

Cancer Incidence and Mortality in Mansa District, Punjab state, India: 2017-2018



Homi Bhabha Cancer Hospital, Sangrur,
Punjab State, India



Mansa district, Punjab State, India

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Executive summary

Background

Tata Memorial Centre (TMC), Mumbai, an autonomous institute under the Department of Atomic Energy Government of India, started Population-Based Cancer Registry (PBCR) in Mansa district on April 1, 2013, in collaboration with the Post-Graduate Institute of Medical Education and Research (PGIMER), Chandigarh and the Ministry of Health, Government of Punjab. The registry is located in the Civil Hospital campus of Mansa. The objective of the cancer registry is to measure the cancer burden in terms of incidence and mortality and to know patterns of cancer in the district. The cancer registry data will be useful in planning cancer control activities and in strengthening the cancer care services in this area.

Population covered

The cancer registry covers the three sub-divisions Mansa, Budhlada, and Sardulgarh covering a population of 830,621. The registry covers the urban and rural areas of the district (242 villages of the three subdivisions). More than 75% of the population of the district is rural.

Registration method

A trained field/ social worker of the registry regularly visits the villages as well as hospitals, pathology laboratories, medical colleges, cancer centres, and the birth and death registration office to collect cancer incidence and death cases. The registry staff interacts with the village sarpanch, Auxiliary Nurse Midwife (ANM), Accredited Social Health Activist (ASHA) workers, and the Primary Health Centre (PHC) staff periodically 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 the ASHA workers, the registry staff interacts with the patient/patient's relatives and notes down the information available. This information is further confirmed at the patient's treating hospital. After confirming the patient's residence (residence of at least one year in the district), and once the information is checked by senior staff, the case is entered in the prescribed format. The data entry is carried out in CanReg5 software. Continuous interactions with the community have enabled the registry to update the survival status of cancer patients. As of December 2021, a good survival status is recorded by the registry with minimum cases being lost to follow-up. This information will be utilized for cancer survival analysis.

A comprehensive cancer treatment facility is not available in the Mansa district. Patients from this area travel to Bhatinda, Ludhiana, Bikaner, Chandigarh, Patiala, Hisar, and Faridkot for cancer care. The nearest centre is 60 km and the farthest centre is 350 km. Tata Memorial Centre established the Homi Bhabha Cancer Hospital in Sangrur district, which is 60 km from Mansa and has been functioning since January 2015.

Results

This report is based on the cancer registry results for the years 2017 and 2018. In the year 2017 and 2018, the cancer registry registered 1159 new cancer cases including 554 (47.8%) male cancer cases and 605 (52.2%) female cancer cases. The age-adjusted incidence rate for males is 59.5 per 100,000 population and for females, 68.6 per 100,000 population. **The cumulative risk for the age group 0-74 in males is 6.8% (1 in 15 men is at risk of developing cancer in Mansa district). For females, the cumulative risk for the age group 0-74 is 8.1% (1 in 12 females is at risk of developing cancer in Mansa district).**

In the year 2017-2018, the cancer registry registered 821 cancer deaths including 405 (49.3%) deaths in males and 416 (50.7%) deaths in females. The age-adjusted mortality rate for males is 43.6 per 100,000 and for females, it is 46.5 per 100,000. **The cumulative risk for the age group 0-74 in males is 5.0% (1 in 20 men is at risk of developing cancer in Mansa district). For females, the cumulative risk for the age group 0-74 is 5.5% (1 in 18 females is at risk of developing cancer in Mansa district).**

Due to improvements in the cancer registration process, the registry has reported 9 (Male: 7, Female: 2) late registration incidence cases of the year 2015-2016. After including the late registration cases, the age-adjusted incidence rate is 55.9 for males and 66.3 per 100,000 for females.

Leading Cancer sites

The leading cancer sites in males are the liver, prostate, oesophagus, mouth, and brain and nervous system. The leading cancer sites in females are the breast, cervix uteri, oesophagus, gall bladder, and ovary. The leading cancer sites are mentioned in Tables I and II.

Table I: Leading cancer sites in males: 2017-2018

ICD 10	Site	Total	%	CR	AAR	TR
C22	Liver	39	7.0	4.4	4.3	8.3
C61	Prostate	44	7.9	5.0	4.2	3.5
C15	Oesophagus	36	6.5	4.1	3.8	7.0
C03-C06	Mouth	29	5.2	3.3	3.1	7.5
C70-C72	Brain, Nervous System	25	4.5	2.8	2.8	4.1

CR: Crude incidence rate per 100,000, AAR: Age-adjusted incidence rate per 100,000, TR: Truncated incidence rate per 100,000 for 35-64 age group

Table II: Leading cancer sites in females: 2017-2018

ICD 10	Site	Total	%	CR	AAR	TR
C50	Breast	144	23.8	18.5	16.6	38.0
C53	Cervix Uteri	90	14.9	11.5	10.2	24.3
C15	Oesophagus	60	9.9	7.7	7.0	14.9
C23-C24	Gallbladder etc.	43	7.1	5.5	4.8	9.4
C56	Ovary	38	6.3	4.9	4.5	9.8

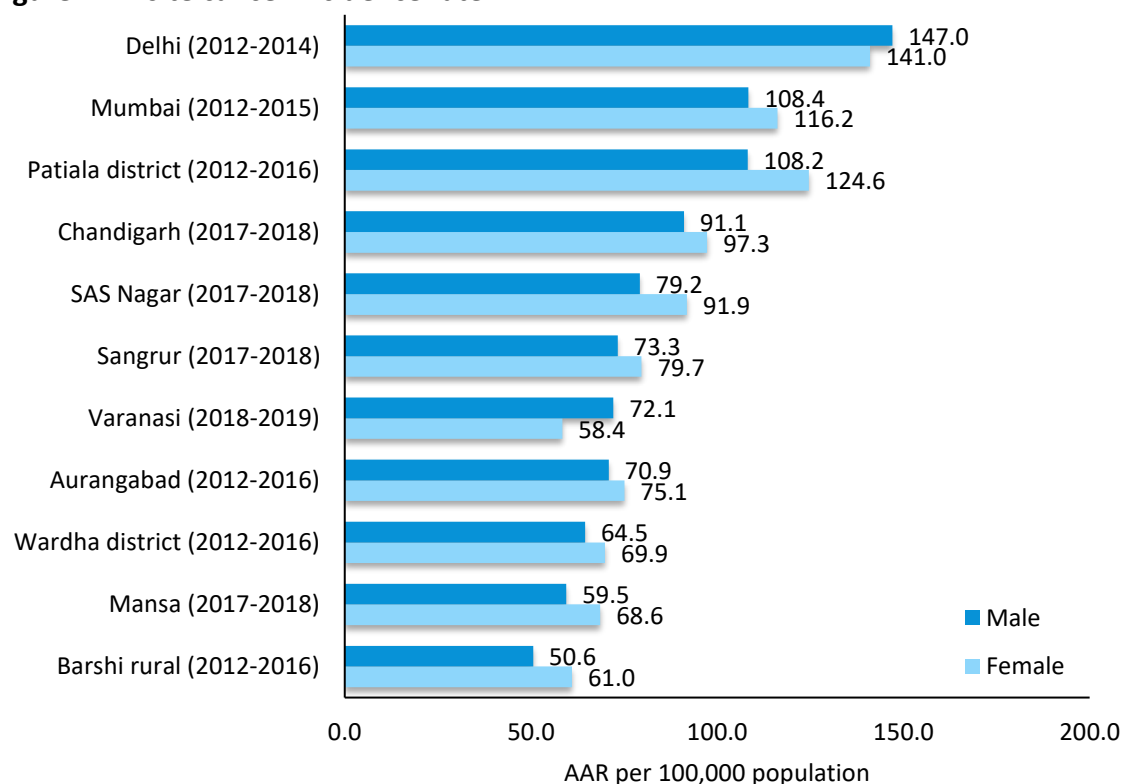
CR: Crude incidence rate per 100,000, AAR: Age-adjusted incidence rate per 100,000, TR: Truncated incidence rate per 100,000 for 35-64 age group

Primary unknown cases

In the year 2017-2018, we registered 9.9% of primary unknown cases in males and 5.6% of primary unknown cases in females. The primary site unknown cases are related to the quality of diagnostic information as well as poor documentation of the medical records. Due to regular interaction with the clinician by the registry staff, there was an improvement in the medical documentation.

Comparison of cancer registry rates with other registries in India

Compared to other parts of India, cancer incidence rates are lower and are in comparison with other parts of rural India. ⁽¹⁻⁵⁾

Figure I: All site cancer incidence rate

Cancer control activities in Mansa district

The Mansa cancer registry data estimated that the risk of developing cancer is 7% in males and 8% in females. The major cancer sites in the Mansa district are breast, cervix uteri, oesophagus, lung, and prostate. Most of these cancers are preventable. Based on the observation of the cancer registry, Tata Memorial Centre has started a satellite centre in Sangrur and a comprehensive cancer centre in SAS Nagar. In addition to this, PGIMER Chandigarh has also initiated a 500-bedded multispecialty hospital in Sangrur. Cancer awareness programs need to be implemented particularly for the early detection of breast and cervical cancer. Tata Memorial Centre, Mumbai regularly organizes workshops/CME for the medical faculties of Mansa and Sangrur districts. The population-based cancer registry in Mansa will be used to monitor cancer trends and to evaluate the effects of prevention and treatment in the future.

Mansa PBCR is actively updating the survival status of cancer patients. The registry has undertaken survival studies of breast, cervix uteri, prostate, and oesophagus cancer cases registered during the period 2013 -2018. The survival report will be available in due course of time.

1. Punjab state profile

Punjab is situated in northwest India. The Indian state borders the Pakistani province of Punjab to the west, Jammu and Kashmir to the north, Himachal Pradesh to the northeast, Chandigarh to the east, Haryana to the south and southeast, and Rajasthan to the southwest. The total area of the state is 50,362 square kilometres. The population is 27,743,338 (Census, 2011)⁶. The capital of Punjab is Chandigarh, which is administered separately as a Union Territory since it is also the capital of the neighbouring state of Haryana.

As per the Census 2011⁶, Punjab has a total population of 27,743,338 of which 14,639,465 (52.76%) are males and 13,103,873 (47.2%) are females. It constitutes 2.29% of the total population of India. The population density of Punjab is 550 people per sq. km. The population of Punjab, according to the 2011 census stands at about 27 million, making it the 15th most populated state in India.

The state is spread over an area of about 50,362 sq. km. making it the 19th largest state in the country in terms of area. The state has a growth rate of approximately 13%, which is below the national average of 17%. The population of the state is rising considerably due to rapid efforts toward development and progress. The literacy rate in the state is approximately 76.7%, a figure that has improved tremendously in the last few years due to consistent efforts by the government. The sex ratio of Punjab significantly lags behind the national average. The Punjab state profile is presented in Table 1⁷.

Table 1: Punjab state population, literacy, and area in Sq. Km.

Sr. No.	Items	Unit	Number
1.	Area		50,362
	(i) Rural Area	Sq. Km	48,265
	(ii) Urban Area		2097
2.	(Population 2011) Total Population	Lakh	277.04
	Rural Population		173.2
3.	District	Number	22
4.	Tehsils	Number	81
5.	% of Rural to Total Population	%	62.51
6.	% of Urban to Total Population	%	37.49
7.	Density	Per Sq. Km	550
8.	Female per 1000 Male	Number	893
9.	Literacy	%	76.7

2. Mansa district profile

Mansa district was formed on April 13, 1992, from the erstwhile district of Bhatinda. Mansa is a small district both in terms of population and area. It is situated on the rail line between the Bhatinda-Jind-Delhi sections and is also situated on the Barnala-Sardulgarh-Sirsa Road rail line. Mansa district is situated in the cotton belt of Punjab and is therefore fondly called the "area of white gold".

The district is spread over 2,198 sq. km, having a total population of 769,751 as per the 2011 census⁸. In Mansa district, River Ghaggar flows through a distance of 15 Km and Sirhind Drain passes through the entire district and has its out-fall in river Ghaggar. Mansa district is a part of the Bhatinda Parliamentary Constituency. The district has three sub-divisions/tehsils and five blocks⁹. The Mansa district subdivision and the number of villages are presented in Table 2.

Figure 1: Location of population-based cancer registry Mansa district, Punjab



Table 2: Subdivision/Tehsil under Mansa District

Tehsil	Number of villages	Block
Budhlada	88	1. Budhlada
Khial Kalan	84	1. Mansa 2. Bhikhi
Sardulgarh	70	1. Sardulgarh 2. Jhunir
Total	242	

Health infrastructure of Mansa district

Mansa district has one district hospital and two sub-district hospitals with basic diagnostic and surgical facilities. The district has 2 rural hospitals, 3 blocks of primary health centres, 12 primary health centres, and more than 103 sub-centres. Primary health care is taken by these hospitals. The Mansa district hospital provides supportive services to cancer cases. Detailed information about the hospital and PHC is presented in table 3.

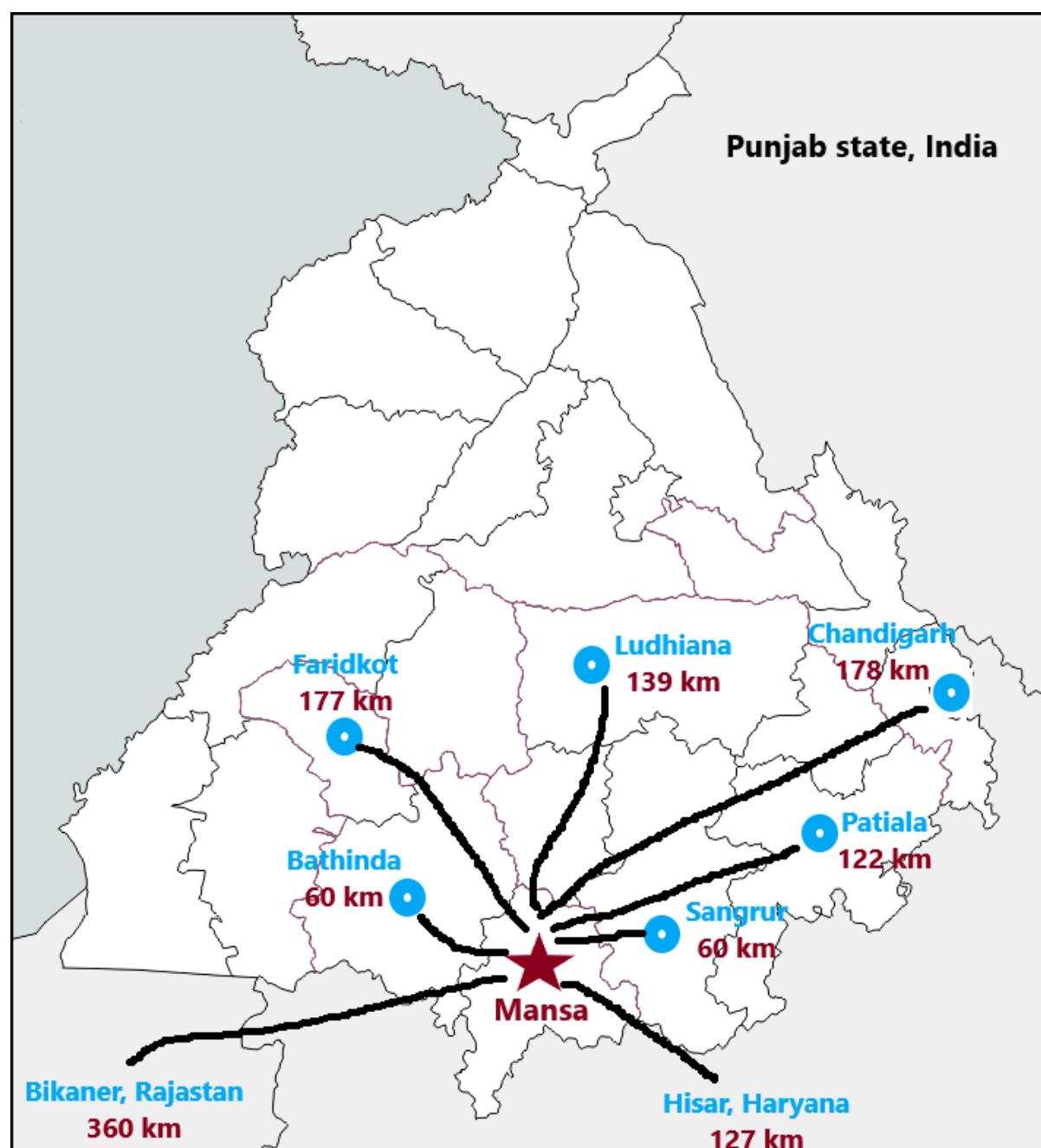
Table 3: Number of government hospitals /health centre in Mansa district

Sr. No.	Institute	Number
1.	District Hospital (DH)	1
2.	Sub District Hospital (SDH)	2
3.	Community Health Centre (Punjab Health System Corporation) (PHSC)	4
4.	Block Primary Health Centre (PHC)	3
5.	Primary Health Centre (MPHC) (Multiple Primary Health Centre)	12
6.	Rural Hospital (RH)	2
7.	Subsidiary Health Centre (SHC)	37
8.	Sub-centre (SC)	103
	Total	164

The cancer treatment facility is not available in the district. For cancer treatment, patients from these areas go to Bhatinda, Faridkot, Ludhiana, Chandigarh, Hisar, New Delhi and Bikaner-a state of Rajasthan. The nearest centre is Sangrur and Bhatinda (60 km) and the farthest centre Bikaner (360 km). The distance from Mansa to different cancer treatment centers is shown in figure 2.

Tata Memorial Centre, Mumbai – an autonomous unit of the Department of Atomic Energy, Government of India with the support of the Government of Punjab has started the Homi Bhabha Cancer Hospital (HBCH) in Sangrur district. The hospital started functioning in January 2015. The HBCH has surgical, radiotherapy, and medical oncology facilities. Since its inception, 8000 cancer patients have been treated. The hospital is listed in the Government sponsor scheme “Mukhmantri Punjab Cancer Rahat Kosh Scheme” ¹⁰ and “Ayushman Bharat Sarbat Sehat Bima Yojana” for cancer treatment.

Figure 2: Distance from Mansa to the cancer treatment centre



3. Administrative order by the state government for the cancer registration process

The State Program Officer (Cancer Control Cell) of the Government of Punjab has issued an administrative order to all hospitals in the state, which are empanelled under the Mukhmantri Punjab Cancer Rahat Kosh Scheme, to provide the data of all cancer patients to the population-based cancer registries of Mansa, Sangrur and SAS Nagar. Due to Administrative support from the government of Punjab, the registry receives good co-operation from all the government hospitals and the private empanelled hospitals.

 NATIONAL PROGRAMME FOR PREVENTION AND CONTROL OF CANCER, DIABETES, CARDIOVASCULAR DISEASES & STROKE Directorate of Health & Family Welfare Room No 502, 4 th Floor, Sector 34 A, Chandigarh 0172-2605600	
No. NPCDCS/Pb/2013/ To	Dated:-11-03-2013
1. Civil Surgeons Mohali, Sangrur and Mansa. 2. All empanelled Hospitals under Mukh Mantri Punjab Cancer Rahat Kosh scheme.	
Subject :- Population Based Cancer Registries (PBCR) – An initiative by Punjab Government in collaboration with Tata Memorial Centre, Mumbai and PGIMER, Chandigarh.	
Population Based Cancer Registry in Urban and Rural areas in Chandigarh, Mohali and Sangrur, Mansa, urban and rural areas respectively, has already started since 1st Jan 2013. These registries will provide annual Cancer incidence, Mortality and trends of Cancer in Punjab. For the above said purpose, the teams will be visiting various institutions, Public and Private, in your area. As per the orders of Worthy PSHFW, Punjab, you are directed to co-operate and co-ordinate with them in every possible way to make this initiative taken by Punjab Government, a success.	
 State Programme Officer Cancer Control Cell	
No. NPCDCS/Pb/2013/ A copy of above is forwarded to:-	Dated:-11-03-2013
1. PA to PSHFW, for information of Worthy PSHFW, Punjab please. 2. PA to DHS, for information of Worthy DHS, Punjab please. 3. Civil Surgeon Mohali, Sangrur and Mansa for information and necessary action please. 4. All empanelled Hospitals (Public and Private) under Mukh Mantri Punjab Cancer Rahat Kosh.	

4. Population covered by the cancer registry

Mansa district is divided into three sub-divisions – Mansa, Budhlada, and Sardulgarh and these divisions are further divided into five blocks (Mansa (Mansa and Bhiki), Budhlada, Sardulgarh (Sardulgarh and Jhunir)⁹. As per the 2011 census, the total population of Mansa district is 769,751. Of the total population 606,147 (78.7%) is rural and 163,604 (21.3%) is urban⁸. Of the total population, males are 53.1% and females are 46.9%. The population as per the 2011 census is mentioned in Table 4.

Table 4: Mansa district Population as per Census 2011

Area	No. of Households	Total	Male	Female
Rural	117232	606147 (78.7%)	322184	283963
Urban	32398	163604 (21.3%)	86548	77056
Total	149630	769751	408732 (53.1%)	361019 (46.9%)

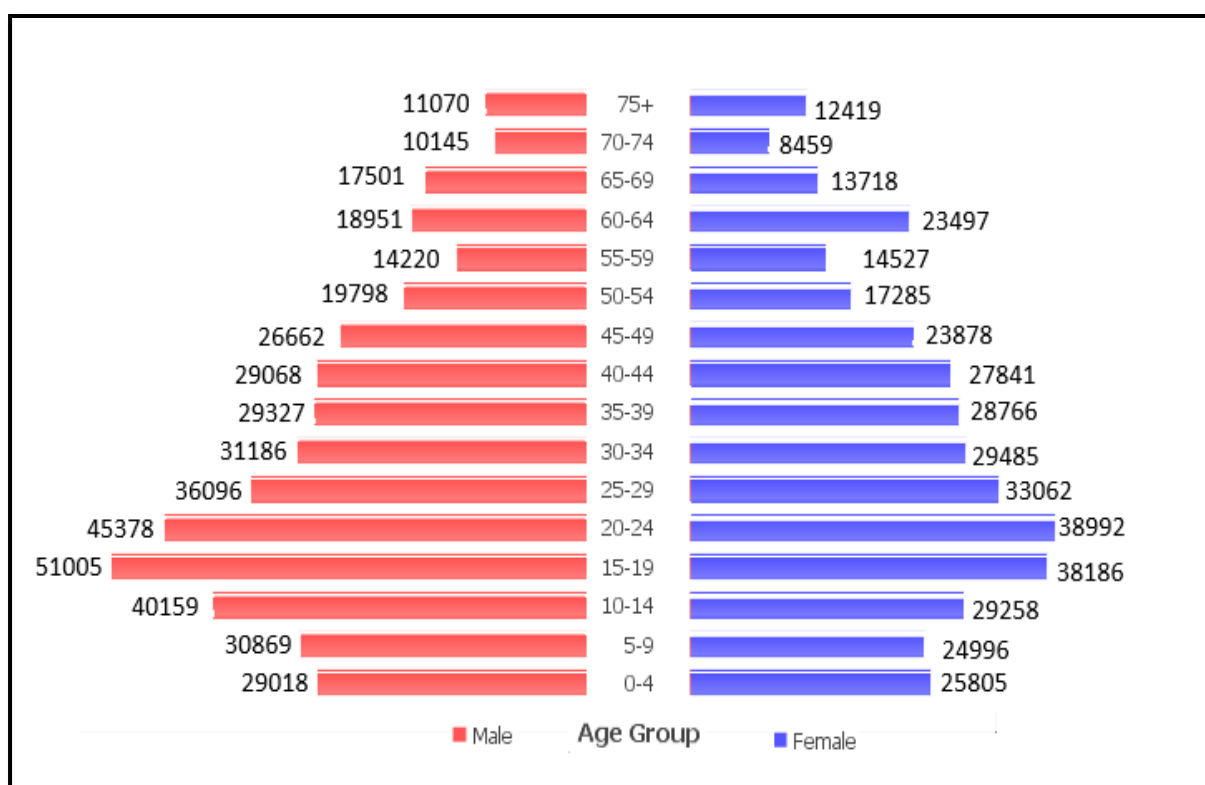
Estimated Population of Mansa district in 2017-2018

The registry population for 2017 and 2018 was estimated by the exponential growth rate method for the 2001 to 2011 census population. As a result, in 2017-2018 the males population is 4,40,450 (53%) and females are 3,90,171 (47%). More than 75% of the population is rural. The average estimated population for 2017-2018 is presented in table 5. The population pyramid of the Mansa district is shown in Figure 3.

Table 5: Estimated population of Mansa district: 2017-2018

Age group	Male		Female		Total	
	Number	%	Number	%	Number	%
0-4	29018	6.6	25805	6.6	54823	6.6
5-9	30869	7.0	24996	6.4	55865	6.7
10-14	40159	9.1	29258	7.5	69417	8.4
15-19	51005	11.6	38186	9.8	89191	10.7
20-24	45378	10.3	38992	10.0	84370	10.2
25-29	36096	8.2	33062	8.5	69158	8.3
30-34	31186	7.1	29485	7.6	60671	7.3
35-39	29327	6.7	28766	7.4	58093	7.0
40-44	29068	6.6	27841	7.1	56909	6.9
45-49	26662	6.1	23878	6.1	50540	6.1
50-54	19798	4.5	17285	4.4	37082	4.5
55-59	14220	3.2	14527	3.7	28747	3.5
60-64	18951	4.3	23497	6.0	42448	5.1
65-69	17501	4.0	13718	3.5	31218	3.8
70-74	10145	2.3	8459	2.2	18604	2.2
75+	11070	2.5	12419	3.2	23489	2.8
Total	440450	100	390171	100	830621	100

Figure 3: Population pyramid of Mansa district: 2017-2018



5. Cancer registration method

Cancer incidence cases

Trained social workers and field investigators of the registry visit the allotted villages periodically (in a period of 6 to 8 months) to identify the cancer cases diagnosed in the area as well as cancer deaths noted in the village administrative office. Field staff interacts with the village sarpanch, ANMs, Anganwadi workers, ASHA workers, and a medical officer of the primary health centre and collects information on cancer cases diagnosed in the villages and also about cancer deaths that have occurred in the villages. The social worker takes detailed information about the cancer case and visits the patient's house along with the ASHA workers. The field staff interacts with the patient or patient's relatives 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 a discharge report, biopsy report, or CT scan report?

The social worker notes down the information available to the patient. As per the information provided by the patient/patient's relatives, 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 of not getting access to the medical records of the patient, staff registers the case based on the information provided by the patient/patient's relative.

Cancer death cases

During the village visit, the field/ social worker inquires about cancer deaths. The social worker also collects the death case information from the village birth and death registrar's office. In the same manner as the cancer incidence cases, the field staff interacts with the patient's relative and collects information regarding cancer death. The information provided by the relatives is matched with the medical records available in the cancer registry and the cancer death is registered. During the field visit, field staff may come across the cases diagnosed before 2017. In this situation, the field staff takes detailed information about the cancer case and maintains the data in the registry office. During the second visit, field staff updates the status of the cancer cases. If there is any death of the prevalent case in that year, then after matching with the registry record, the cancer death is registered.

Cancer prevalence cases

During the field visit, field staff comes across the cases diagnosed before 2015. The field staff takes detailed information about the cancer case from the patient's relative and maintains

the data in the registry office. During the second visit, field staff updates the status of the cancer cases. If there is any death of the prevalent case in that year, then after matching with the registry record the cancer death is registered.

Data checking

All the cases collected by the field staff from the villages as well as from the hospitals are scrutinized by a senior staff member. After residence confirmation (residence of the area for at least one year) the cancer case information is documented in the prescribed format. The primary site and histology are coded based on ICD-O3¹¹.

Data entry

The data entry is carried out in the CanReg5 software developed by the International Agency for Research on Cancer, Lyon, France¹².

After completion of the quality check, the cancer incidence and death cases are registered. The cancer registration process is presented in figure 4.

Cancer case data collection from hospitals and nursing centres

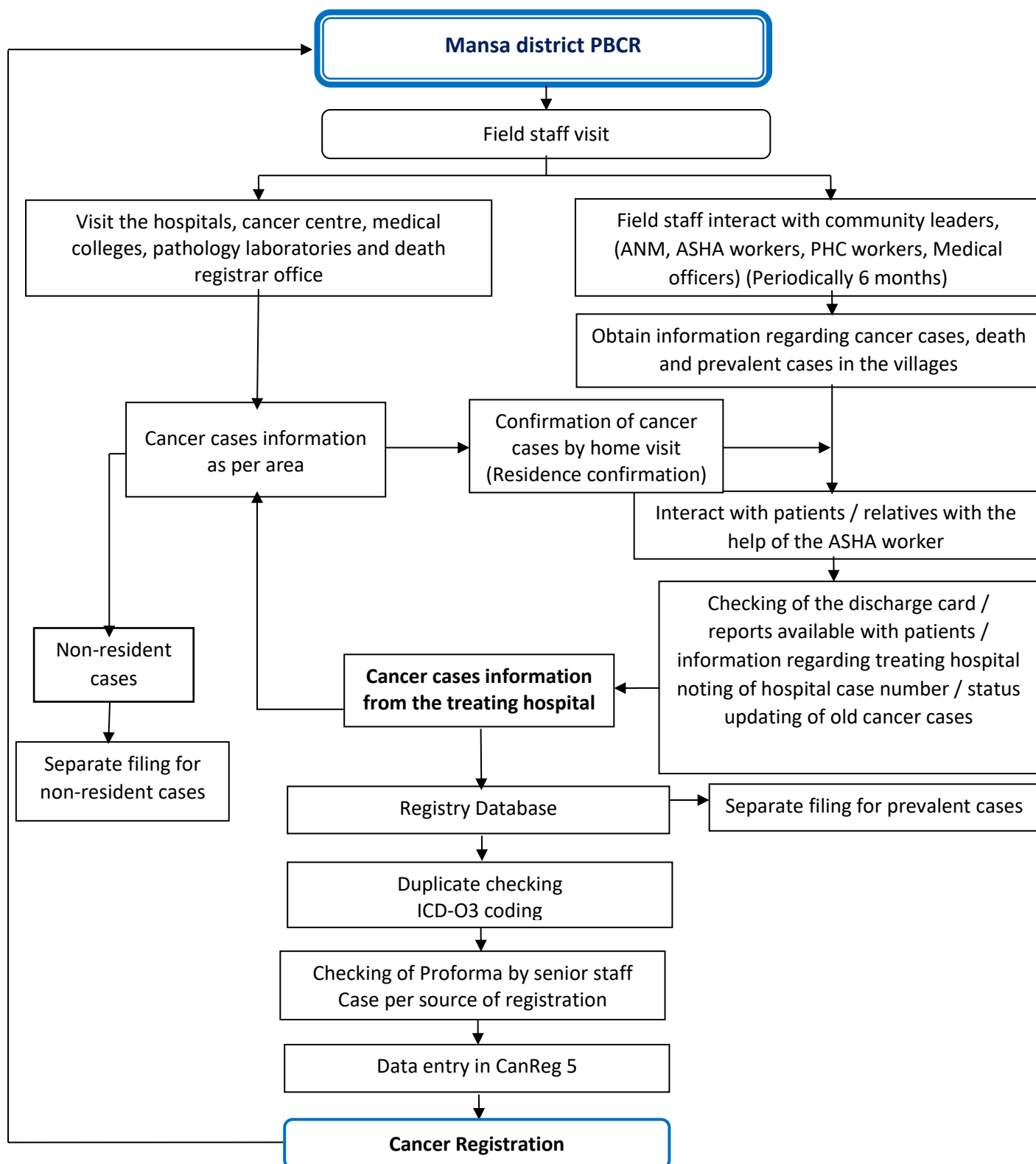
The registry staff regularly visits the following centres to collect information on the cancer cases and death cases in the Mansa district. The Chandigarh and SAS Nagar PBCR staff appointed by TMC regularly visit all the hospitals in of Chandigarh and the SAS Nagar area to collect cancer case data. They provide the cancer case data to the cancer registry staff of Mansa during their monthly meeting at PGIMER, Chandigarh. The different sources of data collection are mentioned in table 6.

Table 6: Different sources of data collection

Sr. No.	Institution name	Place
1	Cancer Control Cell	Mansa
2	Sub District Hospital Sardulgarh	Mansa
3	Community Health Centre Jhunir	Mansa
4	Community Health Centre Bhikhi	Mansa
5	Community Health Centre Khiala Kalan	Mansa
6	Community Health Centre Budhlada	Mansa
7	Community Health Centre Bareta	Mansa
8	Raikhya Nursing Home	Mansa
9	Janak Raj Nursing Home	Mansa
10	Jindal Diagnostic Center	Mansa
11	Brar Nursing Home	Mansa
12	Sran Hospital	Mansa

Sr. No.	Institution name	Place
13	Akashdeep Nursing Home	Mansa
14	Dr. Amritpal Nursing Home	Mansa
15	Medilife Cancer Research Center	Mansa
16	Chandigarh Path Lab	Mansa
17	Satyam Diagnosis Center	Mansa
18	Mansa (Birth & Death register)	Mansa
19	Sardulgarh (Birth & Death register)	Mansa
20	Budhlada (Birth & Death register)	Mansa
21	Homi Bhabha Cancer Hospital	Sangrur
22	Advanced Cancer Institute	Bathinda
23	Cancer Control Cell	Bathinda
24	Bansal Cancer Hospital	Bathinda
25	Dhillon Hospital	Bathinda
26	Max Hospital	Bathinda
27	Punjab Cancer Care	Bathinda
28	Dr. Monika Path Lab	Bathinda
29	Dr. Deepali Path Lab and Cancer diagnostic center	Bathinda
30	Sheena Path Lab	Bathinda
31	Mittal Path Lab	Bathinda
32	Bhatinda (Birth & Death register)	Bathinda
33	Pregma Hospital	Bathinda
34	Post Graduate Institute of Medical Education and Research/PBCR Chandigarh	Chandigarh
35	Govt. Multi specialty hospital sector 32	Chandigarh
36	Rajindra Medical Hospital	Patiala
37	Amar Hospital	Patiala
38	Dr. Lal Path Lab	Patiala
39	Mohandai Oswal Cancer Hospital	Ludhiana
40	Dayanad Medical College & Hospital	Ludhiana
41	Christian Medical College & Hospital	Ludhiana
42	Max Super specialty	SAS Nagar
43	Fortis Hospital	SAS Nagar
44	Guru GobindSingh Medical College & Hospital	Faridkot
45	Acharya Tulsi das Regional Cancer Center Research & Hospital	Bikaner
46	Shiromani Gurudwara Prabhantak committee (SGPC)	Amritsar

Figure 4: Cancer registration method



6. Community involvement in the cancer registration process

Cancer patients from this area travel 60 km to 360 km for cancer treatment. It was practically difficult for the registry staff to visit these centres regularly. The Punjab Government conducted a door-to-door campaign and household survey to know the prevalence of cancer in each district of the state¹³. Due to these programs, the community leaders are aware of the importance of the disease and cancer registration process. The primary health centre staff such as ANM and the supportive staff, Anganwadi workers, and ASHA workers keep the information on the cancer incidence and death cases that have occurred in the village. Trained field staff from the registry regularly interacted with these community members to obtain information about cancer cases in the villages.

