

Chapter 1

MAGNITUDE AND LEADING SITES OF CANCER

This chapter gives the overall magnitude of the problem in terms of cancers diagnosed at the respective centres. It gives the relative frequencies of the leading sites of cancer.

During the ten-year period (1984-93) 3,38,516 new patients of cancer (Table 1.1) were registered at the six Hospital Based Cancer Registries, with Tata Memorial Hospital, Mumbai accounting for over 40 percent (41.4%) and Kidwai Memorial Institute of Oncology, Bangalore nearly 20 percent (19.9%) of the total patients. The proportion in terms of sex ratio percent showed some variation among the centres. While Mumbai and Thiruvananthapuram, had respectively 28 and 18 percent male preponderance there was a 6 to 14 percent higher female proportion in Chandigarh, Bangalore and Chennai. However, the most striking difference was seen in Assam Medical College, Dibrugarh, where the excess of cancers (122%) in males was quite high. The data from Dibrugarh was examined for any differences in this ratio over the years (Table 1.2). There appeared to be a slight drop in the sex ratio percent since 1984, nonetheless, it was still on the high side.

TABLE 1.1: Number (#) and Proportion (%) according to sex, sex ratio percent and relative proportion (Rel.Prop.) of cancers

Registry	Males		Females		Sex* Ratio%	Total Cases	Rel. Prop.
	#	%	#	%			
Mumbai	78588	56.1	61602	43.9	128	140190	41.4
Bangalore	31116	46.2	36188	53.8	86	67304	19.9
Chennai	24588	46.2	28685	53.8	86	53273	15.7
Thi'puram	27808	54.1	23604	45.9	118	51412	15.2
Chandigarh**	6909	48.3	7383	51.7	94	14292	4.2
Dibrugarh	8309	69.0	3736	31.0	222	12045	3.6
All Registries	177318	52.4	161198	47.6	110	338516	100.0

* Number of male patients per 100 female patients

** Data of 1984-89

TABLE 1.2: Number(#) & Proportion(%) according to sex and sex ratio percent across year of diagnosis in Hospital Based Cancer Registry, Dibrugarh

Year of Diagnosis	Males		Females		Sex Ratio*
	#	%	#	%	Percent
1984	860	71.8	338	28.2	254.4
1985	856	70.7	355	29.3	241.1
1986	928	70.7	385	29.3	241.0
1987	858	69.0	386	31.0	222.3
1988	875	68.4	404	31.6	216.6
1989	824	69.6	360	30.4	228.9
1990	808	66.6	405	33.4	199.5
1991	734	68.9	332	31.1	221.1
1992	769	68.0	362	32.0	212.4
1993	797	66.1	409	33.9	194.9
1984-90	8309	69.0	3736	31.0	222.4

* Number of male patients per 100 female patients

The number, relative proportion and rank of ten leading sites of cancer for males and females are presented in Table 1.3 and Figure 1.1 (a & b). In males, cancer of the oral cavity was the leading site in Mumbai, Chennai and Thiruvananthapuram. Cancer of the lung was the leading site at Chandigarh constituting 11 percent of all cancers. At other centres, it varied from second at Thiruvananthapuram, third at Bangalore to eighth at Dibrugarh. Cancer of the oesophagus was the leading site at Dibrugarh constituting 17 percent of all cancers, and was the second leading site at Bangalore, Chennai and Chandigarh. In Bangalore, cancer of the hypopharynx was the leading site constituting almost 11 percent of all cancers.

Among females cancer of the cervix was the leading site of cancer in all centres except Thiruvananthapuram, accounting for 17.4 percent of cancers at Dibrugarh, to 42.2 percent of cancers at Chennai. Cancer of the female breast was the leading site at Thiruvananthapuram constituting 21.7 percent of all cancers and second leading site at Mumbai, Chennai and Chandigarh. In Bangalore and Dibrugarh it was the third leading site. Cancer of the oral cavity was the second leading site in Bangalore accounting for 12 percent of all cancers. Cancer of the oesophagus at Dibrugarh (13.5%) was the second most frequent cancer. Cancer of the ovary was within first five leading sites in all the centers except Dibrugarh where it was the sixth leading site. Other sites of cancer that figured within first five leading sites were thyroid gland at Thiruvananthapuram, stomach at Dibrugarh and brain at Chandigarh.

TABLE 1.3: Number(#), Relative Proportion(%) and Rank(R) of Leading Sites of Cancer**Males**

Registry	Mumbai			Bangalore			Chennai			Thi'puram			Chandigarh			Dibrugarh		
	#	%	R	#	%	R	#	%	R	#	%	R	#	%	R	#	%	R
Oral Cavity	7771	9.9	1	2085	6.7	4	2795	11.4	1	3620	13.0	1	207	3.0	*	443	5.3	6
Tongue	6946	8.8	2	1805	5.8	5	1930	7.8	3	1840	6.6	3	401	5.8	4	619	7.4	5
Hypopharynx	6332	8.1	3	3374	10.8	1	1778	7.2	5	883	3.2	10	306	4.4	7	1311	15.8	2
Oesophagus	5966	7.6	4	3323	10.7	2	2073	8.4	2	1573	5.7	4	463	6.7	2	1434	17.3	1
Lung	5421	6.9	5	2368	7.6	3	1603	6.5	6	3104	11.2	2	762	11.0	1	345	4.2	8
Larynx	4937	6.3	6	1477	4.7	7	1073	4.4	7	1235	4.4	6	429	6.2	3	341	4.1	9
Non Hodgkin's	3492	4.4	7	1164	3.7	8	960	3.9	8	1156	4.2	7	349	5.1	6	203	2.4	*
Oropharynx	2998	3.8	8	1157	3.7	9	863	3.5	9	925	3.3	9	207	3.0	*	771	9.3	3
Leuk Myeloid	2817	3.6	9	923	3.0	10	633	2.6	*	581	2.1	*	159	2.3	*	102	1.2	*
Leuk Lympha	2699	3.4	10	542	1.7	*	439	1.8	*	636	2.3	*	215	3.1	10	56	0.7	*
Stomach	1985	2.5	*	1642	5.3	6	1798	7.3	4	1327	4.8	5	217	3.1	9	388	4.7	7
Penis etc	1018	1.3	*	583	1.9	*	782	3.2	10	385	1.4	*	132	1.9	*	128	1.5	*
Brain	949	1.2	*	896	2.9	*	86	0.3	*	1038	3.7	8	355	5.1	5	19	0.2	*
Rectum	2267	2.9	*	701	2.3	*	680	2.8	*	519	1.9	*	241	3.5	8	108	1.3	*
Sec Lymph N	2592	3.3	*	796	2.6	*	682	2.8	*	735	2.6	*	137	2.0	*	661	8.0	4
Pharynx etc	10	0.0	*	361	1.2	*	192	0.8	*	56	0.2	*	38	0.6	*	235	2.8	10
Total	58200	74.1		23197	74.6		18367	74.7		19613	70.5		4618	66.9		7164	86.2	
All Sites	78588	100.0		31116	100.0		24588	100.0		27808	100.0		6904	100.0		8309	100.0	

