

CANCER INCIDENCE AND MORTALITY IN GREATER MUMBAI 2013-14

MUMBAI CANCER REGISTRY

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Preface

In this publication the data collected by the Mumbai population based Cancer Registry for the year 2013-14 has been analyzed. The first part provides basic information about Mumbai City, the functional structure of the Mumbai Registry and the methods adapted by the Registry for the collection and analysis of data. Subsequently the cancer incidence and mortality data has been analysed and presented by site, age, method of diagnosis, extent of disease, religion, marital status, education, residence and histology.

The cumulative incidence rates and life time risk for each site by sex are also presented in this publication. Cumulative rates (for incidence and mortality) are coefficient calculated for ages in order to determine the cumulative risk which a person has of developing a cancer , or dying of a cancer, in a certain age span during his life. Thus cumulative rates describe the severity of the particular site in the general population.

Acknowledgements

The Registry staff is grateful to the various hospitals administrators, their Staff members and the medical specialists in private practice, who have cooperated with us by permitting our social investigators to collect the data on cancer patients in their care.

The Executive Health Officer of the Mumbai Municipal Corporation deserves special mention and thanks, for making death records of the city available to us for abstracting information on cancer cases. We are also grateful to the Director of Census Operations, Maharashtra, for making available to us the population figures from the 2011 Census, for Greater Mumbai.

We are thankful to the Indian Council of Medical Research at New Delhi, for their technical guidance and partial financial support. Our thanks are due to Dr.R. Badwe, Director of the Tata Memorial Centre for partial financial support as well as for permitting us to utilize their records. We are also grateful to all other cooperating hospitals for making data available for the cancer registry.

Finally, the registry staff, consultants and volunteers are to be praised for their diligence and enthusiasm in the performance of their duties in collecting and processing the data on which this volume is based.

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MUMBAI CANCER REGISTRY

DIVISION OF INDIAN CANCER SOCIETY

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INTRODUCTION

The Mumbai Cancer Registry was established in June 1963 as a unit of the Indian Cancer Society, at Mumbai, with the aim of obtaining reliable morbidity data on cancer, from a precisely defined urban population (Greater Mumbai). The actual compilation of data began in 1964. Until then, no continuing surveys had ever been undertaken anywhere in India. Initially, up to 1975, the project was initiated in collaboration with financial support from Biometry branch of the National Cancer Institute of the Department of Health in Bethesda, U.S.A. From 1975-80, the project received grants from the Department of Science and Technology of the Government of India at New Delhi and from the Indian Cancer Society. Since September 1981, the project has been partially supported by the Indian Council of Medical Research, at New Delhi.

In this publication we have analyzed the cancer cases registered at the Mumbai Cancer Registry during the year 2013-14.

DEMOGRAPHIC CHARACTERISTICS OF GREATER MUMBAI

Greater Mumbai, a densely populated urban metropolis on the west coast of India, occupies an area of 603.0 sq .kms and is the smallest administrative district in Maharashtra state. It is situated between latitudes $18^{\circ}54'$ and $19^{\circ}18'$ North and longitudes $70^{\circ}47'$ and $73^{\circ}00'$ East.

Greater Mumbai is in fact an island, joined to the mainland by a number of bridges. It has a warm and humid climate. The period from November to February is comparatively cooler when the temperature ranges between 20°C to 28°C . From the month of March onwards, the weather turns warmer. April to June is hot, the temperature often touching 35°C during day time. The rain starts by mid-June and continues through July, August and September. The average annual rainfall is 2500 mms.

For the convenience of civic administration and census operation, Greater Mumbai is divided into 15 wards, which are further subdivided into 88 sections. Currently, the city functions as the administrative Capital of Maharashtra State. For revenue collection, the Greater Mumbai area is divided into two units, the Mumbai City Area and the Mumbai Suburban District.

Mumbai residents receive their water supply from five lakes. Chlorinated water comes from Tansa, Vaitarna and Vihar and filtered water from Ulhas and Tulsi lakes, all being within 50 kms of the city limits. All these lakes are dependent on the monsoon rains between June and October, for their water content.

A population census is undertaken every ten years in India. As per the 2011 Census, the estimated population of Greater Mumbai in 2013-14 is 251,57,246, (53.8% males, 46.2% females). As per the 2011 Census the sex ratio is 861 females per 1000 males and density is 19,652 inhabitants per sq.kms, confirming that it is the most heavily populated district in Maharashtra State. The literacy rate was found to be 90.28%, higher than the national literacy rate of 74.04% and 82.3% for the rest of Maharashtra.

The majority of hospitals in the city are maintained by the Municipal Corporation and the State Government, which are responsible for conducting Public Health and Medical Services in the City. Mumbai city has five medical colleges viz. The G.S.Medical College, the T.N. Medical College, the Grant Medical College (established 125 years ago), the L.T.M.G. Medical College and the Somaiya Medical College. The Tata Memorial Cancer Center is Mumbai's major Cancer Center which consists of the Tata Memorial Hospital and Cancer Research Institute. The center is an autonomous unit, funded by the Department of Atomic Energy of the Government of India.

The diagnosis and treatment of cancer is undertaken by most hospitals in Mumbai. Major cancer surgery, is undertaken at all the major hospitals, as well as in some of the well-equipped nursing homes in the city. Facilities for Cobalt 60-Therapy are available in eight hospitals, a Linear accelerator unit is functioning in seven hospitals, whilst Orthovoltage X-ray therapy is available at ten hospitals in the city.

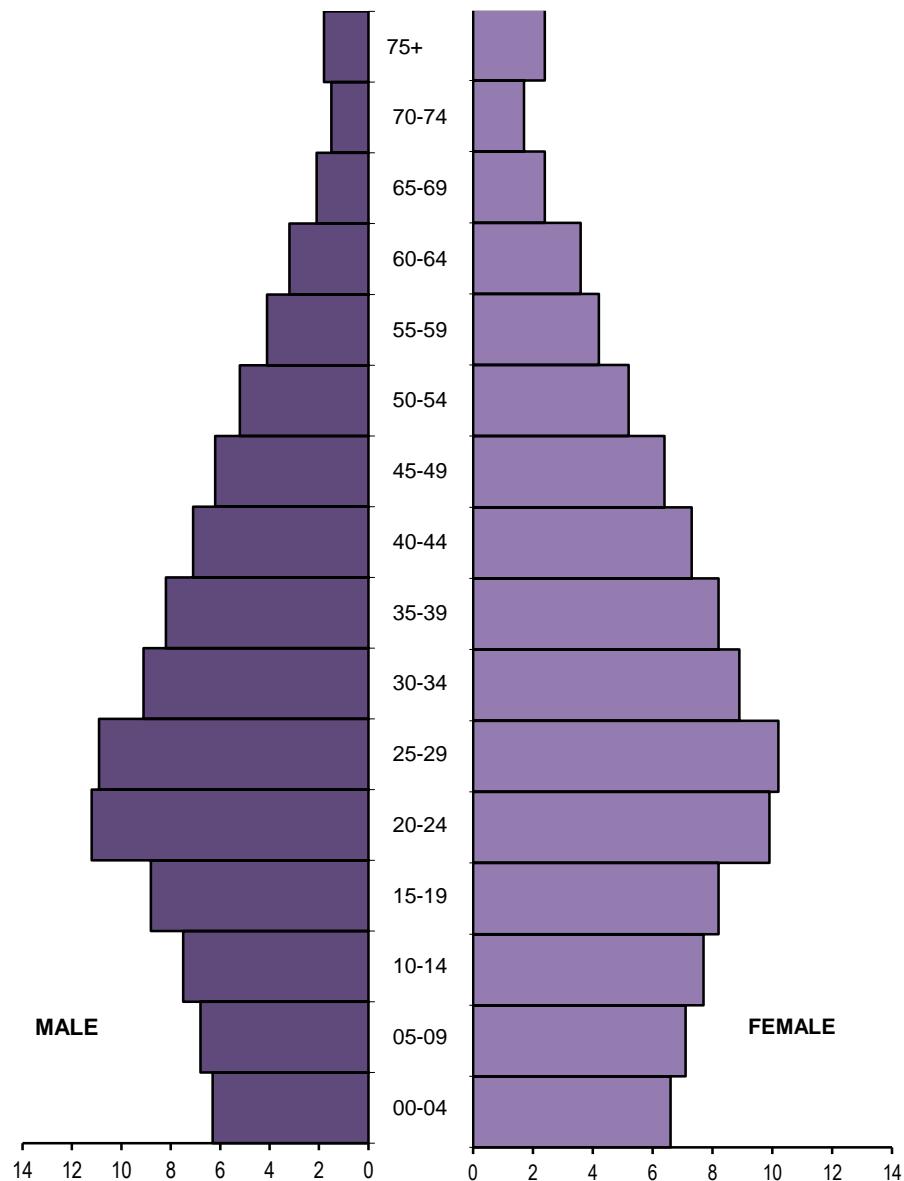
POPULATION ESTIMATES

Population data was estimated from the 2011 Census reports (as on 1st March). The estimates for the year 2013-14 as on 1st July were obtained by "Distribution Method" for each sex. Population distribution by age and sex for Greater Mumbai for the year 2013-14 is given in Table 1 and shown in the following age-pyramid. Population by religion of each sex, for year 2013-14, is presented in Table 2.

SOURCES

1. Census of India 2011, Director of Census Operations, 2011

**PERCENTAGE DISTRIBUTION OF RESIDENT POPULATION BY AGE AND SEX,
GREATER MUMBAI AS ON JULY 1, 2013-14**



SOURCES OF INFORMATION

Two major sources have been utilized for cancer data collection.

- All hospitals, nursing homes and consultants in private practice in the Registry area.
- The Vital Statistics Division of the Department of Public Health of the Mumbai Municipal Corporation.

The Mumbai Cancer Registry today covers all hospitals and private nursing homes in the metropolitan area. The majority of hospitals in Mumbai are maintained by Municipal Corporation and the State Government, which are responsible for organisation of medical and public health services in the city. A major source of cancer data collection is the Tata Memorial Cancer Hospital and Research Institute, a Post-Graduate teaching center of the University and an autonomous unit supported by the Department of Atomic Energy, Government of India.

The pattern of diagnosis and treatment of cancer in Mumbai has undergone a major change over the last decade. With a mushrooming private sector, there are now an increasing number of private hospitals, both large and mid-sized, which are involved in cancer care. Many have the latest facilities for treatment, including IMRT and IGRT. Major cancer surgery is undertaken at all major hospitals, as well as in a number of well-equipped private nursing homes in the city.

CANCER REGISTRATION SYSTEM IN GREATER MUMBAI

Staff members personally visit the wards of the co-operating hospitals regularly to interview all confirmed cancer patients and also those who are under cancer investigation. The records maintained by the various departments of these hospitals viz. Pathology, Hematology, Radiology and the various registers in the specialised surgical and medical wards, are also examined. The requisite details obtained for each patient, are cross-checked with the information collected from the various departments of the collaborating hospitals, to ensure completeness of records. Full information about every cancer patient registered at each and every hospital is thus obtained, irrespective of whether or not the patient is subsequently treated at the particular hospital. Additional information is obtained each time a cancer patient is re-admitted or re-examined at the institution.

As a result of such data, collected from different hospitals, the same patient is sometimes found to be registered at two or more hospitals. Care is taken to see that multiple entries of the same patient are not made in our records. On the other hand, in some instances, complete medical information is obtained by combining the data obtained from two or more hospitals, of the same patient.

Supplementary information can often be gleaned from the death records maintained by the Vital Statistics Division of the Mumbai Municipal Corporation. Copies are made of all death certificates, which mention cancer or tumor as the cause of death. These death certificates are then matched against the registered cases in our files. Every cancer death not traceable to an entry in our files, is labeled as an "unmatched death" and the date of death is then taken as the date of first diagnosis, and is so registered in the corresponding year's data file. Furthermore copies of all death certificates where the term 'Cancer' or 'Tumor' is mentioned as the cause of death are individually scrutinized to confirm the statement.

After collecting the necessary information from the various collaborating institutes, the data is classified into three groups, resident, non-resident and residence not known. Non-resident cases are filed site wise and sex wise. The resident cases are cross checked with the computerised database. Previously reported cases are edited, registered and filed according to the site of cancer, the sex of the patient and the registration number. Copies of the death certificates, from the Vital Statistics Department of the Municipal Corporation are classified according to residential criteria. Non-resident cases are filed alphabetically, as per cause of death and sex. Resident cases are checked with the computerised database. Unmatched cases are registered in the incidence files. All cancer deaths are filed numerically, by sex and cause of death.

CANCER INCIDENCE REPORTING SYSTEM IN GREATER MUMBAI

Cancer incidence is defined as the occurrence of new cancer cases in a defined population during a specified time period. For the purpose of this report, 2013-14 incidence is based on those cancers registered and first diagnosed between 1st January 2013 and 31st December 2014 in residents of Greater Mumbai.

Incidence reflects the number of primary tumors rather than the number of individuals with cancer. The Mumbai Cancer Registry Database records multiple primary cancer in the same person, of which only some are counted for incidence purposes according to the rules of the International Agency for Research on Cancer and International Association of Cancer Registries.

All malignant tumors including those where the pathologist may have merely suspected a malignant change are registered. Cases under code 'O' (benign) or '1' (uncertain whether benign or malignant borderline malignancy) or '2' (carcinoma in situ) are not included in our files. Cancer cases where the death certificate is the only source of information, are however included. Patients, in whom cancer has been ruled out or has not yet been diagnosed, are also omitted from our register.

We utilise the coding system devised by the World Health Organization using code numbers C00.1-C98.9 as published in the Manual of the International Classification of Diseases, Injuries and Causes of Death (10th revision) for coding the primary site. We also utilise the International Classification of Diseases for Oncology, (ICDO-3) simultaneously, for coding the morphology.

REFERENCE:

1. World Health Organization Manual of the International Classification of Diseases, Injuries, causes of death (ICD-10)
Vol.1, Geneva: WHO, 1992
2. World Health Organization International Classification of Diseases for Oncology, Third Edition, Geneva: WHO, 2000

RESULTS

During the two year under report (2013-14), a total number of 27,623 incident cases have been registered including DCO's with 13,466 males and 14,157 females. The Male: Female ratio of incident cases being 0.95:1. The biannual Crude incidence rate (CIR) and Age adjusted incidence rate (AAR) were 99.8 and 111.0 among males and 121.3 and 119.7 among females respectively per 100,000 persons. The truncated rate among males and females were 159.9 and 214.3 per 100,000 persons respectively.

Pediatric cancers accounted for 2.4% of all cancers in boys and 1.4% in girls. Tobacco related cancers accounted for 39.4% of all cancers in males and 16.2% of all cancers in females. The Mortality: Incidence Ratio was 53.3% and the proportion of cases registered with death certificate only sources accounted for 7.9%.

Cancer of Lung is the predominant site of cancer among males followed by cancer of Mouth, Prostate, Liver. Among Females cancer of Breast is the commonest site of cancer followed by Cervix, Ovary, Lung and Uterus.

Table A: Incident cases and Age-adjusted rates by sex for the period of 1964-2014.

Year	Incidence Cases			AAR	
	Male	Female	Total	Male	Female
1964-1968	9865	6459	16324	130.7	110.8
1969-1973	11605	8137	19742	137.4	123.4
1974-1978	13220	10205	23425	117.7	110.5
1979-1983	15220	12083	27303	112.4	105.1
1984-1988	17363	14760	32123	128.6	120.2
1989-1993	19254	17392	36646	103.0	103.6
1994-1998	21133	20126	41259	90.1	97.8
1999-2003	22607	22495	45102	116.0	127.3
2004-2008	25532	27654	53186	98.8	108.3
2009-2013	30192	32094	62286	105.2	114.8
2014	6737	7019	13756	110.1	117.5
Total	192728	178424	371152		

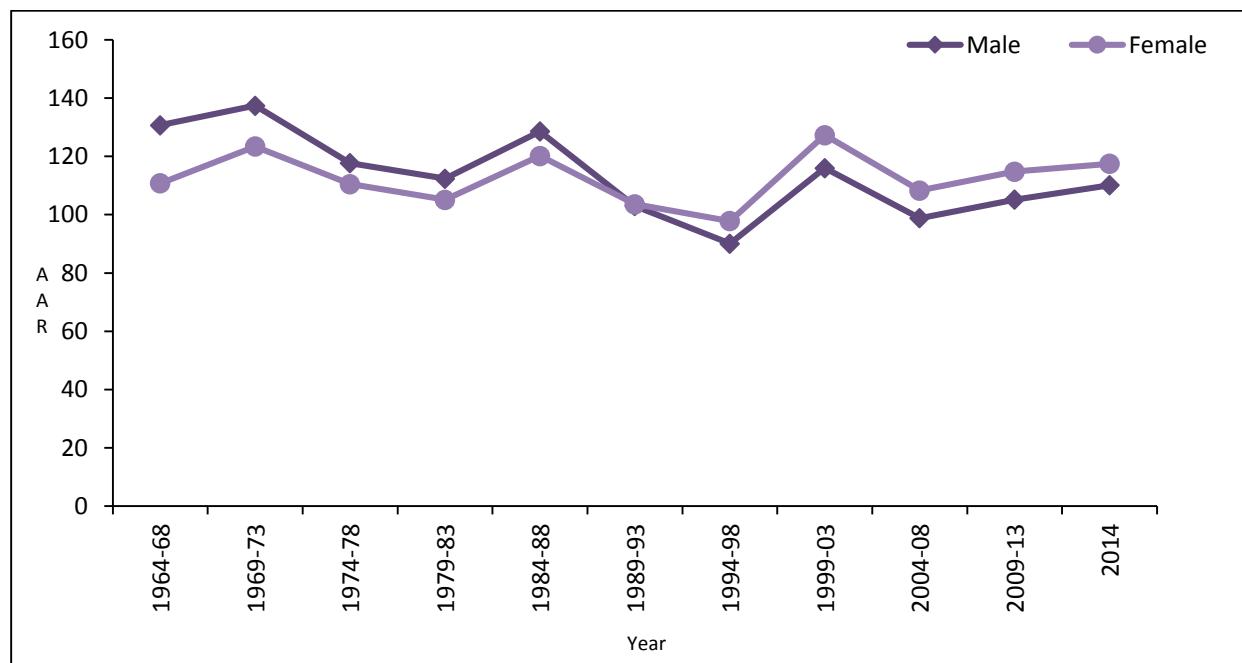


Fig. 1

A total number of 3,71,152 cancer cases were reported by the PBCR of Mumbai during the years 1964-2014. In the initial years the incidence of male cancers was higher than females. For the last 25 years, female cancer incidence has increased than males.

MAJOR SOURCES OF REGISTRATION

During the year 2013-14, 26% of the incident cases were registered from TMH and 74% of the cases were registered from other major sources.