Regular community interaction helps the registry to confirm the residence of the identified cancer cases. Due to community interaction, we are 100% sure about the residence confirmation of the cancer cases. Interaction with the patients/patient's relatives provides socio-demographic information such as education, income, religion, etc. Regular village visits and communication with the community leaders has enabled the registry to update the status of the cancer patients, which will be utilized for the cancer survival analysis. Initially, two major cancer centres refused to provide cancer case data. Two major cancer centres were initially reluctant to share the cancer case data, however, field visits and support from the community members and leaders enabled the registry to receive data and further reach the cancer patients/their relatives from these centres. As compared to the previous year, our case finding process has improved in the urban area. In 2017-2018, the registry has interacted with 1,185 community representatives from the entire district.

Registry staff interacted with community leaders and primary health centre staff to know the diagnosed cancer cases. The detail of the same by block is presented in table 7.

Table 7: Community leaders/primary health centre staff involved in the cancer registration process

Block Name	Villages	Sarpanch	Municipal Corporators (MC)	Senior Medical Officer	Medical Officer (MO)	Block Extension Educator	Auxiliary Nurse Midwife (ANM)	Accredited Social Health Activists Workers	Anganwadi Workers	Multi-Purpose Health Worker	Community Health Officer	Total
Budhlada	88	82	24	1	5	1	45	220	265	34	28	705
Khiala Kalan	84	72	41	3	13	1	47	215	210	39	35	676
Sardulgarh	70	89	13	2	8	1	32	197	98	37	32	509
Total	242	161	54	5	21	2	79	412	308	76	67	1185

7. Quality control

Mortality to incidence ratio

The mortality to incidence or M/I ratio is an indicator of the completeness and accuracy of cancer registry data. In the year 2017-2018, 1159 incidence cases (554 males and 605 females) have been registered. For the same period, 821 cancer deaths have been registered (405 males and 416 females). The overall M/I ratio is 0.71 (71%). The ratio for males is 0.73 (73%) and 0.69 (69%) for females. The reported M/I ratio is comparable with the other rural cancer registries in the country ¹.

Interaction with pathologists/clinicians

A quality control exercise was carried out for the improvement of the records. After cancer cases registration, field workers discussed any difficulties regarding data abstraction or ICD coding with the clinician/ pathologist of HBCH, Sangrur. TMC team also visited the registry for quality control. During the quality control exercise, a need to retrain the staff in case abstraction with primary site unknown, metastatic cases, and lymphoma-leukemia cases was observed and staff members were retrained at TMC, Mumbai. The data were modified and re-entered.

Incidence rates of childhood cancers

In the year 2017-2018, we registered 18 cancer cases in boys and 3 in girls. The age-specific rates reported for pediatric cancer are mentioned in Table 8.

Table 8: Incidence rate of pediatric cancer cases in Mansa district: 2017-2018

Age group	Boys		Girls	
	Number of cases	Age-Specific Rate	Number of cases	Age-Specific Rate
0-4	9	155.1	1	19.4
5-9	5	81.0	2	40.0
10-14	4	49.8	0	0.0
AAR per 1,000,000 population (AAR per million)	100.6		20.4	

The age-adjusted incidence rate for the pediatric age group (0-14 years) was 100.6 per million in boys and 20.4 per million in girls. As per the International Incidence of Childhood Cancer volume III, the incidence rate of girls is less than 60 per million. The registry data indicates a low incidence rate which can be due to under reporting ¹⁴.

The microscopic confirmation was 72.2% in boys and 100% in girls.

Microscopic verification of the cases

In the year 2017-2018, out of 554 male cases, 391 (70.6%) were diagnosed with microscopic verification. 13.2% of cases were diagnosed on a clinical base while 6.9% of cases were diagnosed based on radiological findings. In females, out of 605 cases, 444 cases (73.4%) were diagnosed with microscopic verification. 12.4% of cases were diagnosed on a clinical base while 5.1% of cases were diagnosed based on radiological findings. There may be under-registration of the clinically diagnosed cases. Out of total other and unspecified cancer cases around 37% of cases were diagnosed on a microscopic basis in males while 42% in females (e.g. lymph node, primary site unknown cases).

Death certificate only (DCO cases)

We have registered 48 (8.7%) male cases and 54 (8.9%) female cases under the DCO. The death cases also have been registered based on narration, relative remarks, and/or discharge summary available with the patient's relative. In principle, they are not registered based on the death certificate only because the death certificate does not have the documentation as a cancer death.

As per source case of registration

We have seen cases per source of registration. The cases were counted as per source notification. In Mansa, the per source cases of registration is 2.1. The coverage of sources is very good.

Source	Number of cases confirm
Source 1	1,159
Source 2	882
Source 3	430
Source 4	139
Source 5	29
Source 6	7
Total sources	2,646
Per source of registration	2.3 (2,646/1,159)

8. Cancer cases registered by source of registration – First source of information

The first source of information about the cancer case diagnosed/ cancer death is from the village visit resulted due to interaction with the community. After documentation, these cases were further confirmed from hospital records. In more than 25% of cases the first source of information is from the village visit. The cancer incidence and death cases registered by the source of registration are mentioned in Table 9 and 10.

Table 9: Cancer cases information from the first source of cancer registration: 2017-2018

Sr. No.	Source of registration	Male	%	Female	%	Total	%
1	House/ Village visit	147	26.5	150	24.8	297	25.6
2	Homi Bhaba Cancer Hospital, Sangrur	117	21.1	139	23.0	256	22.1
3	Guru Gobind Singh Medical College & Hospital, Faridkot	91	16.4	112	18.5	203	17.5
4	Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh	38	6.9	25	4.1	63	5.4
5	Advanced Cancer Care, Bhatinda	30	5.4	32	5.3	62	5.3
6	Cancer Cell (MMPCRKS), Mansa	36	6.5	26	4.3	62	5.3
7	Birth and Death, Mansa	18	3.2	28	4.6	46	4.0
8	Max Hospital, Bhatinda	13	2.3	16	2.6	29	2.5
9	Punjab Cancer Care, Bhatinda	14	2.5	15	2.5	29	2.5
10	Acharya Tulsi Dass Regional Cancer Research & Hospital, Bikaner	8	1.4	16	2.6	24	2.1
11	Dyanand Medical College & Hospital, Ludhiana	10	1.8	13	2.1	23	2.0
12	Fortis Hospital, Mohali	4	0.7	5	0.8	9	0.8
13	Government Medical College and Hospital, Chandigarh	4	0.7	3	0.5	7	0.6
14	Mohandai Oswal Cancer Hospital, Ludhiana	3	0.5	4	0.7	7	0.6
15	Rajindra Hospital, Patiala	3	0.5	4	0.7	7	0.6
16	Monika Path Lab, Bhatinda	1	0.2	6	1.0	7	0.6
17	Raikhya Nursing Home, Mansa	2	0.4	2	0.3	4	0.3
18	DMC, Ludhiana	2	0.4	1	0.2	3	0.3
19	Pregma Hospital Bhatinda	2	0.4	1	0.2	3	0.3
20	Other	11	2.0	7	1.2	18	1.6
Total		554	100	605	100	1159	100

Table 10: Cancer death information by the first source of cancer registration: 2017-2018

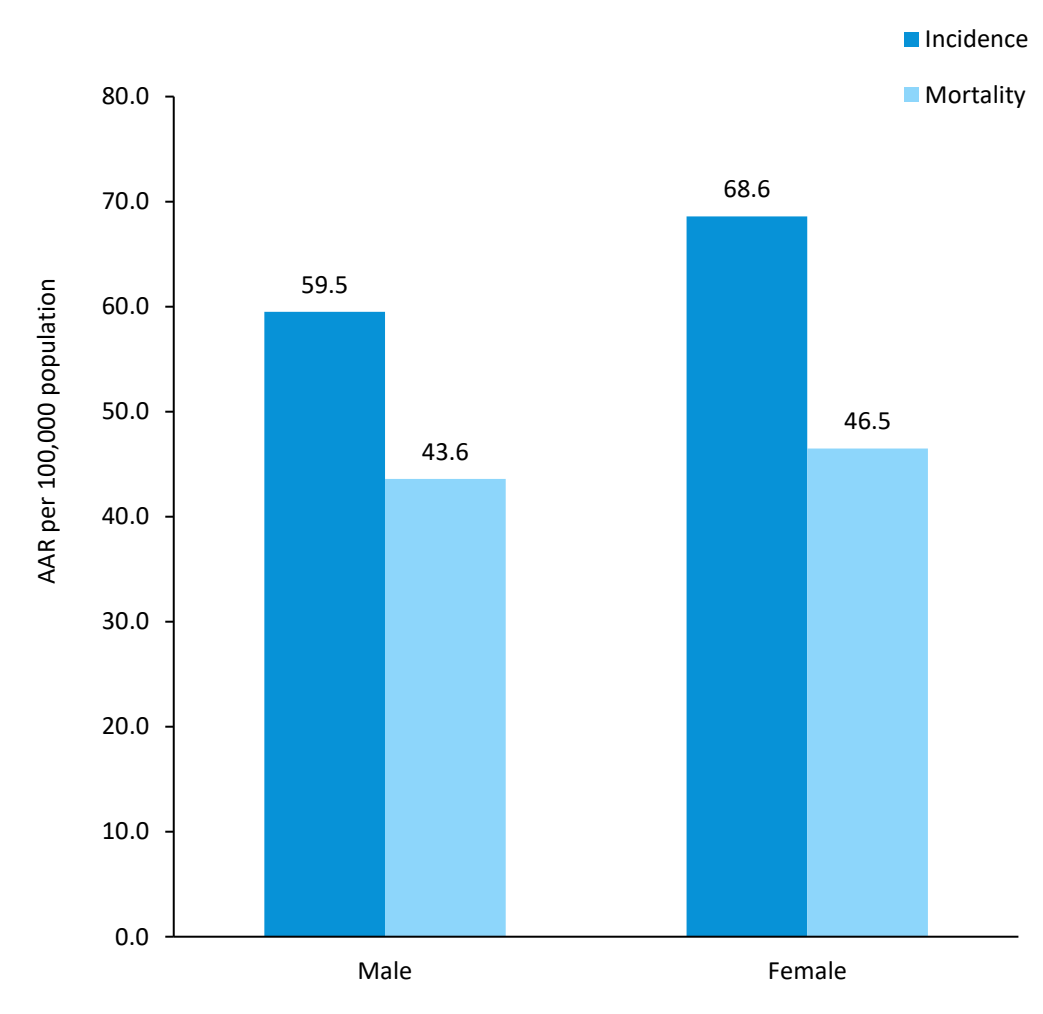
Sr. No.	Source of registration	Male	%	Female	%	Total	%
1	House/ Village visit	137	33.8	152	36.5	289	35.2
2	Guru Gobind Singh Medical College & Hospital, Faridkot	65	16.0	87	20.9	152	18.5
3	Homi Bhaba Cancer Hospital, Sangrur	64	15.8	48	11.5	112	13.6
4	Birth and Death, Mansa	27	6.7	41	9.9	68	8.3
5	Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh	16	4.0	18	4.3	34	4.1
6	Acharya Tulsi Dass Regional Cancer Research & Hospital, Bikaner	14	3.5	13	3.1	27	3.3
7	Advanced Cancer Care, Bathinda	12	3.0	12	2.9	24	2.9
8	Max Hospital, Bhatinda	13	3.2	9	2.2	22	2.7
9	Cancer Cell (MMPCRKS), Mansa	17	4.2	5	1.2	22	2.7
10	Punjab Cancer Care, Bhatinda	14	3.5	6	1.4	20	2.4
11	Dyanand Medical College & Hospital, Ludhiana	6	1.5	6	1.4	12	1.5
12	Government Medical College and Hospital, Chandigarh	4	1.0	1	0.2	5	0.6
13	Rajindra Hospital, Patiala	2	0.5	3	0.7	5	0.6
14	Monika Path Lab, Bhatinda	1	0.2	3	0.7	4	0.5
15	Fortis Hospital, Mohali	0	0.0	3	0.7	3	0.4
16	Mohandai Oswal Cancer Hospital, Ludhiana	1	0.2	2	0.5	3	0.4
17	Raikhya Nursing Home, Mansa	2	0.5	0	0.0	2	0.2
18	Sodhi Scan Centre Hospital, Sangrur	2	0.5	0	0.0	2	0.2
19	DMC, Ludhiana	1	0.2	1	0.2	2	0.2
20	Other	7	1.7	6	1.4	13	1.6
Total		405	100	416	100	821	100

9. Cancer incidence and mortality – All sites

In the year 2017-2018, the cancer registry registered 1159 cancer cases. In males, there were 554 (47.8%) cases and in females, 605 (52.2%) cases. The age-adjusted incidence rate is 59.5 per 100,000 population for males and 68.6 per 100,000 population for females.

In the year 2017-2018, the cancer registry registered 821 cancer deaths. In males, there were 405 (49.3%) deaths and in females, 416 (50.7%) deaths. The age-adjusted mortality rate for is 43.6 per 100,000 population for males and 46.5 per 100,000 population for females. The cancer incidence and mortality rates for all sites for males and females are presented in Figure 5.

Figure 5: All sites cancer incidence and mortality rate by sex: 2017-2018



10. Leading cancer sites by gender

In males; liver, prostate, oesophagus, mouth, brain and nervous system, lung, tongue, hypopharynx, NHL, and myeloid leukaemia are the leading cancer sites. In females; breast, cervix uteri, oesophagus, gall bladder, ovary, myeloid leukaemia, liver, corpus uteri, brain and nervous system, and lung cancer are the leading cancer sites. The top ten 10 leading cancer sites in males and females are presented in Figures 6 and 7 respectively.

Figure 6: Leading cancer sites in males: 2017-2018

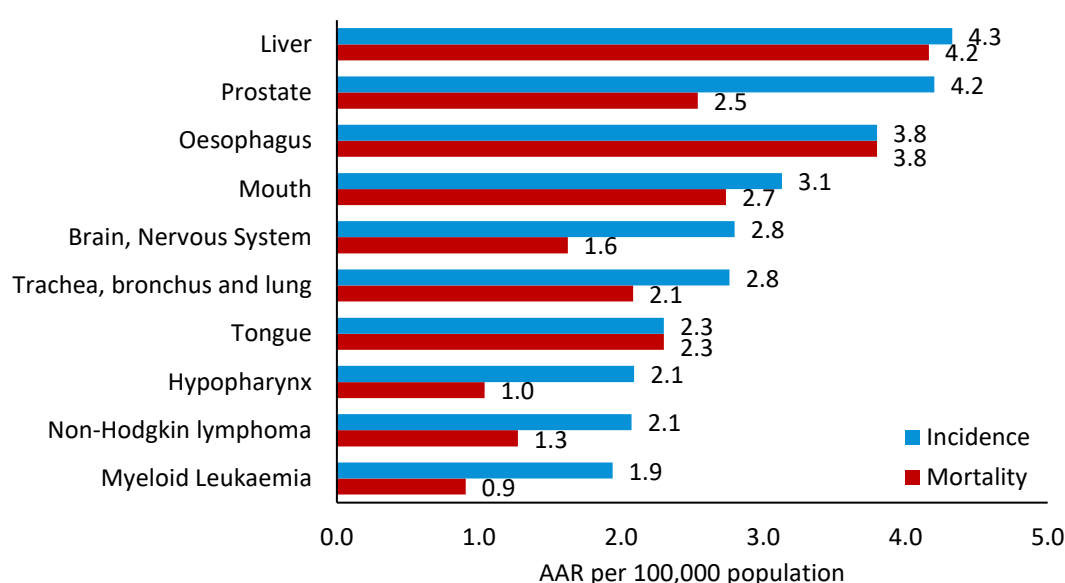
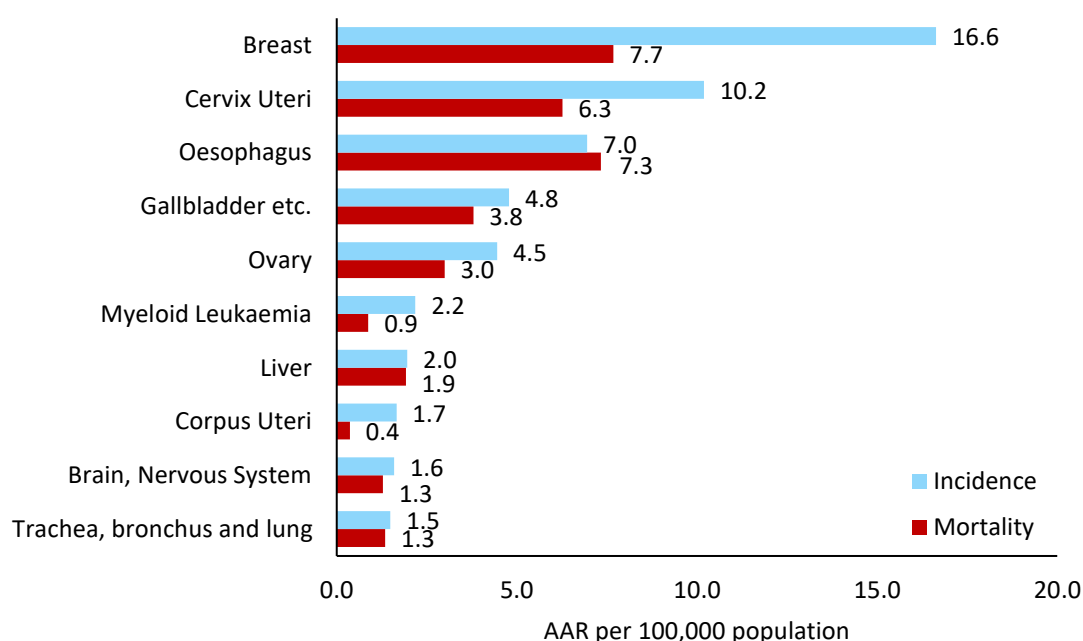


Figure 7: Leading cancer sites in females: 2017-2018



Comparison of leading cancer sites with other Indian registries

The site-wise cancer cases details are shown in respective tables below with crude rate, age-adjusted incidence rate, and truncated rate. The age-specific incidence rate for males and females for each site, as well as comparisons with other Indian registries, are also depicted in the respective figures below.

Cancer of the liver (C22)

	Male	Female
Number of cases	39	18
Percentage (%)	7.0	3.0
Crude incidence rate (CR)	4.4	2.3
Age-adjusted rate (AAR)	4.3	2.0
Truncated rate (TR)	8.3	3.2

Figure 8: Age-specific incidence rate of liver cancer (Mansa district): 2017-2018

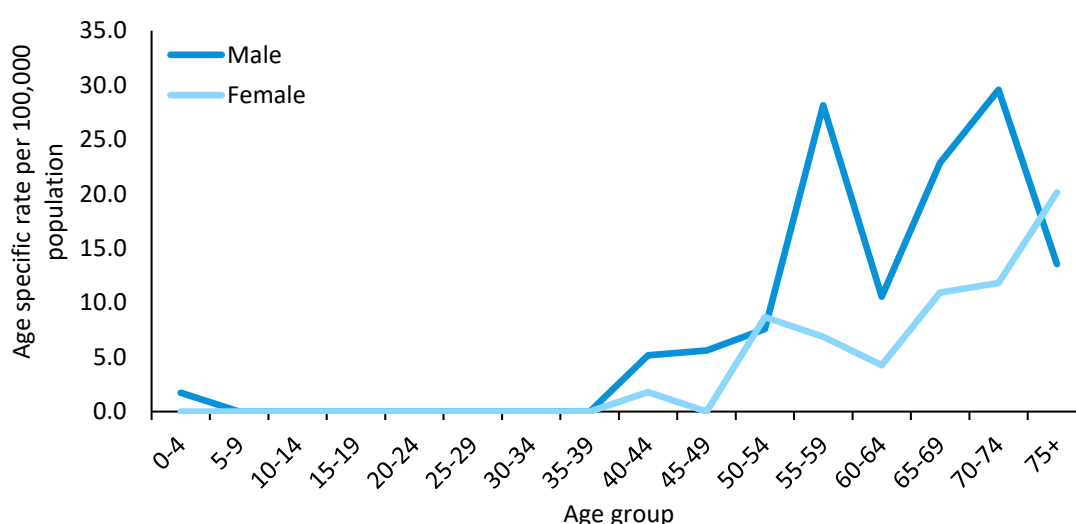
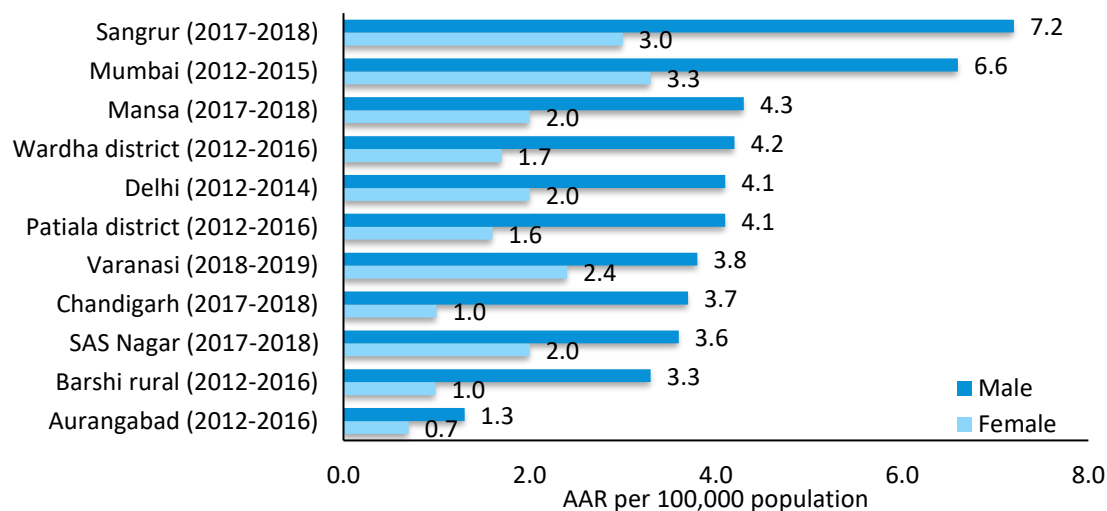


Figure 9: Comparison of liver cancer incidence rate with other Indian registries



Cancer of the oesophagus (C15)

	Male	Female
Number of cases	36	60
Percentage (%)	6.5	9.9
Crude incidence rate (CR)	4.1	7.7
Age-adjusted rate (AAR)	3.8	7.0
Truncated rate (TR)	7.0	14.9

Figure 10: Age-specific incidence rate of oesophagus cancer (Mansa district): 2017-2018

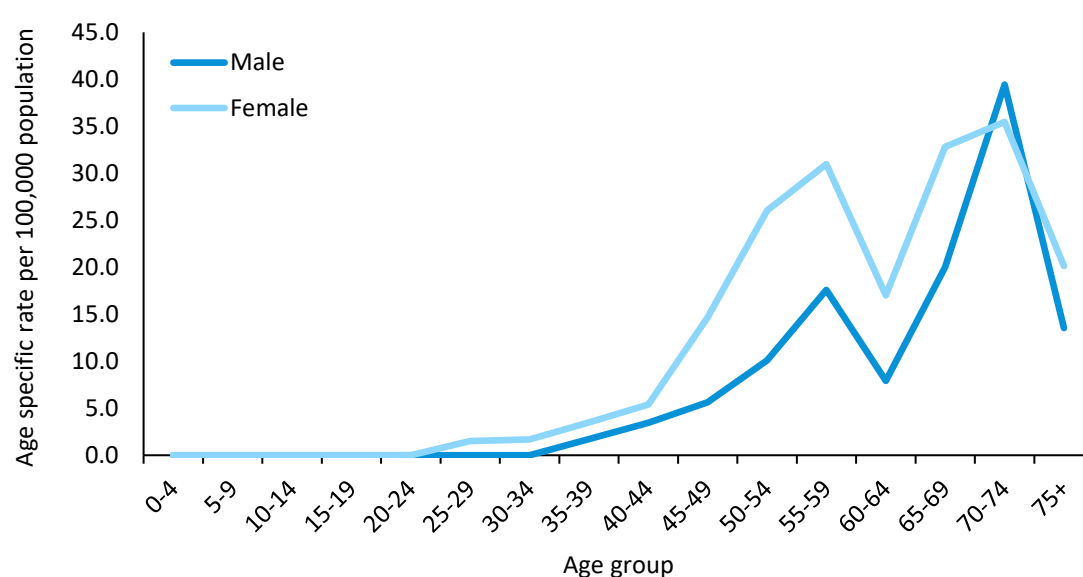
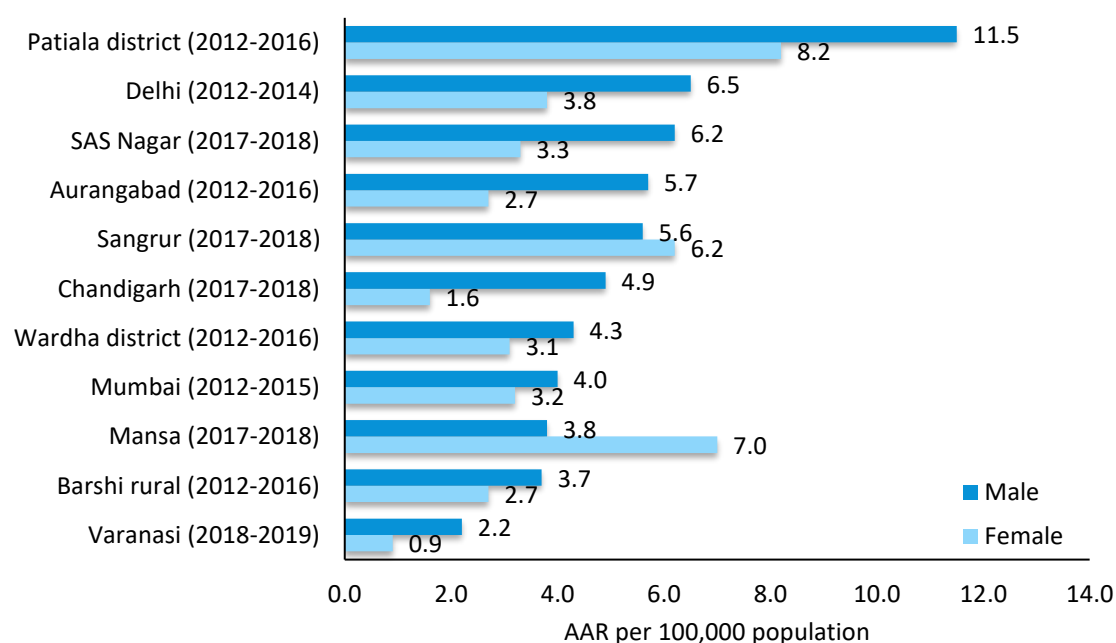


Figure 11: Comparison of oesophagus cancer incidence rate with other Indian registries



Cancer of the mouth (C03-C06)

	Male	Female
Number of cases	29	7
Percentage (%)	5.2	1.2
Crude incidence rate (CR)	3.3	0.9
Age-adjusted rate (AAR)	3.1	0.7
Truncated rate (TR)	7.5	0.8

Figure 12: Age-specific incidence rate of mouth cancer (Mansa district): 2017-2018

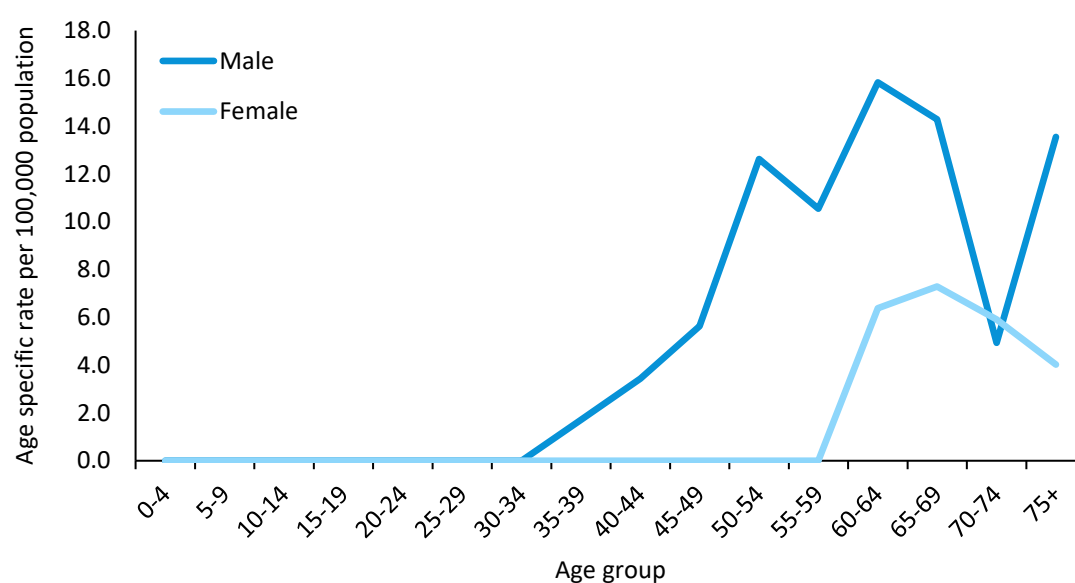
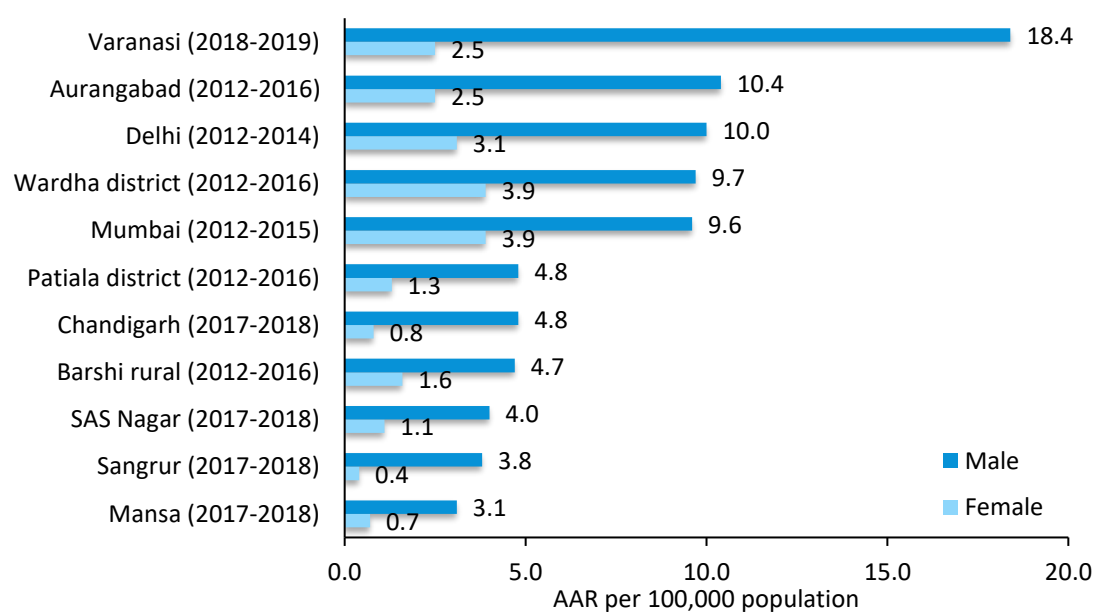


Figure 13: Comparison of mouth cancer incidence rate with other Indian registries



Cancer of the gall bladder (C23-C24)

	Male	Female
Number of cases	11	43
Percentage (%)	2.0	7.1
Crude incidence rate (CR)	1.2	5.5
Age-adjusted rate (AAR)	1.2	4.8
Truncated rate (TR)	3.0	9.4

Figure 14: Age-specific incidence rate of cancer of gall bladder cancer (Mansa district): 2017-2018

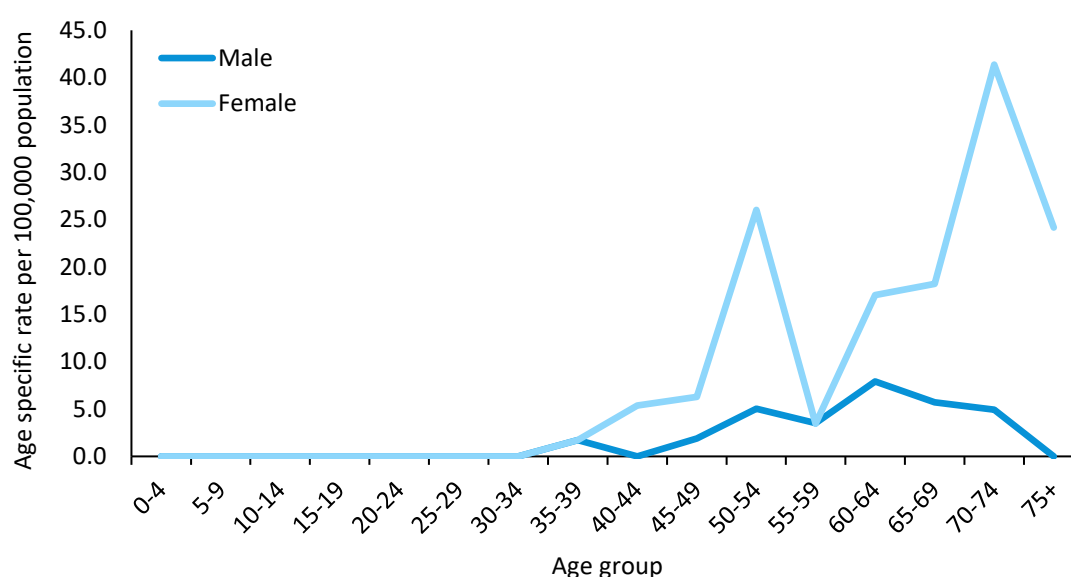
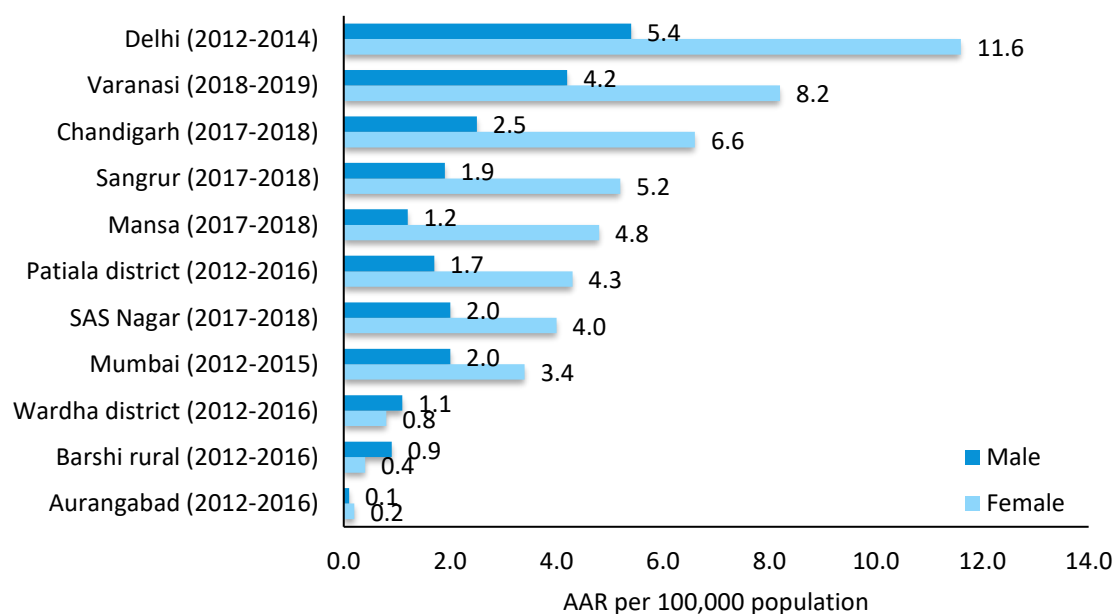