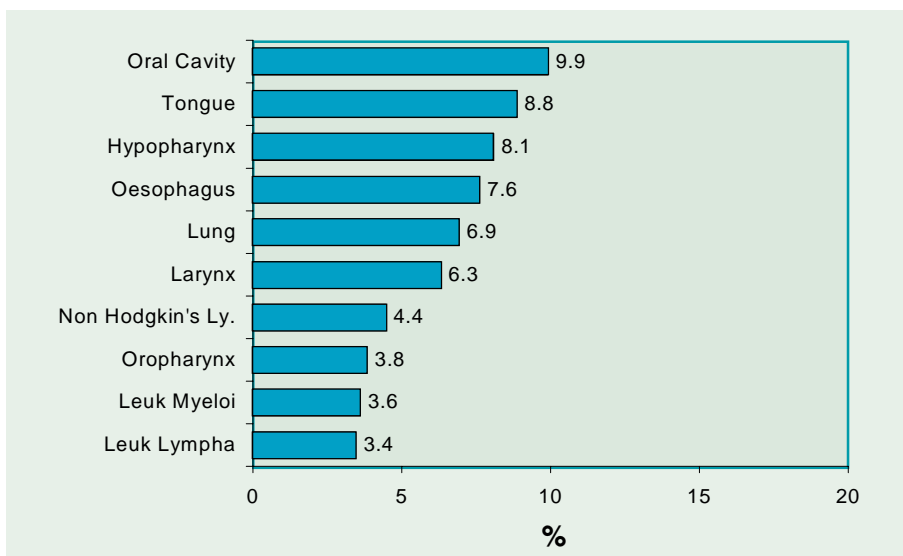
Females

Registry	Mumbai			Bangalore			Chennai			Thi'puram			Chandigarh			Dibrugarh		
	#	%	R	#	%	R	#	%	R	#	%	R	#	%	R	#	%	R
Cervix	17030	27.6	1	14607	40.4	1	12113	42.2	1	4837	20.5	2	2939	39.8	1	650	17.4	1
Breast Female	14160	23.0	2	4109	11.4	3	4546	15.8	2	5123	21.7	1	1132	15.3	2	412	11.0	3
Oesophagus	3145	5.1	3	2422	6.7	4	1024	3.6	4	431	1.8	10	372	5.0	3	506	13.5	2
Oral Cavity	2919	4.7	4	4332	12.0	2	2118	7.4	3	1931	8.2	3	106	1.4	*	203	5.4	4
Ovary	2638	4.3	5	1166	3.2	5	884	3.1	5	1296	5.5	5	302	4.1	4	158	4.2	6
Tongue	1446	2.3	6	352	1.0	*	448	1.6	10	821	3.5	6	89	1.2	*	156	4.2	7
Sec Resp Etc	1392	2.3	7	316	0.9	*	210	0.7	*	266	1.1	*	88	1.2	*	37	1.0	*
Hypopharynx	1298	2.1	8	507	1.4	10	593	2.1	8	160	0.7	*	153	2.1	7	148	4.0	10
Leuk Myeloid	1277	2.1	9	605	1.7	8	397	1.4	*	461	2.0	8	106	1.4	*	45	1.2	*
Non Hodgkin's	228	2.0	10	419	1.2	*	355	1.2	*	444	1.9	9	125	1.7	9	69	1.8	*
Thyroid Gland	1008	1.6	*	677	1.9	6	451	1.6	9	1348	5.7	4	99	1.3	*	34	0.9	*
Stomach	820	1.3	*	647	1.8	7	655	2.3	7	403	1.7	*	76	1.0	*	176	4.7	5
Rectum	1042	1.7	*	529	1.5	9	439	1.5	*	376	1.6	*	100	1.4	*	48	1.3	*
Vagina	566	0.9	*	482	1.3	*	709	2.5	6	314	1.3	*	64	0.9	*	49	1.3	*
Brain	412	0.7	*	388	1.1	*	41	0.1	*	622	2.6	7	163	2.2	5	10	0.3	*
Gall Bladder	558	0.9	*	51	0.1	*	42	0.1	*	56	0.2	*	156	2.1	6	82	2.2	*
Body Uterus	969	1.6	*	277	0.8	*	348	1.2	*	343	1.5	*	150	2.0	8	19	0.5	*
Lung	837	1.4	*	325	0.9	*	235	0.8	*	305	1.3	*	113	1.5	10	65	1.7	*
Oropharynx	395	0.6	*	154	0.4	*	125	0.4	*	95	0.4	*	35	0.5	*	156	4.2	8
Sec Lymph N	770	1.2	*	230	0.6	*	227	0.8	*	277	1.2	*	46	0.6	*	153	4.1	9
Total	53910	87.5		32595	90.1		25960	90.5		19909	84.3		6414	86.9		3176	85.0	
All Sites	61602	100.0		36188	100.0		28685	100.0		23604	100.0		7383	100.0		3736	100.0	