Table B: Incidence Cases of Cancer by Sources of Registration and Sex, with Percentages, Greater Mumbai, 2013-14

Hospitals	Male		Female		Total	%
	#	%	#	%	#	
TMH	3475	25.8	3762	26.6	7237	26.2
Hinduja	746	5.5	758	5.4	1504	5.4
Kokilaben Ambani	535	4.0	701	5.0	1236	4.5
Nair	478	3.5	488	3.4	966	3.5
PAK	490	3.6	437	3.1	927	3.4
Nanavati	381	2.8	463	3.3	844	3.1
Sion	384	2.9	402	2.8	786	2.8
Jaslok	399	3.0	358	2.5	757	2.7
KEM	376	2.8	340	2.4	716	2.6
Raheja	331	2.5	326	2.3	657	2.4
Bombay	356	2.6	295	2.1	651	2.4
Holy Spirit	288	2.1	307	2.2	595	2.2
Breach Candy	206	1.5	337	2.4	543	2.0
Lilavati	312	2.3	207	1.5	519	1.9
Seven Hills	207	1.5	264	1.9	471	1.7
Saifee	198	1.5	251	1.8	449	1.6
Shanti Avedana	195	1.4	177	1.3	372	1.3
Cama	10	0.1	265	1.9	275	1.0
Bhatia	124	0.9	134	0.9	258	0.9
Holy Family	98	0.7	146	1.0	244	0.9
Hindu Sabha	98	0.7	112	0.8	210	0.8
BSES	85	0.6	92	0.6	177	0.6
JJ	46	0.3	62	0.4	108	0.4
Vertex	49	0.4	49	0.3	98	0.4
Dhanwantary	41	0.3	51	0.4	92	0.3
Somaiya	34	0.3	30	0.2	64	0.2
Shushrusha	25	0.2	36	0.3	61	0.2
Rajawadi	17	0.1	40	0.3	57	0.2
Ramkrishna	15	0.1	32	0.2	47	0.2
BPT	18	0.1	28	0.2	46	0.2
Jain	24	0.2	21	0.1	45	0.2
Cooper	20	0.1	16	0.1	36	0.1
E.S.I.S. A	21	0.2	13	0.1	34	0.1
Parsee	21	0.2	13	0.1	34	0.1
St.Georges	16	0.1	17	0.1	33	0.1
Inlakh	12	0.1	12	0.1	24	0.1
B.A.R.C.	7	0.1	11	0.1	18	0.1
B.J. (Children)	8	0.1	9	0.1	17	0.1
Bhartiya Arogya Nidhi	8	0.1	3	0.0	11	0.0
Gurunanak	9	0.1	2	0.0	11	0.0
Motiben Dalvi	3	0.0	6	0.0	9	0.0
Habib	6	0.0	0	0.0	6	0.0
M.G.M	3	0.0	3	0.0	6	0.0
Masina	5	0.0	1	0.0	6	0.0
E.S.I.S. MW	1	0.0	2	0.0	3	0.0
N.Wadia (MAT)	1	0.0	2	0.0	3	0.0
HN	1	0.0	0	0.0	1	0.0
W. RLY Jagjivanram	0	0.0	1	0.0	1	0.0
OTHER SMALL HOSPITAL	2199	16.3	1955	13.8	4154	15.0
BMC	1084	8.0	1120	7.9	2204	8.0
Total	13466	100.0	14157	100.0	27623	100.0

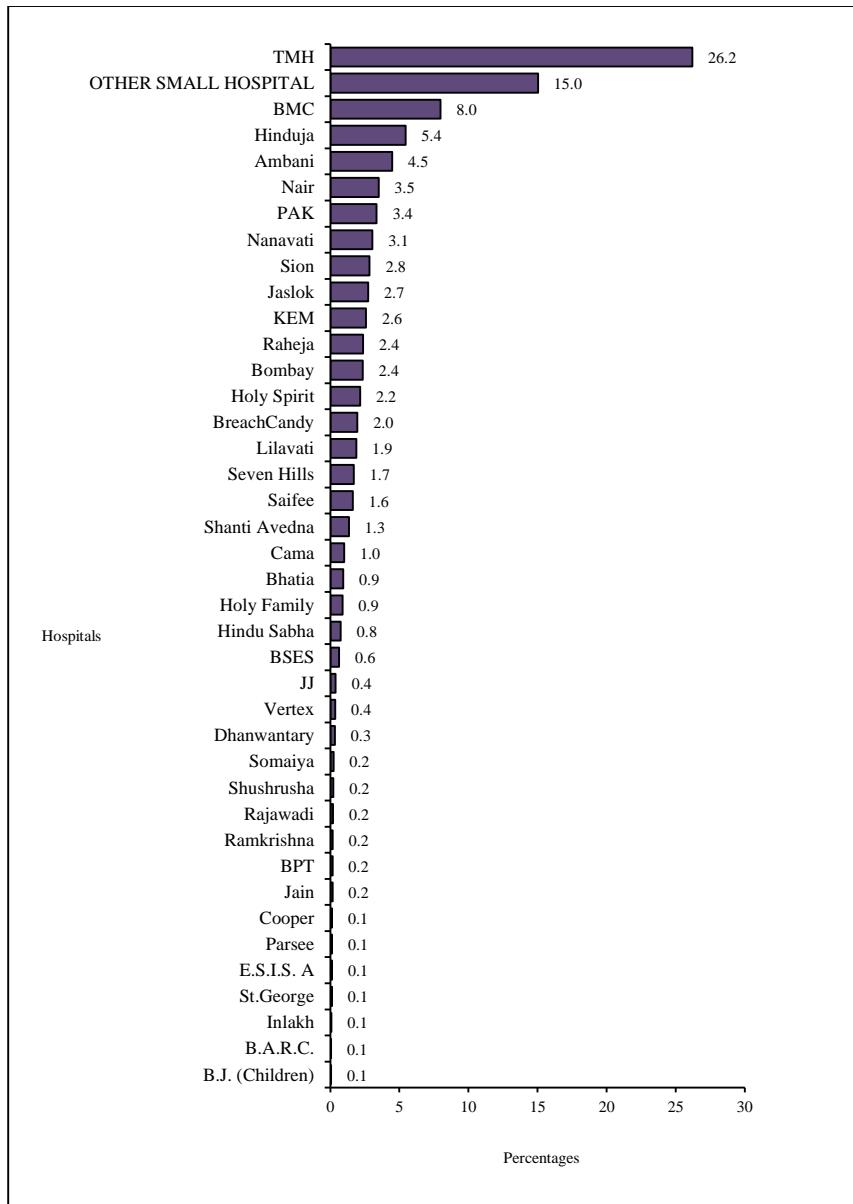


Fig. 2

In 2013-14, 27,623(13,466 Males, 14,157 Females) new cancer cases were registered in Greater Mumbai. Of these cases, 25,419 were registered through collaborating hospitals during 2013-14, and the remaining 2,204 were registered from the Municipal Corporation files. In 2013-14, 7237 new cancer incidence cases residing in Mumbai were recorded at the Tata Memorial hospital. More than 5000 cases were registered at various other hospitals viz. King Edward Memorial Hospital, LTMG Sion Hospital, Nanavati Hospital, Nair Hospital, Hinduja Hospital, Cama Hospital and Jaslok Hospital. These have formed the major source of data, (Table B)

SITE

The percentage distribution of new cancer cases diagnosed by sex and site group in 2013-14 is presented in Table C. In 2013-14, the proportion of male and female cancer cases was 48.7% for males and 51.3% for females. The corresponding estimated resident population of males and females was 53.6% and 46.4% respectively (Table F). At all site groups, except the breast and genital organs, higher occurrence was noted in males. The digestive system as a whole in males was the commonest cancer site, followed by the buccal cavity and pharynx. In women, cancer involved the breast most frequently, followed by the genital organs and the digestive system (Table C).

Table C: Number of New Cancer Cases by Site and Sex with Percentage Distribution, Greater Mumbai, 2013-14						
SITE GROUP	MALE		FEMALE		TOTAL	
	CASES	%	CASES	%	CASES	%
Digestive Organs	3532	26.2	2594	18.3	6126	22.2
Head and Neck	3398	25.2	1391	9.8	4789	17.3
Breast	104	0.8	4305	30.4	4409	16.0
Reproductive Organs	1259	9.3	2619	18.5	3878	14.0
Lung	1320	9.8	745	5.3	2065	7.5
Lymphoma	744	5.5	519	3.7	1263	4.6
Unknown and Secondaries, IIIdefined	598	4.4	483	3.4	1081	3.9
Urinary Organs	769	5.7	262	1.9	1031	3.7
Leukemia	627	4.7	391	2.8	1018	3.7
CNS Tumour	432	3.2	307	2.2	739	2.7
Bone and Soft Tissue	297	2.2	257	1.8	544	2.0
Skin, Melanoma and other	197	1.5	162	1.1	359	1.3
Multiple Myeloma	189	1.4	122	0.9	311	1.1
Total	13466	100.0	14157	100.0	27623	100.0

LEADING SITES OF CANCERS

The first ten leading sites of cancers among males and females are shown in Table D. Ranking of these sites is based on Age-adjusted rates. Among males, cancer of lung is the most predominant site of cancer constituting 11.4 of total cancers followed by cancers of the Mouth(10.1), Prostate(9.7), Liver(7.2) and Lymphoma(5.9). Among females, cancer of breast is the predominant site of cancer and has accounted for 36 of the total cancers in females followed by cancer of Cervix(8.4), Ovary(7.4), Lung(6.4) and Corpus Uteri(4.7).

Table D: Annual Age-Adjusted Incidence Rates by Sex per 100,000 Population at Ten Leading Sites and at all Sites, Greater Mumbai 2013-14						
MALE			FEMALE			
RANK	SITE	AAR	RANK	SITE	AAR	
1	Lung	11.4	1	Breast	36.0	
2	Mouth	10.1	2	Cervix	8.4	
3	Prostate	9.7	3	Ovary	7.4	
4	Liver	7.2	4	Lung	6.4	
5	Lymphoma	5.9	5	Corpus Uteri	4.7	
6	Tongue	5.2	6	Lymphoma	4.4	
7	Leukemia	5.1	7	Mouth	4.1	
8	Stomach	5.0	8	Colon	3.6	
9	Larynx	4.2	9	Gall Bladder	3.5	
10	Oesophagus	4.1	10	Leukemia	3.5	
AAR At all Sites		111.0	AAR At all Sites			119.7

**AGE ADJUSTED INCIDENCE RATES PER 100,000 POPULATION
AT TEN LEADING SITES, 2013-14**

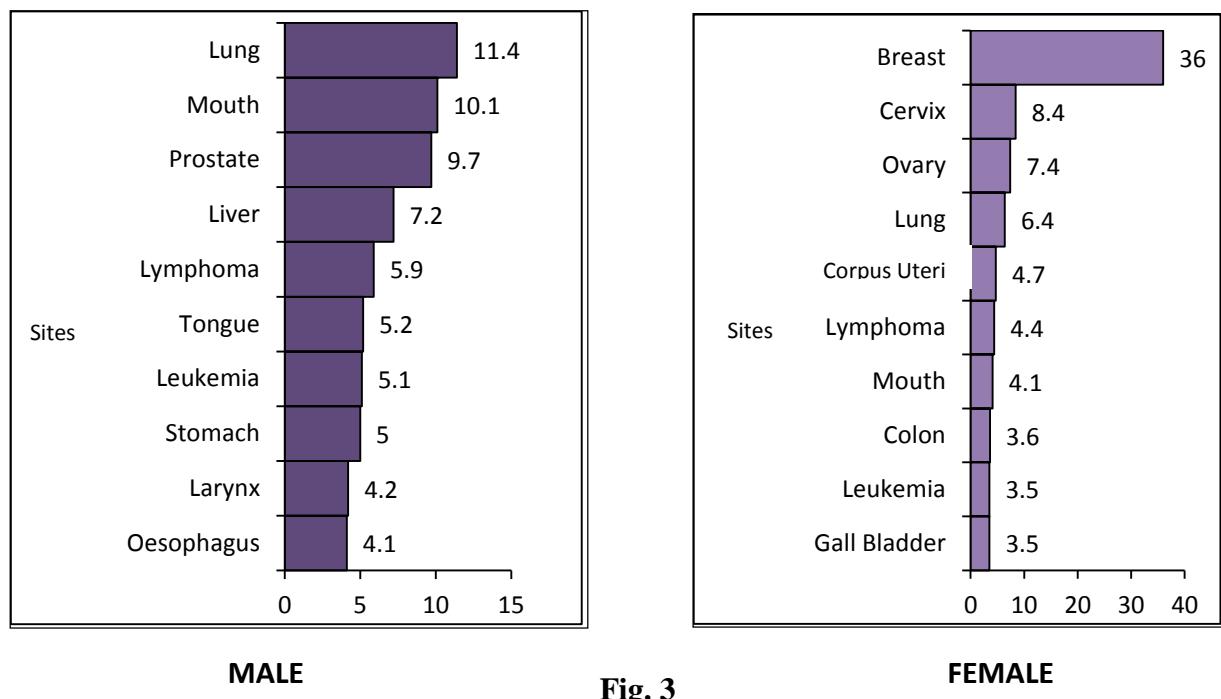


Fig. 3

AGE SPECIFIC INCIDENCE RATES

The age specific incidence rates ranged between 11.2 per 100,000 persons (0-4 years age group) to 1023.0(75+ years age group) per 100,000 persons among males and 7.5 per 100,000 persons (0-4 years age group) to 762.2 per 100,000 persons (75+ years age group) among females. The age specific incidence rates have crossed over 100 a decade earlier among female (40-44 years age group) than among males (45-49 years age group).

Table E: Age Specific Incidence Rates Per 100,000 For All Cancer Sites By Sex, 2013-14

Age-Group	Male	Female
00-04	11.2	7.5
05-09	11.5	6.3
10-14	11.3	9.9
15-19	10.6	9.1
20-24	12.1	11.0
25-29	15.8	18.4
30-34	28.2	37.9
35-39	48.9	68.8
40-44	71.3	122.1
45-49	109.0	189.9
50-54	170.9	272.3
55-59	276.0	329.9
60-64	405.9	419.2
65-69	566.7	579.0
70-74	780.0	641.8
75+	1023.0	762.2
CR	99.8	121.3
AAR	111.0	119.7
TR	159.9	2143.3

**AGE SPECIFIC INCIDENCE RATES PER 100,000 POPULATION,
FOR ALL CANCER SITES, 2013-14**

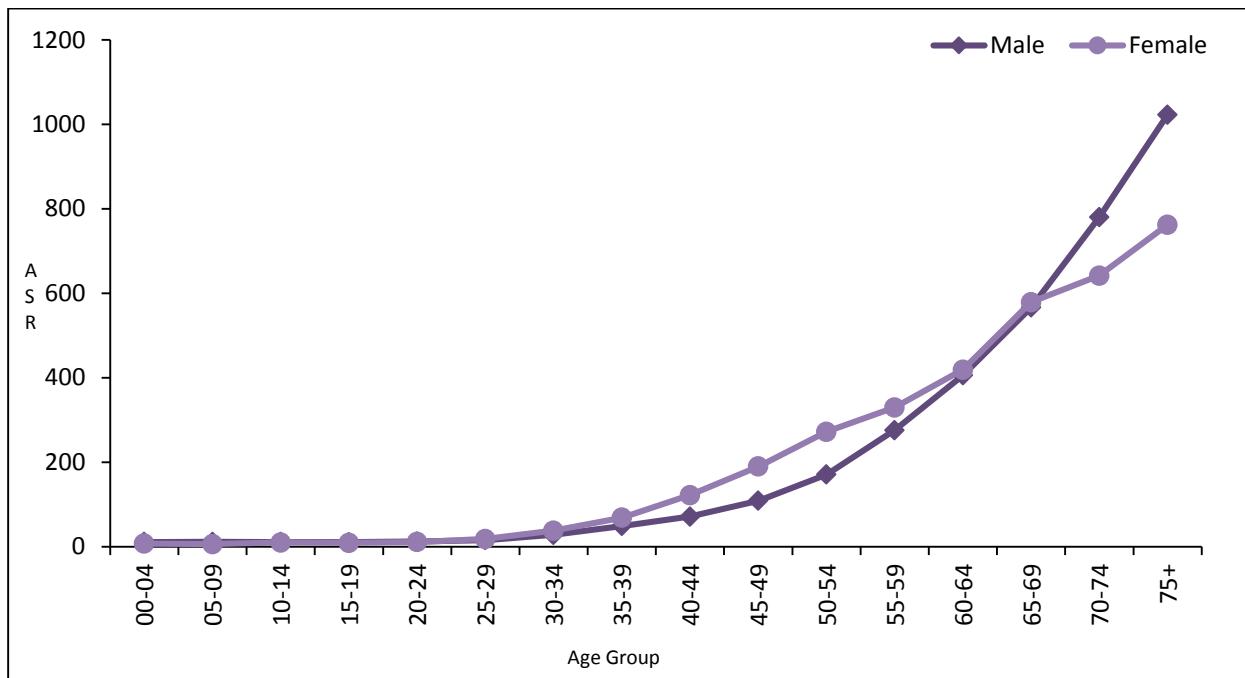


Fig. 4

PROPORTION OF CANCERS BY BROAD-AGE GROUPS

The current distribution of the resident population and the new cancer cases by broad age groups and sex for the year 2013-14 is presented in Table F.

Table F: Percentage Distribution of the Resident Population and New Cancer Cases By Age and Sex, 2013-14						
AGE GROUP	POPULATION			NEW CANCER CASES		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
00-14	11.1	9.9	21.0	1.1	0.7	1.9
15-34	21.4	17.3	38.7	3.2	3.0	6.2
35-64	18.2	16.2	34.4	24.0	29.4	53.4
65+	2.9	3.0	5.9	20.4	18.1	38.5
TOTAL	53.6	46.4	100.0	48.7	51.3	100.0

Table F clearly indicates that cancer occurs mostly at older ages, as only 1.9% of the total number of cancer cases registered were under 15 years of age, although this age group accounts for 21.0% of the total population in the metropolis. The association of cancer with the ageing process is clearly shown by the fact that 38.5% of the cases were diagnosed in those aged 65 and above, an age group, which comprises only 5.9% of the population (Fig 5).

PERCENTAGE DISTRIBUTION OF RESIDENT POPULATION AND CANCER CASES, 2013-14

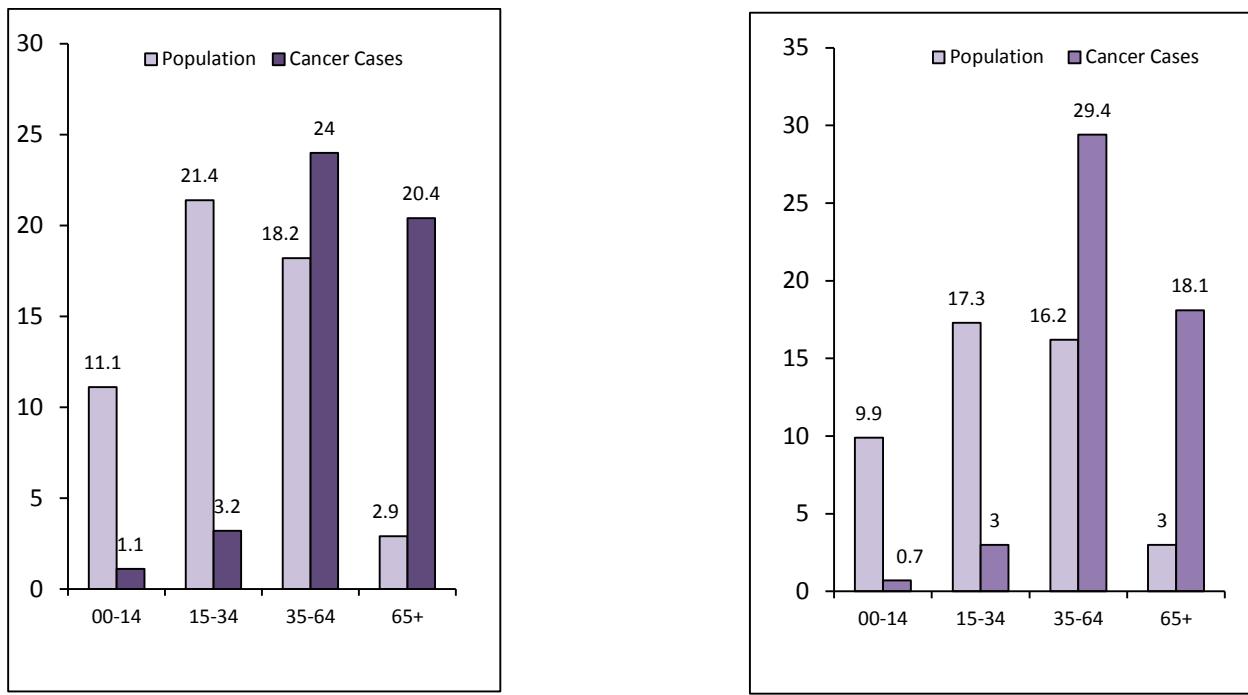


Fig. 5

MALE

FEMALE

COMMON CANCERS IN 0-14 YEARS AGE GROUP:

Cancer of Leukemia, brain and lymphoma tumors were the commonest sites of cancer observed in the pediatric age group in both boys and girls. These three sites together accounted for about 73% of the cancers in boys and 66.8% in girls. The first five leading sites by sex are shown in Table G (1).

Table G (1):

Site	Male		Site	Female	
	#	%		#	%
Leukemia	121	38.3	Leukemia	77	38.7
Lymphoma	58	18.4	Brain & NS	34	17.1
Brain & NS	52	16.5	Lymphoma	22	11.1
Kidney	14	4.4	Bone	14	7.0
Bone	12	3.8	Conn. & Soft Tissue	7	3.5
All Sites	315	2.3	All Sites	199	1.4

COMMON CANCERS IN 15-34 YEARS AGE GROUP:

About 6.2% of the total cancers in males and in females occurred in this age group. Cancers of lymphoma, leukemia, brain & nervous system, Mouth and Bone tumors were the commonest sites of cancers in males, whereas cancer of the breast, leukemia, ovary, thyroid and lymphoma were the commonest sites in females. The details are shown in Table G(2).

Table G (2):

Site	Male		Site	Female	
	#	%		#	%
Leukemia	132	14.9	Breast	199	24.1
Lymphoma	121	13.6	Thyroid	79	9.6
Brain & NS	77	8.7	Leukemia	76	9.2
Mouth	65	7.3	Lymphoma	60	7.3
Tongue	62	7.0	Ovary	43	5.2
All Sites	888	6.6	All Sites	827	5.8

COMMON CANCERS IN 35-64 YEARS AGE GROUP:

Among males, cancer of the mouth (14.8%), lung (8.6%), tongue (7.1%), liver (6.0%) and lymphoma (5.1%) were the commonest sites of cancers in this truncated age group of 35-64 years. Among females, cancer of the breast was the predominant site and accounted for 35.0% of the total female cancers followed by cervix (8.9%), ovary (6.9%), corpus uteri (4.1%) and lung (3.9%). Cancers in this age group accounted for about 49.3% and 57.4% of the total cancers in males and females respectively. The five leading sites by sex are shown in table G (3).

