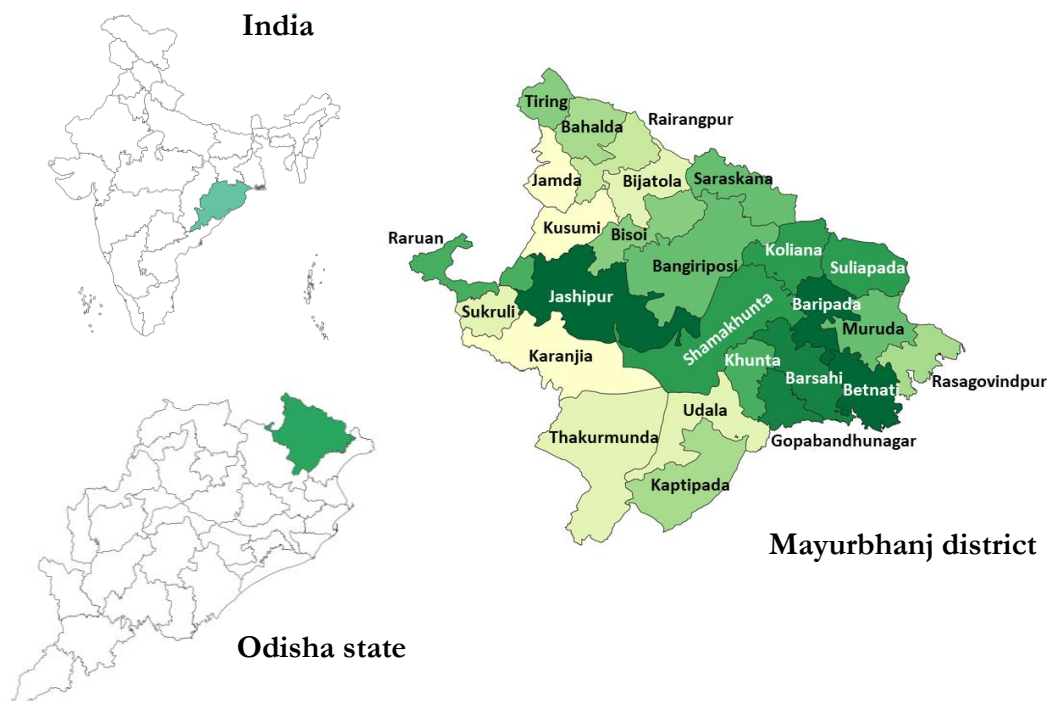




Cancer Incidence and Mortality in Mayurbhanj district, Odisha State, India: 2023

First year report of Population-based Cancer Registry (PBCR)



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Congratulatory Message from the Honourable President of India



**Smt. Droupadi Murmu,
Honourable President of
India**



राष्ट्रपति
भारत गणतंत्र
**PRESIDENT
REPUBLIC OF INDIA**

MESSAGE

I am happy to know that the Construction of a branch of Tata Memorial Hospital will start soon in Jatni, Khordha to bring relief to the patients of Odisha and Eastern India. I am also pleased to note that the Tata Memorial Centre is launching the cancer awareness and early detection programme at Mayurbhanj on 20 August 2023 with special focus on tribal population.

Tata Memorial Centre, a Grant in Aid Institution under the Department of Atomic Energy has been engaged in Cancer Care and Control in India for the last 80 Years. I would urge people to come forward for the early detection programme so that cancer can be detected at a curable stage.

I congratulate Tata Memorial Centre, Department of Atomic Energy for their noble efforts in supporting the Government of India in its mission to conquer cancer. I send my best wishes for the success of the launch programme.

(Droupadi Murmu)

New Delhi
August 18, 2023





Dr Ajit Kumar Mohanty (Chairman, Atomic Energy Commission and Secretary, Department of Atomic Energy, Government of India) inaugurated the projects ‘Early Detection of Oral, Breast and Cervical Cancers in Mayurbhanj district, Odisha’ and ‘Population-based Cancer Registry, Mayurbhanj, Odisha’ in the presence of Mr. Vineet Bharadwaj (District Collector, Mayurbhanj), Dr Satyajit Pradhan (Director, HBCH and MPMMCC Varanasi), Dr Ramkrushna Sahu (Dean, PRM Medical College), Dr Pankaj Chaturvedi (Dy. Director, CCE-TMC), Dr Pratiba Panda (Medical Superintendent, PRM Medical College), Dr Lingaraj Nayak (Professor, TMC), and Dr Atul Budukh (Professor, TMC) on 20th August 2023.



Dr. Ajit Kumar Mohanty, Chairman of Atomic Energy Commission and Secretary, Department of Atomic Energy, Government of India visited Mayurbhanj on 11th August 2024. During his visit, the report on TMC outreach activities in Mayurbhanj district was released in presence of Dr Sudeep Gupta, Director, Tata Memorial Centre, Dr Pankaj Chaturvedi, Director, ACTREC, Dr Lingaraj Nayak, Professor, Medical Oncology and Officer-in-Charge of upcoming TMC Odisha unit, Dr Prativa Panda, Dean and Principal, PRM MCH, Baripada, Dr Rama Kristna Sahu, Professor, PRM MCH, Dr Satyajit Pradhan, Director, HBCH and MPMCC, Varanasi, Dr Bijay Kumar Das, District Medical Officer cum Medical Superintendent, Mayurbhanj, Dr Nihar Das, Chief District Medical Officer, and Dr Atul Budukh, Professor, CCE-TMC, on the occasion of completion of one year of TMC activities in Mayurbhanj district.



Dr Sudeep Gupta, Director, Tata Memorial Centre, reviewing the work of Population-Based Cancer Registry and Early Detection Programme, Mayurbhanj during his visit on 10th August 2024.



Dr Atul Budukh, Professor, TMC, presented the progress of Odisha State Population-based Cancer Registry up to February 2026 and its future plans in the presence of Smt. Aswathy S. (IAS), Commissioner cum Secretary, Department of Health and Family Welfare, Smt. Sumitra Senapati (IAS), Additional Secretary, Dr Bijay Mohapatra, Special Secretary to Health and Family Welfare, Dr Pradeep Guru, Director of Health Services, Dr Nilakantha Mishra, Director of Public Health, Odisha, Dr Susanta Kumar Swain, Additional Director (Non-Communicable Disease (NCD)) cum State Nodal Officer, Cancer Care, Dr Deviprasad Goswami, World Health Organisation, and Mr Bhabani Shankar Sahu, Johns Hopkins Program for International Education in Gynaecology and Obstetrics.

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List of Abbreviations

AAR:	Age Adjusted Rate
ACTREC:	Advanced Centre for Treatment, Research and Education in Cancer
ANM:	Auxiliary Nurse Midwife
ASHA:	Accredited Social Health Activist
ASR:	Age Specific Rate
CCE:	Centre for Cancer Epidemiology
CHC:	Community Health Centre
CHO:	Community Health Officer
CI:	Confidence Interval
CME:	Continuing Medical Education
CMD:	Chronic Myeloproliferative Disorders
CR:	Crude Rate
CT:	Chemotherapy
DCO:	Death Certificate Only
DHH:	District Headquarters Hospital
EDP:	Early Detection Programme
GJAY:	Gopabandhu Jan Arogya Yojana
HWC:	Health and Wellness Centre
IARC:	International Agency for Research on Cancer
ICD – O:	International Classification of Diseases for Oncology
ICCC:	International Classification of Childhood Cancer
LTR:	Lifetime Risk
MCH:	Medical College and Hospital
MDS:	Myelodysplastic Syndrome
MI Ratio:	Mortality to Incidence Ratio
MoU:	Memorandum of Understanding
MPHW:	Multipurpose Health Worker
MV:	Microscopically Verified
NCD:	Non-Communicable Disease
NISER:	National Institute for Science Education and Research
O & U:	Others and Unspecified sites (includes C26, C39, C48, C76, C77, C78, C79, C80, C97)
PBCR:	Population-Based Cancer Registry
PHC:	Primary Health Centre
PRMMCH:	Pandit Raghunath Murmu Medical College and Hospital
RR:	Rate Ratio
RT:	Radiotherapy
SC:	Sub-Centre
ST:	Scheduled Tribes
TMC:	Tata Memorial Centre
TPK:	Tobacco Pouch Keratosis
TR:	Truncated Rate
TRCs:	Tobacco Related Cancers
UPHC:	Urban Primary Health Centre

Highlights

- The Mayurbhanj Population-Based Cancer Registry (PBCR) was established by Tata Memorial Centre (TMC), National Institute for Science Education and Research (NISER), Bhubaneswar and Department of Health and Family Welfare, Government of Odisha, in 2023 with the help of Pandit Raghunath Murmu Medical College and Hospital (PRMMCH), Baripada.
- The primary objective of the Mayurbhanj PBCR is to generate accurate and reliable data on cancer burden and patterns from the largest and predominantly tribal district of Odisha.
- The registry covers all 26 blocks of Mayurbhanj district. 92.3% reside in rural areas, and nearly 60% belong to Scheduled Tribes.
- In the year 2023, Mayurbhanj district had an estimated population of 27.78 lakhs (male: 13.79 lakhs, female: 13.99 lakhs).
- As per the latest National Family Health Survey (NFHS-5) of 2019-20, in Mayurbhanj district, two in three men (62.2%) and one in three women (34.9%) of age 15 years and above use tobacco. About half of all men (45.6%) and one in six (17.0%) women consume alcohol.
- Government of Odisha issued administrative orders to ensure cooperation in data collection process from public health system and also from private hospitals. Important sources included hospitals, clinics, medical colleges, cancer centres, laboratories, imaging centres, and vital statistics office.
- The registry staff regularly interact with all the hospitals, diagnostic centres, vital statistics offices, community level administrators, Community Health Officers, and health workers like Auxiliary Nurse Midwives (ANMs) and Accredited Social Health Activists (ASHAs) to identify newly diagnosed cancer cases and document cancer-related deaths across villages and municipal wards.
- Mayurbhanj PBCR registered a total of 1,170 cancer cases as incidence of the year 2023, of which 519 were males (44.3%), and 651 were females (55.7%). The Age Adjusted Rate (AAR) of cancer incidence for the year 2023 is 42.8 per 100,000 among males and 51.5 per 100,000 among females.
- **One in 21 males and one in 18 females of Mayurbhanj district are at risk of developing cancer before the age of 75 years.**
- Among males, common cancer sites included mouth (AAR 9.0), tongue (AAR 3.8), stomach (AAR 2.4), lungs (AAR 1.8), and gallbladder (AAR 1.5).

- Among females, common cancer sites included breast (AAR 13.4), cervix uteri (AAR 6.5), mouth (AAR 5.4), ovary (AAR 4.3), and gallbladder (AAR 3.0).
- Tobacco-related cancers accounted for 40.3% of all cancers in males (approximately two in five cases) and 14.4% in females (approximately one in seven cases).
- Out of the total 1170 cases, 811 (364 males and 447 females) had histopathological or cytological confirmation of cancer diagnosis. The proportion of microscopically verified cases was 69.3% (males: 70.1%, females: 68.7%). The proportion of cases registered using Death Certificate Only or other methods was 11.3% (males: 10.4%, females: 12.0%).
- One in four (26.3%) of cancer patients were illiterate, and more than 40% of patients had a monthly income of less than Rs 5000.
- A total of 21 paediatric cancer cases (1.8%) were registered among children aged 0-14 years. The age-adjusted incidence rate was 33.7 per million in boys and 12.9 per million in girls.
- In the same year, Mayurbhanj PBCR registered 571 cancer deaths, of which 265 were males (46.4%), and 306 (53.6%) were females. The AAR of cancer mortality for the year 2023 is 22.3 per 100,000 among males and 24.6 per 100,000 among females.
- **One in 41 males and one in 36 females are at risk of dying with cancer before the age of 75 years.**
- As part of routine registry procedure, all incidence cases were followed up. As of 31st December 2025, out of the 1170 incidence cases, 633 (54.1%) have deceased. Highest mortality proportion was observed among cases of gallbladder cancer (81.8%), lung cancer (80.6%), and gastric cancer (68.8%).

Insights and Recommendations

- As 2023 marked the first year of registry operations, there is a possibility of **underreporting**. With continued strengthening of registry processes, completeness of cancer registration is expected to improve in subsequent years, with the support of the district administration and state government.
- There is significant disparity in cancer incidence within different blocks of Mayurbhanj district, owing to urban-rural differences, and accessibility to health infrastructure. Significantly lower incidence was observed among people who lived in areas farther from the district hospital than who lived nearer. Cancer cases are **underdiagnosed**, especially those of visceral organs, arising from interior areas of Mayurbhanj district. With improvements in health infrastructure and strengthening of early detection programme, this disparity may resolve in the coming years.

- The high incidence of **oral cancers** can be correlated to the high prevalence of **tobacco and alcohol** use among males of Mayurbhanj district. Oral cancer is completely preventable; primary prevention by strengthening tobacco and alcohol cessation, secondary prevention by strengthening early diagnosis are highly recommended to reduce the incidence and improve the survival of oral cancer in the coming years.
- As per notification no. 2065, issued by the Department of Health and Family Welfare, Government of Odisha, dated 21st January 2026, the manufacture, processing, packaging, storage, transportation, distribution, and sale of all food products containing tobacco or nicotine is prohibited in the state of Odisha. The prohibition extend to all types and categories of tobacco products, that go by several names including Gutkha, Pan masala etc. Government of Odisha has taken strong steps towards NCD control, by banning such products. In the coming years, proper implementation of this ban shall bring about changes in oral health conditions, that would be observable through future reports of Odisha PBCRs.
- As **gastrointestinal cancers** like stomach and gall bladder make up a significant proportion of the cancer burden in Mayurbhanj district, it is recommended to raise awareness about the common risk factors, and signs and symptoms of these cancers to reduce time to diagnosis. Additionally, improving health infrastructure and resources for diagnosis and treatment of gastrointestinal cancers is highly recommended.
- Considering the high burden of oral, breast, and cervical cancers, Tata Memorial Centre initiated an **Early Detection Programme (EDP)** in Mayurbhanj district. In the period August 2023 to May 2025, 5,768 individuals have been screened. Individuals with screen-positive findings have been referred to higher cancer centres and are under regular follow-up. 72 cancer cases (51 oral, 20 breast, and one cervical cancer) have been diagnosed by EDP in this period, mostly in locoregional stage.
- Cancer detection camps should be held, especially in interior areas of Mayurbhanj district, using well-equipped mobile vans with trained medical and paramedical staff, in order to strengthen cancer care and minimise underdiagnosis in the district.
- As evident from the results of EDP Mayurbhanj, **patient navigation** efforts are highly effective in helping patients approach cancer treatment and improving treatment compliance. It is recommended to strengthen patient navigation process for the benefit of public health.

Executive Summary

Background

Tata Memorial Centre (TMC), Mumbai, a grant-in-aid institution under the Department of Atomic Energy, Government of India, has signed a Memorandum of Understanding (MoU) with the Department of Health and Family Welfare, Government of Odisha, on 7th September 2022, to establish a cancer hospital at the National Institute of Science Education and Research (NISER) campus, Jatni.

In accordance with the MoU, TMC established a Population-Based Cancer Registry (PBCR) for Khordha district in 2022, in collaboration with the Department of Health and Family Welfare, Odisha and NISER, Bhubaneswar. Subsequently, Mayurbhanj PBCR was established in 2023 to represent the rural and tribal population of Odisha, with the support of Pandit Raghunath Murmu Medical College and Hospital (PRMMCH), Baripada, Mayurbhanj.

On 20th August 2023, the Population-Based Cancer Registry and Early Detection Programme for common cancers for Mayurbhanj district were launched in the presence of Dr Ajit Kumar Mohanty (Chairman, AEC and Secretary Department of Atomic Energy, India). The event was graced with a congratulatory message from the Honourable President of India, Smt. Droupadi Murmu for the successful launch of the PBCR and EDP program in the Mayurbhanj district.

The primary objective of Mayurbhanj PBCR is to provide the cancer burden and its patterns in the Mayurbhanj district. The collected data will be utilized for planning cancer care services as well as cancer control programmes.

Population covered

The cancer registry covers the entire Mayurbhanj district, which is administratively divided into 26 blocks. The registry encompasses 382 Gram Panchayats (comprising 3,944 villages) and 70 urban wards, covering a total estimated population of 27.78 lakhs for the year 2023. Of this population, 92.3% reside in rural areas, and nearly 60% belong to Scheduled Tribes. As per the National Family Health Survey (NFHS-5) of 2019-20, in Mayurbhanj district, two in three men (62.2%) and one in three women (34.9%) of age 15 years and above use tobacco. About half of all men (45.6%) and one in six (17%) women consume alcohol.

Registration method

Trained field/ Research assistant of the registry regularly visit multiple data sources including district/private hospitals, pathology laboratories, medical colleges, NCD cells, birth and death registrar office as well as villages/wards to collect cancer incidence and death cases. The cancer cases data received

from various hospitals/labs is further confirmed through the village visit. The registry staff interacts with the village administrators and health staff periodically to get to know the cancer cases diagnosed in the area as well as the cancer deaths that have occurred in the village. With the help of CHO, ANM and ASHA, the registry staff interacts with the patient's relative and document the information available with the patient. After confirming the patient's residence (resident of the district for at least one year) and duplicate checking by senior staff, the case is registered in the prescribed format. For the year 2023, registry staff has interacted with 4,957 community leaders and health staff of 70 wards and 3944 villages. The data entry is carried out in CanReg5 software. Patients from this area travel to Bhubaneswar and Cuttack within the state, and Mumbai (Maharashtra), Vishakhapatnam (Andhra Pradesh), Jamshedpur (Jharkhand), and Kolkata (West Bengal) outside the state for cancer treatment.

Results

This report presents the population-based cancer registry data for Mayurbhanj district for the year 2023. During this period, a total of 1,170 incident cancer cases were registered, comprising of 519 males (44.4%) and 651 females (55.6%).

The age-adjusted incidence rate (AAR) was 42.8 per 100,000 population among males and 51.5 per 100,000 population among females. **One in 21 males and one in 18 females of Mayurbhanj district are at risk of developing cancer before the age of 75 years.**

In the same year, the cancer registry recorded 571 cancer-related deaths, including 265 deaths among males (46.4%) and 306 deaths among females (53.6%). The age-adjusted mortality rate was 22.3 per 100,000 population for males and 24.6 per 100,000 population for females. **One in 41 males and one in 36 females are at risk of dying with cancer before the age of 75 years.**

Leading Cancer Sites

Among males, the five leading cancer sites were mouth (AAR 9.0), followed by tongue (AAR 3.8), stomach (AAR 2.4), lungs (AAR 1.8), and gallbladder (AAR 1.5). Among females, the most common cancer sites were breast (AAR 13.4), cervix uteri (AAR 6.5), mouth (AAR 5.4), ovary (AAR 4.3), and gallbladder (AAR 3.0).

Details of incidence of leading cancer sites are presented in Tables I and II, for males and females.

Table I: Leading cancer sites in males for the year 2023

ICD-10	Sites	Number	%	CR	AAR	TR	Risk
C03-C06	Mouth	114	22.0	8.3	9.0	20.1	1 in 100
C01-C02	Tongue	49	9.4	3.6	3.8	8.1	1 in 265
C16	Stomach	27	5.2	2.0	2.4	4.4	1 in 342
C33-C34	Trachea, bronchus, and lung	21	4.0	1.5	1.8	3.3	1 in 405
C23-C24	Gall bladder etc.	18	3.5	1.3	1.5	3.3	1 in 713

CR: Crude Incidence Rate per 100,000, AAR: Age-Adjusted Rate per 100,000, TR: Truncated Incidence Rate per 100,000

Table II: Leading cancer sites in females for the year 2023

ICD-10	Sites	Number	%	CR	AAR	TR	Risk
C50	Breast	171	26.2	12.2	13.4	34.2	1 in 72
C53	Cervix uteri	80	12.3	5.7	6.5	14.9	1 in 137
C03-C06	Mouth	66	10.1	4.7	5.4	13.0	1 in 164
C56	Ovary	51	8.1	3.6	4.3	9.0	1 in 150
C23-C24	Gallbladder etc.	37	5.7	2.6	3.0	7.7	1 in 284

CR: Crude Incidence Rate per 100,000, AAR: Age-Adjusted Rate per 100,000, TR: Truncated Incidence Rate per 100,000

Paediatric cancer burden

The Mayurbhanj Population-Based Cancer Registry (PBCR) monitors the burden of childhood cancers in the district and maintains paediatric cancer data in accordance with the International Classification of Childhood Cancer, Third Edition (ICCC-3). In 2023, 21 paediatric cancer cases (1.8%) were recorded out of 1,170 total incident cancer cases. The age-adjusted incidence rate of paediatric cancers was 33.7 per million among boys and 12.9 per million among girls. These rates are comparatively lower than those reported by other cancer registries in India. This may reflect under-diagnosis and under-reporting of childhood cancers, particularly in the initial years of registry operations.

Vital status of patients

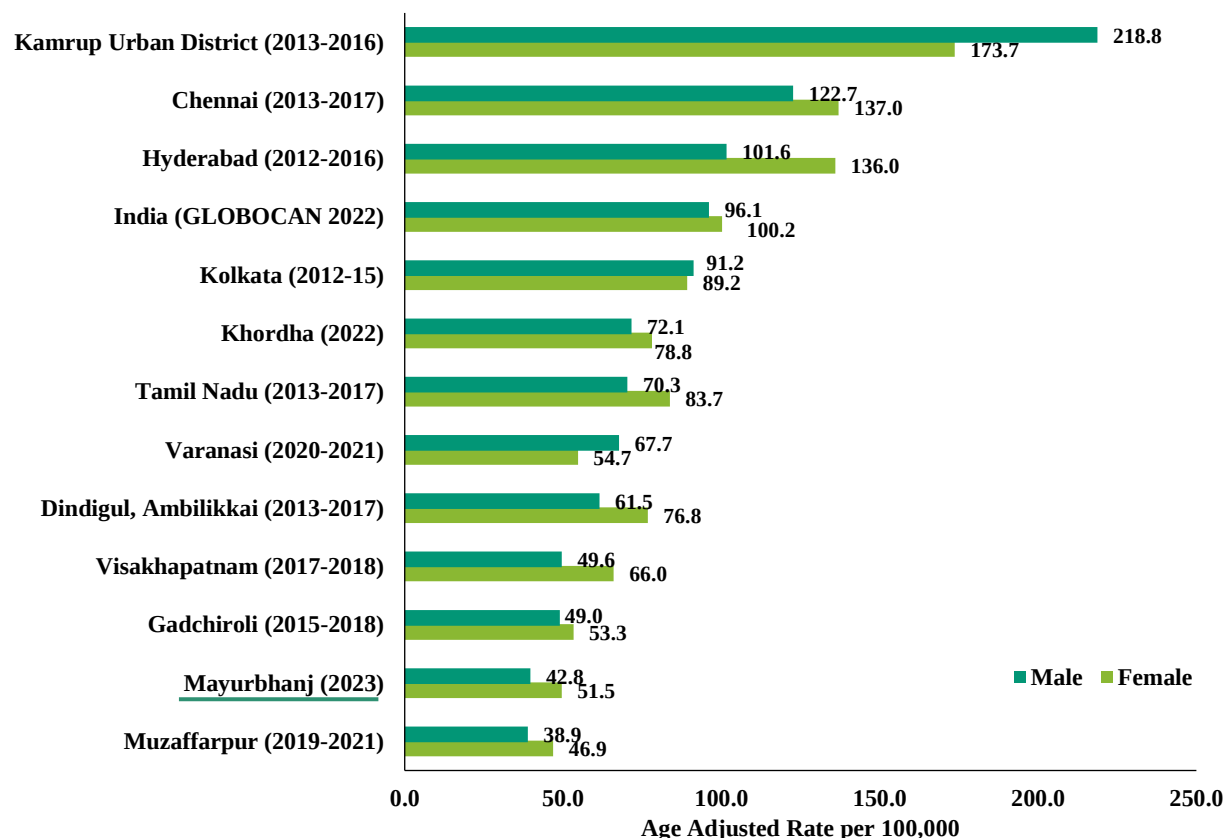
As of 31st December 2025, out of the 1170 incidence cases, 633 (54.1%) have deceased. Highest mortality proportion was observed among cases of gallbladder cancer (81.8%), lung cancer (80.6%), and gastric cancer (68.8%).

Comparison of Mayurbhanj PBCR rate with other cancer registries in India

The cancer incidence rates reported in Mayurbhanj district are in comparison with those observed in Muzaffarpur PBCR and lower than all other PBCRs. Muzaffarpur PBCR covers rural areas in Bihar,

characterised by limited health infrastructure, and low health awareness. The comparison of Mayurbhanj district rates along with other Indian PBCR in mentioned Figure I.

Figure I: Comparison of age adjusted incidence rates across India



Cancer control in Odisha

Tata Memorial Centre (TMC), Mumbai, in collaboration with the Government of Odisha, will establish a state-of-the-art 200-bed cancer hospital at Jatni, Bhubaneswar, equipped with comprehensive diagnostic and treatment facilities. TMC has also initiated Early Detection Programmes (EDPs) for oral, breast, and cervical cancers in the Khordha and Mayurbhanj districts. Additionally, PRM MCH plans to strengthen cancer care services at their hospital for better care of the residents of Mayurbhanj and surrounding districts.

The state Government of Odisha has launched Odisha State Population-based Cancer Registry to represent all 30 districts of Odisha, a population of about 45 million. This shall boost cancer control and research in the state.

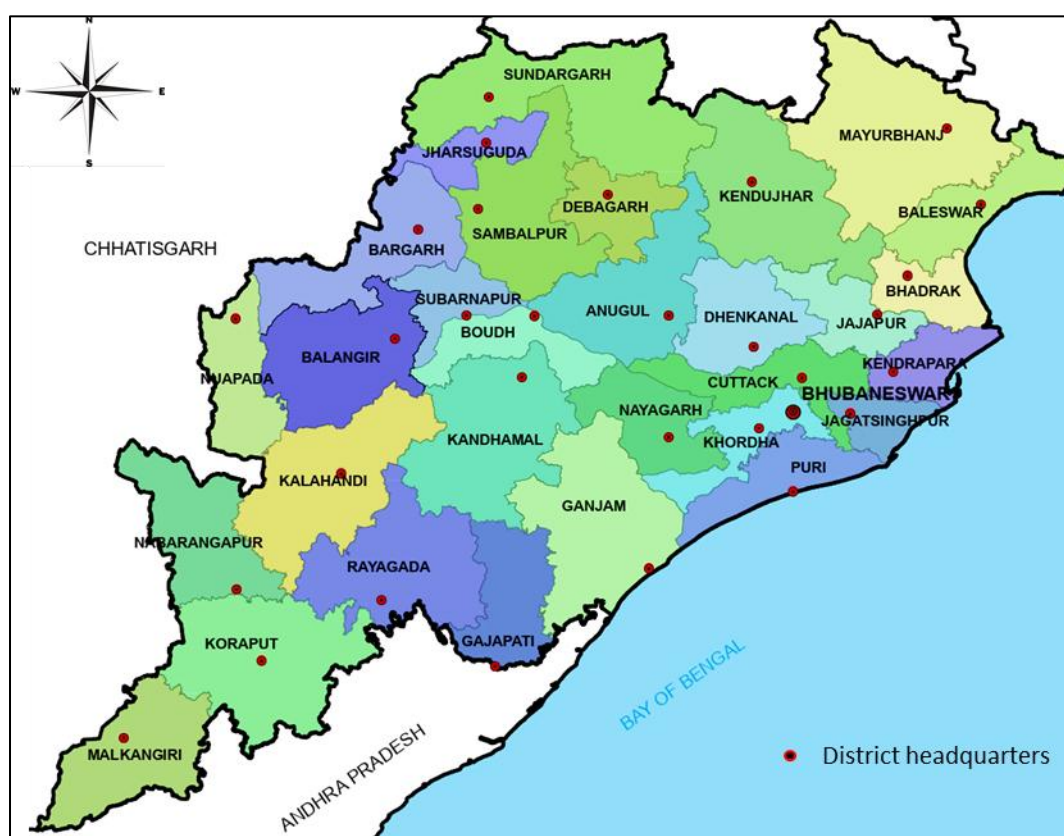
The Population-Based Cancer Registry (PBCR) gratefully acknowledges the continued support of the Government of Odisha and the cooperation extended by government and private hospitals in sharing cancer patient data.

1. Odisha state profile

Odisha, situated on the East coast of India, is the 11th most populous state of India. It has a glorious history, which dates back more than two thousand years in time. The modern state of Odisha lies between 17° 49' and 22° 34' North latitudes, and 81° 27' and 87° 29' East longitudes. It is bounded by the Bay of Bengal, with a coastline of about 482 kms.¹ It neighbours the states of Chhattisgarh to the West, Andhra Pradesh to the South, and West Bengal and Jharkhand to the North. Several areas in Odisha are coastal plains, formed by the six major rivers flowing into the Bay of Bengal. Three-fourths of the state is covered by mountain ranges and highlands. The Jagannath temple in Puri, the Sun temple in Konark, and the Lingaraj temple in Bhubaneswar are prominent historical monuments in the state. The Nandankanan Zoological Park in Khordha, and Similipal National Park in Mayurbhanj are major wildlife sanctuaries in Odisha state.

Odisha is spread across an area of 155,707 sq. km. For administrative purposes, the state is divided into 3 revenue divisions (Sambalpur, Cuttack, and Berhampur), 30 districts, 58 sub-divisions, 314 blocks, and 53845 villages.^{1,2} The thirty districts of Odisha state are shown in figure 1.

Figure 1: Political map of Odisha state, India



As per the Census of India 2011, the total population of Odisha is 41,974,218 in which males were 21,212,136 (50.5%) while females were 20,762,082 (49.5%), with a sex ratio of 979 per 1000 males. **83% of this population lives in rural areas.**³ The population density of Odisha is 270 per sq. km which is lower than the national average of 382 square kilometres. The literacy rate is 72.9%. The key characteristics are represented in Table 1.

Odisha is home to **sixty-two tribal communities** (13 of which are particularly vulnerable tribal groups), which form **22.9% of their state population**, and **9.17% of India's Scheduled Tribe population.**⁴ Most of Odisha's tribal population is concentrated in **Mayurbhanj, Sundargarh, and Keonjhar districts.**

Table 1: Odisha state demographics as per Census of 2011

Characteristic	Value
Area in square kilometres	155,707 sq.km
Total population	41,974,218
Urban population	7,003,656 (16.75%)
Rural population	34,970,562 (83.25%)
Male population	21,212,136 (50.5%)
Female population	20,762,082 (49.5%)
Sex Ratio	979 females per 1000 males
Number of districts	30
Population density	270 people per square km
Literacy rate	72.87%
Tribal population	9,590,756 (22.9%)

2. Mayurbhanj district profile

Geography and Demography of Mayurbhanj district

Mayurbhanj is a vegetation and mineral rich district in East Odisha, covering an area of 10,418 square kilometres.⁵ In the pre-independence era, this area was a princely state of the same name. It merged with the state of Odisha on 1st January 1949. Today, it is the largest district in Odisha, with headquarters at Baripada. It is also the third-most populous district in Odisha, following Ganjam and Cuttack. The district is bounded by the Baleshwar and Kendujhar districts of Odisha, along with the state borders of West Bengal and Jharkhand. A major feature of the district is the Simlipal National Park. **The district is categorised as tribal and rural with 40% of the land covered with forest and hills.**

As per the Census of India 2011, Mayurbhanj district has a population of 2.5 million individuals, where 92.3% of population lives in rural areas, and almost 60% of which (1.48 million) belong to scheduled tribes.^{3,5} Demographic details shown in table 2. Administratively, Mayurbhanj is divided into 4 sub-divisions, namely, Baripada, Bamanghaty (with headquarters at Rairangpur), Kaptipada (with headquarters at Udala), and Panchpir (with headquarters at Karanjia). These subdivisions are further divided into 26 blocks, mentioned in figure 2.⁵ **There are 382 Panchayats (with 3944 villages) and 70 urban wards in the district.** Table 3 presents block-wise population of Mayurbhanj district. Most people in Mayurbhanj district are involved in agricultural activities, primarily in cultivation of rice, pulses, and oilseeds. Small-scale industries operational in Mayurbhanj include mineral grinding and stone crushing.

Figure 2: 26 Blocks of Mayurbhanj district, Odisha

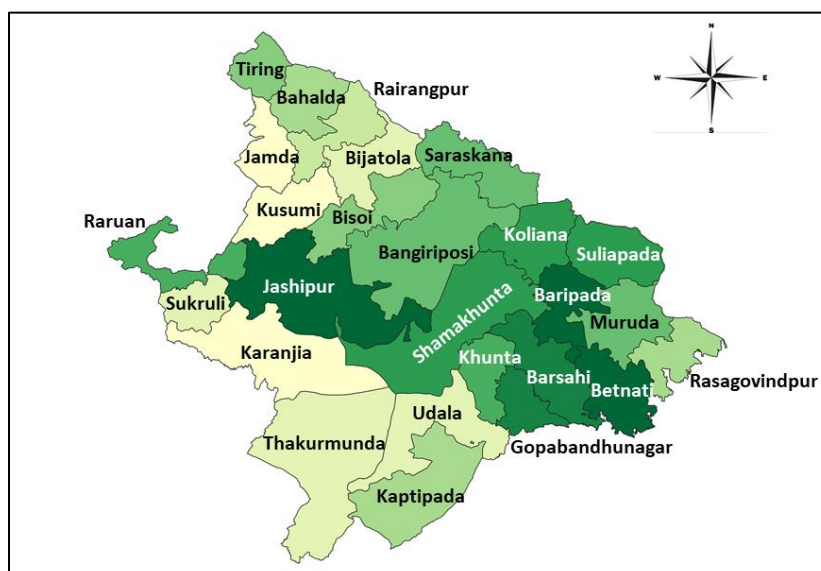


Table 2: Characteristics of Mayurbhanj district, as per census of 2011

Characteristic	Value
Area in square kilometres	10,418 sq.km
Total population	25,19,738
Sex Ratio	1006 females per 1000 males
Number of blocks	26
Population density	242 people per square km

Table 3: Block-wise population for Mayurbhanj district, as per census of 2011

Block	Number of urban wards	No. of Panchayats	No. of villages	Population
Badasahi	0	30	223	1,46,232
Bahalda	0	12	104	86,081
Bangiriposi	0	18	220	1,03,880
Baripada	28	11	126	1,79,525
Betnoti	0	22	224	1,50,434
Bijatala	0	10	154	64,193
Bisoi	0	10	154	74,572
Gopabandhunagar	0	13	155	75,345
Jamda	0	8	78	59,402
Jashipur	0	20	227	1,01,058
Kaptipada	0	26	155	1,48,717
Karanjia	15	13	141	1,14,383
Khunta	0	14	131	74,155
Kuliana	0	17	230	1,01,151
Kusumi	0	12	114	93,116
Muruda	0	20	169	1,03,775
Rairangpur	15	9	104	86,081
Rasgovindapur	0	15	177	96,526
Raruan	0	12	110	66,504
Shamakhunta	0	14	137	79,883
Saraskana	0	15	200	1,00,816
Sukruli	0	9	90	60,577
Suliapada	0	15	193	1,02,263
Thakurmunda	0	16	171	1,04,694
Tiring	0	10	80	57,076
Udala	12	11	77	89,299
Mayurbhanj district	70	382	3,944	25,19,738

Risk factor profile of residents of Mayurbhanj district

The National Family Health Survey-5 (NFHS-5) for 2020-21 presented health indicators for all districts in the country.⁶ Table 4 mentions the health indicators presented by NFHS-5 for Mayurbhanj district, related to Non-Communicable Diseases (NCDs) and their risk factors, for ages 15 and above. People of Mayurbhanj district have the some of the highest tobacco use prevalence in Odisha, such that **two in three men, and one in three women of Mayurbhanj use tobacco. About half of all men and one in six women consume alcohol.**

Table 4: Health indicators and Risk factors related to Non-Communicable Diseases in Mayurbhanj district, as per NFHS-5 (2020-21) among people aged 15 years and above

Health indicator	Males (%)	Females (%)
Diabetes	12.3	8.8
Hypertension	28.8	26.1
Tobacco use	62.2	34.9
Alcohol consumption	45.6	17.0

Public health infrastructure in Mayurbhanj district

Table 5 describes the public health infrastructure present in Mayurbhanj district; there is one District Hospital and one Medical College (PRM MCH) with diagnostic and treatment facilities, 86 Primary Health Centres, and 589 Sub-Centres/Health and Wellness Centres (HWCs).

Table 5: Major government health facilities in Mayurbhanj district

Sr. No.	Institute	Number
1.	District Headquarter Hospital (DHH)	1
2.	Medical College and Hospital (MCH)	1
3.	Sub-divisional Hospital	3
4.	Community Health Centre (CHC)	28
5.	Primary Health Centre (PHC)	86
6.	Urban Primary Health Centre (UPHC)	4
7.	Urban Health and Wellness Centre	3
8.	Sub-Centre (SC)/Health and Wellness Centre (HWC)	589

Distance travelled by patients in Mayurbhanj district to seek cancer care

As mentioned previously, Mayurbhanj district is the largest district in Odisha state. Cancer patients from interior areas of Mayurbhanj district often have to travel several kms to seek cancer diagnosis and treatment at the District Headquarter Hospital, Baripada, as shown in figure 3. Many patients may be referred to higher centres within the state in Bhubaneswar and Cuttack, having to travel about 300 kms, as shown in figure 4. Some patients may prefer to take treatment outside the state, as close as Jamshedpur in Jharkhand (148 kms) or even as far as Mumbai (1708 kms), as shown in figure 5.

Figure 3: Distances travelled by patients in Mayurbhanj district to seek cancer diagnosis and treatment.

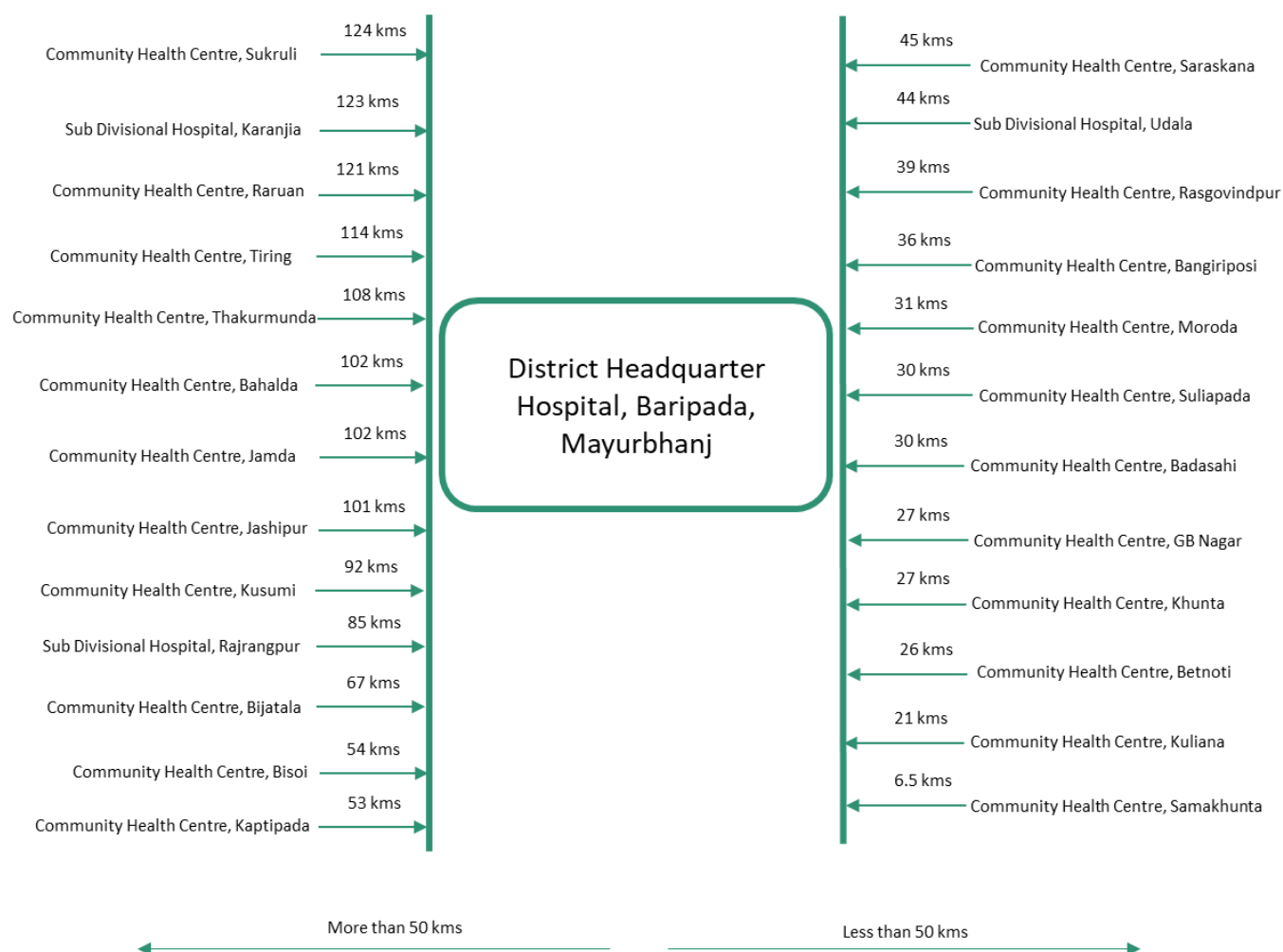


Figure 4: Places visited by residents of Mayurbhanj district to receive cancer treatment within Odisha

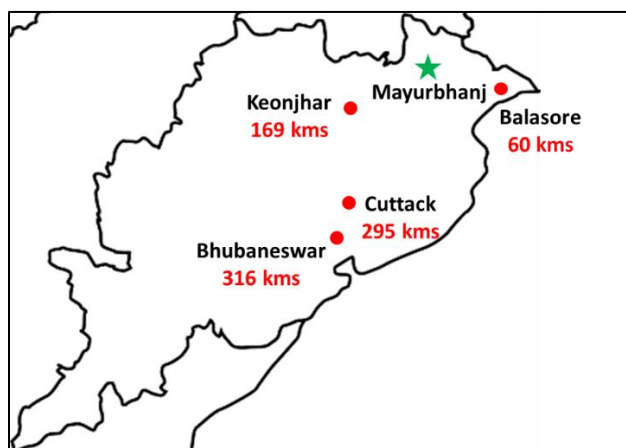
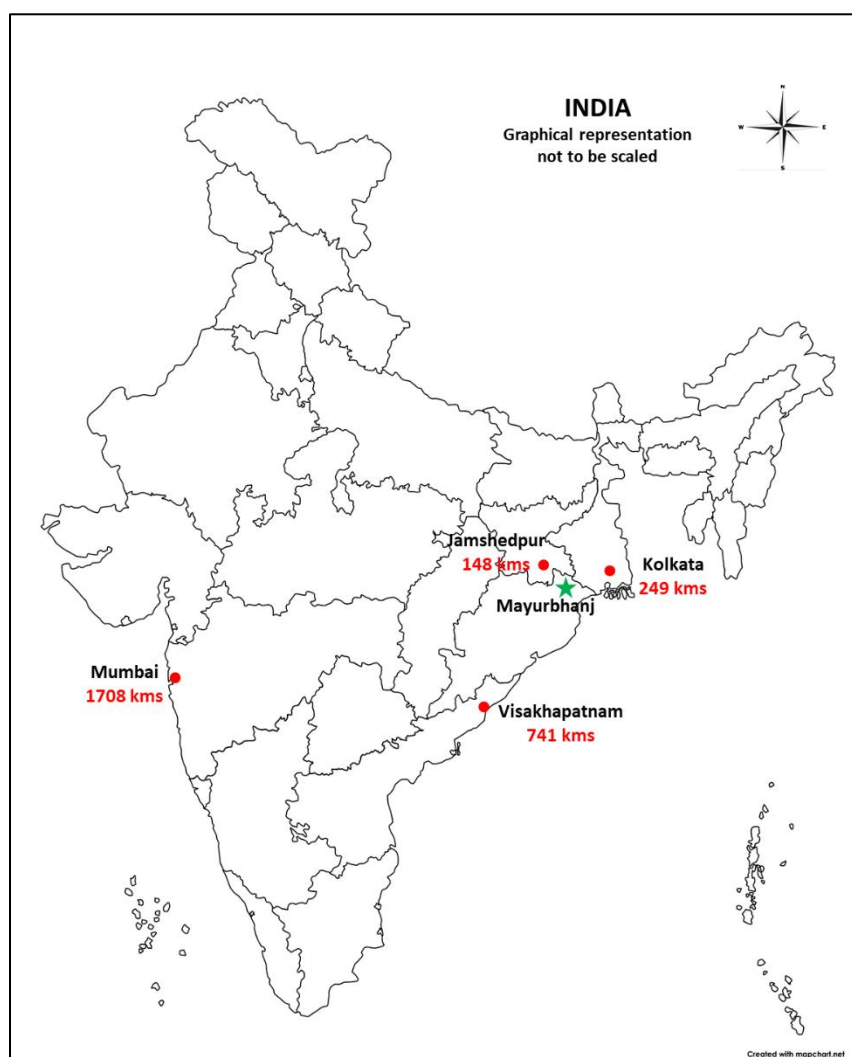


Figure 5: Places visited by residents of Mayurbhanj district to receive cancer treatment outside Odisha



3. Establishment of Mayurbhanj Population-based Cancer Registry (PBCR)

Establishment of PBCR

Tata Memorial Centre (TMC), Mumbai, a grant-in-aid institution under the Department of Atomic Energy, Government of India, has signed a Memorandum of Understanding (MoU) with the Department of Health and Family Welfare, Government of Odisha, on 7th September 2022, for the establishment of a cancer hospital within the National Institute of Science Education and Research (NISER) campus, Bhubaneswar (Jatni), Odisha, to cater to the cancer burden of Odisha and other states in Eastern India.