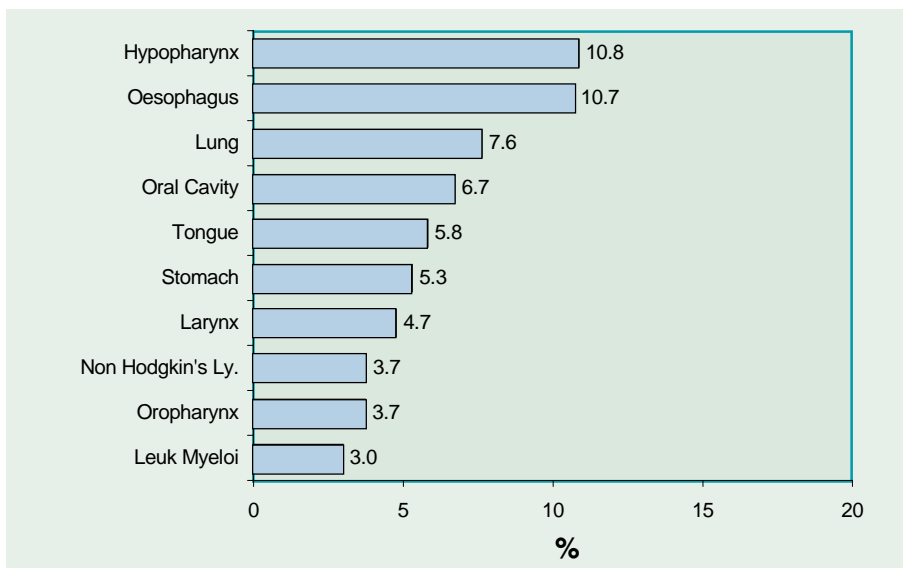
* Rank not within first ten

Fig. 1.1(a): Ten Leading Sites of Cancer - Males

Mumbai



Bangalore



Chennai

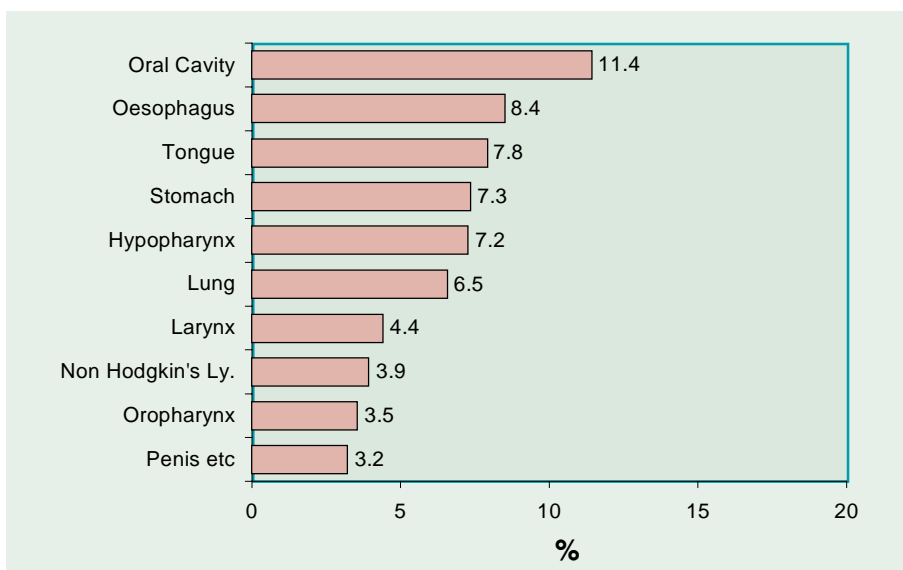
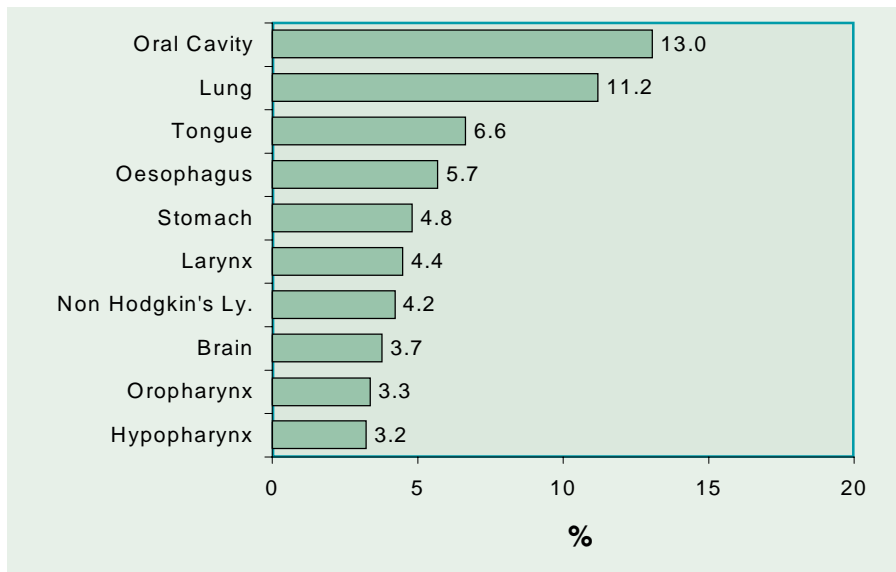
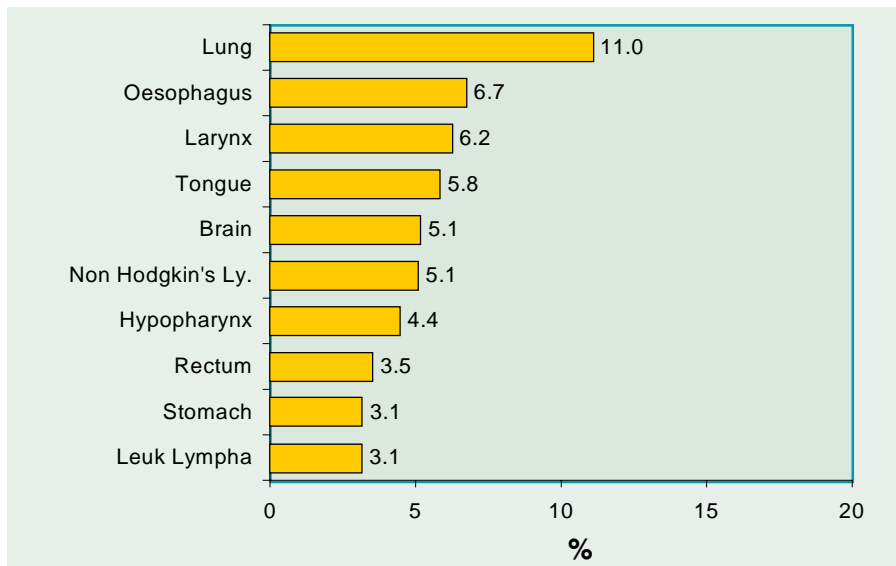


Fig. 1.1(a): Ten Leading Sites of Cancer - Males (Contd..)

Thiruvananthapuram



Chandigarh



Dibrugarh

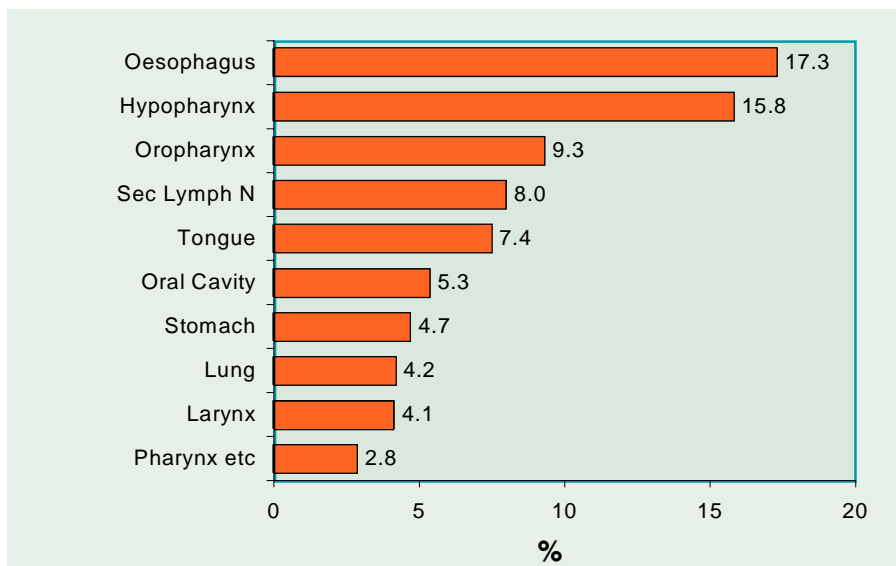
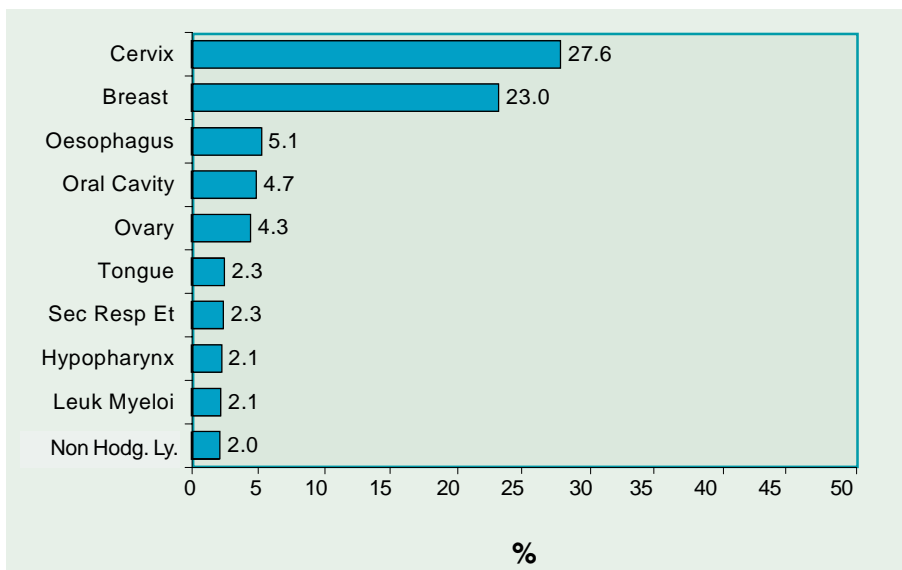
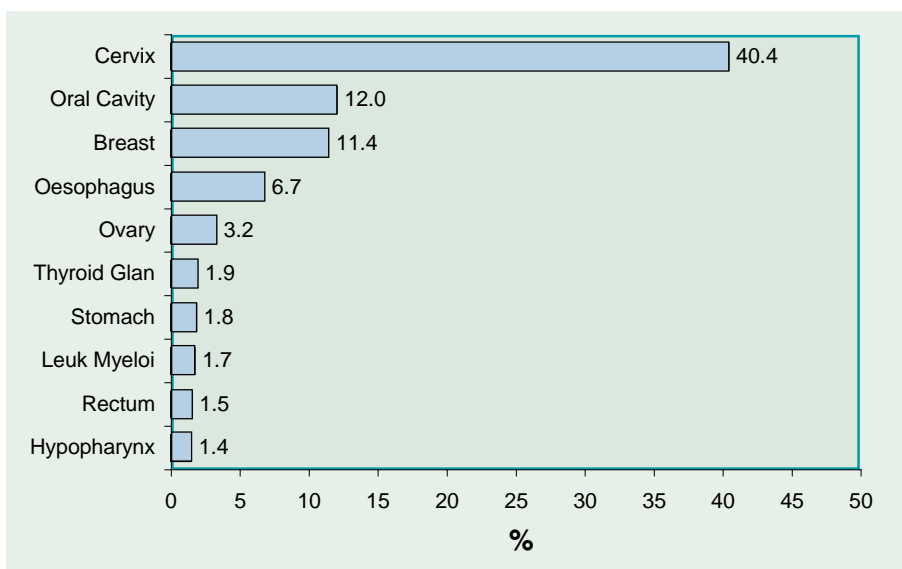