Table G (3):

Site	Male		Site	Female	
	#	%		#	%
Mouth	982	14.8	Breast	2829	34.8
Lung	571	8.6	Cervix	723	8.9
Tongue	473	7.1	Ovary	559	6.9
Liver	398	6.0	Corpus Uteri	332	4.1
Lymphoma	337	5.1	Lung	318	3.9
All Sites	6636	49.3	All Sites	8127	57.4

COMMON CANCERS IN 65+ YEARS AGE GROUP:

The predominant sites of cancers among males in this age group were cancers of prostate (15.3%), lung (12.8%), Liver (7.6%), Mouth (4.9%) and Stomach (4.9%). Cancer in this age group constituted 41.8 in males and 35.3 in females. Among females, cancer of the breast is the leading site and accounted for 25.5% of the total female cancers in this age group followed by lung (8.0%), ovary (5.4%), cervix (5.0%), colon (4.0%). The leading sites in this age group are shown in Table G (4).

Table G (4):

Site	Male		Site	Female	
	#	%		#	%
Prostate	860	15.3	Breast	1275	25.5
Lung	721	12.8	Lung	398	8.0
Liver	429	7.6	Ovary	268	5.4
Mouth	274	4.9	Cervix	248	5.0
Stomach	273	4.9	Colon	202	4.0
All Sites	5626	41.8	All Sites	5004	35.3

METHOD OF DIAGNOSIS

Although the primary site is the single most important item in the classification of cancer data, medical investigations which lead to a correct diagnosis of each case can give additional information useful in epidemiological studies. The various criteria utilized to diagnose cancer in Greater Mumbai are expressed as a percentage of all the methods used to diagnose cancer cases. The percentage of new patients diagnosed before death, is presented in Table H.

METHOD OF DIAGNOSIS	MALE		FEMALE		TOTAL	
	CASES	%	CASES	%	CASES	%
Microscopic	11831	87.9	12433	87.8	24264	87.8
Clinical Only	529	3.9	590	4.2	1119	4.1
Clinical Investigation	21	0.2	13	0.1	34	0.1
DCO	1085	8.1	1121	7.9	2206	8.0
Total	13466	100.0	14157	100.0	27623	100.0

The number of cases and the percentage distribution of cancer by method of diagnosis for each site is presented for males in Table 15 and for females in Table 16 respectively. About 8% of cancer cases were registered through death certificates only. Most probably these were patients with advanced disease who attended out-patient departments of various collaborating hospitals to seek medical advice at a late stage, when no active treatment was possible.

An evaluation of the reliability of cancer data is usually measured by the percentage of patients having microscopic proof of diagnosis, as compared with other methods which are considered less accurate. In our Registry about 87.8% of all new cancer cases were registered through hospitals and from specialists where microscopic confirmation is available. The percentage of microscopic proof of diagnosis for females was found to be slightly higher than that for males (Fig 6).

The percentage of patients having microscopic confirmation of cancer, depends primarily on the accessibility of the part affected. Histological confirmation of cancers arising in the buccal cavity, pharynx and the female genital tract is thus usually available with greater frequency than for tumors at inaccessible sites, such as the digestive and respiratory systems.

A few cancer patients were found to have been diagnosed on the basis of gross examination by the operating surgeon or on endoscopic appearance without biopsy e.g. After cystoscopy, the number of patients diagnosed in this manner was the highest for cancers involving the stomach, pancreas, retroperitoneal region and urinary bladder and was the least for lesions involving the oesophagus, breast and cervix uteri.

**PERCENTAGE DISTRIBUTION OF CASES OF CANCER DIAGNOSED IN HOSPITAL AND
SPECIALISTS, IN GREATER MUMBAI 2013-14**

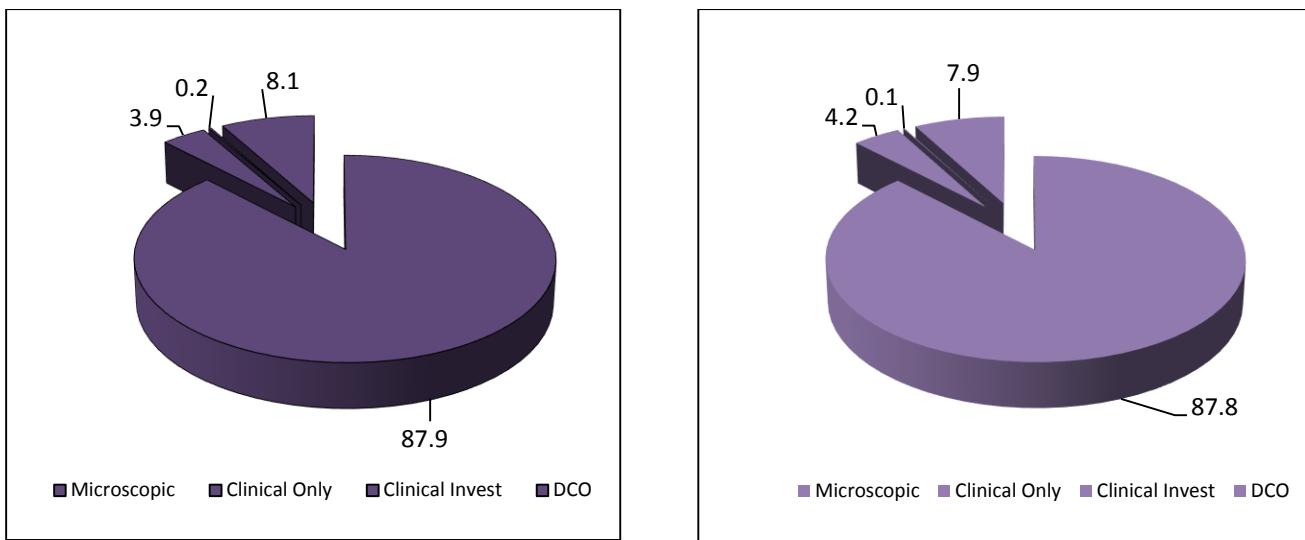


Fig.6

About 3.9% in males and 4.2% in females, cases reported by hospitals and specialists, were found to have been diagnosed on clinical grounds alone. A higher percentage of patients diagnosed in this manner, was found to have had cancer at sites inaccessible for immediate biopsy or because the patient refused to undergo further detailed investigations. However, most of these patients were not offered active treatment because of the extensive nature of the disease.

CLINICAL EXTENT OF DISEASE

The stage of disease at diagnosis is generally the most important factor in determining the prognosis and survival of cancer patients. This is because certain treatments may be available only for early stage tumors and any treatment is more likely to be successful if initiated before metastasis has occurred. The detailed information regarding stage of disease is available in hospital based registries. As population based registry collects the data from too many sources, the information on exact stage of disease is not available for great number of cases. Hence the information on extent of disease serves the purpose of stage of the disease.

At our registry the extent of the disease is based on the clinical assessment only i.e., before first treatment of a cancer patient. The number of new cases with percentage distribution for each category of extent of disease by site is presented in Tables 17 and 18 for males and females respectively.

Cancers arising in the buccal cavity, pharynx, larynx and female genital tract have higher percentage of localised stage as they are easily accessible for biopsy. Cancers having poor prognosis like, oesophagus, stomach, pancreas, lung and urinary bladder are either metastatised or of an advanced stage at the time of diagnosis because most of these patients have been diagnosed on the basis of gross examination by the operating surgeon or on endoscopic appearance without biopsy, e.g., after cystoscopy.

RELIGION

To study the differences in cancer incidence by religion, the crude rates by religion and sex are presented in Table I. From this table, it is evident that different religious groups in Greater Mumbai exhibit considerable variation in the total incidence of cancer in each sex.

RELIGION	MALE	FEMALE
Hindu	109.3	137.8
Muslim	85.2	92.2
Christian	154.9	168.1
Buddhist	32.8	46.1
Jain	46.6	56.6
Sikhs	154.7	169.1
Others	123.0	147.1
Total	99.8	121.3

In Female, Sikh populations at higher risk followed by Christians, Hindus and in Males, Christian population appears to be at a higher risk followed by Sikh, Hindus in all the religious groups. (Fig 7).

CRUDE INCIDENCE RATES BY RELIGION, 2013-14

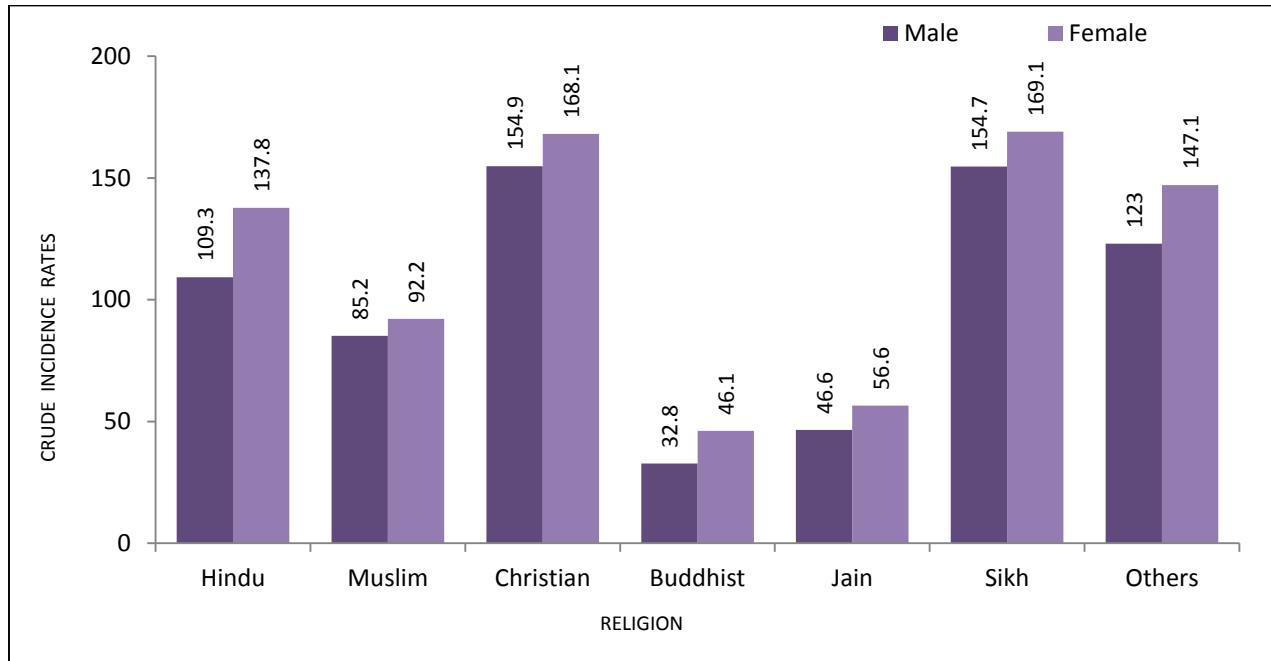


Fig.7

The different religious groups are distinguished from each other by their habits, customs and socio-economic status. Thus, even though living in the same environment, they present striking differences from each other, in the relative frequency with which cancer occurs at various sites. An appraisal of this situation was thus considered promising, in order to study the differences in site patterns of incidence. In order to define the magnitude and nature of the differences observed, the number of cancer cases along with the crude incidence rate of each cancer site in various religious group, is presented in Table 19 for males and Table 20 for females.

The site incidence patterns exhibit considerable differences in the various religious groups. The most common cancer sites by crude rate in each religious group by sex are presented in Table J.

Among males, cancer of Lung is leading site in Hindus, Christians and cancer of Mouth is leading site in Muslims. Among females, the breast is the leading site in all the religious groups. In Hindus and Muslims cervix ranked second, while in Christians, Corpus Uteri ranked second.

Table J: Five Most Common Sites Of Cancer In Different Religious Groups By Sex, Greater Mumbai, 2013-14

RELIGION	MALE				FEMALE			
	RANK	SITE	Cases	CR	RANK	SITE	Cases	CR
HINDU	1	Lung	901	10.1	1	Breast	3153	41.5
	2	Mouth	897	10.1	2	Cervix	778	10.2
	3	Prostate	821	9.2	3	Ovary	639	8.4
	4	Liver	636	7.1	4	Lung	553	7.3
	5	Lymphoma	527	5.9	5	Corpus Uteri	386	5.1
MUSLIM	1	Mouth	321	10.9	1	Breast	680	28.2
	2	Lung	302	10.3	2	Cervix	153	6.4
	3	Tongue	153	5.2	3	Ovary	140	5.8
	4	Lymphoma	147	5.0	4	Lung	112	4.6
	5	Liver	136	4.6	5	Gall Bladder	108	4.5
CHRISTIAN	1	Lung	74	19.3	1	Breast	247	60.1
	2	Prostate	69	18.0	2	Corpus Uteri	47	11.4
	3	Stomach	49	12.8	3	Ovary	44	10.7
	4	Liver	46	12.0	4	Lung	38	9.2
	5	Mouth	34	8.9	5	Colon	31	7.5

MOTHERTONGUE

In India vast differences have been known to exist in the habits and customs of different sections of the large and complex Hindu community. One of the ways of identifying the different groups is on the basis of the written and spoken language. Indian states have been organized primarily on linguistic basis and the mother tongue provides an important source of information, to study the variations found in the relative frequency of cancer.

Greater Mumbai has a cosmopolitan population drawn in sizable numbers from every state in the Indian Union. This urban center thus represents a true cross section of the heterogeneous nature of the Indian population. Hindus constitute 67.4% of the total population. Among the Hindus, 60% are Marathi speaking, who hail from the districts to the south and east of Mumbai, whilst the Gujarati's come from the western seaboard, to the north of the city. The four linguistic groups in the Metropolis have adequate numbers of people available for undertaking a comparative analysis. The Marathi and Gujarati speaking people form the most common linguistic groups followed by the Hindi and Urdu speaking population. The number of cases and the percentage distribution of cancer sites in these groups are presented in Tables 21 and 22, for males and females respectively.

The site incidence patterns exhibit considerable differences in the various linguistic sections. The five most common sites in each linguistic group by sex, is presented in Table K.

Table K: Five Most Common Sites of Cancer in Different Linguistic Groups by Sex, Greater Mumbai, 2013-14

MALE					FEMALE			
LANGUAGE	RANK	SITE	N	%	RANK	SITE	N	%
GUJARATI	1	Prostate	184	11.1	1	Breast	647	36.6
	2	Mouth	160	9.7	2	Ovary	115	6.5
	3	Lung	136	8.2	3	Lung	90	5.1
	4	Lymphoma	85	5.1	4	Cervix	90	5.1
	5	Liver	83	5.0	5	Corpus Uteri	82	4.6
HINDI	1	Mouth	396	10.9	1	Breast	1013	29.3
	2	Lung	363	10.0	2	Cervix	247	7.1
	3	Prostate	292	8.1	3	Ovary	212	6.1
	4	Lymphoma	210	5.8	4	Lung	190	5.5
	5	Liver	205	5.7	5	Gall Bladder	152	4.4
MARATHI	1	Mouth	409	9.1	1	Breast	1554	28.4
	2	Lung	379	8.4	2	Cervix	443	8.1
	3	Liver	324	7.2	3	Ovary	334	6.1
	4	Prostate	301	6.7	4	Lung	297	5.4
	5	Tongue	246	5.5	5	Mouth	234	4.3
URDU	1	Lung	268	12.7	1	Breast	540	29.4
	2	Mouth	256	12.2	2	Cervix	130	7.1
	3	Liver	126	6.0	3	Ovary	117	6.4
	4	Tongue	119	5.7	4	Gall Bladder	98	5.3
	5	Lymphoma	112	5.3	5	Lung	92	5.0

From Table K, it is seen that in males, the mouth is leading site in Hindi and Marathi speaking, lung in Urdu speaking and prostate in Gujarati speaking, while in females, the breast is the leading site for all linguistics groups. The ovary is the second leading cancer in Gujarati speaking and other linguistic group's cervix is second leading site.

MARITAL STATUS

An increasing incidence and mortality of cancer relevant to the marital status, have been reported in several articles during the past 50 years. In particular, attention has been focused on the relation of marital status to the morbidity and mortality of cancers of the female breast and reproductive organs. Marital status is one of the major variables included in many epidemiological studies relating to such cancers.

The number and the percentage distribution of cancer cases by marital status and site, is presented in Tables 23 and 24 for males and females respectively. For comparison, the group of divorced and separated women has not been considered, as they are very small in number. The percentage of cancers involving the bones, connective tissue, brain, the lymphatic and hematopoietic systems, was found to be significantly higher in the unmarried group in both sexes, as the victims of these cancers are mainly children. In unmarried males, the highest incidence was noted in leukemia's, followed by brain, lymphomas, and bones. Among married men, the highest incidence was noted for cancers involving the lung, followed by mouth, prostate, lymphoma and tongue. Among widowed men, the highest cancer incidence was noted in the prostate followed by lung, mouth and stomach.

Among unmarried females, the highest incidence was noted in the breast, followed by the leukemia, lymphoma, thyroid and brain. Among married women the highest incidence was noted for cancers of the breast, followed by cancers involving the cervix and ovary. Among widowed women, cancer of the breast and cervix were found to be more predominant cancers.

EDUCATION

In the preceding pages, consideration has been given to examine the variation in cancer incidence that can be attributed to religion, the mother tongue and the marital status. These demographic variables are not very useful in determining the variations attributable to socio-economic status. In the Indian situation, evaluation of the socio-economic status is a very complex matter and there is no simple way of classifying the different groups that exist in the region under study. Innumerable castes and tribes make it a futile exercise to provide any meaningful grouping. Family income is a useful criteria, but in a hospital setting where the fees chargeable are often assessed on this information, it is not possible to obtain reliable data. Under these circumstances, the level of formal education provides a more appropriate measure of the socio-economic status.

We have tried to obtain information on the education level of each cancer patient. Unfortunately, for a large number of patients we could not obtain this information from the hospital records. Only when we were able to interview the patient individually, was it possible to obtain this data. In order to make the comparison reasonably meaningful, some of the different groups have been pooled together. Illiterates, who constitute a large proportion of females, are treated separately. Those who had received primary education and others who are merely literate are grouped together. Then again, those who have received secondary or technical education are also pooled together. The college educated is a small but important class who deserve separate assessment. The new cancer cases and the percentage distribution for each group by cancer site are presented in (Tables 25 and 26) for males and females respectively.

Cancer involving the oral cavity, pharynx and the respiratory tract constitute the bulk of male cases. These are mainly tobacco related cancers and it was considered interesting to see if any variations were noted in the predominant sites in this category, associated with the educational level of the patients. The major risk factors for these cancers are well known viz. tobacco chewing, for mouth cancer, bidi smoking for cancers involving the larynx and pharynx, and cigarette or bidi smoking for lung cancer. Educational levels were also analyzed, of the patients who had a cancer at these sites and were compared with the educational levels of the patients for 'all cancers' taken together.

Table L: Percentage Distribution Of Cancer Cases For Selected Sites by Educational Level. Greater Mumbai, Males, 2013-14					
SITE	ILLITERATE	LITERATE	PRIM+ MID	SEC+TECH	COLLEGE & ABOVE
Tongue	3.8	4.0	5.0	6.5	6.1
Mouth	7.7	5.2	10.4	11.9	11.4
Oropharynx	1.9	1.4	1.4	1.0	0.8
Hypopharynx	2.8	2.0	1.7	1.7	1.4
Larynx	4.2	4.2	3.8	3.7	1.9
Lung	10.7	13.1	10.6	7.0	6.1
Oesophagus	2.9	4.4	3.9	3.4	2.1
Stomach	2.7	4.9	4.6	4.4	5.9

In general, we can conclude from the above (Table L), that lung, pharyngeal, tongue and laryngeal cancers, which are known to be associated with tobacco-chewing and cigarette and bidi-smoking habits, are more prevalent in the lower socio-economic classes.

In females, besides the breast and uterine cervix, cancers of the mouth are the most commonly affected sites. These three groups are examined in detail in relation to educational levels (Table M & Fig. 8).

Table M: Percentage Distribution Of Cancer Cases For Selected Sites By Education Level, Greater Mumbai, Female, 2013-14					
SITE	ILLITERATE	LITERATE	PRIM+ MID	SEC+TEC	COLL. & ABOVE
Mouth	5.7	3.7	3.3	3.1	1.7
Breast	20.7	23.3	30.6	35.6	40.5
Cervix	11.5	6.0	7.1	6.8	3.5

The percentage distribution for each educational level shows a very interesting gradient with respect to occurrence of cancer at the three common sites, in women with only basic education, in whom the breast and buccal cavity regions are involved. This

trend is somewhat reversed in the case of those who had received secondary, technical or college education. In these categories, cancer was found to occur maximally in the breast, followed by the uterine cervix and the least involved was the oral cavity. When percentage distributions by educational level at each site is compared, cancer of the buccal cavity and cervical cancers were found to be more prevalent at the lower educational level and the incidence starts to decrease as the educational level increases. The exact reverse situation is observed for cancer of the breast.