In accordance with the MoU, TMC established a Population-Based Cancer Registry (PBCR) for Khordha district in 2022, in collaboration with the Department of Health and Family Welfare, Odisha and NISER, Bhubaneswar. Mayurbhanj PBCR was established subsequently in 2023 to represent the rural and tribal population of Odisha, with the support of Pandit Raghunath Murmu Medical College and Hospital (PRMMCH), a government medical college in Baripada, Mayurbhanj.

On 20th August 2023, the Population-Based Cancer Registry and Early Detection Programme for Common cancers for Mayurbhanj district were launched in the presence of Dr Ajit Kumar Mohanty (Chairman, AEC and Secretary Department of Atomic Energy, India), Mr. Vineet Bharadwaj (District Collector), Dr Susanta Swain (Additional Director, NCD) and Dr Ramkrushna Sahu (former Dean/Principal of PRM MCH), with the help of Dr Pratiba Panda (Medical Superintendent, current Dean/Principal of PRM MCH) and Dr Pankaj Chaturvedi (Deputy Director, CCE-TMC), Dr Lingaraj Nayak (Professor, TMH), and Dr Atul Budukh (Professor, CCE-TMC) from Tata Memorial Centre. **The event was graced by a congratulatory message from the Honourable President of India, Smt. Droupadi Murmu for the successful launch of the PBCR and EDP program in the Mayurbhanj district.**

Objective of Mayurbhanj Population-based Cancer Registry

The primary objective of Mayurbhanj PBCR is to collect and present accurate and reliable data on the burden and patterns of cancer experienced by the population of Mayurbhanj district. The PBCR data will be utilized for planning cancer care services as well as cancer control programmes.

4. Administrative orders issued by State Government of Odisha

On the recommendation of TMC, Mumbai, the Department of Health and Family Welfare, State Government of Odisha has issued an administrative order declaring “Cancer as a Reportable Disease” within Odisha state on October 20, 2022.



GOVERNMENT OF ODISHA
HEALTH & FAMILY WELFARE DEPARTMENT

NOTIFICATION

No. HFW-SCH-NPCDCS-0001-2017- 23810 /H, Dated 20-10-2022

In supersession of this Department Notification No.23536/H dated 19.10.2022 and pursuant to the recommendations of Indian Council of Medical Research (ICMR) it is observed that mandatory Cancer reporting is absolutely necessary for Cancer Prevention, Control and Research Programme in the country.

Whereas the estimation of Cancer burden and its distribution with respect to time, place and person is essential for evidence based planning and mobilizing the resources;

And whereas Cancer registries are not being maintained properly at health facilities and a lot of Cancer cases are remaining un-reported;

Whereas Govt. of Odisha, after due consideration of the matter has also found it imperative that all diagnosed cancer incidences should be reported to the appropriate authority for early detection and treatment of disease;

Whereas the data received on Cancer in the state would be used to frame policy on prevention and control of cancer, expansion of treatment facilities and cancer research and training centers in the State;

Therefore, Government hereby declare that "Cancer" is a "Reportable Disease" in the "State of Odisha" and accordingly, all persons concerned in Hospitals (Private or Government), Pathological, Clinical and Radiological Labs, Institutions imparting Medical Education and providing diagnostic treatment, Palliative Care and any other healthcare related facilities will mandatorily report diagnosed cases of cancer to the respective CDM&PHO and also are required to send the patients for pathological confirmation when he/she becomes cognizant of the existence or suspicion of cancer in patient. The pathologist after confirming the same would complete and send the information in prescribed format to the respective CDM&PHO.

Whosoever is reporting or notifying cancer shall maintain a prescribed register and retain a copy of the complete format that has been submitted to the concerned CDM&PHO for all new cases diagnosed or being treated in the State of Odisha with effect from the date of this notification. This should be done within the period not exceeding two weeks from the date of diagnosis.

The notification would apply to:

- All Medical College & Hospitals (Government and Private);
- All State / Central Government / Private hospitals / dispensaries, autonomous Medical institutions;
- All hospitals covered by ESI, Industries, Railways, Civil / Army and other Central and State Government agencies;
- Any other hospitals / medical institutions not covered above; this includes Ayurveda / Unani / any other facilities.

The diagnosing or treating doctor who becomes cognizant of the cancer disease should ensure that the pathologist should be updated of the clinical details of such patients for the purpose of notifying the disease effectively.

It will be the responsibility of every doctor / pathologist / medical establishment to notify the cancer cases preferably on a real time basis, but not more than two week from date of diagnosis.

The Director, Health Services / Director Public Health / Director, Medical Education, Odisha shall take further action in the matter accordingly.

By order of the Governor

Commissioner-cum-Secretary to Government

Memo No. 23811 /H, Dated 20-10-2022

Copy forwarded to the MD, NHM, Odisha / MD, OSMCL, Bhubaneswar for information and necessary action.

Joint Secretary to Government.

Memo No. 23812 /H, Dated 20-10-2022

Copy forwarded to the DHS(O) / DPH(O) / DMET(O) / Director, Nursing(O) / Director, SIHFW(O) / Director, HIVS(O) / Director, Blood Safety(O) / Director, Food Safety(O) / Director, AYUSH(O) / PD, OSACS, Bhubaneswar / Director, Capital Hospital, Bhubaneswar / Director, RGH Rourkela / Drugs Controller(O), Bhubaneswar for information and necessary action.

Joint Secretary to Government.

Memo No. 23813 /H, Dated 20-10-2022

Copy forwarded to the Director, AIIMS, Bhubaneswar / Director, RMRC, Bhubaneswar for information and necessary action.

Joint Secretary to Government.

Memo No. 23814 /H, Dated 20-10-2022

Copy forwarded to all CDM&PHOs / Dean & Principal of all Govt., MCHs / Superintendent of all Govt., MCHs / Dean & Principal of all Private Medical Colleges / all Private Health Institutions of the State for information and necessary action.

Memo No. 23815 /H, Dated 20-10-2022

Copy forwarded to Branch Officers of all Sections of H&FW Department for information and necessary action.

Memo No. 23816 /H, Dated 20-10-2022

Copy forwarded to the IT Cell of H&FW Department for uploading the same in the Department Website.

Joint Secretary to Government

Office Order from the office of Chief District Medical and Public Health Officer of Mayurbhanj district regarding participation in Cancer Registry Training Course



OFFICE OF THE CHIEF DIST. MEDICAL & PUBLIC HEALTH OFFICER,
MAYURBHANJ
(District Programme Management Unit, NHM)
E-mail: dpmumay@gmail.com



LetterNo: 5421 Date: 06-10-23

OFFICE ORDER

In pursuance to the mail on dated 23.09.2023, of Dr. Atul Budukh, Professor, Center for Cancer Epidemiology, Tata Memorial Center, Mumbai that the following **Medical officers from different Health institutions of Mayurbhanj District** will be relieved from their duties for attending Cancer Registry course at the Homi Bhabha Hall, Niser, Jatani. The course will be held from 09th October to 15th October 2023 from 09.15 AM to 05.30 PM. The basic accommodation for the participants on sharing basis is arranged at the NISER campus. The TA of the participants will be paid by respective institutions out of NPCDCS funds as per OSH & FWS norms and booked under NHM PIP 22-24 NCD-5, SL No 108, line item 1.3.1.9.

Sl. No	Name of the Medical Officer	Sex	Name of the Block DHH/SDH/CHC/PHC	Ph Number of Medical Officer I/C	Date of Relieve	Date of Training	Venue
1	Dr. Ram Ch. Murmu	M	Pulmonary Medicine Consultant, DHH, Baripada		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
2	Dr Baidhar Baske	M	O&G Consultant, DHH, Baripada		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
3	Dr Ranjana Bhandari	F	O&G Consultant, DHH, Baripada		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
4	Dr. Sawna Sankar Murmu	M	Surgey, Consultant, SDH Rairangpur		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
5	Dr. Vivekananda Acharya	M	MS, ENT, LTRMO, Jharadih CHC		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
6	Dr Sumyakant Singh	M	MO, Ambikda PHC(Rangamatia CHC)		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
7	Dr Nirmal Kumar Dash	M	Kusalda PHC(Khunta CHC)		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
8	Dr B.C Marandi	M	Suliapada(Kostha CHC)		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
9	Dr Bijaya Ku.Dash	M	I/C, Pathology Consultant DHH, Baripada		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
10	Dr Suprava Giri	F	Sarat PHC(Katipada CHC)		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
11	Dr Prabhudutta Dash	M	Pathology Consultant SDH, Rairangpur		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
12	Dr Anwesh Mishra	M	LTRMO,DHH, Baripada		08.10.23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani



OFFICE OF THE CHIEF DIST. MEDICAL & PUBLIC HEALTH OFFICER,
MAYURBHANJ
(District Programme Management Unit, NHM)
E-mail: dpmumay@gmail.com



13	Dr Sandeep Panda	M	Dental Surgon CHC Bangirposi	08.10. 23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
14	Dr Ram Ch. Marandi	M	O&G Consultant, CHC Bahalada	08.10. 23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
15	Dr Gulesh Mahanta	M	Medicine Consultant, SDH Karanjia	08.10. 23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani
16	Mrs. Debasmitta Mohapatra	F	NO, Trained in Chemotherapy DHH, Baripada	08.10. 23 AN	09.10.23 TO 15.10.23	Homi Bhabha hall, Niser, Jatani

Memo No- 5722 Date- 06.10.23
Copy to the person concerned for information and necessary action.

CDM & PHO, Mayurbhanj

Memo No- 5723 Date- 06.10.23
Copy forwarded to all Superintendents of Concerned CHC/SDH for information and necessary action.

CDM & PHO, Mayurbhanj

Memo No- 5724 Date- 06.10.23
Copy forwarded to Establishment Section 3, DHH Baripada for information and necessary action.

CDM & PHO, Mayurbhanj

Memo No- 5725 Date- 06.10.23
Copy forwarded to Superintendent of PRM & MCH for information and necessary action.

CDM & PHO, Mayurbhanj

Memo No- 5726 Date- 06.10.23
Copy submitted to Collector & DM, Mayurbhanj for favor of kind information.

CDM & PHO, Mayurbhanj

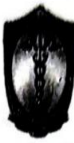
Memo No- 5727 Date- 06.10.23
Copy submitted to the Mission Director, NHM/ DPH, Odisha for kind information.

CDM & PHO, Mayurbhanj

Administrative Order issued by Chief District Medical and Public Health Officer of Mayurbhanj District on 18th October 2023

	OFFICE OF THE CHIEF DIST. MEDICAL & PUBLIC HEALTH OFFICER, MAYURBHANJ (District Programme Management Unit, NHM) E-mail: dpmumay@gmail.com			
Memo No <u>5910</u>	Dated <u>18-10-23</u>			
As per the notification No. HFW-SCH-NPCDCS-0001+2017-23810 / H on dated 20.10.2022 Government hereby declare that cancer is a reportable disease in "State of Odisha" and accordingly all person concerned in diagnostic and treatment (Private and government), medical oncology , palliative care or any other healthcare facilities dealing with oncology including the death registrar offices of the district Mayurbhanj after confirming the cancer would complete and send the information in prescribe format to the respective Population based cancer registry (PBCR) team of district Mayurbhanj or the team will visit your centre to collect the cancer patient data. Copy also forwarded to the DMO (MS) – Supt. DHH Mayurbhanj, All Superintendents of all SDHs/CHCs/UPHCs Mayurbhanj dist, MO, NCD Manager, DPM NHM, and death registrar office of the dist. Mayurbhanj. Kindly extend your support and cooperation to the Population based cancer registry, district Mayurbhanj				
 C. D. M. & PHO cum District Mission Director, Mayurbhanj				
Attachment				
1. Notification No. HFW-SCH-NPCDCS-0001+2017-23810 / H on dated 20.10.2022 2. Format of Population based cancer registry(PBCR), District Mayurbhanj for cancer				

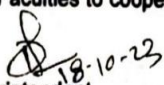
Office Order from the Medical Superintendent of PRM MCH for the cancer registration process

ଅଧ୍ୟକ୍ଷକବାସୀକରଣ ପଣ୍ଡିତ ରାଘବନାଥ ମୁରମୁ ମେଡିକାଲ କଲେଜ ଓ ହସ୍ପିଟାଲ ବାରପଦା, ମୟୂରଭଞ୍ଜ, ୭୫୭୦୦୧ OFFICE OF THE SUPERINTENDENT Pandit Raghunath Murmu Medical College & Hospital, Baripada, Mayurbhanj, PIN- 757001 superintendentprmmch@gmail.com, 06792-257013		ଓଡ଼ିଶା ସରକାର ସ୍ୱାସ୍ଥ୍ୟ ଓ ବଂଶବିକାସ ବିଭାଗ Government of Odisha Department of Health and Family Welfare
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OFFICE ORDER

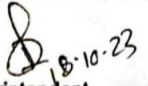
No. 4511 //PRMMCH-Est.//Date 18 // 10 //2023

Population Based Cancer Registry team will collect the data from all OPDs, IPDs, Casualty, Medical Record Section & Central Registration counter of PRMMCH/DHH, Baripada. So all the Department HODs & Faculties to cooperate in this regard.


 18-10-23
 Superintendent
 PRMMCH, Baripada

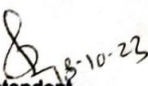
MemoNo. 4512 //date 18-10-2023 //

Copy to Notice Board for wide circulation.
Copy to Nursing Superintendent/ Hospital Managers, PRMMCH, Baripada for information and necessary action.


 18-10-23
 Superintendent
 PRMMCH, Baripada

MemoNo. 4513 //date 18-10-2023 //

Copy forwarded to the Dy. General Supdt-cum- Medical Record Officer, PRMMCH for information and necessary action.

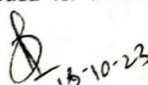

 18-10-23
 Superintendent
 PRMMCH, Baripada

Seen

 19/10/23

MemoNo. 4514 //date 18-10-2023 //

Copy forwarded to the All HODs, PRMMCH, Baripada/ CDM & PHO, Mayurbhanj/ DMO (MS)-cum- Superintendent, DHH, Baripada for information and necessary action.

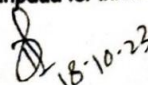

 18-10-23
 Superintendent
 PRMMCH, Baripada

seen

 19/10/2024

MemoNo. 4515 //date 18-10-2023 //

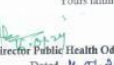
Copy forwarded to the Dean & Principal, PRMMCH, Baripada for information and necessary action.


 18-10-23
 Superintendent
 PRMMCH, Baripada

Letters issued by Director of Public Health Odisha requesting private cancer hospitals in Odisha for data sharing for PBCR process

DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha	
Letter No. <u>52</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2023</u>
From Dr. Niranjana Mishra Director Public Health, Odisha.	
To, Dr. Alok Srivastav Apollo Hospital, Bhubaneswar	
Sub: Sharing information regarding Cancer patients for PBCR	
Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office	
Sir/ Madam,	
As you are aware, Govt. of Odisha vide Notification Number- 23810/H/ Dtd. 20.10.2022 has notified "Cancer as a Reportable Disease" in the state of Odisha. All health and diagnostic facilities registered under Clinical Establishment Act have to share information regarding Cancer patients diagnosed and /or treated in the facility. It was requested by undersigned vide letter No. 2976/ Dtd. 15.05.2023 to kindly share the information regarding Cancer patients who are diagnosed and/or treated in your facility in the given format for Population Based Cancer Registry (PBCR). Tata Memorial Centre, Mumbai is authorised to collect all information for PBCR from your facilities.	
Hence, you are once again requested to abide by the request of sharing the information of Cancer patients as stated above for the purpose of PBCR.	
Yours faithfully,	
 Director Public Health Odisha Dated. <u>16.01.23</u>	
Memo No. <u>53</u> Copy submitted to the PS to the Commissioner cum Secretary, H&FW Deptt. for kind information of Commissioner cum Secretary, H&FW Deptt., Govt. of Odisha.	
Memo No. <u>34</u> Dated. <u>16.01.23</u> Copy forwarded to Dr. Anil Budakh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information	
Director Public Health Odisha	
State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No. 06742391505, Mail id: apnco.odisha@gmail.com, ncdco.odisha@yahoo.in	

DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha	
Letter No. <u>54</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2023</u>
From Dr. Niranjana Mishra Director Public Health, Odisha.	
To, Dr. Bibhu Dutta Mohapatra Chief Operating Officer, Aspire Hospital, Bhubaneswar.	
Sub: Sharing information regarding Cancer patients for PBCR	
Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office	
Sir/ Madam,	
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Yours faithfully,	
 Director Public Health Odisha Dated. <u>16.01.23</u>	
Memo No. <u>54</u> Copy submitted to the PS to the Commissioner cum Secretary, H&FW Deptt. for kind information of Commissioner cum Secretary, H&FW Deptt., Govt. of Odisha.	
Memo No. <u>35</u> Dated. <u>16.01.23</u> Copy forwarded to Dr. Anil Budakh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information	
Director Public Health Odisha	
State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No. 06742391505, Mail id: apnco.odisha@gmail.com, ncdco.odisha@yahoo.in	

DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha	
Letter No. <u>95</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2023</u>
From Dr. Niranjana Mishra Director Public Health, Odisha.	
To, Dr. Puspata Samanta Singhara, Medical Superintendent IMS & SUM Hospital, Bhubaneswar	
Sub: Sharing information regarding Cancer patients for PBCR	
Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office	
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Memo No. <u>56</u> Copy submitted to the PS to the Commissioner cum Secretary, H&FW Deptt. for kind information of Commissioner cum Secretary, H&FW Deptt., Govt. of Odisha.	
Memo No. <u>77</u> Dated. <u>16.01.2023</u> Copy forwarded to Dr. Anil Budakh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information	
Director Public Health Odisha	
State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No. 06742391505, Mail id: apnco.odisha@gmail.com, ncdco.odisha@yahoo.in	

DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha	
Letter No. <u>93</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2023</u>
From Dr. Niranjana Mishra Director Public Health, Odisha.	
To, Dr. Bipin Patra, NIDAN Diagnostic Centre, Bhubaneswar	
Sub: Sharing information regarding Cancer patients for PBCR	
Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office	
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Memo No. <u>95</u> Dated. <u>16.01.2023</u> Copy forwarded to Dr. Anil Budakh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information	
Director Public Health Odisha	
State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No. 06742391505, Mail id: apnco.odisha@gmail.com, ncdco.odisha@yahoo.in	

DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha		DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha	
Letter No- <u>90</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2024</u>	Letter No- <u>87</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2024</u>
From Dr. Niranjan Mishra Director Public Health, Odisha,		From Dr. Niranjan Mishra Director Public Health, Odisha,	
To, Dr. Manas Ranjan Baisakh Sr. Consultant, Pathology Prolife Diagnostics		To, Dr. Nihar Chhualsingh, Tra Scan Diagnostic Centre	
Sub: Sharing information regarding Cancer patients for PBCR		Sub: Sharing information regarding Cancer patients for PBCR	
Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office		Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office	
Sir/ Madam,		Sir/ Madam,	
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 Director Public Health Odisha Dated. <u>16.01.2024</u>		 Director Public Health Odisha Dated. <u>16.01.2024</u>	
Memo No. <u>91</u> Copy submitted to the PS to the Commissioner cum Secretary, H&FW Deptt. for kind information of Commissioner cum Secretary, H&FW Deptt., Govt. of Odisha.		Memo No. <u>84</u> Copy submitted to the PS to the Commissioner cum Secretary, H&FW Deptt. for kind information of Commissioner cum Secretary, H&FW Deptt., Govt. of Odisha.	
 Director Public Health Odisha Dated. <u>16.01.2024</u>		 Director Public Health Odisha Dated. <u>16.01.2024</u>	
Memo No. <u>92</u> Copy forwarded to Dr. Atul Budukh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information		Memo No. <u>89</u> Copy forwarded to Dr. Atul Budukh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information	
 Director Public Health Odisha		 Director Public Health Odisha	
State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No: 06742391305, Mail Id: ncd.odisha@rediffmail.com / ncd.odisha@odisha.gov.in		State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No: 06742391305, Mail Id: ncd.odisha@rediffmail.com / ncd.odisha@odisha.gov.in	

DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha		DIRECTORATE OF PUBLIC HEALTH ODISHA Department of Health & Family Welfare, Government of Odisha	
Letter No- <u>89</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2024</u>	Letter No- <u>86</u> /DPH/ NCD/ 401/2022	Date <u>16.01.2024</u>
From Dr. Niranjan Mishra Director Public Health, Odisha,		From Dr. Niranjan Mishra Director Public Health, Odisha,	
To, Dr. Shovan Rath Carcinoma Cancer Hospital Cuttack		To, Dr. Srikanth Mohapatra, HCG Panda Cancer Hospital, Cuttack	
Sub: Sharing information regarding Cancer patients for PBCR		Sub: Sharing information regarding Cancer patients for PBCR	
Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office		Ref: Letter No. 2976/ Dated 15 th May 2023, 4476, 4480, 4484, 4488, 4490, 4496 and 4500/ Dated 14 th July 2023 of this office	
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Memo No. <u>88</u> Copy submitted to the PS to the Commissioner cum Secretary, H&FW Deptt. for kind information of Commissioner cum Secretary, H&FW Deptt., Govt. of Odisha.		Memo No. <u>82</u> Copy submitted to the PS to the Commissioner cum Secretary, H&FW Deptt. for kind information of Commissioner cum Secretary, H&FW Deptt., Govt. of Odisha.	
 Director Public Health Odisha Dated. <u>16.01.2024</u>		 Director Public Health Odisha Dated. <u>16.01.2024</u>	
Memo No. <u>86</u> Copy forwarded to Dr. Atul Budukh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information		Memo No. <u>83</u> Copy forwarded to Dr. Atul Budukh, Prof. OIC, Centre for cancer Epidemiology, ACTREC, TMC, Mumbai for kind information	
 Director Public Health Odisha		 Director Public Health Odisha	
State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No: 06742391305, Mail Id: ncd.odisha@rediffmail.com / ncd.odisha@odisha.gov.in		State Non-Communicable Diseases Cell Directorate of Public Health, Ground floor, Heads of Department Building, Bhubaneswar-751001 Phone No: 06742391305, Mail Id: ncd.odisha@rediffmail.com / ncd.odisha@odisha.gov.in	

5. Population covered by Mayurbhanj PBCR

The Mayurbhanj PBCR covers the entire district of Mayurbhanj in Odisha state, India. As per the census of 2011, the population of Mayurbhanj district was 25,19,738, of which, 12,56,213 (49.9%) were males, and 12,63,525 (50.1%) were females, as shown in table 6.³ About 92% of the population lives in rural areas.

Table 6: Distribution of urban and rural population in Mayurbhanj, as per 2011 census of India

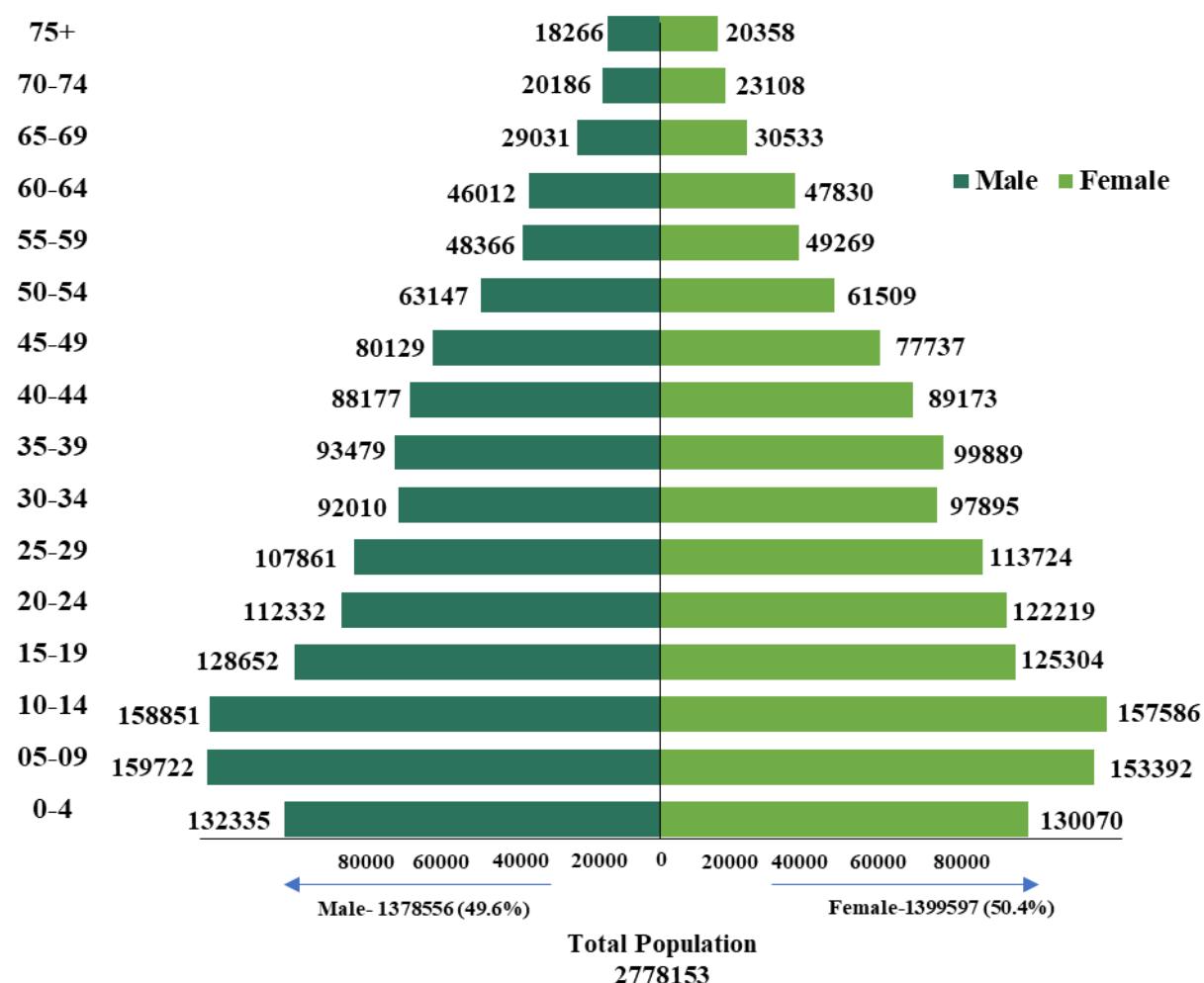
Group	Urban	Urban %	Rural	Rural %	Total
Male	98,637 (51.1%)	7.9%	11,57,576 (49.7%)	92.1%	12,56,213 (49.9%)
Female	94,259 (48.9%)	7.5%	11,69,266 (50.3%)	92.5%	12,63,525 (50.1%)
Total	1,92,896 (100.0%)	7.7%	23,26,842 (100.0%)	92.3%	25,19,738 (100.0%)

The estimated population of Mayurbhanj district for 2023 is 27,78,152 [males: 13,78,556 (49.6%); females: 13,99,596 (50.4%)]. This population was estimated using the ratio method, by projecting the population numbers provided by census of 2001 and 2011. Table 7 presents the estimated population of Mayurbhanj district by sex and age group for 2023. Figure 6 is a population pyramid for the same.

Table 7: Estimated population of Mayurbhanj district in 2023, by sex and age group

Age group	Male		Female		Total	
	Number	%	Number	%	Number	%
0-4	132,335	9.6	130,070	9.3	262,405	9.4
5-9	159,722	11.6	153,392	11.0	313,114	11.3
10-14	158,851	11.5	157,586	11.3	316,437	11.4
15-19	128,652	9.3	125,304	9.0	253,956	9.1
20-24	112,332	8.1	122,219	8.7	234,551	8.4
25-29	107,861	7.8	113,724	8.1	221,585	8.0
30-34	92,010	6.7	97,895	7.0	189,905	6.8
35-39	93,479	6.8	99,889	7.1	193,368	7.0
40-44	88,177	6.4	89,173	6.4	177,350	6.4
45-49	80,129	5.8	77,737	5.6	157,866	5.7
50-54	63,147	4.6	61,509	4.4	124,656	4.5
55-59	48,366	3.5	49,269	3.5	97,635	3.5
60-64	46,012	3.3	47,830	3.4	93,842	3.4
65-69	29,031	2.1	30,533	2.2	59,564	2.1
70-74	20,186	1.5	23,108	1.7	43,294	1.6
75-79	18,266	1.3	20,358	1.4	38,624	1.4
All ages	13,78,556	100.0	13,99,596	100.0	27,78,152	100.0

Figure 6: Population pyramid of Mayurbhanj district for 2023



Geographic distribution into Lower Ghati and Upper Ghati

Mayurbhanj district has two major Ghats, Bamanghati (ranging about 40kms) and Saratghati (ranging about 20kms). On basis of registry experience and these geographical features, Mayurbhanj district can be divided into two zones, namely Upper Ghati and Lower Ghati, for analytical purposes to assess inequalities in cancer incidence and access to cancer care. The Upper Ghati zone comprises of Bahalda, Bijatola, Bisoi, Jamda, Jashipur, Karanjia, Kusumi, Rairangpur, Raruan, Sukruli, Thakurmunda, and Tiring blocks of Mayurbhanj district. The Lower Ghati zone comprises of Badasahi, Bangiriposi, Baripada, Betanati, Gopabandhunagar, Kaptipada, Khunta, Kuliana, Muruda, Rasagobindapur, Saraskana, Shamakhunta, Suliapada, and Udala blocks of Mayurbhanj district. The Lower Ghati blocks have relatively better access to healthcare facilities, while the Upper Ghati blocks are characterised by difficult terrain and limited transportation leading to limited access to health infrastructure. Figure 7 is a map of Mayurbhanj district

with Upper and Lower Ghati division made. Table 8 describes the age group wise population distribution of Upper and Lower Ghati zones.

Figure 7: Map of Mayurbhanj district with Upper and Lower Ghati division

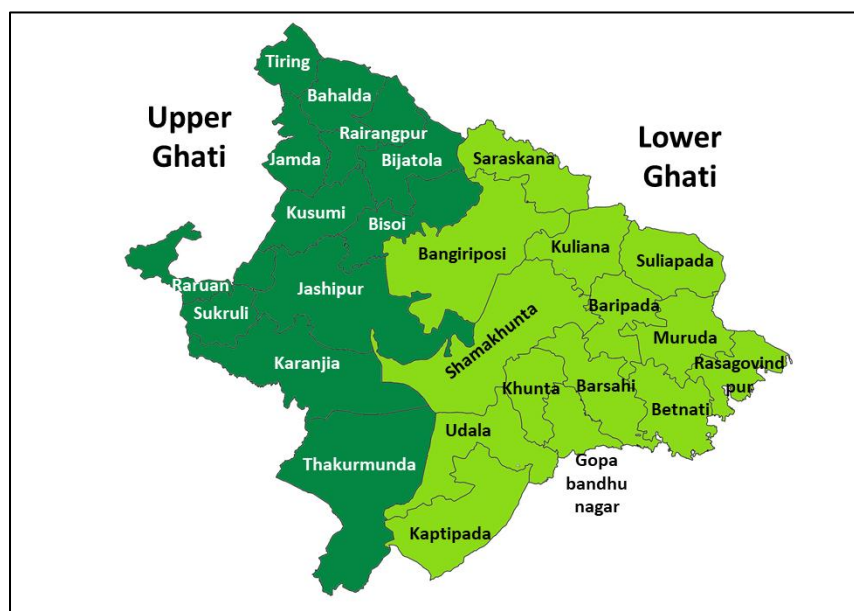


Table 8: Population distribution of Upper Ghati and Lower Ghati, by age and sex for 2023

Age-group	Upper Ghati			Lower Ghati		
	Males	Females	Total	Males	Females	Total
0-4	50,174	50,591	100,765	82,161	79,479	161,640
5-9	60,558	59,663	120,221	99,165	93,730	192,895
10-14	60,227	61,294	121,521	98,624	96,292	194,916
15-19	48,777	48,738	97,515	79,874	76,567	156,441
20-24	42,590	47,537	90,127	69,742	74,681	144,423
25-29	40,895	44,233	85,128	66,966	69,491	136,457
30-34	34,885	38,077	72,962	57,125	59,819	116,944
35-39	35,442	38,852	74,294	58,037	61,037	119,074
40-44	33,432	34,684	68,116	54,745	54,489	109,234
45-49	30,380	30,236	60,616	49,749	47,501	97,250
50-54	23,942	23,924	47,866	39,205	37,585	76,790
55-59	18,337	19,163	37,500	30,028	30,105	60,133
60-64	17,445	18,604	36,049	28,567	29,226	57,793
65-69	11,007	11,876	22,883	18,024	18,657	36,681
70-74	7,653	8,988	16,641	12,532	14,120	26,652
75+	6,926	7,919	14,845	11,341	12,440	23,781
Total	5,22,670	5,44,379	10,67,049	8,55,885	8,55,219	17,11,104

6. Staff recruitment and training

The infrastructure required for the functioning of PBCR was provided by PRM MCH, Baripada. The office space was equipped with furniture, one computer system, and a printer. Additionally, two laptops were provided by TMC, Mumbai. The cancer registry staff were recruited with the help of NISER team on 3rd October 2023.

Post the inauguration of the PBCR, a detailed training workshop on “Setting up a Cancer Registry” was conducted from 9th to 14th October 2023 by TMC staff. The training lectures were conducted in Homi Bhabha Hall at NISER Bhubaneswar, and practical training in CanReg5 software was conducted at the computer centre laboratory. The staff were trained on the basic concepts of cancer registry and its role in cancer control, case abstraction, and ICD-O3 coding, data entry in CanReg5 software, and data analysis. Periodically, CCE-TMC staff members conducted refresher training programs for the staff, either in person or virtually.

In addition to the workshop, the recruited staff were provided field training to provide them with practical skills on how to identify reportable cancer cases, how to engage with community level stakeholders and health system workers like ANMs and ASHAs, how to empathetically interact with patients and their families, and how to perform verbal autopsy.



Faculty from Tata Memorial Centre and participants (Mayurbhanj PBCR staff and medical officers of different health institutions of Mayurbhanj district) of the “Setting up a Cancer Registry” workshop conducted for Mayurbhanj PBCR at NISER, Bhubaneswar

7. Cancer Registration Process

Definitions and Inclusion Criteria

The Mayurbhanj PBCR includes only those cases in its database who are,

1. **Verified residents of Mayurbhanj district, for at least one year before cancer diagnosis.**
2. Cancer cases i.e. people with tumours of malignant behaviour, as defined by the tenth edition of the International Classification of Diseases (ICD-10).

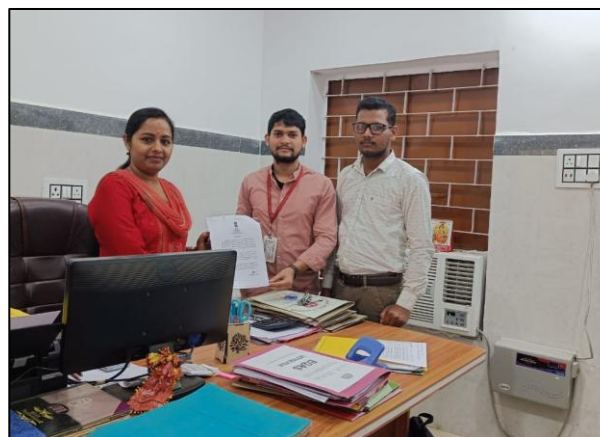
This report provides information about cancer incidence and mortality cases of the year 2023.

Case finding

The registry follows an active method of case finding, to ensure maximum registration of cancer cases. The registry staff personally visit each source the cancer case may have visited to gather information about them. As most of the registry area is rural, the field registry staff physically visit villages for data collection.

Sources of information for cancer cases

The registry staff regularly visits hospitals, medical colleges, primary health centres and sub-centres, diagnostic labs, and death registration office located within and outside Mayurbhanj district to gather information on cancer cases. The staff of PBCR Khordha collect information on cancer cases that are residents of Mayurbhanj district who visited hospitals in Cuttack and Bhubaneswar. Table 9 is an elaborate list of all sources that contributed case information to the Mayurbhanj PBCR for the year 2023.



Hospital visits were carried out for systematic cancer case abstraction, including visits to nearby district and state hospitals to capture cancer cases from Mayurbhanj district for 2023.

Table 9: List of sources of case information for Mayurbhanj PBCR for 2023

Sr. No.	Institution Name	Place
1	28 Community Health Centres (Urban & Rural)	Mayurbhanj District
2	589 Sub-Centres	Mayurbhanj District
3	86 Primary Health Centres and 4 Urban Primary Health Centres	Mayurbhanj District
4	Ayush Amrit Diagnostics	Mayurbhanj District
5	City Clinic, Baripada	Mayurbhanj District
6	Death Registrar Office of 26 CHCs and 4 Municipal Wards	Mayurbhanj District
7	District Headquarter Hospital, Baripada	Mayurbhanj District
8	Durga Nursing Home, Baripada	Mayurbhanj District
9	Early Detection Programme (Collaboration of TMC, NISER, and PRMMCH)	Mayurbhanj District
10	Jeevandeep Hospital, Baripada	Mayurbhanj District
11	Life Line Clinic, Baripada	Mayurbhanj District
12	PRM Medical College, Baripada	Mayurbhanj District
13	Sai Hospital, Baripada	Mayurbhanj District
14	Sai Pratik Health Care, Baripada	Mayurbhanj District
15	All India Institutes of Medical Sciences (AIIMS)	Bhubaneswar
16	Apollo Hospital	Bhubaneswar
17	Bagchi Shri Shankara Cancer Centre and Research Institute	Bhubaneswar
18	Bhubaneswar Municipal Corporation Death	Bhubaneswar
19	Capital Hospital	Bhubaneswar
20	Care Hospital	Bhubaneswar
21	Central Government Health Scheme (CGHS) Hospital	Bhubaneswar
22	Employees State Insurance Corporation (ESIC) Hospital	Bhubaneswar
23	Gen X Hospital	Bhubaneswar
24	Health Village Hospital	Bhubaneswar
25	Hitech Hospital	Bhubaneswar
26	Kalinga Institute of Medical Science	Bhubaneswar
27	Laxmi Poly Clinic	Bhubaneswar
28	Manipal Hospital	Bhubaneswar
29	Neelachal Hospital	Bhubaneswar
30	Sparsh Hospital & Critical Care	Bhubaneswar
31	Sum Hospital	Bhubaneswar
32	Sum Ultimate Hospital	Bhubaneswar
33	Sun Shine Hospital	Bhubaneswar
34	Super Religare Laboratories (SRL) Diagnostics	Bhubaneswar
35	Vivekananda Health Care & Medical Hospital	Bhubaneswar
36	Acharya Harihar Post Graduate Institute of Cancer	Cuttack
37	HCG Panda Cancer Centre	Cuttack
38	District Headquarter Hospital	Keonjhar
39	District Headquarter Hospital	Balasore
40	Fakir Mohan Medical College and Hospital	Balasore
41	Tata Memorial Centre (TMH and ACTREC)	Mumbai, Maharashtra
42	Homi Bhabha Cancer Hospital & Research Centre	Vishakhapatnam, Andhra Pradesh
43	Bramhananda Narayana Hospital	Jamshedpur, Jharkhand
44	Meherbai Tata Memorial Hospital	Jamshedpur, Jharkhand
45	MGM Medical College and Hospital	Jamshedpur, Jharkhand

Community involvement in cancer registration process

Community involvement is an integral part of data collection activities of PBCRs in rural regions. The trained PBCR staff regularly co-ordinate with primary health centre staff, municipal ward officials, ASHAs, and Anganwadi workers who cooperate by providing information on newly diagnosed cancer cases and deaths that have occurred in Mayurbhanj district. The process of community interaction provides a guarantee about the residence status of the cancer cases. Interaction with the patient and their relatives provides demographic information such as education, income, and religion, etc. Regular village/urban ward visits and communications with the community have enabled regular update of the vital status of cancer patients, which will be utilized for cancer survival analysis. Initially, few cancer centres refused to provide the cancer case data. In such a situation, field visits and interactions with community leaders has minimised under-registration of cases.

At present, registry staff has interacted with 4,957 community leaders and health staff of 70 wards and 3944 villages of twenty-six blocks of Mayurbhanj district. Table 10 mentions the number of community leaders and health workers who have contributed to the cancer registration process of Mayurbhanj district.



Meeting with district authorities for smooth functioning of PBCR activities



Community level meetings in villages or Community Health Centres

Table 10: Community leaders and Public Health staff involved in the cancer registration process

Block Name	Sarpanch /MC	MOIC	MO	Ayush MO	Dental MO	BPM/ DPM	CHO/NO	ANM	ASHA	Other	Total
Badasahi	12	1	8	1	0	1	32	48	210	1	314
Bahalda	12	1	3	0	1	1	22	4	65	3	112
Bangiriposi	5	1	2	1	0	1	20	23	131	0	184
Baripada Rural	9	1	5	2	1	1	24	25	99	0	167
Betnati	15	3	10	1	0	1	33	26	186	0	275
Bijatala	10	0	0	0	0	1	16	18	104	0	149
Bisoi	10	1	3	2	0	1	18	0	111	0	146
Gopabandhunagar	10	1	10	1	1	1	15	18	130	0	187
Jamda	8	0	6	2	0	1	13	11	84	0	125
Jashipur	5	1	1	1	0	1	20	14	208	0	251
Kaptipada	6	1	6	2	0	1	31	24	180	0	251
Karanjia Rural	13	1	1	0	0	1	19	19	158	1	213
Khunta	10	1	8	3	1	1	18	16	112	1	171
Kuliana	10	2	10	2	1	1	20	21	141	0	208
Kusumi	12	1	8	1	0	1	14	20	123	0	180
Moroda	8	1	2	2	1	1	19	36	164	0	234
Rairangpur Rural	3	1	6	1	1	1	15	10	83	1	122
Raruan	10	1	1	0	0	1	9	20	95	0	137
Rasgovindpur	7	1	7	1	0	1	19	25	119	0	180
Shamakhunta	15	2	11	1	0	1	18	25	121	0	194
Saraskana	15	0	8	2	1	1	20	23	129	0	199
Sukruli	12	1	1	1	1	1	12	23	75	0	127
Suliapada	15	2	7	1	1	1	21	22	144	0	214
Thakurmunda	4	0	2	0	0	1	22	18	128	0	175
Tiring	1	1	1	0	0	1	5	12	73	7	101
Udala Rural	11	1	7	1	0	1	18	21	99	0	159
Baripada Urban	25	25	10	2	2	1	10	5	35	10	125
Karanjia Urban	1	1	2	1	1	1	0	2	8	0	17
Rairangpur Urban	1	1	3	1	1	0	0	3	10	0	20
Udala Urban	1	1	4	1	1	0	0	2	10	0	20
Total	276	55	153	34	15	28	503	534	3335	24	4957

MC: Municipal Corporator, MOIC: Medical Officer in-charge, MO: Medical Officer, NO: Nursing officer, BPM: Block Programme Manager, DPM: District Programme manager, CHO: Community Health Officer, ANM: Auxiliary Nurse Midwife, ASHA: Accredited Social Health Activist, MPHW: Multipurpose Health Worker

Case abstraction

As most of the registry area is rural, villages are allotted to field registry staff for regular and data collection. The field staff collects detailed information about the cancer case and visits the patient's house, along with the ASHA workers. The field staff interacts with the patient/patient's relative and asks the following questions:

- When was the patient diagnosed with cancer?
- Does the patient have a case file number with the treating hospital?
- Does the patient have any discharge report, biopsy report, or an imaging report?

The field staff notes down the available information. As per the information provided by the patient/patient's relative, the field staff communicates with the treating cancer centre, collects the clinical details of the patient, and registers the cancer case in the prescribed proforma. In case the medical records of the patient are not available, the case is registered on basis of information provided by the patient or their relatives, after confirmation by a medical officer.

Follow - up

During subsequent visits, the field staff update the vital status of the cancer cases, and identifies new cancer cases and cancer-related deaths in the village. This is a continuous process, repeated every 6-8 months.

Cancer death information collection

The registry field staff regularly visits vital statistics and birth and death registrar's office in Mayurbhanj district to collect information on cancer deaths. For additional information regarding the disease of the demised patient, the patient's relatives are contacted with the help of local health workers. The received information is matched with the existing database in the registry office, before registration of cancer mortality cases.

Cancer prevalence cases

During field visits, field staff may come across cases diagnosed before 2023. In this situation, the field staff collect detailed information on the cancer case from the patient's relative and maintain the data in the registry office. During subsequent visits, field staff updates the status of the cancer cases. If a death of the prevalent case occurs in that year, then the cancer death is registered after matching the information with the registry record. As of December 2023, Mayurbhanj PBCR has a record of 1,413 prevalent cancer cases.