Fig. 1.1(b): Ten Leading Sites of Cancer - Females

Mumbai



Bangalore



Chennai

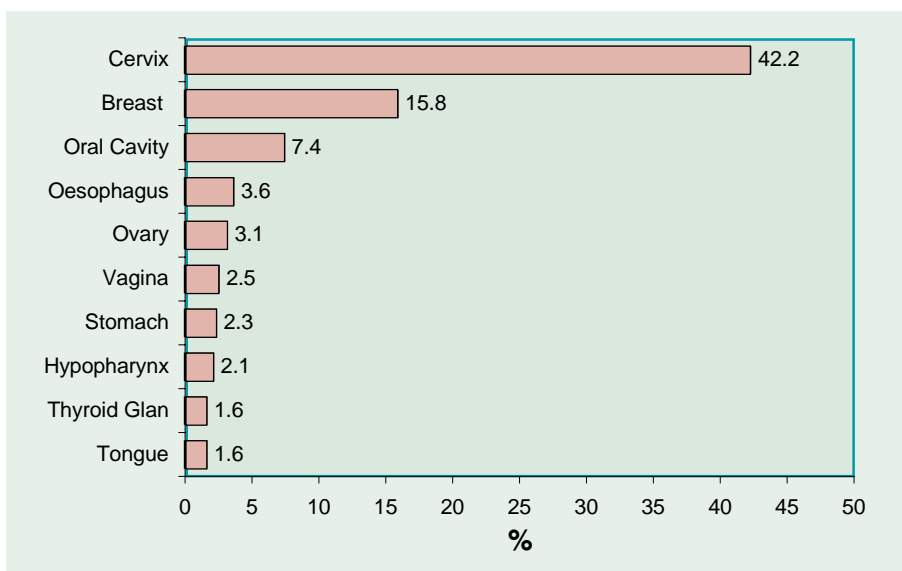
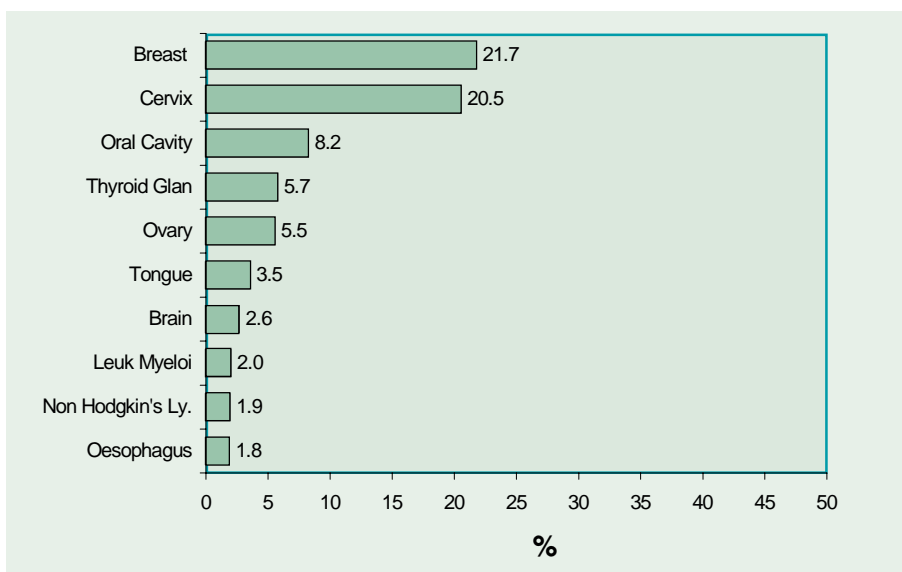
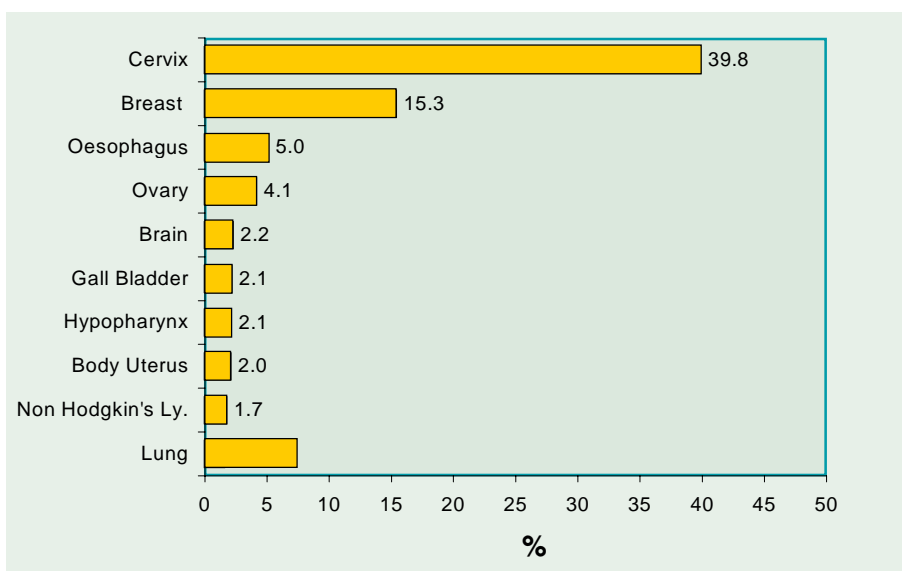


Fig. 1.1(b): Ten Leading Sites of Cancer - Females (Contd..)