**PERCENTAGE DISTRIBUTION OF CANCER CASES FOR MOUTH, BREAST, CERVIX
BY EDUCATION LEVEL, GREATER MUMBAI 2013-14**

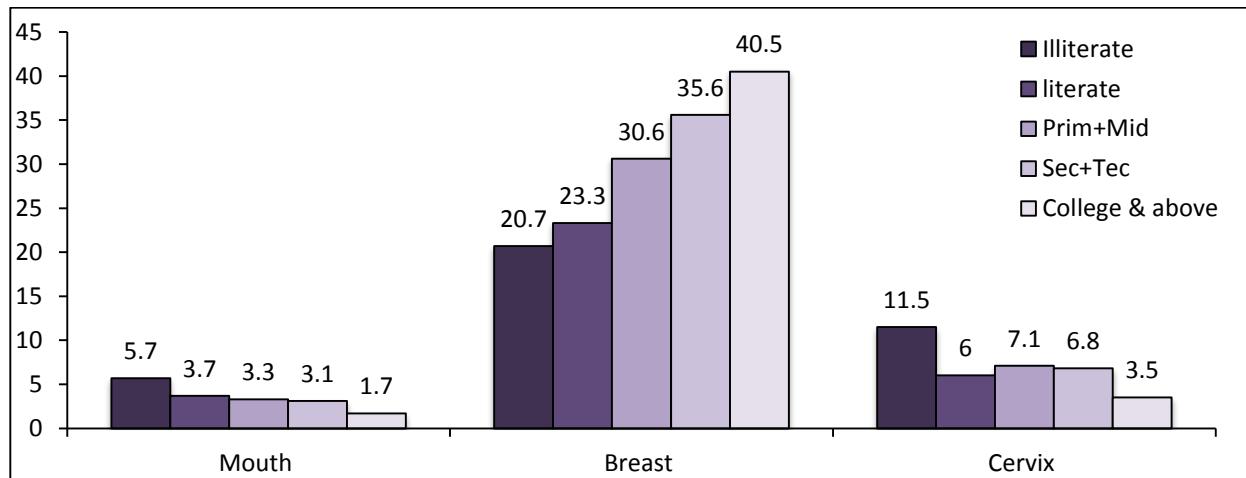


Fig. 8

RESIDENCE

Variations in incidence rates between different population groups, as defined by personal (demographic) variables by place of residence, may suggest the importance of environmental factors in the causation of a particular cancer. Therefore, descriptive epidemiological data are often described as hypothesis generating.

Greater Mumbai is made of the city, suburbs and extended suburbs. For administrative purposes the whole of Greater Mumbai area is divided into fifteen wards. Wards A,B,C,D,E,F and G constitute the city; wards H,K,L,M and N constitute the suburbs and wards P,R and T constitute the extended suburbs. The new cancer cases with percentage distribution for city, suburb and extended suburb by cancer site are presented in Tables 27 and 28 for males and females respectively.

Among males, cancer of the lung is the most predominant cancer in suburbs area followed by mouth in city and extended suburbs mouth is leading cancer followed by lung and Among females, incidence of cancer of the breast top the list followed by cervix and ovary in all the three areas.

HISTOLOGY

During the year 2013-14, 24264 cancer cases were confirmed microscopically. The proportion of histopathologically proved cases was found to be 87.8%. The various histological varieties observed for all sites together during 2013-14 by sex with percentage distribution is presented in Table 29.

Adenocarcinomas are found to be the commonest histological type constituting about 27.6% of the total number of cases. This is the most common variety affecting in males. The next common variety affecting in males is squamous cell carcinomas (26.3%), while in females ductal, lobular and medullary neoplasms (26.4%) is the leading histology followed by adenocarcinomas (20.6%) and squamous cell carcinomas (16.3%).

CUMULATIVE INCIDENCE RATE

The Cumulative incidence rate is simply a summary measure of the experience of a population over a longer time span or age interval. It is obtained by summing up the age specific incidences for each year in the defined age interval.

The cumulative incidence rate between birth to age 74 years is 5 times the sum of the age specific incidence rates calculated over five year age-groups, since age-specific incidence rates are usually computed for five year age intervals. The cumulative incidence is a directly standardized incidence rate and a good approximation to the actuarial or cumulative risk. The reason for interest in the cumulative incidence rate is that it has a useful probabilistic interpretation. Another advantage is that as a form of direct age standardization, the arbitrariness in choosing a standard population is removed and the computations of cumulative incidence rates are easier. The age cumulative incidence rates (00-74 years) are calculated for all sites in both the sexes (Table N). On an average 1 out of 8 males and 1 out of 7 in females gets cancer in his/her life time (0-74). In males, one in 72 and one in 85 will get lung and mouth cancer respectively while in females, one in 24 and one in 104 will get cancer of breast and cervix respectively (Table N).

Table N : Cumulative Rate (%) and Life Time Risk of developing cancer to Age 74 years by Site and Sex, Greater Mumbai, 2013-14 (* 1 in : Risk of developing cancer for each person)

Site	Male		Female	
	cm rt	ltr	cm rt	ltr
Lip	0.1	1758	0.0	2656
Tongue	0.6	166	0.2	411
Mouth	1.2	85	0.5	207
Salivary Gland	0.1	150	0.0	3196
Oropharynx	0.2	584	0.0	2625
Nasopharynx	0.0	2159	0.0	5326
Hypopharynx	0.3	398	0.1	1079
Other Oral	0.1	1324	0.0	5482
Oesophagus	0.5	215	0.4	260
Stomach	0.6	166	0.4	282
Small Intestine	0.0	2153	0.0	2386
Colon	0.4	228	0.4	245
Rectum	0.4	225	0.3	346
Liver	0.9	115	0.4	244
Gall Bladder	0.2	413	0.4	254
Pancreas	0.4	270	0.2	404
Other Dig Organs	0.0	87608	0.0	120237
Nose, Sinuses	0.1	1243	0.0	2731
Larynx	0.5	194	0.1	1152
Lung	1.4	72	0.8	133
Mediastinum, Pleura	0.0	3665	0.0	12079
Respiratory track, NOS	0.0	87608	—	—
Bone	0.1	1027	0.1	1098
Skin Melanoma	0.0	3924	0.0	6643
Skin Others	0.2	619	0.1	668
Nervous System	0.0	20114	0.0	38142
Retroperitoneum	0.0	222461	—	—
Conn & Soft Tissues	0.1	845	0.1	894
Breast	0.1	995	4.1	24
Other Female Genital Organ	—	—	0.1	949
Cervix	—	—	1.0	104
Corpus Uteri	—	—	0.6	167
Uterus	—	—	0.1	1417
Ovary	—	—	0.9	117
Other Unspecified Female Genital Organ	—	—	0.0	15943
Penis	0.1	1109	—	—
Prostate	1.1	92	—	—
Testis	0.0	2293	—	—
Other Male Genital Organs	0.0	24723	—	—
Kidney	0.3	329	0.1	887
Urinary Bladder	0.4	231	0.1	842
Eye	0.0	12014	0.0	17673
Brain	0.3	296	0.3	352
Thyroid	0.1	1083	0.2	467
Other Endocrine Gland	0.0	5544	0.0	10879
Oth III Def Site	0.0	36956	0.0	37718
Lymph Nodes	0.2	519	0.1	848
Sec Respiratory & Digestive Organs	0.1	884	0.2	580
Sec Other	0.0	2081	0.1	1785
Unknown Primary	0.2	506	0.1	789
Hodgkins Lymphoma	0.1	1092	0.1	1225
N.H. Lymphoma	0.5	192	0.4	245
Immunoproliferative Disease	0.0	190966	0.0	192403
Multiple Myeloma	0.2	513	0.1	705
Lymphoid Leukemia	0.2	650	0.1	1232
Myeloid Leukemia	0.2	545	0.1	735
Other Leukemia	0.1	1148	0.1	1390
All Site	12.6	8	13.6	7

CHILDHOOD CANCERS (00-14 YRS)

Cancer in childhood constitute one of the most important groups of tumors, not only because of the age occurrence, connoting a difference set of etiological factors from those, commonly seen in adult cancers but also because in the past two decades, with advances particularly in chemotherapy, many of the childhood cancers have gain markedly high potency for cure. The proportion of childhood cancers relative to all sites of cancers varies from in male and in females in Mumbai population

Table O gives the number and relative proportion of broad types of childhood cancers in Mumbai registry according to the classification scheme of IARC (Parkin et al 1988). Leukemia's and lymphomas followed closely by tumors of the central nervous systems constitutes the vast majority of childhood cancers.

Table O: Number of Childhood cancers and proportion by sex in Greater Mumbai, 2013-14						
Site	ICD10	Male		Female		Total
		#	%	#	%	
Leukemia's	C91, C92, C93-C95	121	38.4	77	38.7	198 38.5
Lymphomas	C81, C82-C85	58	18.4	22	11.1	80 15.6
CNS Tumor	C70-C72	51	16.2	34	17.1	85 16.5
Retinoblastoma	C69	7	2.2	9	4.5	16 3.1
Renal Tumor	C64-C65	14	4.4	7	3.5	21 4.1
Hepatic Tumor	C22	5	1.6	2	1.0	7 1.4
Bone Tumor	C40-C41	12	3.8	14	7.0	26 5.1
Soft Tissue	C49	7	2.2	7	3.5	14 2.7
Germ Cell Tumor	C62	5	1.6	0	0.0	5 1.0
Other Carcinomas		35	11.1	27	13.6	62 12.1
All Types		315	100	199	100	514 100

TOBACCO RELATED CANCERS

Site of cancers that has been associated with use of tobacco (tobacco related cancers- TRC's) includes lip, tongue, oral cavity, pharynx, (including oropharynx and hypopharynx, oesophagus, larynx, lung and urinary bladder).

The total proportions of these sites of cancers to all sites in males and females are given in Table P.

Table P: Number of Tobacco related cancer cases by sex in Greater Mumbai, 2013-14						
Site	ICD10	Male		Female		Total
		#	%	#	%	
Lip	C00	57	0.4	32	0.2	89 0.3
Tongue	C01-C02	698	5.2	249	1.8	947 3.4
Oral Cavity	C03-C06	1323	9.8	482	3.4	1805 6.5
Oropharynx	C09-C10	167	1.2	49	0.3	216 0.8
Hypopharynx	C12-C13	241	1.8	90	0.6	331 1.2
Pharynx	C14	87	0.6	26	0.2	113 0.4
Oesophagus	C15	481	3.6	409	2.9	890 3.2
Larynx	C32	491	3.6	79	0.6	570 2.1
Lung	C33-C34	1320	9.8	745	5.3	2065 7.5
Urinary Bladder	C66-C68	445	3.3	136	1.0	581 2.1
T.R.C.'s		5310	39.4	2297	16.2	7607 27.5
Other Carcinomas		8156	60.6	11860	83.8	20016 72.5
All Types		13466	100	14157	100	27623 100

CANCER OF BREAST
(ICD-10: C50)

CANCER OF BREAST:

No. of cases	4305
% to total cases	30.4
CIR/ 10^5	36.9
AAR/ 10^5	36.0
TR/ 10^5	74.0
Ratio at risk	24

Number, Percent and AAR/ 10^5 by Broad Age Groups

Age Group	#	%	AAR
0-14	2	0.0	0.1
15-34	199	4.6	4.0
35-64	2829	65.7	74.0
65+	1275	29.6	168.3
Total	4305	100	36

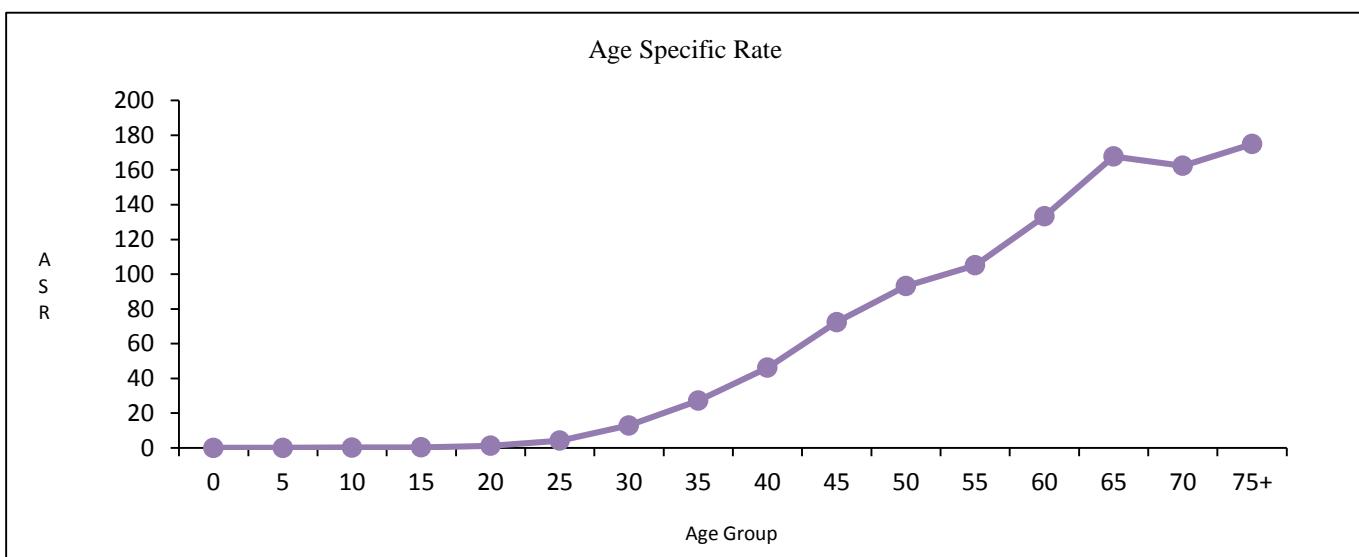


Fig.9 (a)

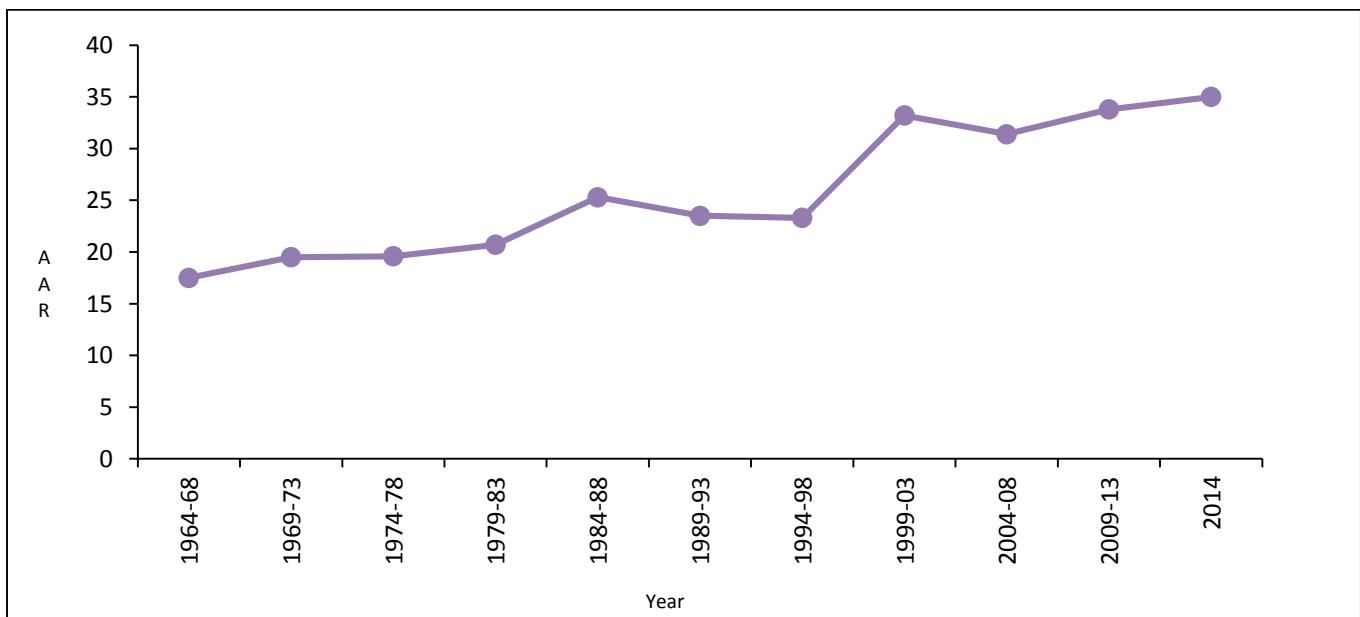


Fig.9 (b)

CANCER OF CERVIX
(ICD-10: C53)

CANCER OF CERVIX

No. of cases	1004
% to total cases	7.1
CIR/ 10^5	8.6
AAR/ 10^5	8.4
TR/ 10^5	19.0
Ratio at risk	104

Number, Percent and AAR/ 10^5 by Broad Age Groups

Age Group	#	%	AAR
0-14	0	0	0
15-34	33	3.3	0.6
35-64	723	72.0	19.0
65+	248	24.7	33.1
Total	1004	100	8.4

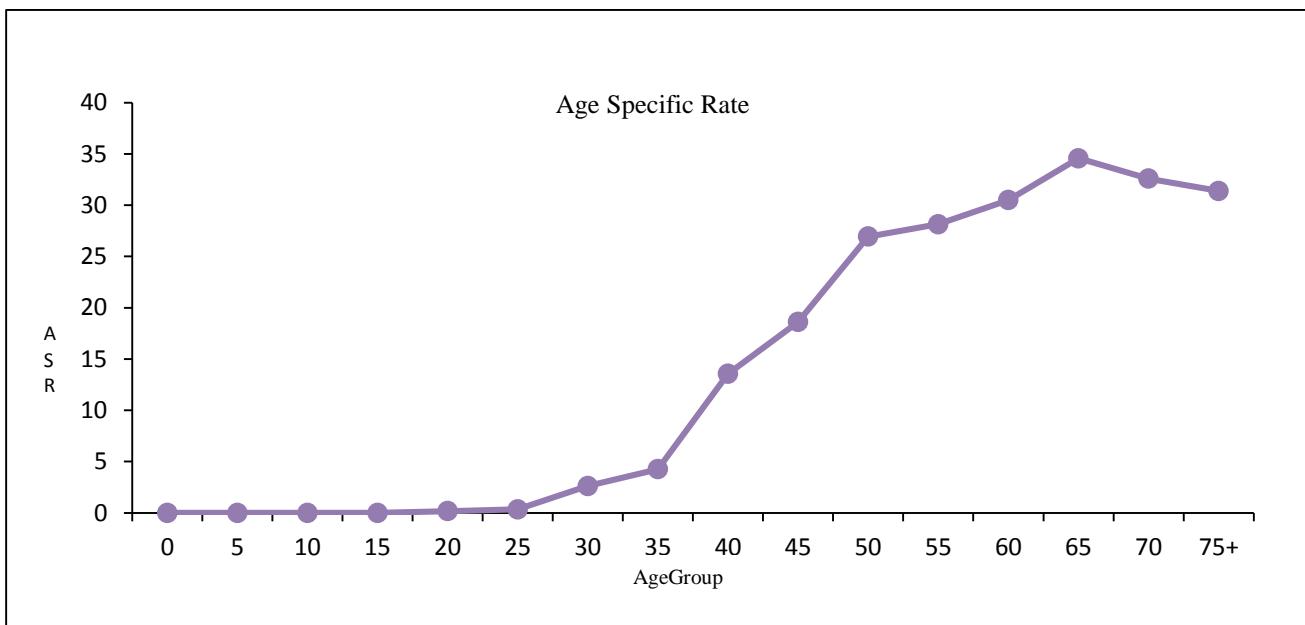


Fig.10 (a)