Interaction with patient and their relatives during field visits, accompanied by ASHA

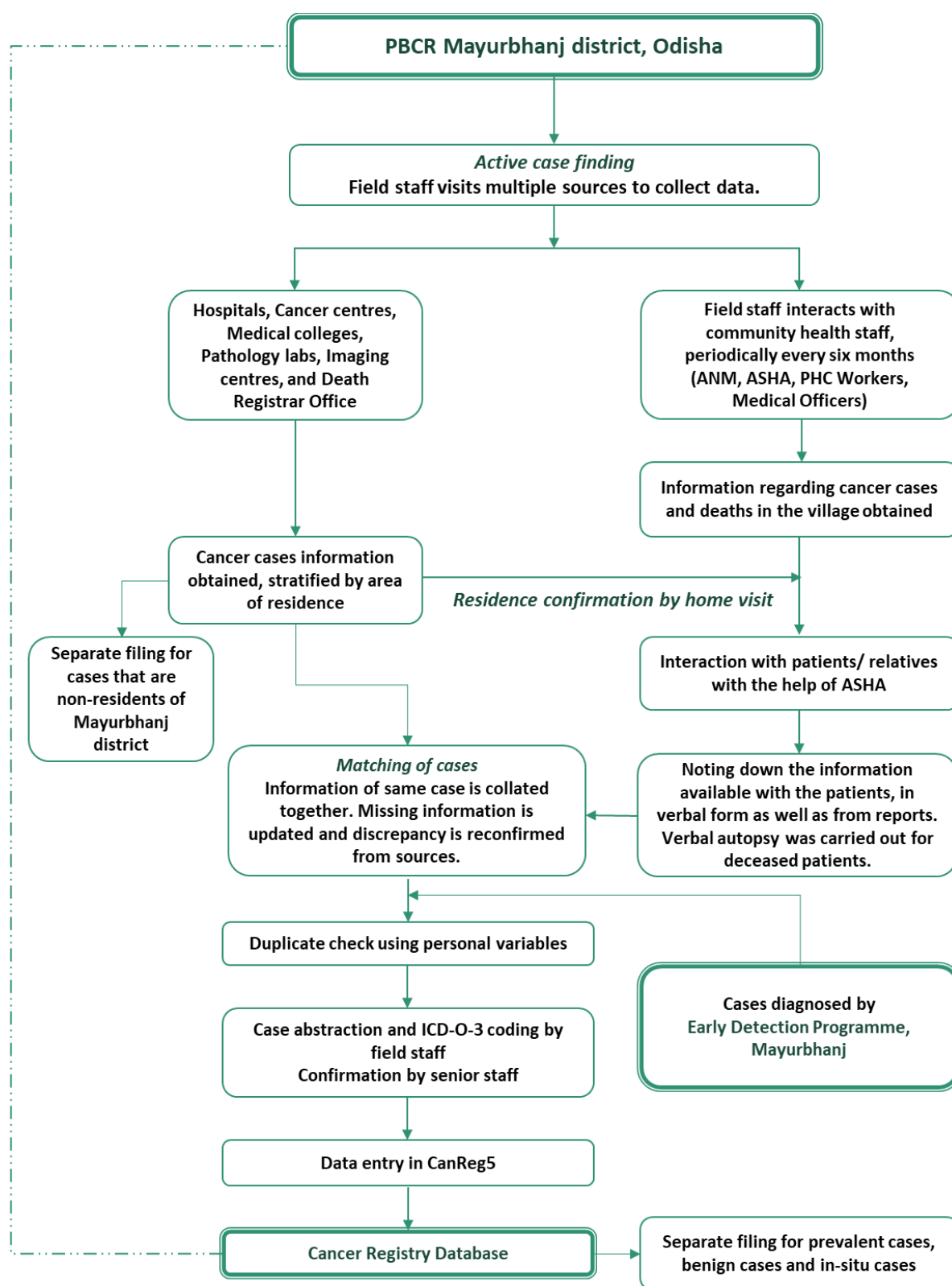


Telephonic interaction with patients or their relatives for verification of sociodemographic details and vital status

Data checking and data entry

All the cases collected by field staff are scrutinized by the senior staff members. After residence confirmation, the cancer case information is matched with the existing database to prevent duplicate entry. Confirmed cases are documented in a prescribed format and entered in CanReg5 software, developed by International Agency for Research on Cancer (IARC), Lyon, France.⁷ The detailed cancer registry proforma is mentioned as Annexure 1. The primary site and histology are coded based on the International Classification of Diseases for Oncology – Third Edition (ICD-O-3).⁸ CanReg5 converts ICD-O-3 codes to ICD-10 and for childhood cancers, International Classification of Childhood Cancer (ICCC-3) codes are also generated.^{8,9} The CCE-TMC team regularly performed data quality control. Consistency checks were conducted using IARC CHECK software. The cancer registration process of the registry is presented in Figure 8.

Figure 8: Summary flowchart for Cancer Registration Process



8. First Source of registration for cancer cases

Tables 11 and 12 describe the first source of cancer registration for incidence and mortality cases, respectively. About 30% of both incidence and mortality cases were first registered through interaction with the community and the primary health system.

Table 11: First source of registration for cancer incidence cases

Sr. No	Source of registration	Male		Female		Total	
		No.	%	No.	%	No.	%
1	Village/ house visit/ Telephonic interaction	140	27.0	182	28.0	322	27.5
2	Acharya Harihar Post Graduate Institute of Cancer, Cuttack	101	19.5	149	22.9	250	21.4
3	PRM MCH, Baripada	64	12.3	109	16.7	173	14.8
4	Birth and Death Registrar of PHC, CHC and UPHC	50	9.6	67	10.3	117	10.0
5	HCG Panda Cancer Hospital, Cuttack	40	7.7	36	5.5	76	6.5
6	State Health Assurance Society (SHAS)	38	7.3	24	3.7	62	5.3
7	Apollo Hospital, Bhubaneswar	16	3.1	5	0.8	21	1.8
8	Tata Memorial Centre, Mumbai	10	1.9	10	1.5	20	1.7
9	Early Detection Programme, Mayurbhanj	10	1.9	8	1.2	18	1.5
10	Kalinga Institute of Medical Science Hospital, Bhubaneswar	5	1.0	2	0.3	7	0.6
11	All India Institutes of Medical Sciences (AIIMS), Bhubaneswar	5	1.0	2	0.3	7	0.6
12	Others	40	7.7	57	8.8	97	8.3
Total		519	100.0	651	100.0	1170	100.0

Table 12: First source of registration for cancer mortality cases

Sr. No	Source of registration	Male		Female		Total	
		No.	%	No.	%	No.	%
1	Village/ house visit/ Telephonic interaction	74	27.9	97	31.7	171	29.9
2	Acharya Harihar Post Graduate Institute of Cancer, Cuttack	53	20.0	58	19.0	111	19.4
3	Birth and Death Registrar of PHC, CHC and UPHC	69	26.0	84	27.5	153	26.8
4	PRM MCH, Baripada	34	12.8	33	10.8	67	11.7
5	HCG Panda Cancer Hospital, Cuttack	9	3.4	12	3.9	21	3.7
6	State Health Assurance Society (SHAS)	6	2.3	3	1.0	9	1.6
7	Bhubaneswar Municipal Corporation, Bhubaneswar	3	1.1	3	1.0	6	1.1
8	Others	17	6.4	16	5.2	33	5.8
Total		265	100.0	306	100.0	571	100.0

9. Data Quality Control and Assessment

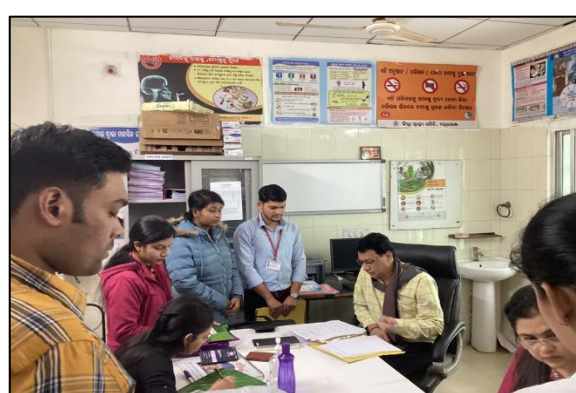
Comprehensive data checking

Staff from CCE-TMC were actively involved in the quality control procedure of the PBCR. During the quality control exercise, data validity and consistency checks were carried out using the IARC check and conversion tool as well as manual checking of each case. Areas requiring further re-training and discussions were identified and then, addressed during refresher training sessions. The retraining was organized through virtual sessions by the CCE-TMC, Mumbai as a part of the capacity building of the PBCR team. The data was updated and re-entered.

The senior officials from CCE-TMC, Mumbai regularly reviewed case files registered by Mayurbhanj PBCR for data checking and quality control. These reviews were conducted either through visits to Mayurbhanj site or by deputation of Mayurbhanj staff to NISER Bhubaneswar or TMC Mumbai for CCE-TMC officials to check. The list of visits by senior officials of CCE-TMC, Mumbai for capacity building, data checking and quality control is mentioned as table 13.

Table 13: Details about data quality checks conducted for Mayurbhanj PBCR

Sr. No.	Date	Faculty	No. of days
<i>Data quality checks conducted at Mayurbhanj PBCR</i>			
1	13.09.2023	Mr Prithviraj Kadam and Mr Pratik Sawant	11
2	16.10.2023	Mr Prithviraj Kadam and Mr Pratik Sawant	6
3	11.12.2023	Dr Atul Budukh	4
4	11.03.2024	Mr Prithviraj Kadam and Mr Pratik Sawant	3
5	24.06.2024	Mr Prithviraj Kadam and Mr Pratik Sawant	3
6	08.08.2024	Dr Atul Budukh and Mr Prithviraj Kadam	2
7	24.06.2025	Dr Suvarna Gore, Ms Sushama Saoba, Mr Prithviraj Kadam & Mr Pratik Sawant	4
8	11.11.2025	Mr Prithviraj Kadam and Mr Pratik Sawant	4
<i>Data quality checks conducted at NISER Bhubaneswar</i>			
1	09.10.2023	Dr Atul Budukh and team	6
2	29.01.2024	Dr Atul Budukh, Ms Sushama Saoba and Mr Prithviraj Kadam	9
3	29.04.2024	Ms Samyukta Shivshankar	28
4	13.10.2024	Mr Prithviraj Kadam	4
5	02.02.2025	Dr Atul Budukh, Ms Sushama Saoba and Mr Prithviraj Kadam	7
<i>Data quality checks conducted at TMC Mumbai</i>			
1	20.08.2024	Ms Krishna Kumari Mohapatra, Ms Jolly Nanda in CCE Mumbai	11
2	26.05.2025	Dr Bindushree Mohanta, Ms Krishna Kumari Mohapatra, Ms Sikha Behera, Mr Rajesh Kumar Das	9



Data quality check and review of procedure by CCE-TMC staff

Mortality to Incidence Ratio

The mortality-incidence or MI ratio is an indicator of the completeness of cancer registry data. In the year 2023; 1,170 incident cancer cases and 571 cancer deaths have been registered by PBCR Mayurbhanj district. The overall mortality to incidence ratio is **0.50 [Male: 0.52; Female: 0.48]**. It was observed when compared to other rural PBCRs in India, the M:I ratio of Mayurbhanj is lower than that of Barshi and Gadchiroli PBCRs of Maharashtra but is similar to that observed in Muzaffarpur, Bihar. **As compared to other rural cancer registries, we have noted the possibility of under reporting, as this is the first year of the cancer registry. In the coming years, there will be improvement in the cancer registration system due to the support from the Health and Family Welfare Department of the Odisha State and their initiative of the Odisha State Cancer Registry.**

There is also evidence of underdiagnosis of cancer cases, which is expected to improve in the upcoming years with strengthening of health system and EDP Mayurbhanj.

Incidence rate of paediatric cancers

In 2023, Mayurbhanj PBCR registered 16 cases of paediatric cancer in boys and 5 in girls of age 0-14 years. The age adjusted rate of paediatric cancer incidence in Mayurbhanj district is **33.7 per 1,000,000 boys** and **12.9 per 1,000,000 girls** in 2023, as shown in table 14. The International Incidence of Childhood Cancer volume III standard for paediatric cancer incidence is within the range 60.0 to 180.0 per million. **On basis of this, there is an under-reporting as well as under-diagnosis of the paediatric cancer cases in Mayurbhanj district.**

Table 14: Incidence of paediatric cancer in Mayurbhanj district 2023

Age group	Boys		Girls	
	Number of cases	Age-Specific Rate per 1,000,000	Number of cases	Age-Specific Rate per 1,000,000
0-4	3	22.7	3	23.1
5-9	6	37.6	1	6.5
10-14	7	44.1	1	6.3
Age Adjusted Rate per 1,000,000 (AAR per million)	33.7		12.9	

Microscopic verification of cases

In the year 2023, out of 519 male and 651 female cases, 364 and 447 cases were microscopically verified, i.e. they had a histopathological or cytological proof that the patient had cancer. **The proportion of microscopically verified cases was 69.3% (70.1% among males and 68.7% among females).** About 7% of cases were registered on basis of radiological evidence and 12% cases had clinical evidence.

Death Certificate Only (DCO) and Verbal Autopsy cases

Under Death Certificate Only (DCO) and Verbal Autopsy category, 54 (10.4%) cases among males and 78 (12.0%) cases among females were registered. DCO% was 11.3%. DCO cases refer to cases with no other proof of cancer diagnosis except a death certificate with cancer mentioned on it. However, in low resource settings, the cause of death data may not be available for most cases. Using the verbal autopsy technique, the relatives' narrative of the chronological events during the diagnosis and treatment of the patient or in case of death patients, was used to register such cases as medical records/reports may not be available with the relatives. All of such cases are duly verified with our Medical Officer before registration. The death cases have been registered based on the narration/relative's remarks/discharge summary available with the patient's relative. In the initial period of the registry, DCO cases are always high, the proportion decreases with continuous registry operation.

Number of sources per case registered

The number of sources per incidence case registered was noted. In Mayurbhanj district, the average number of sources per case registered is 2.4, details are mentioned in the Table 15. Due to field visits and community interactions, good coverage of cancer cases has been observed.

Table 15: Per source case registration

Source	Number of cases confirmed
1 source	1170
2 sources	960
3 sources	427
4 sources	145
5 sources	68
6 sources	27
Total	2797
Case Registration Per Source	$2797/1170 = 2.4$

10. Description of Statistical Terms

Crude Rate

Crude Rate is the total number of cancer cases (or deaths) occurring in a defined population in a defined time period divided by the average population for that time period. They represent the true rate of cancer incidence/mortality in the population for that age group.

$$\text{Crude Rate per 100,000 (CR)} = \frac{\text{Number of incident (or mortality cases)}}{\text{Population for that time period}} \times 100,000$$

Age Specific Rate

Age specific rates are similar to crude rates in formula and principle, however, they are only calculated for one particular age group instead of the whole population. They represent the true rate of cancer incidence/mortality in the population for that age group.

$$\text{Age Specific Rate per 100,000 (ASR)} = \frac{\text{Number of incident (or mortality cases) age group}}{\text{Population at risk of that age group}} \times 100,000$$

Age Adjusted Rate

For proper comparison of total cancer incidence rates between two registries, in epidemiological sense, we need to adjust for the age structure of both registries. Through direct age standardisation against the World Standard Population (WSP), we get Age Adjusted Rates (AAR).

$$\begin{aligned} \text{Age-Adjusted (Standardised) Rate per 100,000 (AAR)} \\ = \frac{\sum (\text{Age specific rate} \times \text{World standard population (for that age group)})}{\sum \text{World standard population}} \end{aligned}$$

Truncated Rate

Age Adjusted Rate calculated specifically for the age group 35-64 years is known as Truncated Rate. This is calculated because 35-64 years is high-risk age group for several cancers, and cancer incidence data of this age group may have better accuracy.

$$\begin{aligned} \text{Truncated Rate per 100,000 (TR)} \\ = \frac{\sum (\text{Age specific rate} \times \text{World standard population (for that age group)})}{\sum \text{World standard population for 35-64 years i.e. 31000}} \end{aligned}$$

Cumulative Rate and Risk

Cumulative risk represents the risk of developing/ dying from cancer. For calculating cumulative risk, first cumulative rate is calculated:

$$\text{Cumulative Rate} = \sum \frac{(\text{Age specific rate} \times \text{interval (for that age group)}) \times 100}{100000}$$

Cumulative rate is expressed as a per cent. Cumulative rate is an approximation of cumulative risk.

Cumulative rate/risk are calculated for either 0-64 years or 0-74 years.

$$\text{Cumulative risk} = 100 \times [1 - \exp (-\text{cum. rate}/100)]$$

Standardised Rate Ratios (RR)

AARs are often useful to compare disease risk between two populations (e.g., districts, sexes, ethnic groups, or time periods). This comparison is facilitated by the calculation of Standardised Rate Ratio (RR). The RR quantifies the relative risk of disease in one population compared to another after adjusting for differences in age structure.

$$\text{Rate Ratio (RR)} = \frac{\text{Age-Adjusted Rate per 100,000 (AAR}_1\text{)}}{\text{Age-Adjusted Rate per 100,000 (AAR}_2\text{)}}$$

Where:

AAR₁ is Age Adjusted Rate of population 1

AAR₂ is Age Adjusted Rate of population 2

If RR is equal to 1, there is no difference between AAR₁ and AAR₂.

If RR is greater than 1, AAR₁ is greater than AAR₂.

If RR is lesser than 1, AAR₂ is greater than AAR₁.

To assess whether the observed difference in rates is statistically significant, 95% confidence interval of RR is calculated as using the formulae prescribed by Boyle and Parkin (1991) in Cancer Registration Principles and Methods.⁷ When the confidence interval does not contain 1 within its range, the difference between two AARs is said to be significant.

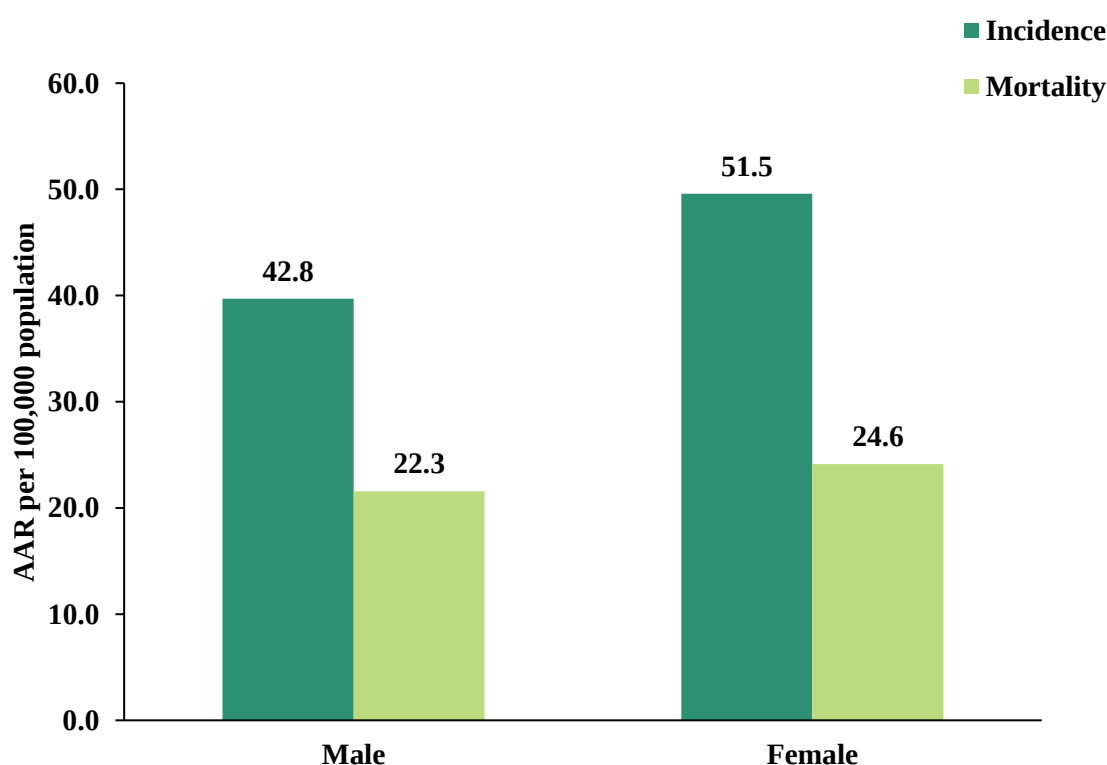
All formulae used in this report have been adapted from the chapter on statistical methods prescribed by Boyle and Parkin (1991) in the IARC publication Cancer Registration: Principles and Methods.¹⁰

11. Cancer Incidence and Mortality in 2023

A total of 1,170 cancer cases were registered by the Mayurbhanj PBCR as incidence of the year 2023, of which 519 were males (44.3%), and 651 were females (55.7%). The Age Adjusted Rate (AAR) of cancer incidence for the year 2023 is 42.8 per 100,000 among males and 51.5 per 100,000 among females, as shown in figure 9.

In the same year, Mayurbhanj PBCR registered 571 cancer deaths, of which 265 were males (46.4%), and 306 (53.6%) were females. The AAR of cancer mortality for the year 2023 is 22.3 per 100,000 among males and 24.6 per 100,000 among females.

Figure 9: Cancer Incidence and Mortality in Mayurbhanj district for 2023



Figures 10 and 11 present the age specific incidence and mortality curves for males and females of Mayurbhanj district, respectively.

Figure 10: Age specific curve of cancer incidence and mortality among males of Mayurbhanj district in 2023

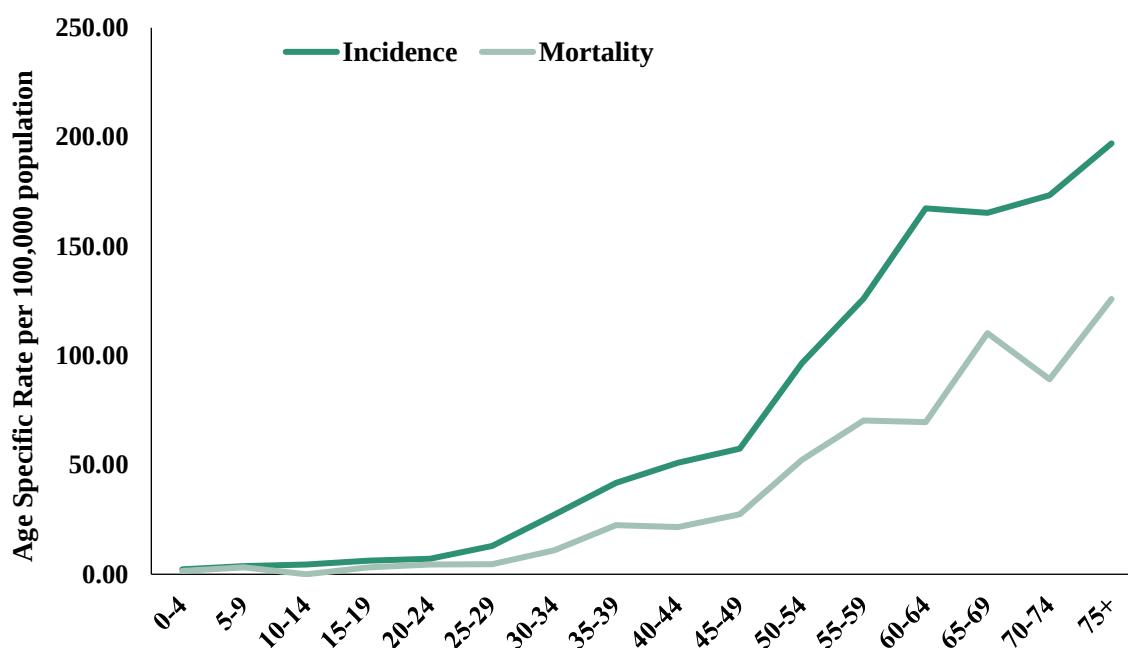
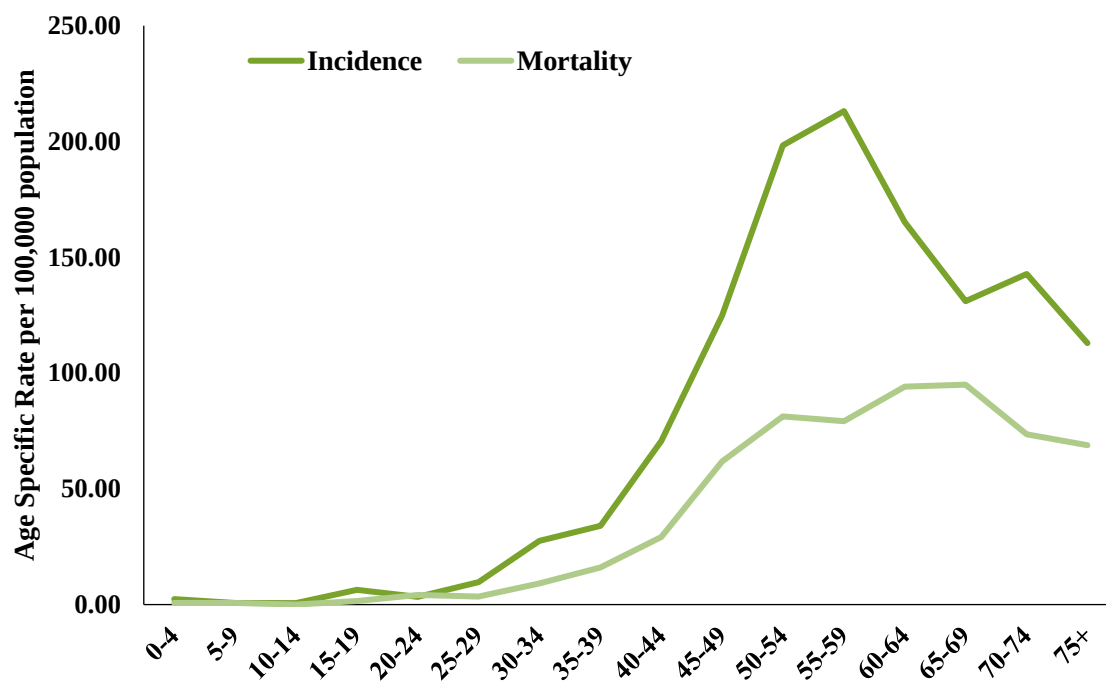


Figure 11: Age specific curve of cancer incidence and mortality among females of Mayurbhanj district in 2023



12. Leading sites of cancer incidence in 2023

The leading sites of cancer incidence among males of Mayurbhanj district for the year 2023 were mouth (AAR 9.0), followed by tongue (AAR 3.8), stomach (AAR 2.4), lungs (AAR 1.8), and gallbladder (AAR 1.5) as shown in figure 12. Among females, breast (AAR 13.4), cervix uteri (AAR 6.5), mouth (AAR 5.4), ovary (AAR 4.3), and gallbladder (AAR 3.0) were the leading sites of cancer incidence in Mayurbhanj district for 2023, as shown in figure 13.

Tables 16 to 23 and figures 14 to 29 present the profile of common cancers in Mayurbhanj district in 2023.

Figure 12: Leading sites of cancer incidence among males of Mayurbhanj district in 2023

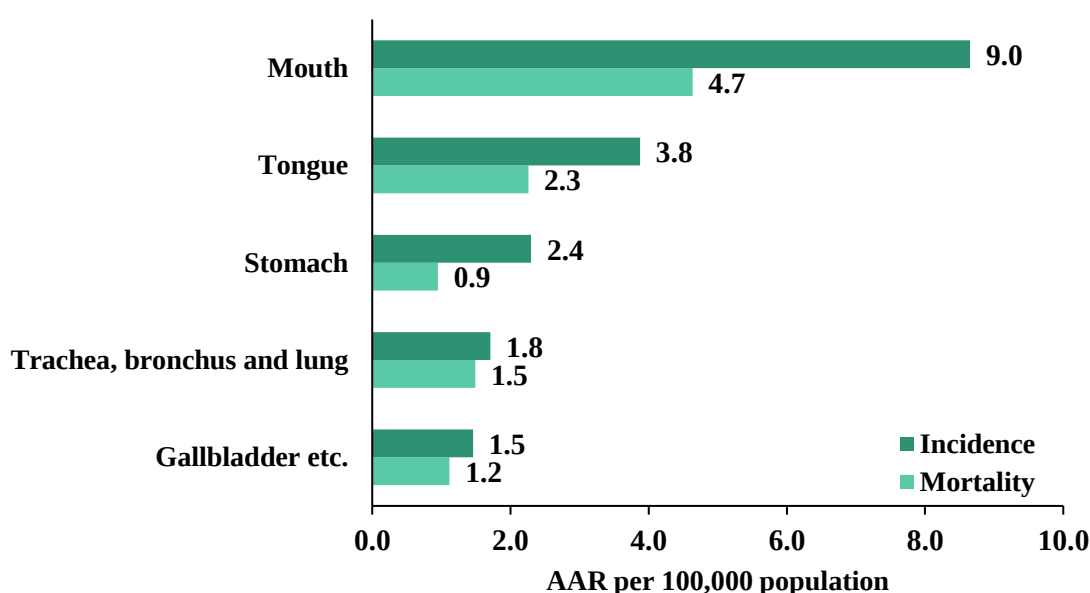
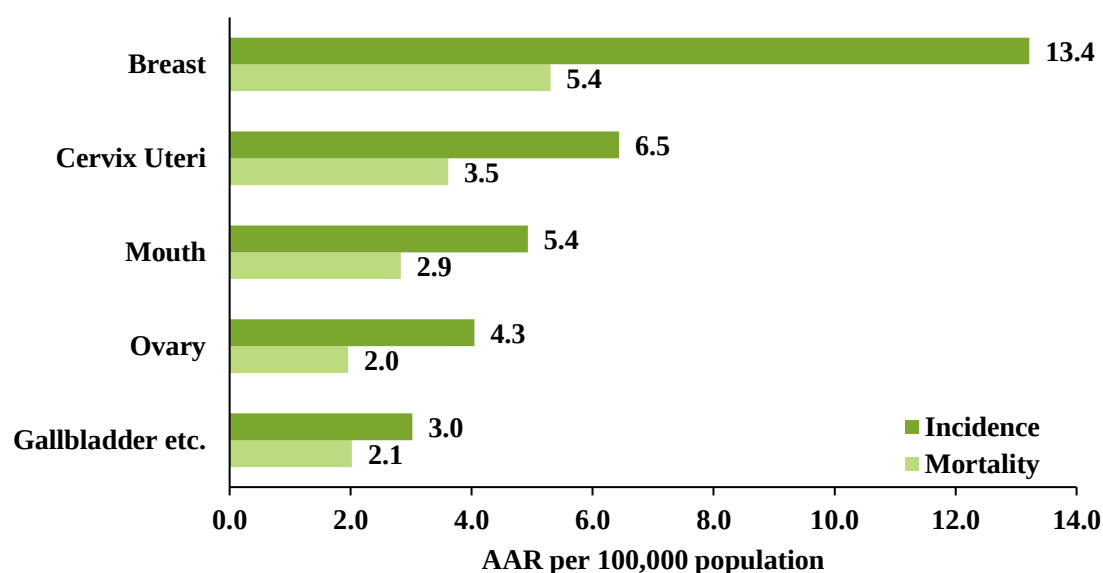


Figure 13: Leading sites of cancer incidence among females of Mayurbhanj district in 2023



Cancer of the Mouth (C03-06)

Table 16: The incidence of mouth cancer in Mayurbhanj district in 2023

Statistic	Male	Female
Number of cases	114	66
% of total cases	22.0	10.1
Crude Incidence Rate per 100,000	8.3	4.7
Age-Adjusted Incidence Rate per 100,000	9.0	5.4
Truncated Rate per 100,000	20.1	13.0

Figure 14: Age Specific Incidence Curve of mouth cancer in Mayurbhanj district in 2023

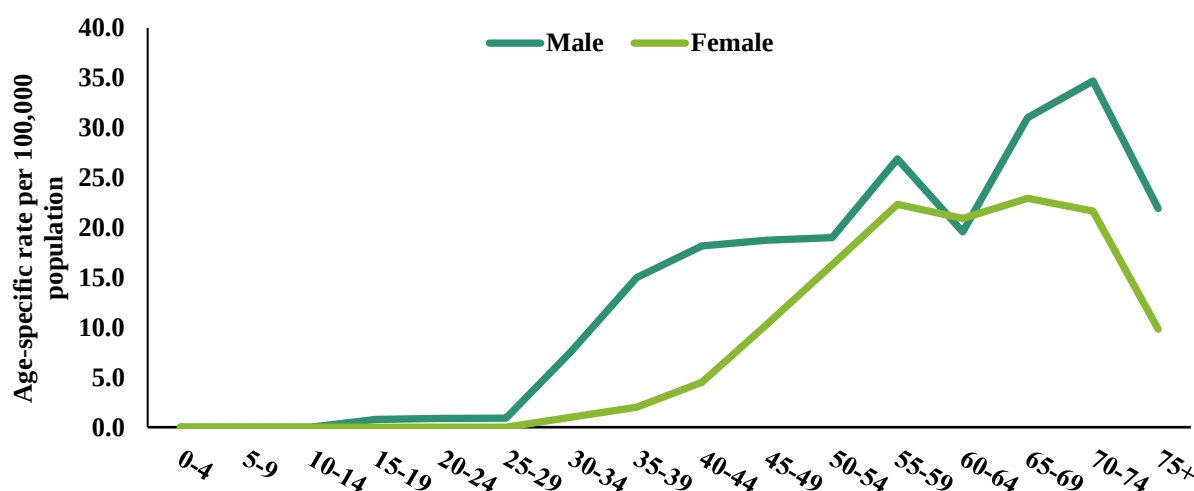
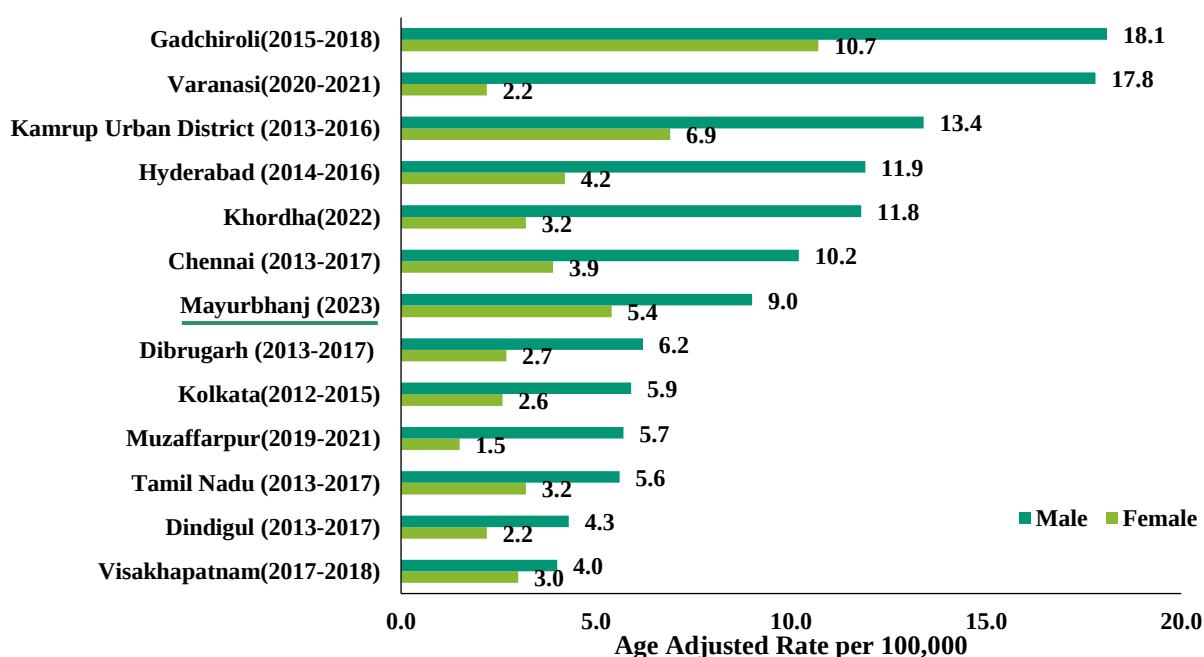


Figure 15: Comparison of mouth cancer incidence in Mayurbhanj district with other PBCRs in India



Cancer of the Tongue (C01-02)

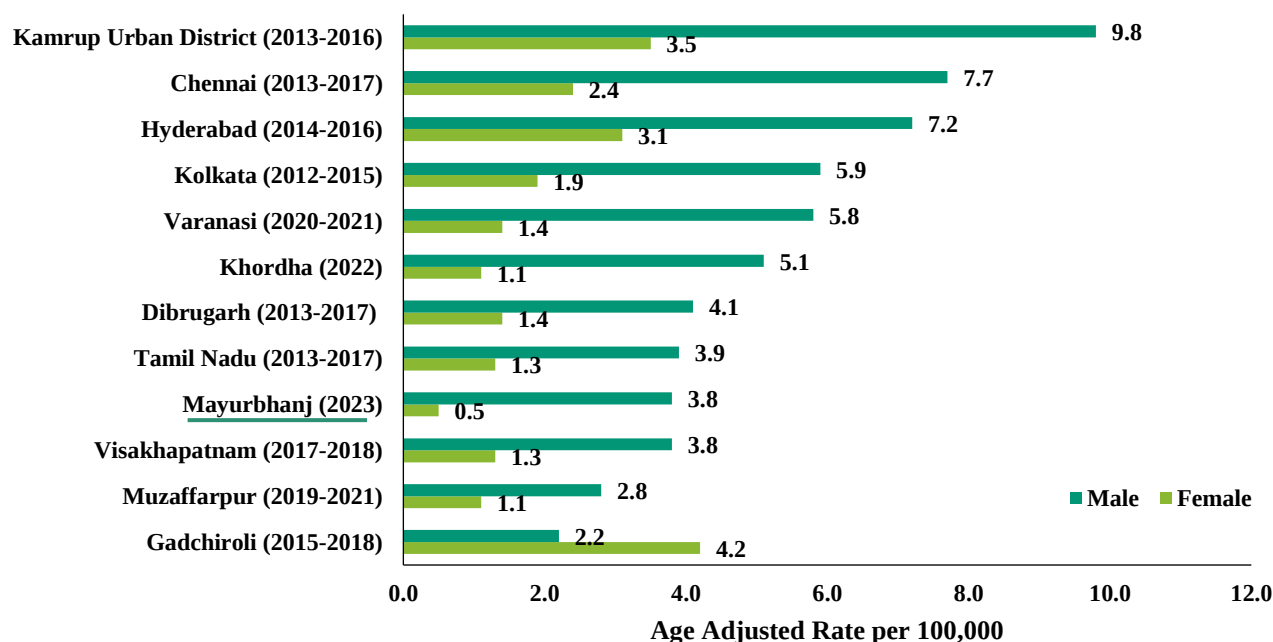
Table 17: The incidence of tongue cancer in Mayurbhanj district in 2023

Statistic	Male	Female
Number of cases	49	7
% of total cases	9.4	1.1
Crude Incidence Rate per 100,000	3.6	0.5
Age-Adjusted Incidence Rate per 100,000	3.8	0.5
Truncated Rate per 100,000	8.1	1.5

Figure 16: Age Specific Incidence Curve of tongue cancer in Mayurbhanj district in 2023



Figure 17: Comparison of tongue cancer incidence in Mayurbhanj district with other PBCRs in India



Cancer of the Stomach (C16)

Table 18: The incidence of gastric cancer in Mayurbhanj district in 2023

Statistic	Male	Female
Number of cases	27	21
% of total cases	5.2	3.2
Crude Incidence Rate per 100,000	2.0	1.5
Age-Adjusted Incidence Rate per 100,000	2.4	1.7
Truncated Rate per 100,000	4.4	3.5

Figure 18: Age Specific Incidence Curve of gastric cancer in Mayurbhanj district in 2023

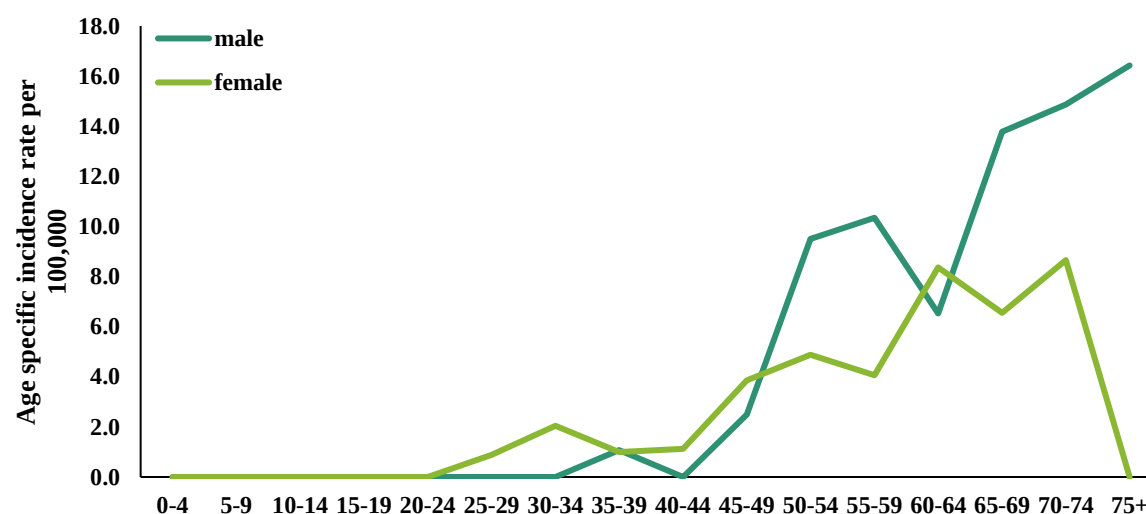
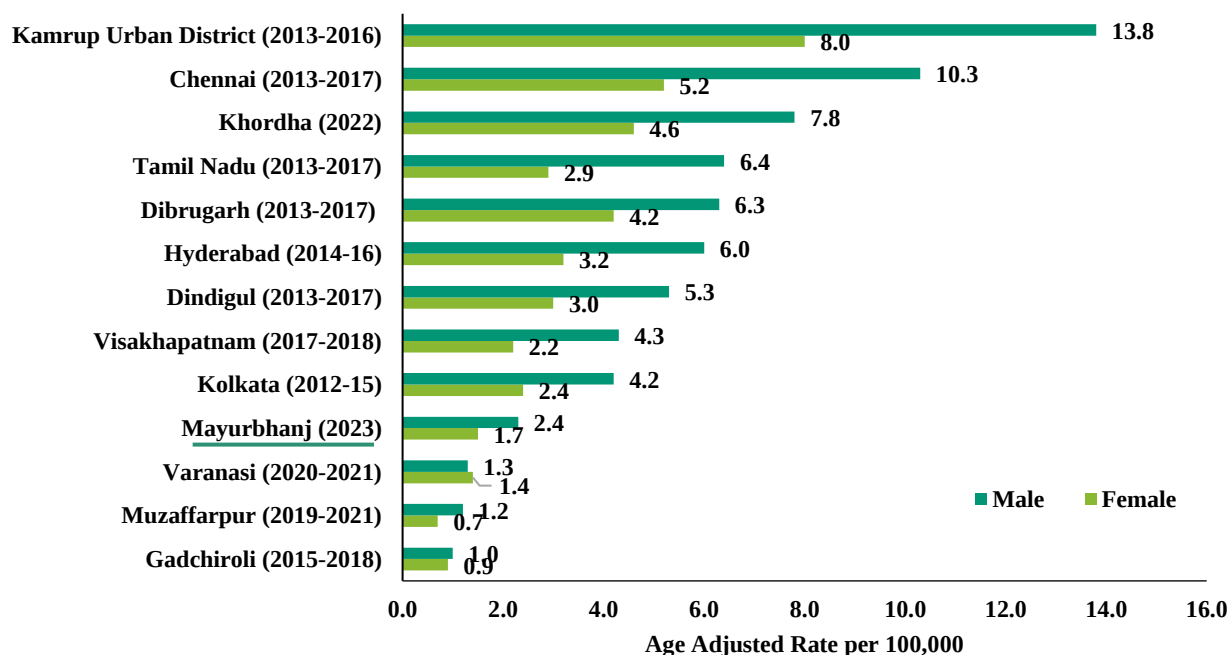


Figure 19: Comparison of gastric cancer incidence in Mayurbhanj district with other PBCRs in India



Cancer of the Trachea, Bronchus, and Lungs (C33-34)

Table 19: The incidence of lung cancer in Mayurbhanj district in 2023

Statistic	Male	Female
Number of cases	21	15
% of total cases	4.0	2.3
Crude Incidence Rate per 100,000	1.5	1.1
Age-Adjusted Incidence Rate per 100,000	1.8	1.2
Truncated Rate per 100,000	3.3	3.2

Figure 20: Age Specific Incidence Curve of lung cancer in Mayurbhanj district in 2023