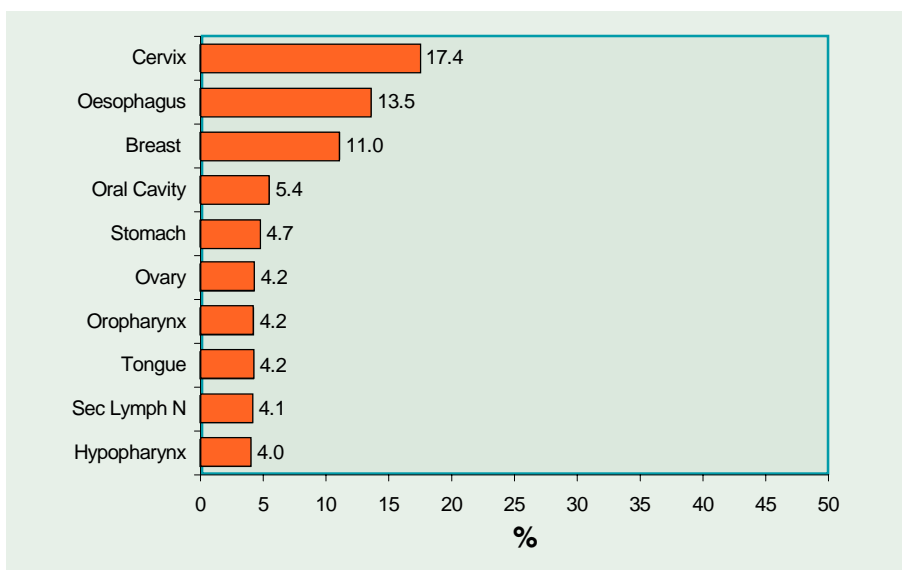
Thiruvananthapuram



Chandigarh



Dibrugarh



LEADING SITES IN BROAD AGE GROUPS

The numbers and relative proportions of cancers in the broad age groups 0-14, 15-34, 35-64 and 65 plus years of age, for both sexes across registries is shown in Table 1.4 and Figure 1.2. Figures 1.3 to 1.5 give the leading sites with their relative proportions in each of these broad age groups, except, childhood cancers.

TABLE 1.4: Number (#) & Proportion (%) of Cancers by Broad Age Groups

Males

Registry	00-14		15-34		35-64		65 +		Unknown		All Ages
	#	%	#	%	#	%	#	%	#	%	
Mumbai	4305	5.5	9848	12.5	50167	63.8	14200	18.1	68	0.1	78588
Bangalore	1637	5.3	3144	10.1	19170	61.6	7164	23.0	1	0.0	31116
Chennai	900	3.7	2805	11.4	16059	65.3	4824	19.6	0	0.0	24588
Thi'puram	1153	4.1	2675	9.6	16663	59.9	7313	26.3	4	0.0	27808
Chandigarh	517	7.5	1027	14.9	4152	60.1	1213	17.6	0	0.0	6909
Dibrugarh	166	2.0	607	7.3	6310	75.9	1226	14.8	0	0.0	8309

Females

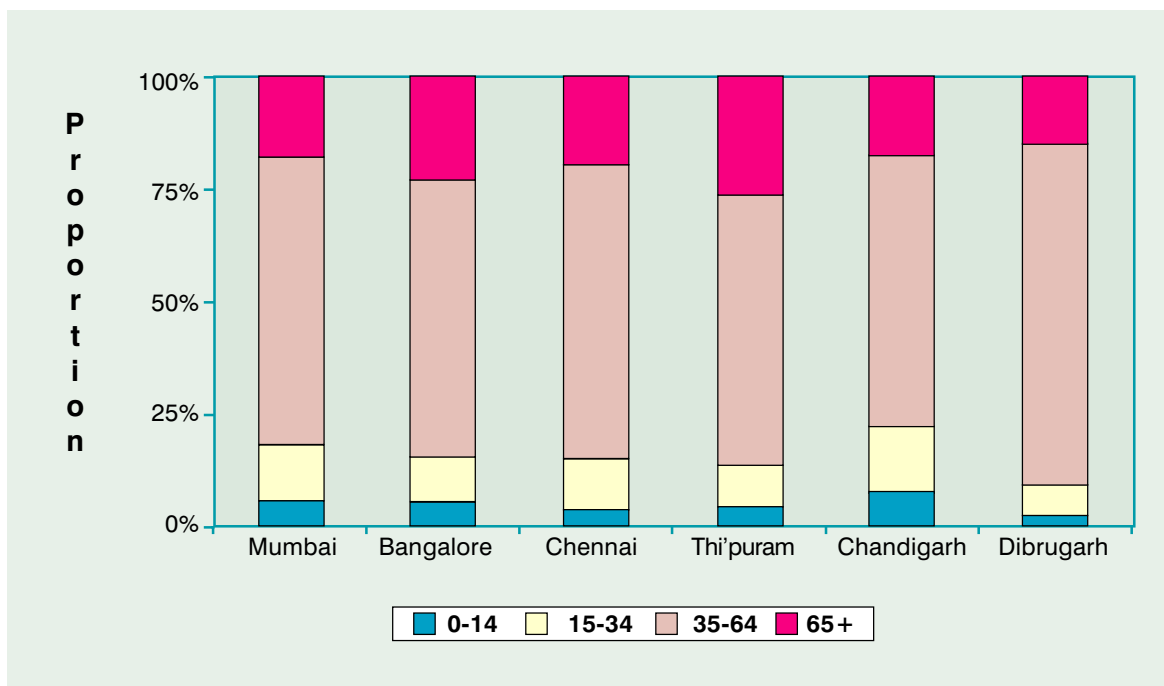
Registry	00-14		15-34		35-64		65 +		Unknown		All Ages
	#	%	#	%	#	%	#	%	#	%	
Mumbai	2071	3.4	7535	12.2	44588	72.4	7323	11.9	84	0.1	61602
Bangalore	881	2.4	3699	10.2	26938	74.4	4670	12.9	0	0.0	36188
Chennai	547	1.9	3125	10.9	22145	77.2	2868	10.0	0	0.0	28685
Thi'puram	897	3.8	2911	12.3	15271	64.7	4520	19.1	5	0.0	23604
Chandigarh	205	2.8	924	12.5	5541	75.1	713	9.7	0	0.0	7383
Dibrugarh	108	2.9	478	12.8	2882	77.1	268	7.2	0	0.0	3736