Figure 15: Comparison of gall bladder cancer incidence rate with other Indian registries



Cancer of the prostate (C61)

Number of cases	44
Percentage (%)	7.9
Crude incidence rate (CR)	5.0
Age-adjusted rate (AAR)	4.2
Truncated rate (TR)	3.5

Figure 16: Age-specific incidence rate of cancer of prostate cancer (Mansa district): 2017-2018

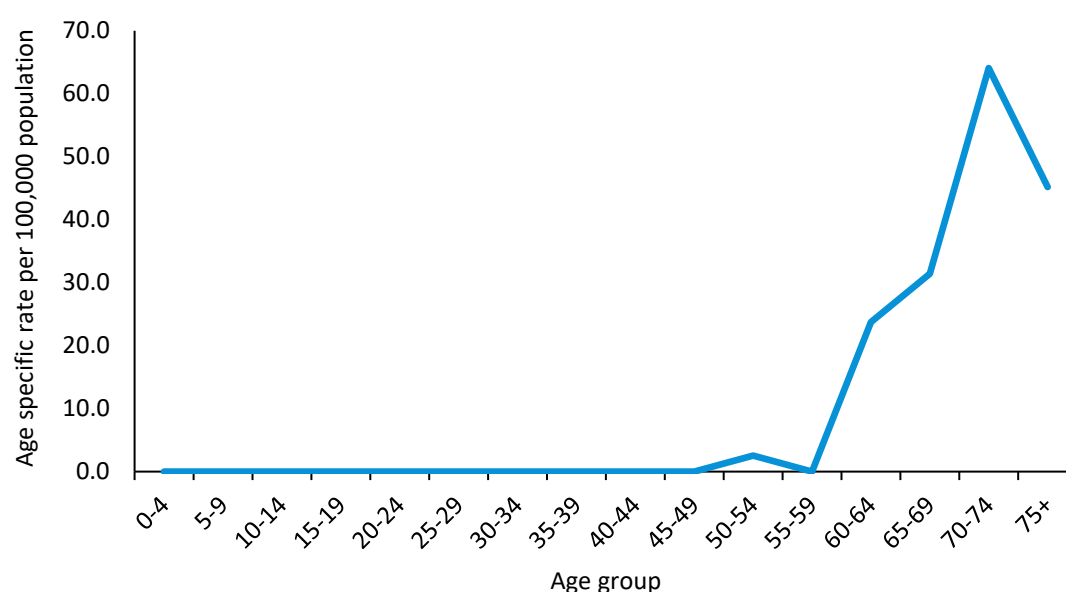
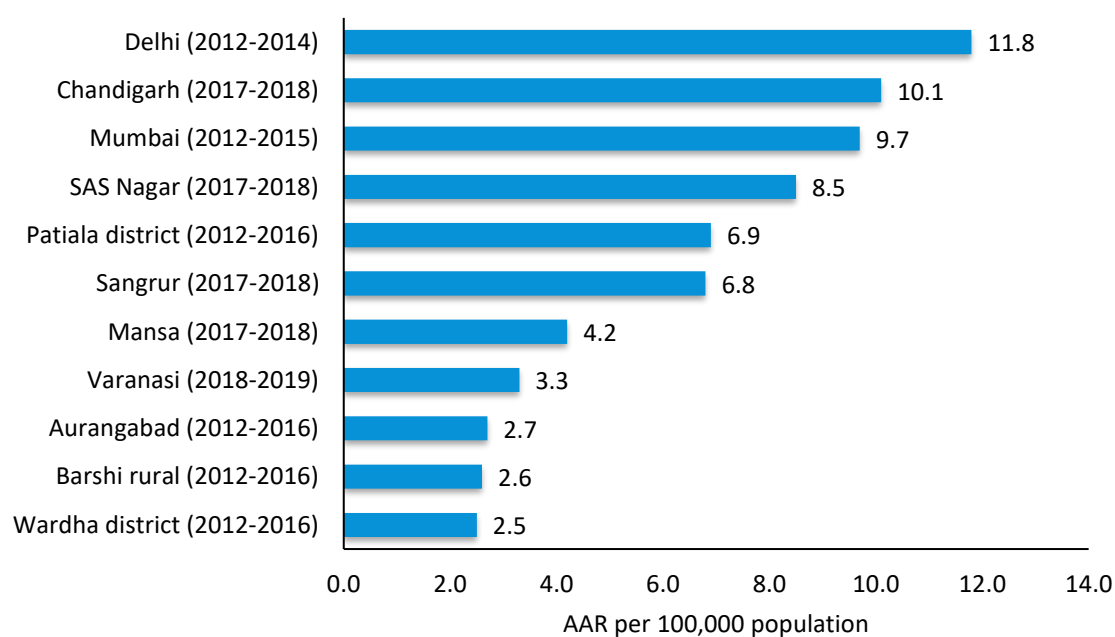


Figure 17: Comparison of prostate cancer incidence rate with other Indian registries



Cancer of the breast (C50)

	Female
Number of cases	144
Percentage (%)	23.8
Crude incidence rate (CR)	18.5
Age-adjusted rate (AAR)	16.6
Truncated rate (TR)	38.0

Figure 18: Age-specific incidence rate of cancer of breast cancer (Mansa district): 2017-2018

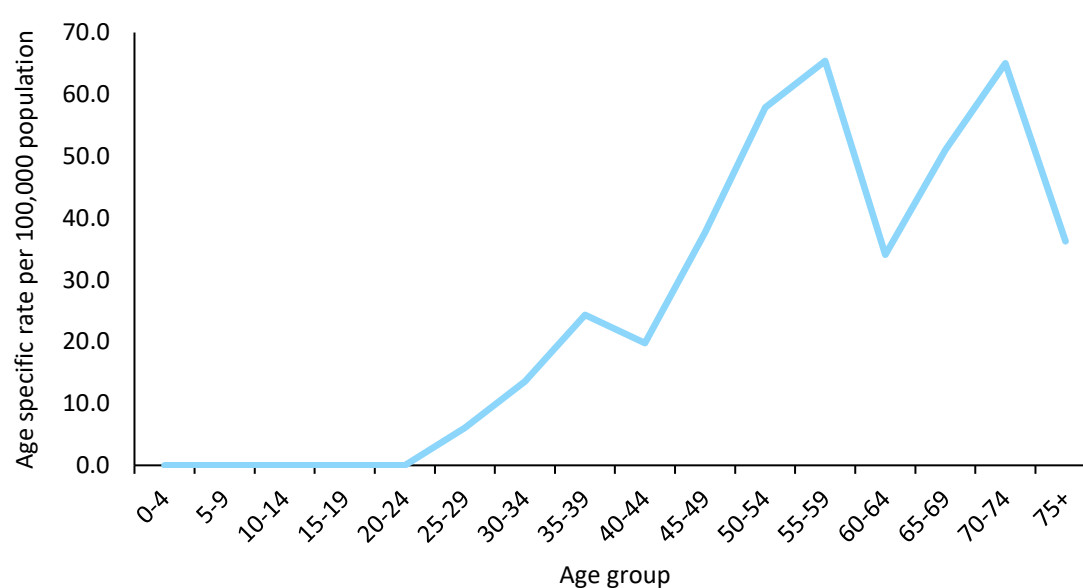
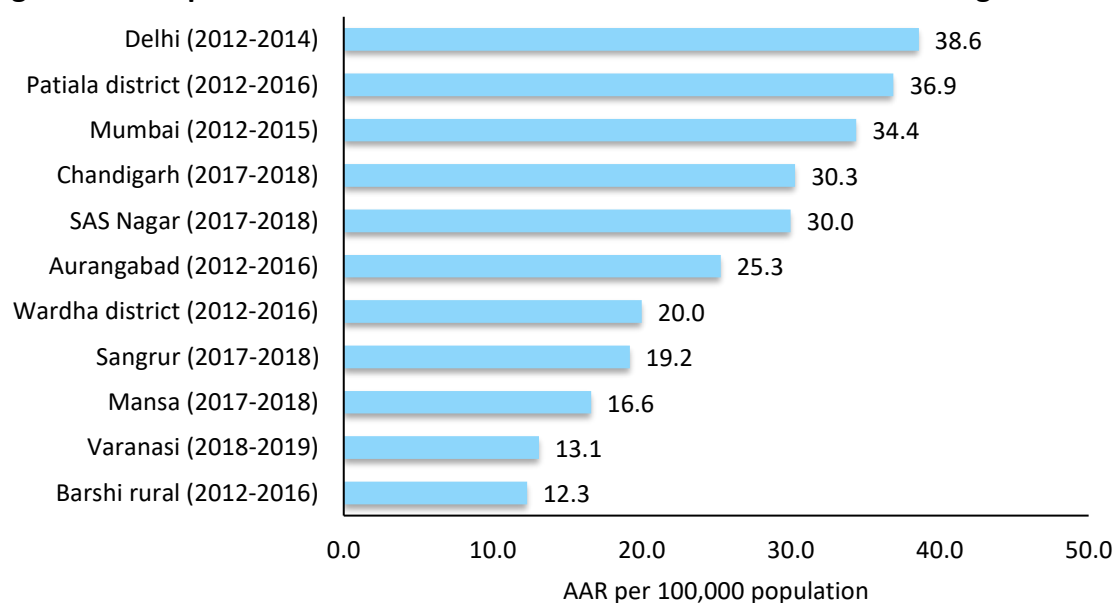


Figure 19: Comparison of breast cancer incidence rate with other Indian registries



Cancer of cervix uteri (C53)

Number of cases	90
Percentage (%)	14.9
Crude incidence rate (CR)	11.5
Age-adjusted rate (AAR)	10.2
Truncated rate (TR)	24.3

Figure 20: Age-specific incidence rate of cancer of cervix uteri cancer (Mansa district): 2017-2018

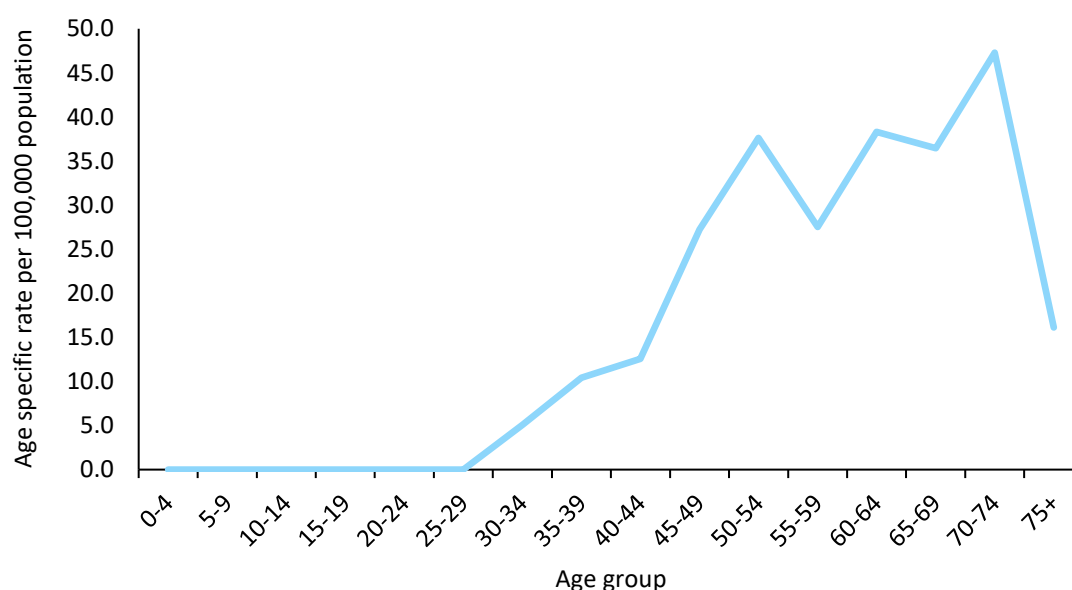
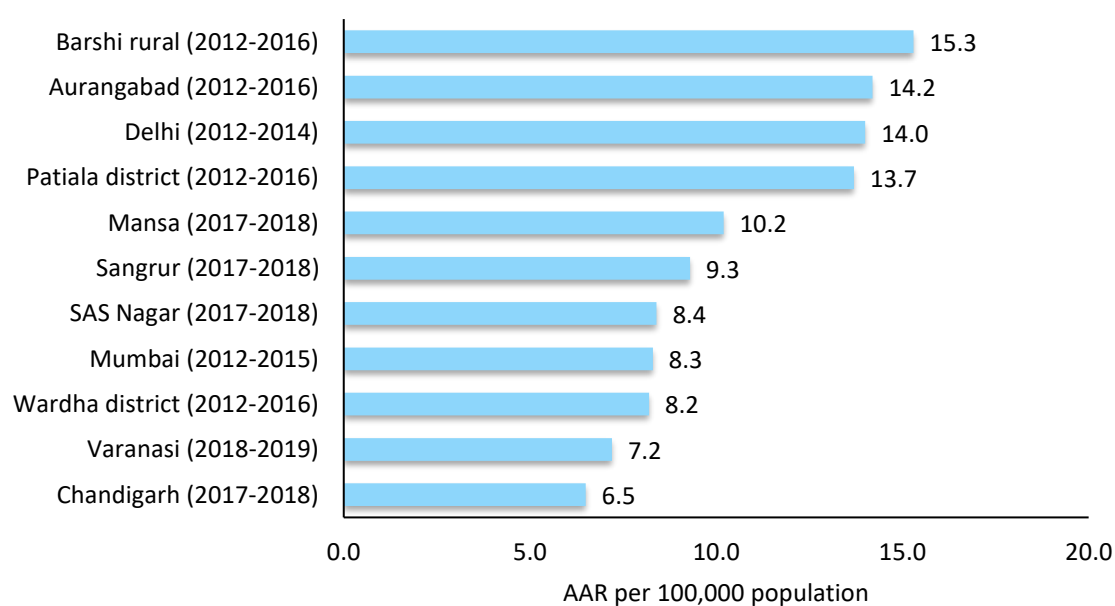


Figure 21: Comparison of cervix uteri cancer incidence rate with other Indian registries



Cancer of the ovary (C56)

Number of cases	38
Percentage (%)	6.3
Crude incidence rate (CR)	4.9
Age-adjusted rate (AAR)	4.5
Truncated rate (TR)	9.8

Figure 22: Age-specific incidence rate of ovarian cancer (Mansa district): 2017-2018

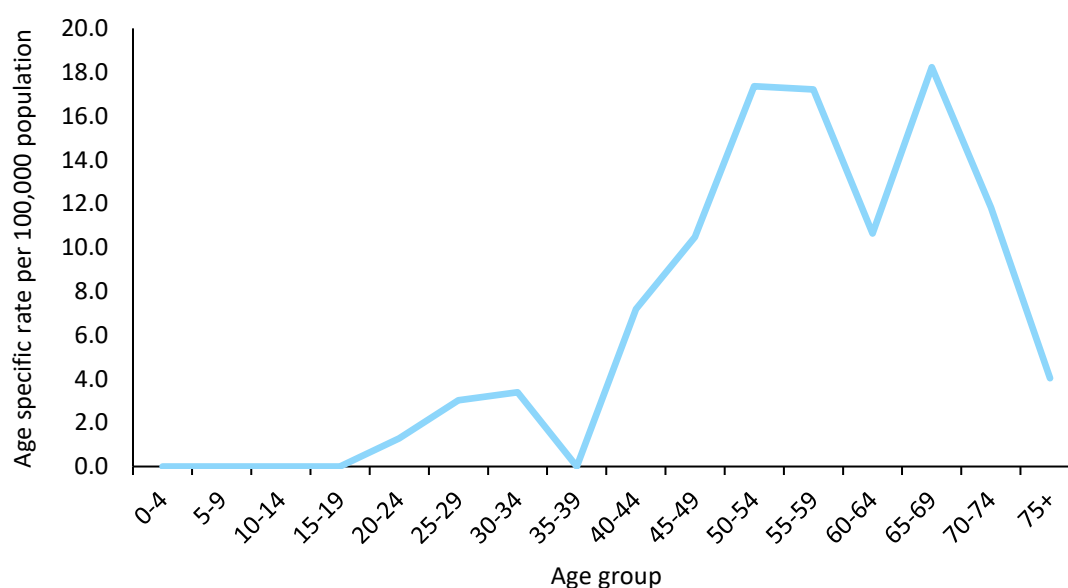


Figure 23: Comparison of ovarian cancer incidence rate with other Indian registries

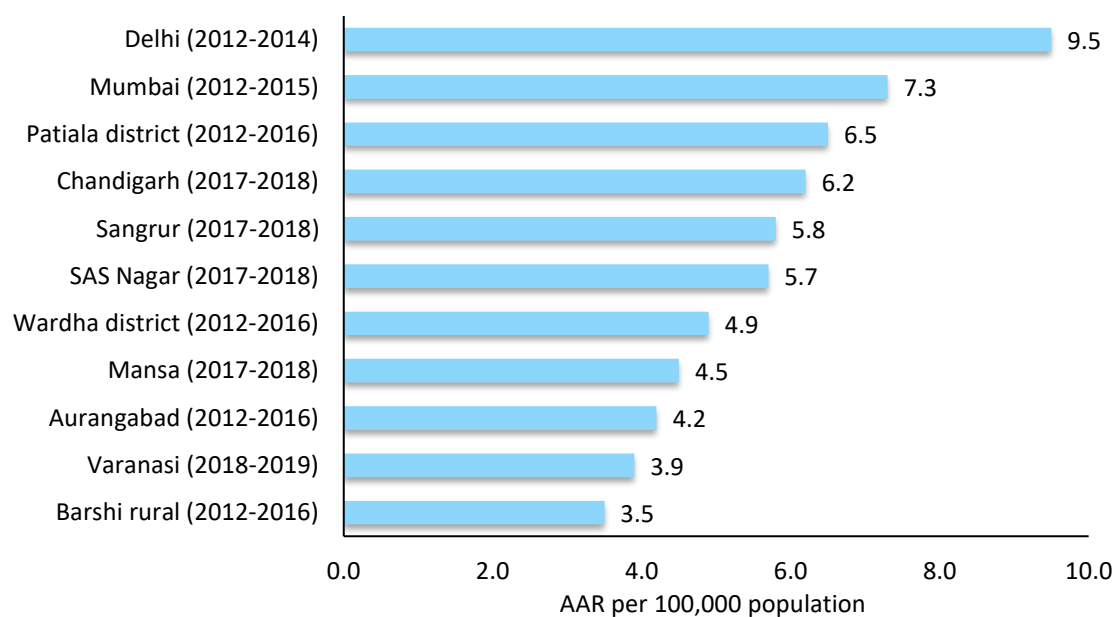


Figure 24: Age-specific incidence and mortality rate: Male all cancer sites (Mansa district): 2017-2018

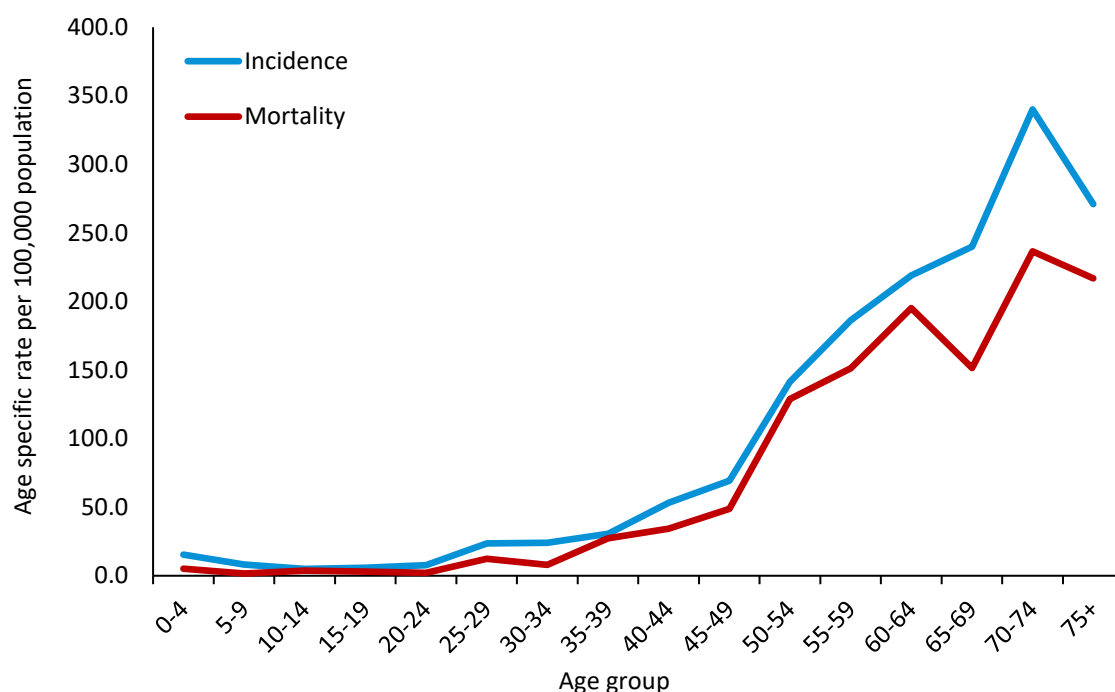
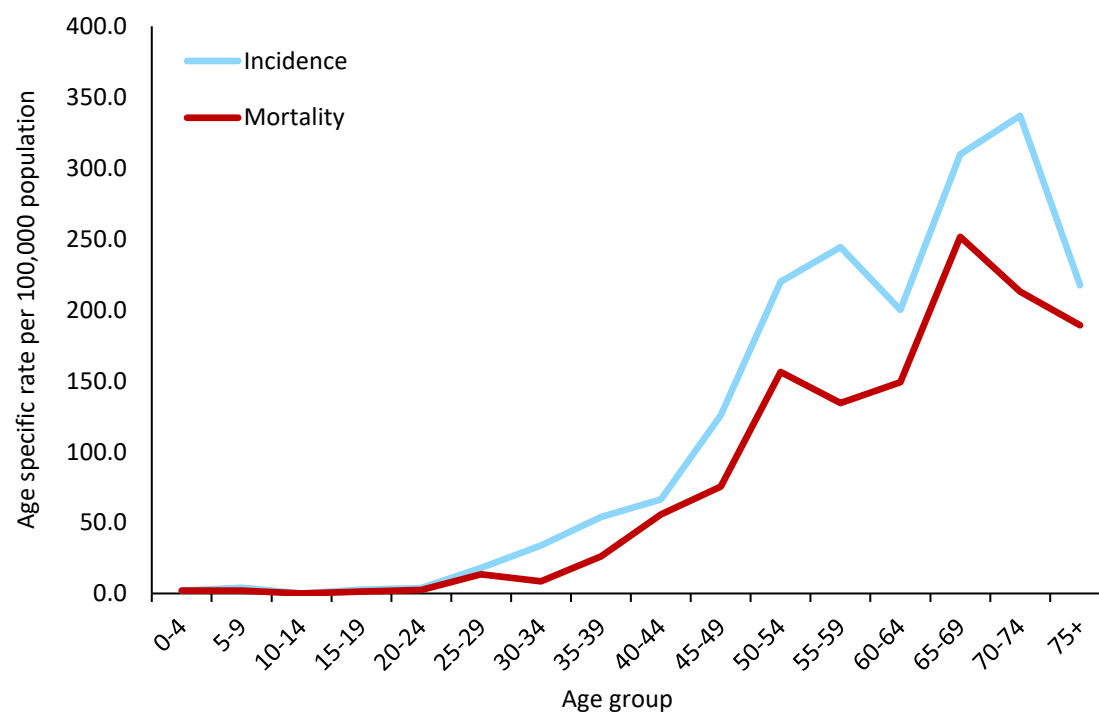


Figure 25: Age-specific incidence and mortality rate: Female all cancer sites (Mansa district): 2017-2018



Other and unspecified sites

The other and unspecified cancer sites refer to the following cancer types:

C26	Other and Ill-Defined Digestive Organ	C77	Secondary and Unspecified Malignant Neoplasm of Lymph Node
C39	Other and Ill-Defined Sites Within Respiratory Systems and Intra thoracic Organ	C78	Secondary Malignant Neoplasm of Respiratory and Digestive Organs,
C48	Retro Peritoneum and Peritoneum	C79	Secondary Malignant Neoplasm of Other and Unspecified Sites
C75	Other Endocrine Glands and Related Structures	C80	Malignant Neoplasm Without Specification of Site
C76	Other and Ill-Defined, Secondary and Unspecified sites	C97	Malignant Neoplasm of Independent (Primary) Multiple sites

In males, out of 554 cases, 71 (12.8%) cases are of other and unspecified sites. The predominant cases are C80 – primary unknown (9.9%), followed by C76 – Other and Ill-Defined, Secondary and Unspecified sites, and C77 Secondary and Unspecified Malignant Neoplasm of Lymph Node (1.3%). In females, out of 605 cases, 48 (7.9%) cases are of other and unspecified sites. The predominant cases are C80 – primary unknown (5.6%), followed by C48 – Retro Peritoneum and Peritoneum, and C76 – other and ill-defined, secondary and unspecified sites (0.7%). The details are presented in table 11.

Due to improvement in the diagnostic and treatment facility, the percentage of the Primary Site Unknown will be decreased.

Table 11: Other and unspecified cases by sex

ICD 10	Male		Female	
	Number	%	Number	%
C26	1	0.2	1	0.2
C48	1	0.2	4	0.7
C75	0	0.0	0	0.0
C76	7	1.3	4	0.7
C77	7	1.3	2	0.3
C78	0	0.0	3	0.5
C79	0	0.0	0	0.0
C80	55	9.9	34	5.6
Total	71/554	12.8/100.0	48/605	7.9/100

Cancer of other and unspecified sites (C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

	Male	Female
Number of cases	71	48
Percentage (%)	12.8	7.9
Crude incidence rate (CR)	8.1	6.2
Age-adjusted rate (AAR)	7.4	5.2
Truncated rate (TR)	11.1	7.5

Figure 26: Age-specific incidence rate of other and unspecified cancer (Mansa district): 2017-2018

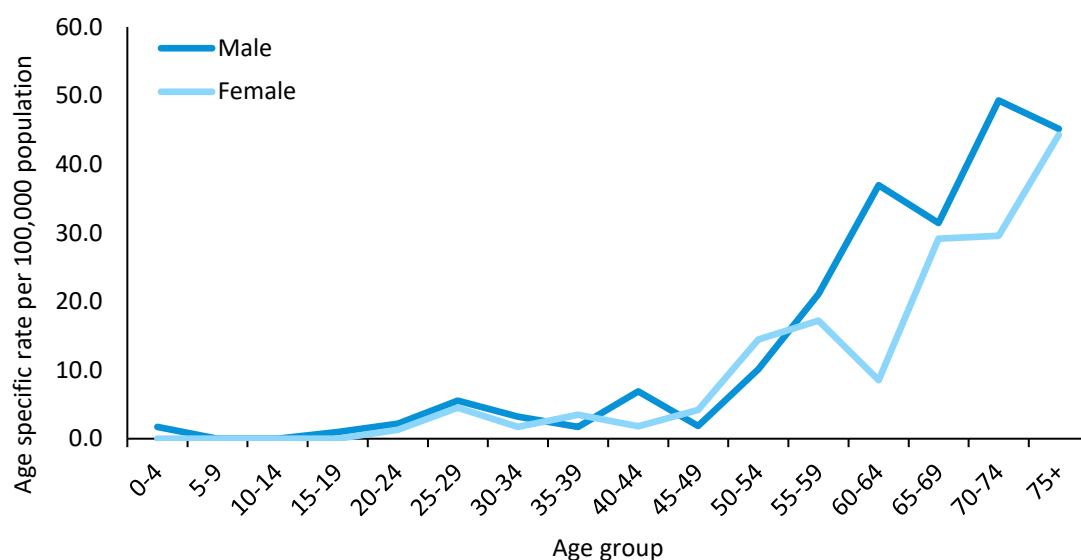
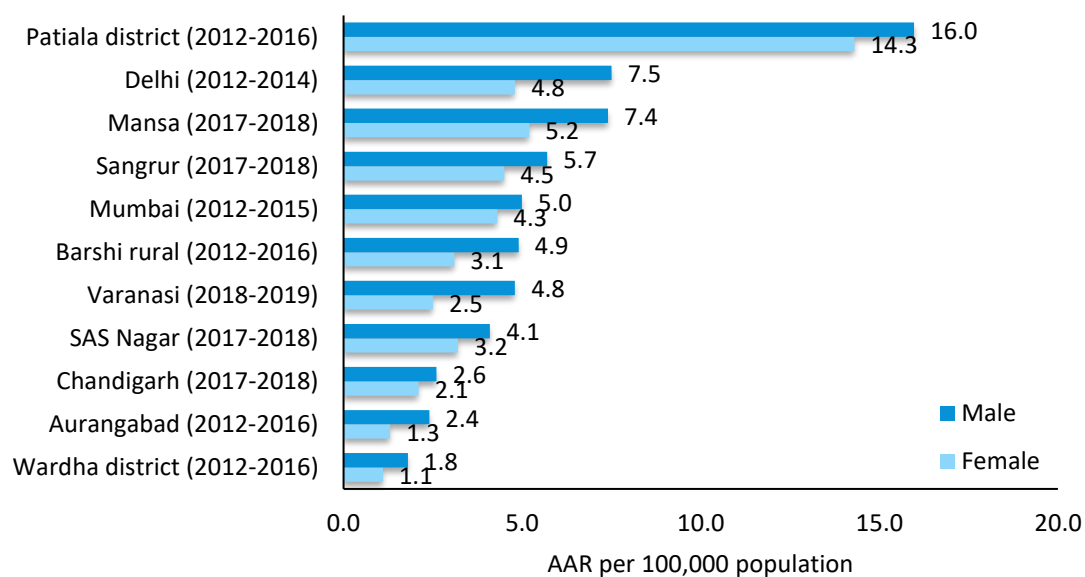


Figure 27: Comparison of other and unspecified cancer incidence rate with other Indian registries



11. Cancer pattern in paediatric age-group (0-14 years)

In the year 2018-2019, out of 1159 registered cancer cases 21 (1.8%) paediatric cases (0-14 age group) were registered. The age-adjusted incidence for boys is 100.6 per million and 20.4 per million for girls. Due to COVID-19 pandemic the registry activities were badly affected due to which the registry might have missed some cases. The registry observed under registration in girls.

The leading cancer sites in boys are leukaemia unspecified, hodgkins disease, brain and nervous system, eye, lymphoid leukaemia, myeloid leukaemia, liver, and connective and soft tissue. While in girls, brain, bone, leukaemia unspecified, lymphoid leukaemia, kidney, connective, soft tissue, live, hypopharynx, hodgkins disease, and salivary gland are the leading cancer sites. Leading cancer sites in boys and girls are mentioned below in figures 28 and 29 respectively.

Figure 28: Leading cancer sites in boys: 2017-2018

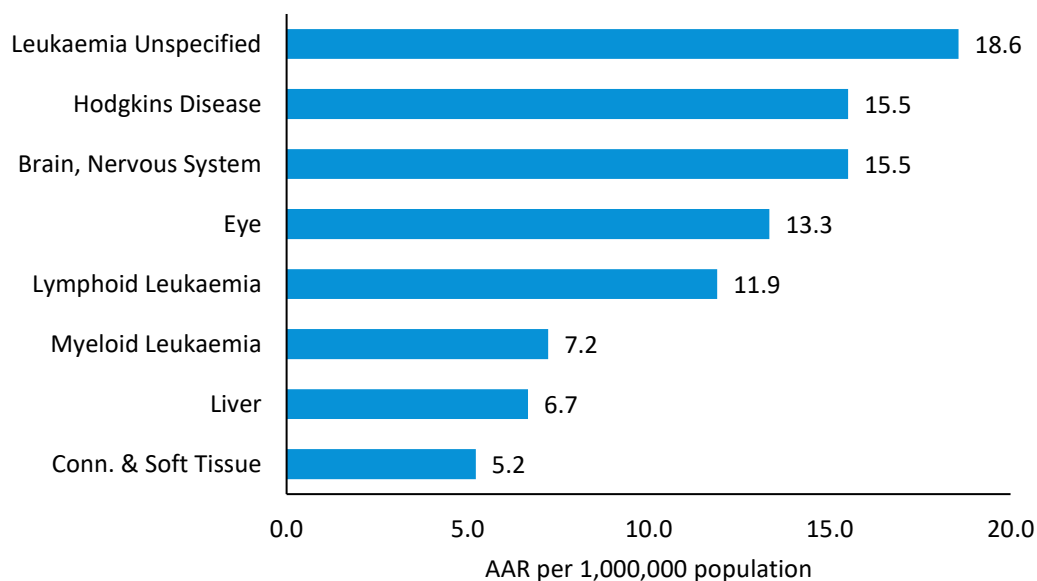
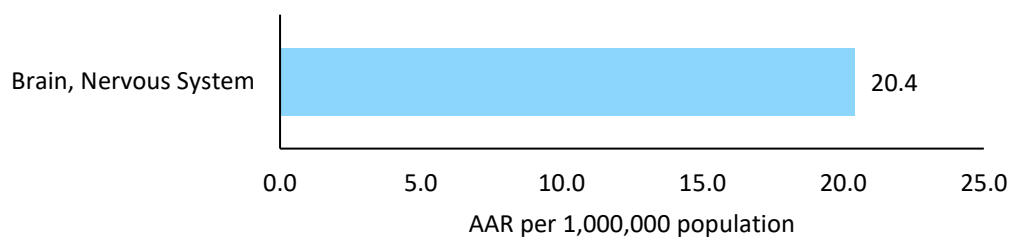


Figure 29: Leading cancer sites in girls: 2017-2018



International Classification of Childhood Cancer, 3rd edition (ICCC-3) has mentioned the separate coding to know the cancer burden in children according to appropriate diagnostic groups. ICCC-3 having twelve main groups and further these are divided in to subgroups and division of selected subgroups. The age-adjusted incidence rate as per subgroups in boys and girls per million population is mentioned in Table 12. **The paediatric cancer burden as per ICCC-3 standard is mentioned separately in Table 39 and 40.** ⁽¹⁵⁾

Proportion of paediatric cancer cases as per 12 main diagnostic group as per ICCC-3 standard is presented in figure 30.