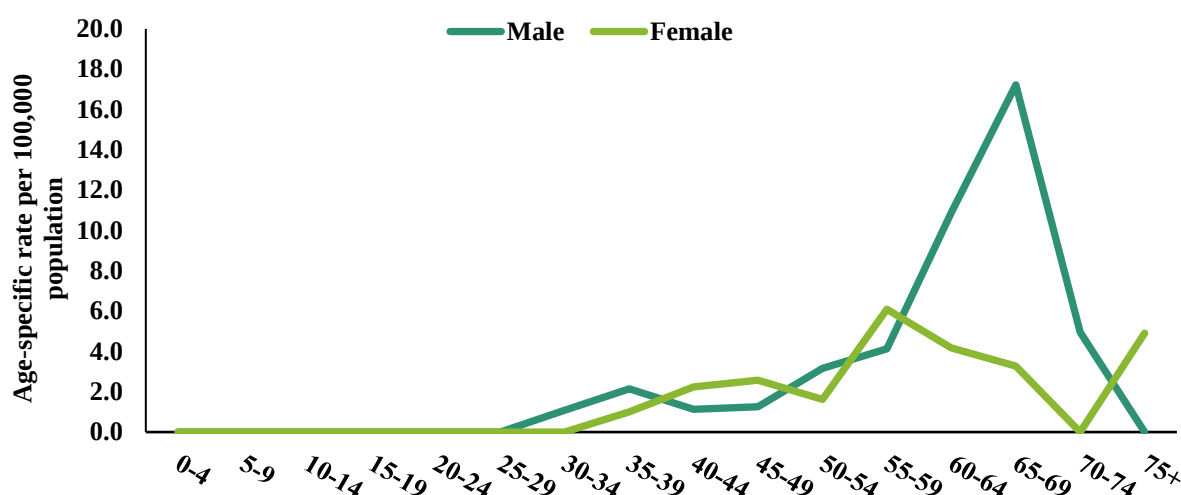
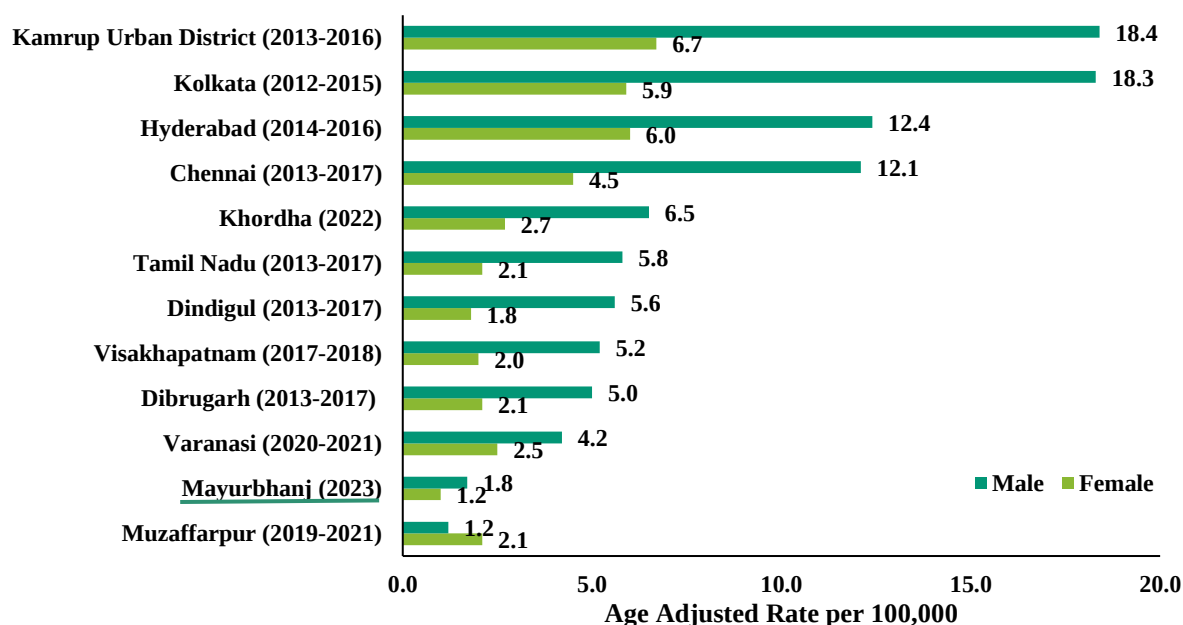


Figure 21: Comparison of lung cancer incidence in Mayurbhanj district with other PBCRs in India



Cancer of the Gallbladder (C23-24)

Table 20: The incidence of gallbladder cancer in Mayurbhanj district in 2023

Statistic	Male	Female
Number of cases	18	37
% of total cases	3.5	5.7
Crude Incidence Rate per 100,000	1.3	2.6
Age-Adjusted Incidence Rate per 100,000	1.5	3.0
Truncated Rate per 100,000	3.3	7.7

Figure 22: Age Specific Incidence Curve of gallbladder cancer in Mayurbhanj district in 2023

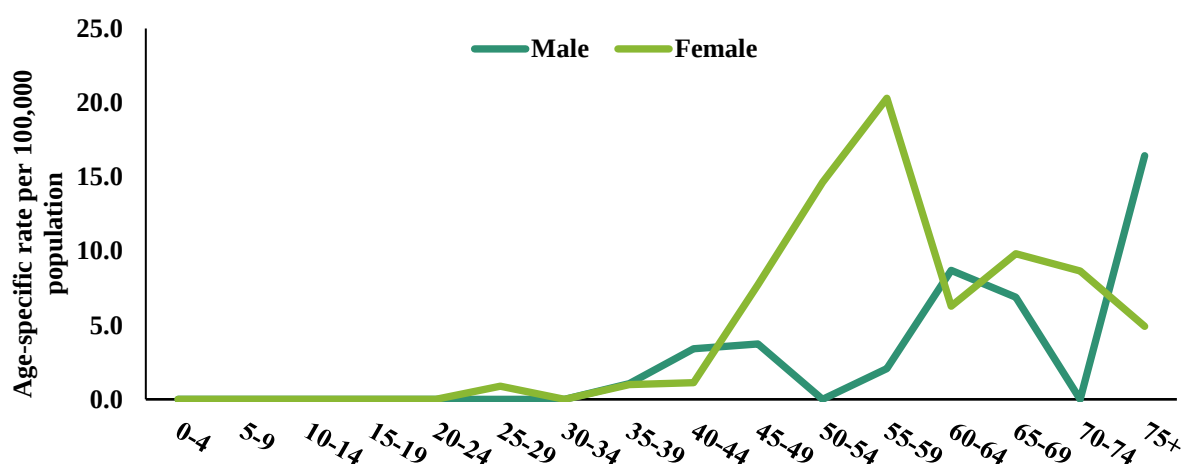
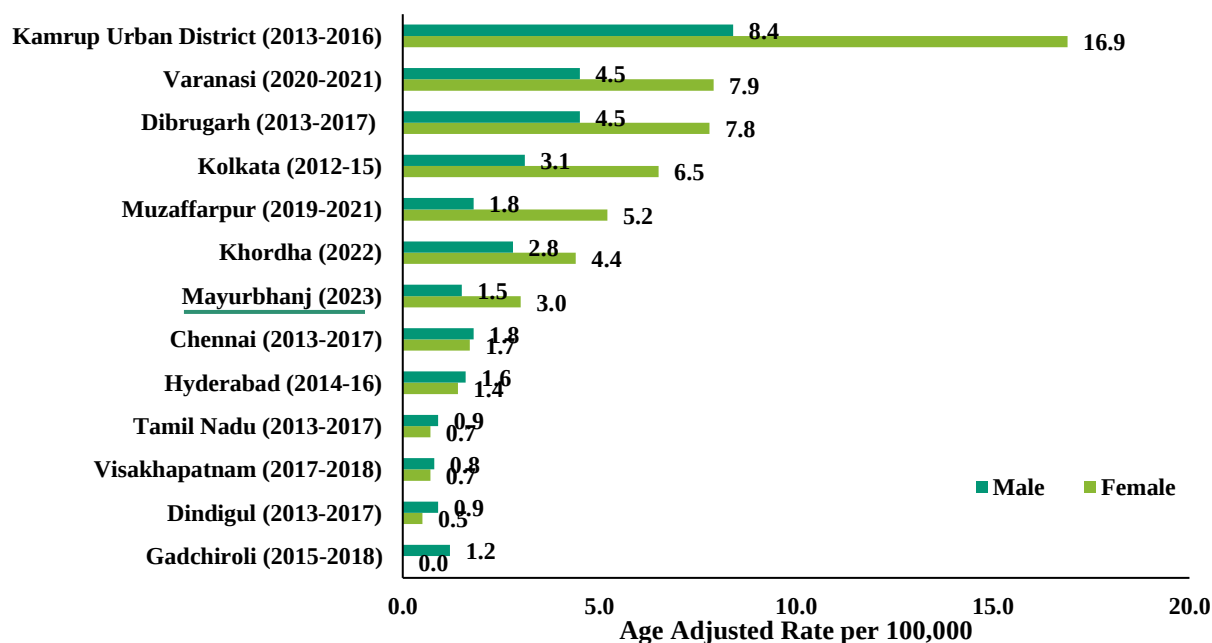


Figure 23: Comparison of gallbladder cancer incidence in Mayurbhanj district with PBCRs in India



Cancer of the Breasts (C50)

Table 21: The incidence of breast cancer among females in Mayurbhanj district in 2023

Statistic	Female
Number of cases	171
% of total cases	26.2
Crude Incidence Rate per 100,000	12.2
Age-Adjusted Incidence Rate per 100,000	13.4
Truncated Rate per 100,000	34.2

Figure 24: Age Specific Incidence Curve of female breast cancer in Mayurbhanj district in 2023

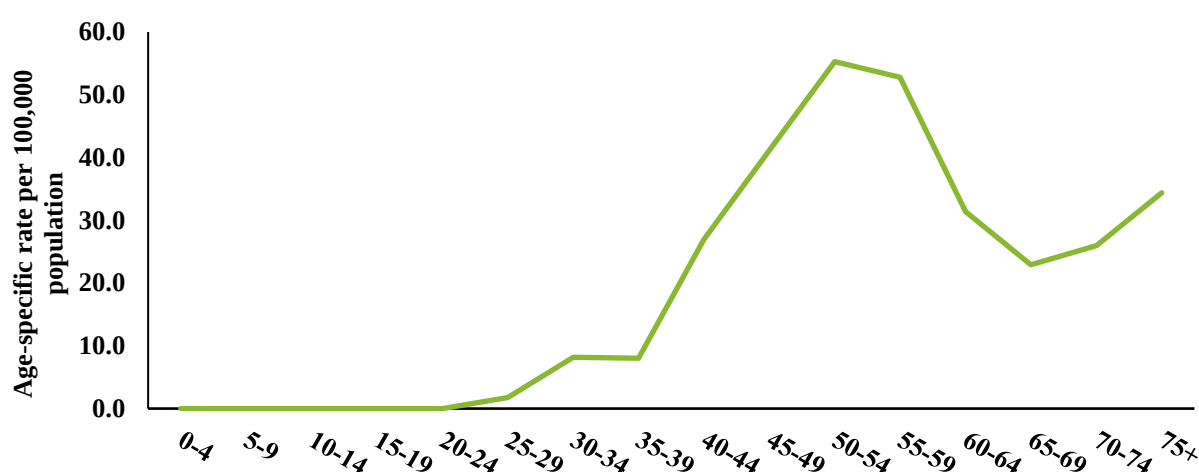
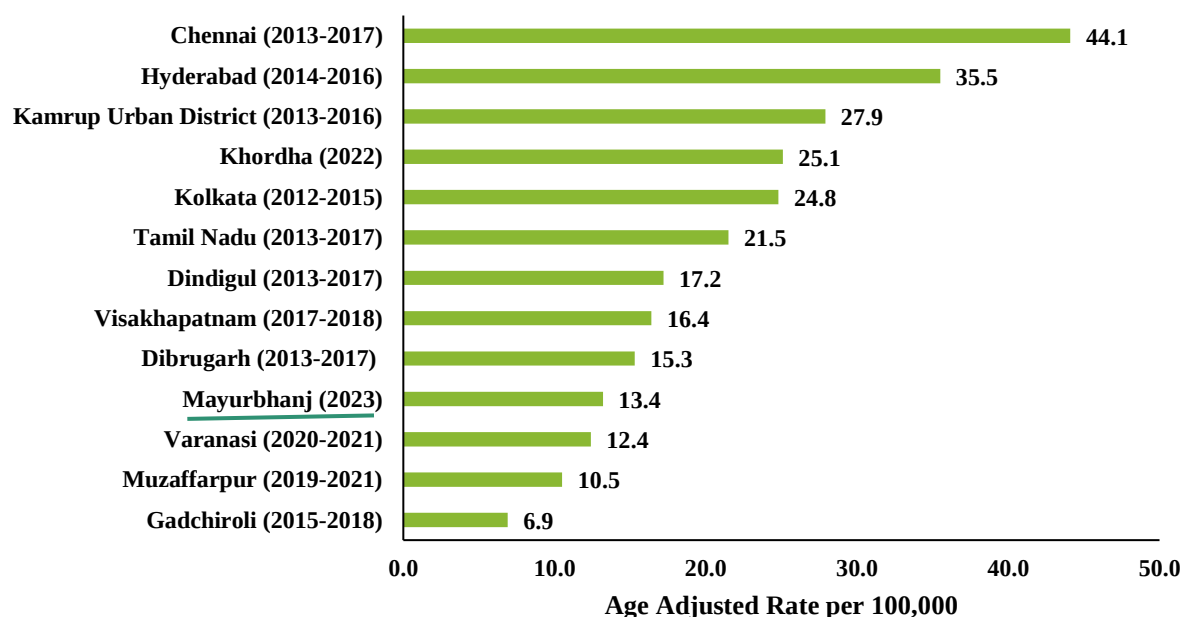


Figure 25: Comparison of female breast cancer incidence in Mayurbhanj district with other PBCRs in India



Cancer of the Cervix uteri (C53)

Table 22: The incidence of cervical cancer in Mayurbhanj district in 2023

Statistic	Female
Number of cases	80
% of total cases	12.3
Crude Incidence Rate per 100,000	5.7
Age-Adjusted Incidence Rate per 100,000	6.5
Truncated Rate per 100,000	14.9

Figure 26: Age Specific Incidence Curve of cervical cancer in Mayurbhanj district in 2023

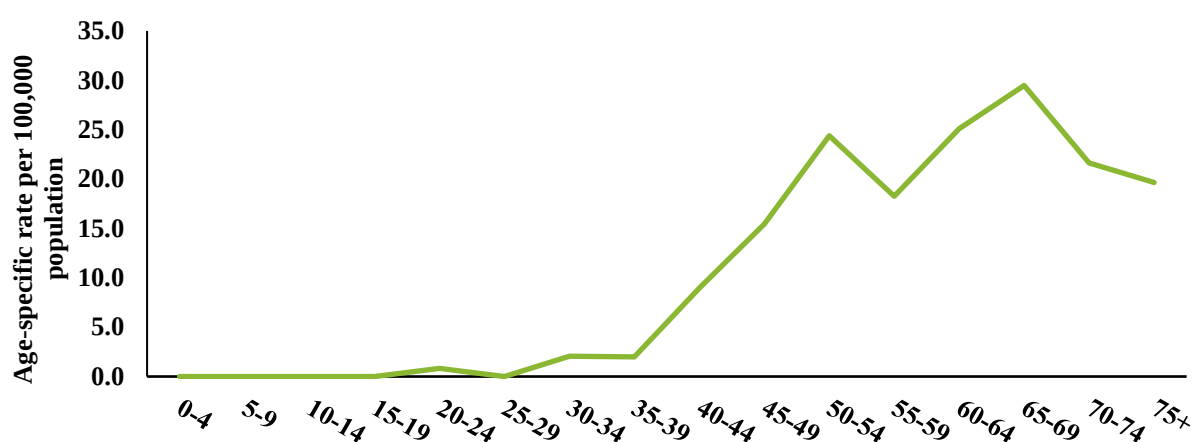
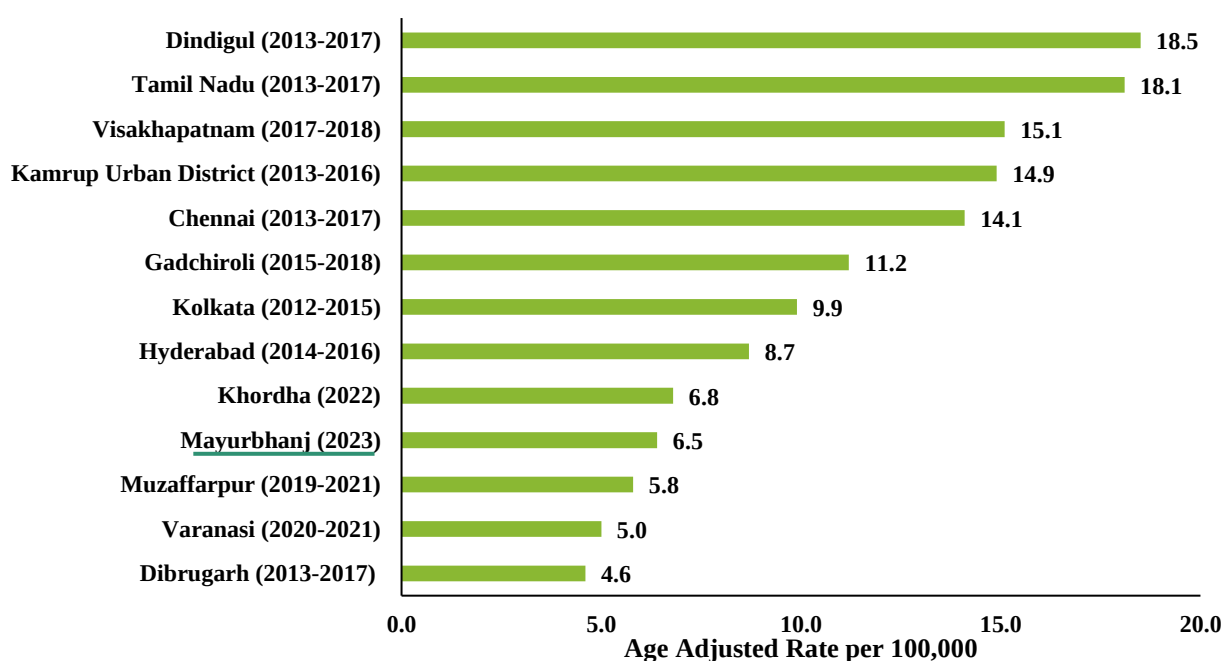


Figure 27: Comparison of cervical cancer incidence in Mayurbhanj district with other PBCRs in India



Cancer of the Ovaries (C56)

Table 23: The incidence of ovarian cancer in Mayurbhanj district in 2023

Statistic	Female
Number of cases	54
% of total cases	8.3
Crude Incidence Rate per 100,000	3.9
Age-Adjusted Incidence Rate per 100,000	4.3
Truncated Rate per 100,000	9.2

Figure 28: Age Specific Incidence Curve of ovarian cancer in Mayurbhanj district in 2023

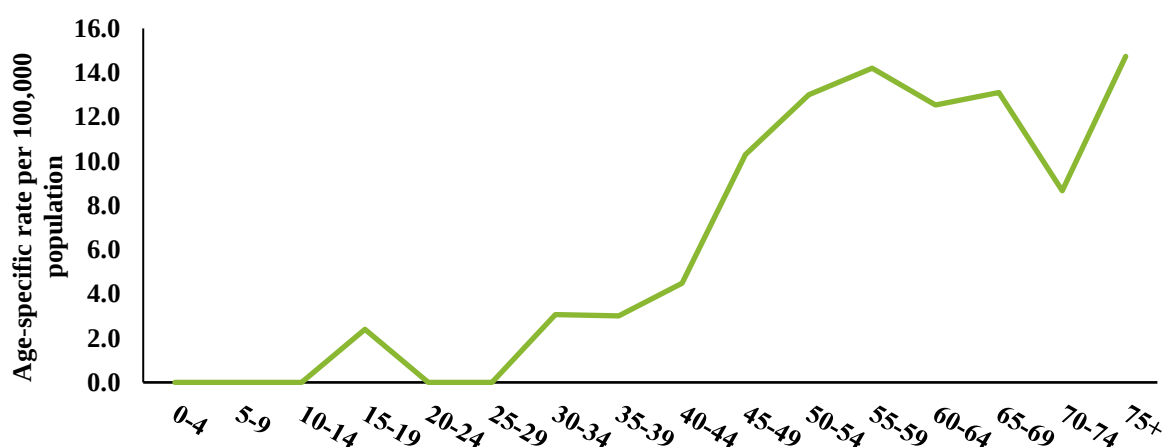
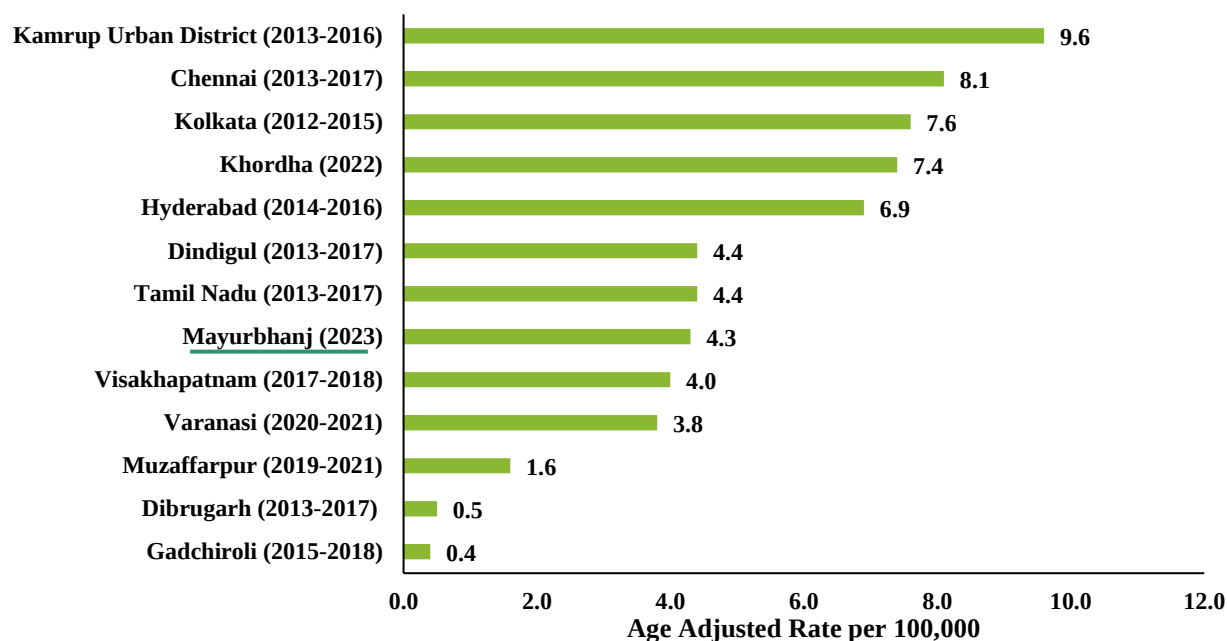


Figure 29: Comparison of ovarian cancer incidence in Mayurbhanj district with other PBCRs in India



Cancer of Other and Unspecified Sites (C26, C39, C48, C76, C77, C78, C79, C80, C97)

Other and Unspecified (O&U) sites defined as per ICD-10 include:

C26	Other and ill-defined sites of digestive organs	C77	Secondary and unspecified malignant neoplasm of lymph nodes
C39	Other and ill-defined sites within respiratory system and intra-thoracic organs	C78	Secondary malignant neoplasm of respiratory and digestive organs
C48	Retroperitoneum	C79	Secondary malignant neoplasm of other and unspecified sites
C76	Other and ill-defined sites	C80	Malignant neoplasm of unknown primary site
C97	Malignant neoplasm of independent multiple primary sites		

Among males, out of 519 cases, 41 were of O&U sites (7.9%). Among females, out of 651 cases, 39 were of O&U sites (6.0%). Table 24 mentions the number of cases of O&U sites by site and sex. Table 25 provides the incidence statistics of total O&U cases. Figure 30 is the age specific incidence curve of cancers of O&U sites in Mayurbhanj district. Figure 31 compares the incidence of O&U cancers in Mayurbhanj district with other registries in the country. In the coming years, it is anticipated that the percentage of the primary site unknown will decrease due to improvements in the diagnostic and treatment facility.

Table 24: Incidence of cancers of Other and Unspecified sites (O&U) by site and sex

ICD-10	Male		Female		Total	
	Number	%	Number	%	Number	%
C26	0	0.0	2	5.7	2	2.5
C48	0	0.0	3	5.7	3	3.8
C76	6	14.6	1	2.9	7	8.8
C77	1	2.4	0	0.0	1	1.3
C80	34	82.9	33	85.7	67	83.8
Total	41	100.0	39	100.0	80	100.0

Table 25: Incidence of cancers of Other and Unspecified sites (O&U) in Mayurbhanj district in 2023

Statistic	Males	Female
Number of cases	41	39
% of total cases	7.9	6.0
Crude Incidence Rate per 100,000	3.0	2.8
Age-Adjusted Incidence Rate per 100,000	3.4	3.1
Truncated Rate per 100,000	6.2	7.9

Figure 30: Age Specific Incidence Curve of cancer of O&U sites in Mayurbhanj district in 2023

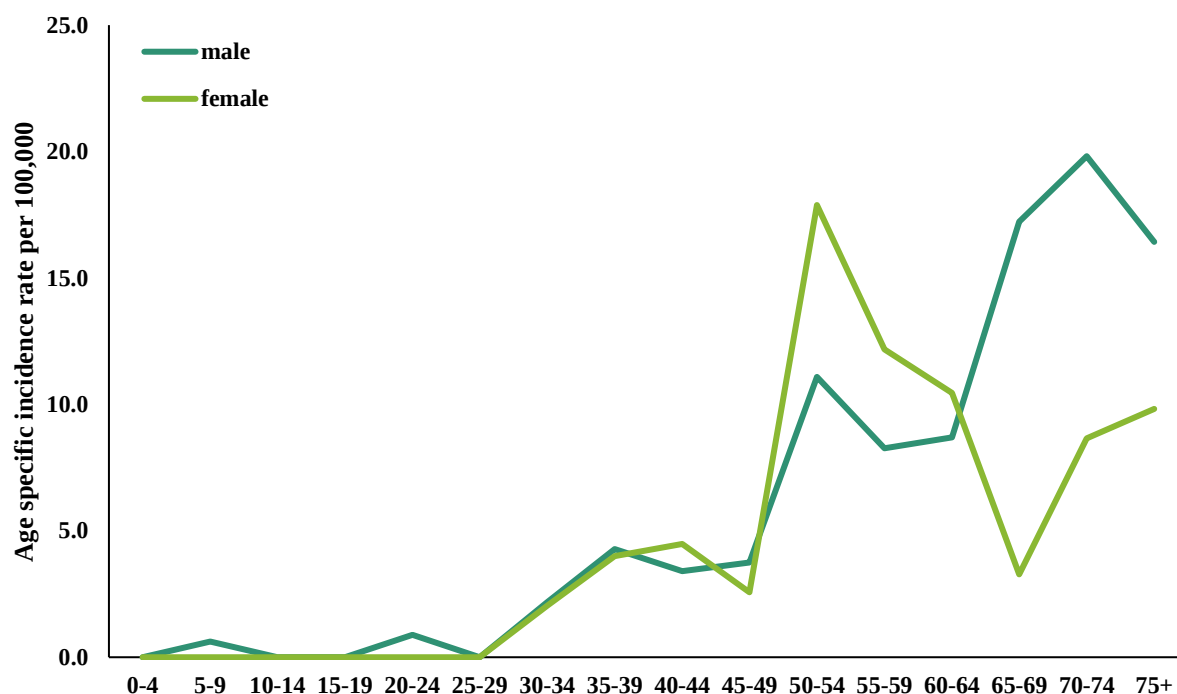
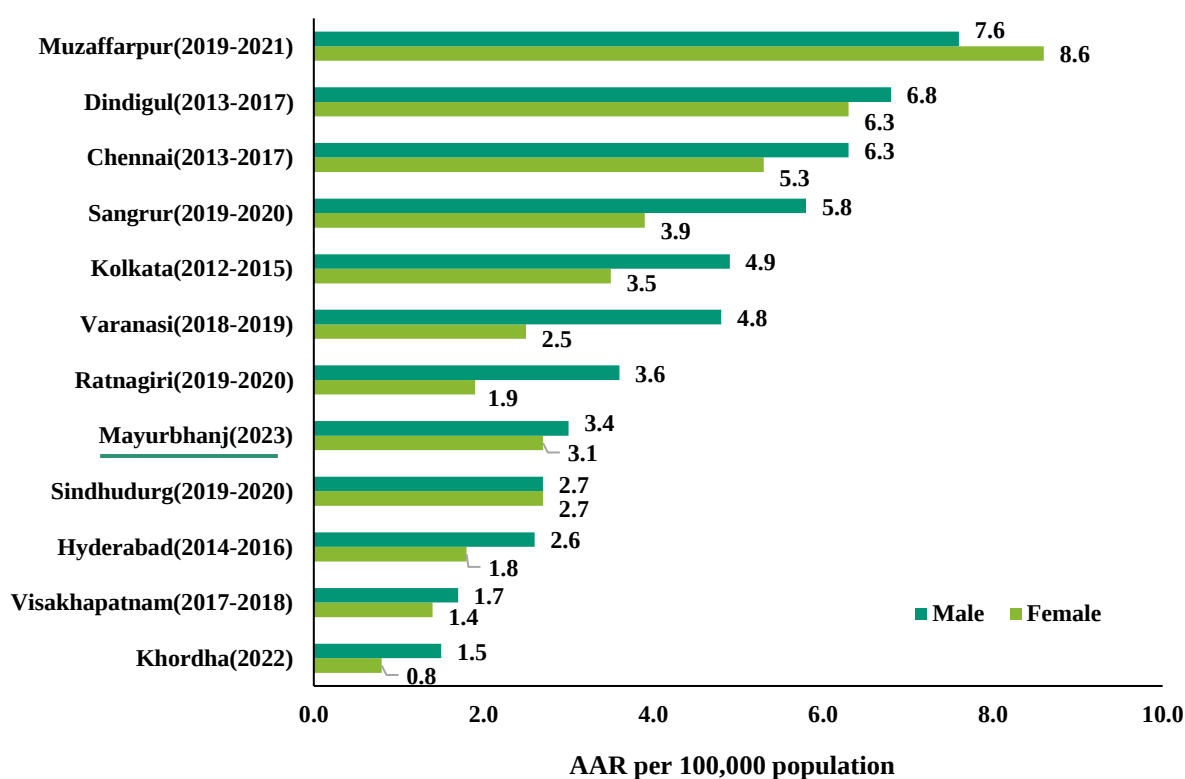


Figure 31: Comparison of O&U cancer incidence in Mayurbhanj district with other PBCRs in India



13. Differences in cancer incidence between Upper Ghati and Lower Ghati regions of Mayurbhanj district

As shown in table 26, about 70% of both incidence and mortality cases of Mayurbhanj district belong to the Lower Ghati zone, due to its larger population, as shown in chapter 5, table 8. However, this difference persists between the incidence AAR of these zones. Among males, Upper Ghati zone (AAR 32.8) reports 33% lower incidence than the Lower Ghati (AAR 48.9) (RR 0.67, 95% CI 0.56-0.80), as shown in table 27. Among females too, the Upper Ghati zone (AAR 41.7) reports 28% lower incidence than Lower Ghati (AAR 57.8) (RR 0.72, 95% CI 0.62-0.85), as shown in table 28.

Table 26: Distribution of number of incidence and mortality cases by block for 2023.

Block/Mandal	Incidence			Mortality		
	Male	Female	Total	Male	Female	Total
Upper Ghati						
Bahalda	18	23	41	12	5	17
Bijatola	10	10	20	5	8	13
Bisoi	5	23	28	5	12	17
Jamda	12	7	19	8	3	11
Jashipur	11	10	21	3	4	7
Karanjia	21	29	50	10	18	28
Kusumi	15	31	46	8	13	21
Rairangpur	19	31	50	11	10	21
Raruan	5	13	18	2	4	6
Sukruli	15	8	23	8	10	18
Thakurmunda	13	16	29	7	8	15
Tiring	11	6	17	4	3	7
Upper Ghati	155 (29.9%)	207 (31.8%)	362 (31.0%)	83 (31.4%)	98 (32.1%)	181 (31.7%)
Lower Ghati						
Badasahi	35	33	68	20	13	33
Bangiriposi	22	25	47	18	13	31
Baripada	74	69	143	30	36	66
Betanati	38	66	104	24	27	51
Gopabandhunagar	20	31	51	9	13	22
Kaptipada	19	23	42	9	15	24
Khunta	13	29	42	8	14	22
Kuliana	20	27	47	11	17	28
Muruda	23	22	45	11	10	21
Rasagobindapur	21	31	52	3	8	11
Saraskana	21	19	40	8	8	16
Shamakhunta	12	15	27	8	8	16
Suliapada	28	24	52	11	10	21
Udala	18	30	48	12	16	28
Lower Ghati	364 (70.2%)	444 (68.3%)	808 (69.1%)	182 (68.7%)	208 (68.0%)	390 (68.4%)
Grand Total	519	651	1170	265	306	571

Table 27: Differences in age adjusted rates of cancer incidence among males between Upper Ghati and Lower Ghati zones of Mayurbhanj district in 2023

ICD-10	Site	Upper Ghati	Lower Ghati	Rate Ratio	95% CI
C00-97	All sites	32.8	48.9	0.67	(0.56-0.80)
C03-C06	Mouth	10.8	7.9	1.36	(0.93-2.00)
C01-C02	Tongue	3.9	3.7	1.04	(0.58-1.84)
C16	Stomach	2.4	2.4	1.0	(0.45-2.19)
C33-C34	Trachea, bronchus and lung	0.5	2.6	0.18	(0.06-0.54)
C23-C24	Gallbladder etc.	0.7	2.1	0.36	(0.12-0.97)

Table 28: Differences in age adjusted rates of cancer incidence among females between Upper Ghati and Lower Ghati zones of Mayurbhanj district in 2023

ICD-10	Site	Upper Ghati	Lower Ghati	Rate Ratio	95% CI
C00-97	All sites	41.7	57.8	0.72	(0.62-0.85)
C50	Breast	10.5	15.3	0.69	(0.50-0.94)
C53	Cervix uteri	4.9	7.5	0.64	(0.41-1.02)
C03-C06	Mouth	5.1	5.6	0.90	(0.55-1.47)
C56	Ovary	3.7	4.7	0.78	(0.45-1.35)
C23-C24	Gallbladder etc.	1.9	3.8	0.50	(0.25-0.99)

Through logistic regression, it was observed that cancer incidence and mortality reporting reduced significantly ($p \leq 0.005$) with increasing distance between the District Headquarter Hospital, Baripada, and the block of residence. An increase of one unit in distance between health infrastructure and the patients, decreased reporting of cancer incidence cases by 16 units and of cancer deaths by 8 units.

Moreover, these differences are particularly inflated in incidence of cancer of internal organs such as lung (RR 0.18, 95% CI 0.06-0.54) in males, and gallbladder (males: RR 0.36, 95% CI 0.12-0.97, females: RR 0.50, 95% CI 0.25-0.99) in both sexes. **This can be attributed to the unavailability and inaccessibility of cancer diagnostic and treatment centres in interior regions of Mayurbhanj district, reflecting under-diagnosis or delayed reporting of cancer cases, and a difference in environmental risk factors.**

14. Cancer incidence in children (0-14 years) and adolescents (15-19 years)

In the year 2023, out of 1,170 registered cancer cases, 21 (1.8%) paediatric cases (0-14 age group) were registered. The age-adjusted incidence for boys is 33.7 per million and 12.9 per million for girls. The paediatric cancer rates are low in comparison to other Indian registries and international standards, leading to suspicion of under-reporting and under-diagnosis. Among the 21 registered paediatric cancer cases, 16 (75.7%) cases have microscopic confirmation.

International Classification of Childhood Cancer, 3rd edition (ICCC-3) is the system used for classification and coding of paediatric cancers.⁹ It has twelve main groups and further divided into subgroups. Table 29 mentions the AAR by subgroups in boys and girls per million population, visually represented as figure 32. Detailed tables are provided in Chapter 20. The leading cancer sites are mentioned in Figures 33 and 34.

The PBCR also recorded 8 cases of cancer among adolescent boys (15-19 years) and 8 cases among girls. Figure 32 describes the distribution by ICCC-3 group for 15-19 age group too. Germ cell tumours were most common in the age group 15-19 years.

Table 29: Number of paediatric cases by gender and age-groups, incidence rates per million by ICCC-3 subgroups

ICCC	Site	Boys			Girls		
		Number	%	AAR per million	Number	%	AAR per million
1a	Lymphoid Leukaemia	4	25.0	9.0	1	20.0	3.0
1b	Acute myeloid Leukaemia	1	6.3	1.8	0	0.0	0.0
1c	CMD Leukaemia	1	6.3	1.8	0	0.0	0.0
1e	Unspecified Leukaemia	1	6.3	2.9	1	20.0	3.0
2a	Hodgkin Lymphoma	1	6.3	2.0	0	0.0	0.0
2b	Non-Hodgkin except BL	1	6.3	1.8	0	0.0	0.0
3b	Astrocytoma	0	0.0	0.0	1	20.0	2.1
3d	Other gliomas	1	6.3	1.8	0	0.0	0.0
6a	Nephroblastoma	1	6.3	2.0	0	0.0	0.0
8a	Osteosarcoma	1	6.3	1.8	0	0.0	0.0
8c	Ewing & related	1	6.3	1.8	1	20.0	3.0
11d	Melanoma	1	6.3	2.9	0	0.0	0.0
11e	Skin carcinoma	1	6.3	1.8	0	0.0	0.0
12b	Other unspecified	1	6.3	2.0	1	20.0	1.8
Total (0-14 years)		16	100.0	33.7	5	100.0	12.9

* AAR per 1,000,000 population

Lymphoid leukaemia is the most common cancer among boys, followed by myeloid leukaemia, Hodgkin lymphoma, glioma, kidney, bone, and skin cancers. Among girls, other and unspecified malignancies, lymphoid leukaemia, bone tumours, brain, and nervous system are the leading cancer sites.

Figure 32: Proportion of cancer cases by age-group (0-19 years): Both sexes

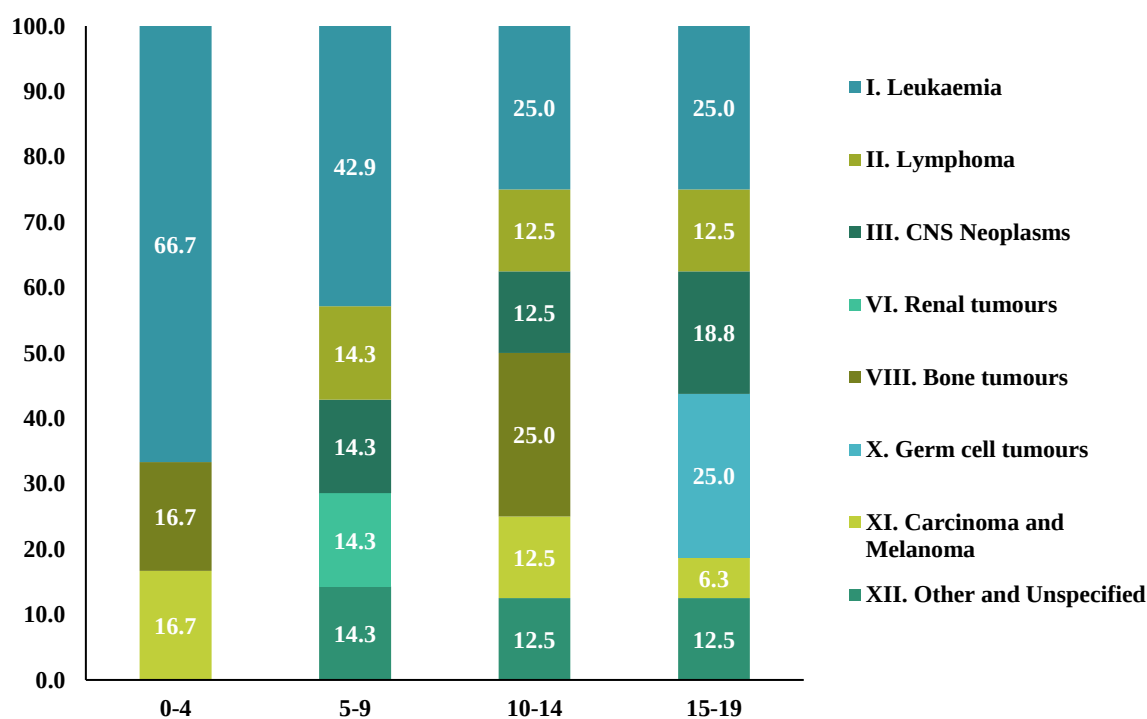


Figure 33: Leading cancer sites in boys (0-14 years): 2023

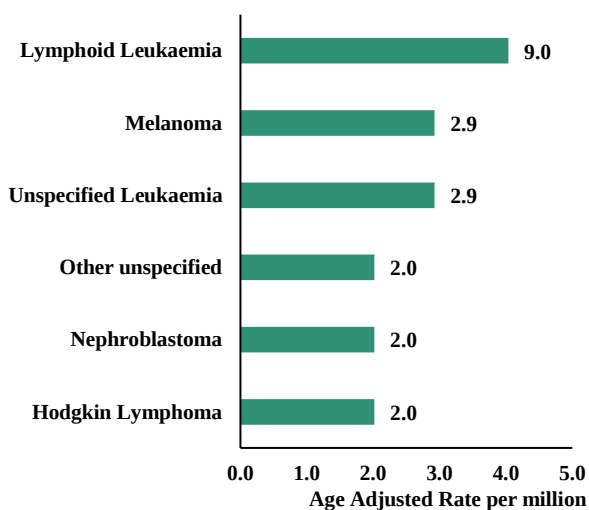
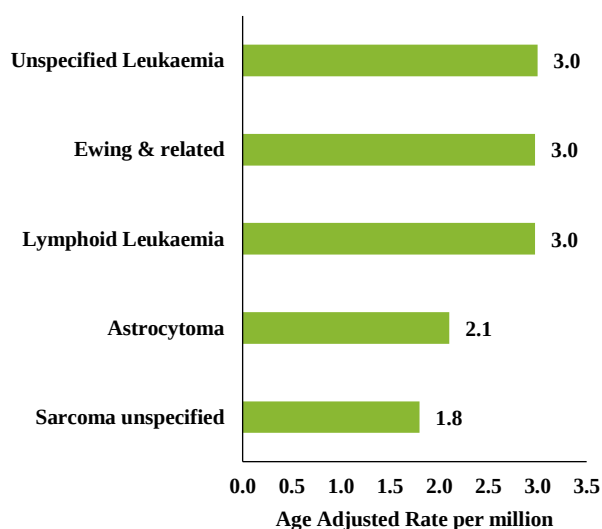


Figure 34: Leading cancer sites in girls (0-14 years): 2023



15. Tobacco-related cancers

Tobacco is a major risk factor for cancer and several other non-communicable diseases. Tobacco related cancers (TRCs) are defined as cancers of the lip (C00), tongue (C01-C02), mouth (C03-C06), pharynx (C10, C12-C14), oesophagus (C15), larynx (C32), lung (C33-C34) and urinary bladder (C67), which are strongly associated with tobacco use.¹¹

As per Mayurbhanj PBCR, 40.3% of all cancers in males (two in five cases) and 14.4% of all cancers in females (one in seven cases) occurred in tobacco related sites. Mouth, followed by tongue and lung are the most common sites of tobacco related cancers in both sexes. Details of tobacco related cancer incidence in Mayurbhanj district are given in table 30 for males and table 31 for females.

By occupation, 34% of male TRC cases were farmers, 16% were business men, and 14% were government employees, while 86% of female cases were housewives, as shown in table 32. More than half of female TRC cases were illiterate, while more than 75% males had completed at least primary education, as shown in table 34. Almost 40% of TRC patients earned less than Rs 5000 a month, as shown in table 35.