Both Sexes

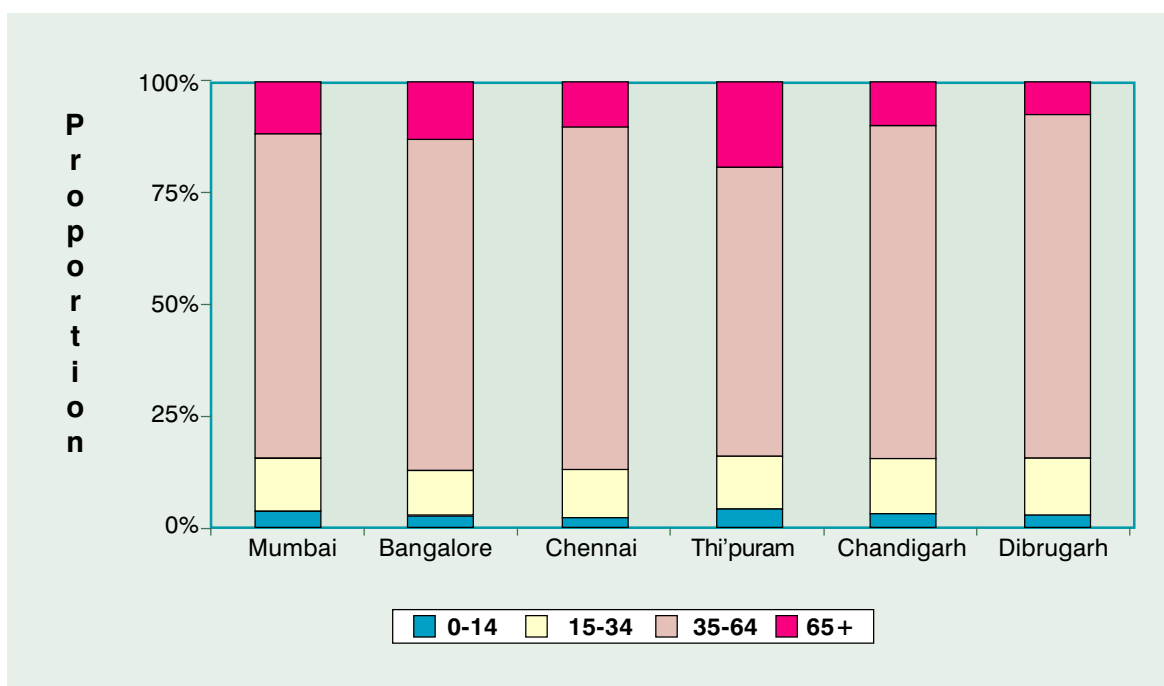
Registry	00-14		15-34		35-64		65 +		Unknown		All Ages
	#	%	#	%	#	%	#	%	#	%	
Mumbai	6377	4.5	17383	12.4	94755	67.6	21523	15.4	152	0.1	140190
Bangalore	2518	3.7	6843	10.2	46108	68.5	11834	17.6	1	0.0	67304
Chennai	1447	2.7	5930	11.1	38204	71.7	7692	14.4	0	0.0	53273
Thi'puram	2050	4.0	5586	10.9	31934	62.1	11833	23.0	9	0.0	51412
Chandigarh	722	5.1	1951	13.7	9693	67.8	1926	13.5	0	0.0	14292
Dibrugarh	274	2.3	1085	9.0	9192	76.3	1494	12.4	0	0.0	12045

Fig. 1.2: Proportion of Cancers By Broad Age Groups

Males



Females



Overall childhood cancers (0-14 year age group) constitute less than 5% of all cancers among males and less than 3% in females, whereas over 80% of all cancers in either sex, are seen in the 35+ age group, with the truncated age group (35-64 years) having a major portion of this.

Childhood: 0-14 Year Age Group

Cancers in childhood are discussed separately in the next chapter.

Young Adult: 15-34 Year Age Group

Males (Figure 1.3(a)): The leading sites in this age group were Myeloid leukaemia at Mumbai, bone at Bangalore, Non-Hodgkin's lymphoma at Chennai and Dibrugarh and brain at Thiruvananthapuram and Chandigarh. These four sites of cancer were seen within first five leading sites in almost all registries. Testis was an important site of cancer being the second most frequent at Mumbai, fourth at Chandigarh and fifth at Chennai. Other important sites of cancer that were within the first five leading sites were hypopharynx at Dibrugarh and connective tissue at Chennai.

Females (Figure 1.3(b)): Cancers of the cervix and breast accounted for about 40% of cancers in this age group. Cervical cancer was the leading site in the registries at Bangalore, Chennai and Chandigarh and constituted about one-third of all cancers in that age group in Bangalore and Chennai. In the Regional Cancer Centre at Thiruvananthapuram (Thi'puram) cancer of the cervix was only the fifth most frequent cancer in this age group. This centre, has cancer of the thyroid and breast as the leading site, each constituting over 19 percent of all cancers in that group. Cancer of the female breast is the leading site in the registries at Mumbai and Dibrugarh. Myeloid leukaemia is among five most frequent cancers in this group in all registries except Thiruvananthapuram, where it is sixth. Though not as common as myeloid leukaemia, Hodgkin's disease also shows a fairly high relative proportion in most of the registries.

Older Adult: 35-64 Year Age Group

Males (Figure 1.4(a)): In this truncated older adult group in males, the predominant cancers are of those sites known to be associated with use of tobacco. These sites include tongue, oral cavity, oropharynx, hypopharynx, oesophagus, lung and larynx. These sites alone, account for over 50 percent of all cancers in this group in all the centres and nearly 72 percent of them at Dibrugarh.

Females (Figure 1.4(b)): Among females in this age group, cancer of the cervix was the most frequent cancer except in Thiruvananthapuram where it was preceded by cancer of the breast. Cancer of the cervix was followed by cancer breast in all centres, except Bangalore and Dibrugarh where breast was third most frequent cancer. Cancer of the oesophagus was one of four leading sites except at Thiruvananthapuram, where it was seventh. The continuance of cancer of the thyroid as a frequent cancer in this age group as in the 15-34 year group, at Thiruvananthapuram is to be noted.

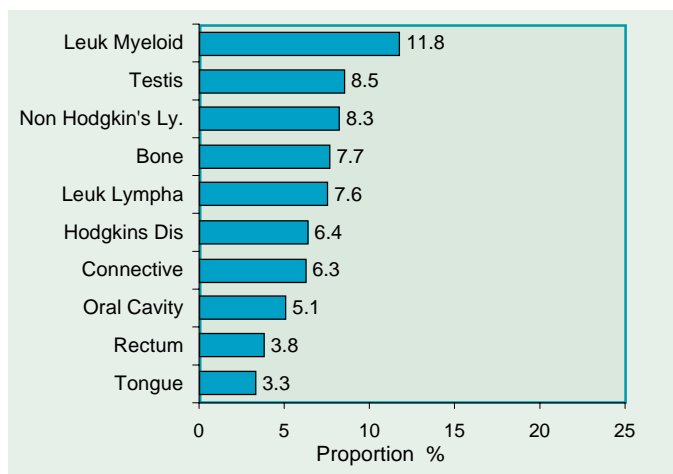
Elderly: 65 Year and above Age Group (Figure 1.5(a & b))

There appears to be little difference in the most frequent cancers in this age group as compared with the previous one in either sex. However, the emergence of cancer of the prostate as a frequent cancer site and possibly that of rectum are the salient features in males. Otherwise, tobacco related cancer sites continue to predominate in males and follow female specific sites in females (Figure 1.7).

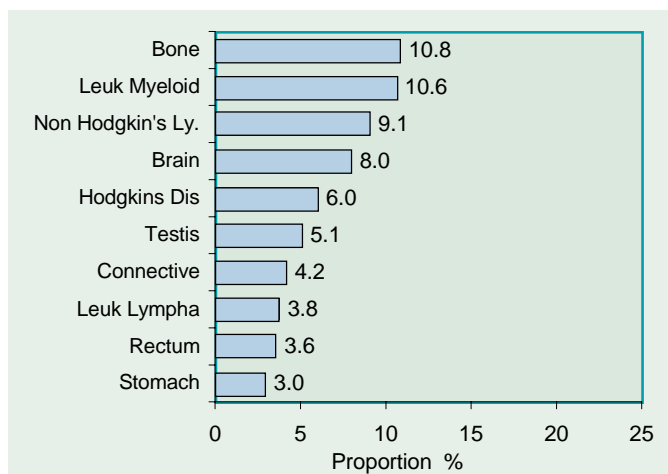
Fig. 1.3(a): Leading Sites in Broad Age Group (15-34 Years)