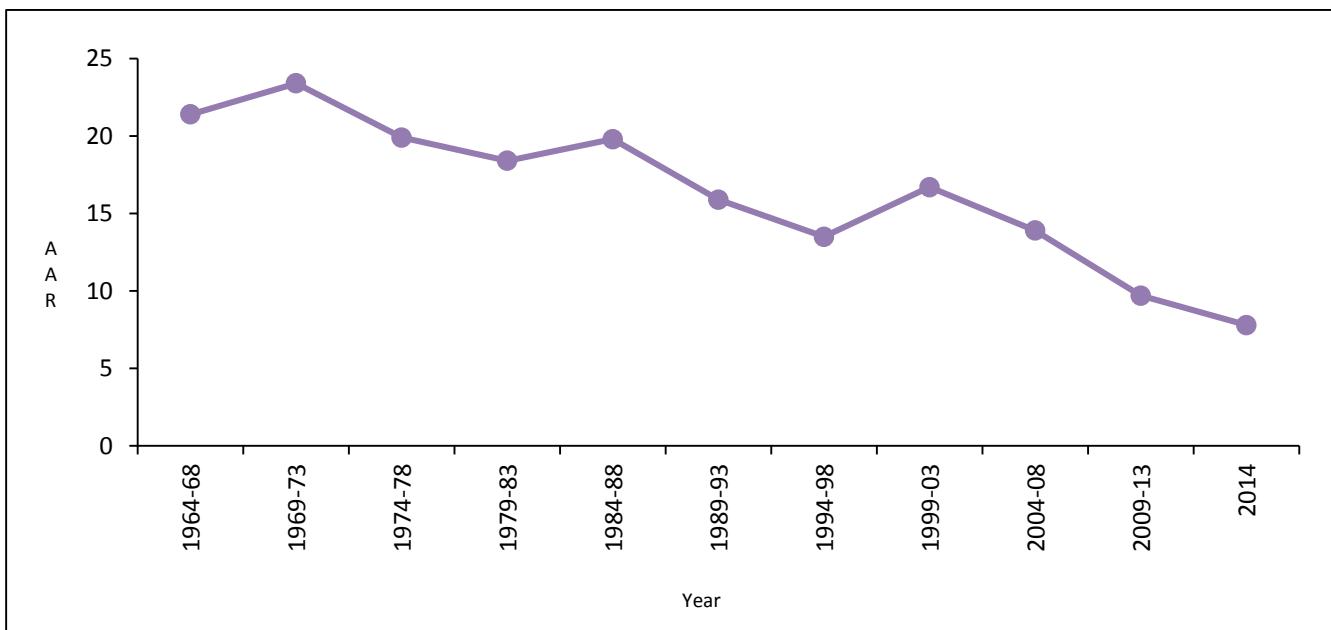


Fig.10 (b)

CANCER OF OVARY
(ICD-10: C56)

CANCER OF OVARY

No. of cases	874
% to total cases	6.2
CIR/ 10^5	7.5
AAR/ 10^5	7.4
TR/ 10^5	14.8
Ratio at risk	117

Number, Percent and AAR/ 10^5 by Broad Age Groups

Age Group	#	%	AAR
0-14	4	0.5	0.1
15-34	43	4.9	0.9
35-64	559	64.0	14.8
65+	268	30.7	35.3
Total	874	100	7.4

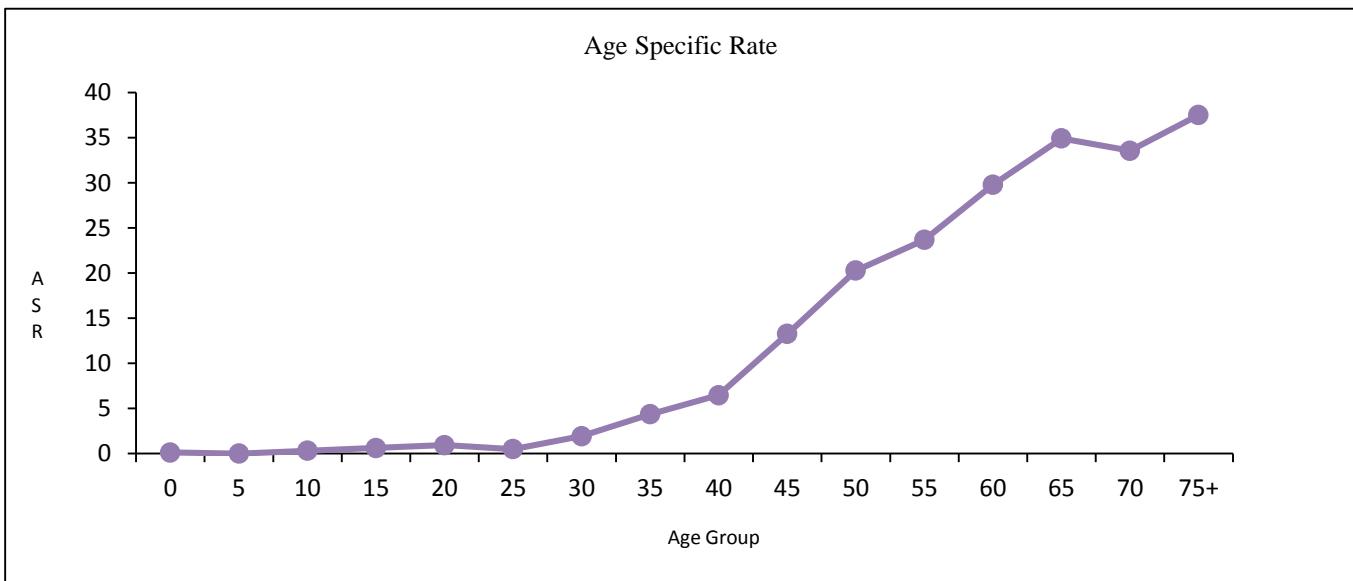


Fig.11 (a)

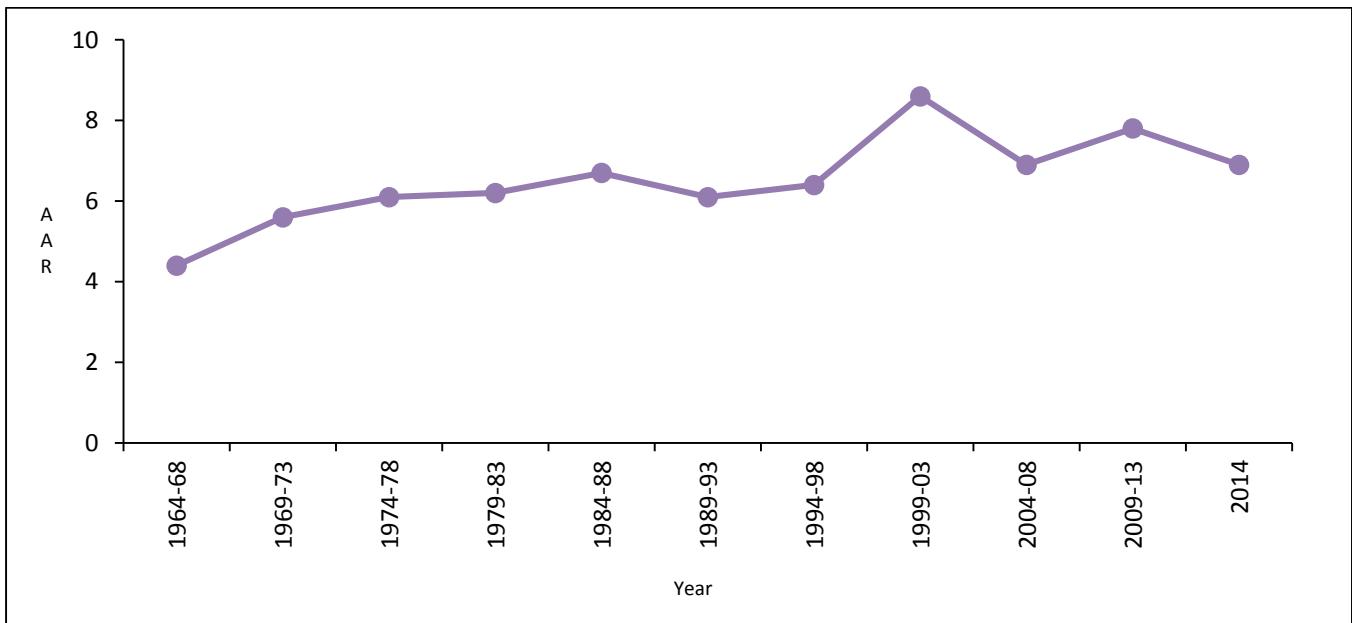


Fig.11 (b)

CANCER OF PROSTATE
(ICD-10: C61)

CANCER OF PROSTATE:

No. of cases	1068
% to total cases	7.9
CIR/ 10^5	7.9
AAR/ 10^5	9.7
TR/ 10^5	5.5
Ratio at risk	92

Number, Percent and AAR/ 10^5 by Broad Age Groups

Age Group	#	%	AAR
0-14	0	0	0.0
15-34	2	0.2	0.0
35-64	206	19.3	5.5
65+	860	80.5	113.1
Total	1068	100	9.7

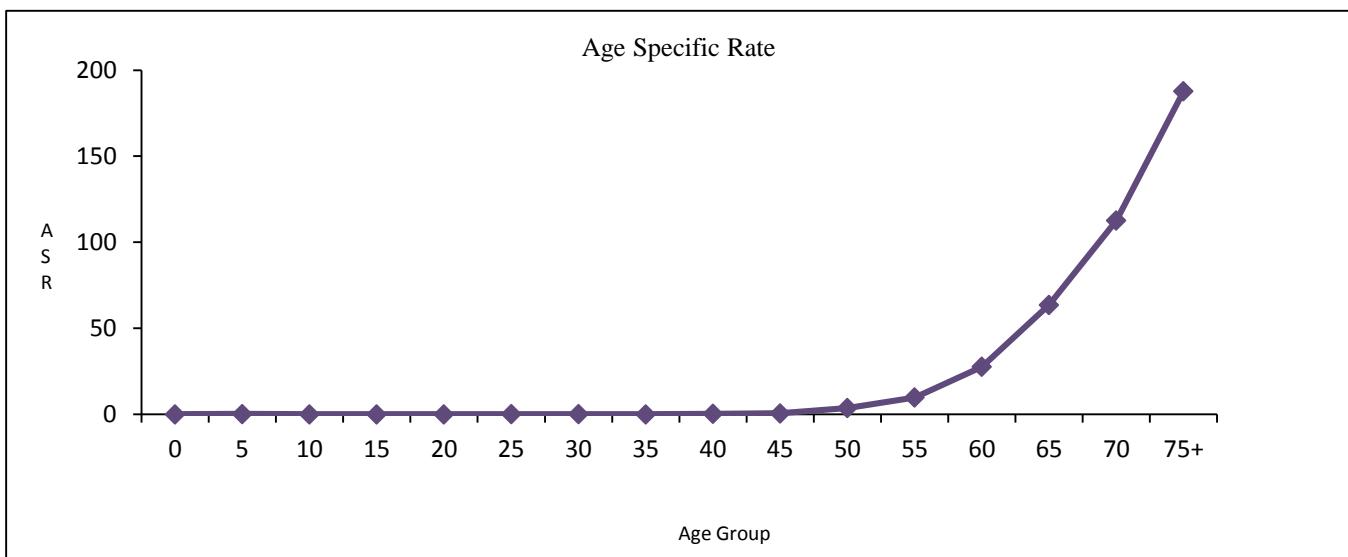


Fig.12 (a)

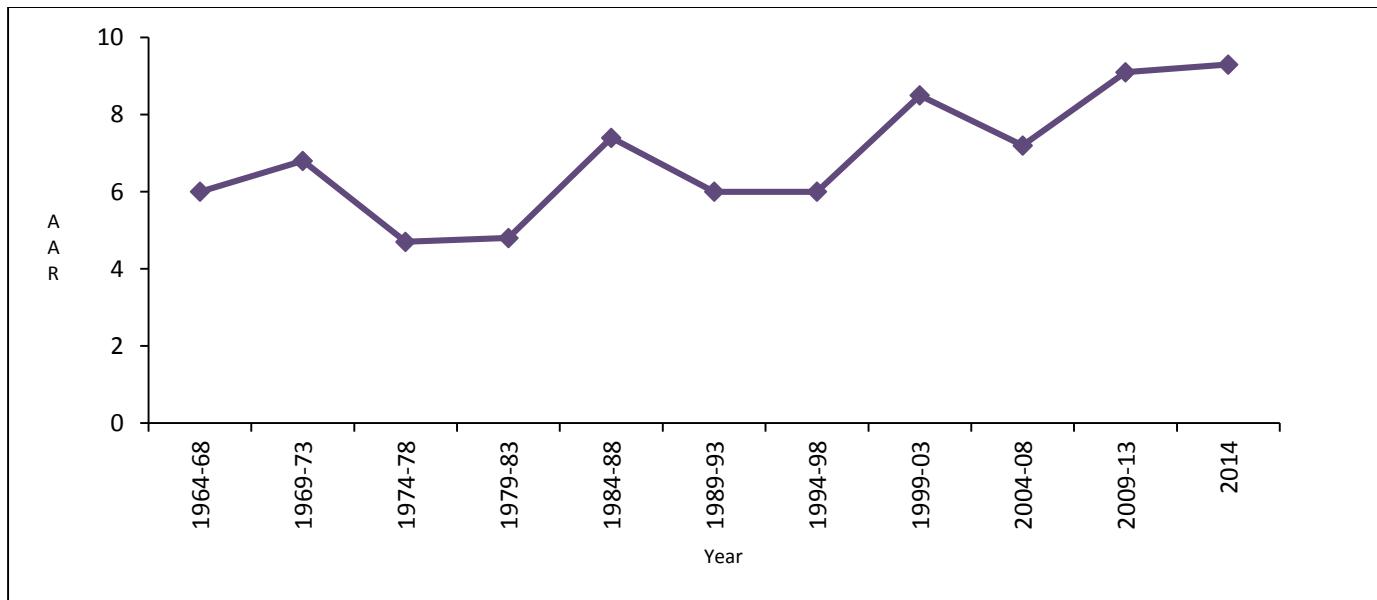


Fig.12(b)

CANCER OF LUNG
(ICD-10: C34)

CANCER OF LUNG

Number, Percent and AAR/ 10^5 by Broad Age Groups

	MALE	FEMALE
No. of cases	1320	745
% to total cases	9.8	5.3
CIR/105	9.8	6.4
AAR/105	11.4	6.4
TR/105	14.3	8.6
Ratio at risk	72	133

Age Group	MALE			FEMALE		
	#	%	AAR	#	%	AAR
0-14	1	0.1	0.0	3	0.4	0.1
15-34	27	2.0	0.5	26	3.5	0.5
35-64	571	43.0	14.3	318	42.7	8.6
65+	721	54.6	97.5	398	53.4	50.5
Total	1320	100	11.4	745	100	6.4

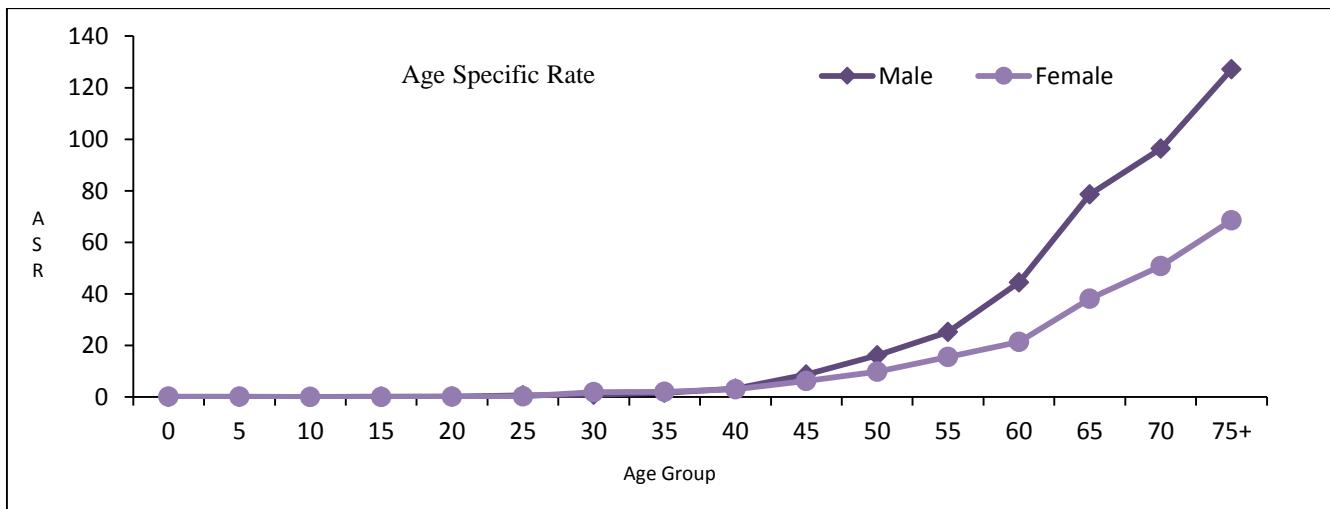


Fig.13 (a)

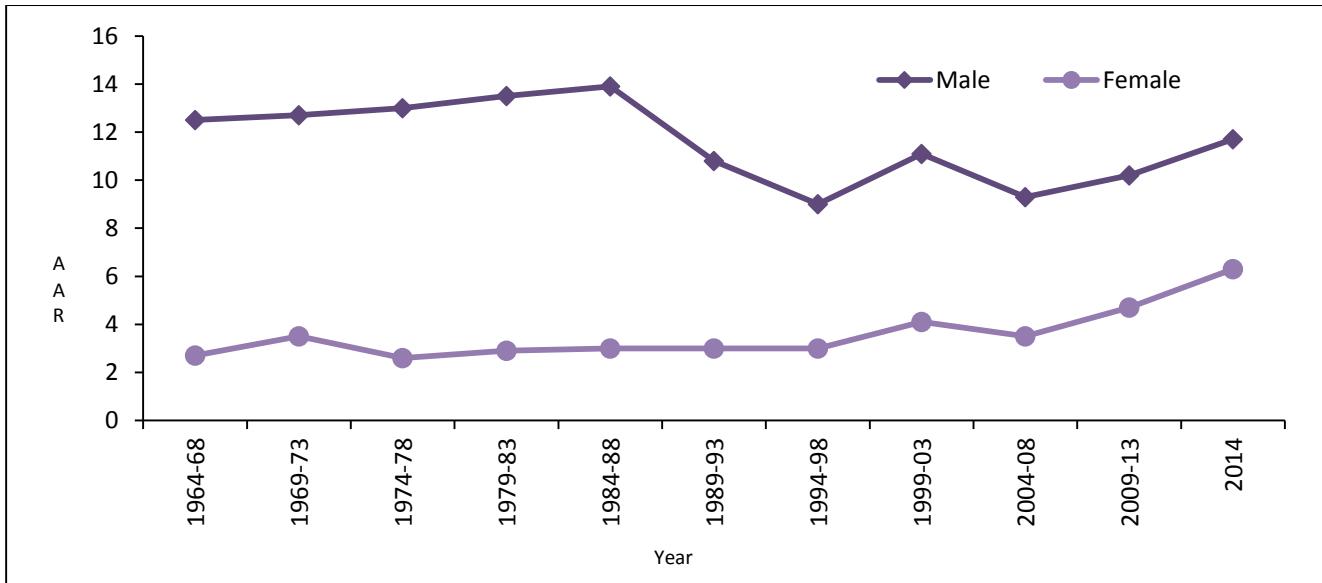


Fig.13 (b)

CANCER OF TONGUE
(ICD-10: C01-C02)

CANCER OF TONGUE

Number, Percent and AAR/ 10^5 by Broad Age Groups

	MALE	FEMALE
No. of cases	698	249
% to total cases	5.2	1.8
CIR/105	5.2	2.1
AAR/105	5.2	2.1
TR/105	10.8	3.8
Ratio at risk	166	411

Age Group	MALE			FEMALE		
	#	%	AAR	#	%	AAR
0-14	0	0.0	0	0	0.0	0
15-34	62	8.9	1.0	9	3.6	0.2
35-64	473	67.8	10.8	143	57.4	3.8
65+	163	23.4	22.6	97	39.0	12.5
Total	698	100	5.2	249	100	2.1

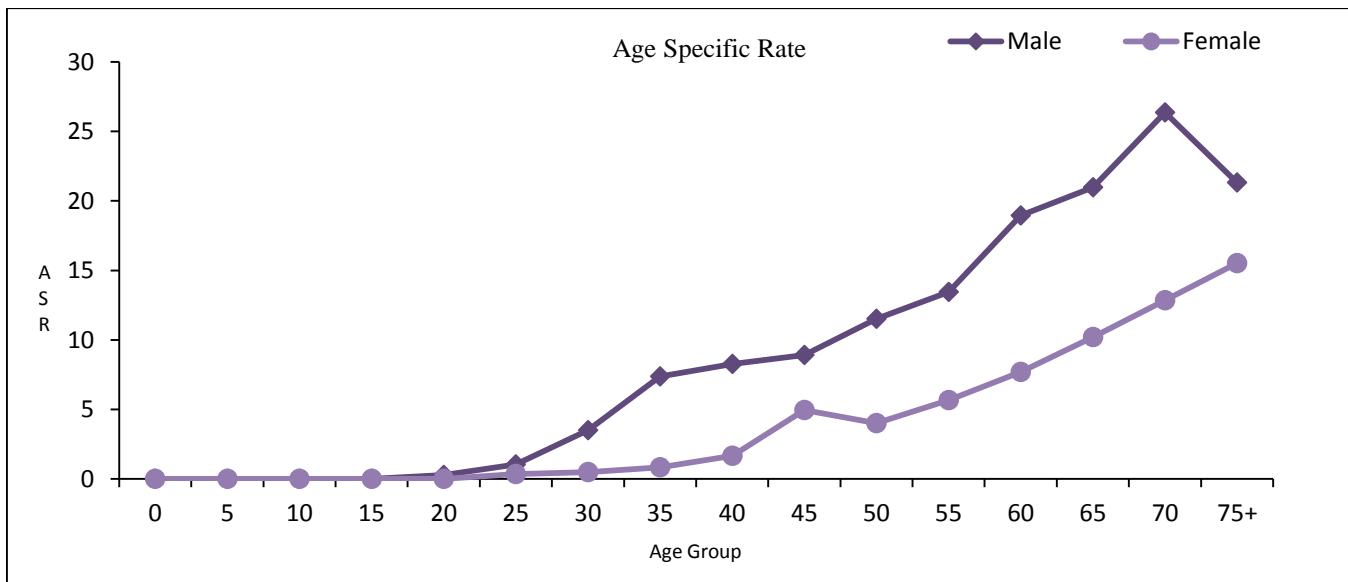


Fig.14 (a)