Table 30: Incidence of tobacco related cancers in males of Mayurbhanj district in 2023

ICD-10	Site	Number	%	CR	AAR	TR
C00	Lip	2	0.4	0.1	0.1	0.5
C01-C02	Tongue	49	9.4	3.6	3.8	8.1
C03-C06	Mouth	114	22.0	8.3	9.0	20.1
C10	Oropharynx	4	0.8	0.3	0.4	0.5
C12-C13	Hypopharynx	2	0.4	0.1	0.2	0.3
C14	Pharynx Unspecified	0	0.0	0.0	0.0	0.0
C15	Oesophagus	4	0.8	0.3	0.3	0.7
C32	Larynx	5	1.0	0.4	0.4	1.1
C33-C34	Trachea, bronchus, and lung	21	4.0	1.5	1.8	3.3
C67	Urinary Bladder	8	1.5	0.6	0.8	0.5
C00-C06, C10, C12-C15, C32-C34 & C67	Tobacco-related cancer	209	40.3	15.2	16.9	35.1

Table 31: Incidence of tobacco related cancers in females of Mayurbhanj district in 2023

ICD-10	Site	Number	%	CR	AAR	TR
C00	Lip	2	0.3	0.1	0.2	0.5
C01-C02	Tongue	7	1.1	0.5	0.5	1.5
C03-C06	Mouth	66	10.1	4.7	5.4	13.0
C10	Oropharynx	0	0.0	0.0	0.0	0.0
C12-C13	Hypopharynx	1	0.2	0.1	0.1	0.2
C14	Pharynx Unspecified	1	0.2	0.1	0.1	0.3
C15	Oesophagus	2	0.3	0.1	0.2	0.5
C32	Larynx	0	0.0	0.0	0.0	0.0
C33-C34	Trachea, bronchus, and lung	15	2.3	1.1	1.2	3.2
C67	Urinary Bladder	0	0.0	0.0	0.0	0.0
C00-C06, C10, C12-C15, C32-C34 & C67	Tobacco-related cancer	94	14.4	6.7	7.6	19.2

Table 32: Tobacco-related cancer cases by occupation and sex

Occupation	Male		Female		Total	
	Number	%	Number	%	Number	%
Business	33	15.8	0	0.0	33	10.9
Clerical/Shop owner	7	3.3	0	0.0	7	2.3
Farmer	72	34.4	7	7.4	79	26.1
Govt Employee	30	14.4	3	3.2	33	10.9
Housewife	0	0.0	81	86.2	81	26.7
Other	17	8.1	3	3.2	20	6.6
Pvt Employee	18	8.6	0	0.0	18	5.9
Semi-Professional	1	0.5	0	0.0	1	0.3
Semi-Skilled Worker	5	2.4	0	0.0	5	1.7
Skilled Worker	14	6.7	0	0.0	14	4.6
Unemployed	1	0.5	0	0.0	1	0.3
Unskilled Worker	11	5.3	0	0.0	11	3.6
Total	209	100.0	94	100.0	303	100.0

Table 33: Tobacco-related cancer by religion and sex

Religion	Male		Female		Total	
	Number	%	Number	%	Number	%
Hindu	205	98.1	93	98.9	298	98.3
Muslim	4	1.9	0	0.0	4	1.3
Others	0	0.0	1	1.1	1	0.3
Total	209	100.0	94	100.0	303	100.0

Table 34: Tobacco-related cancer by education and sex

Education	Male		Female		Total	
	Number	%	Number	%	Number	%
Illiterate	29	13.9	53	56.4	82	27.1
Literate	17	8.1	12	12.8	29	9.6
Primary (1-7 std)	31	14.8	13	13.8	44	14.5
Secondary (8-10 std)	77	36.8	14	14.9	91	30.0
Technical after 10th	7	3.3	0	0.0	7	2.3
College	44	21.1	2	2.1	46	15.2
Post graduate	2	1.0	0	0.0	2	0.7
Other	2	1.0	0	0.0	2	0.7
Total	209	100.0	94	100.0	303	100.0

Table 35: Tobacco-related cancer by income and sex

Income	Male		Female		Total	
	Number	%	Number	%	Number	%
>=30375	24	11.5	7	7.4	31	10.2
15188-30374	15	7.2	9	9.6	24	7.9
11362-15187	21	10.0	10	10.6	31	10.2
7594-11361	38	18.2	17	18.1	55	18.2
4556-7593	27	12.9	7	7.4	34	11.2
1521-4555	33	15.8	11	11.7	44	14.5
<=1520	44	21.1	27	28.7	71	23.4
Unknown/ No Information	7	3.3	6	6.4	13	4.3
Total	209	100.0	94	100.0	303	100.0

16. Cancer burden, by anatomical system grouping

Among males, most cancer cases arise from the head and neck system (38.2%), followed by the digestive system (21.6%), with an AAR of 15.7 and 9.6 per 100,000 respectively, as shown in table 36. Majority of head and neck cancers in Mayurbhanj district belong to the lip, oral cavity with an AAR of 13.0 per 100,000. Within the digestive system, stomach and gallbladder cancers are most common with an AAR of 2.4 and 1.5 per 100,000, respectively.

Among females, breast (AAR 13.4) and female reproductive organs (AAR 13.4) were the most common sites of cancer, followed by digestive system (AAR 7.9), as shown in table 37. Within the female reproductive system, cervical and ovarian cancer are most common with an AAR of 6.5 and 4.3 per 100,000, respectively. Within the digestive system, gallbladder and stomach cancers are most common with an AAR of 3.0 and 1.7 per 100,000, respectively.

Figure 35: Cancer Incidence in Mayurbhanj district by anatomical grouping and sex in 2023

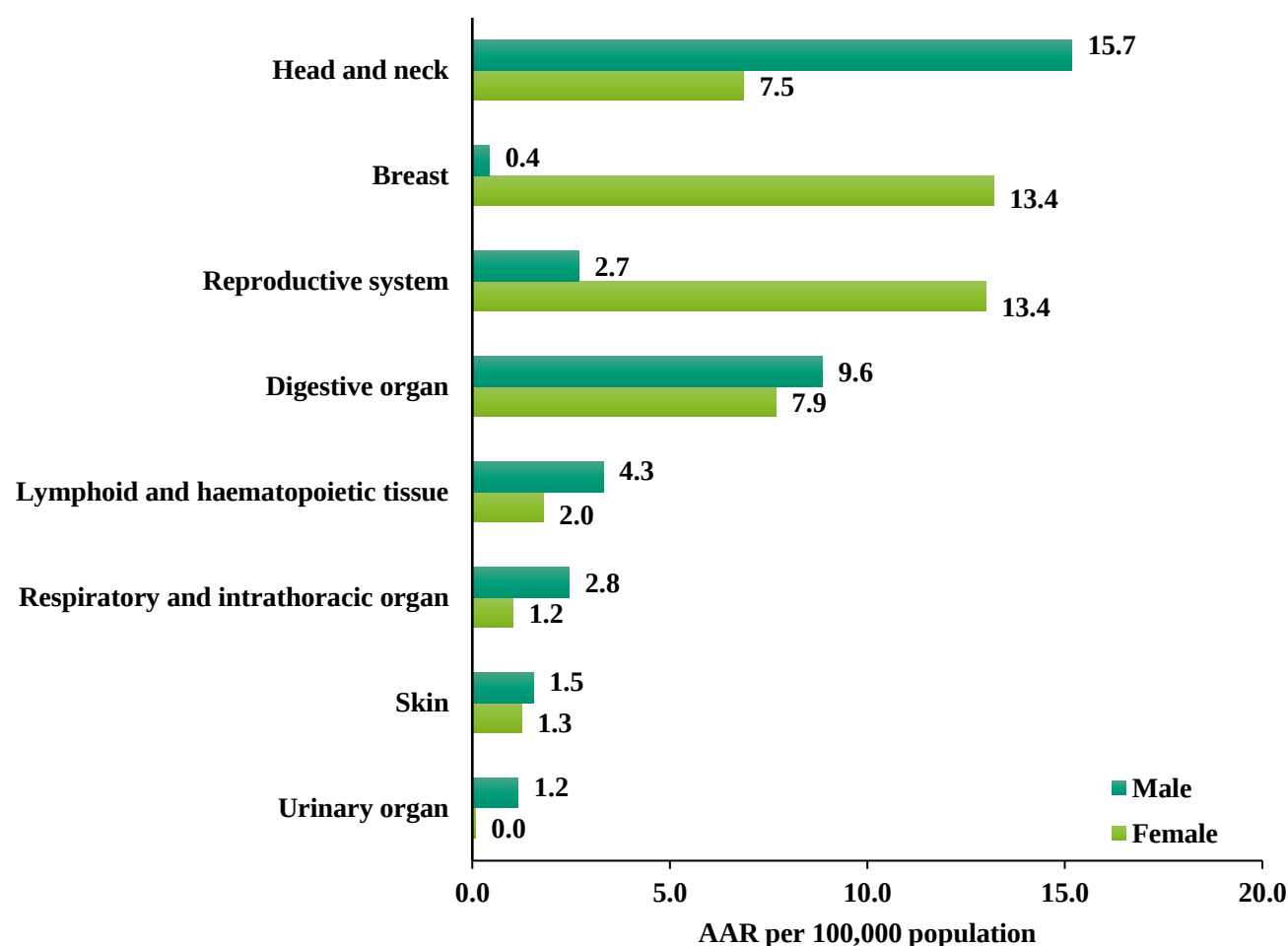


Table 36: Cancer incidence among men of Mayurbhanj district, by anatomical grouping

ICD-10	Site	No.	%	CR	AAR	TR	Risk (1 in)
C00-C14, C30-C32 & C73	Head and neck	198	38.2	14.4	15.7	35.3	58
C00-C06	Lip, oral cavity	165	31.8	12.0	13.0	28.7	72
C15-C25	Digestive organs	112	21.6	8.1	9.6	20.9	92
C81-C96	Lymphoid and haematopoietic system	54	10.4	3.9	4.3	6.4	271
C81	Hodgkin Lymphoma	7	1.5	0.5	0.6	0.8	2572
C82-86, C96	Non-Hodgkin Lymphoma	17	3.3	1.2	1.4	2.6	707
C90	Multiple myeloma	4	0.8	0.3	0.4	0.5	2777
C91-C95	Leukaemia	26	5.0	1.9	2.0	2.6	656
C60-C63	Male reproductive organs	32	6.4	2.2	2.7	2.4	290
C30-C38	Respiratory and intrathoracic organs	29	6.2	2.3	2.8	2.6	286
C43-C44	Skin	13	2.5	0.9	1.2	1.3	831
C64-C68	Urinary organ	5	1.0	0.4	0.4	1.1	1532
C50	Breast	4	0.8	0.3	0.4	0.5	2777

Table 37: Cancer incidence among women of Mayurbhanj district, by anatomical grouping

ICD-10	Site	No.	%	CR	AAR	TR	Risk (1 in)
C50	Breast	171	26.3	12.2	13.4	34.2	72
C51-C58	Female genital organ	166	25.5	11.9	13.4	31.0	66
C15-C25	Digestive organ	99	15.2	7.1	7.9	19.3	105
C00-C14, C30-C32 & C73	Head and neck	94	14.4	6.7	7.5	18.3	114
C00-C06	Lip, oral cavity	75	11.5	5.4	6.1	15.0	136
C81-C96	Lymphoid and haematopoietic tissue	26	4.0	1.9	2.0	3.8	594
C81	Hodgkin Lymphoma	1	0.2	0.1	0.1	0.0	19579
C82-86, C96	Non-Hodgkin Lymphoma	9	1.4	0.6	0.7	1.5	1651
C90	Multiple myeloma	3	0.5	0.2	0.2	0.5	4681
C91-C95	Leukaemia	13	2.1	0.9	1.0	1.8	1230
C43-C44	Skin	17	2.6	1.2	1.3	3.8	724
C30-C38	Respiratory and intrathoracic organ	15	2.3	1.1	1.2	3.2	855
C64-C68	Urinary organ	0	0.0	0.0	0.0	0.0	0

17. Socio-demographic characteristics of cancer cases

The following tables (number 38 to 41) describe the incidence of cancer in Mayurbhanj district by their sociodemographic characteristics. As shown in table 38, about 50% of male cancer patients were farmers or workers (skilled/unskilled), while 81% of female patients were housewives. More than 98% of patients identified with Hindu religion. With respect to education, more than 75% of men had completed at least primary education, while about 40% of women were illiterate, as shown in table 40. About 40% of all cancer patients earned less than Rs 5000 in a month, as shown in table 41.

Table 38: Cancer cases by occupation and sex

Occupation	Male		Female		Total	
	Number	%	Number	%	Number	%
Business	64	12.3	2	0.3	66	5.6
Clerical/Shop owner	13	2.5	0	0.0	13	1.1
Farmer	182	35.1	36	5.5	218	18.6
Govt Employee	76	14.6	34	5.2	110	9.4
Housewife	0	0.0	527	81.0	527	45.0
Not applicable to children	8	1.5	4	0.6	12	1.0
Other	39	7.5	15	2.3	54	4.6
Professional	1	0.2	0	0.0	1	0.1
Pvt Employee	35	6.7	1	0.2	36	3.1
Semi-Professional	1	0.2	0	0.0	1	0.1
Semi-Skilled Worker	8	1.5	5	0.8	13	1.1
Skilled Worker	37	7.1	4	0.6	41	3.5
Student	18	3.5	10	1.5	28	2.4
Unemployed	8	1.5	2	0.3	10	0.9
Unskilled Worker	29	5.6	11	1.7	40	3.4
Total	519	100.0	651	100.0	1170	100

Table 39: Cancer cases by religion and sex

Religion	Male		Female		Total	
	Number	%	Number	%	Number	%
Hindu	511	98.5	643	98.8	1154	98.6
Muslim	7	1.5	6	0.9	13	1.1
Christian	1	0.2	1	0.2	2	0.2
Other	0	0.0	1	0.2	1	0.1
Total	519	100.0	651	100.0	1170	100.0

Table 40: Cancer cases by education and sex

Education	Male		Female		Total	
	Number	%	Number	%	Number	%
Illiterate	65	12.5	243	37.3	308	26.3
Literate	44	8.5	87	13.4	131	11.2
Primary (1-7 std)	105	20.2	121	18.6	226	19.3
Secondary (8-10 std)	156	30.1	124	19.0	280	23.9
Technical after 10th	12	2.3	2	0.3	14	1.2
College	103	19.8	55	8.4	158	13.5
Post graduate	14	2.7	11	1.7	25	2.1
Other	5	1.0	2	0.3	7	0.6
Not applicable for children	5	1.0	3	0.5	8	0.7
Unknown / No Information	10	1.9	3	0.5	13	1.1
Total	519	100.0	651	100.0	1170	100.0

Table 41: Cancer cases by income and sex

Income	Male		Female		Total	
	Number	%	Number	%	Number	%
>=30375	63	12.1	50	7.7	113	9.7
15188-30374	38	7.3	41	6.3	79	6.8
11362-15187	72	13.9	93	14.3	165	14.1
7594-11361	83	16.0	88	13.5	171	14.6
4556-7593	57	11.0	51	7.8	108	9.2
1521-4555	72	13.9	71	10.9	143	12.2
<=1520	101	19.5	207	31.8	308	26.3
Unknown/No Information	33	6.4	50	7.7	83	7.1
Total	519	100.0	651	100.0	1170	100.0

18. Comparison of Age Adjusted Incidence Rates per 100,000 with other Indian registries

As shown in figure 36, there are 52 PBCRs in India.^{12–22} Several PBCRs like Amritsar, Haridwar, and Patna and Navi Mumbai are newly established, due to which their data is not publicly available. The following figures 37 to 46 compare the incidence of cancer in Mayurbhanj district with other PBCRs in India. Mayurbhanj district has lower cancer incidence than the average Indian estimate given by Global Cancer Observatory (GLOBOCAN) for 2022. However, the rates of cancer incidence in Mayurbhanj district are similar to other rural districts in the country like Muzaffarpur in Bihar and Sindhudurg in Maharashtra. Mayurbhanj lies in the middle of the graph for mouth, tongue, and gallbladder cancer incidence in India, but at the lower end of the graph for breast, cervical, ovarian, stomach, and lung cancer.

Figure 36: Population-based Cancer Registries in India, as of 2025



Figure 37: Comparison of cancer incidence among males of different PBCRs of India

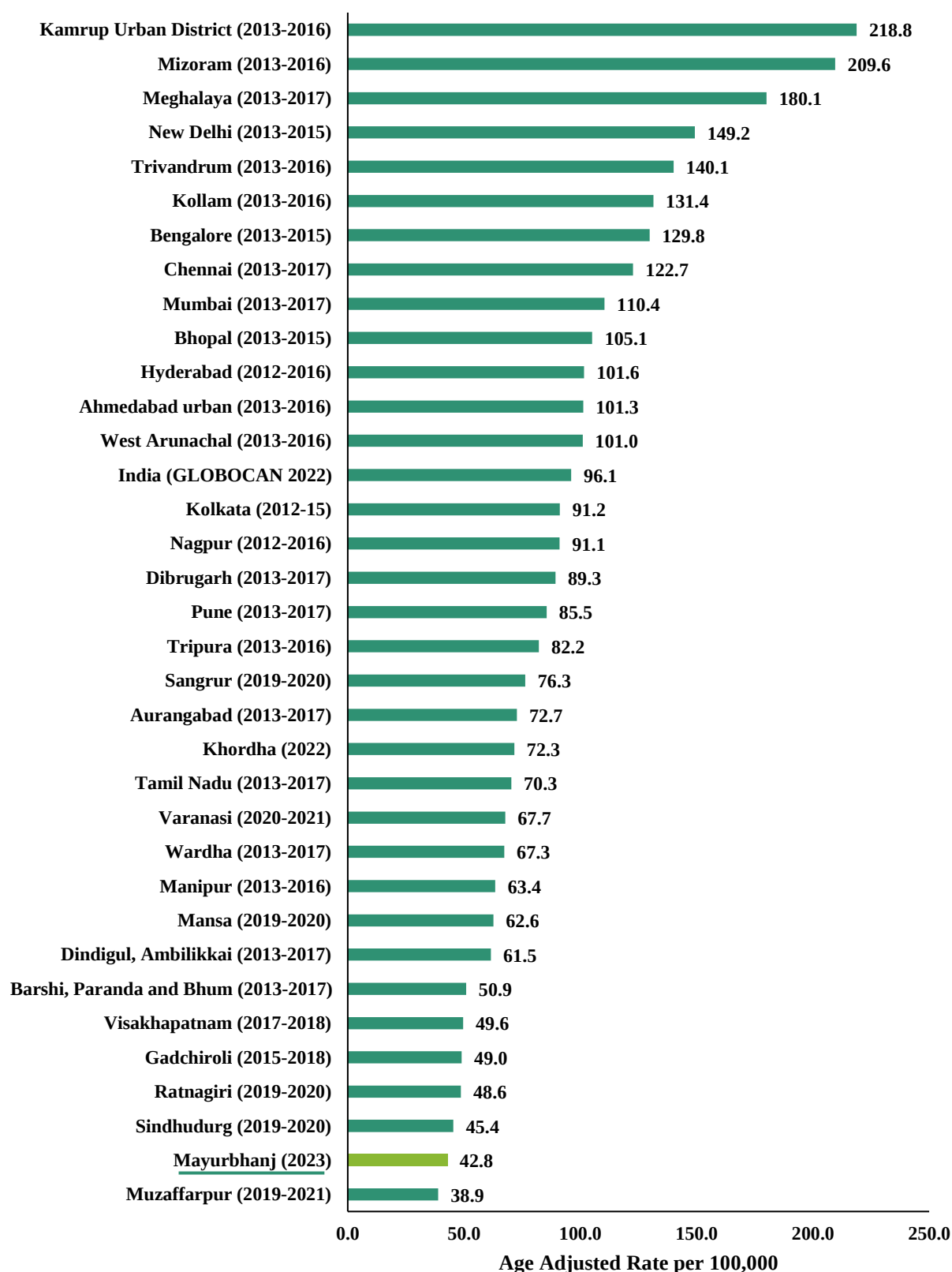


Figure 38: Comparison of cancer incidence among females of different PBCRs of India

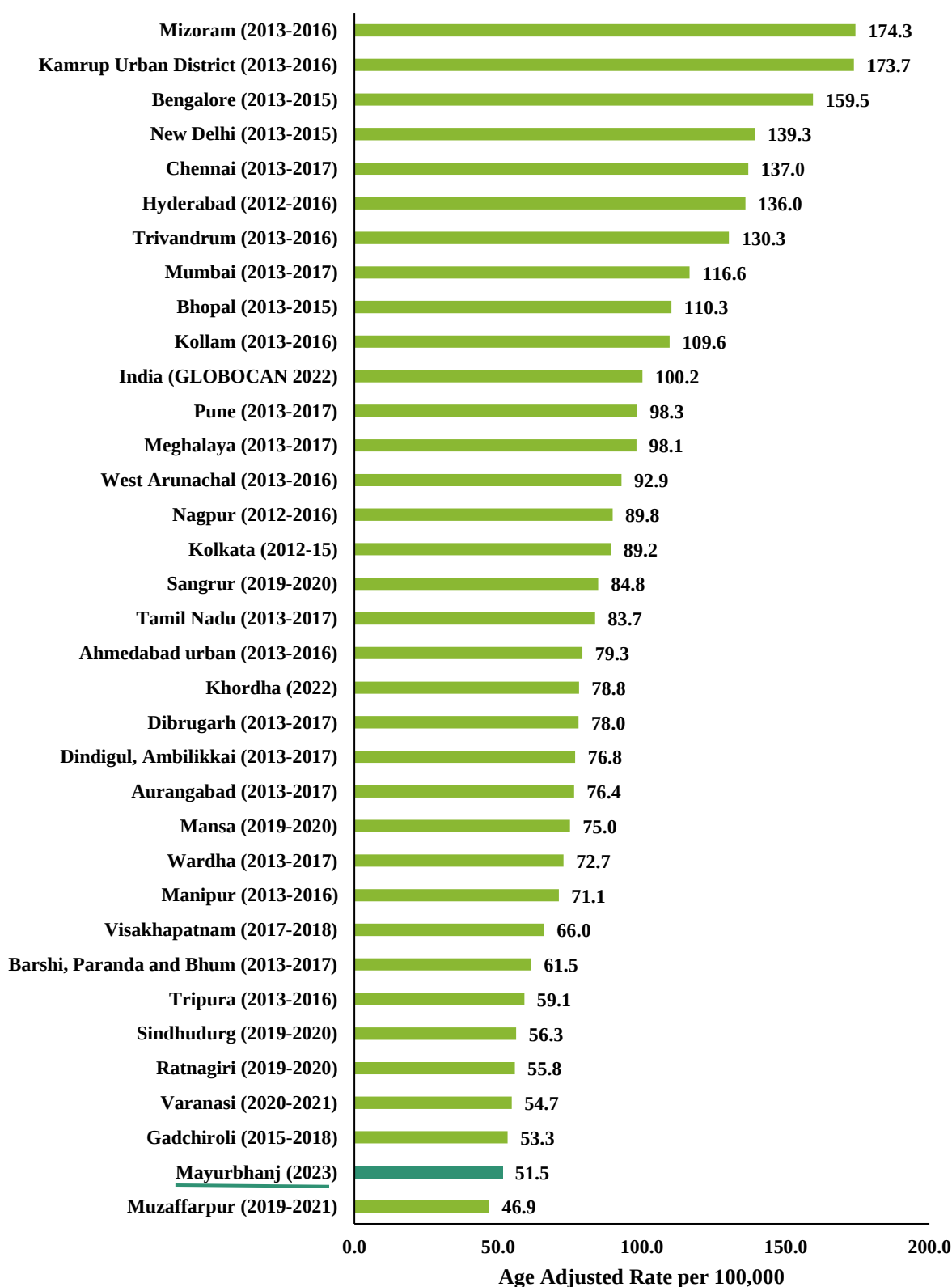


Figure 39: Comparison of mouth cancer incidence among males and females of different PBCRs in India

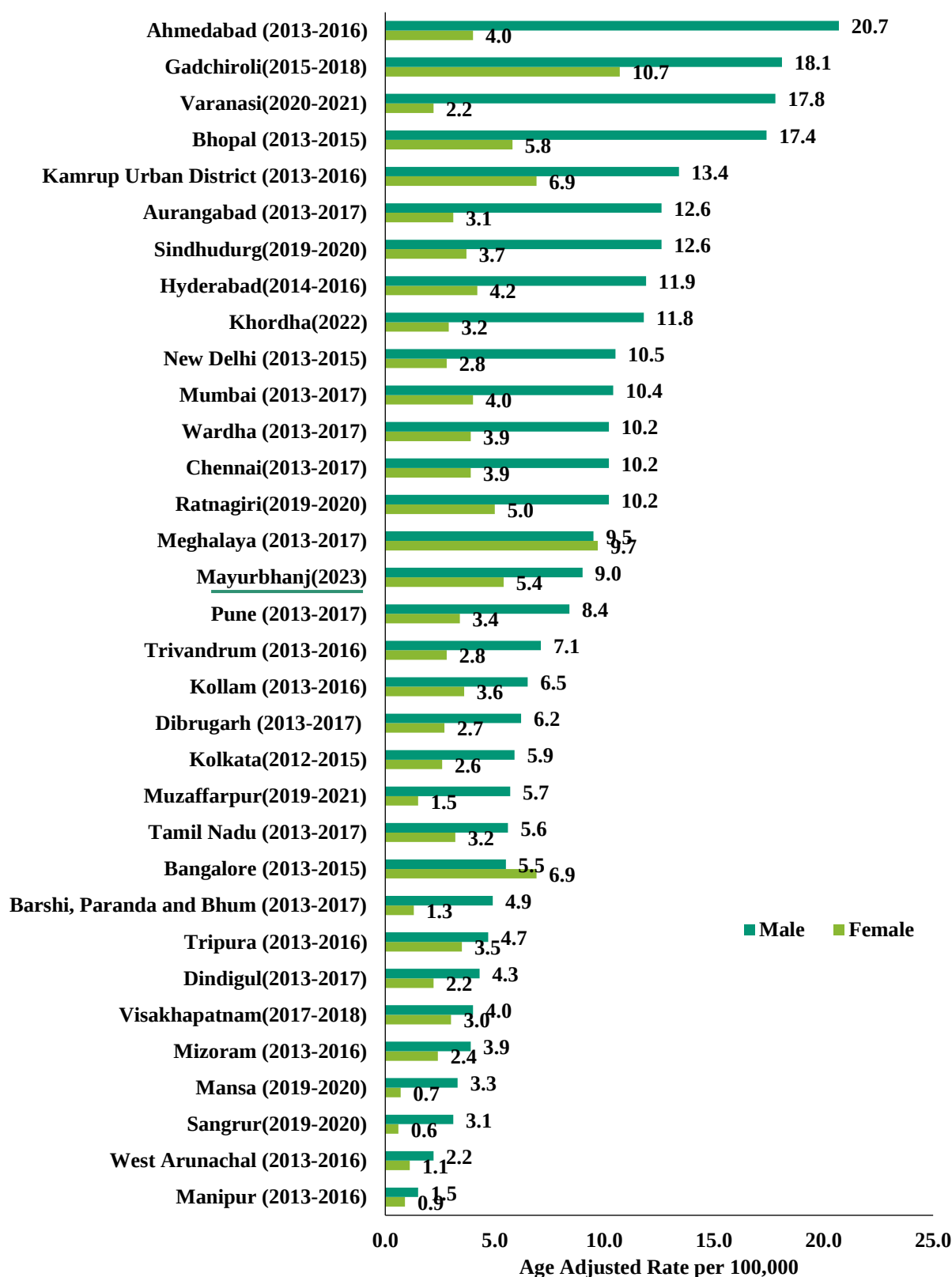


Figure 40: Comparison of tongue cancer incidence among males and females of different PBCRs in India

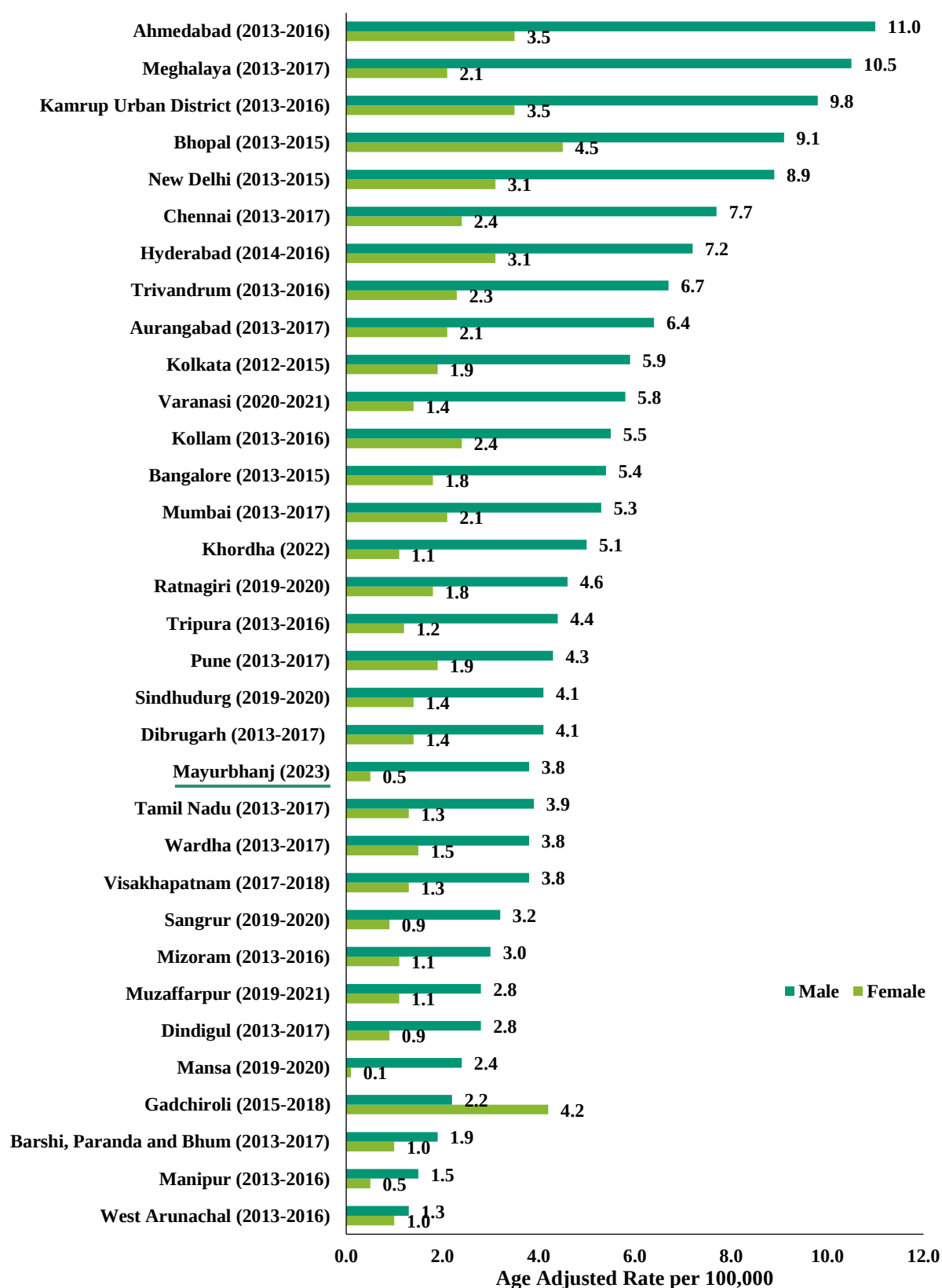


Figure 41: Comparison of breast cancer incidence among females of different PBCRs of India

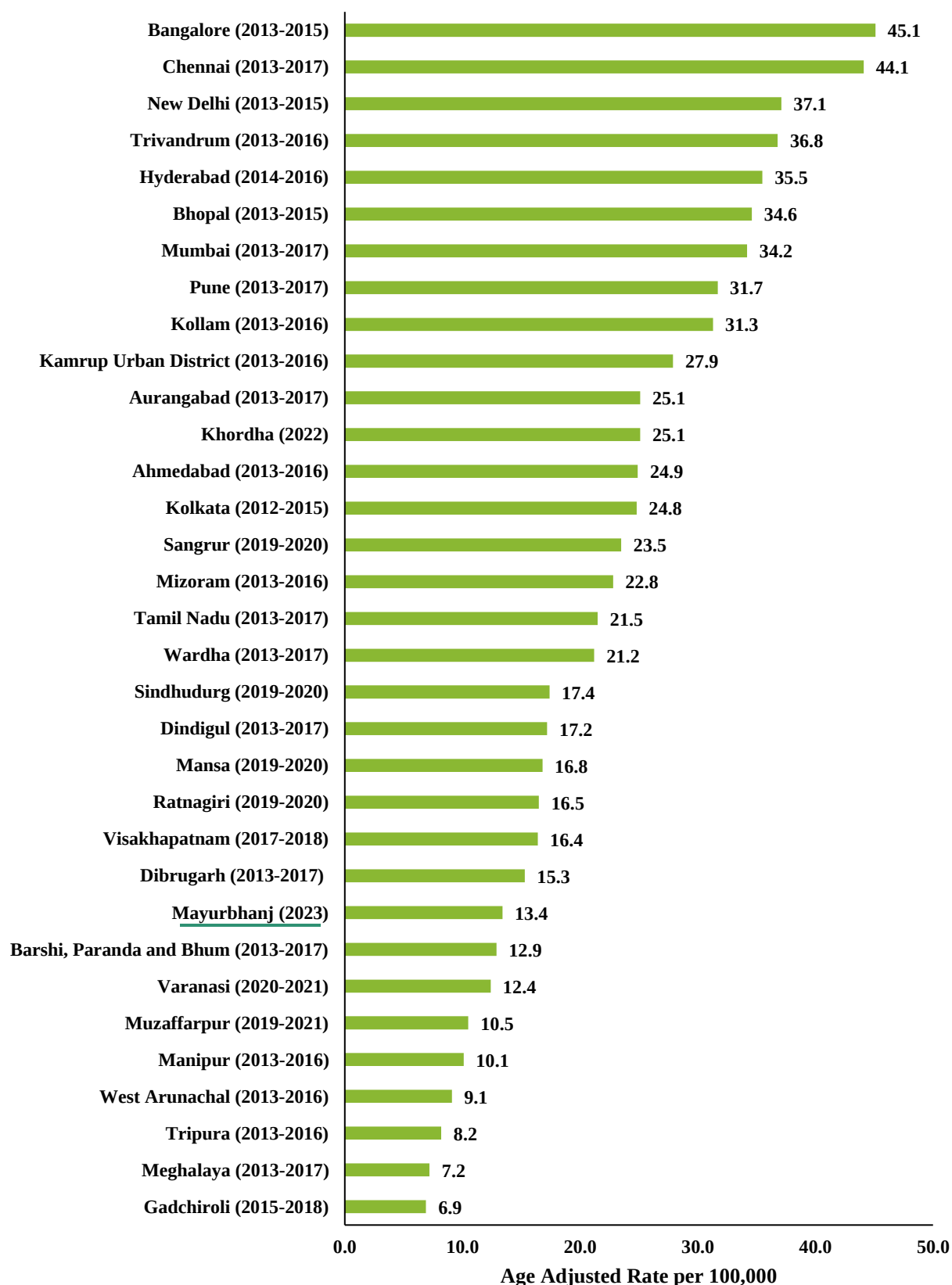


Figure 42: Comparison of cervical cancer incidence among females of different PBCRs of India

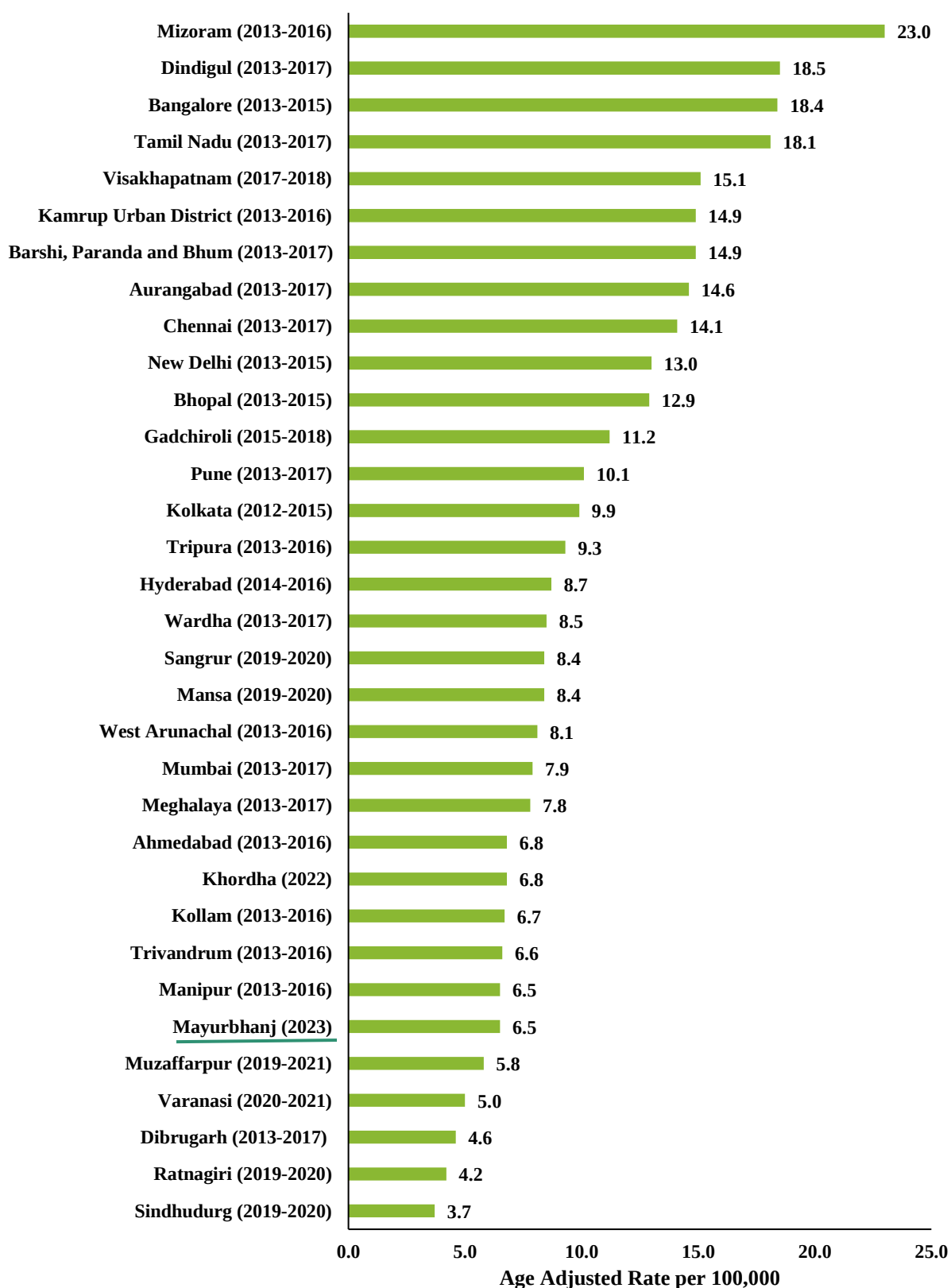


Figure 43: Comparison of ovarian cancer incidence among females of different PBCRs of India

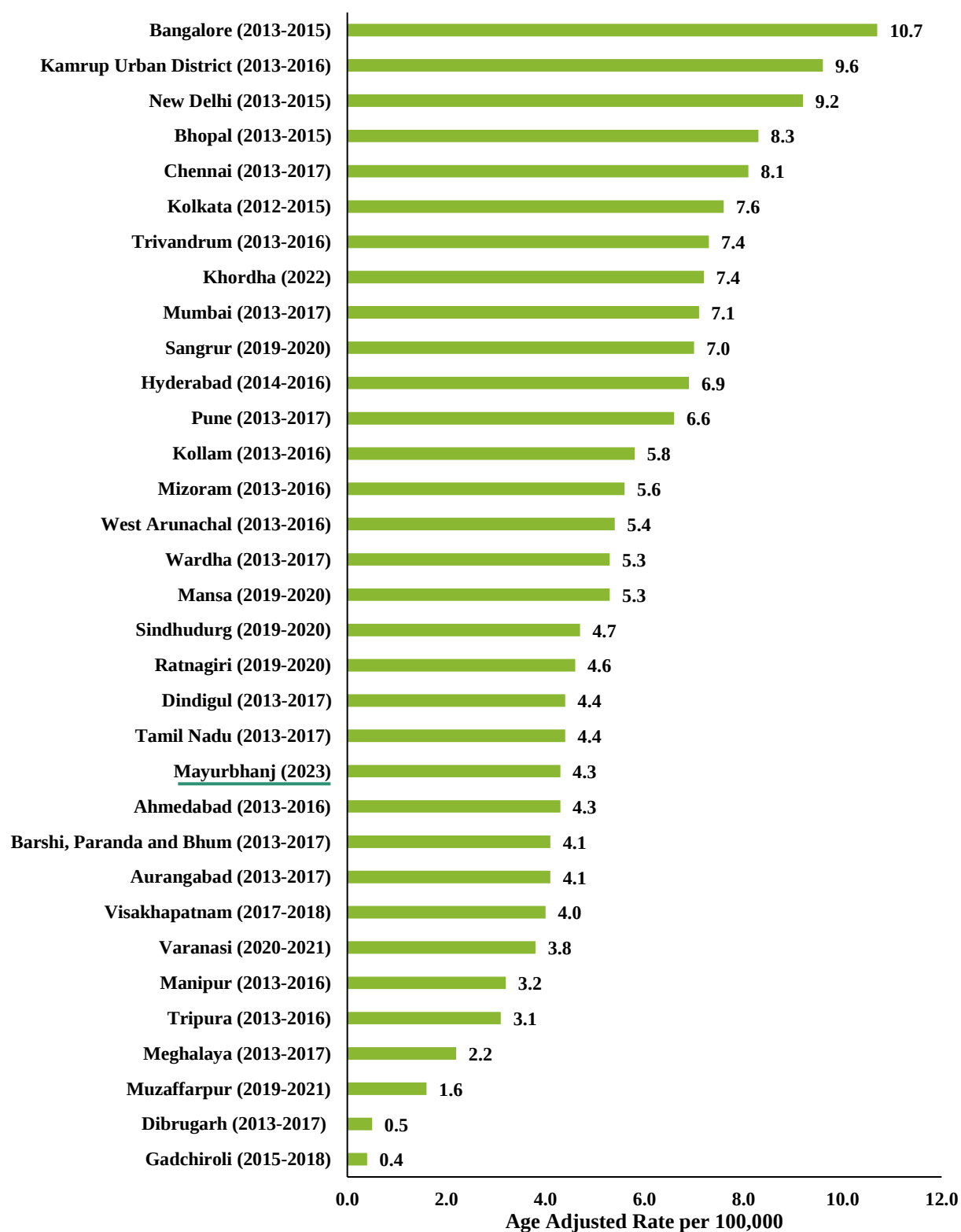


Figure 44: Comparison of stomach cancer incidence among males and females of different PBCRs of India

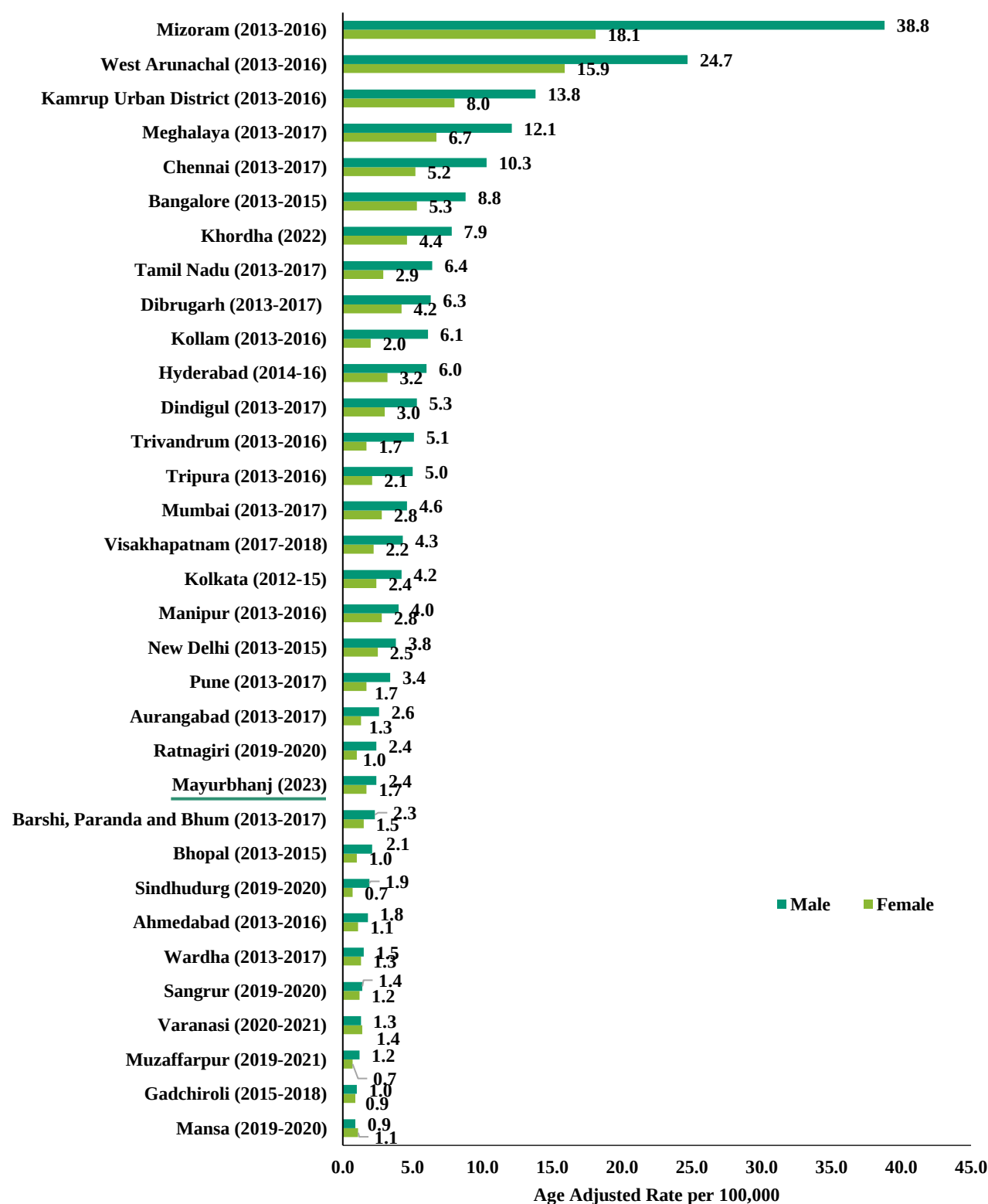


Figure 45: Comparison of gallbladder cancer incidence among males and females of different Indian PBCRs