Males

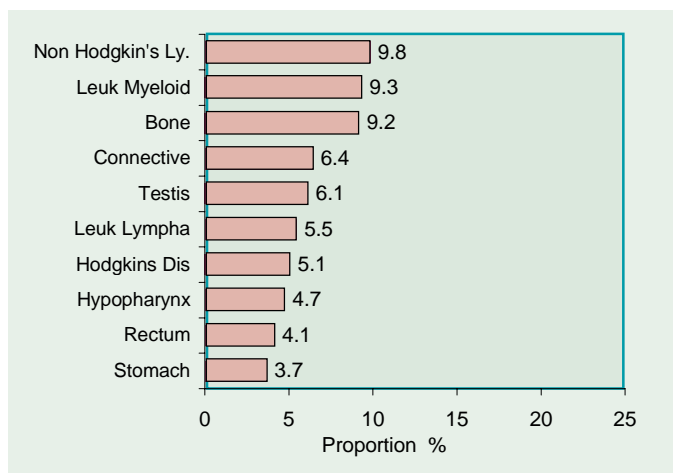
Mumbai



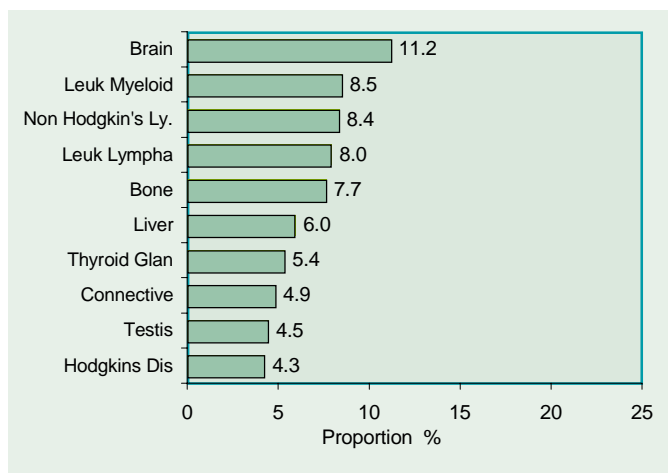
Bangalore



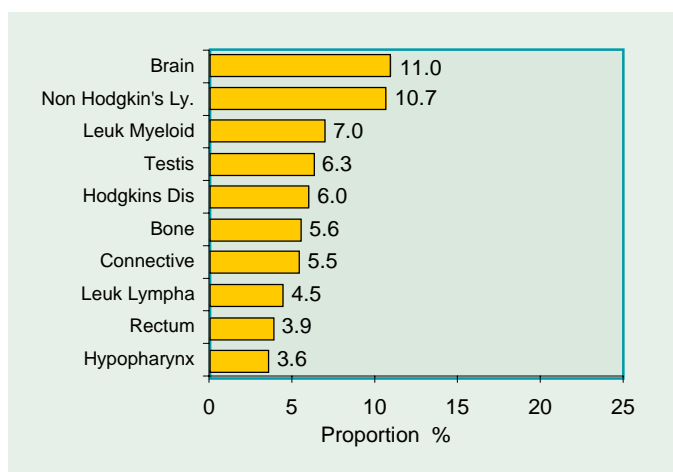
Chennai



Thi'puram



Chandigarh



Dibrugarh

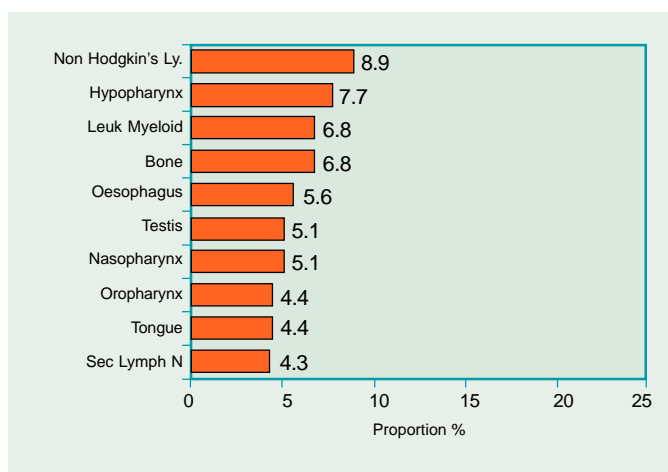
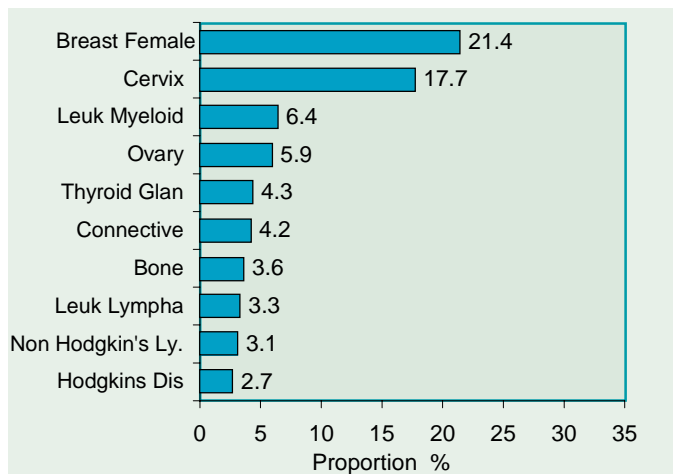


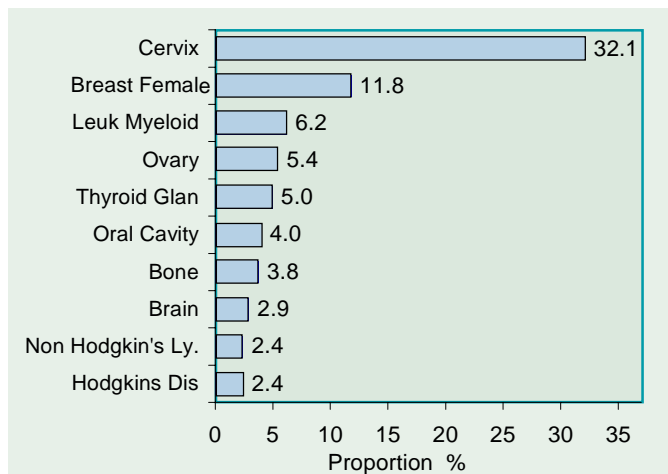
Fig. 1.3(b): Leading Sites in Broad Age Group (15-34 Years)