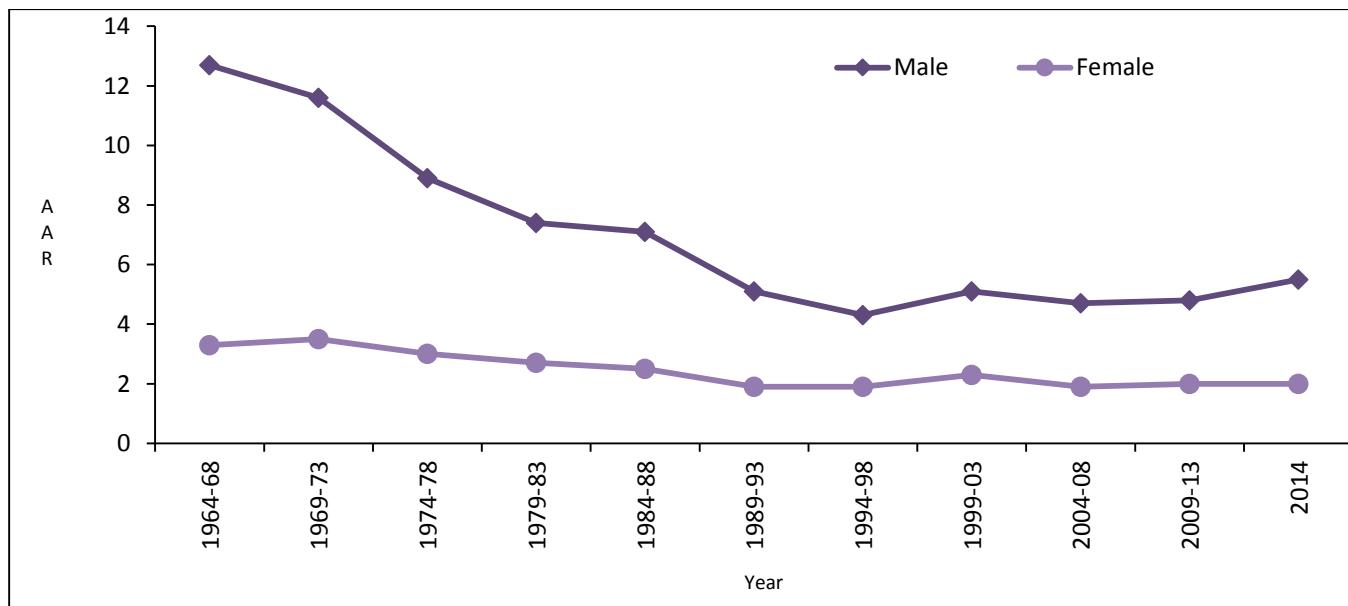


Fig.14 (b)

CANCER OF MOUTH

CANCER OF MOUTH

(ICD-10: C03-06)

Number, Percent and AAR/ 10^5 by Broad Age Groups

	MALE	FEMALE
No. of cases	1323	482
% to total cases	9.8	3.4
CIR/105	9.8	4.1
AAR/105	10.1	4.1
TR/105	22.8	8.2
Ratio at risk	85	207

Age Group	MALE			FEMALE		
	#	%	AAR	#	%	AAR
0-14	2	0.2	0.1	1	0.2	0.1
15-34	65	4.9	1.1	12	2.5	0.2
35-64	982	74.2	22.8	309	64.1	8.2
65+	274	20.7	38.5	160	33.2	21.2
Total	1323	100	10.1	482	100	4.1

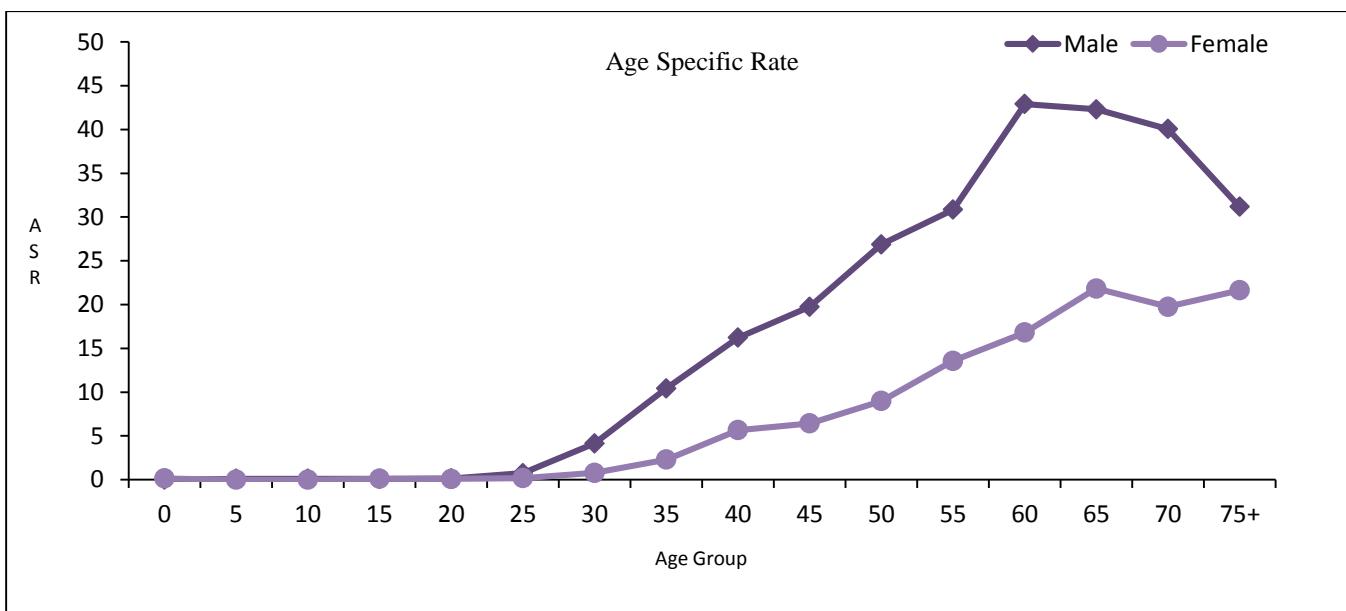


Fig.18(a)

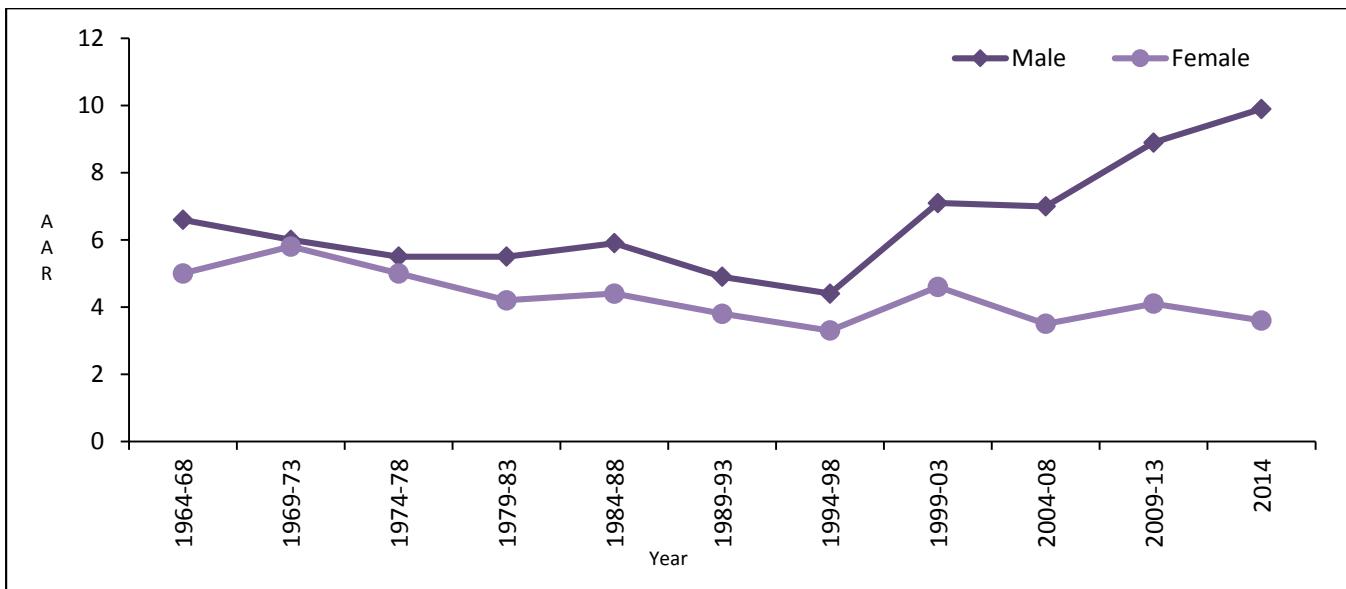


Fig.18(b)

MORTALITY

Mortality statistics have an impressive history as a useful tool for undertaking epidemiological studies of cancer. The mortality analysis of various occupational groups has provided the evidence, which leads to the discovery of several chemical carcinogens. Examination of time trends of the deaths rates has in turn lead to the developments of new etiologic hypotheses. Furthermore, international comparison of mortality data has been productive in outlining new directions for undertaking epidemiological field studies.

The significant role played by mortality data in epidemiological studies in the past was largely due to the unavailability of morbidity data, which is considered more valuable for undertaking epidemiological investigations. Gradually, the role of mortality studies has diminished with the establishment of population based cancer registries in various countries throughout the world and the availability of adequate morbidity data. The value of mortality data has also decreased with the increasing use of epidemiological field studies undertaken to test specific etiologic hypotheses, developed as a result of analysis of mortality statistics.

At our registry, mortality data has been obtained from the death records maintained by the Vital Statistics Division of the Mumbai Municipal Corporation. Copies are made by us of all death certificates which mention the words 'Cancer' or 'Tumor' as being the cause of death.

During the year 2013-14, a total of 14733 cancer deaths were recorded. Out of these, 7649 males and 7084 females, Male:Female ratio of mortality cases being 1.1:1. The annual Crude mortality rate (CR) & age adjusted rate (AAR) were 56.7 and 64.6 in males 60.7 and 60.5 in females respectively per 100,000 persons. The truncated rate among males and females were 81.9 and 90.8 per 100,000 respectively.

The leading sites of cancer deaths, ranked by age-adjusted rates in males and females, are given in Table Q. Deaths from cancers of the lung, top the list in males, followed by deaths from cancers involving the liver, prostate, mouth, and stomach. Among females, cancers of the breast being the leading site followed by the lung, ovary and cervix. (Fig 19)

The age-specific rates were found to follow the general patterns of increase with age. An increase for the first time was seen to occur in the sixth decade, in both sexes (Table R). The age-specific death rates for females were found to be generally lower than for males, except in the age-group i.e. 25-54 (Table R). This can be explained by the high mortality rates of female genital cancers that occur in the reproductive age groups (Fig 20.)

Table Q : Annual Age Adjusted Cancer Death Rates Per 100,000 Population at All Sites and the leading sites, Greater Mumbai, 2013-14

MALE			FEMALE		
RANK	SITE	AAR	RANK	SITE	AAR
1	Lung	9.0	1	Breast	12.6
2	Liver	6.2	2	Lung	4.9
3	Prostate	5.2	3	Ovary	4.6
4	Mouth	3.6	4	Cervix	3.8
5	Stomach	3.4	5	Liver	2.9
6	Leukemia	3.4	6	Oesophagus	2.6
7	Oesophagus	3.3	7	Gall Bladder	2.4
8	Lymphoma	2.7	8	Leukemia	2.4
9	Pancreas	2.5	9	Stomach	2.2
10	Tongue	2.3	10	Colon	2.1
	All Sites	64.6		All Sites	60.5

AGE ADJUSTED DEATH RATES PER 100,000 POPULATIONS AT TEN LEADING SITES, 2013-14

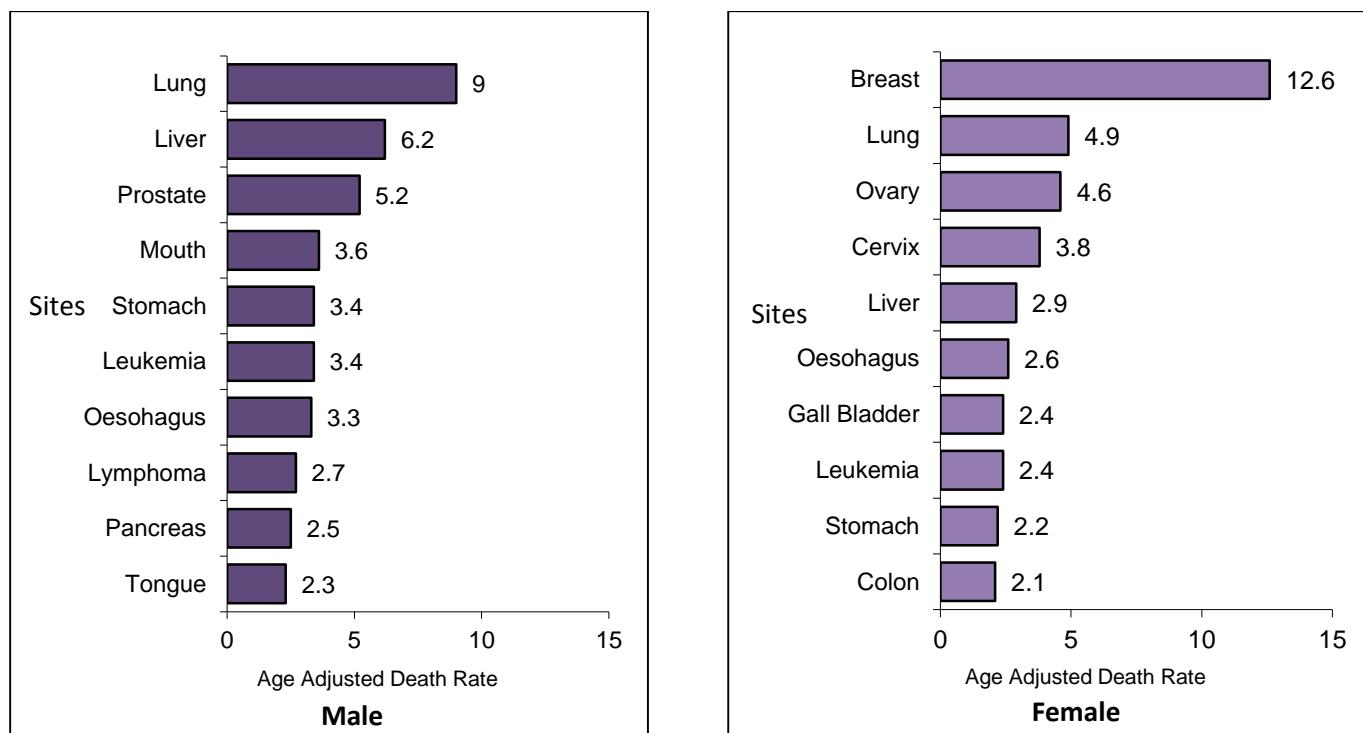


Fig.19

Table R: Annual Age Specific Mortality Rates Per 100,000 Population by Sex , Greater Mumbai, 2013-14

Age Group	Male	Female
00-04	5.2	4.3
05-09	3.8	2.2
10-14	3.5	3.0
15-19	3.8	3.8
20-24	4.4	2.3
25-29	5.3	5.5
30-34	10.5	11.0
35-39	16.4	22.0
40-44	30.2	42.1
45-49	51.3	76.6
50-54	80.5	114.4
55-59	152.1	146.0
60-64	235.1	203.5
65-69	337.1	315.9
70-74	512.2	416.7
75+	788.3	596.6
ALL AGES	64.6	60.5

AGE SPECIFIC MORTALITY RATE PER 100,000 POPULATION, FOR ALL CANCER SITES, 2013-14

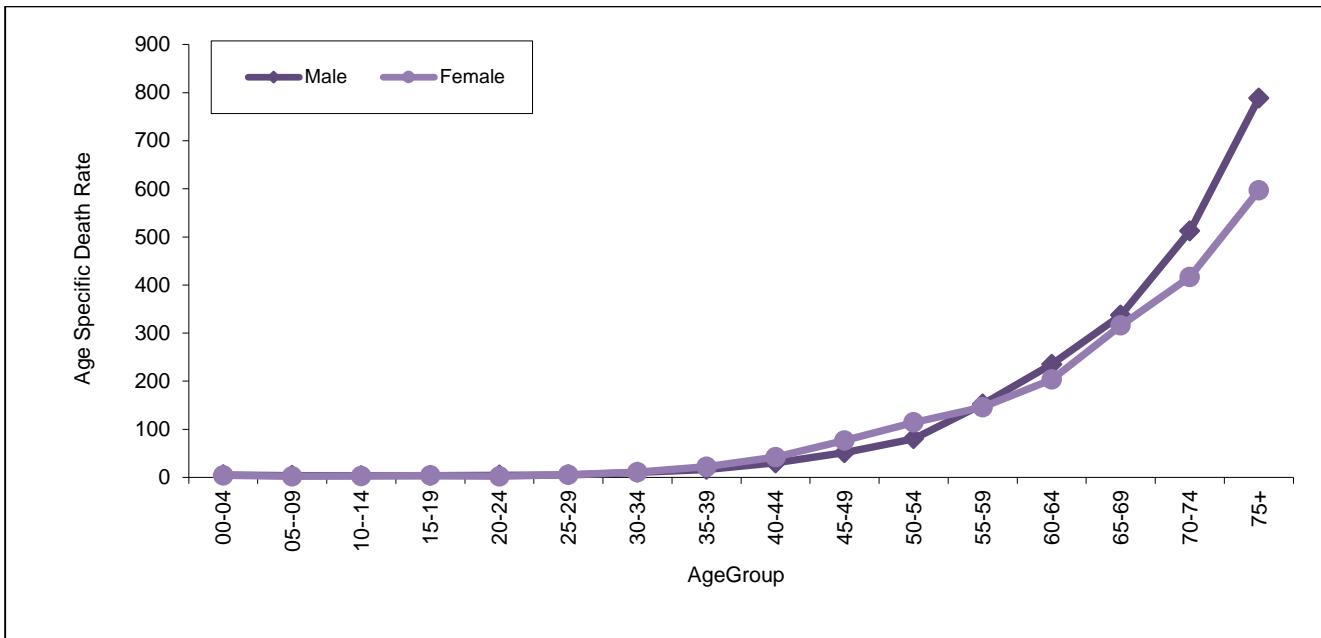


Fig.20

It is important to determine whether the pattern of age and sex in cancer mortality rates, in fact reflects the incidence rates. The relative comparison of the age distribution in the mortality and morbidity analysis and the age distribution of the population by sex, are given Table S.

Table S: Relative Morbidity and Mortality Rates of Cancer by Sex, Greater Mumbai, 2013-14

SEX	AGE	POPULATION	CANCER CASES	INDICATOR OF RELATIVE FREQUENCY	CANCER DEATH	INDICATOR OF RELATIVE FREQUENCY
MALE	00-14	20.6	2.3	11.4	1.5	7.3
	15-34	40.0	6.6	16.5	4.2	10.5
	35-64	34.0	49.3	144.9	43.6	128.2
	65+	5.4	41.8	77.8	50.7	939.4
FEMALE	00-14	21.4	1.4	6.6	1.1	5.1
	15-34	37.2	5.8	15.7	3.4	9.2
	35-64	34.9	57.4	164.5	48.0	137.4
	65+	6.5	35.3	543.8	47.5	731.0
TOTAL	00-14	21.0	1.9	8.9	1.3	6.2
	15-34	38.7	6.2	16.0	3.8	9.9
	35-64	34.4	53.4	155.4	45.7	132.8
	65+	5.9	38.5	652.3	49.2	833.6

Cancer incidence and mortality rates were found to be very low in the younger ages. The association of cancer incidence and mortality with the aging process, is clearly shown by the fact that the percentage of registered cancer cases and the percentage of the total number of deaths occurring in person 65 years of age and above, are 38.5 and 49.2 respectively, as this group comprises only about 6.0% of the general population. The relative cancer incidence and mortality rates increase with age, in both the sexes. Indicators of the relative incidence and mortality, shows that up to the age of 64 the incidence rates are higher but therefore the mortality rates reach higher levels in both the sexes.