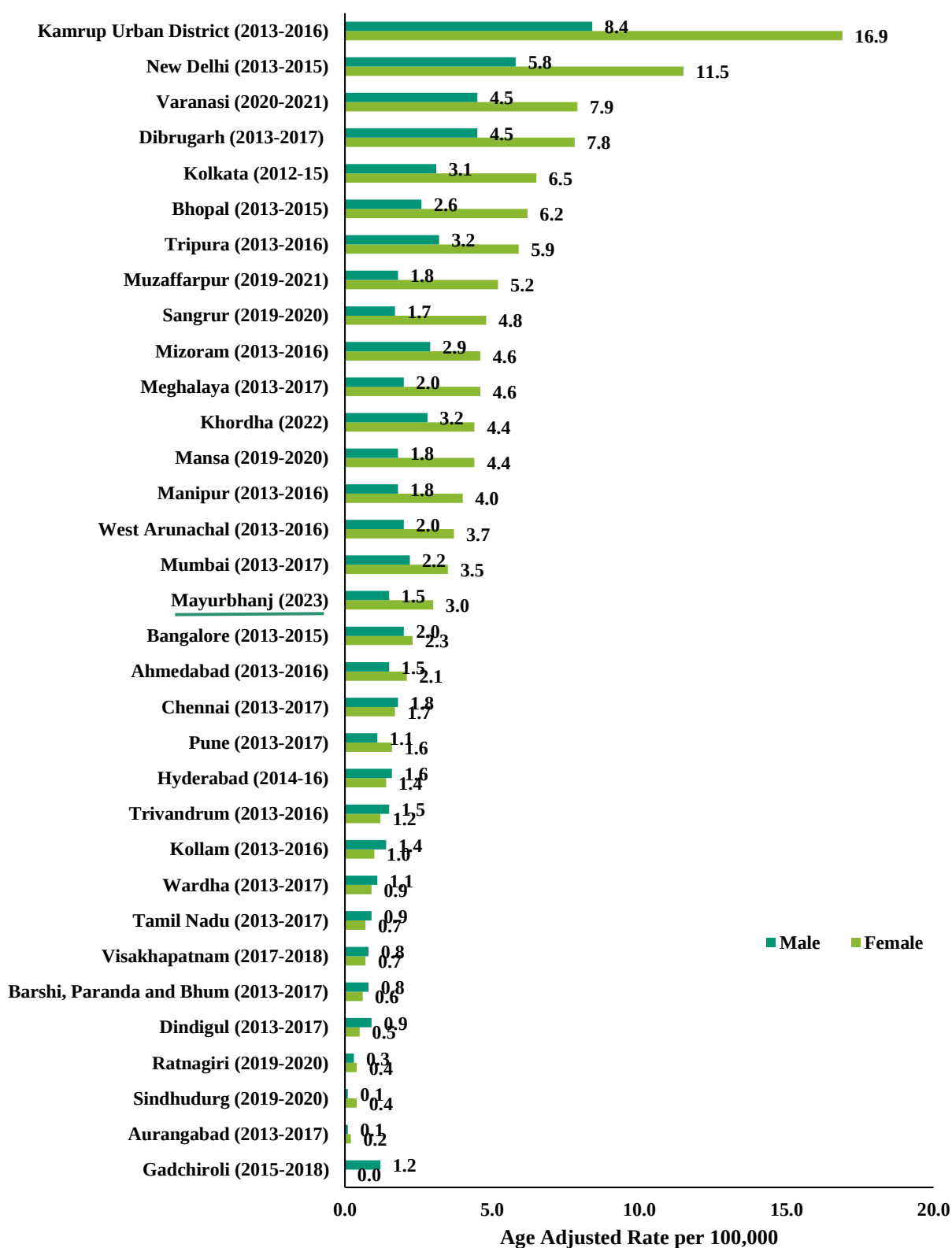
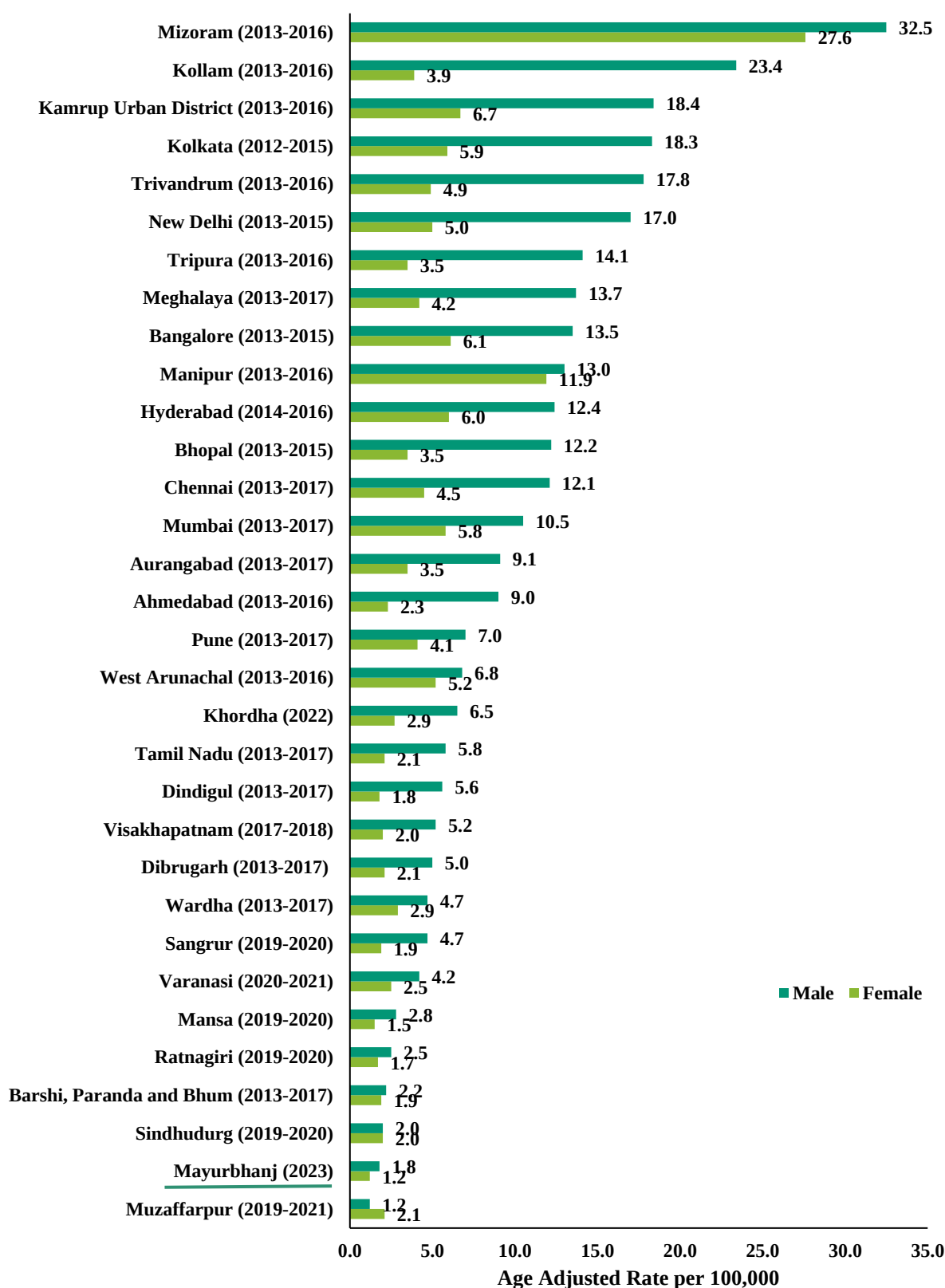


Figure 46: Comparison of lung cancer incidence among males and females of different PBCRs of India



19. Vital status of Patients as of December 2025

As of 31st December 2025, 633 cases (54.1%) out of the total 1,170 incidence cases have deceased, while 475 (40.6%) are alive. Site wise details are mentioned in table 42. More than 80% of lung and gallbladder cancer cases diagnosed in 2023 have died on or before 31st December 2025.

Table 42: Vital status of patients registered in 2023

Cancer Site	No. of cases (2023)	Follow-up status as on 31 st December, 2025				Follow-up ongoing
		Alive	%	Death	%	
Oral Cavity	240	95	39.6	134	55.8	11
Breast	171	111	64.9	63	36.8	0
Cervix uteri	80	33	41.3	46	57.5	1
Ovary	54	25	46.3	26	48.1	3
Stomach	48	12	25.0	33	68.8	3
Gallbladder	55	9	16.4	45	81.8	1
Lung	36	4	11.1	29	80.6	3
All Sites	1170	475	45.9	633	54.1	62 (5.3%)

20. Challenges faced by Mayurbhanj PBCR

Mayurbhanj PBCR was initiated in the year 2023 to systematically collect cancer-related information in the population. Like any other data collection effort, the cancer registry also faced many hurdles during its operations and activities. The prominent challenges faced are mentioned below:

Undiagnosed frank cancer cases

In tribal and remote regions, many frank cancer cases remain undiagnosed due to limited access to diagnostic facilities, poor health awareness and socio-behavioural factors. The patients were often unwilling to seek formal diagnosis and treatment, and prefer traditional remedies. As a result, documentary evidence and histopathological/radiological confirmation was unavailable making it difficult to register such cases.

This challenge was overcome with the help of Early Detection Programme, Mayurbhanj. Whenever the field staff would come across such frank cases, they would request the medical officer of EDP to visit them and provide a clinical diagnosis. The patient is registered on basis of the opinion of the medical officer. Further, the patient is counselled to seek formal diagnosis and treatment with the help of EDP.

Challenges with respect to staff

The job profile of registry field staff involves extensive field work in several blocks of Mayurbhanj district. The district covers a large geographical area, with nearly 40% forest cover and the presence of wild animals, leaving few traversable locations. During recruitment, preference was given to local candidates and they were informed regarding the nature of the work. However, in the initial period, few staff quit their job after the training. Cancer registry activities were hampered due to re-recruitment and re-training of new staff. Additionally, few staff members were reluctant to undertake field activities due to distant locations and safety issues in the forest-covered areas in the region.

Poor medical record maintenance

Some sources had poor maintenance of medical records with minimum information available for data collection. The complete address and contact details of the patient were not recorded in data received from various hospitals and diagnostic centres. Incomplete contact information made it difficult for field staff while tracing those patients in the field.

Lack of awareness in the community

Due to the rural and tribal nature of the region, many patients and their relatives are reluctant to seek medical diagnosis and treatment. Some prefer to rely on traditional rituals or alternative medical treatments. Additionally, some patients are hesitant to share their diagnosis and treatment details with cancer registry staff due to prevailing social taboos and misconceptions associated with the disease.

Transportation and other logistic issues

Due to the remote location of many villages and the presence of forested areas, reliable transportation services are often unavailable or irregular. There is also a lack of local transportation facilities in several villages and blocks. In some areas, ongoing road construction further delays travel, making it difficult for registry staff to reach the locations on time.

Many villages are located in dense forest regions, and patients often reside in remote and scattered locations. This makes it difficult for staff to reach patients' households for follow-up and data collection activities.

The hilly terrain and changing weather conditions pose additional challenges. Travel becomes particularly difficult during the rainy season, as many roads are unpaved and muddy, making it unsafe to travel by two-wheelers. Frequent power cuts in these areas also create difficulties during fieldwork and data collection and data processing.

Despite these challenges, constant support from Department of Health & Family Welfare, Government of Odisha as well as continued interactions with the PHC, UPHC, ASHA, DPM, BPM, CHO, ANM and community leaders by registry staff, ensured data collection on information about the cancer cases.

SECTION

STANDARD REGISTRY TABLES

21. Cancer incidence in 2023

Table 43: Number of cancer cases incident among males of Mayurbhanj district by age group in 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total	%
C00	Lip	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	2	0.4
C01-C02	Tongue	-	-	-	-	-	5	6	4	7	5	7	4	6	1	2	2	49	9.4
C03-C06	Mouth	-	-	-	1	1	1	8	14	17	15	14	14	9	9	7	4	114	22.0
C07-C08	Salivary Glands	-	-	-	-	-	2	-	-	1	1	1	2	-	-	-	-	7	1.3
C09	Tonsil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C10	Other Oropharynx	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	4	0.8
C11	Nasopharynx	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	2	0.4
C12-C13	Hypopharynx	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	2	0.4
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C15	Oesophagus	-	-	-	-	-	-	-	-	1	1	1	-	-	-	1	-	4	0.8
C16	Stomach	-	-	-	-	-	-	-	1	-	2	6	5	3	4	3	3	27	5.2
C17	Small Intestine	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	1	4	0.8
C18	Colon	-	-	-	-	-	-	-	1	1	4	1	4	3	-	-	-	14	2.7
C19-C20	Rectum	-	-	-	-	-	-	-	1	-	2	2	2	4	2	1	-	14	2.7
C21	Anus	-	-	-	-	-	-	-	-	1	1	2	1	-	1	-	-	6	1.2
C22	Liver	-	-	-	-	-	-	-	1	1	-	1	1	4	1	1	2	12	2.3
C23-C24	Gallbladder etc.	-	-	-	-	-	-	-	1	3	3	-	1	5	2	-	3	18	3.5
C25	Pancreas	-	-	-	-	-	-	1	-	-	1	2	1	4	1	2	1	13	2.5
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	4	0.8
C32	Larynx	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	1	5	1.0
C33-C34	Trachea, bronchus and lung	-	-	-	-	-	-	1	2	1	1	2	2	5	6	1	-	21	4.0
C37-C38	Other Thoracic Organs	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	0.2
C40-C41	Bone	-	-	2	-	1	-	-	-	-	-	-	2	-	-	-	-	5	1.0
C43	Melanoma of Skin	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	0.4
C44	Other Skin	-	-	1	-	-	1	-	-	2	3	2	-	2	2	1	2	16	3.1
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C47+C49	Connective & Soft Tissue	-	-	-	-	-	-	1	1	-	-	-	4	2	-	1	-	9	1.7
C50	Breast	-	-	-	-	-	-	-	-	-	-	1	-	3	-	1	-	5	1.0
C60	Penis	-	-	-	-	-	1	-	-	2	-	-	2	2	1	2	1	11	2.1
C61	Prostate	-	-	-	-	-	-	-	-	-	-	-	-	2	3	4	2	11	2.1
C62	Testis	-	-	-	1	3	1	3	-	-	1	1	-	-	-	-	-	10	1.9
C63	Other male genital organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C64	Kidney	-	1	-	-	-	-	1	-	-	-	1	1	1	-	-	-	5	1.0
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C67	Urinary Bladder	-	-	-	-	-	-	-	-	-	-	2	-	-	1	2	3	8	1.5
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C69	Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	0.2
C70-C72	Brain, Nervous System	-	-	1	1	-	1	-	1	-	-	1	-	1	2	-	-	8	1.5
C73	Thyroid	-	-	-	-	2	-	-	1	-	-	-	3	3	-	-	-	9	1.7
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	0.2
C75	Other endocrine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C81	Hodgkin Disease	-	1	-	2	-	-	-	-	-	1	-	-	2	-	-	1	7	1.3
C82-C86, C96	Non-Hodgkin Lymphoma	-	-	1	-	-	1	1	-	2	1	2	3	2	1	1	2	17	3.3
C88	Immunoproliferative diseases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C90	Multiple Myeloma	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	4	0.8
C91	Lymphoid Leukaemia	1	3	-	1	-	-	1	1	-	-	-	-	2	-	-	1	10	1.9
C92-C94	Myeloid Leukaemia	-	-	2	1	-	1	-	4	2	1	-	-	1	2	-	-	14	2.7
C95	Leukaemia Unspecified	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	0.4
O&U*	Other and Unspecified	-	1	-	-	1	-	2	4	3	3	7	4	4	5	4	3	41	7.9
ALL	All sites	3	6	7	8	8	14	25	39	45	46	61	61	77	48	35	36	519	100.0

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 44: Number of cancer cases incident among females of Mayurbhanj district by age group in 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total	%
C00	Lip	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	2	0.3
C01-C02	Tongue	-	-	-	-	-	1	-	-	2	-	2	2	-	-	-	-	7	1.1
C03-C06	Mouth	-	-	-	-	-	-	1	2	4	9	11	13	12	7	5	2	66	10.1
C07-C08	Salivary Glands	-	-	-	-	-	-	-	-	-	2	1	-	-	-	1	-	4	0.6
C09	Tonsil	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	0.2
C10	Other Oropharynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C11	Nasopharynx	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	0.2
C12-C13	Hypopharynx	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	0.2
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	0.2
C15	Oesophagus	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2	0.3
C16	Stomach	-	-	-	-	-	1	2	1	1	3	3	2	4	2	2	-	21	3.2
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C18	Colon	-	-	-	-	1	1	1	2	1	-	1	3	2	1	2	-	15	2.3
C19-C20	Rectum	-	-	-	-	-	-	-	1	-	2	1	1	2	-	1	-	8	1.2
C21	Anus	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	0.2
C22	Liver	-	-	-	-	-	-	-	-	1	1	2	2	-	2	-	-	8	1.2
C23-C24	Gallbladder etc.	-	-	-	-	-	1	-	1	1	6	9	10	3	3	2	1	37	5.7
C25	Pancreas	-	-	-	-	-	-	-	-	-	2	3	1	1	-	-	-	7	1.1
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C32	Larynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C33-C34	Trachea, bronchus, and lung	-	-	-	-	-	-	-	1	3	3	1	3	2	1	-	1	15	2.3
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C40-C41	Bone	1	-	-	-	-	-	-	-	-	2	-	-	-	-	1	-	4	0.6
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	3	0.5
C44	Other Skin	-	-	-	-	-	1	1	-	1	2	3	3	3	-	-	-	14	2.2
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C47+C49	Connective and Soft Tissue	-	-	1	-	-	-	2	1	3	1	-	2	-	-	-	-	10	1.5
C50	Breast	-	-	-	-	-	2	8	8	24	30	36	27	13	9	6	8	171	26.3
C51	Vulva	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	0.2
C52	Vagina	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	0.3
C53	Cervix Uteri	-	-	-	-	1	-	3	2	8	13	15	9	12	9	4	4	80	12.3
C54	Corpus Uteri	-	-	-	-	-	-	-	1	2	1	4	4	11	1	4	-	28	4.3
C55	Uterus Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C56	Ovary	-	-	-	3	-	-	3	3	5	8	8	7	6	4	3	4	54	8.3
C57	Other Female Genital organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C58	Placenta	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	0.2
C64	Kidney	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C67	Urinary Bladder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C69	Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C70-C72	Brain, Nervous System	-	1	-	2	-	-	-	1	-	2	2	-	1	-	-	1	10	1.5
C73	Thyroid	-	-	-	1	-	2	1	3	1	-	-	2	1	-	-	-	11	1.7
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C75	Other endocrine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C81	Hodgkin Disease	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	0.2
C82-C86, C96	Non-Hodgkin lymphoma	-	-	-	-	2	1	-	1	-	1	2	2	-	-	-	-	9	1.4
C88	Immunoproliferative Diseases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C90	Multiple Myeloma	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	3	0.5
C91	Lymphoid Leukaemia	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.2
C92-C94	Myeloid Leukaemia	-	-	-	1	-	1	1	-	-	3	-	-	-	-	-	-	6	0.9
C95	Leukaemia Unspecified	1	-	-	1	-	-	-	-	-	-	2	1	1	-	-	-	6	0.9
O&U*	Other and Unspecified	-	-	-	-	-	-	2	4	4	2	11	6	5	1	2	2	39	6.0
ALL	All sites	3	1	1	8	4	11	27	34	63	97	122	105	79	40	33	23	651	100.0

*O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 45: Age-Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 years) (TR) incidence rate per 100,000 population in Males, Mayurbhanj PBCR – 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CR	AAR	TR
C00	Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.5
C01-C02	Tongue	0.0	0.0	0.0	0.0	0.0	4.6	6.5	4.3	7.9	6.2	11.1	8.3	13.0	3.4	9.9	10.9	3.6	3.8	8.1
C03-C06	Mouth	0.0	0.0	0.0	0.8	0.9	0.9	8.7	15.0	19.3	18.7	22.2	28.9	19.6	31.0	34.7	21.9	8.3	9.0	20.1
C07-C08	Salivary Gland	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.1	1.2	1.6	4.1	0.0	0.0	0.0	0.0	0.5	0.5	1.3
C09	Tonsil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C10	Other Oropharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	6.9	0.0	0.0	0.3	0.4	0.5
C11	Nasopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.2	0.0	0.0	0.0	0.1	0.2	0.5
C12-C13	Hypopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	5.0	0.0	0.1	0.2	0.3
C14	Pharynx Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C15	Oesophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	1.6	0.0	0.0	0.0	5.0	0.0	0.3	0.3	0.7
C16	Stomach	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	2.5	9.5	10.3	6.5	13.8	14.9	16.4	2.0	2.4	4.4
C17	Small Intestine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.6	0.0	0.0	0.0	0.0	5.5	0.3	0.3	0.7
C18	Colon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	5.0	1.6	8.3	6.5	0.0	0.0	0.0	1.0	1.1	3.6
C19-C20	Rectum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	2.5	3.2	4.1	8.7	6.9	5.0	0.0	1.0	1.2	2.9
C21	Anus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	3.2	2.1	0.0	3.4	0.0	0.0	0.4	0.5	1.2
C22	Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	1.6	2.1	8.7	3.4	5.0	10.9	0.9	1.1	2.1
C23-C24	Gallbladder etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.4	3.7	0.0	2.1	10.9	6.9	0.0	16.4	1.3	1.5	3.3
C25	Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.2	3.2	2.1	8.7	3.4	9.9	5.5	0.9	1.1	2.1
C30-C31	Nose, Sinuses etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	6.5	0.0	0.0	0.0	0.3	0.3	1.1
C32	Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	4.3	0.0	0.0	5.5	0.4	0.4	1.1
C33-C34	Trachea, bronchus and lung	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.1	1.1	1.2	3.2	4.1	10.9	20.7	5.0	0.0	1.5	1.8	3.3
C37-C38	Other Thoracic Organs	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
C40-C41	Bone	0.0	0.0	1.3	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.4	0.3	0.5
C43	Melanoma of Skin	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.1	0.2	0.0
C44	Other Skin	0.0	0.0	0.6	0.0	0.0	0.9	0.0	0.0	2.3	3.7	3.2	0.0	4.3	6.9	5.0	10.9	1.2	1.3	2.2
C45	Mesothelioma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C46	Kaposi Sarcoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C47+C49	Conn. & Soft Tissue	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.0	8.3	4.3	0.0	5.0	0.0	0.7	0.7	1.8
C50	Breast	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	6.5	0.0	5.0	0.0	0.4	0.4	1.1
C60	Penis	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	2.3	0.0	0.0	4.1	4.3	3.4	9.9	5.5	0.8	1.0	1.5
C61	Prostate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	10.3	19.8	10.9	0.8	1.1	0.6
C62	Testis	0.0	0.0	0.0	0.8	2.7	0.9	3.3	0.0	0.0	1.2	1.6	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.5
C63	Other Male Genital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C64	Kidney etc.	0.0	0.6	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.6	2.1	2.2	0.0	0.0	0.0	0.4	0.4	0.8
C65	Renal Pelvis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C66	Ureter	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C67	Urinary Bladder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.4	9.9	16.4	0.6	0.8	0.5
C68	Unspecified Urinary Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C69	Eye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.1	0.1	0.0
C70-C72	Brain, Nervous System	0.0	0.0	0.6	0.8	0.0	0.9	0.0	1.1	0.0	0.0	1.6	0.0	2.2	6.9	0.0	0.0	0.6	0.6	0.7
C73	Thyroid	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.1	0.0	0.0	0.0	6.2	6.5	0.0	0.0	0.0	0.7	0.7	1.8
C74	Adrenal Gland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.1	0.1	0.0
C75	Other endocrine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C81	Hodgkin Disease	0.0	0.6	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	4.3	0.0	0.0	5.5	0.5	0.6	0.8
C82-C86, C96	Non-Hodgkin Lymphoma	0.0	0.0	0.6	0.0	0.0	0.9	1.1	0.0	2.3	1.2	3.2	6.2	4.3	3.4	5.0	10.9	1.2	1.4	2.6
C88	Malig Imm.Prol D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C90	Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.2	3.4	0.0	5.5	0.3	0.4	0.5
C91	Lymphoid Leukaemia	0.8	1.9	0.0	0.8	0.0	0.0	1.1	1.1	0.0	0.0	0.0	0.0	4.3	0.0	0.0	5.5	0.7	0.8	0.8
C92-C94	Myeloid Leukaemia	0.0	0.0	1.3	0.8	0.0	0.9	0.0	4.3	2.3	1.2	0.0	0.0	2.2	6.9	0.0	0.0	1.0	1.0	1.8
C95	Leukaemia Unspecified	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.1	0.2	0.0
O&U	Other and Unspecified	0.0	0.6	0.0	0.0	0.9	0.0	2.2	4.3	3.4	3.7	11.1	8.3	8.7	17.2	19.8	16.4	3.0	3.4	6.2
ALL	All sites	2.3	3.8	4.4	6.2	7.1	13.0	27.2	41.7	51.0	57.4	96.6	126.1	167.3	165.3	173.4	197.1	37.6	42.8	82.5

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 46: Age-Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 years) (TR) incidence rate per 100,000 population in females, Mayurbhanj PBCR – 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CR	AAR	TR
C00	Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.0	0.0	0.0	0.0	0.0	0.1	0.2	0.5
C01-C02	Tongue	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	2.2	0.0	3.3	4.1	0.0	0.0	0.0	0.0	0.5	0.5	1.5
C03-C06	Mouth	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	4.5	11.6	17.9	26.4	25.1	22.9	21.6	9.8	4.7	5.4	13.0
C07-C08	Salivary Gland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.6	0.0	0.0	0.0	4.3	0.0	0.3	0.3	0.8
C09	Tonsil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C10	Other Oropharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C11	Nasopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C12-C13	Hypopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C14	Pharynx Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
C15	Oesophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.1	0.2	0.5
C16	Stomach	0.0	0.0	0.0	0.0	0.0	0.9	2.0	1.0	1.1	3.9	4.9	4.1	8.4	6.6	8.7	0.0	1.5	1.7	3.5
C17	Small Intestine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C18	Colon	0.0	0.0	0.0	0.0	0.8	0.9	1.0	2.0	1.1	0.0	1.6	6.1	4.2	3.3	8.7	0.0	1.1	1.1	2.2
C19-C20	Rectum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.6	1.6	2.0	4.2	0.0	4.3	0.0	0.6	0.6	1.8
C21	Anus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C22	Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.3	3.3	4.1	0.0	6.6	0.0	0.0	0.6	0.7	1.5
C23-C24	Gallbladder etc.	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.0	1.1	7.7	14.6	20.3	6.3	9.8	8.7	4.9	2.6	3.0	7.7
C25	Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	4.9	2.0	2.1	0.0	0.0	0.0	0.5	0.6	1.8
C30-C31	Nose, Sinuses etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C32	Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C33-C34	Trachea, bronchus and lung	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.4	3.9	1.6	6.1	4.2	3.3	0.0	4.9	1.1	1.2	3.2
C37-C38	Other Thoracic Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C40-C41	Bone	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	4.3	0.0	0.3	0.3	0.5
C43	Melanoma of Skin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.6	2.0	0.0	0.0	0.0	0.0	0.2	0.2	0.7
C44	Other Skin	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.0	1.1	2.6	4.9	6.1	6.3	0.0	0.0	0.0	1.0	1.1	3.1
C45	Mesothelioma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C46	Kaposi Sarcoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C47+C49	Conn. & Soft Tissue	0.0	0.0	0.6	0.0	0.0	0.0	2.0	1.0	3.4	1.3	0.0	4.1	0.0	0.0	0.0	0.0	0.7	0.7	1.6
C50	Breast	0.0	0.0	0.0	0.0	0.0	1.8	8.2	8.0	26.9	38.6	58.5	54.8	27.2	29.5	26.0	39.3	12.2	13.4	34.2
C51	Vulva	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
C52	Vagina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.5
C53	Cervix Uteri	0.0	0.0	0.0	0.0	0.8	0.0	3.1	2.0	9.0	16.7	24.4	18.3	25.1	29.5	17.3	19.6	5.7	6.5	14.9
C54	Corpus Uteri	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.2	1.3	6.5	8.1	23.0	3.3	17.3	0.0	2.0	2.3	5.9
C55	Uterus Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C56	Ovary	0.0	0.0	0.0	2.4	0.0	0.0	3.1	3.0	5.6	10.3	13.0	14.2	12.5	13.1	13.0	19.6	3.9	4.3	9.2
C57	Other Female Genital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C58	Placenta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C64	Kidney etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C65	Renal Pelvis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C66	Ureter	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C67	Urinary Bladder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C68	Unspecified Urinary Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C69	Eye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C70-C72	Brain, Nervous System	0.0	0.7	0.0	1.6	0.0	0.0	0.0	1.0	0.0	2.6	3.3	0.0	2.1	0.0	0.0	4.9	0.7	0.8	1.5
C73	Thyroid	0.0	0.0	0.0	0.8	0.0	1.8	1.0	3.0	1.1	0.0	0.0	4.1	2.1	0.0	0.0	0.0	0.8	0.8	1.6
C74	Adrenal Gland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C75	Other endocrine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C81	Hodgkin Disease	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
C82-C86, C96	Non-Hodgkin lymphoma	0.0	0.0	0.0	0.0	1.6	0.9	0.0	1.0	0.0	1.3	3.3	4.1	0.0	0.0	0.0	0.0	0.6	0.7	1.5
C88	Malig Imm.Prol D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C90	Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5
C91	Lymphoid Leukaemia	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
C92-C94	Myeloid Leukaemia	0.0	0.0	0.0	0.8	0.0	0.9	1.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.7
C95	Leukaemia Unspecified	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	3.3	2.0	2.1	0.0	0.0	0.0	0.4	0.5	1.1
O&U*	Other and Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0	4.5	2.6	17.9	12.2	10.5	3.3	8.7	9.8	2.8	3.1	7.9
ALL	All sites	2.3	0.7	0.6	6.4	3.3	9.7	27.6	34.0	70.6	124.8	198.3	213.1	165.2	131.0	142.8	113.0	46.5	51.5	125.2

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 47: Cumulative Rate (Cum. Rate), Cumulative Risk (Cum Risk) and Lifetime Risk (before 75 years) of individual sites (ICD-10) based on age-specific rates (0-64 and 0-74 years) in males, Mayurbhanj PBCR – 2023

ICD10	Site	Cum Rate (0-64)	Cum Risk (0-64)	Cum. Risk (0-64) in %	Cum Rate (0-74)	Cum Risk (0-74)	Cum. Risk (0-74) in %	Lifetime risk upto 75 years
C00	Lip	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 7359
C01-C02	Tongue	0.0031	0.0031	0.31	0.0038	0.0038	0.38	1 in 265
C03-C06	Mouth	0.0067	0.0067	0.67	0.0100	0.0100	1.00	1 in 100
C07-C08	Salivary Gland	0.0005	0.0005	0.05	0.0005	0.0005	0.05	1 in 2009
C09	Tonsil	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C10	Other Oropharynx	0.0002	0.0002	0.02	0.0006	0.0006	0.06	1 in 1814
C11	Nasopharynx	0.0002	0.0002	0.02	0.0002	0.0002	0.02	1 in 4716
C12-C13	Hypopharynx	0.0001	0.0001	0.01	0.0003	0.0003	0.03	1 in 3059
C14	Pharynx Unspecified	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C15	Oesophagus	0.0002	0.0002	0.02	0.0004	0.0004	0.04	1 in 2242
C16	Stomach	0.0015	0.0015	0.15	0.0029	0.0029	0.29	1 in 342
C17	Small Intestine	0.0002	0.0002	0.02	0.0002	0.0002	0.02	1 in 5372
C18	Colon	0.0012	0.0012	0.12	0.0012	0.0012	0.12	1 in 849
C19-C20	Rectum	0.0010	0.0010	0.10	0.0016	0.0016	0.16	1 in 637
C21	Anus	0.0004	0.0004	0.04	0.0006	0.0006	0.06	1 in 1808
C22	Liver	0.0007	0.0007	0.07	0.0011	0.0011	0.11	1 in 872
C23-C24	Gallbladder etc.	0.0011	0.0011	0.11	0.0014	0.0014	0.14	1 in 713
C25	Pancreas	0.0008	0.0008	0.08	0.0015	0.0015	0.15	1 in 675
C30-C31	Nose, Sinuses etc.	0.0004	0.0004	0.04	0.0004	0.0004	0.04	1 in 2468
C32	Larynx	0.0004	0.0004	0.04	0.0004	0.0004	0.04	1 in 2358
C33-C34	Trachea, bronchus, and lung	0.0012	0.0012	0.12	0.0025	0.0025	0.25	1 in 405
C37-C38	Other Thoracic Organs	0.0000	0.0000	0.00	0.0000	0.0000	0.00	1 in 25730
C40-C41	Bone	0.0003	0.0003	0.03	0.0003	0.0003	0.03	1 in 3182
C43	Melanoma of Skin	0.0000	0.0000	0.00	0.0000	0.0000	0.00	1 in 26467
C44	Other Skin	0.0008	0.0008	0.08	0.0013	0.0013	0.13	1 in 743
C45	Mesothelioma	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C46	Kaposi Sarcoma	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C47+C49	Conn. & Soft Tissue	0.0007	0.0007	0.07	0.0010	0.0010	0.10	1 in 1014
C50	Breast	0.0004	0.0004	0.04	0.0007	0.0007	0.07	1 in 1532
C60	Penis	0.0006	0.0006	0.06	0.0013	0.0013	0.13	1 in 799
C61	Prostate	0.0002	0.0002	0.02	0.0017	0.0017	0.17	1 in 580
C62	Testis	0.0005	0.0005	0.05	0.0005	0.0005	0.05	1 in 1911
C63	Other Male Genital	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C64	Kidney	0.0004	0.0004	0.04	0.0004	0.0004	0.04	1 in 2653
C65	Renal Pelvis	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C66	Ureter	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C67	Urinary Bladder	0.0002	0.0002	0.02	0.0008	0.0008	0.08	1 in 1211
C68	Unspecified Urinary Organs	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C69	Eye	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C70-C72	Brain, Nervous System	0.0004	0.0004	0.04	0.0007	0.0007	0.07	1 in 1424
C73	Thyroid	0.0008	0.0008	0.08	0.0008	0.0008	0.08	1 in 1284
C74	Adrenal Gland	0.0000	0.0000	0.00	0.0002	0.0002	0.02	1 in 5806
C75	Other endocrine	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C81	Hodgkin Disease	0.0004	0.0004	0.04	0.0004	0.0004	0.04	1 in 2572
C82-C86, C96	Non-Hodgkin Lymphoma	0.0010	0.0010	0.10	0.0014	0.0014	0.14	1 in 707
C88	Immunoproliferative	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C90	Multiple Myeloma	0.0002	0.0002	0.02	0.0004	0.0004	0.04	1 in 2777
C91	Lymphoid Leukaemia	0.0005	0.0005	0.05	0.0005	0.0005	0.05	1 in 2017
C92-C94	Myeloid Leukaemia	0.0006	0.0006	0.06	0.0010	0.0010	0.10	1 in 1009
C95	Leukaemia Unspecified	0.0000	0.0000	0.00	0.0000	0.0000	0.00	1 in 26467
O&U	Other and Unspecified	0.0022	0.0022	0.22	0.0040	0.0040	0.40	1 in 249
C00-97	All sites	0.0302	0.0302	3.02	0.0471	0.0471	4.71	1 in 21

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 48: Cumulative Rate (Cum Rate), Cumulative Risk (Cum Risk), and Lifetime Risk of individual sites (ICD-10) based on age-specific rates (0-64 and 0-74 years) in females, Mayurbhanj PBCR – 2023

ICD10	Site	Cum Rate (0-64)	Cum Risk (0-64)	Cum Risk (0-64) in %	Cum Rate (0-74)	Cum Risk (0-74)	Cum Risk (0-74) in %	Lifetime risk upto 75years
C00	Lip	0.0002	0.0002	0.02	0.0002	0.0002	0.02	1 in 5471
C01-C02	Tongue	0.0005	0.0005	0.05	0.0005	0.0005	0.05	1 in 1917
C03-C06	Mouth	0.0044	0.0044	0.44	0.0067	0.0067	0.67	1 in 150
C07-C08	Salivary Gland	0.0002	0.0002	0.02	0.0004	0.0004	0.04	1 in 2346
C09	Tonsil	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 15547
C10	Other Oropharynx	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C11	Nasopharynx	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 19978
C12-C13	Hypopharynx	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 15547
C14	Pharynx Unspecified	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 9854
C15	Oesophagus	0.0002	0.0002	0.02	0.0002	0.0002	0.02	1 in 4927
C16	Stomach	0.0013	0.0013	0.13	0.0021	0.0021	0.21	1 in 483
C17	Small Intestine	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C18	Colon	0.0009	0.0009	0.09	0.0015	0.0015	0.15	1 in 674
C19-C20	Rectum	0.0006	0.0006	0.06	0.0008	0.0008	0.08	1 in 1271
C21	Anus	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 15547
C22	Liver	0.0005	0.0005	0.05	0.0008	0.0008	0.08	1 in 1229
C23-C24	Gallbladder etc.	0.0026	0.0026	0.26	0.0035	0.0035	0.35	1 in 284
C25	Pancreas	0.0006	0.0006	0.06	0.0006	0.0006	0.06	1 in 1729
C30-C31	Nose, Sinuses etc.	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C32	Larynx	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C33-C34	Trachea, bronchus, and lung	0.0010	0.0010	0.10	0.0012	0.0012	0.12	1 in 855
C37-C38	Other Thoracic Organs	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C40-C41	Bone	0.0002	0.0002	0.02	0.0004	0.0004	0.04	1 in 2608
C43	Melanoma of Skin	0.0002	0.0002	0.02	0.0002	0.0002	0.02	1 in 4187
C44	Other Skin	0.0011	0.0011	0.11	0.0011	0.0011	0.11	1 in 876
C45	Mesothelioma	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C46	Kaposi Sarcoma	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C47+C49	Connective and Soft Tissue	0.0006	0.0006	0.06	0.0006	0.0006	0.06	1 in 1614
C50	Breast	0.0112	0.0112	1.12	0.0140	0.0140	1.40	1 in 72
C51	Vulva	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 12302
C52	Vagina	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 8306
C53	Cervix Uteri	0.0050	0.0050	0.50	0.0073	0.0073	0.73	1 in 137
C54	Corpus Uteri	0.0021	0.0021	0.21	0.0031	0.0031	0.31	1 in 319
C55	Uterus Unspecified	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C56	Ovary	0.0032	0.0032	0.32	0.0045	0.0045	0.45	1 in 222
C57	Other Female Genital organs	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C58	Placenta	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 19978
C64	Kidney etc.	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C65	Renal Pelvis	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C66	Ureter	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C67	Urinary Bladder	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C69	Eye	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C70-C72	Brain, Nervous System	0.0006	0.0006	0.06	0.0006	0.0006	0.06	1 in 1791
C73	Thyroid	0.0007	0.0007	0.07	0.0007	0.0007	0.07	1 in 1444
C74	Adrenal Gland	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C75	Other endocrine	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C81	Hodgkin Disease	0.0001	0.0001	0.01	0.0001	0.0001	0.01	1 in 19579
C82-C86, C96	Non-Hodgkin lymphoma	0.0006	0.0006	0.06	0.0006	0.0006	0.06	1 in 1651
C88	Malig Imm.Prol D	0.0000	0.0000	0.00	0.0000	0.0000	0.00	0
C90	Multiple Myeloma	0.0002	0.0002	0.02	0.0002	0.0002	0.02	1 in 4681
C91	Lymphoid Leukaemia	0.0000	0.0000	0.00	0.0000	0.0000	0.00	1 in 26014
C92-C94	Myeloid Leukaemia	0.0003	0.0003	0.03	0.0003	0.0003	0.03	1 in 3050
C95	Leukaemia Unspecified	0.0004	0.0004	0.04	0.0004	0.0004	0.04	1 in 2237
O&U	Other and Unspecified	0.0027	0.0027	0.27	0.0033	0.0033	0.33	1 in 305
ALL	All sites	0.0428	0.0428	4.28	0.0565	0.0565	5.65	1 in 18

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 49: Number (#) and Proportion (%) of cancers by site (ICD-10) and method of diagnosis in males, Mayurbhanj PBCR - 2023

ICD10	Site	Clinical		Radiological		Microscopic		DCO & Other		Total
		#	%	#	%	#	%	#	%	#
C00	Lip	-	-	-	-	2	100.0	-	-	2
C01-C02	Tongue	3	6.0	-	-	43	88.0	3	6.1	49
C03-C06	Mouth	23	20.2	3	2.6	73	64.0	15	13.2	114
C07-C08	Salivary Gland	1	14.3	-	-	6	85.7	-	-	7
C09	Tonsil	-	-	-	-	-	-	-	-	-
C10	Other Oropharynx	-	-	-	-	4	100.0	-	-	4
C11	Nasopharynx	-	-	-	-	2	100.0	-	-	2
C12-C13	Hypopharynx	-	-	-	-	2	100.0	-	-	2
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-
C15	Oesophagus	1	25.0	1	25.0	2	50.0	-	-	4
C16	Stomach	3	11.1	4	14.8	18	66.7	2	7.4	27
C17	Small Intestine	-	-	1	25.0	3	75.0	-	-	4
C18	Colon	2	14.3	1	7.1	11	78.6	-	-	14
C19-C20	Rectum	3	21.4	3	21.4	8	57.1	-	-	14
C21	Anus	-	-	-	-	6	100.0	-	-	6
C22	Liver	3	25.0	5	41.7	-	-	4	33.3	12
C23-C24	Gallbladder etc.	2	11.8	4	23.5	11	64.7	-	-	17
C25	Pancreas	2	15.4	5	38.5	5	38.5	1	7.7	13
C30-C31	Nose, Sinuses etc.	-	-	-	-	4	100.0	-	-	4
C32	Larynx	-	-	-	-	5	100.0	-	-	5
C33-C34	Lung etc.	2	9.5	1	4.8	16	76.2	2	9.5	21
C37-C38	Other Thoracic Organs	-	-	1	100.0	-	-	-	-	1
C40-C41	Bone	2	40.0	-	-	3	60.0	-	-	5
C43	Melanoma of Skin	-	-	-	-	2	100.0	-	-	2
C44	Other Skin	-	-	-	-	15	93.8	1	6.3	16
C45	Mesothelioma	-	-	-	-	-	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-
C47+C49	Conn. & Soft Tissue	1	11.1	2	22.2	6	66.7	-	-	9
C50	Breast	-	-	-	-	5	100.0	-	-	5
C60	Penis	2	18.2	0	0.0	9	81.8	-	-	11
C61	Prostate	-	-	1	9.1	10	90.9	-	-	11
C62	Testis	-	-	1	10.0	9	90.0	-	-	10
C63	Other Male Genital	-	-	-	-	-	-	-	-	-
C64	Kidney	-	-	-	-	5	100.0	-	-	5
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-
C66	Ureter	-	-	-	-	-	-	-	-	-
C67	Urinary Bladder	1	12.5	2	25.0	5	62.5	-	-	8
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-
C69	Eye	-	-	-	-	-	-	1	100.0	1
C70-C72	Brain, Nervous System	-	-	1	12.5	7	87.5	-	-	8
C73	Thyroid	-	-	-	-	9	100.0	-	-	9
C74	Adrenal Gland	-	-	1	100.0	-	-	-	-	1
C75	Other endocrine	-	-	-	-	-	-	-	-	-
C81	Hodgkin Disease	-	-	-	-	7	100.0	-	-	7
C82-C86, C96	Non-Hodgkin Lymphoma	-	-	-	-	11	100.0	-	-	11
C88	Malig Inn.Prol D	-	-	-	-	-	-	-	-	-
C90	Multiple Myeloma	-	-	-	-	4	100.0	-	-	4
C91	Lymphoid Leukaemia	-	-	-	-	9	90.0	1	10.0	10
C92-C94	Myeloid Leukaemia	-	-	-	-	14	100.0	-	-	14
C95	Leukaemia Unspecified	-	-	-	-	-	-	1	100.0	1
O&U	Other and Unspecified	9	22.0	2	4.9	7	17.1	23	56.1	41
ALL	All sites	60	11.6	39	7.5	364	70.1	54	10.4	519*

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

*2 cases diagnosed on basis of tumour markers, not included in table

Table 50: Number (#) and Proportion (%) of cancers by site (ICD-10) and method of diagnosis in females, Mayurbhanj PBCR - 2023