Figure 30: Proportion of paediatric cancer cases by age-group: Both sex (Mansa district)

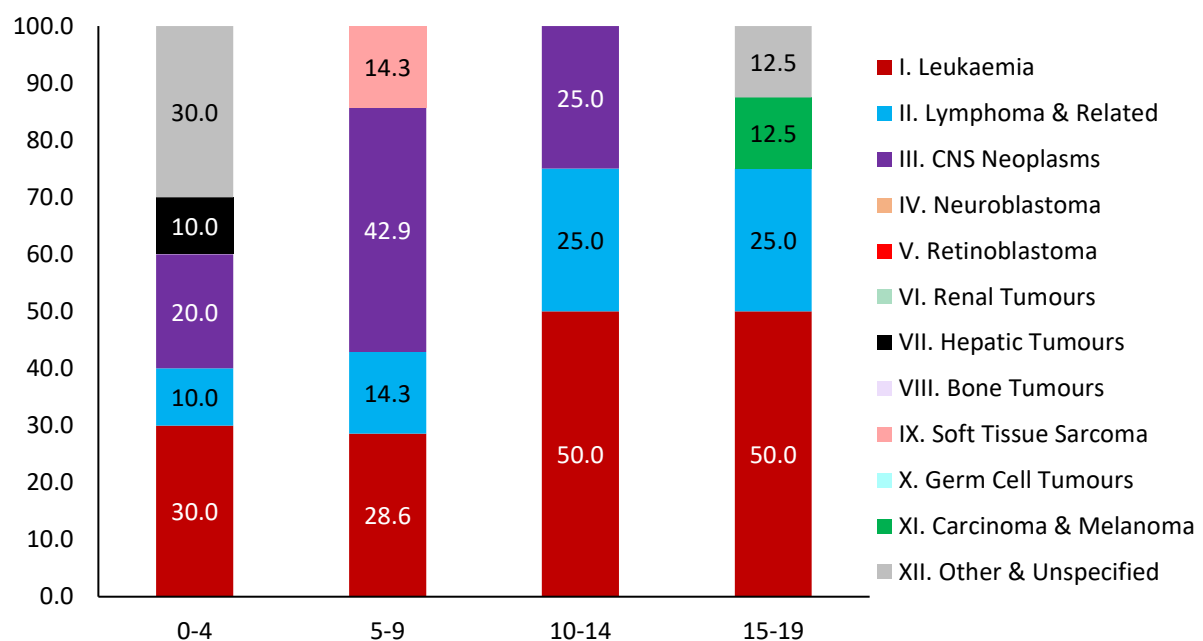


Table 12: Cancer cases distribution as per the International Classification of Childhood Cancer (ICCC) code: 2017-2018

ICCC Code	Site	Boys			Girls		
		Number	%	AAR*	Number	%	AAR*
1a	Lymphoid leukaemias	2	11.1	11.9			
1b	Acute myeloid leukaemias	2	11.1	7.2			
1e	Unspecified and other specified leukaemias	3	16.7	18.6			
2a	Hodgkin lymphomas	3	16.7	15.5			
3a	Ependymomas and choroid plexus tumor	1	5.6	6.7	2	66.7	12.9
3c	Intracranial and intraspinal embryonal tumors	1	5.6	3.6			
3f	Unspecified intracranial and intraspinal neoplasms	1	5.6	5.2	1	33.3	7.5
7c	Unspecified malignant hepatic tumors	1	5.6	6.7			
9d	Other specified soft tissue sarcomas	1	5.6	5.2			
12b	Other unspecified malignant tumors	3	16.7	20.0			
ALL	All sites	18	100	100.6	3	100	20.4

* AAR per 1,000,000 population

12. Tobacco-related cancers

Tobacco use has a detrimental impact on health and is one of the major causes of non-communicable diseases. The anatomical sites are included to calculate the tobacco-related cancer burden based on the guidelines of International Agency for Research on Cancer (IARC), World Health Organization (WHO).⁽¹⁶⁾ Lip (C00), tongue (C01-C02), mouth (C03-C06), pharynx (C10, C12-C14), oesophagus (C15), larynx (C32), lung (C33-C34) and urinary bladder (C67) cancers are associated with the use to tobacco.

As per the Mansa registry data, tobacco-related cancer burden is 31.9% among males while 15.9% among females. The leading sites under tobacco-related cancer are esophagus, mouth, lung, tongue, and hypopharynx in males; and in females, esophagus, lung, mouth, hypopharynx, tongue and bladder.

In males out of 177; 95 (53.7%) are farmer, 29 (16.4%) unskilled worker and 17 (9.6%) are clerical/shop owner. In the female out of 96; 89 (92.7%) are housewives. Considering the educational level in this population 59.3% of males and 83.3% of females are illiterate.

Table 13: Tobacco-related cancer burden in males: 2017-2018

ICD10	Site	Number	%	CR	AAR	TR
C00	Lip	3	0.5	0.3	0.3	1.1
C01-C02	Tongue	23	4.2	2.6	2.3	4.0
C03-C06	Mouth	29	5.2	3.3	3.1	7.5
C10	Other Oropharynx	8	1.4	0.9	0.9	2.0
C12-C13	Hypopharynx	20	3.6	2.3	2.1	3.6
C14	Pharynx Unspecified	0	0.0	0.0	0.0	0.0
C15	Oesophagus	36	6.5	4.1	3.8	7.0
C32	Larynx	17	3.1	1.9	1.7	3.0
C33-C34	Lung etc.	26	4.7	3.0	2.8	5.4
C67	Urinary Bladder	15	2.7	1.7	1.7	4.2
C00-C06, C10, C12-C15, C32-C34 & C67	Tobacco-related cancer	177	31.9	20.1	18.7	37.6

Table 14: Tobacco-related cancer burden along with associated site in female: 2017-2018

ICD10	Site	Number	%	CR	AAR	TR
C00	Lip	1	0.2	0.1	0.1	0.0
C01-C02	Tongue	4	0.7	0.5	0.4	0.5
C03-C06	Mouth	7	1.2	0.9	0.7	0.8
C10	Other Oropharynx	0	0.0	0.0	0.0	0.0
C12-C13	Hypopharynx	6	1.0	0.8	0.7	0.8
C14	Pharynx Unspecified	1	0.2	0.1	0.1	0.0
C15	Oesophagus	60	9.9	7.7	7.0	14.9
C32	Larynx	1	0.2	0.1	0.1	0.3
C33-C34	Lung etc.	14	2.3	1.8	1.5	1.8
C67	Urinary Bladder	2	0.3	0.3	0.2	0.4
C00-C06, C10, C12-C15, C32-C34 & C67	Tobacco-related cancer	96	15.9	12.3	10.7	19.6

Table 15: Occupation in tobacco-related cancer cases: 2017-2018

Occupation	Male		Female		Total	
	Number	%	Number	%	Number	%
Professional	1	0.6	0	0.0	1	0.4
Clerical/Shop owner	17	9.6	0	0.0	17	6.2
Farmer	95	53.7	1	1.0	96	35.2
Skilled worker	5	2.8	0	0.0	5	1.8
Semi-skilled worker	10	5.6	0	0.0	10	3.7
Unskilled worker	29	16.4	1	1.0	30	11.0
Unemployed	1	0.6	0	0.0	1	0.4
Student	2	1.1	0	0.0	2	0.7
Housewife	3	1.7	89	92.7	92	33.7
Government employee	5	2.8	2	2.1	7	2.6
Private employee	2	1.1	0	0.0	2	0.7
Other	7	4.0	3	3.1	10	3.7
Total	177	100	96	100	273	100

Table 16: Educational characteristics in tobacco-related cancer cases: 2017-2018

Education	Male		Female		Total	
	Number	%	Number	%	Number	%
Illiterate	105	59.3	79	82.3	184	67.4
Literate	13	7.3	2	2.1	15	5.5
Primary (1-7 std)	18	10.2	9	9.4	27	9.9
Secondary (8-10 std)	32	18.1	3	3.1	35	12.8
Technical after 10 th	5	2.8		0.0	5	1.8
College	3	1.7	2	2.1	5	1.8
Post-graduate	1	0.6	1	1.0	2	0.7
Total	177	100	96	100	273	100

Table 17: Religion in tobacco-related cancer cases: 2017-2018

Religion	Male		Female		Total	
	Number	%	Number	%	Number	%
Hindu	38	21.5	8	8.3	46	16.8
Muslim	2	1.1	1	1.0	3	1.1
Sikh	137	77.4	87	90.6	224	82.1
Total	177	100	96	100	273	100

13. Cancer burden as per anatomical system

In males, the majority of cancer cases involves the site from the digestive organ (24.2%) followed by Head and Neck cancer (20.8%), Lymphoid and Haematopoietic tissue (13.7%), and male genital organ (11.4%) with AAR 14.6, 12.1, 8.7 and 6.2 per 100,000 population respectively. In digestive organs, the liver and oesophagus are the predominant cancers while in Head and Neck cancer, the predominant cancers are the tongue and mouth. Among Lymphoid and Haematopoietic tissue, NHL and lymphoid leukaemia are the predominant cancers. Prostate cancer is predominant cancer in the male genital organs.

In females, the majority of cancer cases involved the sites from the female genital organ (24.8%) followed by the digestive organ (24.6%), breast (23.8%), and Head and Neck (6.3%) with AAR 17.2, 16.6, 16.6, and 4.0 per 100,000 population respectively. In the female genital organ, cervix uteri, and ovary are predominant cancer while in the digestive organ, oesophagus and gall bladder are predominant cancer. The details are presented in Figure 31, Tables 18 and 19.

Figure 31: Cancer rates by different anatomical sites in Mansa district: 2017-2018

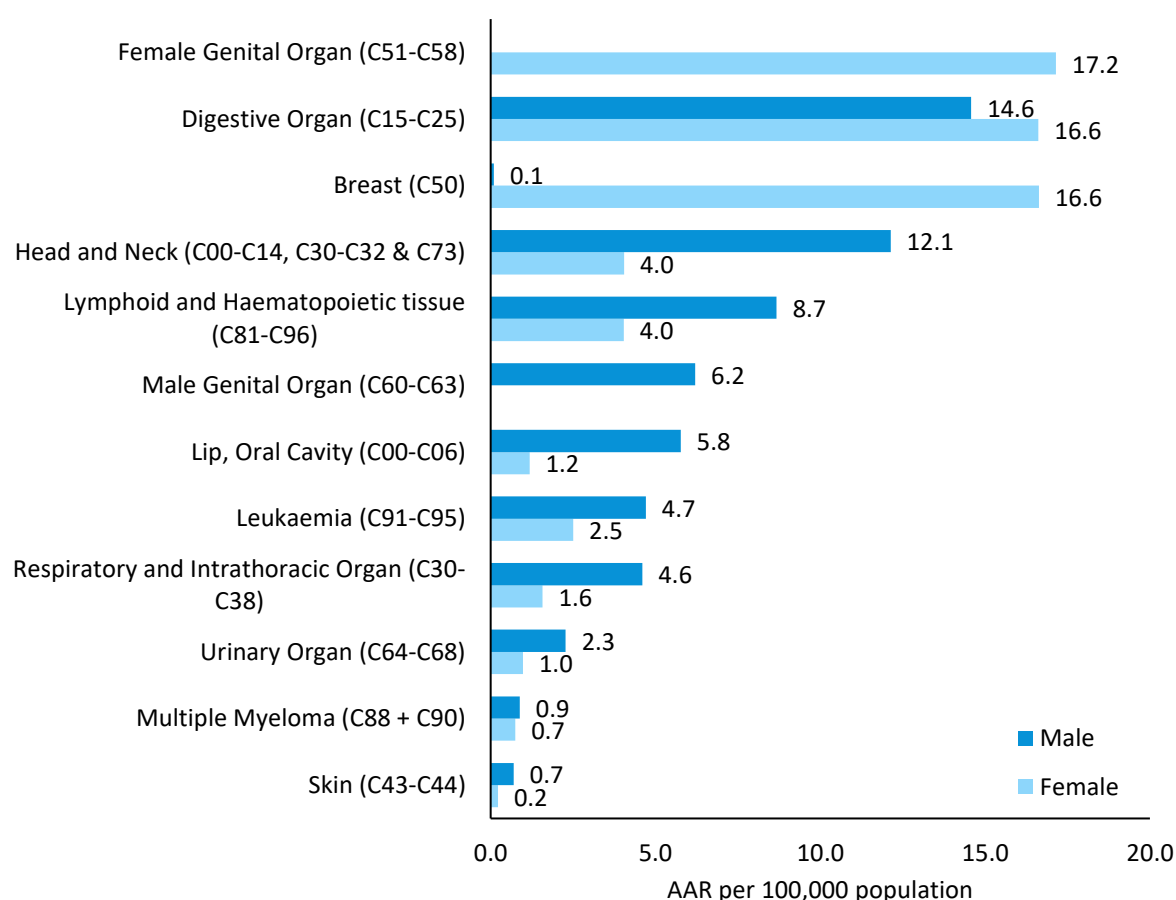


Table 18: Cancer burden as per the various anatomical system in male: 2017-2018

ICD10	Site	Number	%	CR	AAR	TR
C15-C25	Digestive Organ	135	24.4	15.3	14.6	29.1
C00-C14, C30-C32 & C73	Head and Neck	115	20.8	13.1	12.1	24.9
C81-C96	Lymphoid and Haematopoietic tissue	76	13.7	8.6	8.7	12.8
C60-C63	Male Genital Organ	63	11.4	7.2	6.2	7.5
C00-C06	Lip, Oral Cavity	55	9.9	6.2	5.8	12.6
C91-C95	Leukaemia	41	7.4	4.7	4.7	5.6
C30-C38	Respiratory and Intrathoracic Organ	44	7.9	5.0	4.6	8.7
C64-C68	Urinary Organ	21	3.8	2.4	2.3	5.2
C88 + C90	Multiple Myeloma	8	1.4	0.9	0.9	1.6
C43-C44	Skin	6	1.1	0.7	0.7	1.6
C50	Breast	1	0.2	0.1	0.1	0.3

Table 19: Cancer burden as per the various anatomical system in female: 2017-2018

ICD10	Site	Number	%	CR	AAR	TR
C51-C58	Female Genital Organ	150	24.8	19.2	17.2	39.1
C15-C25	Digestive Organ	149	24.6	19.1	16.6	33.5
C50	Breast	144	23.8	18.5	16.6	38.0
C00-C14, C30-C32 & C73	Head and Neck	38	6.3	4.9	4.0	7.1
C81-C96	Lymphoid and Haematopoietic tissue	35	5.8	4.5	4.0	8.1
C91-C95	Leukaemia	22	3.6	2.8	2.5	5.0
C30-C38	Respiratory and Intrathoracic Organ	15	2.5	1.9	1.6	2.1
C00-C06	Lip, Oral Cavity	12	2.0	1.5	1.2	1.4
C64-C68	Urinary Organ	9	1.5	1.2	1.0	1.4
C88 + C90	Multiple Myeloma	6	1.0	0.8	0.7	1.7
C43-C44	Skin	2	0.3	0.3	0.2	0.7

14. Cancer trends in Mansa district

The all-site cancer incidence trends for males and females have increased. The increased cancer incidence trend indicates an improved cancer registration process. Initially, there might have been a possibility of under registration. With continuous efforts towards proper documentation and establishment of HBCH, Sangrur has greatly improved the cancer registration process.

For males, the oesophageal cancer trend is showing a stable incidence rate but liver, brain, mouth, and prostate cancer incidence shows increasing trends.

In females; breast, gall bladder, and liver cancer incidence are showing increasing trends throughout 2013 – 2018, while oesophagus, mouth, ovary, and cervical cancer trends are stable. There may be under registration of cervical cancer cases in the year 2015-2016.

Figure 32: All sites cancer trends in Mansa district

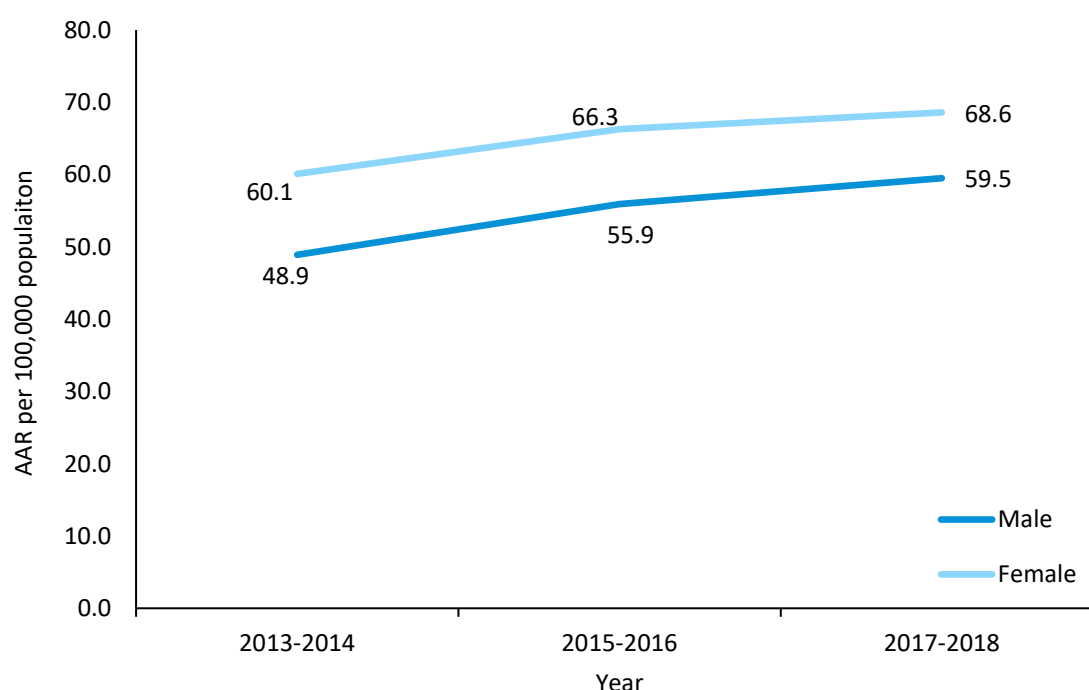


Figure 33: Oesophagus cancer trends in Mansa district

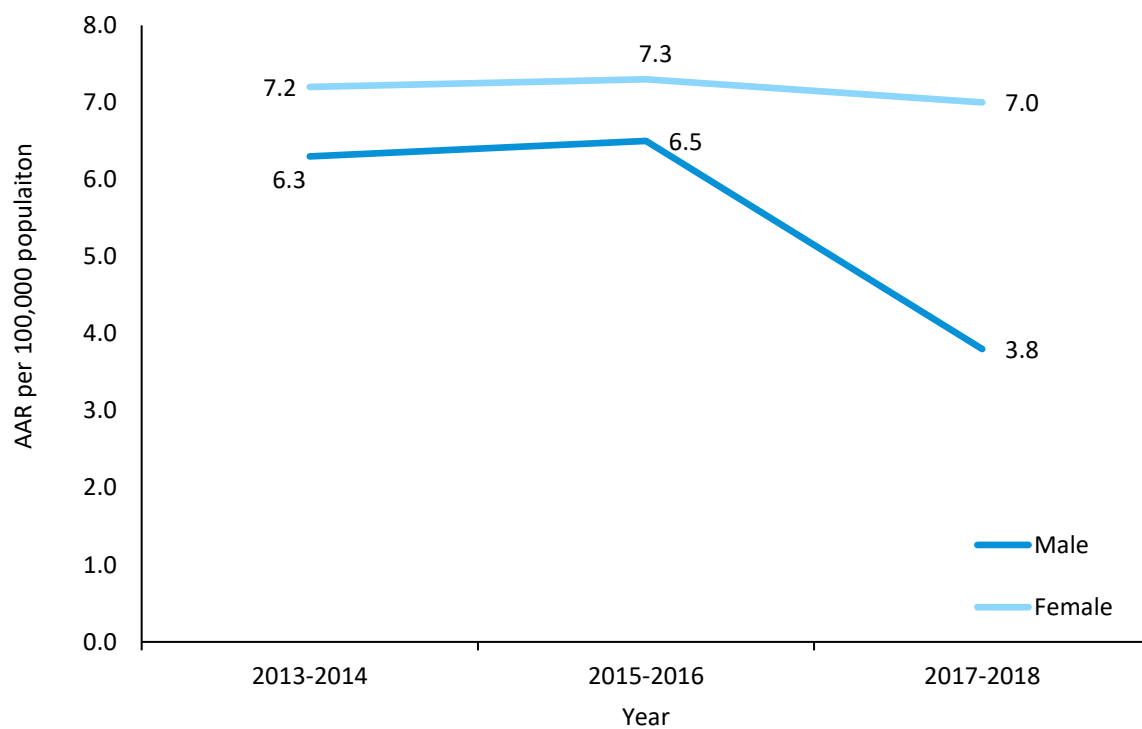


Figure 34: Liver cancer trends in Mansa district

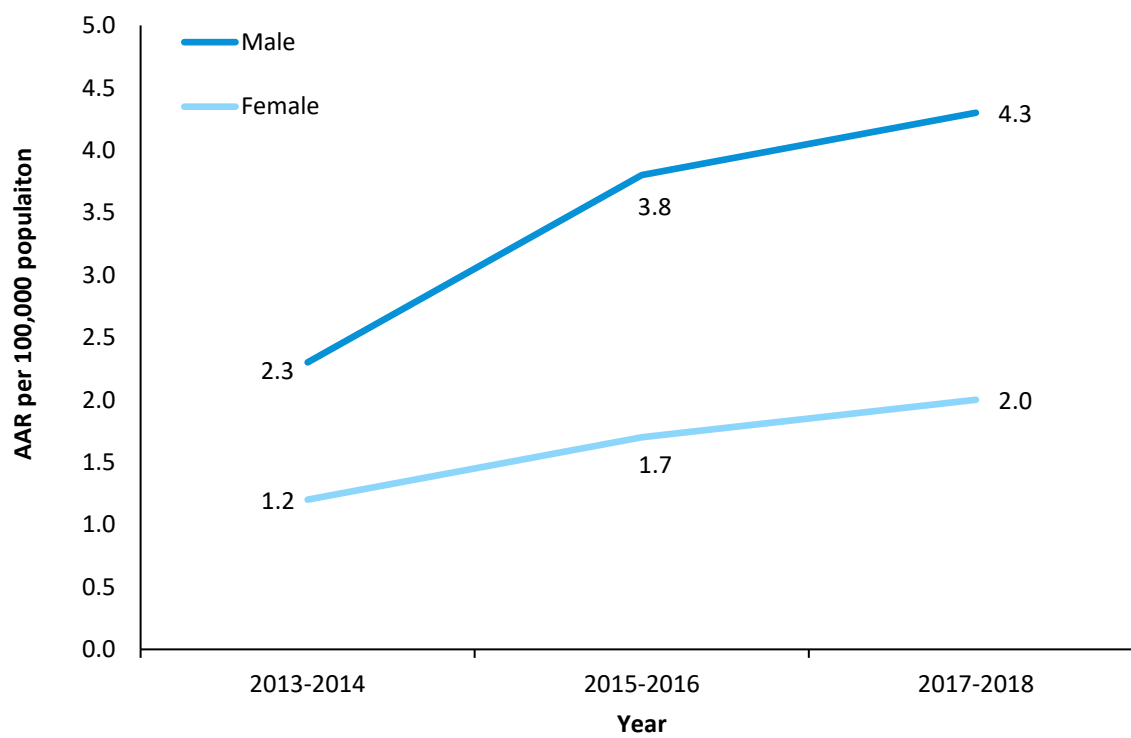


Figure 35: Breast cancer trends in Mansa district: Female

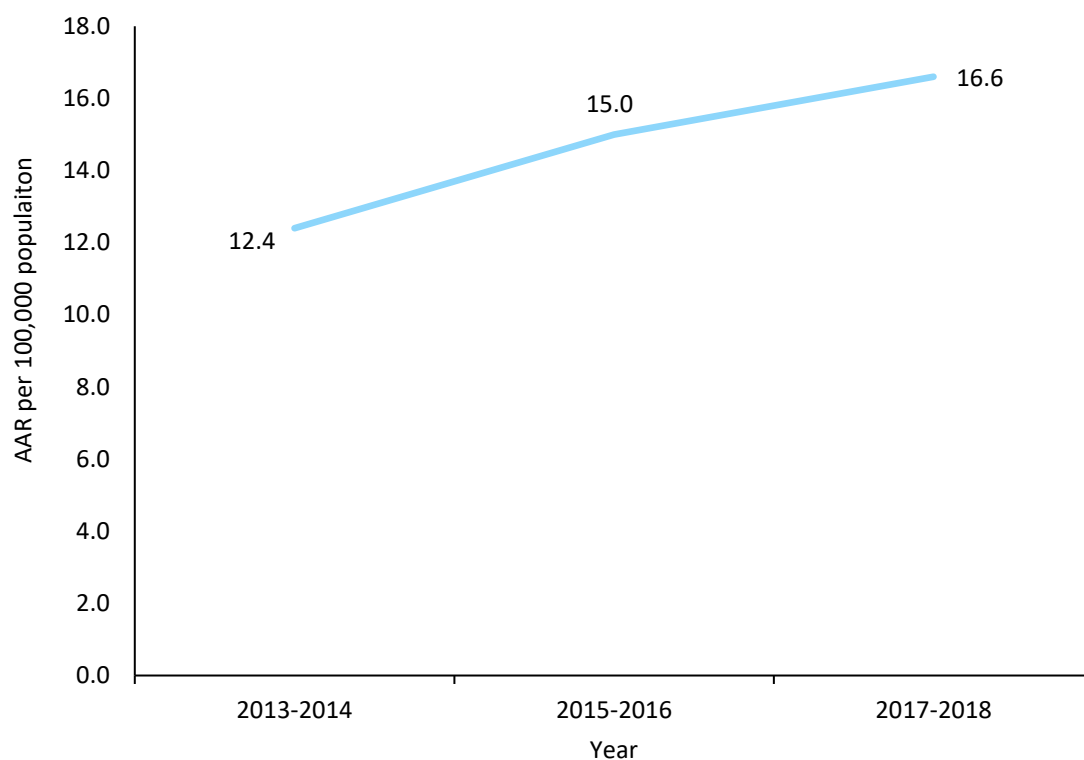


Figure 36: Cervical cancer trends in Mansa district

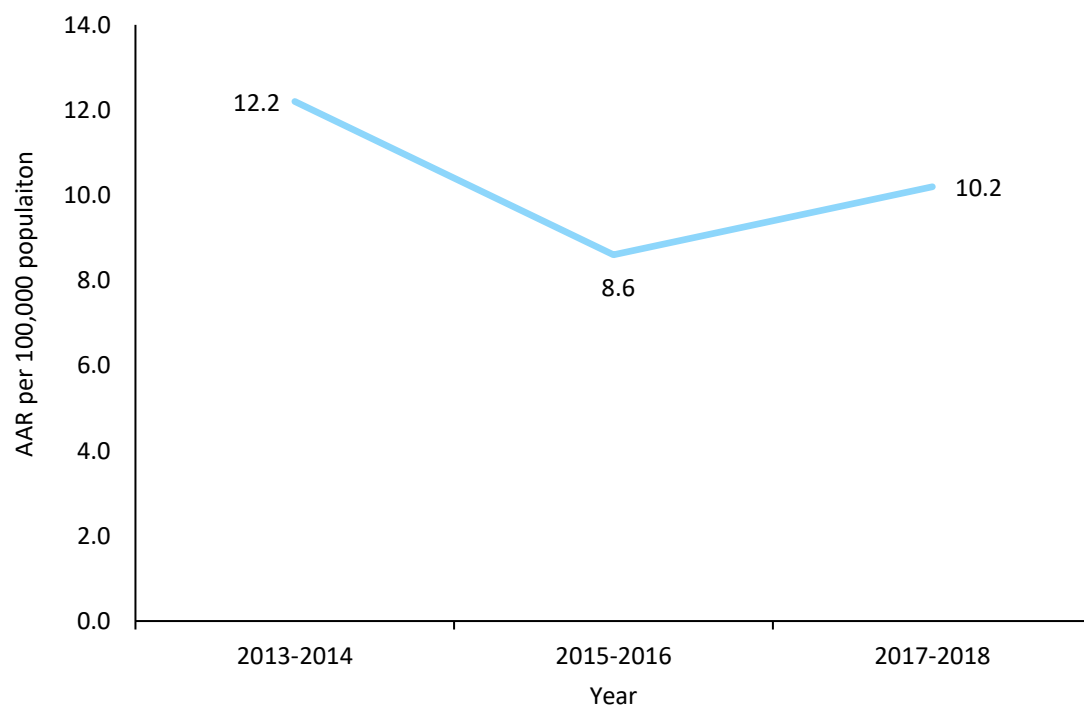


Figure 37: Ovarian cancer trends in Mansa district

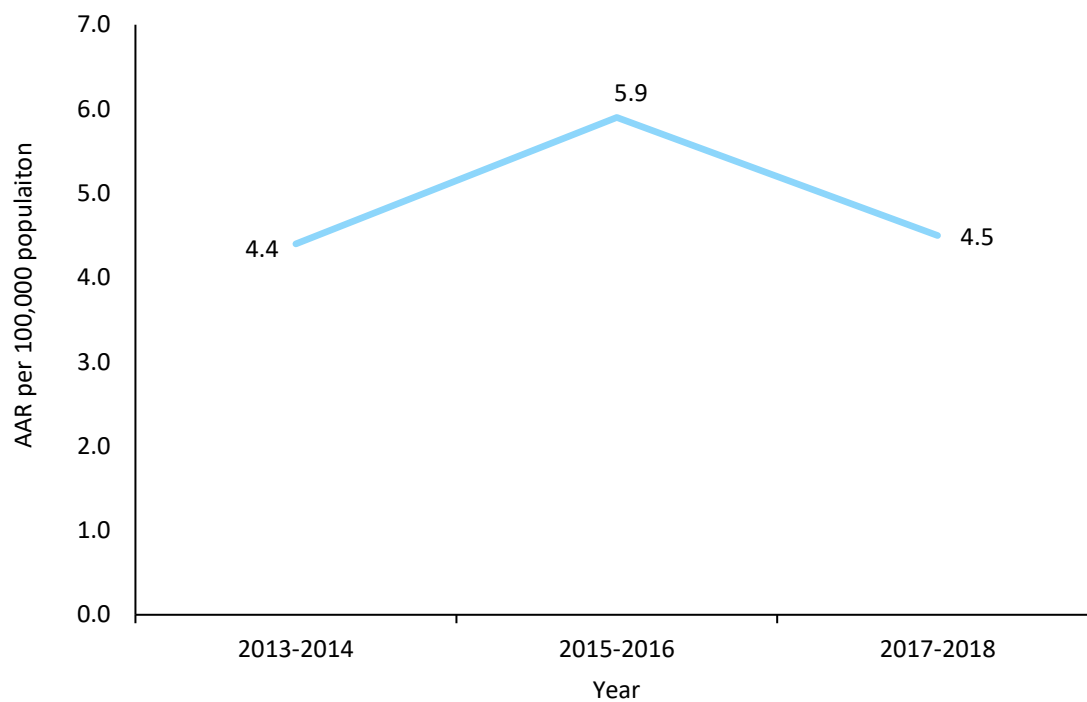


Figure 38: Prostate cancer trends in Mansa district

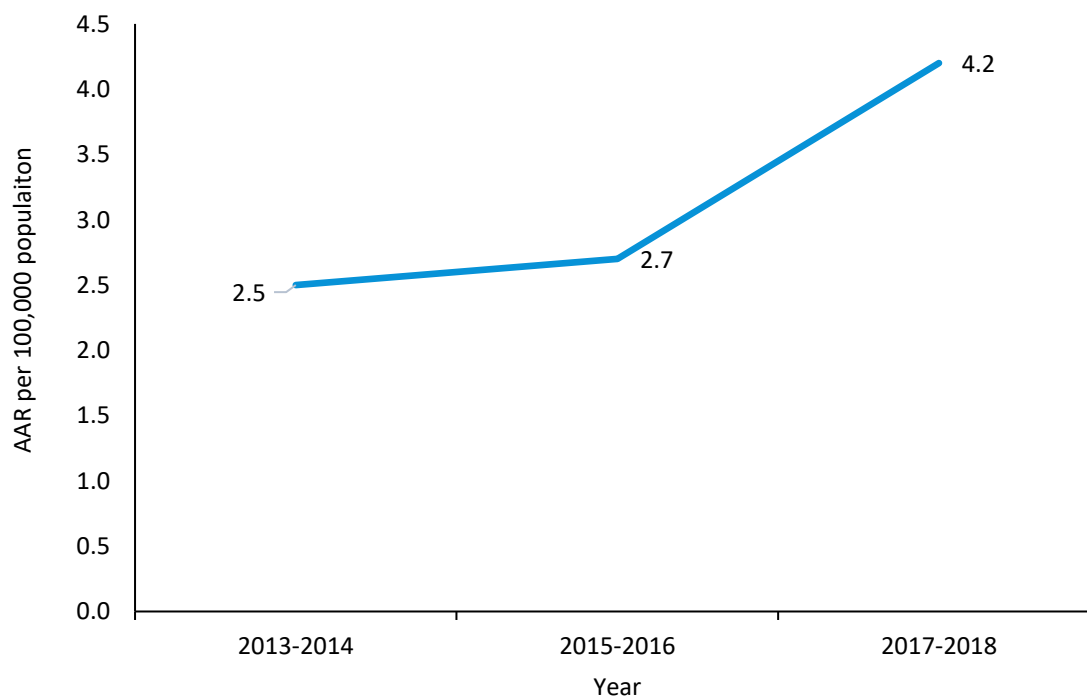


Figure 39: Gall bladder cancer trends in Mansa district

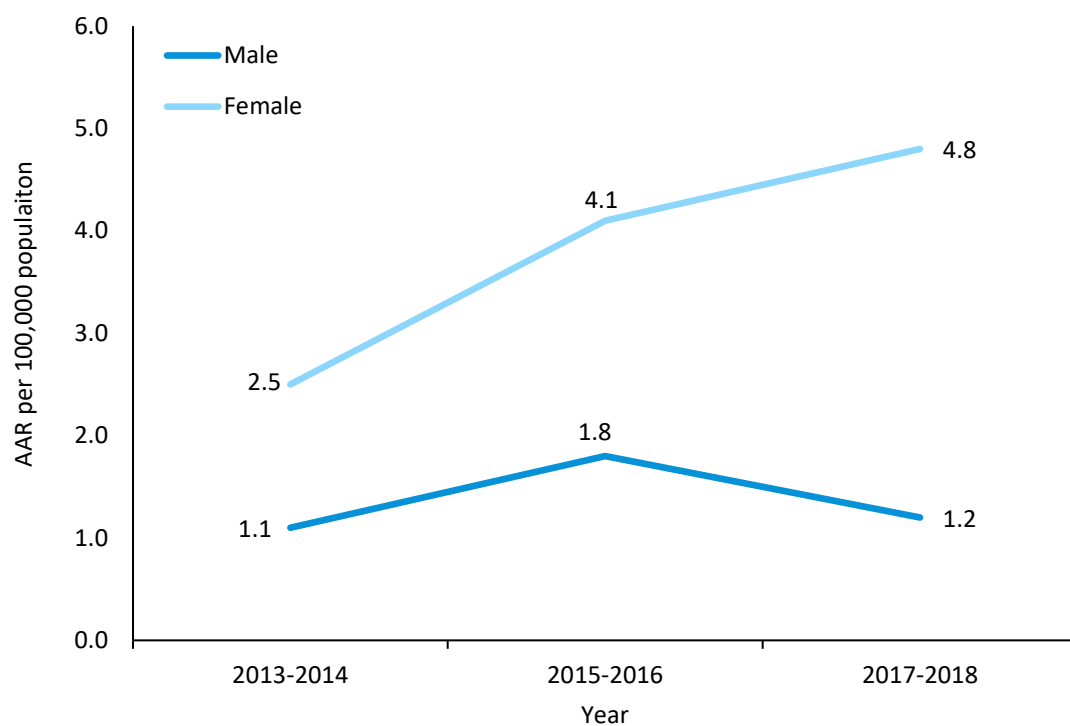
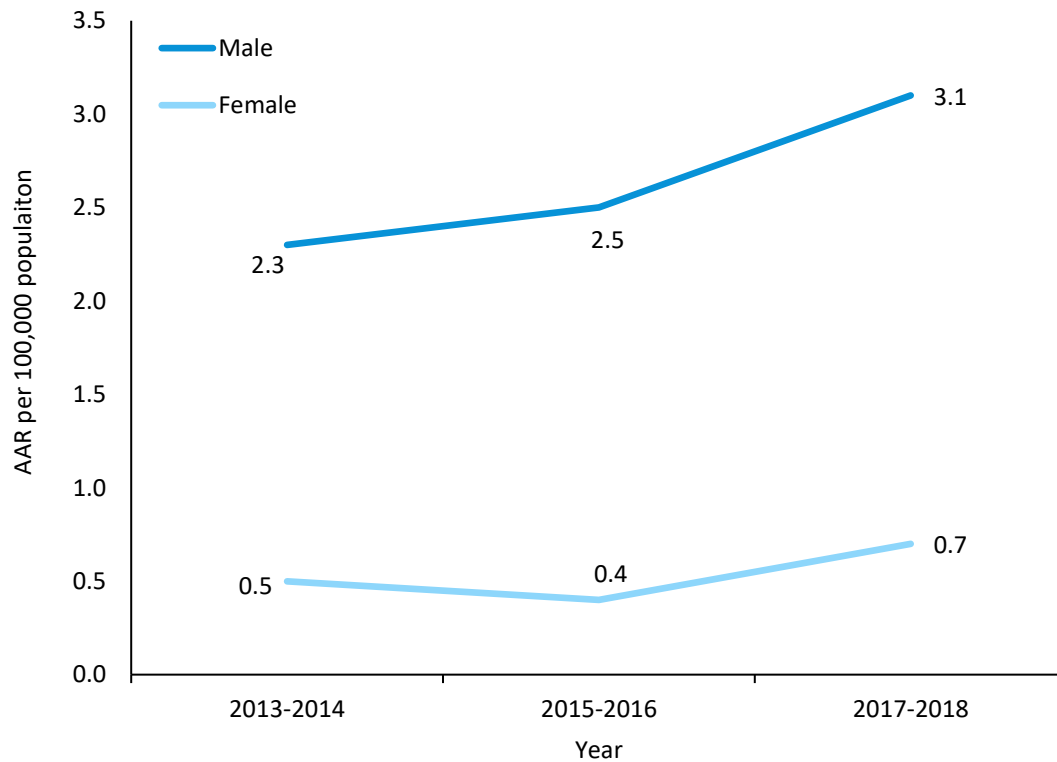


Figure 40: Mouth cancer trends in Mansa district



15. Cancer survival studies

Mansa PBCR regularly updates the follow-up status of the diagnosed cancer cases. We have undertaken survival studies of the oesophagus, breast, cervix uteri and prostate cancer cases diagnosed in 2013-2018. The date of the diagnosis is the starting date and the last date of follow-up is 31st December 2021 or the date of death.

