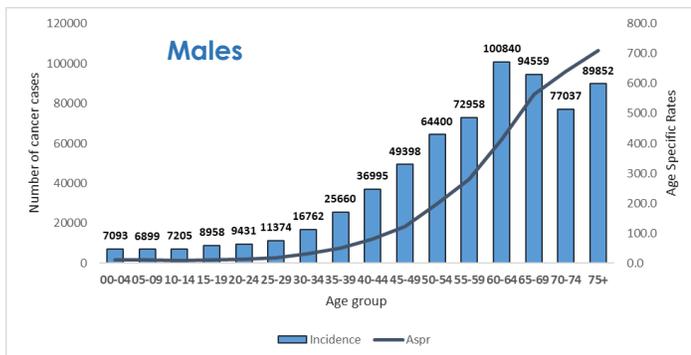
## Risk of Developing Cancer

A person developing cancer during the life period ranged between one in four (high) in some registries of North Eastern states to one in nine in others for a near average life span (0-74 years).

Possibility of one in number of persons developing cancer in one's lifetime (0-74 years)			
Aizawl District East Khasi Hills District Papumpare District Kamrup Urban		Papumpare District	
Mizoram State Meghalaya		Aizawl District Mizoram State	
Delhi		Bangalore Kamrup Urban	
Bangalore Thi'pura District Cachar District Kollam District Pasighat Nagaland		Delhi Chennai Hyderabad District	
Chennai West Arunachal		Patiala District East Khasi Hills District Mumbai Thi'pura District Bhopal Pasighat Imphal West District	
Patiala District Hyderabad District Mumbai Ahmedabad Urban Bhopal Imphal West District Dibrugarh		Kollam District Meghalaya Cachar District	

Registries with higher risk are included

## Estimated number of new cases and age specific incidence rates (AsPR), India, 2020 for all sites of cancer



The age groups most affected by cancer among all registries are 35-64-year age group which is the most productive age group.

A rise in the incidence of all sites of cancer with age was observed in majority of the PBCRs.

## Summary of Hospital Based Cancer Registries

The purpose of HBCRs are:

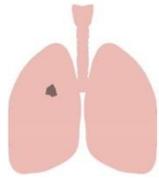
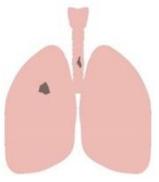
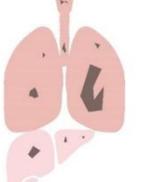
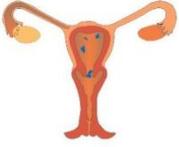
- Assess patient care
- Inform about patterns of cancer
- Help plan hospital facilities and services

Hospital Based Cancer Registries were set up in suitable hospitals across the country to contribute clinical and patient management data systematically to the National Cancer Registry Programme. They collect data throughout the year on active follow-up of cancer patient, describe length and quality of survival in relation to anatomical site, clinical stage and treatment, contribute to Population Based Cancer Registries in the given area. Data collection is done on standardized common core form for all the registries.

## Clinical extent of Disease at presentation

Some leads provided on Clinical Extent of Disease (CED) at presentation by the Hospital Based Cancer Registry data. This gives an idea of spread of cancer at the time when the patient presents to the reporting institution without receiving any prior treatment directed towards cancer.