Table 1: A- Estimated Resident Population by Age and Sex as on 1st July 2013, Greater Mumbai, Total Population (All Religious Communities)

Age Gr	Male		Female		Total	
00-04	425564	6.3	388505	6.7	814069	6.5
05-09	464208	6.9	417211	7.2	881419	7.0
10-14	511463	7.6	454381	7.8	965844	7.7
15-19	596793	8.9	482338	8.3	1079131	8.6
20-24	755233	11.2	579118	10.0	1334351	10.6
25-29	733563	10.9	593260	10.2	1326823	10.6
30-34	615212	9.1	513994	8.8	1129206	9.0
35-39	554819	8.2	479106	8.2	1033925	8.2
40-44	475773	7.1	420217	7.2	895990	7.1
45-49	412977	6.1	369851	6.4	782828	6.2
50-54	345244	5.1	297089	5.1	642333	5.1
55-59	275180	4.1	243177	4.2	518357	4.1
60-64	216038	3.2	205218	3.5	421256	3.4
65-69	139273	2.1	136190	2.3	275463	2.2
70-74	97394	1.4	100037	1.7	197431	1.6
75+	119788	1.8	136181	2.3	255969	2.0
Total	6738522	100.0	5815873	100.0	12554395	100.0

Table 1:B- Estimated Resident Population by Age and Sex as on 1st July 2014, Greater Mumbai, Total Population (All Religious Communities)

Age Gr	Male		Female		Total	
00-04	420040	6.2	382706	6.5	802746	6.4
05-09	457693	6.8	410347	7.0	868040	6.9
10-14	503112	7.5	447361	7.6	950473	7.5
15-19	588999	8.7	479675	8.2	1068674	8.5
20-24	751589	11.1	581827	9.9	1333416	10.6
25-29	735075	10.9	597561	10.2	1332636	10.6
30-34	617061	9.1	519144	8.9	1136205	9.0
35-39	557484	8.3	483123	8.3	1040607	8.3
40-44	479055	7.1	428171	7.3	907226	7.2
45-49	417560	6.2	376735	6.4	794295	6.3
50-54	350441	5.2	304098	5.2	654539	5.2
55-59	282331	4.2	250631	4.3	532962	4.2
60-64	222001	3.3	211097	3.6	433098	3.4
65-69	141988	2.1	138603	2.4	280591	2.2
70-74	99784	1.5	102504	1.8	202288	1.6
75+	124013	1.8	141042	2.4	265055	2.1
Total	6748226	100.0	5854625	100.0	12602851	100.0

Table 2: A- Estimated Resident Population by Religion and Sex as on 1st July 2013, Greater Mumbai

Religion	Male		Female		Total	
	#	%	#	%	#	%
Hindu	4455500	35.5	3788838	30.2	8244338	65.7
Muslim	1463408	11.7	1193859	9.5	2657267	21.2
Christian	192878	1.5	205513	1.6	398391	3.2
Sikh	30628	0.2	28242	0.2	58870	0.5
Buddhist	297992	2.4	300870	2.4	598862	4.8
Jain	257829	2.1	259418	2.1	517247	4.1
Others	40287	0.3	39133	0.3	79420	0.6
Total	6738522	53.7	5815873	46.3	12554395	100.0

Table 2:B- Estimated Resident Population by Religion and Sex as on 1st July 2014, Greater Mumbai

Religion	Male		Female		Total	
	#	%	#	%	#	%
Hindu	4451453	35.3	3807374	30.2	8258827	65.5
Muslim	1481309	11.8	1214758	9.6	2696067	21.4
Christian	190632	1.5	205512	1.6	396144	3.1
Sikh	30142	0.2	27937	0.2	58079	0.5
Buddhist	296223	2.4	300535	2.4	596758	4.7
Jain	259056	2.1	261488	2.1	520544	4.1
Others	39411	0.3	37021	0.3	76432	0.6
Total	6748226	53.5	5854625	46.5	12602851	100.0

Table 15: Incidence Cases of Cancer by Most Valid Basis of Diagnosis and Site (ICD10) with Percentage, Greater Mumbai, 2013-14, Male

ICD-10	SITE	Microscopic		Clinical		Clinical Inv		D.C.O.		Total	
		#	%	#	%	#	%	#	%	#	%
C00	Lip	52	0.4	3	0.6	0	0.0	2	0.2	57	0.4
C01-02	Tongue	645	5.5	20	3.8	0	0.0	33	3.0	698	5.2
C03-06	Mouth	1237	10.5	48	9.1	0	0.0	38	3.5	1323	9.8
C07-08	Salivary Gland	55	0.5	5	0.9	0	0.0	6	0.6	66	0.5
C09-10	Oropharynx	148	1.3	7	1.3	0	0.0	12	1.1	167	1.2
C11	Nasopharynx	54	0.5	1	0.2	0	0.0	3	0.3	58	0.4
C12-13	Hypopharynx	218	1.8	16	3.0	0	0.0	7	0.6	241	1.8
C14	Other Oral	56	0.5	5	0.9	0	0.0	26	2.4	87	0.6
C15	Oesophagus	363	3.1	30	5.7	0	0.0	88	8.1	481	3.6
C16	Stomach	531	4.5	29	5.5	0	0.0	42	3.9	602	4.5
C17	Small Intestine	49	0.4	0	0.0	0	0.0	3	0.3	52	0.4
C18	Colon	407	3.4	29	5.5	2	9.5	42	3.9	480	3.6
C19-21	Rectum	400	3.4	20	3.8	1	4.8	27	2.5	448	3.3
C22	Liver	685	5.8	43	8.1	0	0.0	129	11.9	857	6.4
C23-24	Gall Bladder	207	1.7	21	4.0	0	0.0	16	1.5	244	1.8
C25	Pancreas	270	2.3	37	7.0	1	4.8	59	5.4	367	2.7
C26	Oth Dig Org	0	0.0	1	0.2	0	0.0	0	0.0	1	0.0
C30-31	Nose,Sinuses	78	0.7	5	0.9	0	0.0	4	0.4	87	0.6
C32	Larynx	420	3.5	32	6.0	0	0.0	39	3.6	491	3.6
C33-34	Lung	1046	8.8	67	12.7	16	76.2	191	17.6	1320	9.8
C37-38	Mediastinum,Pleura	20	0.2	0	0.0	0	0.0	1	0.1	21	0.2
C39	Respiratory Tract,Nos	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
C40-41	Bone	133	1.1	2	0.4	0	0.0	6	0.6	141	1.0
C43	Skin Melanoma	27	0.2	0	0.0	0	0.0	1	0.1	28	0.2
C44	Skin Others	156	1.3	5	0.9	0	0.0	8	0.7	169	1.3
C47	Nervous System	8	0.1	0	0.0	0	0.0	0	0.0	8	0.1
C48	Retroperitoneum	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
C49	Conn. & Soft Tissue	144	1.2	1	0.2	0	0.0	3	0.3	148	1.1
C50	Breast	89	0.8	6	1.1	0	0.0	9	0.8	104	0.8
C60	Penis	81	0.7	4	0.8	0	0.0	3	0.3	88	0.7
C61	Prostate	887	7.5	40	7.6	0	0.0	141	13.0	1068	7.9
C62	Testis	89	0.8	4	0.8	0	0.0	1	0.1	94	0.7
C63	Other Male Genital Organs	6	0.1	1	0.2	1	4.8	1	0.1	9	0.1
C64-65	Kidney	300	2.5	7	1.3	0	0.0	17	1.6	324	2.4
C66-68	Urinary Bladder	402	3.4	18	3.4	0	0.0	25	2.3	445	3.3
C69	Eye	13	0.1	0	0.0	0	0.0	0	0.0	13	0.1
C70-72	Brain	385	3.3	9	1.7	0	0.0	38	3.5	432	3.2
C73	Thyroid	105	0.9	1	0.2	0	0.0	4	0.4	110	0.8
C74-75	Other Endocrine Gland	15	0.1	0	0.0	0	0.0	1	0.1	16	0.1
C76	Oth ILL Def. Sites	1	0.0	1	0.2	0	0.0	2	0.2	4	0.0
C77	Lymph Nodes	192	1.6	0	0.0	0	0.0	0	0.0	192	1.4
C78	Sec Resp & Dig Organs	110	0.9	0	0.0	0	0.0	0	0.0	110	0.8
C79	Sec. Others	46	0.4	0	0.0	0	0.0	0	0.0	46	0.3
C80	Unknown Primary	165	1.4	11	2.1	0	0.0	30	2.8	206	1.5
C81	Hodgkin Lymphoma	154	1.3	0	0.0	0	0.0	1	0.1	155	1.2
C82-85	N.H .Lymphoma	584	4.9	0	0.0	0	0.0	5	0.5	589	4.4
C88	Immunoproliferative Disease	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
C90	Multiple Myeloma	187	1.6	0	0.0	0	0.0	2	0.2	189	1.4
C91	Lymphoid Leukemia	241	2.0	0	0.0	0	0.0	3	0.3	244	1.8
C92	Myeloid Leukemia	245	2.1	0	0.0	0	0.0	9	0.8	254	1.9
C93-95	Other Leukemia	124	1.0	0	0.0	0	0.0	5	0.5	129	1.0
Total	All Sites	11831	100.0	529	100.0	21	100.0	1085	100.0	13466	100.0

Table 16: Incidence Cases of Cancer by Most Valid Basis of Diagnosis and Site (ICD10) with Percentage, Greater Mumbai, 2013-14, Female

ICD-10	SITE	Microscopic		Clinical		Clinical Inv		D.C.O.		Total	
		#	%	#	%	#	%	#	%	#	%
C00	Lip	28	0.2	1	0.2	0	0.0	3	0.3	32	0.2
C01-02	Tongue	219	1.8	11	1.9	1	7.7	18	1.6	249	1.8
C03-06	Mouth	447	3.6	20	3.4	0	0.0	15	1.3	482	3.4
C07-08	Salivary Gland	30	0.2	0	0.0	0	0.0	1	0.1	31	0.2
C09-10	Oropharynx	45	0.4	2	0.3	0	0.0	2	0.2	49	0.3
C11	Nasopharynx	19	0.2	3	0.5	0	0.0	0	0.0	22	0.2
C12-13	Hypopharynx	85	0.7	3	0.5	0	0.0	2	0.2	90	0.6
C14	Other Oral	12	0.1	4	0.7	0	0.0	10	0.9	26	0.2
C15	Oesophagus	311	2.5	19	3.2	0	0.0	79	7.0	409	2.9
C16	Stomach	273	2.2	19	3.2	0	0.0	56	5.0	348	2.5
C17	Small Intestine	37	0.3	2	0.3	0	0.0	2	0.2	41	0.3
C18	Colon	367	3.0	22	3.7	0	0.0	41	3.7	430	3.0
C19-21	Rectum	268	2.2	22	3.7	0	0.0	21	1.9	311	2.2
C22	Liver	308	2.5	17	2.9	2	15.4	72	6.4	399	2.8
C23-24	Gall Bladder	290	2.3	61	10.3	0	0.0	61	5.4	412	2.9
C25	Pancreas	180	1.4	21	3.6	0	0.0	40	3.6	241	1.7
C26	Oth Dig Org	1	0.0	0	0.0	0	0.0	2	0.2	3	0.0
C30-31	Nose,Sinuses	26	0.2	0	0.0	0	0.0	2	0.2	28	0.2
C32	Larynx	63	0.5	6	1.0	0	0.0	10	0.9	79	0.6
C33-34	Lung	538	4.3	56	9.5	9	69.2	142	12.7	745	5.3
C37-38	Mediastinum,Pleura	12	0.1	0	0.0	0	0.0	0	0.0	12	0.1
C40-41	Bone	109	0.9	4	0.7	0	0.0	5	0.4	118	0.8
C43	Skin Melanoma	20	0.2	0	0.0	0	0.0	0	0.0	20	0.1
C44	Skin Others	123	1.0	2	0.3	0	0.0	17	1.5	142	1.0
C47	Nervous System	3	0.0	0	0.0	0	0.0	1	0.1	4	0.0
C49	Conn. & Soft Tissue	135	1.1	0	0.0	0	0.0	0	0.0	135	1.0
C50	Breast	3992	32.1	96	16.3	1	7.7	216	19.3	4305	30.4
C51-52	Other Female Genital Organs	103	0.8	8	1.4	0	0.0	2	0.2	113	0.8
C53	Cervix	882	7.1	48	8.1	0	0.0	74	6.6	1004	7.1
C54	Corpus Uteri	510	4.1	19	3.2	0	0.0	12	1.1	541	3.8
C55	Uterus	45	0.4	8	1.4	0	0.0	26	2.3	79	0.6
C56	Ovary	716	5.8	80	13.6	0	0.0	78	7.0	874	6.2
C57-58	Other Unsp. Female Genital Orga	7	0.1	0	0.0	0	0.0	1	0.1	8	0.1
C64-65	Kidney	115	0.9	4	0.7	0	0.0	7	0.6	126	0.9
C66-68	Urinary Bladder	120	1.0	9	1.5	0	0.0	7	0.6	136	1.0
C69	Eye	11	0.1	0	0.0	0	0.0	0	0.0	11	0.1
C70-72	Brain	255	2.1	5	0.8	0	0.0	47	4.2	307	2.2
C73	Thyroid	275	2.2	11	1.9	0	0.0	6	0.5	292	2.1
C74-75	Other Endocrine Gland	12	0.1	0	0.0	0	0.0	0	0.0	12	0.1
C76	Oth ILL Def. Sites	1	0.0	0	0.0	0	0.0	1	0.1	2	0.0
C77	Lymph Nodes	112	0.9	0	0.0	0	0.0	0	0.0	112	0.8
C78	Sec Resp & Dig Organs	156	1.3	0	0.0	0	0.0	0	0.0	156	1.1
C79	Sec. Others	50	0.4	0	0.0	0	0.0	0	0.0	50	0.4
C80	Unknown Primary	111	0.9	7	1.2	0	0.0	20	1.8	138	1.0
C81	Hodgkin Lymphoma	97	0.8	0	0.0	0	0.0	0	0.0	97	0.7
C82-85	N.H.Lymphoma	417	3.4	0	0.0	0	0.0	5	0.4	422	3.0
C88	Immunoproliferative Disease	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
C90	Multiple Myeloma	121	1.0	0	0.0	0	0.0	1	0.1	122	0.9
C91	Lymphoid Leukemia	116	0.9	0	0.0	0	0.0	4	0.4	120	0.8
C92	Myeloid Leukemia	173	1.4	0	0.0	0	0.0	6	0.5	179	1.3
C93-95	Other Leukemia	87	0.7	0	0.0	0	0.0	5	0.4	92	0.6
Total	All Sites	12433	100.0	590	100.0	13	100.0	1121	100.0	14157	100.0

Table 17: Incidence Cases of Cancer by Clinical Extent of Disease and Site (ICD10) with Percentage, Greater Mumbai, 2013-14, Male

ICD-10	SITE	Localised		Dir Ext.		Adv & Mets		Not appl		Total	
		#	%	#	%	#	%	#	%	#	%
C00	Lip	33	0.6	9	0.7	15	0.3	0	0.0	57	0.4
C01-02	Tongue	419	7.2	174	12.7	105	2.2	0	0.0	698	5.2
C03-06	Mouth	819	14.0	326	23.9	178	3.8	0	0.0	1323	9.8
C07-08	Salivary Gland	45	0.8	7	0.5	14	0.3	0	0.0	66	0.5
C09-10	Oropharynx	70	1.2	54	4.0	43	0.9	0	0.0	167	1.2
C11	Nasopharynx	28	0.5	13	1.0	17	0.4	0	0.0	58	0.4
C12-13	Hypopharynx	138	2.4	57	4.2	45	1.0	1	0.1	241	1.8
C14	Other Oral	32	0.5	9	0.7	46	1.0	0	0.0	87	0.6
C15	Oesophagus	208	3.6	31	2.3	242	5.2	0	0.0	481	3.6
C16	Stomach	268	4.6	65	4.8	269	5.7	0	0.0	602	4.5
C17	Small Intestine	34	0.6	3	0.2	14	0.3	1	0.1	52	0.4
C18	Colon	203	3.5	88	6.4	189	4.0	0	0.0	480	3.6
C19-21	Rectum	260	4.4	72	5.3	116	2.5	0	0.0	448	3.3
C22	Liver	215	3.7	24	1.8	618	13.2	0	0.0	857	6.4
C23-24	Gall Bladder	88	1.5	29	2.1	127	2.7	0	0.0	244	1.8
C25	Pancreas	109	1.9	25	1.8	233	5.0	0	0.0	367	2.7
C26	Oth Dig Org	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
C30-31	Nose,Sinuses	62	1.1	9	0.7	16	0.3	0	0.0	87	0.6
C32	Larynx	314	5.4	76	5.6	101	2.2	0	0.0	491	3.6
C33-34	Lung	437	7.5	56	4.1	826	17.6	1	0.1	1320	9.8
C37-38	Mediastinum,Pleura	14	0.2	1	0.1	6	0.1	0	0.0	21	0.2
C39	Respiratory Tract,Nos	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
C40-41	Bone	101	1.7	13	1.0	27	0.6	0	0.0	141	1.0
C43	Skin Melanoma	8	0.1	2	0.1	4	0.1	14	0.9	28	0.2
C44	Skin Others	121	2.1	7	0.5	38	0.8	3	0.2	169	1.3
C47	Nervous System	6	0.1	0	0.0	2	0.0	0	0.0	8	0.1
C48	Retropertitoneum	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
C49	Conn. & Soft Tissue	113	1.9	8	0.6	27	0.6	0	0.0	148	1.1
C50	Breast	55	0.9	21	1.5	28	0.6	0	0.0	104	0.8
C60	Penis	50	0.9	19	1.4	19	0.4	0	0.0	88	0.7
C61	Prostate	611	10.4	23	1.7	432	9.2	2	0.1	1068	7.9
C62	Testis	65	1.1	12	0.9	17	0.4	0	0.0	94	0.7
C63	Other Male Genital Organs	4	0.1	2	0.1	3	0.1	0	0.0	9	0.1
C64-65	Kidney	194	3.3	23	1.7	107	2.3	0	0.0	324	2.4
C66-68	Urinary Bladder	310	5.3	38	2.8	97	2.1	0	0.0	445	3.3
C69	Eye	12	0.2	0	0.0	1	0.0	0	0.0	13	0.1
C70-72	Brain	257	4.4	29	2.1	145	3.1	1	0.1	432	3.2
C73	Thyroid	70	1.2	26	1.9	14	0.3	0	0.0	110	0.8
C74-75	Other Endocrine Gland	6	0.1	2	0.1	8	0.2	0	0.0	16	0.1
C76	Oth ILL Def. Sites	2	0.0	0	0.0	2	0.0	0	0.0	4	0.0
C77	Lymph Nodes	2	0.0	8	0.6	182	3.9	0	0.0	192	1.4
C78	Sec Resp & Dig Organs	0	0.0	2	0.1	108	2.3	0	0.0	110	0.8
C79	Sec. Others	2	0.0	0	0.0	44	0.9	0	0.0	46	0.3
C80	Unknown Primary	64	1.1	2	0.1	140	3.0	0	0.0	206	1.5
C81	Hodgkin Lymphoma	2	0.0	0	0.0	1	0.0	152	9.8	155	1.2
C82-85	N.H.Lymphoma	5	0.1	0	0.0	7	0.1	577	37.2	589	4.4
C88	Immunoproliferative Disease	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
C90	Multiple Myeloma	0	0.0	1	0.1	2	0.0	186	12.0	189	1.4
C91	Lymphoid Leukemia	0	0.0	0	0.0	3	0.1	241	15.6	244	1.8
C92	Myeloid Leukemia	0	0.0	0	0.0	9	0.2	245	15.8	254	1.9
C93-95	Other Leukemia	0	0.0	0	0.0	5	0.1	124	8.0	129	1.0
Total	All sites	5856	100.0	1366	100.0	4695	100.0	1549	100.0	13466	100.0

Table 18: Incidence Cases of Cancer by Clinical Extent of Disease and Site (ICD10) with Percentage, Greater Mumbai, 2013-14, Female