Due to regular village visits and community interaction, the registry has good follow-up status for the oesophagus, breast, cervix uteri and prostate cancer. The registry is in the process of analysing the data. For the other cancer sites (ovary, gall bladder, NHL and lung) follow-up is in process.

For the 2013-2018 cancer cases, the follow-up status as on 31st December 2021 shows, that out of 322 total oesophagus cancer cases 37 (11.5%) patients are alive while 284 (88.2%) are dead. Out of 368 breast cancer cases, 193 (52.4%) patients are alive while 175 (47.6%) are dead. Similarly, out of 256 cervix uteri cancer cases, 93 (36.3%) patients are alive while 162 (63.3%) patients are dead. Out of 90 prostate cancer cases, 24 patients are alive (26.7%) while 66 (73.3%) patients have died.

We will publish the survival results soon.

Table 20: Cancer cases registered in the period 2013-2018 and their follow-up status

Cancer Site	No. of cases (2013-2018)	Follow-up status as on 31 st December, 2021					
		Alive		Death		Migrated/ lost to follow up	
		No.	%	No.	%	No.	%
Oesophagus	322	37	11.5	284	88.2	1	0.3
Breast	368	193	52.4	175	47.6	--	--
Cervix uteri	256	93	36.3	162	63.3	1	0.4
Prostate	90	24	26.7	66	73.3	--	--

16. Socio-demographic information

The Mansa district cancer registry staff interacted with cancer patients or their relatives and gathered socio-demographic information. Based on the information collected, in Mansa district, cancer cases were highest among the sikh community (83.4%). Moreover, cancer cases were more among illiterate population [n= 720, (62.1%)]. Among the illiterate population, cancer cases are more among females [433 (71.6%) out of 605 cancer cases] than males. Furthermore, in terms of occupation, cancer cases were more commonly found among housewives in females and farmers in males respectively 90.2% and 49.8%. The number of cancer cases was more among the population with an income of less than Rs. 15,000/- per month.

Table 21: Cancer cases by education and sex: 2017-2018

Education	Male		Female		Total	
	Number	%	Number	%	Number	%
Illiterate	287	51.8	433	71.6	720	62.1
Literate	34	6.1	22	3.6	56	4.8
Primary (1-7 std)	76	13.7	54	8.9	130	11.2
Secondary (8-10 std)	87	15.7	42	6.9	129	11.1
Technical after 10 th	33	6.0	19	3.1	52	4.5
College	20	3.6	17	2.8	37	3.2
Post-graduate	9	1.6	16	2.6	25	2.2
Not applicable for children	8	1.4	2	0.3	10	0.9
Total	554	100	605	100	1159	100

Table 22: Cancer cases by religion and sex: 2017-2018

Religion	Male		Female		Total	
	Number	%	Number	%	Number	%
Hindu	94	17.0	90	14.9	184	15.9
Muslim	5	0.9	3	0.5	8	0.7
Sikh	455	82.1	512	84.6	967	83.4
Total	554	100	605	100	1159	100

Table 23: Cancer cases by income and sex: 2017-2018

Income	Male		Female		Total	
	Number	%	Number	%	Number	%
>=30375	67	12.1	89	14.7	156	13.5
15188-30374	57	10.3	58	9.6	115	9.9
11362-15187	169	30.5	164	27.1	333	28.7
7594-11361	139	25.1	176	29.1	315	27.2
4556-7593	64	11.6	72	11.9	136	11.7
1521-4555	57	10.3	45	7.4	102	8.8
<=1520	1	0.2	1	0.2	2	0.2
Total	554	100	605	100	1159	100

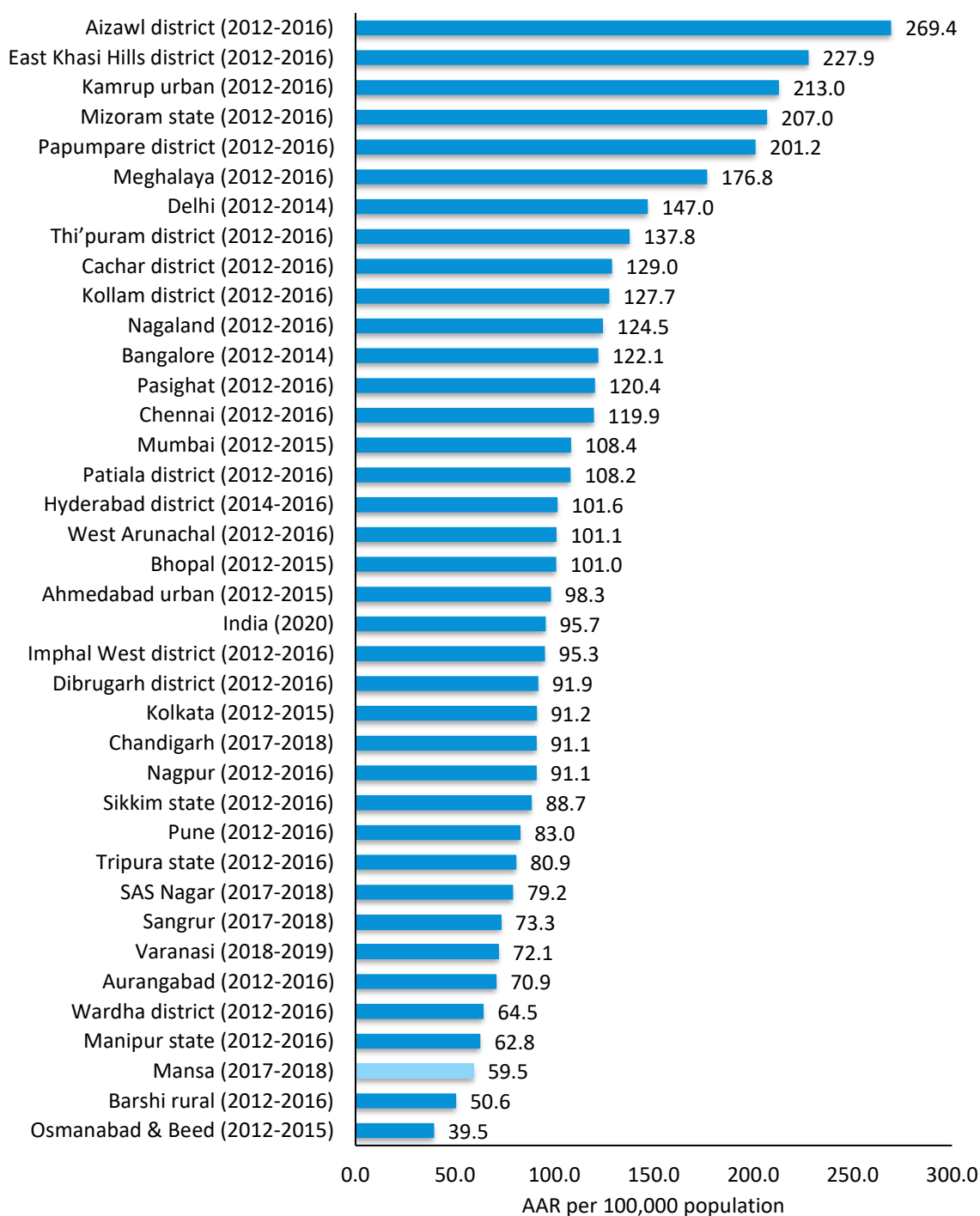
Table 24: Cancer cases by occupation and sex: 2017-2018

Occupation	Male		Female		Total	
	Number	%	Number	%	Number	%
Professional	4	0.7		0.0	4	0.3
Semi-professional	5	0.9	1	0.2	6	0.5
Clerical/Shop owner	40	7.2	2	0.3	42	3.6
Farmer	276	49.8	4	0.7	280	24.2
Skilled worker	22	4.0		0.0	22	1.9
Semi-skilled worker	32	5.8		0.0	32	2.8
Unskilled worker	91	16.4	5	0.8	96	8.3
Unemployed	1	0.2		0.0	1	0.1
Student	24	4.3	8	1.3	32	2.8
Housewife	4	0.7	546	90.2	550	47.5
Government employee	24	4.3	19	3.1	43	3.7
Private employee	4	0.7	3	0.5	7	0.6
Other	26	4.7	17	2.8	43	3.7
Not applicable to children	1	0.2		0.0	1	0.1
Total	554	100	605	100	1159	100

17. Comparison of cancer incidence rate with other Indian registries

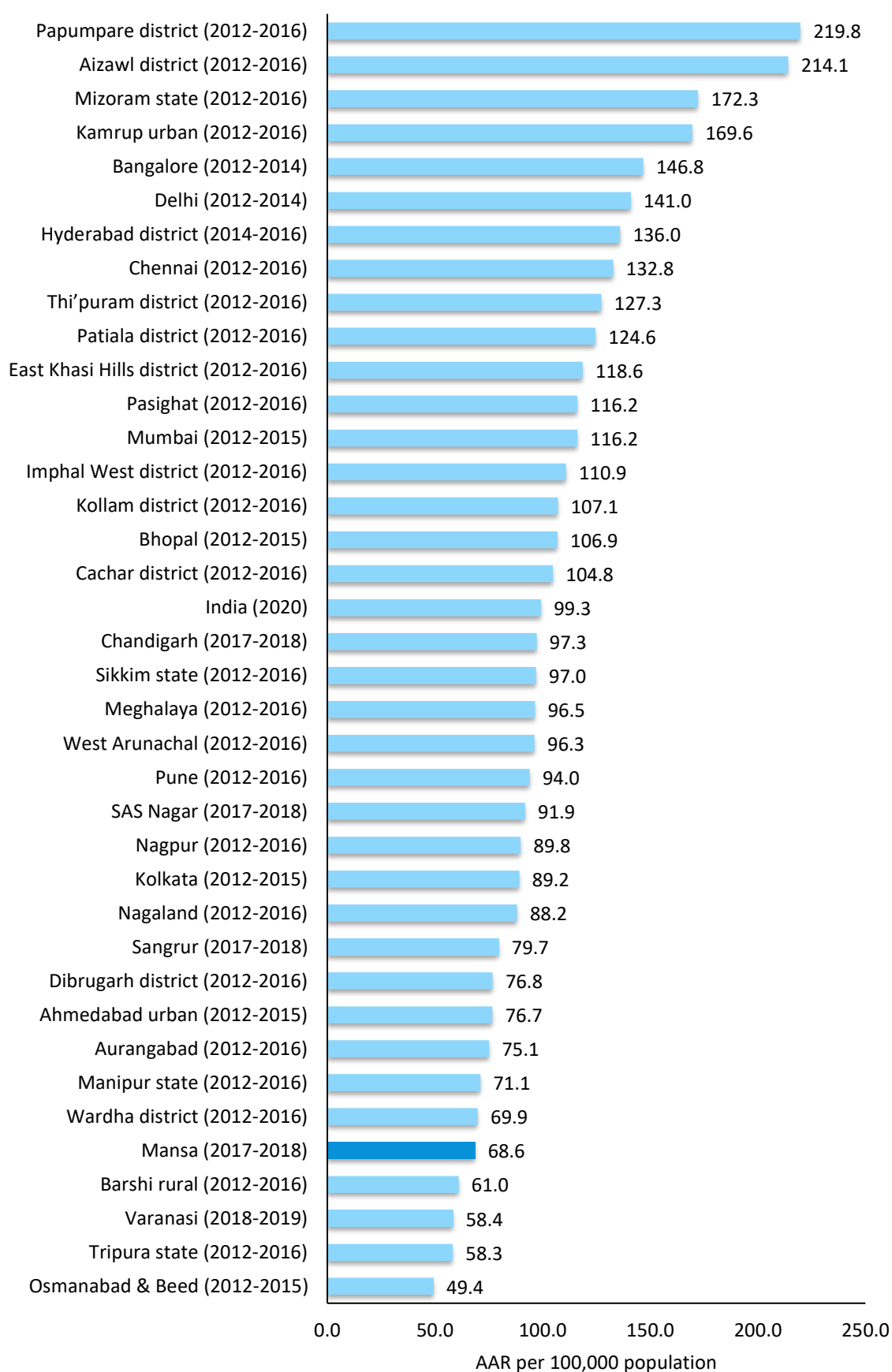
Age-adjusted incidence rate for all cancer sites for both sexes for the year 2017-2018 was compared with other Indian PBCRs in Figures 41 and 42. The cancer incidence rate in Mansa district is comparable with other rural cancer registries in the country.

Figure 41: Age-adjusted incidence rate of all cancer sites in males



(References: 1-5, 17)

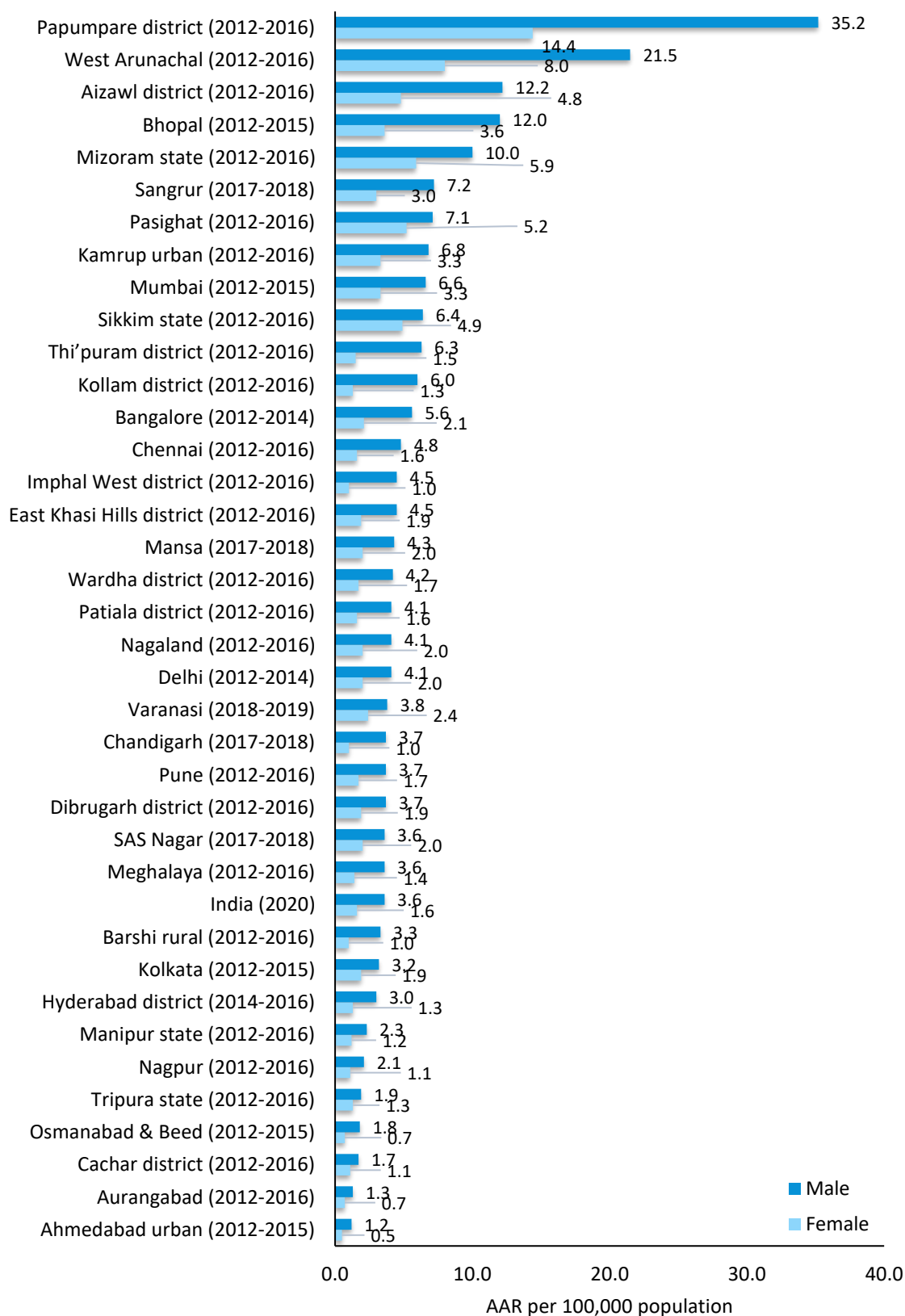
Figure 42: Age-adjusted incidence rate of all cancer sites in females



(References: 1-5, 17)

The liver cancer rate is high in Mansa district as compared to Barshi rural registry. A comparison of liver cancer rates is shown in Figure 43.

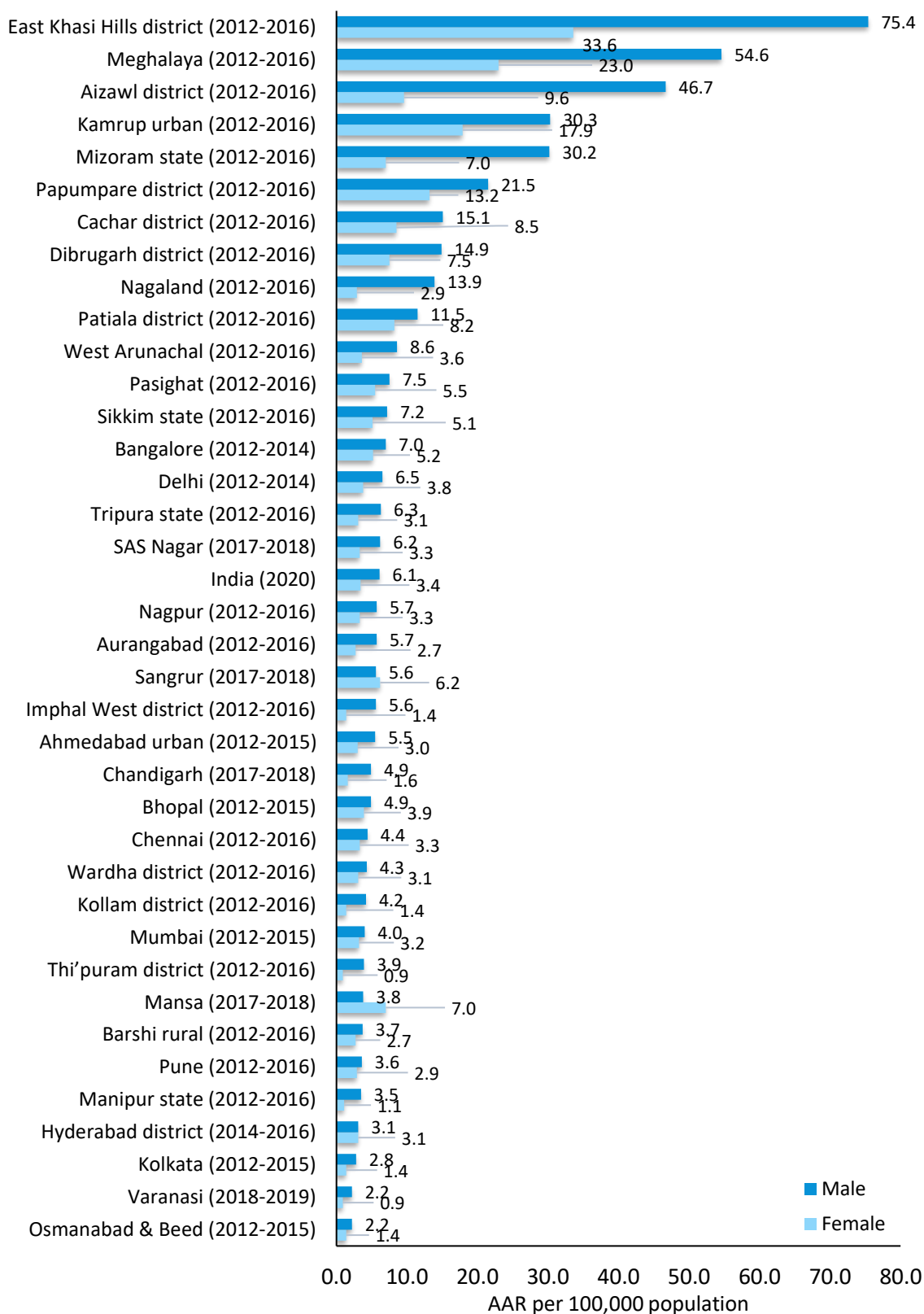
Figure 43: Age-adjusted incidence rate of liver cancer



(References: 1-5, 17)

The Oesophagus cancer rate in Mansa district is in comparison with the Barshi registry as well it is lower than cancer registries in Punjab and Chandigarh. A comparison of oesophagus cancer rates is shown in Figure 44.

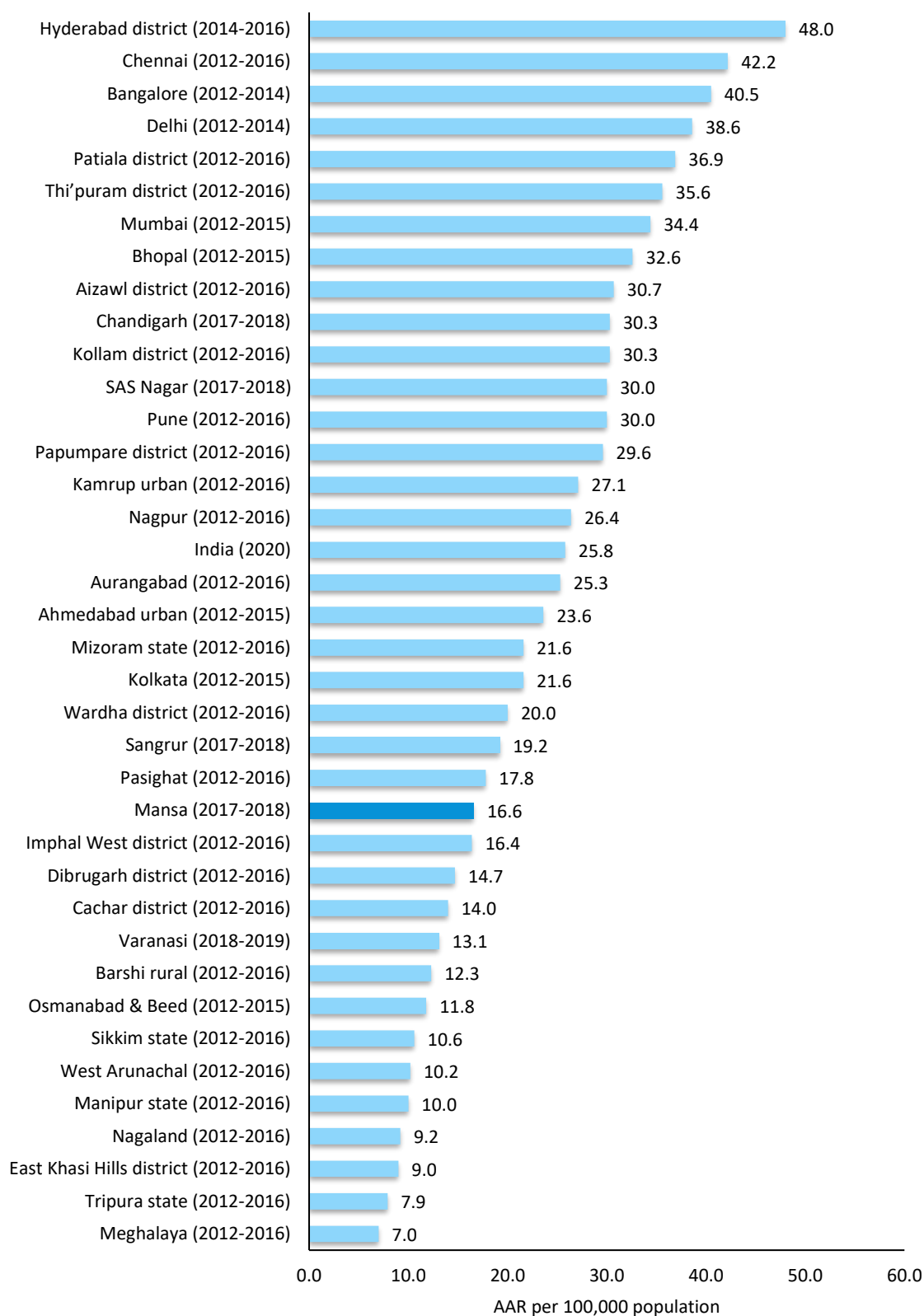
Figure 44: Age-adjusted incidence rate of oesophagus cancer



(References: 1-5, 17)

The breast cancer incidence rate is low in Mansa district as compared to other registries in India. The comparison of breast cancer rates is shown in Figure 45.

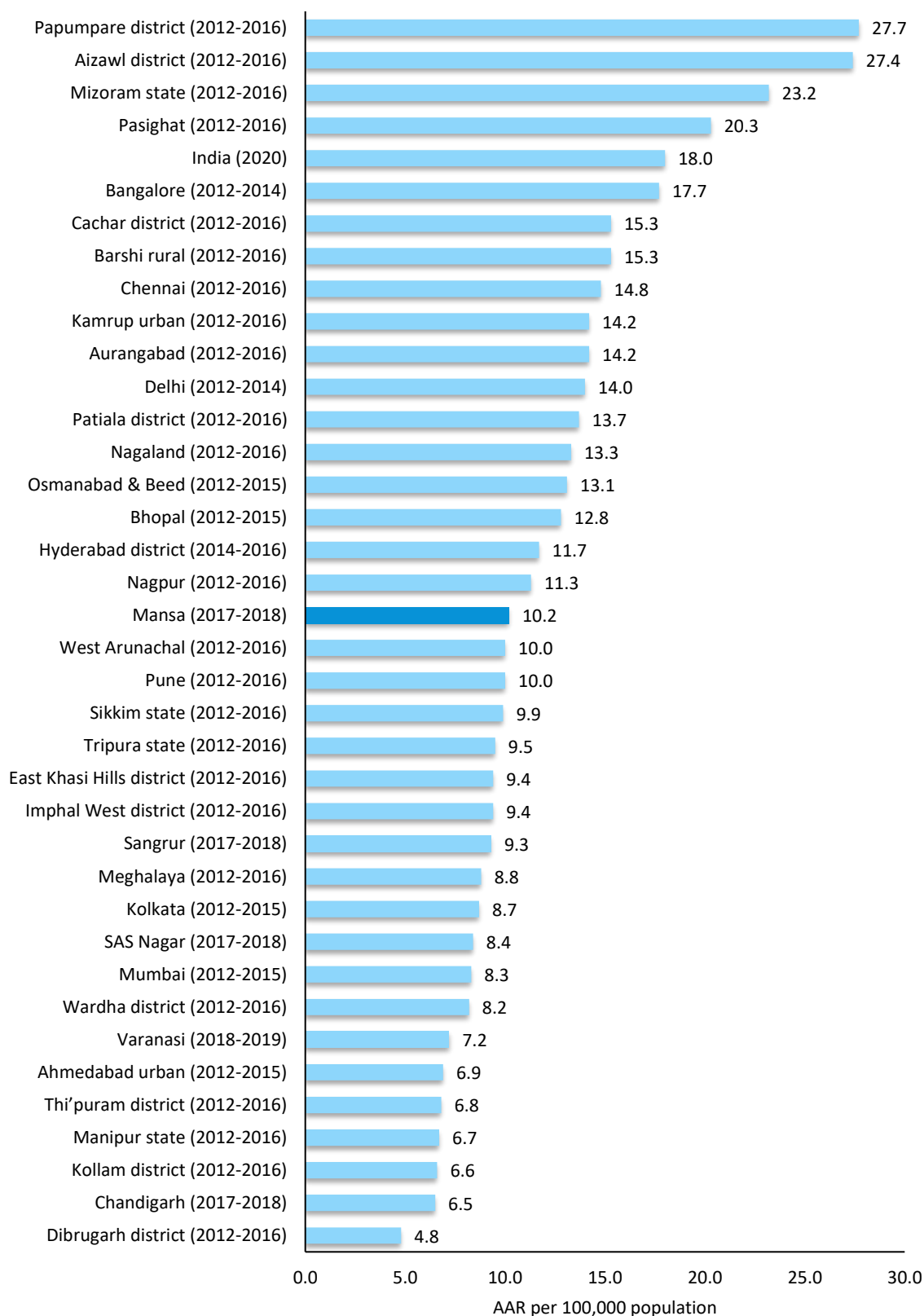
Figure 45: Age-adjusted incidence rate of breast cancer



(References: 1-5, 17)

The cervical cancer incidence rate is low in Mansa district as compared to other registries in India. The comparison of cervical cancer rates is shown in Figure 46.

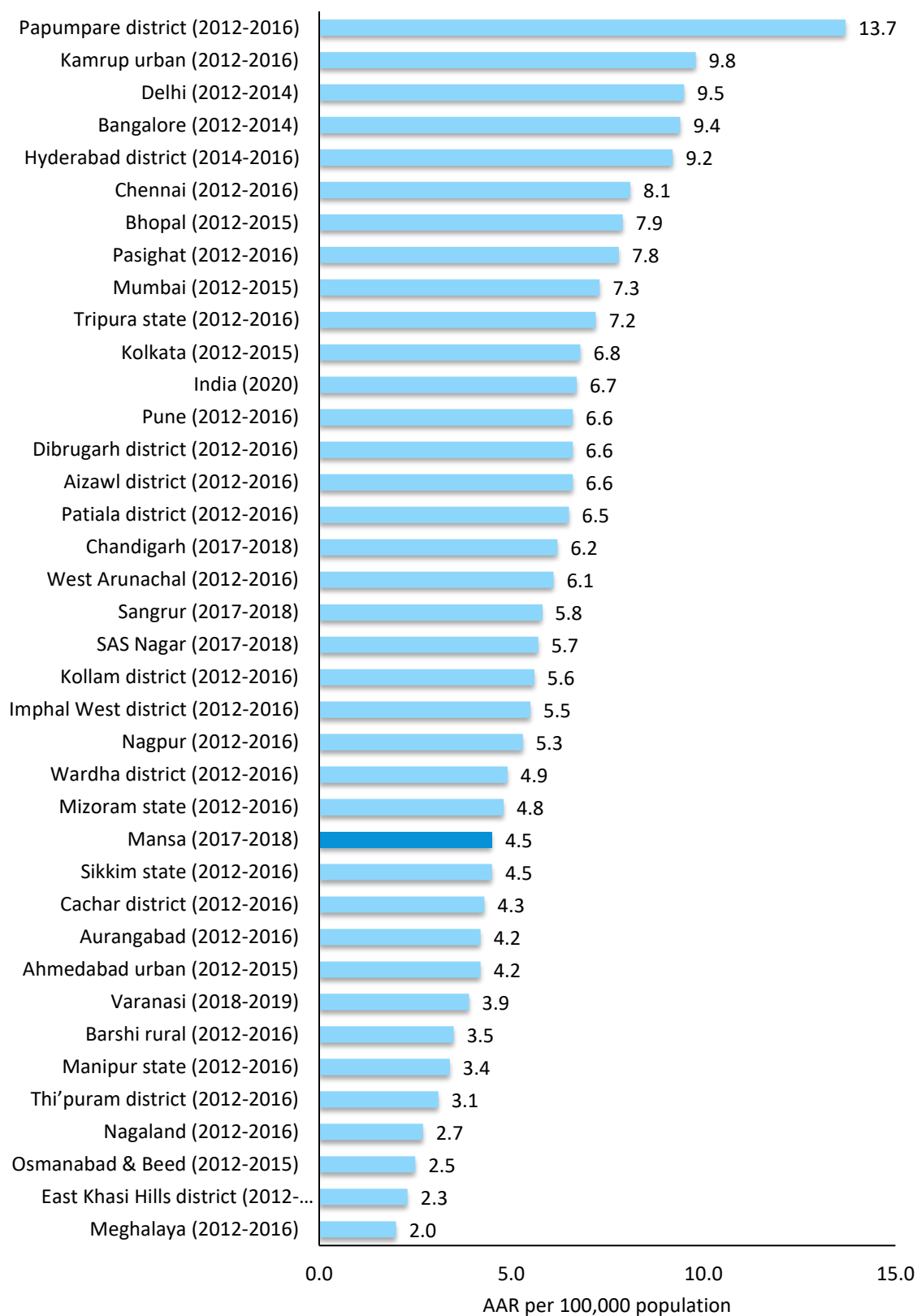
Figure 46: Age-adjusted incidence rate of cervical cancer



(References: 1-5, 17)

The ovarian cancer incidence rate is low in Mansa district as compared to other registries in India. The comparison of ovarian cancer rates is shown in Figure 47.