ICD10	Site	Clinical		Radiological		Microscopic		DCO & Other		Total
		#	%	#	%	#	%	#	%	#
C00	Lip	-	-	-	-	2	100.0	-	-	2
C01-C02	Tongue	-	-	-	-	7	100.0	-	-	7
C03-C06	Mouth	12	18.2	3	4.5	41	62.1	10	15.2	66
C07-C08	Salivary Gland	-	-	-	-	4	100.0	-	-	4
C09	Tonsil	-	-	-	-	1	100.0	-	-	1
C10	Other Oropharynx	-	-	-	-	-	-	-	-	0
C11	Nasopharynx	-	-	-	-	1	100.0	-	-	1
C12-C13	Hypopharynx	1	100.0	-	-	-	-	-	-	1
C14	Pharynx Unspecified	-	-	-	-	-	-	1	100.0	1
C15	Oesophagus	-	-	-	-	2	100.0	-	-	2
C16	Stomach	6	28.6	3	14.3	12	57.1	-	-	21
C17	Small Intestine	-	-	-	-	-	-	-	-	0
C18	Colon	3	20.0	1	6.7	11	73.3	-	-	15
C19-C20	Rectum	-	-	-	-	8	100.0	-	-	8
C21	Anus	-	-	-	-	1	100.0	-	-	1
C22	Liver	1	12.5	2	25.0	2	25.0	3	37.5	8
C23-C24	Gallbladder etc.	4	10.8	8	21.6	23	62.2	2	5.4	37
C25	Pancreas	1	14.3	2	28.6	4	57.1	-	-	7
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	0
C32	Larynx	-	-	-	-	-	-	-	-	0
C33-C34	Trachea, bronchus and lung	1	6.7	-	-	14	93.3	-	-	15
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	0
C40-C41	Bone	1	25.0	-	-	2	50.0	1	25.0	4
C43	Melanoma of Skin	-	-	-	-	3	100.0	-	-	3
C44	Other Skin	1	7.1	1	7.1	12	85.7	-	-	14
C45	Mesothelioma	-	-	-	-	-	-	-	-	0
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	0
C47+C49	Conn. & Soft Tissue	3	30.0	1	10.0	6	60.0	-	-	10
C50	Breast	12	7.1	1	0.6	139	81.3	19	11.1	171
C51	Vulva	1	100.0	-	-	-	-	-	-	1
C52	Vagina	-	-	-	-	2	100.0	-	-	2
C53	Cervix Uteri	12	15.0	9	11.3	51	63.8	9	11.1	80
C54	Corpus Uteri	2	9.1	1	4.5	19	86.4	-	-	22
C55	Uterus Unspecified	2	33.3	1	16.7	0	0.0	3	50.0	6
C56	Ovary	5	9.8	8	15.7	35	68.6	3	5.9	51
C57	Other Female Genital	-	-	-	-	-	-	-	-	0
C58	Placenta	-	-	-	-	1	100.0	-	-	1
C64	Kidney etc.	-	-	-	-	-	-	-	-	0
C65	Renal Pelvis	-	-	-	-	-	-	-	-	0
C66	Ureter	-	-	-	-	-	-	-	-	0
C67	Urinary Bladder	-	-	-	-	-	-	-	-	0
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	0
C69	Eye	-	-	-	-	-	-	-	-	0
C70-C72	Brain, Nervous System	1	9.1	1	9.1	6	54.5	3	27.3	11
C73	Thyroid	-	-	-	-	10	100.0	-	-	10
C74	Adrenal Gland	-	-	-	-	-	-	-	-	0
C75	Other endocrine	-	-	-	-	-	-	-	-	0
C81	Hodgkin Disease	-	-	-	-	1	100.0	-	-	1
C82-C86, C96	Non-Hodgkin lymphoma	1	11.1	1	11.1	7	77.8	-	-	9
C88	Malig Imm.Prol D	-	-	-	-	-	-	-	-	0
C90	Multiple Myeloma	1	33.3	-	-	2	66.7	-	-	3
C91	Lymphoid Leukaemia	-	-	-	-	1	100.0	-	-	1
C92-C94	Myeloid Leukaemia	-	-	-	-	6	100.0	-	-	6
C95	Leukaemia Unspecified	1	20.0	-	-	3	60.0	1	20.0	5
O&U	Other and Unspecified	3	7.7	4	10.3	7	17.9	25	64.1	39
ALL	All sites	76	11.7	46	7.1	447	68.7	78	12.0	651*

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

*4 cases diagnosed on basis of tumour markers, not included in table

22. Cancer mortality in 2023

Table 51: Number of cancer deaths among males of Mayurbhanj district – 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total	%
C00	Lip	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C01-C02	Tongue	-	-	-	-	-	4	1	1	1	4	4	8	1	1	1	2	28	10.6
C03-C06	Mouth	-	-	-	-	-	-	2	8	8	9	6	8	5	6	3	3	58	21.9
C07-C08	Salivary Gland	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	2	0.8
C09	Tonsil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C10	Other Oropharynx	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	0.4
C11	Nasopharynx	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	2	0.8
C12-C13	Hypopharynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	0.8
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C15	Oesophagus	-	-	-	-	-	-	-	-	1	1	2	-	1	-	2	-	7	2.6
C16	Stomach	-	-	-	-	1	-	1	-	-	-	1	3	2	1	1	1	11	4.2
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	2	0.8
C18	Colon	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	1	4	1.5
C19-C20	Rectum	-	-	-	-	-	-	-	-	-	1	-	-	2	1	-	-	4	1.5
C21	Anus	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	0.4
C22	Liver	-	-	-	-	-	-	-	2	1	-	1	1	2	-	-	2	9	3.4
C23-C24	Gallbladder etc.	-	-	-	-	-	-	-	1	1	1	1	2	2	3	-	2	13	4.9
C25	Pancreas	-	-	-	-	-	-	1	-	-	1	-	1	1	-	2	1	7	2.6
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.4
C32	Larynx	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	0.4
C33-C34	Trachea, bronchus and lung	-	-	-	-	-	-	1	-	1	-	3	1	3	6	2	-	17	6.4
C37-C38	Other Thoracic Organs	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	2	0.8
C40-C41	Bone	-	-	-	1	2	-	-	1	-	-	-	1	-	-	-	-	5	1.9
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C44	Other Skin	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	1	4	1.5
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C47+C49	Conn. & Soft Tissue	-	1	-	-	1	-	-	-	-	-	-	2	-	-	-	-	4	1.5
C50	Breast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C60	Penis	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	1	4	1.5
C61	Prostate	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1.1
C62	Testis	-	-	-	-	-	-	1	-	-	1	1	-	-	-	-	-	3	1.1
C63	Other Male Genital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C64	Kidney etc.	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	3	1.1
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C67	Urinary Bladder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	0.8
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C69	Eye	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.4
C70-C72	Brain, Nervous System	-	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	3	1.1
C73	Thyroid	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	4	1.5
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	0.4
C75	Other endocrine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C81	Hodgkin Disease	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C82-C86, C96	Non-Hodgkin Lymphoma	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	3	1.1
C88	Malig Imm.Prol D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C90	Multiple Myeloma	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	-	4	1.5
C91	Lymphoid Leukaemia	-	1	-	2	-	-	1	1	-	-	-	1	-	-	-	1	7	2.6
C92-C94	Myeloid Leukaemia	1	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	4	1.5
C95	Leukaemia Unspecified	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	0.8
O&U*	Other and Unspecified	-	1	-	-	1	-	2	4	4	3	5	1	3	7	3	2	36	13.6
ALL	All sites	2	5	0	4	5	5	10	21	19	22	33	34	32	32	18	23	265	100

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 52: Number of cancer deaths among females of Mayurbhanj district – 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	Total	%
C00	Lip	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.3
C01-C02	Tongue	-	-	-	-	-	-	1	-	-	-	1	1	1	-	-	-	4	1.3
C03-C06	Mouth	-	-	-	-	-	-	1	2	3	4	6	3	9	2	4	2	36	11.8
C07-C08	Salivary Gland	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	0.3
C09	Tonsil	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	0.3
C10	Other Oropharynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C11	Nasopharynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C12-C13	Hypopharynx	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	0.3
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.3
C15	Oesophagus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C16	Stomach	-	-	-	-	1	1	1	-	-	2	2	2	4	1	1	-	15	4.9
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C18	Colon	-	-	-	-	1	-	-	-	-	-	2	-	-	1	1	-	5	1.6
C19-C20	Rectum	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	3	1.0
C21	Anus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C22	Liver	-	-	-	-	-	-	-	-	-	1	1	2	-	2	-	-	6	2.0
C23-C24	Gallbladder etc.	-	-	-	-	-	1	-	1	1	3	8	6	2	2	2	-	26	8.5
C25	Pancreas	-	-	-	-	-	-	-	-	-	3	-	1	1	-	-	-	5	1.6
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C32	Larynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C33-C34	Trachea, bronchus and lung	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	3	1.0
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C40-C41	Bone	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-	3	1.0
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C44	Other Skin	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.3
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C47+C49	Conn. & Soft Tissue	1	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	4	1.3
C50	Breast	-	-	-	-	-	1	4	6	9	13	6	11	7	8	2	2	69	22.5
C51	Vulva	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C52	Vagina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C53	Cervix Uteri	-	-	-	-	1	-	-	4	4	8	7	5	4	4	3	4	44	14.4
C54	Corpus Uteri	-	-	-	-	-	-	-	-	-	1	-	1	4	2	2	1	11	3.6
C55	Uterus Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C56	Ovary	-	-	-	1	-	-	-	-	1	2	6	1	3	4	1	4	23	7.5
C57	Other Female Genital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C58	Placenta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C64	Kidney etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	0.3
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C67	Urinary Bladder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C69	Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C70-C72	Brain, Nervous System	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	1	4	1.3
C73	Thyroid	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	2	0.7
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C75	Other endocrine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C81	Hodgkin Disease	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C82-C86, C96	Non-Hodgkin lymphoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C88	Malig Imm.Prol D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C90	Multiple Myeloma	-	-	-	-	-	-	-	-	1	-	1	-	2	-	-	-	4	1.3
C91	Lymphoid Leukaemia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.0
C92-C94	Myeloid Leukaemia	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	0.3
C95	Leukaemia Unspecified	-	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	3	1.0
O&U*	Other and Unspecified	-	-	-	-	-	-	1	3	5	1	7	5	4	1	1	-	28	9.2
ALL	All sites	1	1	0	2	5	4	9	16	26	48	50	39	45	29	17	14	306	100.0

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 53: Average annual Age-Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 years) (TR) mortality rate per 100,000 population in Males, Mayurbhanj PBCR – 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CR	AAR	TR
C00	Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C01-C02	Tongue	0.0	0.0	0.0	0.0	0.0	3.7	1.1	1.1	1.1	5.0	6.3	16.5	2.2	3.4	5.0	10.9	2.0	2.3	4.8
C03-C06	Mouth	0.0	0.0	0.0	0.0	0.0	0.0	2.2	8.6	9.1	11.2	9.5	16.5	10.9	20.7	14.9	16.4	4.2	4.7	10.7
C07-C08	Salivary Gland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.1	0.0	0.0	0.0	0.0	0.1	0.2	0.5
C09	Tonsil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C10	Other Oropharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
C11	Nasopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.1	0.0	0.0	0.0	0.0	0.1	0.2	0.5
C12-C13	Hypopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.5	0.1	0.2	0.0
C14	Pharynx Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C15	Oesophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	3.2	0.0	2.2	0.0	9.9	0.0	0.5	0.6	1.3
C16	Stomach	0.0	0.0	0.0	0.0	0.9	0.0	1.1	0.0	0.0	0.0	1.6	6.2	4.3	3.4	5.0	5.5	0.8	0.9	1.6
C17	Small Intestine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	5.5	0.1	0.2	0.3
C18	Colon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	4.3	0.0	0.0	5.5	0.3	0.4	0.8
C19-C20	Rectum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	4.3	3.4	0.0	0.0	0.3	0.4	0.8
C21	Anus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.1	0.1	0.0
C22	Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	1.1	0.0	1.6	2.1	4.3	0.0	0.0	10.9	0.7	0.8	1.7
C23-C24	Gallbladder etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.2	1.6	4.1	4.3	10.3	0.0	10.9	0.9	1.2	2.0
C25	Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.2	0.0	2.1	2.2	0.0	9.9	5.5	0.5	0.6	0.8
C30-C31	Nose, Sinuses etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.1	0.1	0.3
C32	Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3
C33-C34	Trachea, bronchus and lung	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.1	0.0	4.8	2.1	6.5	20.7	9.9	0.0	1.2	1.5	2.1
C37-C38	Other Thoracic Organs	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
C40-C41	Bone	0.0	0.0	0.0	0.8	1.8	0.0	0.0	1.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.4	0.4	0.5
C43	Melanoma of Skin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C44	Other Skin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.6	0.0	2.2	0.0	0.0	5.5	0.3	0.4	0.8
C45	Mesothelioma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C46	Kaposi Sarcoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C47+C49	Conn. & Soft Tissue	0.0	0.6	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.3	0.3	0.5
C50	Breast	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C60	Penis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	3.4	0.0	5.5	0.3	0.4	0.6
C61	Prostate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	5.0	5.5	0.2	0.3	0.0
C62	Testis	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.2	1.6	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5
C63	Other Male Genital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C64	Kidney etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	3.4	0.0	0.0	0.2	0.3	0.5
C65	Renal Pelvis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C66	Ureter	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C67	Urinary Bladder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.5	0.1	0.2	0.0
C68	Unspecified Urinary Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C69	Eye	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
C70-C72	Brain, Nervous System	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.4
C73	Thyroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	4.3	0.0	0.0	0.0	0.3	0.3	1.1
C74	Adrenal Gland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.1	0.1	0.0
C75	Other endocrine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C81	Hodgkin Disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C82-C86, C96	Non-Hodgkin Lymphoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.4	0.0	5.5	0.2	0.3	0.3
C88	Malig Imm.Prol D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C90	Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.2	3.4	5.0	0.0	0.3	0.4	0.5
C91	Lymphoid Leukaemia	0.0	0.6	0.0	1.6	0.0	0.0	1.1	1.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0	5.5	0.5	0.5	0.5
C92-C94	Myeloid Leukaemia	0.8	0.0	0.0	0.0	0.0	0.9	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.4
C95	Leukaemia Unspecified	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.1	0.2	0.0
O&U*	Other and Unspecified	0.0	0.6	0.0	0.0	0.9	0.0	2.2	4.3	4.5	3.7	7.9	2.1	6.5	24.1	14.9	10.9	2.6	3.0	4.8
ALL	All sites	1.5	3.1	0.0	3.1	4.5	4.6	10.9	22.5	21.5	27.5	52.3	70.3	69.5	110.2	89.2	125.9	19.2	22.3	40.3

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

Table 54: Average annual Age-Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 years) (TR) mortality rate per 100,000 population in females, Mayurbhanj PBCR – 2023

ICD10	Site	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+	CR	AAR	TR
C00	Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.1	0.1	0.3
C01-C02	Tongue	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.6	2.0	2.1	0.0	0.0	0.0	0.3	0.3	0.8
C03-C06	Mouth	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	3.4	5.1	9.8	6.1	18.8	6.6	17.3	9.8	2.6	2.9	6.8
C07-C08	Salivary Gland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3
C09	Tonsil	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
C10	Other Oropharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C11	Nasopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C12-C13	Hypopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C14	Pharynx Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.1	0.1	0.3
C15	Oesophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C16	Stomach	0.0	0.0	0.0	0.0	0.8	0.9	1.0	0.0	0.0	2.6	3.3	4.1	8.4	3.3	4.3	0.0	1.1	1.2	2.6
C17	Small Intestine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C18	Colon	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	3.3	4.3	0.0	0.4	0.4	0.5
C19-C20	Rectum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	3.3	0.0	0.0	0.2	0.3	0.5
C21	Anus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C22	Liver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.6	4.1	0.0	6.6	0.0	0.0	0.4	0.5	1.0
C23-C24	Gallbladder etc.	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.0	1.1	3.9	13.0	12.2	4.2	6.6	8.7	0.0	1.9	2.1	5.4
C25	Pancreas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	2.0	2.1	0.0	0.0	0.0	0.4	0.4	1.3
C30-C31	Nose, Sinuses etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C32	Larynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C33-C34	Trachea, bronchus and lung	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.0	0.0	0.0	0.0	0.0	0.2	0.2	0.8
C37-C38	Other Thoracic Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C40-C41	Bone	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5
C43	Melanoma of Skin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C44	Other Skin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.1	0.1	0.3
C45	Mesothelioma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C46	Kaposi Sarcoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C47+C49	Conn. & Soft Tissue	0.8	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.4
C50	Breast	0.0	0.0	0.0	0.0	0.0	0.9	4.1	6.0	10.1	16.7	9.8	22.3	14.6	26.2	8.7	9.8	4.9	5.4	12.7
C51	Vulva	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C52	Vagina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C53	Cervix Uteri	0.0	0.0	0.0	0.0	0.8	0.0	0.0	4.0	4.5	10.3	11.4	10.1	8.4	13.1	13.0	19.6	3.1	3.5	7.9
C54	Corpus Uteri	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	2.0	8.4	6.6	8.7	4.9	0.8	1.0	1.6
C55	Uterus Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C56	Ovary	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.1	2.6	9.8	2.0	6.3	13.1	4.3	19.6	1.6	2.0	3.4
C57	Other Female Genital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C58	Placenta	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C64	Kidney etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.1	0.1	0.0
C65	Renal Pelvis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C66	Ureter	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C67	Urinary Bladder	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C68	Unspecified Urinary Organs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C69	Eye	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C70-C72	Brain, Nervous System	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	4.9	0.3	0.3	0.5
C73	Thyroid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.1	0.0	0.0	0.0	0.1	0.2	0.5
C74	Adrenal Gland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C75	Other endocrine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C81	Hodgkin Disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C82-C86, C96	Non-Hodgkin lymphoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C88	Malig Imm.Prol D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C90	Multiple Myeloma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	1.6	0.0	4.2	0.0	0.0	0.0	0.3	0.3	1.0
C91	Lymphoid Leukaemia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C92-C94	Myeloid Leukaemia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C95	Leukaemia Unspecified	0.0	0.7	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3
O&U*	Other and Unspecified	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	5.6	1.3	11.4	10.1	8.4	3.3	4.3	0.0	2.0	2.1	6.1
ALL	All sites	0.8	0.7	0.0	1.6	4.1	3.5	9.2	16.0	29.2	61.7	81.3	79.2	94.1	95.0	73.6	68.8	21.9	24.6	56.2

O&U includes C26, C39, C45, C76, C77, C78, C79, C80 and C97

23. Paediatric cancer incidence by ICCC-3 grouping

Table 55: Number of cases in paediatric age-group, incidence rate per million population, Mayurbhanj PBCR – 2023

ICCC	Site	Number of cases in age group						Percentage (0-14)		Percentage (0-19)		Age-specific rate per 100,000				AAR		Cum risk (1 in)		MV% (0-19)	DCO% (0-19)
		0-4	5-9	10-14	15-19	0-14	0-19	All	Group	All	Group	0-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19		
I	Leukaemia	4	3	2	4	9	13	42.9	100.0	35.1	100.0	15.2	9.6	6.3	15.8	10.8	11.9	6422	4265	76.9	7.7
a	Lymphoid	2	3	-	1	5	6	23.8	55.6	16.2	46.2	7.6	9.6	-	3.9	6.0	5.6	11626	9460	83.3	-
b	Acute myeloid	-	-	1	1	1	2	4.8	11.1	5.4	15.4	-	-	3.2	3.9	0.9	1.6	63287	28177	100.0	-
c	CMD	-	-	1	1	1	2	4.8	11.1	5.4	15.4	-	-	3.2	3.9	0.9	1.6	63287	28177	100.0	-
d	MDS & other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	2	-	-	1	2	3	9.5	22.2	8.1	23.1	7.6	-	-	3.9	3.0	3.2	26241	17302	33.3	33.3
II	Lymphoma & Related	-	1	1	2	2	4	9.5	100.0	10.8	100.0	-	3.2	3.2	7.9	1.9	3.3	31477	14056	100.0	-
a	Hodgkin	-	1	-	2	1	3	4.8	50.0	8.1	75.0	-	3.2	-	7.9	1.0	2.6	62623	18068	100.0	-
b	Non-Hodgkin except BL	-	-	1	-	1	1	4.8	50.0	2.7	25.0	-	-	3.2	-	0.9	0.7	63287	63287	100.0	-
c	Burkitt (BL)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Lymphoreticular	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
III	CNS Neoplasms	-	1	1	3	2	5	9.5	100.0	13.5	100.0	-	3.2	3.2	11.8	1.9	4.2	31477	11009	80.0	-
a	Ependymoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Astrocytoma	-	1	-	2	1	3	4.8	50.0	8.1	60.0	-	3.2	-	7.9	1.0	2.6	62623	18068	100.0	-
c	CNS embryonal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Other gliomas	-	-	1	-	1	1	4.8	50.0	2.7	20.0	-	-	3.2	-	0.9	0.7	63287	63287	100.0	-
e	Othe specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f	Unspecified CNS	-	-	-	1	-	1	-	-	2.7	20.0	-	-	-	3.9	-	0.9	-	50791	-	-
IV	Neuroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a	(Ganglio)neuroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Peripheral nervous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V	Retinoblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VI	Renal Tumours	-	1	-	-	1	1	4.8	100.0	2.7	100.0	-	3.2	-	-	1.0	0.8	62623	62623	100.0	-
a	Nephroblastoma	-	1	-	-	1	1	4.8	100.0	2.7	100.0	-	3.2	-	-	1.0	0.8	62623	62623	100.0	-
b	Renal carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VII	Hepatic Tumours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a	Hetoblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Hepatic carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VIII	Bone Tumours	1	-	2	-	3	3	14.3	100.0	8.1	100.0	3.8	-	6.3	-	3.3	2.6	19741	19741	100.0	-
a	Osteosarcoma	-	-	1	-	1	1	4.8	33.3	2.7	33.3	-	-	3.2	-	0.9	0.7	63287	63287	100.0	-
b	Chondrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Ewing & related	1	-	1	-	2	2	9.5	66.7	5.4	66.7	3.8	-	3.2	-	2.4	1.9	28690	28690	100.0	-
d	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IX	Soft tissue sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a	Rhabdomyosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Fibrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Kaposi sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X	Germ Cell Tumours	-	-	-	4	-	4	-	-	10.8	100.0	-	-	-	15.8	-	3.5	-	12698	75.0	-
a	CNS germ cell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Other extragonadal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Gonadal germ cell	-	-	-	1	-	1	-	-	2.7	25.0	-	-	-	3.9	-	0.9	-	50791	100.0	-
d	Gonadal carcinoma	-	-	-	1	-	1	-	-	2.7	25.0	-	-	-	3.9	-	0.9	-	50791	100.0	-
e	Unspecified gonadal	-	-	-	2	-	2	-	-	5.4	50.0	-	-	-	7.9	-	1.8	-	25396	50.0	-
XI	Carcinoma & Melanoma	1	-	1	1	2	3	9.5	100.0	8.1	100.0	3.8	-	3.2	3.9	2.4	2.7	28690	18334	100.0	-
a	Adrenocortical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Thyroid	-	-	-	1	-	1	-	-	2.7	33.3	-	-	-	3.9	-	0.9	-	50791	100.0	-
c	Nasopharyngeal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Melanoma	1	-	-	-	1	1	4.8	50.0	2.7	33.3	3.8	-	-	-	1.5	1.1	52481	52481	100.0	-
e	Skin carcinoma	-	-	1	-	1	1	4.8	50.0	2.7	33.3	-	-	3.2	-	0.9	0.7	63287	63287	100.0	-
f	Other & unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XII	Other & Unspecified	-	1	1	2	2	4	9.5	100.0	10.8	100.0	-	3.2	3.2	7.9	1.9	3.3	31477	14056	-	25.0
a	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Other unspecified	-	1	1	2	2	4	9.5	100.0	10.8	100.0	-	3.2	3.2	7.9	1.9	3.3	31477	14056	-	25.0
All sites		6	7	8	16	21	37	100.0	100.0	100.0	100.0	22.9	22.4	25.3	63.0	23.4	32.3	2837	1498	75.7	5.4

Table 56: Number of cases in paediatric age-group, incidence rate per million population by sex

ICCC	Site	Boys								Girls								Male: Female Ratio	
		Number of cases in age group						AAR		Number of cases in age group						AAR			
		0-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-14	0-19
I	Leukaemia	2	3	2	2	7	9	15.6	15.6	2	-	-	2	2	4	6.0	8.2	2.61	1.90
a	Lymphoid	1	3	-	1	4	5	9.0	8.7	1	-	-	-	1	1	3.0	2.3	3.02	3.78
b	Acute myeloid	-	-	1	1	1	2	1.8	3.2	-	-	-	-	-	-	-	-	-	-
c	CMD	-	-	1	-	1	1	1.8	1.4	-	-	-	1	-	1	-	1.8	-	0.79
d	MDS & other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	1	-	-	-	1	1	2.9	2.3	1	-	-	1	1	2	3.0	4.1	0.98	0.55
II	Lymphoma & Related	-	1	1	2	2	4	3.8	6.5	-	-	-	-	-	-	-	-	-	-
a	Hodgkin	-	1	-	2	1	3	2.0	5.1	-	-	-	-	-	-	-	-	-	-
b	Non-Hodgkin except BL	-	-	1	-	1	1	1.8	1.4	-	-	-	-	-	-	-	-	-	-
c	Burkitt (BL)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Lymphoreticular	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
III	CNS Neoplasms	-	-	1	1	1	2	1.8	3.2	-	1	-	2	1	3	2.1	5.2	0.87	0.61
a	Ependymoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Astrocytoma	-	-	-	1	-	1	-	1.7	-	1	-	1	1	2	2.1	3.4	0.00	0.51
c	CNS embryonal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Other gliomas	-	-	1	-	1	1	1.8	1.4	-	-	-	-	-	-	-	-	-	-
e	Othe specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f	Unspecified CNS	-	-	Unspecified CNS	-	-	-	-	-	-	-	-	1	-	1	-	1.8	-	0.00
IV	Neuroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a	(Ganglio)neuroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Peripheral nervous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V	Retinoblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VI	Renal Tumours	-	1	-	-	1	1	2.0	1.6	-	-	-	-	-	-	-	-	-	-
a	Nephroblastoma	-	1	-	-	1	1	2.0	1.6	-	-	-	-	-	-	-	-	-	-
b	Renal carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VII	Hepatic Tumours	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a	Hetoblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Hepatic carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VIII	Bone Tumours	-	-	2	-	2	2	3.7	2.8	1	-	-	-	1	1	3.0	2.3	1.23	1.23
a	Osteosarcoma	-	-	1	-	1	1	1.8	1.4	-	-	-	-	-	-	-	-	-	-
b	Chondrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Ewing & related	-	-	1	-	1	1	1.8	1.4	1	-	-	-	1	1	3.0	2.3	0.61	0.61
d	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IX	Soft tissue sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a	Rhabdomyosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Fibrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Kaposi sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X	Germ Cell Tumours	-	-	-	1	-	1	-	1.7	-	-	-	3	-	3	-	5.4	-	0.32
a	CNS germ cell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Other extragonadal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c	Gonadal germ cell	-	-	-	1	-	1	-	1.7	-	-	-	-	-	-	-	-	-	-
d	Gonadal carcinoma	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1.8	-	0.00
e	Unspecified gonadal	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	3.6	-	0.00
XI	Carcinoma & Melanoma	1	-	1	-	2	2	4.8	3.7	-	-	-	1	-	1	-	1.8	-	2.05
a	Adrenocortical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Thyroid	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1.8	-	0.00
c	Nasopharyngeal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d	Melanoma	1	-	-	-	1	1	2.9	2.3	-	-	-	-	-	-	-	-	-	-
e	Skin carcinoma	-	-	1	-	1	1	1.8	1.4	-	-	-	-	-	-	-	-	-	-
f	Other & unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XII	Other & Unspecified	-	1	-	2	1	3	2.0	5.1	-	-	1	-	1	1	1.8	1.4	1.10	3.55
a	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b	Other unspecified	-	1	-	2	1	3	2.0	5.1	-	-	1	-	1	1	1.8	1.4	1.10	3.55
All sites		3	6	7	8	16	24	33.7	40.1	3	1	1	8	5	13	12.9	24.3	2.62	1.65

24. Block-wise cancer incidence

Mayurbhanj district is administratively divided into 26 blocks, as shown in figure 2. The following table mentions the number of cancer cases and incidence AAR in each of these blocks, and some common sites of cancer.

Table 57: Number of cases, proportion (%), Crude Rate per 100,000 (CR), Age Adjusted Rate per 100,000 (AAR), Truncated Rate per 100,000 (TR), and lifetime risk of developing cancer (LTR) for all blocks of Mayurbhanj district

Block	Males								Females							
	ICD-10	Site	No.	%	CR	AAR	TR	LTR (1 in)	ICD-10	Site	No.	%	CR	AAR	TR	LTR (1 in)
Badsahi	ALL	All sites	35	100.0	43.4	50.4	101.6	17	ALL	All sites	33	100.0	41.0	45.2	103.4	20
	C03-C06	Mouth	6	17.1	7.4	8.3	17.5	93	C50	Breast	9	27.3	11.2	11.5	33.8	94
	C23-C24	Gallbladder	3	8.6	3.7	4.1	13.3	214	C53	Cervix Uteri	3	9.1	3.7	4.9	0.0	151
	C16	Stomach	2	6.1	2.5	3.2	4.8	164	O&U	Other and Unspecified	3	9.1	3.7	4.3	8.9	151
Bahalda	ALL	All sites	18	100.0	38.4	41.5	80.1	23	ALL	All sites	23	100.0	47.9	54.3	130.1	20
	C01-C02	Tongue	3	16.7	6.4	5.8	12.5	207	C50	Breast	11	47.8	22.9	26.8	50.6	48
	C32	Larynx	2	11.1	4.3	5.0	16.1	160	C53	Cervix Uteri	3	13.0	6.2	7.6	15.3	106
	C23-C24	Gallbladder	2	11.1	4.3	4.6	14.7	206	C01-C02	Tongue	2	8.7	4.2	4.7	15.3	188
	C03-C06	Mouth	2	11.1	4.3	4.2	6.5	330	C44	Skin	2	8.7	4.2	4.6	14.9	207
	C70-72	Brain, CNS	2	11.1	4.3	5.2	0.0	156	C56	Ovary	2	8.7	4.2	4.3	14.0	218
Bangiriposi	ALL	All sites	22	100.0	38.6	42.7	71.3	27	ALL	All sites	25	100.0	43.4	49.2	109.9	19
	C01-C02	Tongue	5	22.7	8.8	10.4	19.1	125	C00	Breast	10	40.0	17.4	19.0	48.8	47
	C03-C06	Mouth	4	18.2	7.0	6.9	17.1	152	C01-C02	Mouth	5	20.0	8.7	11.2	12.9	78
	O&U	Other and Unspecified	4	18.2	7.0	9.0	12.4	125	C03-C06	Thyroid	2	8.0	3.5	3.7	6.4	292
	C25	Pancreas	2	9.1	3.5	3.9	12.6	242	C07-C08	Cervix Uteri	2	8.0	3.5	3.6	11.6	300
	C62	Testis	2	9.1	3.5	3.4	0.0	496	O&U	Other and Unspecified	1	4.0	1.7	1.5	4.7	823
Baripada	ALL	All sites	74	100.0	73.1	84.8	158.1	10	ALL	All sites	69	100.0	71.4	79.3	203.6	11
	C03-C06	Mouth	18	24.3	17.8	19.8	42.8	50	C50	Breast	21	30.4	21.7	24.1	61.0	40
	C01-C02	Tongue	6	8.1	5.9	5.9	12.8	194	C23-C24	Gallbladder	8	11.6	8.3	9.2	25.0	91
	C33-C34	Lung	4	5.4	4.0	4.6	10.5	142	C53	Cervix Uteri	6	8.7	6.2	7.3	18.9	112
Betanati	ALL	All sites	38	100.0	45.7	53.3	102.4	16	ALL	All sites	66	100.0	79.7	88.2	214.6	9
	C03-C06	Mouth	5	13.2	6.0	6.6	12.1	136	C53	Cervix Uteri	10	15.2	12.1	12.7	37.5	84
	C01-C02	Tongue	5	13.2	6.0	6.3	16.8	156	C50	Breast	9	13.6	10.9	12.1	28.9	66
	O&U	Other & Unspecified	4	10.5	4.8	5.8	8.2	95	C03-C06	Mouth	8	12.1	9.7	11.2	25.3	72
Bijatola	ALL	All sites	10	100.0	28.8	29.3	67.5	37	ALL	All sites	10	100.0	27.8	30.1	70.9	28
	C03-C06	Mouth	3	30.0	8.6	8.0	17.4	150	C03-C06	Mouth	3	30.0	8.3	9.8	20.7	64
	C01-C02	Tongue	2	20.0	5.8	5.9	9.6	232	C56	Ovary	2	20.0	5.6	6.0	19.4	200
	C73	Thyroid	2	20.0	5.8	5.4	8.2	257	C53	Cervix Uteri	2	20.0	5.6	5.6	10.5	166
Bisoi	ALL	All sites	5	100.0	12.5	14.3	34.5	59	ALL	All sites	23	100.0	54.3	58.7	150.1	17
	C16	Stomach	2	40.0	5.0	5.5	17.7	183	C50	Breast	4	17.4	9.4	10.3	25.6	112
	C82-C86, C96	Non-Hodgkin Lymphoma	1	20.0	2.5	3.6	0.0	168	C56	Ovary	4	17.4	9.4	10.5	23.3	84
	C73	Thyroid	1	20.0	2.5	3.0	9.7	266	C53	Cervix Uteri	4	17.4	9.4	10.4	33.4	88
	C03-C06	Mouth	1	20.0	2.5	2.2	7.2	541	C03-C06	Mouth	3	13.0	7.1	8.1	26.0	115
Gopa Bandhu Nagar	ALL	All sites	20	100.0	48.7	56.0	72.1	28	ALL	All sites	31	100.0	73.9	82.7	185.4	10
	C03-C06	Mouth	3	15.0	7.3	7.1	22.9	158	C50	Breast	12	38.7	28.6	31.4	84.6	28
	C16	Stomach	2	10.0	4.9	5.0	16.2	239	C56	Ovary	5	16.1	11.9	12.7	26.7	75
	O&U	Other & Unspecified	2	10.0	4.9	5.8	0.0	953	C53	Cervix Uteri	2	6.5	4.8	6.2	0.0	79

Block	Males								Females							
	ICD-10	Site	No.	%	CR	AAR	TR	LTR (1 in)	ICD-10	Site	No.	%	CR	AAR	TR	LTR (1 in)
Jamda	ALL	All sites	12	100.0	38.0	40.3	84.3	21	ALL	All sites	7	100.0	20.6	22.8	73.6	41
	C03-C06	Mouth	8	66.7	25.3	28.0	52.5	28	C50	Breast	3	42.9	8.8	9.3	30.0	109
	C40-C41	Bone	1	8.3	3.2	3.6	11.6	222	C33-C34	Lung	1	14.3	2.9	3.5	11.1	232
	C01-C02	Tongue	1	8.3	3.2	3.5	11.1	289	C53	Cervix Uteri	1	14.3	2.9	3.4	10.8	298
	C07-C08	Salivary Gland	1	8.3	3.2	3.3	10.5	367	C03-C06	Mouth	1	14.3	2.9	3.4	10.8	239
	C92-94	Myeloid Leukaemia	1	8.3	3.2	2.5	0.0	728	O&U	Other & Unspecified	1	14.3	2.9	3.4	10.8	299
Jashipur	ALL	All sites	11	100.0	20.1	19.9	30.6	52	ALL	All sites	10	100.0	17.6	19.4	49.9	57
	C03-C06	Mouth	6	54.5	11.0	11.2	17.1	87	C50	Breast	4	40.0	7.1	7.4	11.2	200
	-	-	-	-	-	-	-	-	C03-C06	Mouth	3	30.0	5.3	6.1	19.6	142
Kaptipada	ALL	All sites	19	100.0	23.3	25.2	65.6	49	ALL	All sites	23	100.0	28.0	30.2	68.0	31
	C01-C02	Tongue	3	15.8	3.7	3.4	10.9	355	C56	Ovary	3	13.0	3.6	4.2	8.2	428
	C33-C34	Lung	2	10.5	2.4	2.9	9.2	280	C33-C34	Lung	3	13.0	3.6	3.9	12.6	227
	C25	Pancreas	2	10.5	2.4	2.8	9.0	316	C03-C06	Mouth	3	13.0	3.6	3.8	4.2	177
Karanjia	ALL	All sites	21	100.0	33.8	40.1	74.2	24	ALL	All sites	29	100.0	45.3	49.7	108.8	16
	C03-C06	Mouth	6	28.6	9.7	10.9	27.2	123	O&U	Other & Unspecified	10	34.5	15.6	17.6	39.3	45
	C01-C02	Tongue	4	19.0	6.4	7.0	5.7	105	C50	Breast	5	17.2	7.8	8.7	15.9	70
	C16	Stomach	3	14.3	4.8	6.1	12.4	116	C03-C06	Mouth	3	10.3	4.7	5.3	17.3	167
	O&U	Other & Unspecified	3	14.3	4.8	6.4	5.7	138	C16	Stomach	2	6.9	3.1	3.0	5.4	396
Khunta	ALL	All sites	13	100.0	32.5	35.7	79.2	22	ALL	All sites	29	100.0	69.5	75.8	161.4	12
	C19-C20	Rectum	2	15.4	5.0	5.8	18.9	137	C50	Breast	9	31.0	21.6	22.7	49.3	42
	C01-C02	Tongue	2	15.4	5.0	5.6	18.0	159	C53	Cervix Uteri	5	17.2	12.0	14.3	26.2	46
Kuliana	ALL	All sites	20	100.0	35.9	42.6	78.3	19	ALL	All sites	27	100.0	48.3	55.0	147.8	19
	C03-C06	Mouth	4	20.0	7.2	9.3	13.2	89	C50	Breast	9	33.3	16.1	18.4	51.3	60
Kusumi	ALL	All sites	15	100.0	30.0	34.2	67.4	25	ALL	All sites	31	100.0	58.8	62.4	168.3	15
	C03-C06	Mouth	7	46.7	14.0	16.2	25.5	39	C53	Cervix Uteri	8	25.8	15.2	15.3	36.6	56
	C01-C02	Tongue	3	20.0	6.0	6.4	20.8	164	C50	Breast	7	22.6	13.3	14.1	45.6	69
Muruda	ALL	All sites	23	100.0	40.6	47.6	90.9	20	ALL	All sites	22	100.0	38.0	43.4	91.8	22
	C03-C06	Mouth	4	17.4	7.1	6.5	21.0	184	C50	Breast	6	27.3	10.4	12.1	31.4	106
	C67	Urinary Bladder	2	8.7	3.5	5.3	0.0	-	C23-C24	Gallbladder	3	14.3	5.2	6.1	12.1	141
	C01-C02	Tongue	2	8.7	3.5	4.5	6.8	115	C53	Cervix Uteri	2	9.5	3.5	4.3	6.3	169
	C18	Colon	2	8.7	3.5	3.8	12.4	248	C03-C06	Mouth	2	9.5	3.5	4.1	6.5	129
	-	-	-	-	-	-	-	-	C82-C86, C96	Non-Hodgkin lymphoma	2	9.5	3.5	3.7	6.3	284
Rairang Pur	ALL	All sites	19	100.0	40.9	46.7	123.1	23	ALL	All sites	31	100.0	64.0	69.8	189.0	15
	C03-C06	Mouth	3	15.8	6.5	7.4	23.8	116	C50	Breast	7	22.6	14.4	16.4	53.1	54
	C18	Colon	2	10.5	4.3	5.0	16.2	159	C53	Cervix Uteri	4	12.9	8.3	9.1	29.4	94
	C19-C20	Rectum	2	10.5	4.3	4.9	15.9	179	C56	Ovary	4	12.9	8.3	8.7	13.2	190
	C01-C02	Tongue	2	10.5	4.3	4.2	13.7	283	C54	Corpus Uteri	3	9.7	6.2	7.2	23.2	120
	C32	Larynx	2	10.5	4.3	5.8	8.3	311	C23-C24	Gallbladder	2	6.5	4.1	4.7	15.1	171
Raruan	ALL	All sites	5	100.0	13.8	15.2	49.0	61	ALL	All sites	13	100.0	35.1	38.4	101.4	21
	-	-	-	-	-	-	-	-	C50	Breast	5	38.5	13.5	14.8	47.6	65
	-	-	-	-	-	-	-	-	C44	Other Skin	2	15.4	5.4	5.7	18.4	165
Rasa Gobinda pur	ALL	All sites	21	100.0	39.2	44.0	104.8	22	ALL	All sites	31	100.0	58.6	64.5	146.5	16
	C82-C86, C96	Non-Hodgkin Lymphoma	4	19.0	7.5	8.4	12.5	182	C50	Breast	8	25.8	15.1	16.1	51.9	64
	C33-C34	Lung	3	14.3	5.6	5.8	18.8	165	C53	Cervix Uteri	7	22.6	13.2	14.9	39.8	84
Saraskana	ALL	All sites	21	100.0	37.6	42.8	100.8	18	ALL	All sites	19	100.0	34.4	39.4	103.1	21
	C03-C06	Mouth	5	23.8	9.0	10.5	25.5	79	C50	Breast	6	31.6	10.9	13.1	26.2	59
	O&U	Other and Unspecified	4	19.0	7.2	7.5	24.1	125	C53	Cervix Uteri	3	15.8	5.4	6.6	13.1	119
	C01-C02	Tongue	2	9.5	3.6	4.2	13.5	191	C54	Corpus Uteri	3	15.8	5.4	6.3	20.3	127
	C16	Stomach	2	9.5	3.6	4.0	12.9	222	C03-C06	Mouth	3	15.8	5.4	6.1	19.6	160

Block	Males								Females							
	ICD-10	Site	No.	%	CR	AAR	TR	LTR (1 in)	ICD-10	Site	No.	%	CR	AAR	TR	LTR (1 in)
Shama Khunta	ALL	All sites	12	100.0	27.4	29.4	50.7	33	ALL	All sites	15	100.0	33.9	36.3	99.8	27
	C44	Other Skin	2	16.7	4.6	6.2	8.8	292	C53	Cervix Uteri	4	26.7	9.0	9.9	32.0	98
	C03-C06	Mouth	2	16.7	4.6	4.2	13.4	288	C56	Ovary	3	20.0	6.8	7.4	13.7	115
Sukruli	ALL	All sites	15	100.0	45.8	51.8	101.9	15	ALL	All sites	8	100.0	23.5	27.0	73.9	30
	C03-C06	Mouth	5	33.3	15.3	17.5	42.5	46	C03-C06	Mouth	2	25.0	5.9	7.5	11.1	91
	-	-	-	-	-	-	-	-	C56	Ovary	2	25.0	5.9	6.8	21.8	118
Suliapada	ALL	All sites	28	100.0	49.6	56.9	90.2	13	ALL	All sites	24	100.0	42.6	45.6	131.3	25
	C03-C06	Mouth	4	14.3	7.1	7.7	16.7	113	C50	Breast	7	29.2	12.4	12.6	32.9	104
	C44	Other Skin	4	14.3	7.1	7.7	17.0	93	C23-C24	Gallbladder	3	12.5	5.3	6.1	19.7	141
	O&U	Others and Unspecified	4	14.3	7.1	7.8	11.9	106	-	-	-	-	-	-	-	-
Thakur Munda	ALL	All sites	13	100.0	23.1	24.5	60.8	45	ALL	All sites	16	100.0	27.0	29.7	83.5	32
	C03-C06	Mouth	6	46.2	10.7	11.2	36.0	84	C03-C06	Mouth	4	25.0	6.8	7.5	24.2	136
	C01-C02	Tongue	2	15.4	3.6	3.4	5.9	349	C50	Breast	4	25.0	6.8	7.1	18.3	152
	C16	Stomach	2	15.4	3.6	4.8	6.9	376	C16	Stomach	2	12.5	3.4	4.2	6.2	160
Tiring	ALL	All sites	11	100.0	35.5	37.8	68.2	23	ALL	All sites	6	100.0	18.8	22.5	34.5	36
	C03-C06	Mouth	4	36.4	12.9	14.2	35.7	67	-	-	-	-	-	-	-	-
Udala	ALL	All sites	18	100.0	36.6	45.8	48.7	25	ALL	All sites	30	100.0	60.9	70.9	130.4	13
	C03-C06	Mouth	4	22.2	8.1	9.2	20.4	90	C50	Breast	9	30.0	18.3	21.3	42.6	35
	C61	Prostate	3	16.7	6.1	8.7	0.0	85	C53	Cervix Uteri	5	16.7	10.1	11.2	30.1	84

Figure 47: Comparison of total cancer incidence Age Adjusted Rate per 100,000 within Mayurbhanj district in 2023 among males