ICD-10	SITE	Localised		Dir Extension		Adv & Mets		Not appl		Total	
		#	%	#	%	#	%	#	%	#	%
C00	Lip	20	0.3	2	0.1	10	0.2	0	0.0	32	0.2
C01-02	Tongue	154	2.3	41	2.2	54	1.2	0	0.0	249	1.8
C03-06	Mouth	289	4.2	117	6.3	76	1.7	0	0.0	482	3.4
C07-08	Salivary Gland	19	0.3	7	0.4	5	0.1	0	0.0	31	0.2
C09-10	Oropharynx	24	0.4	8	0.4	17	0.4	0	0.0	49	0.3
C11	Nasopharynx	12	0.2	6	0.3	4	0.1	0	0.0	22	0.2
C12-13	Hypopharynx	58	0.8	21	1.1	11	0.2	0	0.0	90	0.6
C14	Other Oral	7	0.1	1	0.1	18	0.4	0	0.0	26	0.2
C15	Oesophagus	178	2.6	31	1.7	200	4.5	0	0.0	409	2.9
C16	Stomach	140	2.0	27	1.4	181	4.1	0	0.0	348	2.5
C17	Small Intestine	15	0.2	6	0.3	20	0.5	0	0.0	41	0.3
C18	Colon	188	2.8	66	3.5	176	4.0	0	0.0	430	3.0
C19-21	Rectum	151	2.2	59	3.2	101	2.3	0	0.0	311	2.2
C22	Liver	110	1.6	14	0.7	275	6.2	0	0.0	399	2.8
C23-24	Gall Bladder	168	2.5	29	1.6	215	4.8	0	0.0	412	2.9
C25	Pancreas	64	0.9	21	1.1	156	3.5	0	0.0	241	1.7
C26	Oth Dig Org	0	0.0	0	0.0	3	0.1	0	0.0	3	0.0
C30-31	Nose,Sinuses	17	0.2	7	0.4	4	0.1	0	0.0	28	0.2
C32	Larynx	37	0.5	18	1.0	23	0.5	1	0.1	79	0.6
C33-34	Lung	252	3.7	21	1.1	471	10.6	1	0.1	745	5.3
C37-38	Mediastinum,Pleura	9	0.1	1	0.1	2	0.0	0	0.0	12	0.1
C40-41	Bone	72	1.1	7	0.4	38	0.9	1	0.1	118	0.8
C43	Skin Melanoma	3	0.0	1	0.1	3	0.1	13	1.3	20	0.1
C44	Skin Others	97	1.4	8	0.4	35	0.8	2	0.2	142	1.0
C47	Nervous System	2	0.0	0	0.0	2	0.0	0	0.0	4	0.0
C49	Conn. & Soft Tissue	105	1.5	13	0.7	17	0.4	0	0.0	135	1.0
C50	Breast	2484	36.4	1007	53.9	814	18.3	0	0.0	4305	30.4
C51-52	Other Female Genital Organs	93	1.4	9	0.5	11	0.2	0	0.0	113	0.8
C53	Cervix	745	10.9	60	3.2	199	4.5	0	0.0	1004	7.1
C54	Corpus Uteri	380	5.6	79	4.2	82	1.8	0	0.0	541	3.8
C55	Uterus	15	0.2	2	0.1	62	1.4	0	0.0	79	0.6
C56	Ovary	329	4.8	73	3.9	472	10.6	0	0.0	874	6.2
C57-58	Other Unsp. Female Genital Organs	3	0.0	2	0.1	3	0.1	0	0.0	8	0.1
C64-65	Kidney	71	1.0	11	0.6	44	1.0	0	0.0	126	0.9
C66-68	Urinary Bladder	80	1.2	13	0.7	43	1.0	0	0.0	136	1.0
C69	Eye	9	0.1	1	0.1	1	0.0	0	0.0	11	0.1
C70-72	Brain	158	2.3	20	1.1	129	2.9	0	0.0	307	2.2
C73	Thyroid	209	3.1	49	2.6	33	0.7	1	0.1	292	2.1
C74-75	Other Endocrine Gland	9	0.1	0	0.0	3	0.1	0	0.0	12	0.1
C76	Oth ILL Def. Sites	0	0.0	0	0.0	2	0.0	0	0.0	2	0.0
C77	Lymph Nodes	2	0.0	6	0.3	104	2.3	0	0.0	112	0.8
C78	Sec Resp & Dig Organs	5	0.1	4	0.2	147	3.3	0	0.0	156	1.1
C79	Sec. Others	2	0.0	0	0.0	48	1.1	0	0.0	50	0.4
C80	Unknown Primary	35	0.5	1	0.1	102	2.3	0	0.0	138	1.0
C81	Hodgkin Lymphoma	2	0.0	0	0.0	0	0.0	95	9.3	97	0.7
C82-85	N.H .Lymphoma	4	0.1	0	0.0	8	0.2	410	40.3	422	3.0
C88	Immunoproliferative Disease	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
C90	Multiple Myeloma	4	0.1	0	0.0	1	0.0	117	11.5	122	0.9
C91	Lymphoid Leukemia	0	0.0	0	0.0	4	0.1	116	11.4	120	0.8
C92	Myeloid Leukemia	0	0.0	0	0.0	6	0.1	173	17.0	179	1.3
C93-95	Other Leukemia	0	0.0	0	0.0	5	0.1	87	8.6	92	0.6
Total	All Sites	6830	100.0	1869	100.0	4441	100.0	1017	100.0	14157	100.0

Table 27: Incidence Cases of Cancer by Ward and Site (ICD10) with Percentages, Greater Mumbai, 2013-14, Male.

ICD-10	SITE	City		Suburb		Ext. Suburb		Unknown		Total	
		#	%	#	%	#	%	#	%	#	%
C00	Lip	18	0.5	28	0.5	11	0.3	0	0.0	57	0.4
C01-02	Tongue	212	5.4	293	4.8	191	5.6	2	8.0	698	5.2
C03-06	Mouth	392	10.0	558	9.2	366	10.6	7	28.0	1323	9.8
C07-08	Salivary Gland	26	0.7	23	0.4	17	0.5	0	0.0	66	0.5
C09-10	Oropharynx	60	1.5	66	1.1	40	1.2	1	4.0	167	1.2
C11	Nasopharynx	15	0.4	29	0.5	13	0.4	1	4.0	58	0.4
C12-13	Hypopharynx	55	1.4	120	2.0	66	1.9	0	0.0	241	1.8
C14	Other Oral	31	0.8	30	0.5	26	0.8	0	0.0	87	0.6
C15	Oesophagus	144	3.7	200	3.3	135	3.9	2	8.0	481	3.6
C16	Stomach	177	4.5	273	4.5	150	4.4	2	8.0	602	4.5
C17	Small Intestine	19	0.5	23	0.4	10	0.3	0	0.0	52	0.4
C18	Colon	147	3.7	204	3.4	129	3.8	0	0.0	480	3.6
C19-21	Rectum	155	3.9	176	2.9	116	3.4	1	4.0	448	3.3
C22	Liver	227	5.8	423	7.0	207	6.0	0	0.0	857	6.4
C23-24	Gall Bladder	61	1.6	117	1.9	66	1.9	0	0.0	244	1.8
C25	Pancreas	123	3.1	156	2.6	87	2.5	1	4.0	367	2.7
C26	Oth Dig Org	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
C30-31	Nose,Sinuses	26	0.7	40	0.7	21	0.6	0	0.0	87	0.6
C32	Larynx	155	3.9	220	3.6	116	3.4	0	0.0	491	3.6
C33-34	Lung	337	8.6	657	10.8	325	9.5	1	4.0	1320	9.8
C37-38	Mediastinum,Pleura	8	0.2	6	0.1	7	0.2	0	0.0	21	0.2
C39	Respiratory Tract,Nos	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
C40-41	Bone	49	1.2	62	1.0	30	0.9	0	0.0	141	1.0
C43	Skin Melanoma	7	0.2	15	0.2	5	0.1	1	4.0	28	0.2
C44	Skin Others	60	1.5	74	1.2	35	1.0	0	0.0	169	1.3
C47	Nervous System	3	0.1	5	0.1	0	0.0	0	0.0	8	0.1
C48	Retropertitoneum	0	0.0	0	0.0	1	0.0	0	0.0	1	0.0
C49	Conn. & Soft Tissue	39	1.0	71	1.2	37	1.1	1	4.0	148	1.1
C50	Breast	33	0.8	44	0.7	27	0.8	0	0.0	104	0.8
C60	Penis	29	0.7	41	0.7	18	0.5	0	0.0	88	0.7
C61	Prostate	303	7.7	477	7.9	286	8.3	2	8.0	1068	7.9
C62	Testis	26	0.7	43	0.7	25	0.7	0	0.0	94	0.7
C63	Other Male Genital Organs	5	0.1	3	0.0	1	0.0	0	0.0	9	0.1
C64-65	Kidney	85	2.2	155	2.6	84	2.4	0	0.0	324	2.4
C66-68	Urinary Bladder	149	3.8	180	3.0	115	3.3	1	4.0	445	3.3
C69	Eye	2	0.1	7	0.1	3	0.1	1	4.0	13	0.1
C70-72	Brain	119	3.0	190	3.1	122	3.5	1	4.0	432	3.2
C73	Thyroid	30	0.8	63	1.0	17	0.5	0	0.0	110	0.8
C74-75	Other Endocrine Gland	5	0.1	5	0.1	6	0.2	0	0.0	16	0.1
C76	Oth ILL Def. Sites	1	0.0	2	0.0	1	0.0	0	0.0	4	0.0
C77	Lymph Nodes	43	1.1	103	1.7	46	1.3	0	0.0	192	1.4
C78	Sec Resp & Dig Organs	33	0.8	53	0.9	24	0.7	0	0.0	110	0.8
C79	Sec. Others	11	0.3	25	0.4	10	0.3	0	0.0	46	0.3
C80	Unknown Primary	56	1.4	100	1.6	50	1.5	0	0.0	206	1.5
C81	Hodgkin Lymphoma	46	1.2	67	1.1	42	1.2	0	0.0	155	1.2
C82-85	N.H.Lymphoma	169	4.3	282	4.6	138	4.0	0	0.0	589	4.4
C88	Immunoproliferative Disease	1	0.0	0	0.0	0	0.0	0	0.0	1	0.0
C90	Multiple Myeloma	50	1.3	85	1.4	54	1.6	0	0.0	189	1.4
C91	Lymphoid Leukemia	83	2.1	105	1.7	56	1.6	0	0.0	244	1.8
C92	Myeloid Leukemia	63	1.6	125	2.1	66	1.9	0	0.0	254	1.9
C93-95	Other Leukemia	39	1.0	50	0.8	40	1.2	0	0.0	129	1.0
Total	All Sites	3928	100.0	6075	100.0	3438	100.0	25	100.0	13466	100.0

Table 28: Incidence Cases of Cancer by Ward and Site (ICD10) with Percentages, Greater Mumbai, 2013-14, Female.

ICD-10	SITE	City		Suburb		Ext. Suburb		Unknown		Total	
		#	%	#	%	#	%	#	%	#	%
C00	Lip	11	0.3	16	0.3	5	0.1	0	0.0	32	0.2
C01-02	Tongue	68	1.6	121	1.9	60	1.8	0	0.0	249	1.8
C03-06	Mouth	172	3.9	218	3.4	91	2.7	1	3.3	482	3.4
C07-08	Salivary Gland	9	0.2	18	0.3	4	0.1	0	0.0	31	0.2
C09-10	Oropharynx	18	0.4	21	0.3	10	0.3	0	0.0	49	0.3
C11	Nasopharynx	7	0.2	10	0.2	5	0.1	0	0.0	22	0.2
C12-13	Hypopharynx	34	0.8	32	0.5	24	0.7	0	0.0	90	0.6
C14	Other Oral	10	0.2	11	0.2	5	0.1	0	0.0	26	0.2
C15	Oesophagus	116	2.7	199	3.1	94	2.8	0	0.0	409	2.9
C16	Stomach	104	2.4	148	2.3	96	2.8	0	0.0	348	2.5
C17	Small Intestine	18	0.4	14	0.2	9	0.3	0	0.0	41	0.3
C18	Colon	126	2.9	194	3.0	109	3.2	1	3.3	430	3.0
C19-21	Rectum	79	1.8	146	2.3	83	2.5	3	10.0	311	2.2
C22	Liver	116	2.7	192	3.0	91	2.7	0	0.0	399	2.8
C23-24	Gall Bladder	119	2.7	189	3.0	103	3.0	1	3.3	412	2.9
C25	Pancreas	71	1.6	97	1.5	73	2.2	0	0.0	241	1.7
C26	Oth Dig Org	2	0.0	1	0.0	0	0.0	0	0.0	3	0.0
C30-31	Nose,Sinuses	10	0.2	14	0.2	4	0.1	0	0.0	28	0.2
C32	Larynx	27	0.6	34	0.5	18	0.5	0	0.0	79	0.6
C33-34	Lung	196	4.5	385	6.0	162	4.8	2	6.7	745	5.3
C37-38	Mediastinum,Pleura	4	0.1	5	0.1	3	0.1	0	0.0	12	0.1
C40-41	Bone	23	0.5	67	1.1	28	0.8	0	0.0	118	0.8
C43	Skin Melanoma	8	0.2	8	0.1	4	0.1	0	0.0	20	0.1
C44	Skin Others	48	1.1	69	1.1	25	0.7	0	0.0	142	1.0
C47	Nervous System	3	0.1	1	0.0	0	0.0	0	0.0	4	0.0
C49	Conn. & Soft Tissue	43	1.0	58	0.9	34	1.0	0	0.0	135	1.0
C50	Breast	1378	31.5	1868	29.3	1044	30.9	15	50.0	4305	30.4
C51-52	Other Female Genital Organs	38	0.9	40	0.6	34	1.0	1	3.3	113	0.8
C53	Cervix	307	7.0	462	7.2	235	6.9	0	0.0	1004	7.1
C54	Corpus Uteri	185	4.2	249	3.9	106	3.1	1	3.3	541	3.8
C55	Uterus	19	0.4	37	0.6	23	0.7	0	0.0	79	0.6
C56	Ovary	272	6.2	367	5.8	233	6.9	2	6.7	874	6.2
C57-58	Other Unsp. Female Genital Organs	2	0.0	5	0.1	1	0.0	0	0.0	8	0.1
C64-65	Kidney	37	0.8	63	1.0	26	0.8	0	0.0	126	0.9
C66-68	Urinary Bladder	43	1.0	58	0.9	34	1.0	1	3.3	136	1.0
C69	Eye	3	0.1	7	0.1	1	0.0	0	0.0	11	0.1
C70-72	Brain	90	2.1	144	2.3	73	2.2	0	0.0	307	2.2
C73	Thyroid	104	2.4	137	2.1	50	1.5	1	3.3	292	2.1
C74-75	Other Endocrine Gland	6	0.1	3	0.0	3	0.1	0	0.0	12	0.1
C76	Oth ILL Def. Sites	1	0.0	0	0.0	1	0.0	0	0.0	2	0.0
C77	Lymph Nodes	34	0.8	47	0.7	31	0.9	0	0.0	112	0.8
C78	Sec Resp & Dig Organs	46	1.1	71	1.1	39	1.2	0	0.0	156	1.1
C79	Sec. Others	11	0.3	27	0.4	12	0.4	0	0.0	50	0.4
C80	Unknown Primary	36	0.8	67	1.1	35	1.0	0	0.0	138	1.0
C81	Hodgkin Lymphoma	28	0.6	39	0.6	30	0.9	0	0.0	97	0.7
C82-85	N.H.Lymphoma	137	3.1	177	2.8	107	3.2	1	3.3	422	3.0
C88	Immunoproliferative Disease	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
C90	Multiple Myeloma	35	0.8	57	0.9	30	0.9	0	0.0	122	0.9
C91	Lymphoid Leukemia	42	1.0	48	0.8	30	0.9	0	0.0	120	0.8
C92	Myeloid Leukemia	46	1.1	90	1.4	43	1.3	0	0.0	179	1.3
C93-95	Other Leukemia	29	0.7	42	0.7	21	0.6	0	0.0	92	0.6
Total	All Sites	4371	100.0	6374	100.0	3382	100.0	30	100.0	14157	100.0

Table 29: Number of Incidence Cases of Cancer by Primary histology and sex, with Percentages, Greater Mumbai, 2013-14

ICD-O-3	Histology	Male		Female		Total	
		#	%	#	%	#	%
800	Malignant Neoplasms, Nos	1692	12.6	1765	12.5	3457	12.5
8001-8005	Malignant Tumors	327	2.4	344	2.4	671	2.4
801-804	Malignant Epithelial Neoplasms, Nos	997	7.4	773	5.5	1770	6.4
805-808	Squamous cell Neoplasms	3546	26.3	2301	16.3	5847	21.2
809-811	Basal Cell Neoplasms	26	0.2	37	0.3	63	0.2
812-813	Transitional Cell Carcinomas	356	2.6	94	0.7	450	1.6
814-838	Adenocarcinomas	3718	27.6	2913	20.6	6631	24.0
839-842	Skin Appendage Neoplasms	4	0.0	7	0.0	11	0.0
843	Mucoepidermoid Neoplasms	28	0.2	15	0.1	43	0.2
844-849	Cystic, Mucinous and Serous Neoplasm	213	1.6	478	3.4	691	2.5
850-854	Ductal and Lobular Neoplasms	90	0.7	3731	26.4	3821	13.8
855	Acinar Cell Neoplasms	91	0.7	7	0.0	98	0.4
856-857	Complex Epithelial Neoplasms	14	0.1	23	0.2	37	0.1
858	Thymic Epithelial Neoplasms	5	0.0	2	0.0	7	0.0
859-867	Specialised Gonadal Neoplasms	1	0.0	6	0.0	7	0.0
868-871	Paragangliomas And Glomus Tumors	1	0.0	1	0.0	2	0.0
872-879	Nevi and Melanomas	30	0.2	25	0.2	55	0.2
880	Soft Tissue Tumors and Sarcomas	77	0.6	64	0.5	141	0.5
881-883	Fibromatous Neoplasms	9	0.1	12	0.1	21	0.1
884	Myxomatous Neoplasms	1	0.0	3	0.0	4	0.0
885-888	Lipomatous Neoplasms	29	0.2	17	0.1	46	0.2
889-892	Myomatous Neoplasms	26	0.2	49	0.3	75	0.3
893-899	Complex mixed and Stromal Neoplasms	43	0.3	71	0.5	114	0.4
900-903	Fibroepithelial Neoplasms	0	0.0	20	0.1	20	0.1
904	Synovial Neoplasms	22	0.2	18	0.1	40	0.1
905	Mesothelial Neoplasms	8	0.1	5	0.0	13	0.0
906-909	Germ Cell Neoplasms	81	0.6	14	0.1	95	0.3
910	Trophoblastic Neoplasms	0	0.0	10	0.1	10	0.0
912-916	Blood vessel Tumors	3	0.0	5	0.0	8	0.0
918-924	Osseous and chondromatous neoplasms	49	0.4	34	0.2	83	0.3
925	Giant Cell Tumors	18	0.1	16	0.1	34	0.1
926	Miscellaneous bone tumors	21	0.2	19	0.1	40	0.1
927-934	Odontogenic tumors	1	0.0	2	0.0	3	0.0
935-937	Miscellaneous tumors	14	0.1	9	0.1	23	0.1
938-948	Gliomas	349	2.6	226	1.6	575	2.1
949-952	Neuroepitheliomatous Neoplasms	18	0.1	18	0.1	36	0.1
953	Meningiomas	3	0.0	3	0.0	6	0.0
954-957	Nerve Sheath Tumors	8	0.1	4	0.0	12	0.0
958	Granular Cell Tumor	0	0.0	1	0.0	1	0.0
959	Malignant lymphomas, Nos or Diff	313	2.3	238	1.7	551	2.0
965-966	Hodgkins lymphomas	149	1.1	95	0.7	244	0.9
967-972	Non-hodgkins Lymphomas	282	2.1	182	1.3	464	1.7
973	Plasma Cell Tumors	194	1.4	122	0.9	316	1.1
975	Neoplasms of Histiocytes & Lymphoid cells	2	0.0	1	0.0	3	0.0
976	Immunoproliferative Disease	1	0.0	0	0.0	1	0.0
980	Leukemias	117	0.9	84	0.6	201	0.7
980-994	Leukemias	1	0.0	2	0.0	3	0.0
982-983	Lymphoid Leukemias	235	1.7	115	0.8	350	1.3
984-993	Myeloid Leukemias	245	1.8	173	1.2	418	1.5
994	Other Leukemias	5	0.0	1	0.0	6	0.0
995-996	Chronic myeloproliferative Disorders	2	0.0	2	0.0	4	0.0
998	Myelodysplastic Syndromes	1	0.0	0	0.0	1	0.0
Total	All Sites	13466	100.0	14157	100.0	27623	100.0

APPENDIX

Calculation of rates

Age Specific Rates are calculated by dividing the number of cases in each 5 year age and sex stratum by corresponding population estimates for that stratum and multiplying the product by 100,000 to give the rates per 100,000.

Crude Rates are calculated by same way using the total cancer cases and total cases and total population by sex.

Age-Adjusted Rates are calculated by summing the products of the age specific rates and the world standard population strata. They provide a rate which is independent of the age structure of the population of interest and are therefore useful in making comparisons between different populations, time periods etc.

Cumulative Rates are calculated by multiplying the five year age specific rates per person by 5 and summing over age groups from 0-4 to 70-74. This rate is then expressed as a percentage. This rate is good indicator of life time risk.