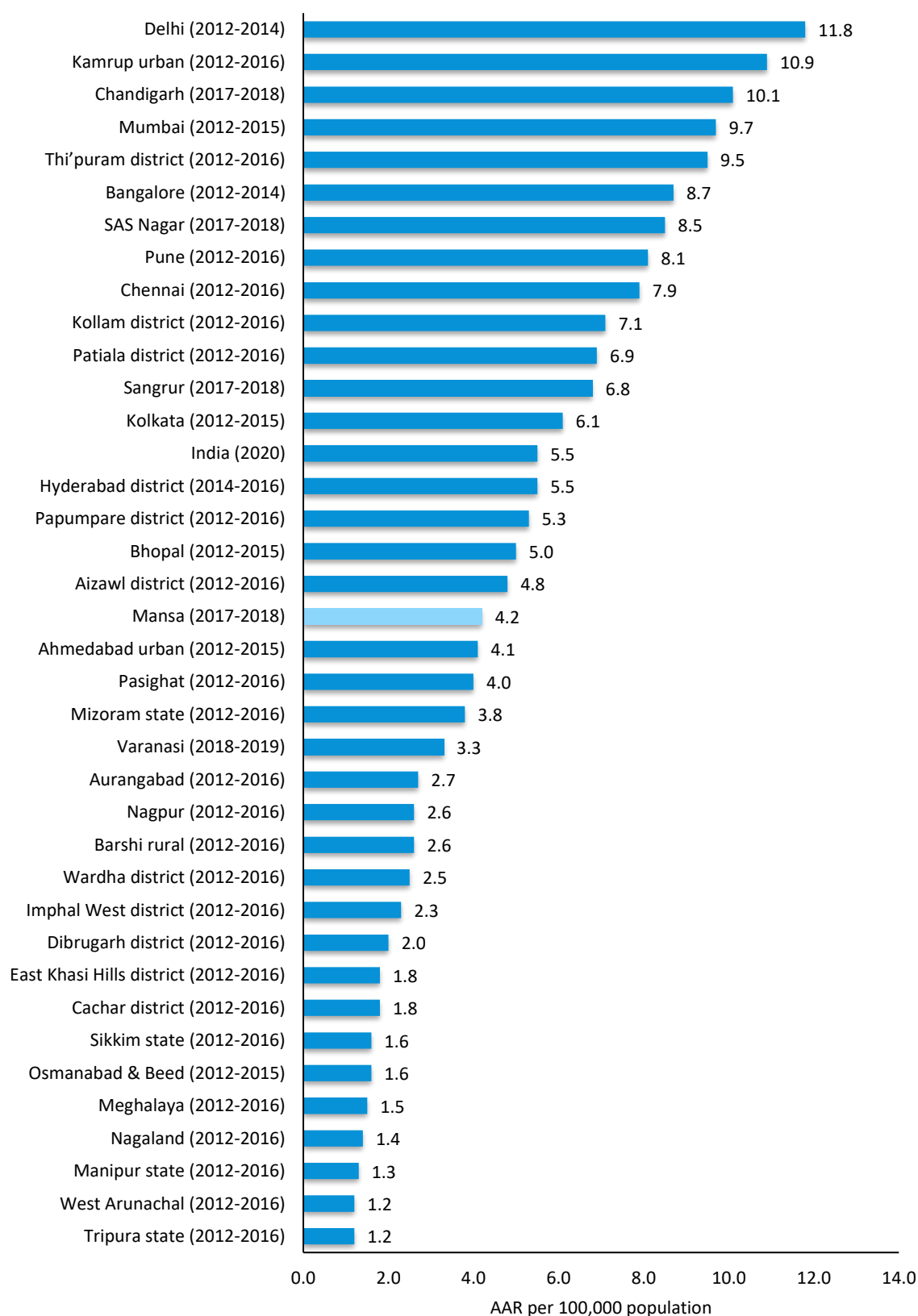
Figure 47: Age-adjusted incidence rate of ovarian cancer



(References: 1-5, 17)

The prostate cancer incidence rate is low in Mansa district as compared to other registries in India. The comparison of prostate cancer rates is shown in Figure 48.

Figure 48: Age-adjusted incidence rate of prostate cancer



(References: 1-5, 17)

18. COVID-19 impact on cancer registry activities

Globally, the COVID-19 pandemic has affected the day-to-day activities of human beings. Due to a strict lockdown in the country from 24th March 2020 to 31st May 2020. After the lockdown period, there was a continuous COVID wave and due to several restrictions, the registry work was badly hampered.

Since the registry activities involved community interaction, visiting the different hospitals, and meeting with the consultant for the data collection were completely stopped. There was a significant drop down in the sources visits during the COVID-19 pandemic in 2020 and 2021 as well as there was a significant drop down in the meetings with the community leaders.

We have requested our registry staff to work in the hospital as a support staff to improve the hospital services during the COVID-19 pandemic. Since the staff was not able to travel we have updated the follow-up status of cancer patients and the staff was asked to do data entry work and update their manual registers.

Several registry staff and their relatives got infected and they have to apply for leaves and several staff members were quarantined. The staff was encouraged to work from home during the pandemic period.

Despite several challenges, the cancer registry team has worked very effectively by adopting the flexible remedial measure. We have received very good administrative support from HBCH Sangrur and technical support from CCE-TMC.

19. Description of statistical term used

Incidence: Cancer incidence denotes new cancer cases diagnosed in a defined population in a specified time-period. For this report, all cancer cases diagnosed from January 1, 2017, to December 31, 2018, in the Mansa district have been included.

Mortality: Cancer mortality is defined as the number of cancer deaths occurring in a defined population, in a defined geographic area, during a particular year(s) per 100,000 population. All cancer deaths between January 1, 2017, and December 31, 2018, in the Mansa district, have been included.

Rates: Rates for cancer are always expressed per 100,000 population.

Crude Incidence Rate: The crude incidence is the rate at which new cases occur in a population during a specific period.

$$CR = \frac{\text{Number of new cancer cases observed in the period 2017-2018} * 100000}{\text{Estimated population of the same year}}$$

This rate is also called crude rate because it relates to each population as a whole and is influenced by the age structure of each population.

Age-Specific Rate: This refers to the rate obtained by the division of the total number of cancer cases by the corresponding estimated population in that age group and sex/site/geographic area/time-period and multiplying by 100,000.

Age-Adjusted or Age Standardized Rate (AAR): Age adjustment is a statistical method that corrects for the changing age distribution of the population and allows comparisons to be made in the adjusted rates between different population sub-groups over time.

Truncated Rates: This is similar to the age-adjusted rate except that it is calculated for the truncated age group 35-64 years of age.

Paediatric cancer incidence rate: Age-specific rates are shown for 0-4, 5-9, 10-14, and 15-19 age groups. Age-adjusted incidence rates were calculated by the direct method, using the age-specific rates for the age groups 0-4, 5-9, 10-14, and 15-19 and the weights of the World Standard population for these age groups according to Segi, namely 12, 10, 9, and 9. The cumulative incidence rates were calculated as the sum of the age-specific incidence rates for the 5-year age groups, each multiplied by 5, the number of years contained in each age group.

20. Standard registry tables

Table 25: Number of incidence cancers by five-year age groups and site (ICD 10): 2017-2018

Males Mansa district

% = Relative Proportion of Cancers of All Sites

ICD 10	Sites	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	-	1	-	-	-	3	0.5
C01-C02	Tongue	-	-	-	-	-	-	-	1	1	2	1	1	5	5	2	5	23	4.2
C03-C06	Mouth	-	-	-	-	-	-	-	1	2	3	5	3	6	5	1	3	29	5.2
C07-C08	Salivary Gland	-	-	-	-	-	-	-	-	1	-	2	-	1	-	-	-	4	0.7
C09	Tonsil	-	-	-	-	-	-	-	-	-	1	1	2	1	2	-	1	8	1.4
C10	Oth. Oropharynx	-	-	-	-	-	-	-	-	-	1	2	1	1	1	1	1	8	1.4
C11	Nasopharynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C12-C13	Hypopharynx	-	-	-	-	-	-	-	-	1	-	4	2	2	6	3	2	20	3.6
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C15	Oesophagus	-	-	-	-	-	-	-	1	2	3	4	5	3	7	8	3	36	6.5
C16	Stomach	-	-	-	-	-	-	-	-	-	2	-	-	-	1	4	1	8	1.4
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C18	Colon	-	-	-	-	-	-	1	-	3	2	1	-	2	1	-	-	10	1.8
C19-C20	Rectum	-	-	-	-	1	2	1	1	1	-	2	3	1	2	-	2	16	2.9
C21	Anus & Anal Canal	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	3	0.5
C22	Liver	1	-	-	-	-	-	-	-	3	3	3	8	4	8	6	3	39	7.0
C23-C24	Gallbladder etc.	-	-	-	-	-	-	-	1	-	1	2	1	3	2	1	-	11	2.0
C25	Pancreas	-	-	-	-	-	-	-	3	1	1	1	3	1	2	-	-	12	2.2
C30-C31	Nose, Sinuses, etc.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.2
C32	Larynx	-	-	-	-	-	-	-	1	1	1	2	1	2	4	2	3	17	3.1
C33-C34	Trachea, bronchus, and lung	-	-	-	1	-	-	1	-	1	3	3	3	4	3	3	4	26	4.7
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	Bone	-	-	-	-	-	-	-	-	1	-	-	2	-	-	1	1	5	0.9
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	0.2
C44	Other Skin	-	-	-	-	-	-	-	-	1	-	1	1	-	-	1	1	5	0.9
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	Conn. & Soft Tissue	-	1	-	-	-	-	2	-	2	-	1	-	-	1	-	-	7	1.3
C50	Breast	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.2
C60	Penis	-	-	-	-	-	-	-	1	1	2	2	1	4	1	2	2	16	2.9
C61	Prostate	-	-	-	-	-	-	-	-	-	-	1	-	9	11	13	10	44	7.9
C62	Testis	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	0.5
C63	Other Male Genital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	Kidney etc.	-	-	-	-	-	1	-	-	-	1	-	-	2	1	1	-	6	1.1
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	Urinary Bladder	-	-	-	-	-	-	-	-	1	2	4	1	3	1	1	2	15	2.7
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	Eye	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	3	0.5
C70-C72	Brain, Nervous System	1	1	1	-	-	2	2	2	1	3	1	2	2	2	2	3	25	4.5
C73	Thyroid	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2	0.4
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	Hodgkins Disease	1	1	1	-	-	1	2	1	-	-	1	-	-	-	-	-	8	1.4
C82-C86, C96	Non-Hodgkin lymphoma	-	-	-	-	-	1	-	-	1	3	1	2	6	1	4	-	19	3.4
C88	Malig Imn.Prol D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C90	Multiple Myeloma	-	-	-	-	-	1	-	1	-	-	1	2	-	2	-	1	8	1.4
C91	Lymphoid Leukaemia	1	1	-	1	-	-	-	2	-	1	3	1	2	1	-	-	13	2.3
C92-C94	Myeloid Leukaemia	-	-	2	3	3	2	1	-	2	1	1	1	-	1	2	-	19	3.4
C95	Leukaemia Unspecified	2	1	-	-	1	2	-	-	-	-	-	-	1	1	1	-	9	1.6
Other and Unspecified*		1	-	-	1	2	4	2	1	4	1	4	6	14	11	10	10	71	12.8
All sites		9	5	4	6	7	17	15	18	31	37	56	53	83	84	69	60	554	100.0

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 26: Number of incidence cancers by five-year age groups and site (ICD 10): 2017-2018

Females Mansa district

% = Relative Proportion of Cancers of All Sites

ICD 10	Sites	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	0.2
C01-C02	Tongue	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	-	4	0.7
C03-C06	Mouth	-	-	-	-	-	-	-	-	-	-	-	-	3	2	1	1	7	1.2
C07-C08	Salivary Gland	-	-	-	-	1	-	-	-	1	-	-	1	-	-	-	1	4	0.7
C09	Tonsil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C10	Oth. Oropharynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C11	Nasopharynx	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	0.2
C12-C13	Hypopharynx	-	-	-	-	-	-	-	-	1	-	-	1	-	3	-	1	6	1.0
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	0.2
C15	Oesophagus	-	-	-	-	-	1	1	2	3	7	9	9	8	9	6	5	60	9.9
C16	Stomach	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	2	0.3
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	0.2
C18	Colon	-	-	-	-	-	-	-	-	-	1	1	-	2	1	-	-	5	0.8
C19-C20	Rectum	-	-	-	-	-	-	-	1	-	-	1	-	2	1	1	-	6	1.0
C21	Anus & Anal Canal	-	-	-	-	-	-	-	1	-	-	1	-	2	-	-	-	4	0.7
C22	Liver	-	-	-	-	-	-	-	-	1	-	3	2	2	3	2	5	18	3.0
C23-C24	Gallbladder etc.	-	-	-	-	-	-	-	1	3	3	9	1	8	5	7	6	43	7.1
C25	Pancreas	-	-	-	-	-	-	-	-	-	-	-	1	4	1	2	2	10	1.7
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	Larynx	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.2
C33-C34	Trachea, bronchus, and lung	-	-	-	-	-	-	-	-	1	-	-	2	2	6	1	2	14	2.3
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	Bone	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	0.2
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C44	Other Skin	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	2	0.3
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	Conn. & Soft Tissue	-	-	-	-	-	-	1	-	-	1	-	-	1	-	1	-	4	0.7
C50	Breast	-	-	-	-	-	4	8	14	11	18	20	19	16	14	11	9	144	23.8
C51	Vulva	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	2	5	0.8
C52	Vagina	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	2	0.3
C53	Cervix Uteri	-	-	-	-	-	-	3	6	7	13	13	8	18	10	8	4	90	14.9
C54	Corpus Uteri	-	-	-	-	-	-	-	-	-	1	1	5	3	3	1	-	14	2.3
C55	Uterus Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C56	Ovary	-	-	-	-	1	2	2	-	4	5	6	5	5	5	2	1	38	6.3
C57	Other Female Genital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	0.2
C58	Placenta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	Kidney etc.	-	-	-	-	-	-	-	-	-	-	-	1	2	1	2	1	7	1.2
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	Urinary Bladder	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	2	0.3
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C70-C72	Brain, Nervous System	1	2	-	-	-	-	1	-	-	1	1	2	1	1	1	-	11	1.8
C73	Thyroid	-	-	-	-	-	-	1	2	1	3	2	1	1	-	-	2	13	2.1
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	Hodgkins Disease	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	0.2
C82-C86, C96	Non-Hodgkin lymphoma	-	-	-	-	-	-	-	-	3	1	-	-	-	2	-	-	6	1.0
C88	Malig Imn.Prol D	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	0.2
C90	Multiple Myeloma	-	-	-	-	-	-	-	-	-	-	3	-	1	1	-	-	5	0.8
C91	Lymphoid Leukaemia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	0.3
C92-C94	Myeloid Leukaemia	-	-	-	-	-	-	2	2	-	3	1	4	2	3	1	1	19	3.1
C95	Leukaemia Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.2
Other and Unspecified*		-	-	-	-	1	3	1	2	1	2	5	5	4	8	5	11	48	7.9
All sites		1	2	-	2	3	12	20	31	37	60	76	71	94	85	57	54	605	100

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 27: Average annual Age Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 yrs) (TR) Incidence Rate per 100,000 Population: 2017-2018 – Males Mansa district

ICD 10	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	-	-	-	-	-	-	-	1.7	-	-	2.5	-	2.6	-	-	-	0.3	0.3	1.1
C01-C02	-	-	-	-	-	-	-	1.7	1.7	3.8	2.5	3.5	13.2	14.3	9.9	22.6	2.6	2.3	4.0
C03-C06	-	-	-	-	-	-	-	1.7	3.4	5.6	12.6	10.5	15.8	14.3	4.9	13.6	3.3	3.1	7.5
C07-C08	-	-	-	-	-	-	-	-	1.7	-	5.1	-	2.6	-	-	-	0.5	0.5	1.5
C09	-	-	-	-	-	-	-	-	-	1.9	2.5	7.0	2.6	5.7	-	4.5	0.9	0.9	2.0
C10	-	-	-	-	-	-	-	-	-	1.9	5.1	3.5	2.6	2.9	4.9	4.5	0.9	0.9	2.0
C11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C12-C13	-	-	-	-	-	-	-	-	1.7	-	10.1	7.0	5.3	17.1	14.8	9.0	2.3	2.1	3.6
C14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C15	-	-	-	-	-	-	-	1.7	3.4	5.6	10.1	17.6	7.9	20.0	39.4	13.6	4.1	3.8	7.0
C16	-	-	-	-	-	-	-	-	-	3.8	-	-	-	2.9	19.7	4.5	0.9	0.8	0.7
C17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C18	-	-	-	-	-	-	1.6	-	5.2	3.8	2.5	-	5.3	2.9	-	-	1.1	1.1	2.8
C19-C20	-	-	-	-	1.1	2.8	1.6	1.7	1.7	-	5.1	10.5	2.6	5.7	-	9.0	1.8	1.7	3.2
C21	-	-	-	-	-	-	-	-	-	-	-	-	2.6	2.9	-	4.5	0.3	0.3	0.3
C22	1.7	-	-	-	-	-	-	-	5.2	5.6	7.6	28.1	10.6	22.9	29.6	13.6	4.4	4.3	8.3
C23-C24	-	-	-	-	-	-	-	1.7	-	1.9	5.1	3.5	7.9	5.7	4.9	-	1.2	1.2	3.0
C25	-	-	-	-	-	-	-	5.1	1.7	1.9	2.5	10.5	2.6	5.7	-	-	1.4	1.3	3.8
C30-C31	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	-	-	0.1	0.1	0.3
C32	-	-	-	-	-	-	-	1.7	1.7	1.9	5.1	3.5	5.3	11.4	9.9	13.6	1.9	1.7	3.0
C33-C34	-	-	-	1.0	-	-	1.6	-	1.7	5.6	7.6	10.5	10.6	8.6	14.8	18.1	3.0	2.8	5.4
C37-C38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	-	-	-	-	-	-	-	-	1.7	-	-	7.0	-	-	4.9	4.5	0.6	0.6	1.2
C43	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-	-	-	0.1	0.1	0.5
C44	-	-	-	-	-	-	-	-	1.7	-	2.5	3.5	-	-	4.9	4.5	0.6	0.6	1.2
C45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	-	1.6	-	-	-	-	3.2	-	3.4	-	2.5	-	-	2.9	-	-	0.8	0.8	1.1
C50	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	-	-	0.1	0.1	0.3
C60	-	-	-	-	-	-	-	1.7	1.7	3.8	5.1	3.5	10.6	2.9	9.9	9.0	1.8	1.7	4.0
C61	-	-	-	-	-	-	-	-	-	-	2.5	-	23.7	31.4	64.1	45.2	5.0	4.2	3.5
C62	-	-	-	-	-	-	4.8	-	-	-	-	-	-	-	-	-	0.3	0.3	-
C63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	-	-	-	-	-	1.4	-	-	-	1.9	-	-	5.3	2.9	4.9	-	0.7	0.6	1.0
C65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	-	-	-	-	-	-	-	-	1.7	3.8	10.1	3.5	7.9	2.9	4.9	9.0	1.7	1.7	4.2
C68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	3.4	-	-	-	-	-	-	-	-	-	2.5	-	-	-	-	-	0.3	0.5	0.4
C70-C72	1.7	1.6	1.2	-	-	2.8	3.2	3.4	1.7	5.6	2.5	7.0	5.3	5.7	9.9	13.6	2.8	2.8	4.1
C73	-	-	-	-	-	1.4	-	-	-	-	-	-	-	-	-	4.5	0.2	0.2	-
C74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	1.7	1.6	1.2	-	-	1.4	3.2	1.7	-	-	2.5	-	-	-	-	-	0.9	1.0	0.7
C82-C86, C96	-	-	-	-	-	1.4	-	-	1.7	5.6	2.5	7.0	15.8	2.9	19.7	-	2.2	2.1	4.8
C88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C90	-	-	-	-	-	1.4	-	1.7	-	-	2.5	7.0	-	5.7	-	4.5	0.9	0.9	1.6
C91	1.7	1.6	-	1.0	-	-	-	3.4	-	1.9	7.6	3.5	5.3	2.9	-	-	1.5	1.6	3.4
C92-C94	-	-	2.5	2.9	3.3	2.8	1.6	-	3.4	1.9	2.5	3.5	-	2.9	9.9	-	2.2	1.9	1.9
C95	3.4	1.6	-	-	1.1	2.8	-	-	-	-	-	-	2.6	2.9	4.9	-	1.0	1.2	0.3
O&U*	1.7	-	-	1.0	2.2	5.5	3.2	1.7	6.9	1.9	10.1	21.1	36.9	31.4	49.3	45.2	8.1	7.4	11.1
All sites	15.5	8.1	5.0	5.9	7.7	23.5	24.0	30.7	53.3	69.4	141.4	186.4	219.0	240.0	340.1	271.0	62.9	59.5	104.8

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 28: Average annual Age Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 yrs) (TR) Incidence Rate per 100,000 Population: 2017-2018 – Females Mansa district

ICD 10	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	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	-	0.1	0.1	-
C01-C02	-	-	-	-	-	-	-	-	-	-	-	-	4.3	3.6	5.9	-	0.5	0.4	0.5
C03-C06	-	-	-	-	-	-	-	-	-	-	-	-	6.4	7.3	5.9	4.0	0.9	0.7	0.8
C07-C08	-	-	-	-	1.3	-	-	-	1.8	-	-	3.4	-	-	-	4.0	0.5	0.4	0.8
C09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C11	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-
C12-C13	-	-	-	-	-	-	-	-	1.8	-	-	3.4	-	10.9	-	4.0	0.8	0.7	0.8
C14	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	-	0.1	0.1	-
C15	-	-	-	-	-	1.5	1.7	3.5	5.4	14.7	26.0	31.0	17.0	32.8	35.5	20.1	7.7	7.0	14.9
C16	-	-	-	-	-	1.5	-	-	-	-	-	-	2.1	-	-	-	0.3	0.2	0.3
C17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	0.1	0.1	-
C18	-	-	-	-	-	-	-	-	-	2.1	2.9	-	4.3	3.6	-	-	0.6	0.5	1.4
C19-C20	-	-	-	-	-	-	-	1.7	-	-	2.9	-	4.3	3.6	5.9	-	0.8	0.6	1.4
C21	-	-	-	-	-	-	-	1.7	-	-	2.9	-	4.3	-	-	-	0.5	0.4	1.4
C22	-	-	-	-	-	-	-	-	1.8	-	8.7	6.9	4.3	10.9	11.8	20.1	2.3	2.0	3.2
C23-C24	-	-	-	-	-	-	-	1.7	5.4	6.3	26.0	3.4	17.0	18.2	41.4	24.2	5.5	4.8	9.4
C25	-	-	-	-	-	-	-	-	-	-	-	3.4	8.5	3.6	11.8	8.1	1.3	1.0	1.5
C30-C31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	0.1	0.1	0.3
C33-C34	-	-	-	-	-	-	-	-	1.8	-	-	6.9	4.3	21.9	5.9	8.1	1.8	1.5	1.8
C37-C38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	0.1	0.1	0.4
C43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C44	-	-	-	-	-	-	-	-	-	-	-	3.4	2.1	-	-	-	0.3	0.2	0.7
C45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	-	-	-	-	-	-	1.7	-	-	2.1	-	-	2.1	-	5.9	-	0.5	0.4	0.7
C50	-	-	-	-	-	6.0	13.6	24.3	19.8	37.7	57.9	65.4	34.0	51.0	65.0	36.2	18.5	16.6	38.0
C51	-	-	-	-	-	-	-	-	-	-	-	-	2.1	7.3	-	8.1	0.6	0.5	0.3
C52	-	-	-	-	-	-	-	-	-	2.1	-	3.4	-	-	-	-	0.3	0.3	0.8
C53	-	-	-	-	-	-	5.1	10.4	12.6	27.2	37.6	27.5	38.3	36.4	47.3	16.1	11.5	10.2	24.3
C54	-	-	-	-	-	-	-	-	-	2.1	2.9	17.2	6.4	10.9	5.9	-	1.8	1.7	3.9
C55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C56	-	-	-	-	1.3	3.0	3.4	-	7.2	10.5	17.4	17.2	10.6	18.2	11.8	4.0	4.9	4.5	9.8
C57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	0.1	0.1	-
C58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	-	-	-	-	-	-	-	-	-	-	-	3.4	4.3	3.6	11.8	4.0	0.9	0.7	1.0
C65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	-	-	-	-	-	-	-	-	-	-	-	3.4	-	3.6	-	-	0.3	0.2	0.4
C68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C70-C72	1.9	4.0	-	-	-	-	1.7	-	-	2.1	2.9	6.9	2.1	3.6	5.9	-	1.4	1.6	2.0
C73	-	-	-	-	-	-	1.7	3.5	1.8	6.3	5.8	3.4	2.1	-	-	8.1	1.7	1.5	3.9
C74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	-	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-
C82-C86, C96	-	-	-	-	-	-	-	-	5.4	2.1	-	-	-	7.3	-	-	0.8	0.7	1.4
C88	-	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-
C90	-	-	-	-	-	-	-	-	-	-	8.7	-	2.1	3.6	-	-	0.6	0.6	1.7
C91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.8	-	0.3	0.2	-
C92-C94	-	-	-	-	-	-	3.4	3.5	-	6.3	2.9	13.8	4.3	10.9	5.9	4.0	2.4	2.2	4.7
C95	-	-	-	-	-	-	-	-	-	-	-	-	2.1	-	-	-	0.1	0.1	0.3
O&U*	-	-	-	-	1.3	4.5	1.7	3.5	1.8	4.2	14.5	17.2	8.5	29.2	29.6	44.3	6.2	5.2	7.5
All sites	1.9	4.0	-	2.6	3.8	18.1	33.9	53.9	66.4	125.6	219.9	244.4	200.0	309.8	336.9	217.4	77.5	68.6	140.4

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 29: Cumulative Rate (Cu. Rate) & Cumulative Risk (Cu. Risk) of individual sites (ICD 10) based on age-specific rates (From 0-64 Years and 0-74 Years) 2017-2018: Males

ICD 10	Sites	Cum Rate (0-64)	Cum Risk (0-64)	Cum Rate (0-74)	Cum Risk (0-74)
C00	Lip	0.0003	0.0003	0.0003	0.0003
C01-C02	Tongue	0.0013	0.0013	0.0025	0.0025
C03-C06	Mouth	0.0025	0.0025	0.0034	0.0034
C07-C08	Salivary Gland	0.0005	0.0005	0.0005	0.0005
C09	Tonsil	0.0007	0.0007	0.0010	0.0010
C10	Oth. Oropharynx	0.0007	0.0007	0.0010	0.0010
C11	Nasopharynx	-	-	-	-
C12-C13	Hypopharynx	0.0012	0.0012	0.0028	0.0028
C14	Pharynx Unspecified	-	-	-	-
C15	Oesophagus	0.0023	0.0023	0.0053	0.0053
C16	Stomach	0.0002	0.0002	0.0013	0.0013
C17	Small Intestine	-	-	-	-
C18	Colon	0.0009	0.0009	0.0011	0.0011
C19-C20	Rectum	0.0014	0.0014	0.0016	0.0016
C21	Anus & Anal Canal	0.0001	0.0001	0.0003	0.0003
C22	Liver	0.0029	0.0029	0.0056	0.0056
C23-C24	Gallbladder etc.	0.0010	0.0010	0.0015	0.0015
C25	Pancreas	0.0012	0.0012	0.0015	0.0015
C30-C31	Nose, Sinuses etc.	0.0001	0.0001	0.0001	0.0001
C32	Larynx	0.0010	0.0010	0.0020	0.0020
C33-C34	Trachea, bronchus and lung	0.0019	0.0019	0.0031	0.0031
C37-C38	Other Thoracic Organs	-	-	-	-
C40-C41	Bone	0.0004	0.0004	0.0007	0.0007
C43	Melanoma of Skin	0.0002	0.0002	0.0002	0.0002
C44	Other Skin	0.0004	0.0004	0.0006	0.0006
C45	Mesothelioma	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-
C47+C49	Conn. & Soft Tissue	0.0005	0.0005	0.0007	0.0007
C50	Breast	0.0001	0.0001	0.0001	0.0001
C60	Penis	0.0013	0.0013	0.0020	0.0020
C61	Prostate	0.0013	0.0013	0.0061	0.0061
C62	Testis	0.0002	0.0002	0.0002	0.0002
C63	Other Male Genital	-	-	-	-
C64	Kidney etc.	0.0004	0.0004	0.0008	0.0008
C65	Renal Pelvis	-	-	-	-
C66	Ureter	-	-	-	-
C67	Urinary Bladder	0.0014	0.0014	0.0017	0.0017
C68	Unspecified Urinary Organs	-	-	-	-
C69	Eye	0.0003	0.0003	0.0003	0.0003
C70-C72	Brain, Nervous System	0.0018	0.0018	0.0026	0.0026
C73	Thyroid	0.0001	0.0001	0.0001	0.0001
C74	Adrenal Gland	-	-	-	-
C81	Hodgkins Disease	0.0007	0.0007	0.0007	0.0007
C82-C86, C96	Non-Hodgkin lymphoma	0.0017	0.0017	0.0028	0.0028
C88	Malig Imn.Prol D	-	-	-	-
C90	Multiple Myeloma	0.0006	0.0006	0.0009	0.0009
C91	Lymphoid Leukaemia	0.0013	0.0013	0.0014	0.0014
C92-C94	Myeloid Leukaemia	0.0012	0.0012	0.0019	0.0019
C95	Leukaemia Unspecified	0.0006	0.0006	0.0010	0.0010
Other and Unspecified*		0.0046	0.0046	0.0086	0.0086
All sites		0.0395	0.0395	0.0685	0.0685

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 30: Cumulative Rate (Cu. Rate) & Cumulative Risk (Cu. Risk) of individual sites (ICD 10) based on age-specific rates (From 0-64 Years and 0-74 Years) 2017-2018: Females

ICD 10	Sites	Cum Rate (0-64)	Cum Risk (0-64)	Cum Rate (0-74)	Cum Risk (0-74)
C00	Lip	-	-	0.0002	0.0002
C01-C02	Tongue	0.0002	0.0002	0.0007	0.0007
C03-C06	Mouth	0.0003	0.0003	0.0010	0.0010
C07-C08	Salivary Gland	0.0003	0.0003	0.0003	0.0003
C09	Tonsil	-	-	-	-
C10	Oth. Oropharynx	-	-	-	-
C11	Nasopharynx	0.0001	0.0001	0.0001	0.0001
C12-C13	Hypopharynx	0.0003	0.0003	0.0008	0.0008
C14	Pharynx Unspecified	-	-	0.0002	0.0002
C15	Oesophagus	0.0050	0.0050	0.0085	0.0085
C16	Stomach	0.0002	0.0002	0.0002	0.0002
C17	Small Intestine	-	-	0.0003	0.0003
C18	Colon	0.0005	0.0005	0.0006	0.0006
C19-C20	Rectum	0.0004	0.0004	0.0009	0.0009
C21	Anus & Anal Canal	0.0004	0.0004	0.0004	0.0004
C22	Liver	0.0011	0.0011	0.0022	0.0022
C23-C24	Gallbladder etc.	0.0030	0.0030	0.0060	0.0060
C25	Pancreas	0.0006	0.0006	0.0014	0.0014
C30-C31	Nose, Sinuses etc.	-	-	-	-
C32	Larynx	0.0001	0.0001	0.0001	0.0001
C33-C34	Trachea, bronchus and lung	0.0006	0.0006	0.0020	0.0020
C37-C38	Other Thoracic Organs	-	-	-	-
C40-C41	Bone	0.0002	0.0002	0.0002	0.0002
C43	Melanoma of Skin	-	-	-	-
C44	Other Skin	0.0003	0.0003	0.0003	0.0003
C45	Mesothelioma	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-
C47+C49	Conn. & Soft Tissue	0.0003	0.0003	0.0006	0.0006
C50	Breast	0.0129	0.0129	0.0187	0.0187
C51	Vulva	0.0001	0.0001	0.0005	0.0005
C52	Vagina	0.0003	0.0003	0.0003	0.0003
C53	Cervix Uteri	0.0079	0.0079	0.0121	0.0121
C54	Corpus Uteri	0.0014	0.0014	0.0023	0.0023
C55	Uterus Unspecified	-	-	-	-
C56	Ovary	0.0035	0.0035	0.0050	0.0050
C57	Other Female Genital	-	-	0.0003	0.0003
C58	Placenta	-	-	-	-
C64	Kidney etc.	0.0004	0.0004	0.0012	0.0012
C65	Renal Pelvis	-	-	-	-
C66	Ureter	-	-	-	-
C67	Urinary Bladder	0.0002	0.0002	0.0004	0.0004
C68	Unspecified Urinary Organs	-	-	-	-
C69	Eye	-	-	-	-
C70-C72	Brain, Nervous System	0.0011	0.0011	0.0016	0.0016
C73	Thyroid	0.0012	0.0012	0.0012	0.0012
C74	Adrenal Gland	-	-	-	-
C81	Hodgkins Disease	0.0001	0.0001	0.0001	0.0001
C82-C86, C96	Non-Hodgkin lymphoma	0.0004	0.0004	0.0007	0.0007
C88	Malignant Prol D	0.0001	0.0001	0.0001	0.0001
C90	Multiple Myeloma	0.0005	0.0005	0.0007	0.0007
C91	Lymphoid Leukaemia	-	-	0.0006	0.0006
C92-C94	Myeloid Leukaemia	0.0017	0.0017	0.0025	0.0025
C95	Leukaemia Unspecified	0.0001	0.0001	0.0001	0.0001
Other and Unspecified*		0.0029	0.0029	0.0058	0.0058
All sites		0.0487	0.0487	0.0811	0.0810

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 31: Number (#) and Proportion (%) of cancers by site (ICD -10) and method of diagnosis: 2017-2018 – Males Mansa district