### Proportion of Clinical Extent of Disease by site of cancer

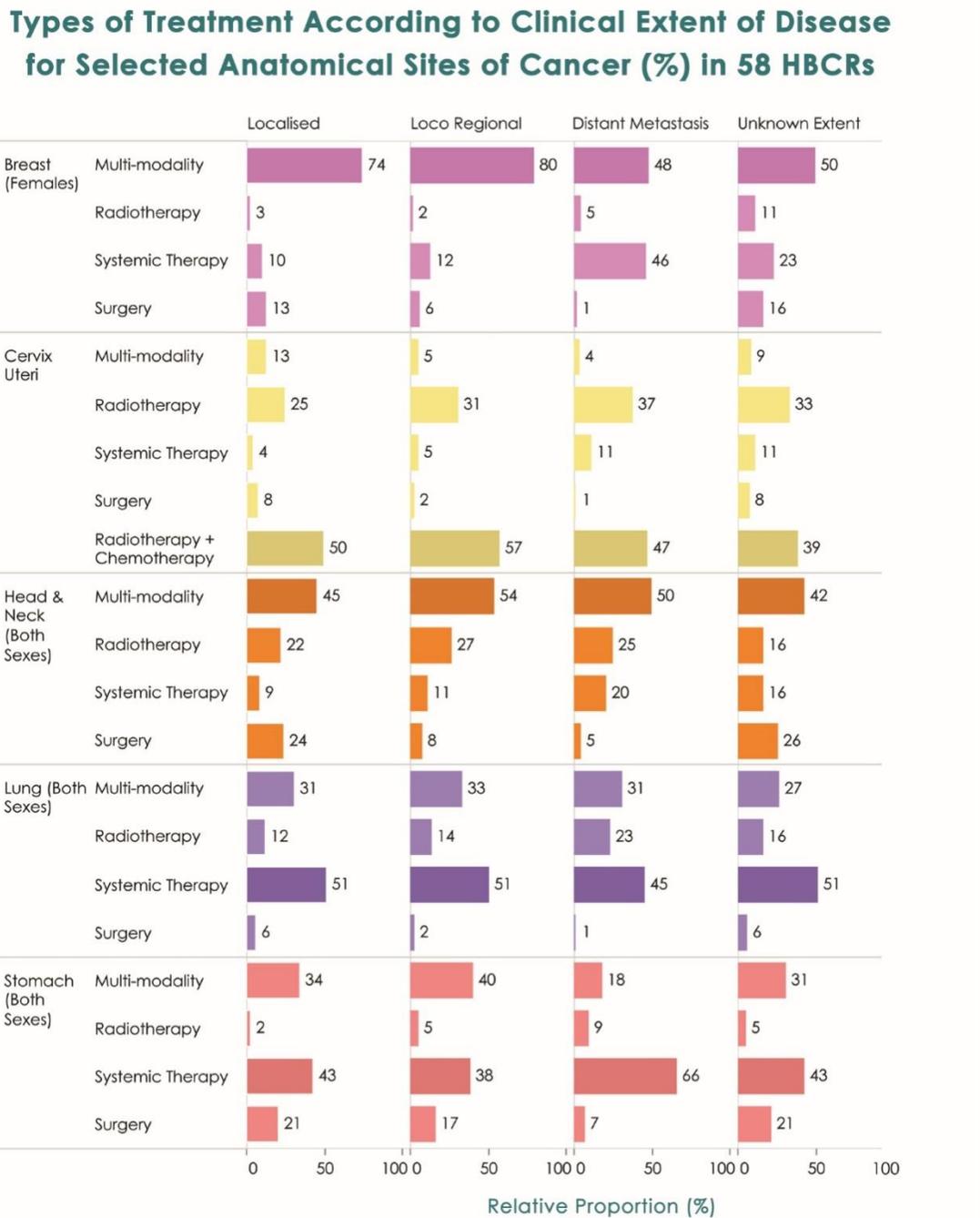
	Localized	Regional	Distant Metastasis
<b>Lungs</b>	 Males 13.9% Females 17.0%	 Males 37.0% Females 29.8%	 Males 44.0% Females 47.6%
<b>Stomach</b>	 Males 18.4% Females 19.3%	 Males 51.0% Females 50.3%	 Males 24.6% Females 24.8%
<b>Breast</b>	 Females 29.0%	 Females 57.0%	 Females 10.3%
<b>Cervix uteri</b>	 Females 32.8%	 Females 60.0%	 Females 5.1%

- CED provides valuable information on the extent of spread of the cancer when the patient presents for treatment. It has important bearing on the screening and early detection programs.
- Majority of Lung cancer patients had regional and distant spread of disease; 50-60% of Stomach and Breast (Female) cancer was diagnosed at regional spread stage

**Localized-** Restricted to the site of origin, without evidence of spread.

**Regional-** Describes spread of tumour/s to the body areas around the primary tumour site.

**Distant metastasis-** Refers to cancer that has spread from the original (primary) tumour to distant organs or distant lymph nodes. Also known as distant cancer.



*Multi-modality includes the combination of Surgery and/or Radiotherapy and/or Systemic Therapy*

### Recommendations

1. Making cancer a notifiable disease to enable increase coverage by registries and establishment of registries in areas hitherto uncovered regions.
2. The information should be used effectively for advocacy for better cancer screening, early detection, referral, treatment and palliative care services throughout the country.
3. The NCRP data should be utilized for appropriate and relevant research for strengthening cancer prevention and control efforts.

### Contact

Director

ICMR - National Centre for Disease Informatics and Research  
 II Floor of Nirmal Bhawan, ICMR Complex, Poojanhalli Road, Off NH-7,  
 Kannamangala Post Bangalore - 562 110. India.  
 Email: [ncdir@ncdirindia.org](mailto:ncdir@ncdirindia.org)