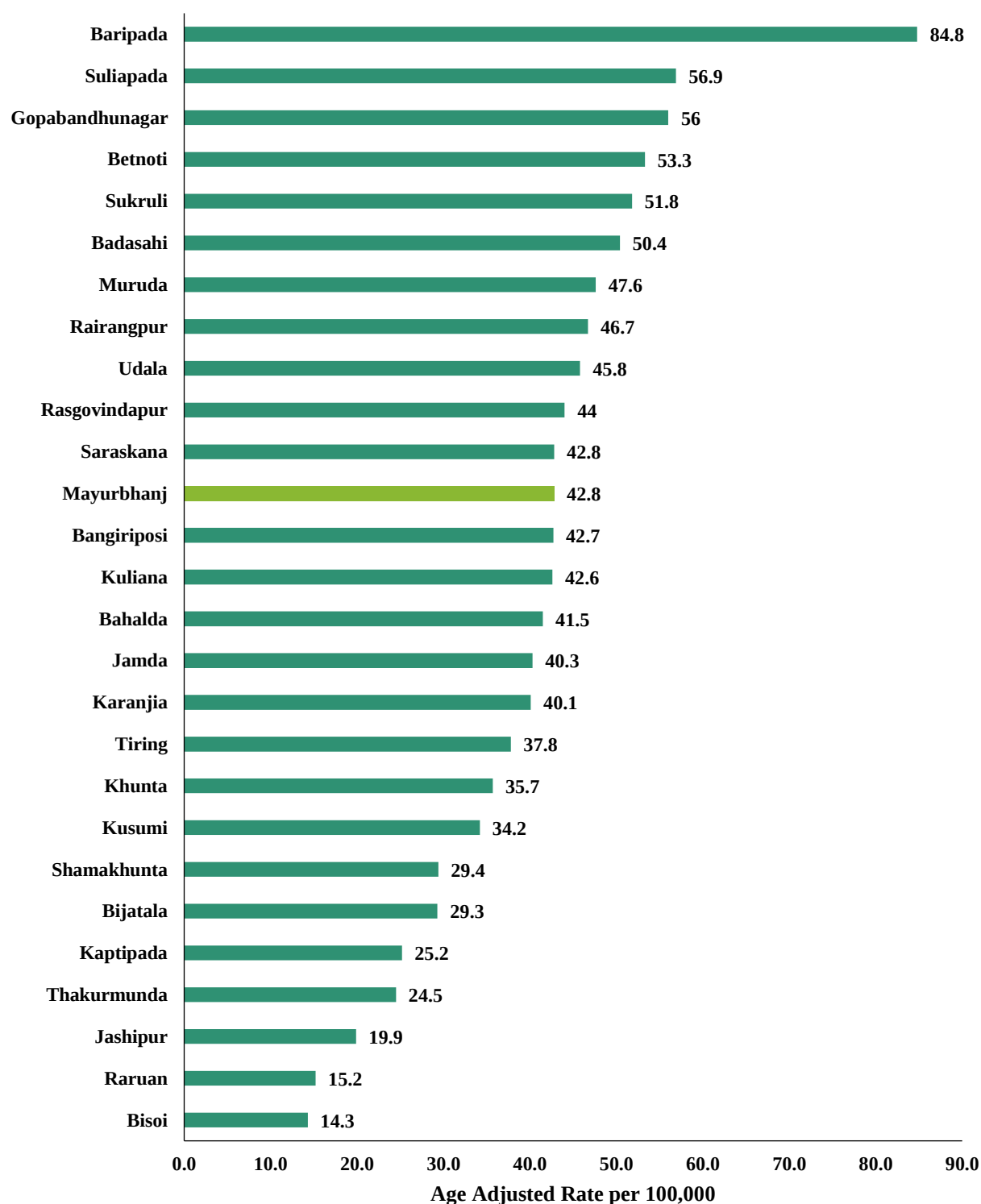
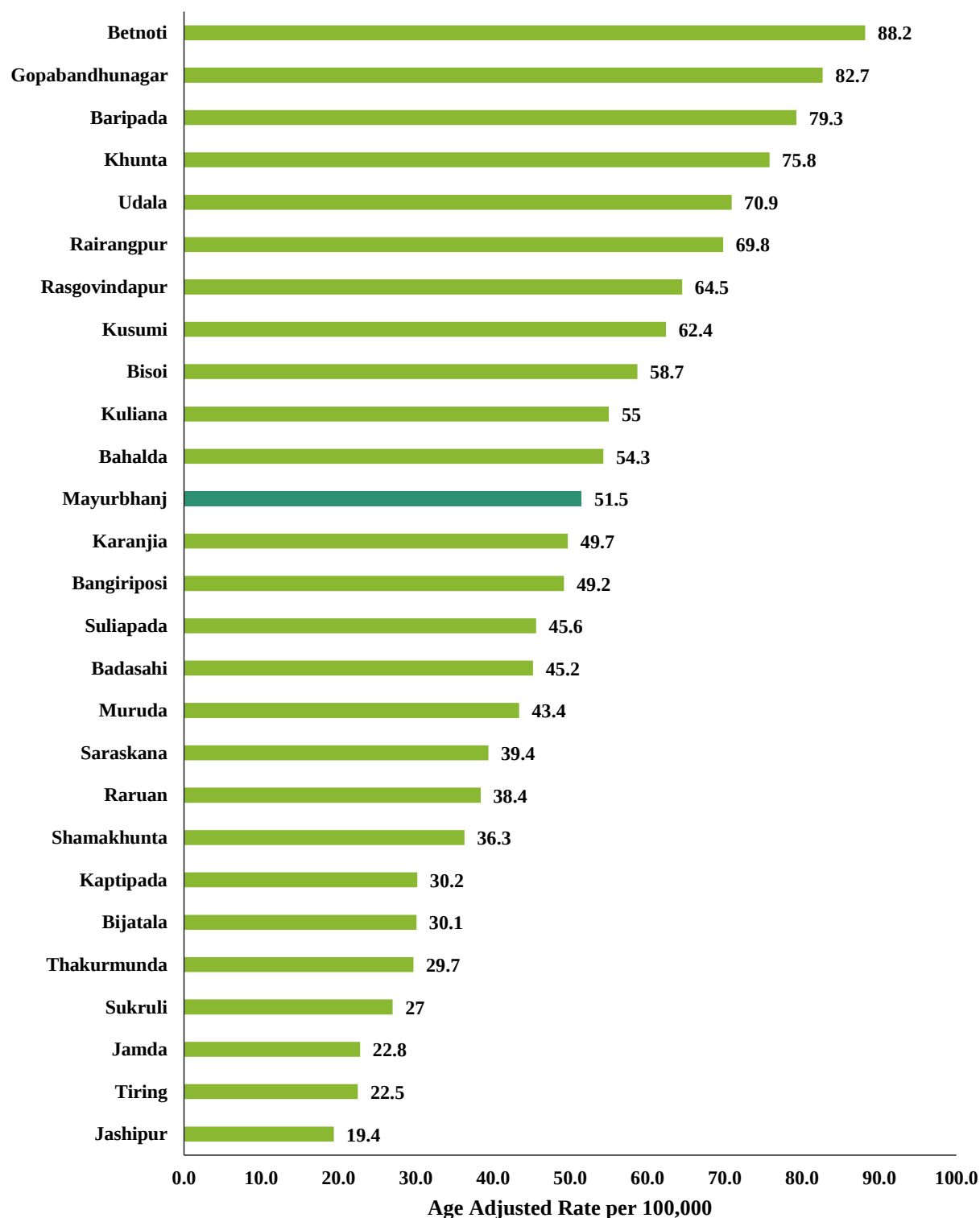


Figure 48: Comparison of total cancer incidence Age Adjusted Rate per 100,000 within Mayurbhanj district in 2023 among females



SECTION ANNEXURES

13. Name of source of registration

Sr. No	Sources	Institute Number	Cross verified

14. Date of Diagnosis

15. Basis of Diagnosis (As per ICD-O3 book)

0. Death certificate only 1. Clinical 2. Radiology (X-ray, USG, MRI, CT and Endoscopy)
 4. Specific tumor markers 5. Cytology (Peripheral blood/ Bone marrow) 6. Histology of a metastasis
 7. Histology of a primary tumor 8. Other _____ 9. Unknown/ No information

16. Primary Site

17. Stage

1. In situ 2. Localization 3. Direct Extension 4. Regional lymph node involvement
 5. Direct extension with regional node involvement 6. Distance metastasis
 7. Too advanced 8. Not applicable 99. Unknown/No Information

18. Histology

19. Treatment

01. Surgery 02. RT 03. CT 04. Surgery+RT 05. Surgery+CT 06. RT+CT
 07. Surgery+CT+RT 08. Palliative 09. No treatment 99. Unknown /No information

20. Completion of treatment

1. Complete 3. Not completed (Specify) _____ 8. NA 99. Unknown /No information

21. Date of Last follow-up

1 st Follow-up date	
2 nd	
3 rd	

22. Follow-up status

1. Alive 2. Dead (Date of Death) 3. Migrated 99. Unknown /No information

23. Remark (Any relevant information)

24. Name of person completing form

Visit Date

Signature

Population Based Cancer Registry Mayurbhanj district, Odisha state, India

Project of Tata Memorial Centre, Mumbai in collaboration with Health and Family Welfare Department Government of Odisha

Registration Number:

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Name of the Patient: _____

Remark by Field Staff:

Signature: _____

Date:

--	--	--	--	--	--	--	--	--	--

Remark by Research Co-ordinator:

Signature: _____

Date:

--	--	--	--	--	--	--	--	--	--

Confirmation of the case:

Date	Source	Remark

Annexure 2: Launch of Odisha State Population-based Cancer Registry

4th February 2026 | Vikram Sarabhai Hall, NISER, Jatni, Odisha

On the occasion of World Cancer Day 2026, formal launch of the Odisha State Population-Based Cancer Registry (OPBCR) was held on 4th February 2026 at Vikram Sarabhai Hall, National Institute of Science Education and Research (NISER), Jatni. This landmark event marked a significant milestone in strengthening cancer surveillance and cancer control planning in the state of Odisha. The registry is an initiative of the Department of Health and Family Welfare, Government of Odisha, with technical support from the Centre for Cancer Epidemiology (CCE), ACTREC, Tata Memorial Centre (TMC), Mumbai, and National Institute Science Education and Research (NISER), Bhubaneswar.

Population-based cancer registries are globally recognized as the foundation of effective cancer control. The World Health Organization emphasises that *“Population-based cancer registries are essential for planning, monitoring and evaluating cancer control programmes.”* In alignment with this vision, the Odisha State PBCR aims to generate high-quality, reliable cancer incidence data that will guide prevention, early detection, treatment planning, and policy formulation across the state.



The formal launch of the Odisha State Population-Based Cancer Registry was conducted jointly by Dr Nilakantha Mishra (Director of Public Health, Odisha), Dr A Srinivasan (Dean of Faculty Affairs, NISER), Prof. Bedangadas Mohanty (Head, Centre for Medical and Radiation Physics, NISER), Dr Lingaraj Nayak (Professor of Medical Oncology and Officer-in-Charge of the upcoming TMC Odisha unit), and Dr Atul Budukh (Professor, CCE-TMC). The Standard Operating Procedure of the registry and the software manual were released by the hands of the guests of honour during the launch.

The programme commenced with a welcome address by Prof. A Srinivasan, Dean of Faculty Affairs, NISER. In his opening remarks, he highlighted the importance of institutional collaboration between academic, clinical, and public health systems in addressing complex health challenges such as cancer.

Dr. Atul Budukh, Professor and Officer-in-Charge, Medical Records and Cancer Registries, CCE-TMC, provided an overview of the activities conducted by TMC and NISER in Odisha in the past three years. He also summarised the preparatory work undertaken for the establishment of the Odisha PBCR, including stakeholder engagement, training of registry personnel, development of standardized data collection processes through the one-page proforma, and implementation of a web-based software system.

The role of the state government in strengthening cancer registration was highlighted by Dr. Nilakantha Mishra, Director of Public Health, Odisha. He emphasized that reliable cancer data are essential for informed decision-making at the policy level. He reiterated the government's commitment to supporting the OPBCR through administrative backing, integration with district health systems, and facilitation of reporting from public and private healthcare institutions.

Congratulatory messages were received from Dr Bishnu Giri of World Health Organisation South East Asia Regional Office and Mr Les Mery of the International Agency for Research on Cancer. The programme was hosted by Dr Shubham Samantaray, state coordinator of OSPBCR. The programme concluded on the note that continuous activities for cancer control will be conducted in Odisha under this initiative, with the vote of thanks delivered by Mr Abhaya Mohanty, Administrative Officer, NISER, who expressed gratitude to all stakeholders and reaffirmed NISER's continued support to the Odisha State PBCR initiative.

Training for Setting up Cancer Registration

In preparation of the OSPBCR, TMC and NISER trained more than 150 staff in January 2026 from district hospitals across state, and government and private hospitals in Bhubaneswar and Cuttack. Participants were trained in core concepts of cancer registration, case abstraction procedures and ICD-O-3 coding, use of the “Setu” web-based data management tool for cancer registration, and follow-up techniques. Experts from the field of cancer management and care gave informative lectures to introduce participants to terminologies used during abstraction and what data should be abstracted. The Standard Operating Procedure of the PBCR was discussed in detail with the participants. The training also included practical demonstrations by the staff of Khordha PBCR. Pre- and Post-tests conducted indicated good understanding of registry-related concepts among the participants, and a readiness to participate in the registry’s activities.

Table 58 enlists the participants from Mayurbhanj district who attended the Odisha state PBCR training.



Faculty from TMC and participants from Mayurbhanj district during the Odisha state PBCR training

Table 58: Participants from Mayurbhanj district who attended the Odisha state PBCR training at NISER, with their designations

Name of the Participant	Designation
Dr Subas Nayak	District Public Health Officer
Sri Nihar Ranjan Prusty	Assistant Manager Non-Communicable Disease
Sri Sabyasachi Swami	Data Manager Integrated Disease Surveillance Programme

Odisha State Population Based Cancer Registry Proforma

POPULATION-BASED CANCER REGISTRY ODISHA STATE, INDIA																			
Project of Ministry of Health and Family Welfare, Government of Odisha Tata Memorial Centre, Mumbai, India																			
1. Patient name: _____																			
2. AADHAR Number <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																			
3. Age: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td></tr></table>																			
4. Sex: 1. Male 2. Female <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
5. Contact number: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																			
6. Address: _____ Village: _____ Block: _____ District: _____																			
7. Area: 1. Urban 2. Rural 3. Tribal <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
8. Hospital name: _____																			
9. Hospital case file number: _____																			
10. Date of diagnosis: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																			
11. Basis of diagnosis: (As per ICD-O3 book) <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
0. Death Certificate only 1. Clinical 2. Radiology (X-ray, USG, MRI, CT & Endoscopy) 4. Specific Tumor Markers																			
5. Cytology (Peripheral blood/ Bone marrow) 6. Histology Metastasis 7. Histology of a primary tumor 8. Other/Verbal autopsy																			
12. Primary site: _____ <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
13. Stage: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
1. In situ 2. Localization 3. Direct Extension 4. Regional lymph node involvement																			
5. Direct extension with regional node involvement 6. Distance metastasis																			
7. Too advanced 8. Not applicable 9. Unknown/No Information																			
14. Histology: _____ <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td></tr></table>																			
15. Treatment: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
1. Surgery (S) 2. Radio Therapy (RT) 3. Chemotherapy (CT) 4. S+RT 5. S+CT 6. CT+RT																			
7. S+RT+CT 8. Hormone therapy (H) 9. S+H 10. RT+H 11. CT+H 12. S+RT+H 13. S+CT+H																			
14. RT+CT+H 15. S+RT+CT+H 16. Palliative 17. Other _____ 18. No treatment 19. Unknown																			
16. Treatment Status: 1. Complete 2. Incomplete 3. Not applicable 9. Unknown <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
17. Vital Status: 1. Alive 2. Dead 9. Unknown <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td></tr></table>																			
18. Age at death: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td></tr></table>																			
19. Date of death: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																			
20. Staff name: _____																			
21. Contact number (Staff): <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																			

Annexure 3: Activities and Achievements of PBCR and EDP Mayurbhanj

1. CME Session conducted on 6th October 2023

A Continuing Medical Education (CME) session was held at PRM MCH, Baripada on 6th October 2023. Faculty from Tata Memorial Centre provided in depth lectures on screening and early detection of common cancers, and on medical certification of cause of death.



2. Celebration of completion of one year of TMC Activities in Mayurbhanj

The Tata Memorial Centre, Mumbai, in collaboration with the Department of Health and Family Welfare, Odisha, celebrated the completion of one year of the Early Detection Program (EDP) and Population-Based Cancer Registry in Mayurbhanj on 11th August 2024 at PRM MCH, Baripada.

The ceremony commenced with a welcome address by **Dr Atul Budukh**, Professor, TMC. The event was inaugurated with cultural glimpses of Mayurbhanj and songs in Odia language. A key moment was the release of an activity book by the dignitaries, documenting the achievements, progress, and updates of the EDP Mayurbhanj. The book encapsulates the program's transformative impact on cancer prevention and early detection in the region.

Dr Sudeep Gupta, Director, TMC, Mumbai, delivered an address on public health challenges, emphasizing the disparities in cancer epidemiology by male-to-female tobacco usage ratios, the correlation between hypertension, diabetes, and cancer risk, and regional variations in age-specific cancer incidence rates. He also highlighted the achievements of the Early Detection Programme in Mayurbhanj.

Dr Ajit Mohanty, Chairman, AEC & Secretary, Department of Atomic Energy, Government of India, underscored the importance of health awareness, discussed factors influencing cancer development and treatment, and shared inspiring lessons for students to champion public health initiatives. **Dr Pankaj Chaturvedi**, Director, ACTREC-TMC, Navi Mumbai, and **Dr Prativa Panda**, Dean and Principal, PRM MCH, Baripada reinforced the programme's significance through their speeches, highlighting collaborative efforts to combat cancer.

The event was graced by several dignitaries from Tata Memorial Centre, including **Dr Satyajit Pradhan**, Director, Homi Bhabha Cancer Hospital and Research Centre, Varanasi, and Dr Lingaraj Nayak, Professor, TMC and Officer-in-Charge of the upcoming TMC Odisha unit, and the district health administration of Mayurbhanj, including **Dr Nihar Ranjan Das**, Acting CDMO, and Dr Bijay Kumar Dash, ADMO. During the programme, individuals who successfully quit their tobacco habit through the EDP team's counselling efforts were felicitated by the dignitaries. Winners of the drawing competition held at Suliapada Government College were also felicitated for their creative contributions to cancer awareness.

The event concluded with a vote of thanks by **Dr Lingaraj Nayak**, who expressed heartfelt gratitude to all guests, participants, and stakeholders for their unwavering commitment to advancing cancer prevention and control in Mayurbhanj. This celebration marked a milestone in collective efforts to promote health equity, early detection, and community engagement, reflecting the shared vision of a healthier future for Mayurbhanj.



Dr Sudeep Gupta, Director, Tata memorial Centre and Dr Ajit Kumar Mohanty, Chairman, AEC & Secretary, Department of Atomic Energy, along with Dr Prativa Panda, Dean and Principal PRMMCH inaugurating the function by lighting the ceremonial lamp.



Dr Ajit Kumar Mohanty, Chairman, AEC & Secretary, Department of Atomic Energy, Dr Sudeep Gupta, Director, Tata Memorial Centre, Dr Pankaj Chaturvedi, Director, Advanced Centre for Treatment, Research and Education in Cancer, and Dr Prativa Panda, Dean and Principal PRMMCH, felicitating competition winners at the one-year celebration of Early Detection Programme, Mayurbhanj.

3. Research Article Publication by Mayurbhanj team

In 2025, Early Detection Programme published a case report on the management of Tobacco Pouch Keratosis (TPK), an Oral Potentially Malignant Disorder (OPMD), in a 60-year-old female in Mayurbhanj district, a tribal area with high tobacco use prevalence. The article, published in the Canadian Journal of Public Health, aimed raise awareness among health care professionals of the potential occurrence of TPK in all smokeless tobacco users, thereby facilitating early detection and appropriate intervention to mitigate the risk of malignant transformation.



During screening, Tobacco Pouch Keratosis detected



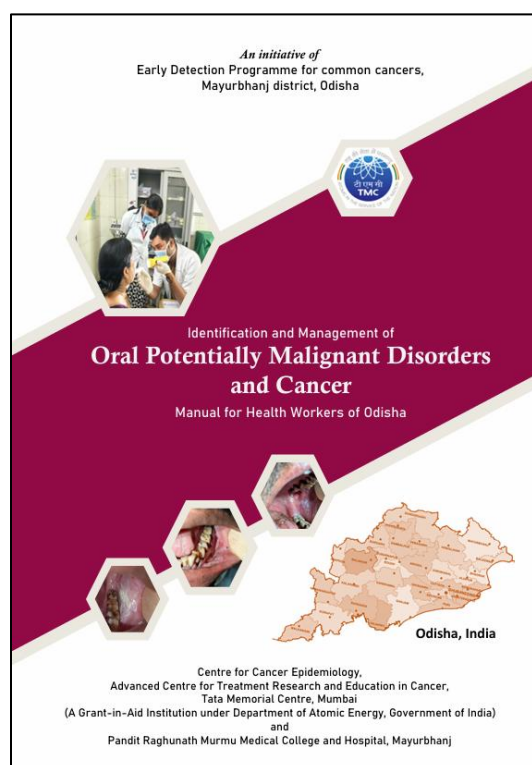
After three months, resolution of TPK due to management and tobacco cessation

Reference: Samantaray SS, Patra P, Panda SS, Panda P, Dash BK, Patil SP, Budukh AM. Management of tobacco pouch keratosis in the tribal area of Mayurbhanj, India. Can J Dent Hyg. 2025 Oct 1;59(3):224-227. PMID: 41195318; PMCID: PMC12584925.

4. Manual for Identification and Management of Oral Potentially Malignant Disorders

Oral cancer is one of the most common cancers in India, due to the high prevalence of smokeless tobacco use. The Early Detection Programme for Common Cancers was launched in Mayurbhanj in 2023, with the aims of improving the diagnosis, management, and outcomes of common cancers (oral, breast, and cervical cancer) in underserved tribal communities. The programme identified high prevalence of Oral Potentially Malignant Disorders in the district and the need to address them at a health system level.

The “**Identification and Management of Oral Potentially Malignant Disorders and Cancer: Manual for Health Workers of Odisha,**” is a comprehensive resource aimed at enhancing early detection and



ISBN 978-93-82963-79-0

management of precancerous conditions, highlighting a wide range of oral conditions, including oral premalignant lesions, benign conditions, and oral cancer. With the objective to train health workers in identifying suspicious and potential lesions, this manual has been prepared in Odia and English.

This manual is designed to assist healthcare professionals, medical students, and researchers in identifying oral potentially malignant lesions, recognising symptoms, and formulating effective treatment strategies. The initial chapters include the anatomy of oral cavity and the association of different types of tobacco with oral potentially malignant and malignant lesions. The next few chapters describe the appearances of different kinds of oral premalignant and malignant lesions visually along with their epidemiology and treatment methods. The final

chapter presents the effect of visual examination of oral cavity followed by appropriate intervention on the lesion. Additional information on epidemiology, treatment and staging of oral cancers have been added as appendices.

The manual is an important step toward bridging the gap in cancer research and care, particularly in underserved areas where resources and awareness might be scarce. By equipping healthcare professionals with the knowledge and tools necessary for early intervention, we aim to bridge the gap in cancer care and improve patient outcomes.

Annexure 4: Early Detection Programme, Mayurbhanj

The Early Detection Programme (EDP) initiatives in Mayurbhanj district, Odisha, represent a comprehensive public health intervention aimed at strengthening common cancer prevention and screening services in a predominantly rural and tribal population. This programme is implemented by Tata Memorial Centre in collaboration with the Department of Health and Family Welfare, Government of Odisha and NISER, Bhubaneswar.

The programme was formally initiated in 20th August 2023, following extensive coordination between TMC faculty and state health authorities. An initial situational assessment identified gaps in infrastructure, trained manpower, and diagnostic capacity at district-level facilities, particularly at Pandit Raghunath Murmu Medical College and Hospital, Baripada. The dual launch of the EDP and PBCR enabled simultaneous strengthening of early detection services and systematic cancer data collection.

A strong emphasis was placed on training and capacity building of healthcare personnel across multiple levels. Multiple hands-on training on screening and early diagnosis of common cancers was conducted for 1938 beneficiaries in 90 sessions. Hands-on training sessions were conducted for doctors, nurses, paramedical staff, and field workers on screening techniques for oral, breast, and cervical cancers. In addition, sensitization meetings and awareness sessions were organized for healthcare providers, teachers, and community stakeholders.

Outreach activities also included intensive health education, community sensitization meetings, and school- and college-based awareness programmes. The project staff conducted 314 sensitization meetings regarding the project and 6208 stakeholders from various levels attended them. 5,033 health care providers were made aware of common cancers and their screening during total 149 sessions. 18 intensive health awareness sessions were conducted on common cancers in educational institutions and 2,174 individuals participated in it.

Screening activities were conducted in 90 outreach camps, apart from the daily OPD services at District Hospital, Mayurbhanj. Necessary circulars were issued to the local authorities to facilitate cooperation with the staff and coordination to conduct the required activities. Screening services focused on oral, breast, and cervical cancers, reflecting the local risk profile and feasibility within resource-limited settings.

In the period August 2023- May 2025, a total of 5,768 participants were screened. In total, 5744 participants were screened for oral cancer, 1887 were screened for breast cancer and 343 for cervical cancer. Among the individuals from Mayurbhanj, 2,003 (35.2%) individuals were screen-positives for oral, 198 (10.5%) for breast and 74 (21.6%) for cervix.

In Mayurbhanj, 3,312 (58.2%) of individuals screened for oral cancer were tobacco consumers. Screen positivity rate for oral lesions was 60.5% among tobacco users. Among screen-positive cases, Leukoplakia (1547, 77.2%) was the most common OPMD, followed by submucosal fibrosis (177, 8.8%) and Erythroleukoplakia (172, 8.6%).

Screen-positive individuals were systematically referred for further diagnostic evaluation. Cancer cases were referred to higher centres for definitive management, with active patient navigation support provided to facilitate access to care. Patients were referred and accompanied to tertiary and regional cancer care institutions, including Acharya Harihar Post Graduate Institute of Cancer, Cuttack; All India Institute of Medical Sciences, Bhubaneswar; Utkal Cancer Hospital, Bhubaneswar; Baghchi Cancer Hospital, Bhubaneswar; Tata Memorial Centre, Mumbai, and other appropriate facilities. With support from the Early Detection Programme (EDP) team, patients were successfully navigated, admitted, and initiated on treatment at these centres. 72 cancer cases were diagnosed under this project (51 oral cancer cases, 20 breast cancer cases and one cervical cancer case).

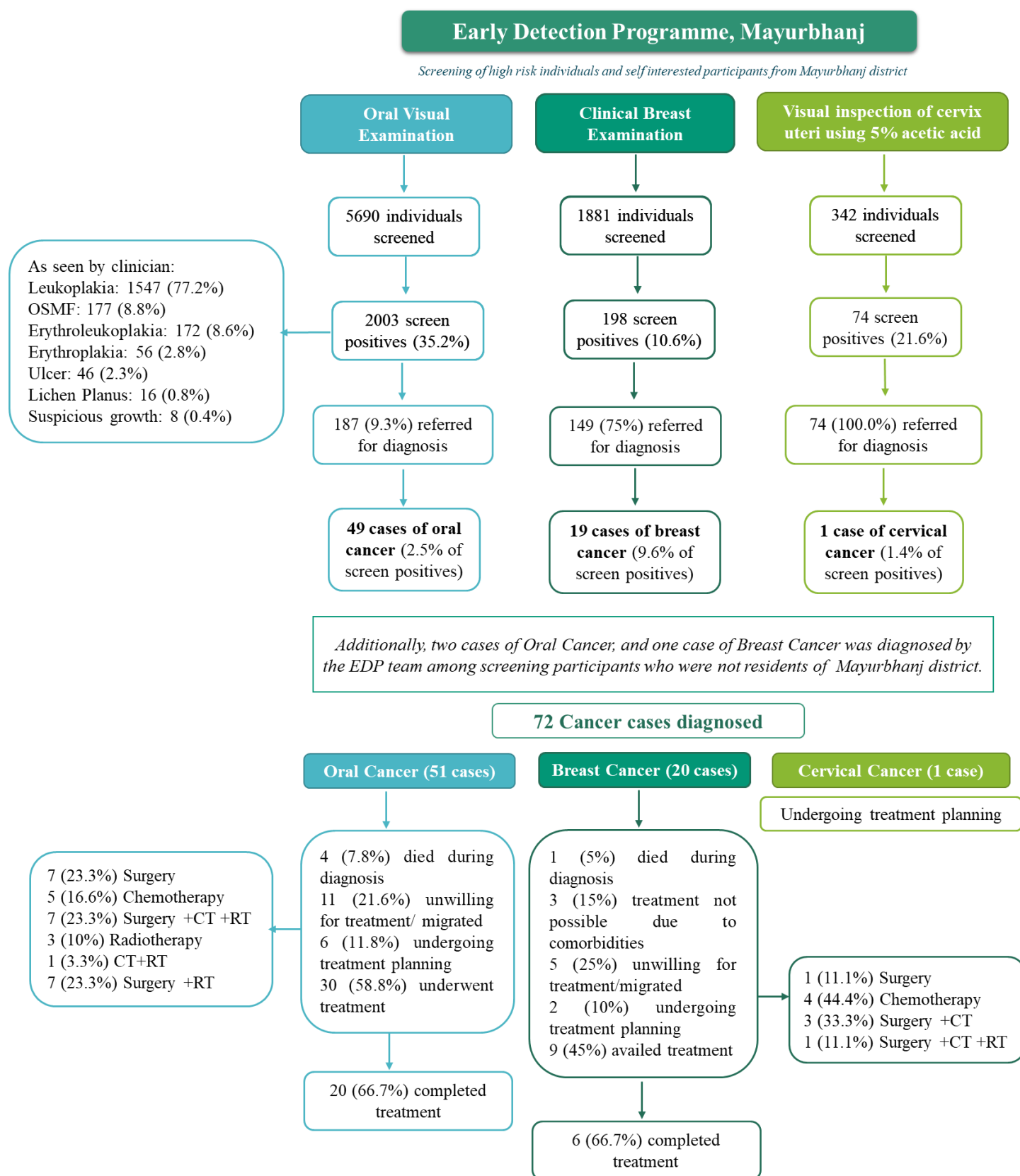
Importantly, a substantial proportion of cancers detected through the programme were diagnosed at locoregional stage (oral: 74.5%, breast: 55.0% and cervical: 100%). 30 (58.8%) oral cancer cases and 9 (45.0%) breast cancer cases availed treatment. Out of those who availed treatment, 20 (66.7%) of oral cancer patients and 6 (66.7%) of breast cancer cases completed their treatment.

Results have been summarised as figure 49.

Continuous supervision and quality assurance were integral components of the programme. Regular field visits, virtual reviews, and random cross-verification of screening and registry data were conducted by TMC faculty.

The programme faced several challenges, including low health awareness, cultural beliefs, stigma, difficult terrain, transportation barriers, and limited healthcare infrastructure. High prevalence of locally manufactured smokeless tobacco further compounded the cancer risk profile. Nevertheless, the programme demonstrated that sustained community engagement, strong institutional collaboration, and integration with existing health systems can overcome many of these barriers.

Figure 49: Summary of EDP results for the period August 2023-May 2025



Patient Navigation

Patient navigation plays a pivotal role in ensuring the benefits of screening by addressing both medical and non-medical barriers to care. Through counselling, coordination, and logistical support, navigators facilitated referrals and treatment initiation at specialized cancer centres, thereby improving continuity of care and treatment compliance.

To ensure seamless coordination and quality care, the medical officer personally escorted 22 patients (16 oral cancer, 5 breast cancer, and 1 cervical cancer) to referral centres. Comprehensive counselling sessions were conducted for patients and their families to enhance understanding of the disease, reduce fear and stigma, and improve adherence to treatment. Transportation and other non-medical expenses were supported by Tata Memorial Centre, while the majority of patients received free treatment under the Government of Odisha's Gopabandhu Jan Arogya Yojna (GJAY) scheme.

Among the navigated patients, seven completed their treatment, thirteen are currently undergoing cancer-directed therapy, and two patients succumbed during treatment. In addition to EDP-detected cases, the programme also facilitated referral and navigation of two gastrointestinal cancer patients and two paediatric patients to tertiary care hospitals for further management.

By understanding patient-specific challenges and providing continuous guidance, the team was able to improve compliance with investigations and treatment.



Patient navigated to treatment centre and admitted for treatment with help of EDP staff

Annexure 5: Population-based Cancer Registry Khordha (2022)

The Population-based Cancer Registry of Khordha covers all ten blocks of Khordha district. The first-year report of Khordha PBCR was released in 2025. The registry has noted late registration of 110 incidence cases for the year 2022.

The following graphs (Figure 49) provides the updated cancer incidence and mortality figures for the year 2022. Figures 50 and 51 provide the leading sites of cancer incidence in males and females of Khordha district, respectively.

Figure 50: Cancer Incidence and Mortality in Khordha district (2022)

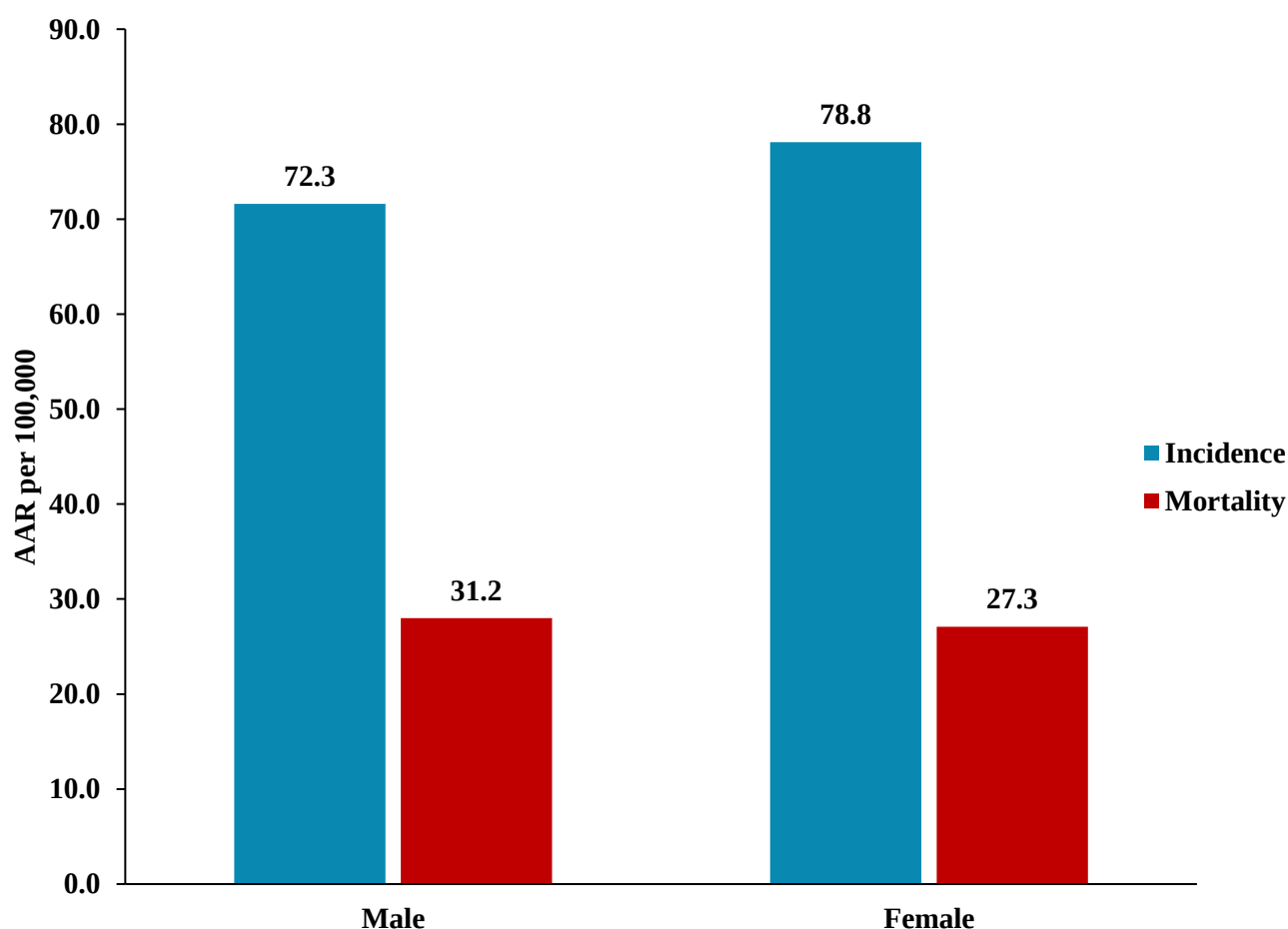


Figure 51: Leading sites of cancer incidence among males in Khordha district (2022)

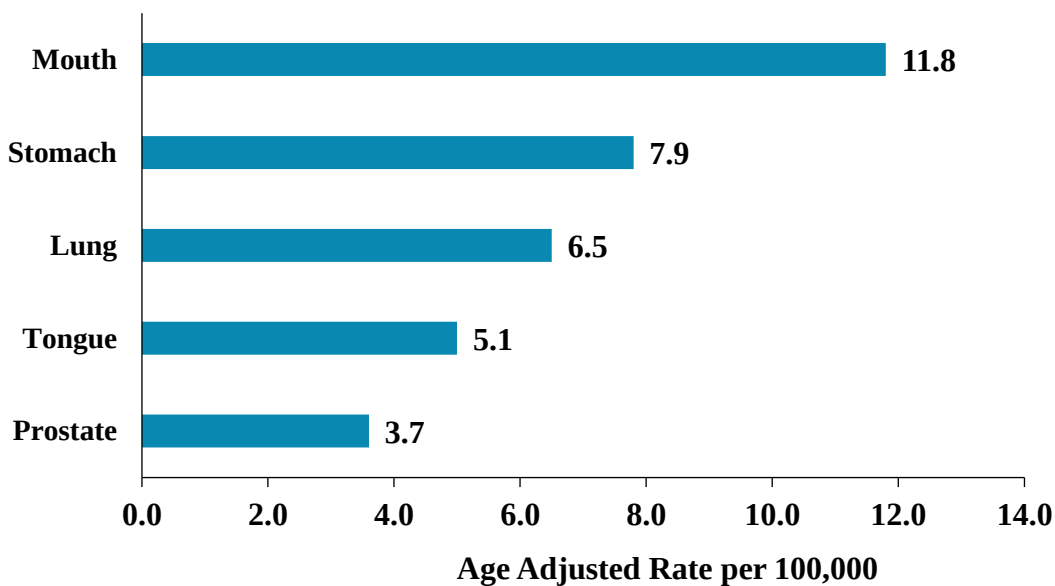
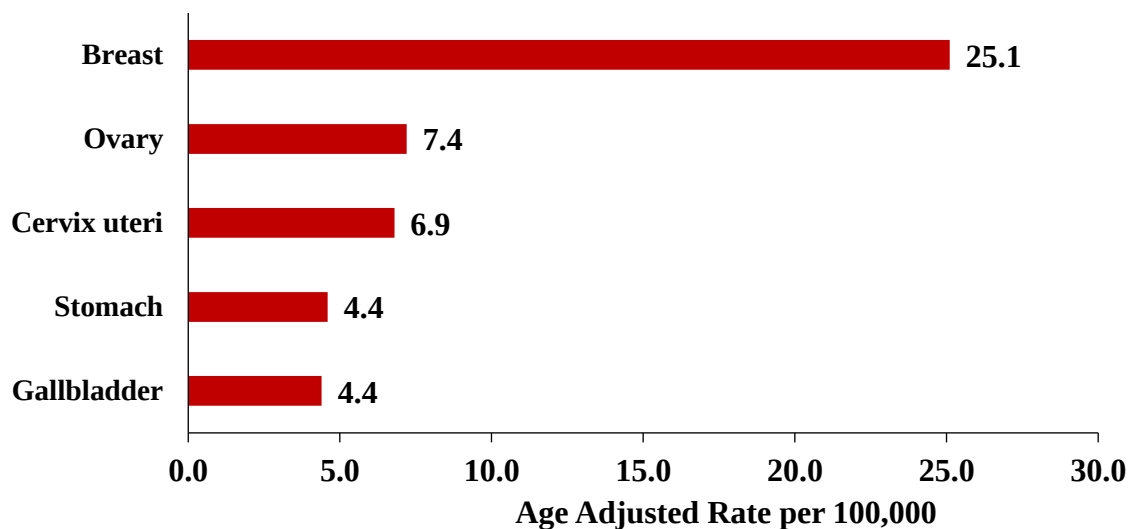


Figure 52: Leading sites of cancer incidence among females in Khordha district (2022)



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Dr Rashmi Ranjan Guru, Medical Superintendent

Mr Rabinarayan Das, MRD in-charge

Ms Subhalaxmi Dash, Junior executive MRD

Bagchi Sri Shankara Cancer Hospital

Dr Deepak Kumar Mishra, Medical Director
 Dr Bidhu Kalyan Mohanti, Director Academics
 Dr Geeta Bharati Ray, Clinical coordinator,
 Community Oncologist

Sparsh Hospital, Bhubaneswar

Dr Bharat Das, Medical Superintendent
 Dr Ghanashyam Biswas, Oncologist
 Mr Gyanaranjan Kara, MRD Manager
 Mr Asit Kumar Praharaj, Assistant General
 Manager
 Mr Santosh Parida, MRD Assistant

Sunshine Hospital, Bhubaneswar

Dr Alok Louth, CEO
 Dr Rakesh Behera, Medical Superintendent
 Mr Pradipta Kumar Majhi, MRD Incharge

Kalinga Hospital, Bhubaneswar

Dr S Santosh Dora, CEO
 Mr Rashmi Ranjan Nayak, MRD in charge

Hi-Tech Hospital, Bhubaneswar

Dr Basudev Behera, DGA
 Dr Pritish Chandra Mishra, HOD Oncology
 Mr Hemanta Kumar Khatua, MRD in-charge
 Mr Umashankar Pattnaik, Pharmacist

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Dr Sidhartha Mishra, Medical Superintendent
 Mr Narayan Chandra Behera, MRD in-charge

Care Hospital, Bhubaneswar

Dr Satyam Dash, Asst Medical Superintendent

Mr Imran Khan, MRD in-charge

Blue wheel Hospital, Bhubaneswar

Dr Arun Prakash Pattnaik, Medical
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 Mrs Bandana Swain, MRD in charge

Aditya Ashwini Hospital, Bhubaneswar

Dr Manas Swain, DMS
 Dr Sanjay Panda, Head of Quality Control
 Ms Munmun Das, MRD In-charge

Railway Hospital, Khordha

Dr Sarath Babu, Chief Medical Superintendent
 Mr Ananta Kumar Swain, Manager
 Mr Rakesh, Clinical Record Department

Employee State Insurance Corporation (ESIC) Hospital, Bhubaneswar

Dr Tanushree Mishra, Radiation Oncologist
 Mr Sumit Mohapatra, IT Manager

CGHS Hospital, Bhubaneswar

Dr B.P. Panda, Medical Superintendent
 Dr P.K. Choudhury, DMS
 Dr Santosh Kumar Sahoo, Medical Officer
 Mr Babula Seth, In-charge, MRD

Aspire Hospital, Bhubaneswar

Dr Bibhu Dutta Mohapatra, Chief Operating
 Officer
 Mrs Koushiki Pattnayak, Operational Manager
 Mr Sachin Sahoo, Front Office Executive
 Mr Sameer Sahoo, Operational Manager

Vivekananda Hospital, Bhubaneswar

Mr Sibanandan Pati, Medical Director
 Mr Sourajit Seth, Operational Head
 Ms Laxmi Sivam, Asst. Nursing Superintendent
 Ms Anita Nayak, MRD In-charge

BMC Death Register, Bhubaneswar

Dr Deepak Kumar Bisoyi, City Health Officer

Prolife Diagnostics, Bhubaneswar

Dr Manas Ranjan Baisakh, Sr. Consultant
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GenX Diagnostics, Bhubaneswar

Sandeepa Parida, HR, Lab In charge

Nidaan Diagnostic, Bhubaneswar

Jamini Rath, Chief Executive Officer

M.K.C.G Medical College, Berhampur

Prof. Suchitra Dash, Medical Superintendent
 Prof. Bishnu Prasad Das, Head of Radiation
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 Ms Sujata Mohapatra, Head Staff Nurse

**South-East Asia Regional Office (SEARO),
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 Dr Bishnu Giri, Technical Officer (Cancer
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**International Agency for Research on Cancer,
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Dr Freddie Bray, Branch Head, Cancer
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Dr Abhisekh Thakur, Medical Superintendent

Dr Sanghamitra Jena, Surgical Oncologist

Ms Sajitha Nair, Attendant

**Mahatma Gandhi Medical College & Hospital,
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Dr D Hansdah, Dean and Principal

Dr RK Madan, Medical Superintendent

Dr SN Paul, Head, Department of Pathology

**Brahmananda Narayan Multispeciality
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Mr Nimish Krishna, Head of Administrative
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District Headquarter Hospital, Keonjhar

Dr Purusottam Mohanta, Medical Officer in-
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District Headquarter Hospital, Balasore

Dr Prabhat Kumar Behera, Chief District Medical
Officer

Dr Priya Kumar Ghosh, Medical Officer in-
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Shanti Memorial Hospital, Cuttack

Dr Swarnav Pattnaik, Oral Maxillofacial Surgeon

Dr Biswaranjan Nayak, Dental Surgeon



Tata Memorial Centre, Mumbai



**Advanced Centre for Treatment Research
and Education in Cancer, Navi Mumbai**



**National Institute for Science Education
and Research, Bhubaneswar**



**Centre for Cancer Epidemiology,
ACTREC, Navi Mumbai**



**Pandit Raghuram Murmu Medical
College and Hospital, Baripada**



Similipal National Park, Mayurbhanj