ICD 10	Sites	Clinical		Radiology		Microscopic		Other (+DCO)**		Total #	
		No.	%	No.	%	No.	%	No.	%	No.	%
C00	Lip	-	-	-	-	3	100.0	-	-	3	100
C01-C02	Tongue	1	4.3	-	-	22	95.7	-	-	23	100
C03-C06	Mouth	2	6.9	1	3.4	26	89.7	-	-	29	100
C07-C08	Salivary Gland	-	-	-	-	4	100.0	-	-	4	100
C09	Tonsil	2	25.0	-	-	6	75.0	-	-	8	100
C10	Oth. Oropharynx	2	25.0	-	-	6	75.0	-	-	8	100
C11	Nasopharynx	-	-	-	-	-	-	-	-	-	-
C12-C13	Hypopharynx	3	15.0	-	-	17	85.0	-	-	20	100
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-
C15	Oesophagus	8	22.2	-	-	25	69.4	3	8.3	36	100
C16	Stomach	2	25.0	1	12.5	5	62.5	-	-	8	100
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-
C18	Colon	1	10.0	1	10.0	8	80.0	-	-	10	100
C19-C20	Rectum	3	18.8	-	-	12	75.0	1	6.3	16	100
C21	Anus & Anal Canal	-	-	-	-	3	100.0	-	-	3	100
C22	Liver	6	15.8	6	15.8	19	50.0	7	18.4	38	100
C23-C24	Gallbladder etc.	1	9.1	2	18.2	8	72.7	-	-	11	100
C25	Pancreas	6	50.0	1	8.3	5	41.7	-	-	12	100
C30-C31	Nose, Sinuses etc.	-	-	-	-	1	100.0	-	-	1	100
C32	Larynx	2	11.8	-	0.0	15	88.2	-	-	17	100
C33-C34	Lung etc.	3	11.5	5	19.2	17	65.4	1	3.8	26	100
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-
C40-C41	Bone	-	-	1	20.0	3	60.0	1	20.0	5	100
C43	Melanoma of Skin	-	-	-	-	1	100.0	-	-	1	100
C44	Other Skin	1	20.0	-	-	4	80.0	-	-	5	100
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-
C47+C49	Conn. & Soft Tissue	2	28.6	-	-	5	71.4	-	-	7	100
C50	Breast	-	-	-	-	-	-	1	100.0	1	100
C60	Penis	4	25.0	-	-	10	62.5	2	12.5	16	100
C61	Prostate	9	21.4	1	2.4	29	69.0	3	7.1	42	100
C62	Testis	1	33.3	-	-	2	66.7	-	-	3	100
C63	Other Male Genital	-	-	-	-	-	-	-	-	-	-
C64	Kidney etc.	1	16.7	1	16.7	3	50.0	1	16.7	6	100
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-
C66	Ureter	-	-	-	-	-	-	-	-	-	-
C67	Urinary Bladder	2	13.3	-	-	12	80.0	1	6.7	15	100
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-
C69	Eye	-	-	2	66.7	1	33.3	-	-	3	100
C70-C72	Brain, Nervous System	1	4.0	6	24.0	15	60.0	3	12.0	25	100
C73	Thyroid	-	-	-	-	2	100.0	-	-	2	100
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-
C81	Hodgkins Disease	-	-	-	-	8	100.0	-	-	8	100
C82-C86, C96	NHL	-	-	-	-	19	100.0	-	-	19	100
C88	Malig Imn.Prol D	-	-	-	-	-	-	-	-	-	-
C90	Multiple Myeloma	-	-	-	-	8	100.0	-	-	8	100
C91	Lymphoid Leukaemia	-	-	-	-	13	100.0	-	-	13	100
C92-C94	Myeloid Leukaemia	-	-	-	-	19	100.0	-	-	19	100
C95	Leukaemia Unspecified	-	-	-	-	9	100.0	-	-	9	100
Other and Unspecified*		10	14.1	10	14.1	26	36.6	25	35.2	71	100
All sites		73	13.2	38	6.9	391	71.0	49	8.9	551	100

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

** Other: Information based on patient's relatives, medical notes, and DCO # 3 cases of specific cases tumor marker

Table 32: Number (#) and Proportion (%) of cancers by the site (ICD -10) and method of diagnosis: 2017-2018 – Females Mansa district

ICD 10	Sites	Clinical		Radiology		Microscopic		Other (+DCO)**		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
C00	Lip	-	-	-	-	1	100.0	-	-	1	100
C01-C02	Tongue	-	-	-	-	4	100.0	-	-	4	100
C03-C06	Mouth	-	-	1	14.3	4	57.1	2	28.6	7	100
C07-C08	Salivary Gland	-	-	-	-	4	100.0	-	-	4	100
C09	Tonsil	-	-	-	-	-	-	-	-	-	-
C10	Oth. Oropharynx	-	-	-	-	-	-	-	-	-	-
C11	Nasopharynx	-	-	-	-	1	100.0	-	-	1	100
C12-C13	Hypopharynx	-	-	-	-	6	100.0	-	-	6	100
C14	Pharynx Unspecified	1	100.0	-	-	-	-	-	-	1	100
C15	Oesophagus	4	6.7	2	3.3	47	78.3	7	11.7	60	100
C16	Stomach	-	-	-	-	2	100.0	-	-	2	100
C17	Small Intestine	-	-	-	-	1	100.0	-	-	1	100
C18	Colon	1	20.0	1	20.0	3	60.0	-	-	5	100
C19-C20	Rectum	-	-	1	16.7	4	66.7	1	16.7	6	100
C21	Anus & Anal Canal	-	-	-	-	4	100.0	-	-	4	100
C22	Liver	5	27.8	3	16.7	6	33.3	4	22.2	18	100
C23-C24	Gallbladder etc.	5	11.6	7	16.3	26	60.5	5	11.6	43	100
C25	Pancreas	4	40.0	2	20.0	4	40.0	-	-	10	100
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-
C32	Larynx	1	100.0	-	-	-	-	-	-	1	100
C33-C34	Lung etc.	2	14.3	1	7.1	8	57.1	3	21.4	14	100
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-
C40-C41	Bone	-	-	1	100.0	-	-	-	-	1	100
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	-	-
C44	Other Skin	-	-	-	-	2	100.0	-	-	2	100
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-
C47+C49	Conn. & Soft Tissue	-	-	-	-	4	100.0	-	-	4	100
C50	Breast	18	12.5	1	0.7	122	84.7	3	2.1	144	100
C51	Vulva	1	20.0	-	-	4	80.0	-	-	5	100
C52	Vagina	-	-	-	-	2	100.0	-	-	2	100
C53	Cervix Uteri	12	13.3	2	2.2	68	75.6	8	8.9	90	100
C54	Corpus Uteri	1	7.1	-	-	13	92.9	-	-	14	100
C55	Uterus Unspecified	-	-	-	-	-	-	-	-	-	-
C56	Ovary etc.	7	18.4	2	5.3	29	76.3	-	-	38	100
C57	Other Female Genital	-	-	-	-	-	-	-	-	-	-
C58	Placenta	-	-	-	-	-	-	-	-	-	-
C64	Kidney etc.	1	14.3	2	28.6	3	42.9	1	14.3	7	100
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-
C66	Ureter	-	-	-	-	-	-	-	-	-	-
C67	Urinary Bladder	-	-	-	-	1	50.0	1	50.0	2	100
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-
C69	Eye	-	-	-	-	-	-	-	-	-	-
C70-C72	Brain, Nervous System	2	18.2	1	9.1	5	45.5	3	27.3	11	100
C73	Thyroid	1	7.7	1	7.7	11	84.6	-	-	13	100
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-
C81	Hodgkins Disease	-	-	-	-	1	100.0	-	-	1	100
C82-C86, C96	NHL	-	-	-	-	6	100.0	-	-	6	100
C88	Malig Imn.Prol D	-	-	-	-	1	100.0	-	-	1	100
C90	Multiple Myeloma	-	-	-	-	5	100.0	-	-	5	100
C91	Lymphoid Leukaemia	-	-	-	-	2	100.0	-	-	2	100
C92-C94	Myeloid Leukaemia	-	-	-	-	19	100.0	-	-	19	100
C95	Leukaemia Unspecified	-	-	-	-	1	100.0	-	-	1	100
Other and Unspecified*		9	18.8	3	6.3	20	41.7	16	33.3	48	100
All sites		75	12.4	31	5.1	444	73.5	54	8.9	604	100

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

** Other: Information based on patient's relatives, medical notes, and DCO

1 case of specific cases tumor marker

Table 33: Number of cancer deaths by five-year age groups and site (ICD 10): 2017-2018

Males Mansa district

% = Relative Proportion of Cancers of All Sites

ICD 10	Sites	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	0.2
C01-C02	Tongue	-	-	-	-	-	-	-	3	-	2	-	1	7	3	3	4	23	5.7
C03-C06	Mouth	-	-	-	-	-	-	-	1	1	4	7	1	5	3	-	3	25	6.2
C07-C08	Salivary Gland	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	2	0.5
C09	Tonsil	-	-	-	-	-	-	-	-	-	-	3	-	2	1	-	1	7	1.7
C10	Oth. Oropharynx	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	3	0.7
C11	Nasopharynx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C12-C13	Hypopharynx	-	-	-	-	-	-	-	-	1	-	3	-	-	2	3	1	10	2.5
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C15	Oesophagus	-	-	-	-	-	-	-	1	2	3	4	7	7	3	4	3	34	8.4
C16	Stomach	-	-	-	-	-	-	-	-	-	2	-	2	-	1	3	1	9	2.2
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C18	Colon	-	-	-	-	-	-	1	-	-	1	2	1	2	2	-	1	10	2.5
C19-C20	Rectum	-	-	-	-	-	1	1	-	1	-	1	1	2	1	-	2	10	2.5
C21	Anus & Anal Canal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C22	Liver	-	-	-	-	-	-	-	-	2	3	4	8	5	5	5	6	38	9.4
C23-C24	Gallbladder etc.	-	-	-	-	-	-	-	1	-	1	2	2	3	-	-	1	10	2.5
C25	Pancreas	-	-	-	-	-	-	-	2	-	1	1	3	1	2	-	-	10	2.5
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	0.2
C32	Larynx	-	-	-	-	-	-	-	-	1	-	4	1	3	2	1	2	14	3.5
C33-C34	Trachea, bronchus and lung	-	-	-	1	-	-	-	-	1	-	1	3	5	3	2	4	20	4.9
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	Bone	-	-	1	-	-	-	-	-	2	-	-	1	-	-	1	1	6	1.5
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	0.2
C44	Other Skin	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2	0.5
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	Conn. & Soft Tissue	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	2	0.5
C50	Breast	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	0.2
C60	Penis	-	-	-	-	-	-	-	-	1	3	1	-	3	-	-	1	9	2.2
C61	Prostate	-	-	-	-	-	-	-	-	-	-	3	1	6	4	6	5	25	6.2
C62	Testis	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.2
C63	Other Male Genital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	Kidney etc.	-	-	-	-	-	-	-	-	-	-	-	1	2	1	-	1	5	1.2
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	Urinary Bladder	-	-	-	-	-	-	-	-	-	-	3	-	2	-	1	-	6	1.5
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	Eye	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.2
C70-C72	Brain, Nervous System	-	1	-	1	-	3	1	1	-	1	1	1	-	1	2	2	15	3.7
C73	Thyroid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	Hodgkins Disease	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C82-C86, C96	Non-Hodgkin lymphoma	-	-	-	-	-	1	-	-	2	1	1	-	4	-	3	-	12	3.0
C88	Malig Imn.Prol D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C90	Multiple Myeloma	-	-	-	-	-	-	-	1	-	1	-	1	-	2	-	1	6	1.5
C91	Lymphoid Leukaemia	-	-	-	-	-	-	-	2	-	-	-	1	-	-	1	-	4	1.0
C92-C94	Myeloid Leukaemia	-	-	-	-	-	1	-	2	1	-	-	1	-	3	-	1	9	2.2
C95	Leukaemia Unspecified	1	-	-	-	1	2	-	-	-	-	-	-	2	2	1	-	9	2.2
Other and Unspecified*		1	-	1	1	1	-	1	2	5	2	5	5	1-	12	12	6	64	15.8
All sites		3	1	3	3	2	9	5	16	20	26	51	43	74	53	48	48	405	100

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 34: Number of cancer deaths by five-year age groups and site (ICD 10): 2017-2018

Females Mansa district

% = Relative Proportion of Cancers of All Sites

ICD 10	Sites	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C01-C02	Tongue	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	2	0.5
C03-C06	Mouth	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	3	0.7
C07-C08	Salivary Gland	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	0.2
C09	Tonsil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C10	Oth. Oropharynx	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	0.2
C11	Nasopharynx	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	0.2
C12-C13	Hypopharynx	-	-	-	-	-	-	-	1	1	-	-	-	-	1	-	1	4	1.0
C14	Pharynx Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	0.2
C15	Oesophagus	-	-	-	-	-	2	-	2	5	5	11	7	9	12	3	9	65	15.6
C16	Stomach	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2	0.5
C17	Small Intestine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C18	Colon	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	3	0.7
C19-C20	Rectum	-	-	-	-	-	-	1	-	1	1	-	-	2	-	1	-	6	1.4
C21	Anus & Anal Canal	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1	-	3	0.7
C22	Liver	-	-	-	-	-	-	-	-	1	1	3	2	2	3	2	3	17	4.1
C23-C24	Gallbladder etc.	-	-	-	-	-	-	-	1	3	3	3	-	7	7	6	6	36	8.7
C25	Pancreas	-	-	-	-	-	-	-	-	1	-	-	1	2	-	2	2	8	1.9
C30-C31	Nose, Sinuses etc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	Larynx	-	-	-	-	-	-	-	1	-	-	-	-	2	1	-	-	4	1.0
C33-C34	Trachea, bronchus and lung	-	-	-	-	-	-	-	-	-	1	-	1	3	5	1	2	13	3.1
C37-C38	Other Thoracic Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	Bone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C43	Melanoma of Skin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C44	Other Skin	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	1	4	1.0
C45	Mesothelioma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	Kaposi Sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	Conn. & Soft Tissue	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	2	0.5
C50	Breast	-	-	-	-	-	2	1	4	6	6	11	8	11	10	2	7	68	16.3
C51	Vulva	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	3	0.7
C52	Vagina	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C53	Cervix Uteri	-	-	-	-	-	-	-	1	7	9	8	5	12	6	5	2	55	13.2
C54	Corpus Uteri	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	3	0.7
C55	Uterus Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C56	Ovary	-	-	-	-	-	-	1	2	1	2	8	2	2	3	2	2	25	6.0
C57	Other Female Genital	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	0.2
C58	Placenta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	Kidney etc.	-	-	-	-	-	-	-	-	2	-	-	1	-	1	1	-	5	1.2
C65	Renal Pelvis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	Ureter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	Urinary Bladder	-	-	-	-	-	-	1	-	-	-	-	1	-	1	-	-	3	0.7
C68	Unspecified Urinary Organs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	Eye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C70-C72	Brain, Nervous System	1	1	-	-	1	-	1	-	-	-	1	2	-	1	1	-	9	2.2
C73	Thyroid	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	2	0.5
C74	Adrenal Gland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	Hodgkins Disease	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	0.2
C82-C86, C96	Non-Hodgkin lymphoma	-	-	-	-	-	-	-	-	1	2	-	1	1	3	-	-	8	1.9
C88	Malig Imn.Prol D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C90	Multiple Myeloma	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	4	1.0
C91	Lymphoid Leukaemia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C92-C94	Myeloid Leukaemia	-	-	-	-	-	-	-	-	-	1	1	1	2	2	-	1	8	1.9
C95	Leukaemia Unspecified	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	2	0.5
Other and Unspecified*		-	-	-	-	1	2	-	1	2	3	2	3	8	7	5	9	43	10.3
All sites		1	1	-	1	2	9	5	15	31	36	54	39	70	69	36	47	416	100

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 35: Average annual Age Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 yrs) (TR) Mortality Rate per 100,000 population: 2017-2018 – Males Mansa district

ICD 10	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	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	-	-	0.1	0.1	0.4
C01-C02	-	-	-	-	-	-	-	5.1	-	3.8	-	3.5	18.5	8.6	14.8	18.1	2.6	2.3	4.6
C03-C06	-	-	-	-	-	-	-	1.7	1.7	7.5	17.7	3.5	13.2	8.6	-	13.6	2.8	2.7	7.1
C07-C08	-	-	-	-	-	-	-	-	-	1.9	-	-	2.6	-	-	-	0.2	0.2	0.7
C09	-	-	-	-	-	-	-	-	-	-	7.6	-	5.3	2.9	-	4.5	0.8	0.8	1.9
C10	-	-	-	-	-	-	-	-	-	-	2.5	-	2.6	-	-	4.5	0.3	0.3	0.7
C11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C12-C13	-	-	-	-	-	-	-	-	1.7	-	7.6	-	-	5.7	14.8	4.5	1.1	1.0	1.6
C14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C15	-	-	-	-	-	-	-	1.7	3.4	5.6	10.1	24.6	18.5	8.6	19.7	13.6	3.9	3.8	9.3
C16	-	-	-	-	-	-	-	-	-	3.8	-	7.0	-	2.9	14.8	4.5	1.0	1.0	1.6
C17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C18	-	-	-	-	-	-	1.6	-	-	1.9	5.1	3.5	5.3	5.7	-	4.5	1.1	1.1	2.3
C19-C20	-	-	-	-	-	1.4	1.6	-	1.7	-	2.5	3.5	5.3	2.9	-	9.0	1.1	1.1	1.9
C21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C22	-	-	-	-	-	-	-	-	3.4	5.6	10.1	28.1	13.2	14.3	24.6	27.1	4.3	4.2	8.7
C23-C24	-	-	-	-	-	-	-	1.7	-	1.9	5.1	7.0	7.9	-	-	4.5	1.1	1.2	3.4
C25	-	-	-	-	-	-	-	3.4	-	1.9	2.5	10.5	2.6	5.7	-	-	1.1	1.1	3.1
C30-C31	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	-	-	0.1	0.1	0.4
C32	-	-	-	-	-	-	-	-	1.7	-	10.1	3.5	7.9	5.7	4.9	9.0	1.6	1.5	3.4
C33-C34	-	-	-	1.0	-	-	-	-	1.7	-	2.5	10.5	13.2	8.6	9.9	18.1	2.3	2.1	3.8
C37-C38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	-	-	1.2	-	-	-	-	-	3.4	-	-	3.5	-	-	4.9	4.5	0.7	0.6	1.1
C43	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-	-	-	0.1	0.1	0.5
C44	-	-	-	-	-	-	-	-	-	-	5.1	-	-	-	-	-	0.2	0.3	0.8
C45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	-	-	-	-	-	1.4	1.6	-	-	-	-	-	-	-	-	-	0.2	0.2	-
C50	-	-	-	-	-	-	-	-	-	-	-	-	2.6	-	-	-	0.1	0.1	0.3
C60	-	-	-	-	-	-	-	-	1.7	5.6	2.5	-	7.9	-	-	4.5	1.0	1.0	2.9
C61	-	-	-	-	-	-	-	-	-	-	7.6	3.5	15.8	11.4	29.6	22.6	2.8	2.5	3.7
C62	-	-	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-
C63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	-	-	-	-	-	-	-	-	-	-	-	3.5	5.3	2.9	-	4.5	0.6	0.5	1.1
C65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	-	-	-	-	-	-	-	-	-	-	7.6	-	5.3	-	4.9	-	0.7	0.7	1.9
C68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.2	-
C70-C72	-	1.6	-	1.0	-	4.2	1.6	1.7	-	1.9	2.5	3.5	-	2.9	9.9	9.0	1.7	1.6	1.6
C73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C82-C86, C96	-	-	-	-	-	1.4	-	-	3.4	1.9	2.5	-	10.6	-	14.8	-	1.4	1.3	2.8
C88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C90	-	-	-	-	-	-	-	1.7	-	1.9	-	3.5	-	5.7	-	4.5	0.7	0.6	1.1
C91	-	-	-	-	-	-	-	3.4	-	-	-	3.5	-	-	4.9	-	0.5	0.4	1.1
C92-C94	-	-	-	-	-	1.4	-	3.4	1.7	-	-	3.5	-	8.6	-	4.5	1.0	0.9	1.4
C95	1.7	-	-	-	1.1	2.8	-	-	-	-	-	-	5.3	5.7	4.9	-	1.0	1.0	0.7
O&U*	1.7	-	1.2	1.0	1.1	-	1.6	3.4	8.6	3.8	12.6	17.6	26.4	34.3	59.1	27.1	7.3	6.7	10.8
All sites	5.2	1.6	3.7	2.9	2.2	12.5	8.0	27.3	34.4	48.8	128.8	151.2	195.2	151.4	236.6	216.8	46.0	43.6	86.9

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

Table 36: Average annual Age Specific, Crude (CR), Age-Adjusted (AAR) and Truncated (35-64 yrs) (TR) Mortality Rate per 100,000 Population: 2017-2018 – Females Mansa district

ICD 10	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C01-C02	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	5.9	-	0.3	0.2	-
C03-C06	-	-	-	-	-	-	-	-	-	-	-	-	2.1	3.6	5.9	-	0.4	0.3	0.3
C07-C08	-	-	-	1.3	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-
C09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C10	-	-	-	-	-	-	-	-	-	2.1	-	-	-	-	-	-	0.1	0.1	0.4
C11	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-
C12-C13	-	-	-	-	-	-	-	1.7	1.8	-	-	-	-	3.6	-	4.0	0.5	0.4	0.7
C14	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	-	0.1	0.1	-
C15	-	-	-	-	-	3.0	-	3.5	9.0	10.5	31.8	24.1	19.2	43.7	17.7	36.2	8.3	7.3	15.1
C16	-	-	-	-	-	1.5	-	-	-	-	-	-	-	-	-	4.0	0.3	0.2	-
C17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C18	-	-	-	-	-	-	-	-	-	-	5.8	-	2.1	-	-	-	0.4	0.4	1.2
C19-C20	-	-	-	-	-	-	1.7	-	1.8	2.1	-	-	4.3	-	5.9	-	0.8	0.6	1.3
C21	-	-	-	-	-	-	-	1.7	-	2.1	-	-	-	-	5.9	-	0.4	0.3	0.7
C22	-	-	-	-	-	-	-	-	1.8	2.1	8.7	6.9	4.3	10.9	11.8	12.1	2.2	1.9	3.6
C23-C24	-	-	-	-	-	-	-	1.7	5.4	6.3	8.7	-	14.9	25.5	35.5	24.2	4.6	3.8	5.9
C25	-	-	-	-	-	-	-	-	1.8	-	-	3.4	4.3	-	11.8	8.1	1.0	0.8	1.3
C30-C31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C32	-	-	-	-	-	-	-	1.7	-	-	-	-	4.3	3.6	-	-	0.5	0.4	0.9
C33-C34	-	-	-	-	-	-	-	-	-	2.1	-	3.4	6.4	18.2	5.9	8.1	1.7	1.3	1.7
C37-C38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C40-C41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C44	-	-	-	-	-	-	-	-	-	-	-	6.9	2.1	-	-	4.0	0.5	0.4	1.2
C45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C47+C49	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	5.9	-	0.3	0.3	0.4
C50	-	-	-	-	-	3.0	1.7	7.0	10.8	12.6	31.8	27.5	23.4	36.4	11.8	28.2	8.7	7.7	17.6
C51	-	-	-	-	-	-	-	-	-	-	-	3.4	-	3.6	-	4.0	0.4	0.3	0.4
C52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C53	-	-	-	-	-	-	-	1.7	12.6	18.8	23.1	17.2	25.5	21.9	29.6	8.1	7.0	6.3	15.7
C54	-	-	-	-	-	-	-	-	-	-	2.9	-	-	7.3	-	-	0.4	0.4	0.5
C55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C56	-	-	-	-	-	-	1.7	3.5	1.8	4.2	23.1	6.9	4.3	10.9	11.8	8.1	3.2	3.0	7.0
C57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	-	0.1	0.1	-
C58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	-	-	-	-	-	-	-	-	3.6	-	-	3.4	-	3.6	5.9	-	0.6	0.6	1.1
C65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C67	-	-	-	-	-	-	1.7	-	-	-	-	3.4	-	3.6	-	-	0.4	0.3	0.4
C68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C70-C72	1.9	2.0	-	-	1.3	-	1.7	-	-	-	2.9	6.9	-	3.6	5.9	-	1.2	1.3	1.4
C73	-	-	-	-	-	-	-	-	-	-	2.9	-	2.1	-	-	-	0.3	0.2	0.7
C74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C81	-	-	-	-	-	-	-	1.7	-	-	-	-	-	-	-	-	0.1	0.1	0.3
C82-C86, C96	-	-	-	-	-	-	-	-	1.8	4.2	-	3.4	2.1	10.9	-	-	1.0	0.9	1.9
C88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C90	-	-	-	-	-	-	-	-	-	-	5.8	-	4.3	-	-	-	0.5	0.5	1.5
C91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C92-C94	-	-	-	-	-	-	-	-	-	2.1	2.9	3.4	4.3	7.3	-	4.0	1.0	0.9	1.9
C95	-	-	-	-	-	1.5	-	-	-	-	-	-	2.1	-	-	-	0.3	0.2	0.3
O&U*	-	-	-	-	1.3	3.0	-	1.7	3.6	6.3	5.8	10.3	17.0	25.5	29.6	36.2	5.5	4.5	6.7
All sites	1.9	2.0	-	1.3	2.6	13.6	8.5	26.1	55.7	75.4	156.2	134.2	149.0	251.5	212.8	189.2	53.3	46.5	92.1

* O & U includes the sites (ICD - 10: C26, C39, C48, C75, C76, C77, C78, C79, C80, C97)

21. Paediatric cancer incidence tables as per ICCC-3 standard

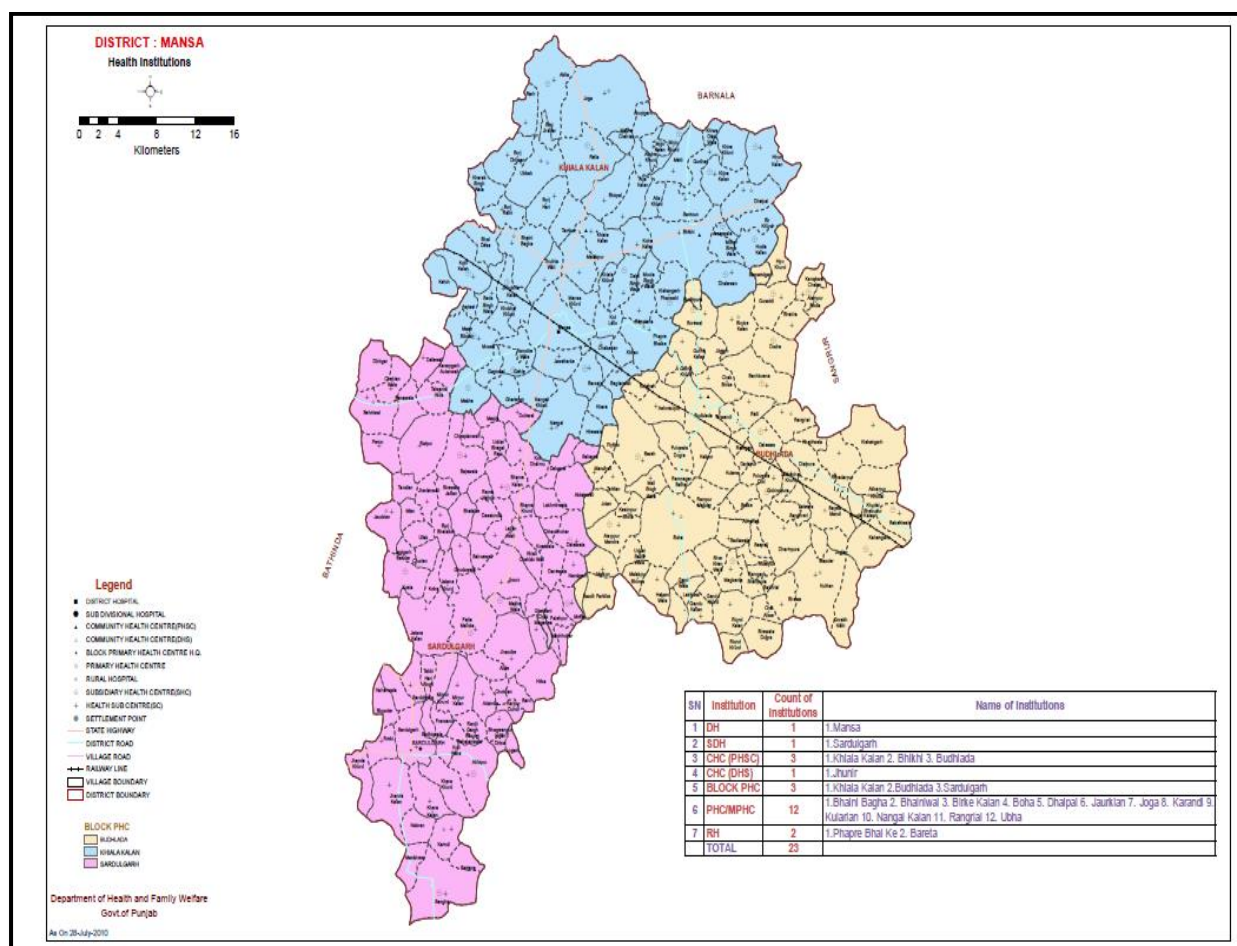
Table 37: Number of cases in paediatric age-group, incidence rate per million population: 2017-2018 (Both sex)

ICCC	Site	0-4	5-9	10-14	15-19	0-14	0-19	Percentage (0-14)		Percentage (0-19)		Age-specific rate per 1,000,000				AAR		Cumulative		MV % 0-19	DCO % 0-19
								All	Group	All	Group	0-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19		
I	LEUKAEMIA	3	2	2	4	7	11	33.3	100	37.9	100	27.4	17.9	14.4	22.4	20.5	21.0	3352	2437	100	0.0
a.	Lymphoid	1	1	-	1	2	3	9.5	28.6	10.3	27.3	9.1	9.0	-	5.6	6.4	6.2	11068	8448	100	0.0
b.	Acute myeloid	-	-	2	2	2	4	9.5	28.6	13.8	36.4	-	-	14.4	11.2	4.2	5.8	13884	7808	100	0.0
c.	CMD	-	-	-	1	-	1	-	-	3.4	9.1	-	-	-	5.6	-	1.3	-	35677	100	0.0
d.	MDS & other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified	2	1	-	-	3	3	14.3	42.9	10.3	27.3	18.2	9.0	-	-	9.9	7.7	7356	7356	100	0.0
II	LYMPHOMA & RELATED	1	1	1	2	3	5	14.3	100	17.2	100	9.1	9.0	7.2	11.2	8.5	9.1	7914	5482	100	0.0
a.	Hodgkin	1	1	1	1	3	4	14.3	100	13.8	80.0	9.1	9.0	7.2	5.6	8.5	7.9	7914	6477	100	0.0
b.	Non-Hodgkin except BL	-	-	-	1	-	1	-	-	3.4	20.0	-	-	-	5.6	-	1.3	-	35677	100	0.0
c.	Burkitt (BL)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Lymphoreticular	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
III	CNS NEOPLASMS	2	3	1	-	6	6	28.6	100	20.7	100	18.2	26.9	7.2	-	17.8	13.8	3825	3825	83.3	0.0
a.	Ependymoma	1	2	-	-	3	3	14.3	50.0	10.3	50.0	9.1	17.9	-	-	9.3	7.2	7402	7402	100	0.0
b.	Astrocytoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	CNS embryonal	-	-	1	-	1	1	4.8	16.7	3.4	16.7	-	-	7.2	-	2.1	1.6	27767	27767	100	0.0
d.	Other gliomas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f.	Unspecified CNS	1	1	-	-	2	2	9.5	33.3	6.9	33.3	9.1	9.0	-	-	6.4	5.0	11068	11068	50.0	0.0
IV	NEUROBLASTOMA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	(Ganglio)neuroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Peripheral nervous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V	RETINOBLASTOMA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VI	RENAL TUMOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	Nephroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Renal carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VII	HEPATIC TUMOURS	1	-	-	-	1	1	4.8	100	3.4	100	9.1	-	-	-	3.5	2.7	21930	21930	-	0.0
a.	Hepatoblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Hepatic carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Unspecified	1	-	-	-	1	1	4.8	100	3.4	100	9.1	-	-	-	3.5	2.7	21930	21930	-	0.0
VIII	BONE TUMOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	Osteosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Chondrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Ewing & related	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IX	SOFT TISSUE SARCOMA	-	1	-	-	1	1	4.8	100	3.4	100	-	9.0	-	-	2.9	2.2	22346	22346	100	0.0
a.	Rhabdomyosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Fibrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Kaposi sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Other specified	-	1	-	-	1	1	4.8	100	3.4	100	-	9.0	-	-	2.9	2.2	22346	22346	100	0.0
e.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X	GERM CELL TUMOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	CNS germ cell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Other extragonadal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Gonadal germ cell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Gonadal carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified gonadal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XI	CARCINOMA & MELANOMA	-	-	-	1	-	1	-	-	3.4	100.0	-	-	-	5.6	-	1.3	-	35677	100	0.0
a.	Adrenocortical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Thyroid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Nasopharyngeal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Melanoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Skin carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f.	Other & unspecified	-	-	-	1	-	1	-	-	3.4	100	-	-	-	5.6	-	1.3	-	35677	100	0.0
XII	OTHER & UNSPECIFIED	3	-	-	1	3	4	14.3	100	13.8	100	27.4	-	-	5.6	10.6	9.5	7310	6067	-	25.0
a.	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Other unspecified	3	-	-	1	3	4	14.3	100	13.8	100	27.4	-	-	5.6	10.6	9.5	7310	6067	-	25.0
Total		10	7	4	8	21	29	100.0	100	100.0	100	91.2	62.7	28.8	44.8	63.9	59.6	1095	880	79.3	3.4

Table 38: Number of cases in paediatric age-group, incidence rate per million population: 2017-2018 (By gender)

ICCC	Site	Males						Females											
		Number of cases in age groups						AAR per million		M/F Ratio		Number of cases in age groups						AAR per million	
		0-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19	0-14	0-19	0-4	5-9	10-14	15-19	0-14	0-19	0-14	0-19
I	LEUKAEMIA	3	2	2	4	7	11	37.7	38.0	0.0	-	-	-	-	-	-	-	-	-
a.	Lymphoid	1	1	-	1	2	3	11.9	11.4	0.0	-	-	-	-	-	-	-	-	-
b.	Acute myeloid	-	-	2	2	2	4	7.2	10.0	0.0	-	-	-	-	-	-	-	-	-
c.	CMD	-	-	-	1	-	1	-	2.2	0.0	-	-	-	-	-	-	-	-	-
d.	MDS & other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified	2	1	-	-	3	3	18.6	14.4	0.0	-	-	-	-	-	-	-	-	-
II	LYMPHOMA & RELATED	1	1	1	-	3	3	15.5	12.0	0.0	1.5	-	-	-	2	-	2	-	5.9
a.	Hodgkin	1	1	1	-	3	3	15.5	12.0	3.0	3.0	-	-	-	1	1	1	-	2.9
b.	Non-Hodgkin except BL	-	-	-	-	-	-	-	-	0.0	0.0	-	-	-	1	-	1	-	2.9
c.	Burkitt (BL)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Lymphoreticular	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
III	CNS NEOPLASMS	1	1	1	-	3	3	15.5	12.0	1.0	1.0	1	2	-	-	3	3	20.4	15.8
a.	Ependymoma	1	-	-	-	1	1	6.7	5.2	0.5	0.5	-	2	-	-	2	2	12.9	10.0
b.	Astrocytoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	CNS embryonal	-	-	1	-	1	1	3.6	2.8	0.0	0.0	-	-	-	-	-	-	-	-
d.	Other gliomas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f.	Unspecified CNS	-	1	-	-	1	1	5.2	4.0	1.0	1.0	1	-	-	-	1	1	7.5	5.8
IV	NEUROBLASTOMA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	(Ganglio)neuroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Peripheral nervous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V	RETINOBLASTOMA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VI	RENAL TUMOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	Nephroblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Renal carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VII	HEPATIC TUMOURS	1	-	-	-	1	1	6.7	5.2	0.0	0.0	-	-	-	-	-	-	-	-
a.	Hepatoblastoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Hepatic carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Unspecified	1	-	-	-	1	1	6.7	5.2	0.0	0.0	-	-	-	-	-	-	-	-
VIII	BONE TUMOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	Osteosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Chondrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Ewing & related	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IX	SOFT TISSUE SARCOMA	-	1	-	-	1	1	5.2	4.0	0.0	0.0	-	-	-	-	-	-	-	-
a.	Rhabdomyosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Fibrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Kaposi sarcoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Other specified	-	1	-	-	1	1	5.2	4.0	0.0	0.0	-	-	-	-	-	-	-	-
e.	Unspecified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X	GERM CELL TUMOURS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a.	CNS germ cell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Other extragonadal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Gonadal germ cell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Gonadal carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Unspecified gonadal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XI	CARCINOMA & MELANOMA	-	-	-	1	-	1	-	2.2	0.0	0.0	-	-	-	-	-	-	-	-
a.	Adrenocortical	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Thyroid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c.	Nasopharyngeal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d.	Melanoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e.	Skin carcinoma	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
f.	Other & unspecified	-	-	-	1	-	1	-	2.2	0.0	0.0	-	-	-	-	-	-	-	-
XII	OTHER & UNSPECIFIED	3	-	-	1	3	4	20.0	17.7	0.0	0.0	-	-	-	-	-	-	-	-
a.	Other specified	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b.	Other unspecified	3	-	-	1	3	4	20.0	17.7	0.0	0.0	-	-	-	-	-	-	-	-
Total		9	5	4	6	18	24	100.6	91.2	6.0	4.8	1	2	-	2	3	5	20.4	21.7

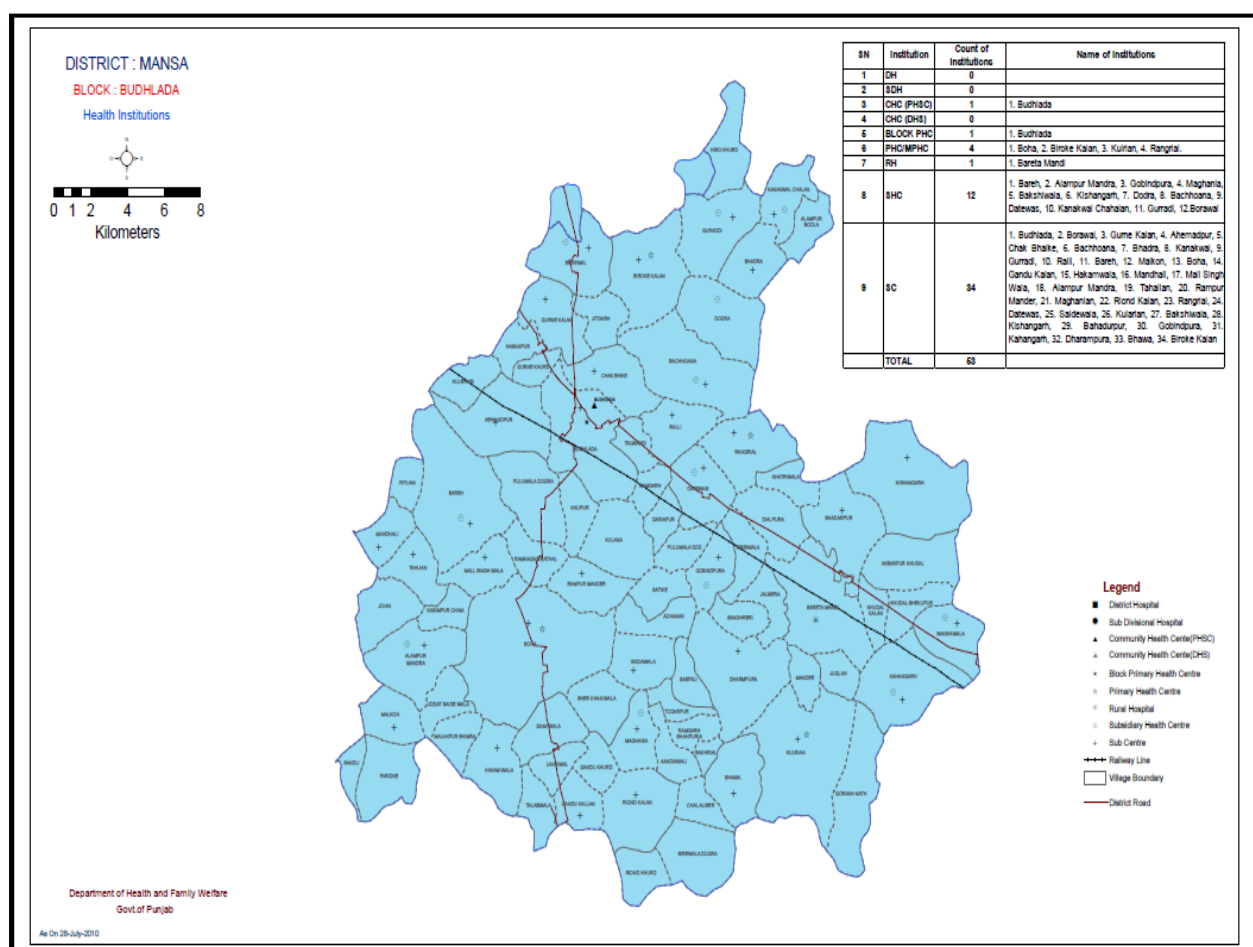
22. Village-wise incidence and mortality cases in Mansa district: 2013-2018



Village-wise Cancer Incidence Cases and Mortality Cases: Mansa District

Block	Incidence (2013-2018)			Mortality (2013-2018)		
	Male	Female	Total	Male	Female	Total
Budhlada	489	509	998	363	335	698
Khaila Kalan	587	734	1321	406	437	843
Sardulgarh	374	387	761	268	233	501
Total	1450	1630	3080	1037	1005	2042

Village-wise Cancer Incidence Cases and Mortality Cases: Budhlada, Mansa District (2013-2018)

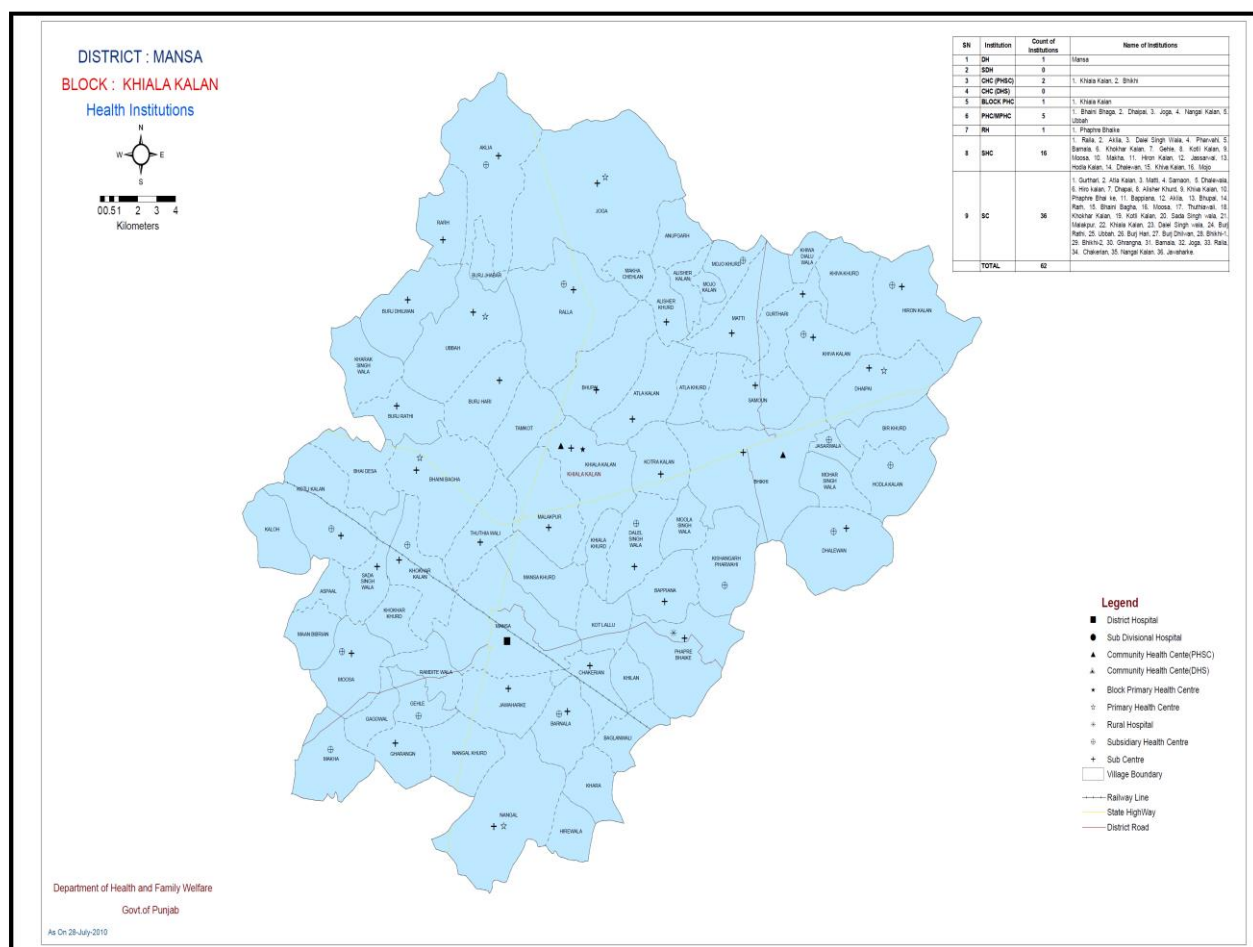


Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
1	Achanak	4	2	6	2	2	4
2	Ahmedpur	8	8	16	6	4	10
3	Akbarpur Khudal	4	6	10	2	6	8
4	Alampur Bodla	2	3	5	2	4	6
5	Alampur Mandran	7	11	18	6	7	13
6	Andian Wali	1	3	4	1	1	2
7	Bachhoana	10	13	23	6	13	19
8	Bahadarpur	18	16	34	13	14	27
9	Bakhshiwal	0	3	3	1	2	3
10	Bareh	16	7	23	14	5	19
11	Baretta	44	33	77	31	18	49

Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
12	Bhadra	2	4	6	1	2	3
13	Bhakhrial	8	1	9	9	0	9
14	Bhawa	6	7	13	4	2	6
15	Birewala Dogra	4	2	6	3	1	4
16	Biroke Kalan	4	7	11	2	6	8
17	Biroke Khurd	2	0	2	2	1	3
18	Boha	20	26	46	11	16	27
19	Borewal	6	14	20	4	8	12
20	Budhlada	61	64	125	43	40	83
21	Budhlada Pind	0	3	3	0	3	3
22	Chak Ali Sher	2	4	6	2	1	3
23	Chak Bhai Ke	2	8	10	1	3	4
24	Dariapur	1	3	4	0	3	3
25	Datewas	5	6	11	3	3	6
26	Dharampura	20	13	33	17	8	25
27	Dodra	6	8	14	3	5	8
28	Dyalpura	4	5	9	2	4	6
29	Farid Ke	2	2	4	1	2	3
30	Gami Wala	3	5	8	2	6	8
31	Gandhu Kalan	5	2	7	1	1	2
32	Gandhu Khurd	1	2	3	0	1	1
33	Gobindpura	2	2	4	2	1	3
34	Gorkhnath	2	4	6	0	2	2
35	Guraddi	4	12	16	5	8	13
36	Gurne Kalan	6	6	12	6	3	9
37	Gurne Khurd	3	6	9	2	3	5
38	Hakamwala	5	6	11	4	4	8
39	Hassanpur	2	1	3	1	1	2
40	Heron Khurd	3	6	9	1	5	6
41	Jalwehra	4	3	7	3	3	6
42	Joian	2	2	4	1	1	2
43	Juglan	2	1	3	0	1	1
44	Kahangarh	9	6	15	6	6	12
45	Kalipur	3	5	8	4	6	10
46	Kanakwal Chehlan	3	6	9	2	2	4
47	Kasimpur Chhina	0	3	3	0	1	1
48	Khatti Wala	3	4	7	4	2	6

Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
49	Khiva Mihan Singh Wala	2	1	3	3	0	3
50	Khudal Kalan	1	4	5	1	2	3
51	Kishangarh	7	10	17	5	5	10
52	Kulana	6	9	15	3	5	8
53	Kulehri	5	10	15	5	7	12
54	Kulrian	31	14	45	24	12	36
55	Lakhiwal	2	2	4	2	1	3
56	Maghanian	2	1	3	2	0	2
57	Mal Singh Wala	6	6	12	3	3	6
58	Malakpur Bhimra	3	1	4	3	3	6
59	Malko	4	4	8	3	4	7
60	Mander	7	6	13	4	4	8
61	Mandhali	6	4	10	3	4	7
62	Phulluwala Dod	1	1	2	1	1	2
63	Phulluwala Dogra	2	3	5	1	3	4
64	Piplian	3	4	7	2	1	3
65	Rali	3	11	14	3	9	12
66	Ramgarh	1	0	1	1	0	1
67	Ramgarh Bhathal	6	6	12	5	5	10
68	Ramgarh Shahpurian	3	2	5	3	0	3
69	Rampur Mander	8	1	9	7	1	8
70	Ranghrial	8	6	14	6	2	8
71	Reond Kalan	4	2	6	3	1	4
72	Reond Khurd	3	2	5	2	1	3
73	Saide Wala	6	4	10	4	4	8
74	Sandli	1	1	2	1	1	2
75	Sanghreri	3	2	5	4	2	6
76	Saspali	3	1	4	3	1	4
77	Sati Ke	5	2	7	4	0	4
78	Shekhupur Khudal	7	7	14	7	5	12
79	Sher Khan Wala	1	2	3	0	1	1
80	Sirsi Wala	1	1	2	1	1	2
81	Tahlian	1	4	5	2	2	4
82	Talib Wala	2	3	5	2	2	4
83	Uddat Saide Wala	4	8	12	4	1	5
Total		489	509	998	363	335	698

Village-wise cancer incidence cases and mortality cases: Khiala Kalan, Mansa District (2013-2018)

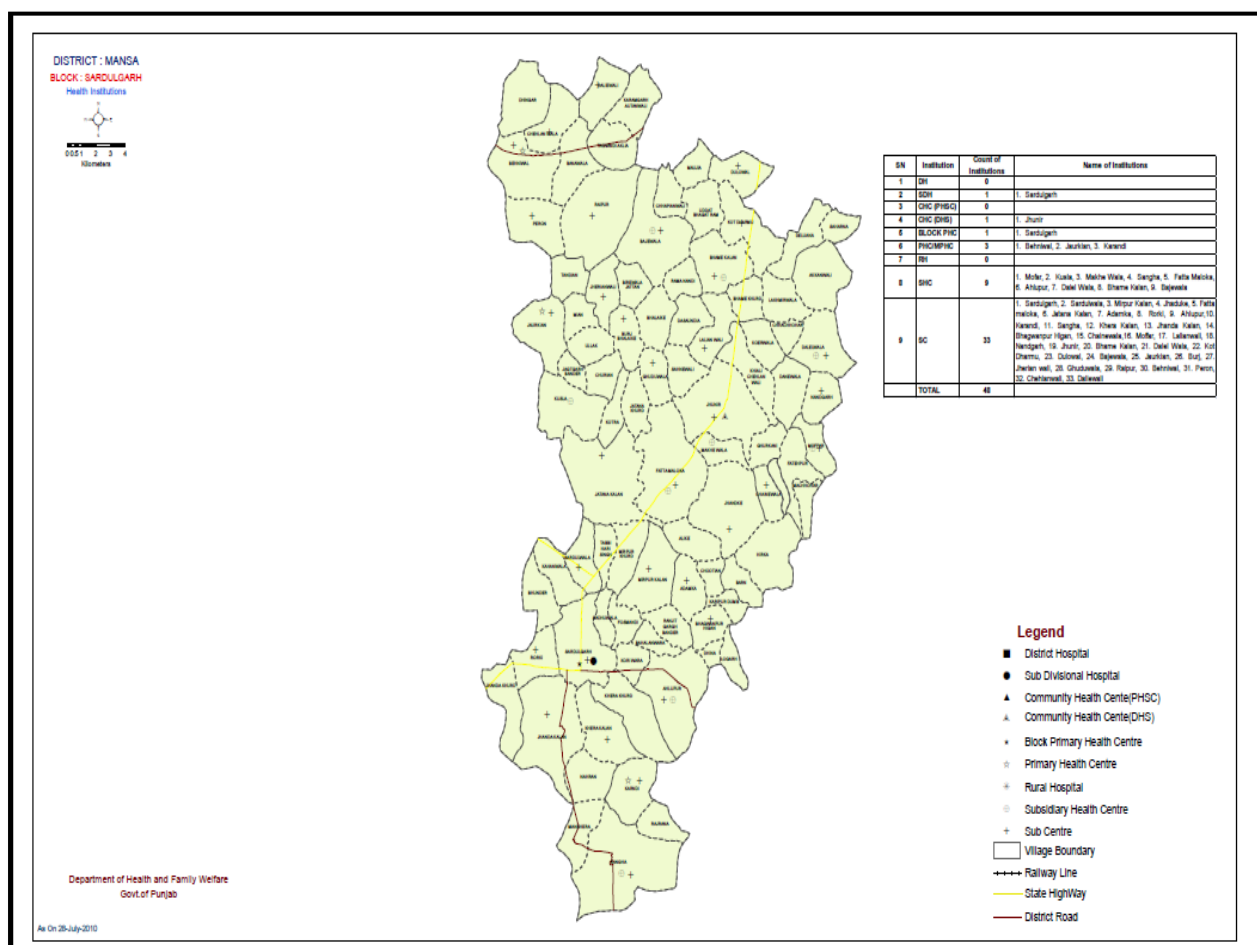


Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
1	Aklia	14	28	42	6	19	25
2	Ali Sher Kalan	3	4	7	3	3	6
3	Ali Sher Khurd	2	0	2	0	0	0
4	Anoopgarh	1	1	2	1	2	3
5	Aspal	2	1	3	1	1	2
6	Atla Kalan	5	4	9	4	2	6
7	Atla Khurd	2	3	5	1	6	7
8	Bapiana	4	7	11	4	5	9
9	Barnala	6	4	10	4	2	6
10	Bhai Desa	2	4	6	1	2	3
11	Bhaini Bagha	11	22	33	9	13	22

Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
12	Bhikhi	30	37	67	22	23	45
13	Bhupal Kalan	9	7	16	5	4	9
14	Bhupal Khurd	2	0	2	2	1	3
15	Bir Khurd	1	10	11	2	5	7
16	Burj Dhilwan	13	8	21	9	5	14
17	Burj Hari	6	12	18	6	9	15
18	Burj Jhabbar	2	1	3	2	0	2
19	Burj Rathi	5	9	14	5	7	12
20	Chakerian	2	7	9	2	4	6
21	Dalel Singh Wala	6	11	17	4	9	13
22	Dhaipi	3	4	7	2	3	5
23	Dhalewan	9	8	17	3	5	8
24	Gagowal	2	2	4	2	2	4
25	Gehle	3	3	6	3	1	4
26	Gharangna	9	5	14	6	1	7
27	Gurthari	1	4	5	1	4	5
28	Heron Kalan	11	8	19	8	3	11
29	Hire Wala	3	7	10	2	4	6
30	Hodla Kalan	6	6	12	3	6	9
31	Jassarwal	0	2	2	0	2	2
32	Jawaharke	9	18	27	5	13	18
33	Joga	24	27	51	17	21	38
34	Kahllon	4	7	11	3	6	9
35	Khara	11	8	19	8	5	13
36	Kharak Singh Wala	5	7	12	2	2	4
37	Khiala Kalan	15	10	25	7	8	15
38	Khiala Khurd	1	1	2	1	2	3
39	Khillan	6	2	8	4	3	7
40	Khiva Dyalu	2	3	5	2	2	4
41	Khiva Kalan	12	14	26	7	6	13
42	Khiva Khurd	3	5	8	2	2	4
43	Khokhar Kalan	9	8	17	10	1	11
44	Khokhar Khurd	7	6	13	6	4	10
45	Kishangarh Urf Pharwahi	12	7	19	11	5	16
46	Kot Lallu	5	9	14	3	3	6
47	Kotli Kalan	10	16	26	7	8	15
48	Kotra Kalan	12	11	23	5	6	11

Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
49	Maan Bibrian	2	3	5	3	0	3
50	Makha	9	6	15	5	4	9
51	Makha Chehlan	3	11	14	5	7	12
52	Malakpur	5	5	10	2	5	7
53	Mansa	138	154	292	87	74	161
54	Mansa Kanchiyan	3	3	6	1	2	3
55	Mansa Khurd	2	7	9	2	2	4
56	Maojo kalan	1	2	3	1	0	1
57	Maojo Khurd	6	1	7	5	1	6
58	Matti	4	8	12	4	3	7
59	Mohar Singh Wala	2	5	7	2	4	6
60	Moola Singh Wala	2	2	4	1	2	3
61	Moosa	11	7	18	9	2	11
62	Nangal Kalan	18	18	36	15	14	29
63	Nangal Khurd	4	13	17	0	8	8
64	Narinder Pura	2	6	8	2	2	4
65	Phaphre Bhai Ke	5	11	16	3	6	9
66	Ralla	8	24	32	6	12	18
67	Ramditta Wala	3	5	8	1	5	6
68	Rar	7	6	13	2	3	5
69	Sadda Singh Wala	7	7	14	4	5	9
70	Samaon	10	13	23	9	4	13
71	Tamkot	6	8	14	6	6	12
72	Thuthianwali	5	9	14	6	6	12
73	Ubha	2	12	14	2	10	12
Total		587	734	1321	406	437	843

Village-wise Cancer Incidence Cases and Mortality Cases: Sardulgarh, Mansa District (2013-2018)



Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
1	Adam Ke	1	0	1	1	1	2
2	Ahlupur	6	9	15	3	4	7
3	Akkanwali	2	2	4	0	1	1
4	Ali Ke	2	1	3	1	1	2
5	Bajewala	6	7	13	6	7	13
6	Banawali	0	4	4	1	3	4
7	Behniwal	6	9	15	4	2	6
8	Bern	1	1	2	1	2	3
9	Bhagwanpur Hingna	1	3	4	0	1	1
10	Bhalai Ke	4	2	6	4	0	4
11	Bhallanwara	1	2	3	1	1	2

Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
12	Bhamme Kalan	4	10	14	4	10	14
13	Bhamme Khurd	4	4	8	3	3	6
14	Bhunder	9	3	12	8	0	8
15	Bire Wala Jattan	3	5	8	2	1	3
16	Burj Bhalai Ke	0	4	4	0	5	5
17	Chachohar	1	1	2	1	1	2
18	Chahlanwala	6	4	10	4	3	7
19	Chaine Wala	4	2	6	3	1	4
20	Chhapian Wali	1	1	2	1	0	1
21	Chotian	0	2	2	0	2	2
22	Chuhrian	3	3	6	1	1	2
23	Dalelwala	6	10	16	2	7	9
24	Dalie Wali	5	4	9	3	2	5
25	Dane Wala	1	8	9	1	4	5
26	Dasoundhia	3	3	6	2	4	6
27	Deluana	3	2	5	1	2	3
28	Dhingana	0	1	1	0	0	0
29	Dhingar	8	6	14	5	5	10
30	Dulowal	12	4	16	10	2	12
31	Fatehpur	11		11	8	1	9
32	Fatta Maluke	8	8	16	7	4	11
33	Ghurkani	1	5	6	0	3	3
34	Gudduwala	3	1	4	2	0	2
35	Hirke	7	3	10	5	2	7
36	Jagat Garh Bandran	3	2	5	3	1	4
37	Jatana Kalan	5	5	10	3	2	5
38	Jatana Khurd	0	2	2	0	0	0
39	Jhanda Kalan	6	10	16	4	5	9
40	Jhanda Khurd	7	7	14	4	1	5
41	Jhandu Ke	8	12	20	4	6	10
42	Jherianwali	3	1	4	2	0	2
43	Jhunir	12	16	28	10	10	20
44	Jourkian	4	7	11	5	4	9
45	Kahne Wala	5	1	6	4	1	5
46	Karamgarh Autanwali	1	7	8	1	4	5
47	Karandi	4	3	7	1	0	1
48	Karipur Dumb	1	1	2	1	1	2

Sr. No.	Village Name	Incidence (2013-2018)			Mortality (2013-2018)		
		Male	Female	Total	Male	Female	Total
49	Kauriwara	2	0	2	1	0	1
50	Khaira Kalan	9	2	11	8	2	10
51	Khaira Khurd	15	3	18	10	2	12
52	Khiali Chehlanwali	5	9	14	3	4	7
53	Kore Wala	2	4	6	2	4	6
54	Kot Dharmu	10	8	18	7	5	12
55	Kotra	3	3	6	2	2	4
56	Kusla	3	7	10	2	6	8
57	Lakhmirwala	5	4	9	4	2	6
58	Lallianwali	6	3	9	5	3	8
59	Lohar Khera	0	1	1	0	0	0
60	Lohgarh	3	7	10	3	7	10
61	Makhe Wala	3	7	10	1	6	7
62	Man Khera	2	6	8	2	4	6
63	Mian	4	1	5	4	0	4
64	Mirpur Kalan	4	8	12	3	4	7
65	Mirpur Khurd	3	4	7	1	3	4
66	Moffar	3	2	5	3	1	4
67	Mojia	3	4	7	4	3	7
68	Nahran	0	3	3	0	1	1
69	Nandgarh	5	3	8	4	3	7
70	Peron	6	3	9	6	3	9
71	Phus Mandi	2	2	4	1	1	2
72	Raipur	9	14	23	4	5	9
73	Raj Rana	2	2	4	2	0	2
74	Rama Nandi	2	1	3	1	3	4
75	Ranjitgarh Bander	2	0	2	1	0	1
76	Rorki	2	3	5	1	3	4
77	Sadhuwala	1	1	2	0	0	0
78	Saharna	6	2	8	5	1	6
79	Sahniawali	2	1	3	2	1	3
80	Sangha	7	6	13	5	3	8
81	Sardulewala	7	3	10	5	2	7
82	Sardulgarh	30	28	58	22	15	37
83	Talwandi Akalia	3	4	7	1	2	3
84	Tandian	3	8	11	1	5	6
85	Tibbi Hari Singh	1	3	4	0	1	1
86	Uddat Bhagat Ram	3	5	8	3	3	6
87	Ullak	4	4	8	2	2	4
Total		374	387	761	268	233	501

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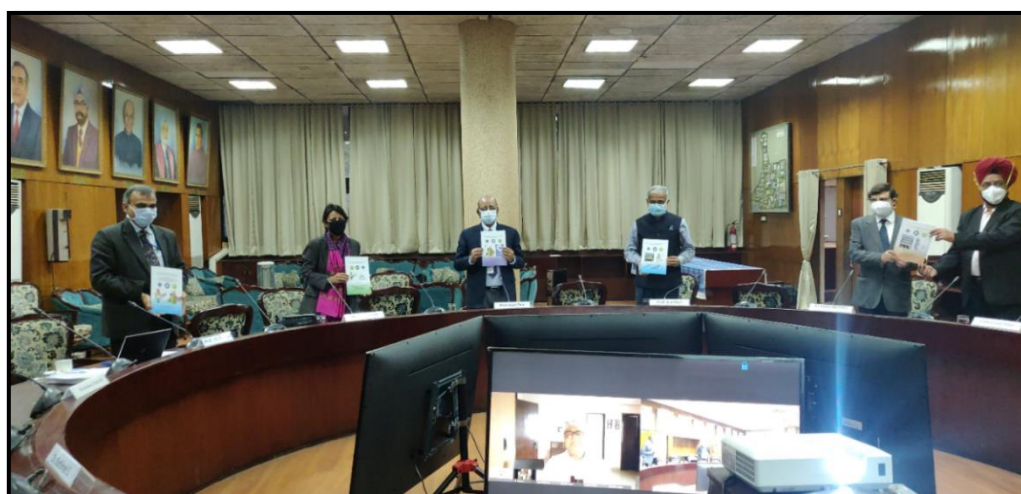
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25. Annexure

Release of third annual report of the Mansa population-based cancer registry

The third annual report of population-based cancer registry of Chandigarh and Punjab State was released on 28th November 2020 by Mrs. Vini Mahajan, Ex-Principal Secretary – Government of Punjab state, India, in the presence of Director Dr. Jagat Ram, PGIMER and Dr. RA Badwe, Dr. JS Thakur, Dr. Rajesh Dikshit, and Dr. Atul Budukh along with other dignitaries.

Amidst the COVID-19 situation Dr. RA Badwe, Director TMC Mumbai and his team joined the meeting virtually. While releasing the report, Dr. RA Badwe mentioned that cancer registries serve to be an extremely important tool in gauging the enemy i.e., cancer. For planning cancer control activities cancer registries are essentials. There is need for making cancer as a notifiable disease across the country. Further, he briefed about the magnitude and types of the cancers, geographical variations and infrastructure required for managing specific cancers. Mrs. Vini Mahajan has appreciated the work done by TMC, Mumbai and PGIMER, Chandigarh for providing valuable data on cancer burden in different parts of Punjab. She assured that Punjab government provide all the support to the cancer registries.



Achievement

Mansa cancer registry data have been submitted to CI-5 and also data has been utilized by Globocan 2018 and Globocan 2020 to estimate the cancer rates in India.



Incidence

Country-specific data source: Ahmedabad Cancer Registry, Aurangabad Cancer Registry, Bangalore Cancer Registry, Barshi Cancer Registry, Bhopal Cancer Registry, Cachar Cancer Registry, Chennai Cancer Registry, Delhi Cancer Registry, Dibrugarh Cancer Registry, Dindigul Cancer Registry, Kamrup Cancer Registry, Kollam Cancer Registry, Kozhikode Cancer Registry, Imphal/Manipur Cancer Registry, **Mansa District Population Based Cancer Registry**, Meghalaya Cancer Registry, Mumbai Cancer Registry, Nagpur Cancer Registry, Nagaland Cancer Registry, Poona Cancer Registry, Ratnagiri Cancer Registry, Sangrur District Population Based Cancer Registry, Sikkim Cancer Registry, Trivandrum Cancer Registry, Tripura Cancer Registry

Method: Weighted/simple average of the most recent local rates applied to 2020 population

Other activities

Registry staff conducted various health education program in the community to raise the cancer awareness also organized screening programs



Cancer registration awareness and Health education programme was conducted at Kaurian block, Sangrur during this programme 200 ASHA Workers were present

Publications

1. Chandigarh Population Based Cancer Registry Report: 2013 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh
2. SAS Nagar Population Based Cancer Registry Report: 2013 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh
3. Sangrur Population Based Cancer Registry Report: 2013 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh.
4. Mansa Population Based Cancer Registry Report: 2013 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh.
5. Chandigarh Population Based Cancer Registry Report: 2014 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh
6. SAS Nagar Population Based Cancer Registry Report: 2014 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh
7. Sangrur Population Based Cancer Registry Report: 2014 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh.
8. Mansa Population Based Cancer Registry Report: 2014 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh.
9. Chandigarh Population Based Cancer Registry Report: 2015-16 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh
10. SAS Nagar Population Based Cancer Registry Report: 2015-16 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh
11. Sangrur Population Based Cancer Registry Report: 2015-16 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh.
12. Mansa Population Based Cancer Registry Report: 2015-16 – Tata Memorial Centre, Mumbai and Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh.
13. Population Based Cancer Registries at Chandigarh and SAS Nagar, Sangrur, Mansa Districts of Punjab, state(2013-16)

14. Budukh A, Dikshit R, Thakur JS, Kadam P, Dora T, Sancheti S, et al. Linkage of cancer registration with cancer treatment in predominantly rural district: A model form Sangrur district, Punjab state, India. *Int J Non-Commun Dis* 2018;3:56-9
15. Thakur JS, Budukh A, Kapoor, R, Malhotra P, Bashir MA, Kathirvel S, Dikshit R, Arrora P. Bhatia SPS, Badwe RA, (2017) Urban rural difference in cancer incidence and pattern in Punjab and Chandigarh: findings from four new population based cancer registries in north India. *Int J Non-Commun Dis* 2017;2:49-55
16. Prabhat Jha, Dinesh Kumar, Rajesh Dikshit, Atul Budukh, Rehana Begum, Prabha Sati et.al. Automated versus physician assignment of cause of death for verbal autopsies: randomized trial of 9374 deaths in 117 villages in India: *BMC Medicine* (2019) 17:116
17. Budukh Atul M, Chaudhary Debashish, Sancheti Sankalp, Dora Tapas, Kumar Goel Alok, Singla Anshul, Sali Akash, Shinde Shraddha, Singh Chauhan Kuldeep, Kadam Prithviraj, Mohammad Raza, Kapoor Rakesh, Chaturvedi Pankaj, Dikshit Rajesh P, Badwe Rajendra A (2021) Determinants of completion of cancer directed treatment: an experience from a rural cancer centre, Sangrur, Punjab state, India *ecancer* 15 1313.
18. Bhatia A, Victora CG, Beckfield J, Budukh A, Krieger N. "Registries are not only a tool for data collection, they are for action": Cancer registration and gaps in data for health equity in six population-based registries in India. *Int J Cancer*. 2020 Nov 13. doi: 10.1002/ijc.33391.
19. Chakravarti Priyal, Maheshwari Amita, Tahlan Shweta, Kadam Prithviraj, Bagal Sonali, Gore Suvarna, Panse Nandkumar, Deodhar Kedar, Chaturvedi Pankaj, Dikshit Rajesh, Budukh Atul (2022) Diagnostic accuracy of menstrual blood for human papillomavirus detection in cervical cancer screening: a systematic review *ecancer* 16 1427. DOI: <https://doi.org/10.3332/ecancer.2022.1427>
20. Hospital Based Cancer Registry – Annual Report 2017: Homi Bhabha Cancer Hospital, Sangrur, Punjab State, India, Tata Memorial Centre, Mumbai, India
21. Hospital Based Cancer Registry – Annual Report 2018: Homi Bhabha Cancer Hospital, Sangrur, Punjab State, India, Tata Memorial Centre, Mumbai, India



Tata Memorial Centre, Mumbai



Centre for Cancer Epidemiology, ACTREC, Navi Mumbai



Homi Bhabha Cancer Hospital, Sangrur, Punjab



Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh

“Cancer is curable if detected early.”