Females

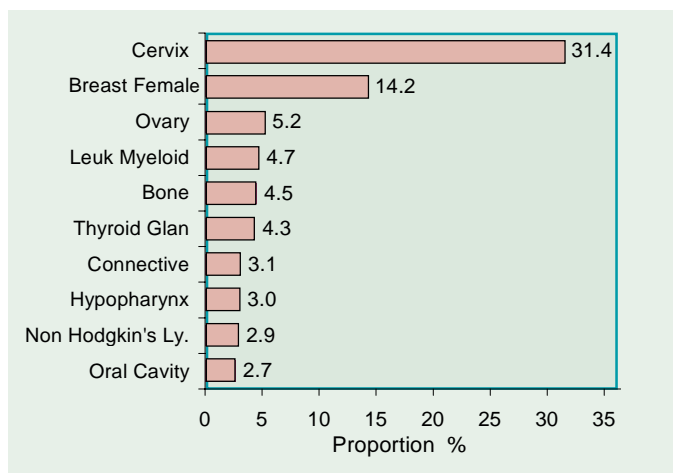
Mumbai



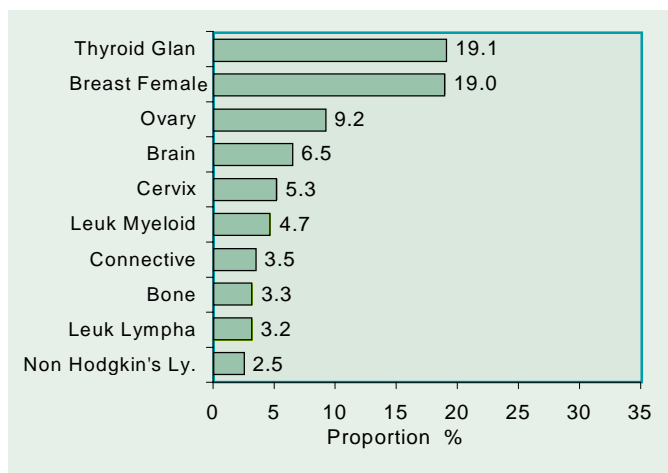
Bangalore



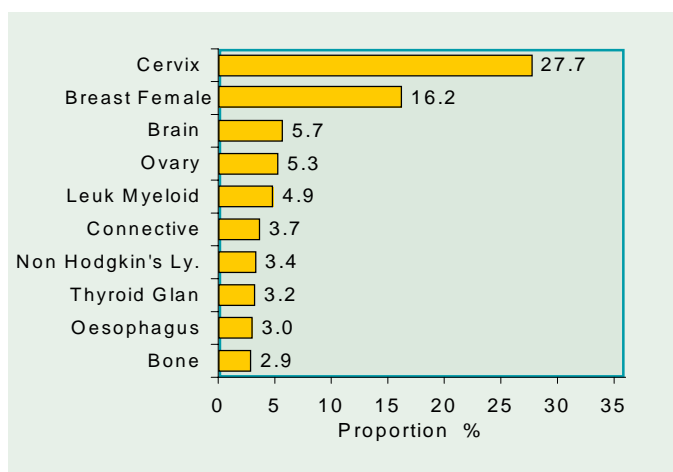
Chennai



Thi'puram



Chandigarh



Dibrugarh

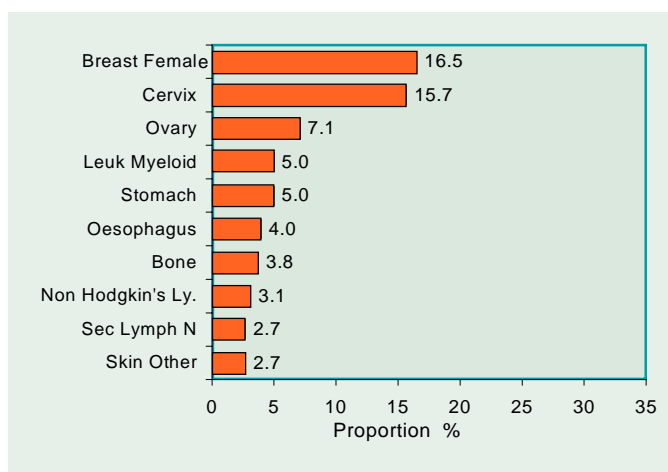
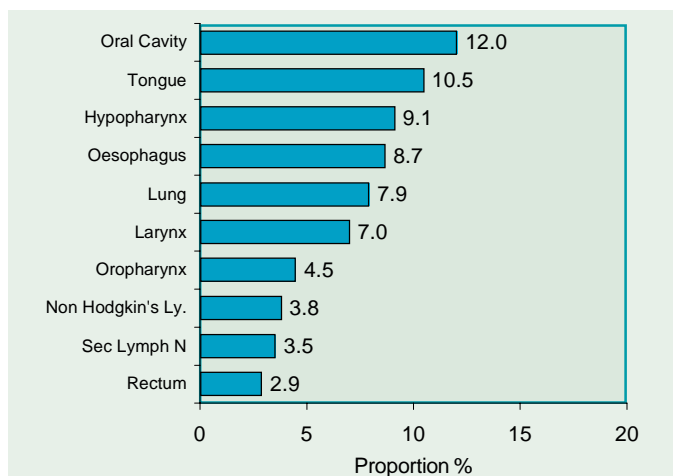


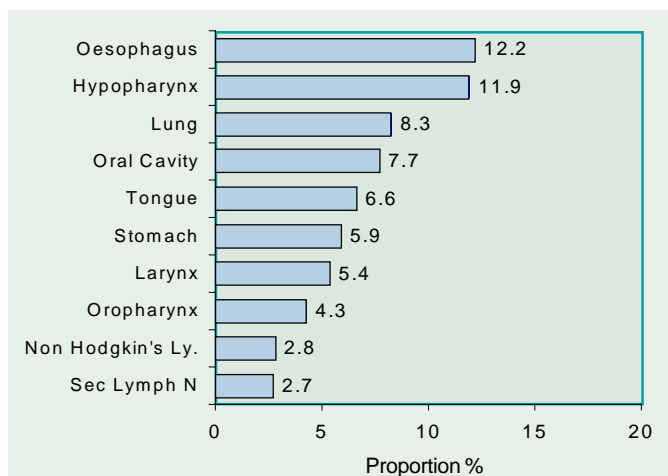
Fig. 1.4(a): Leading Sites in Broad Age Group (35-64 Years)

Males

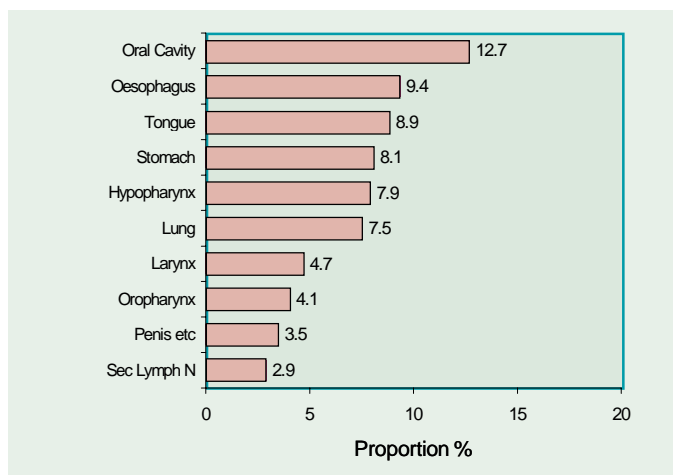
Mumbai



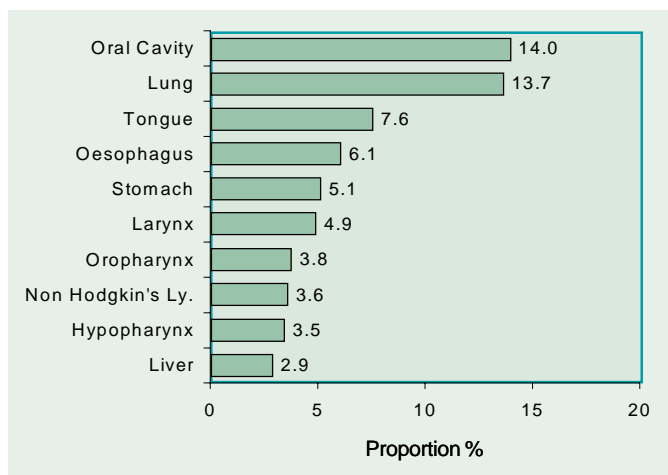
Bangalore



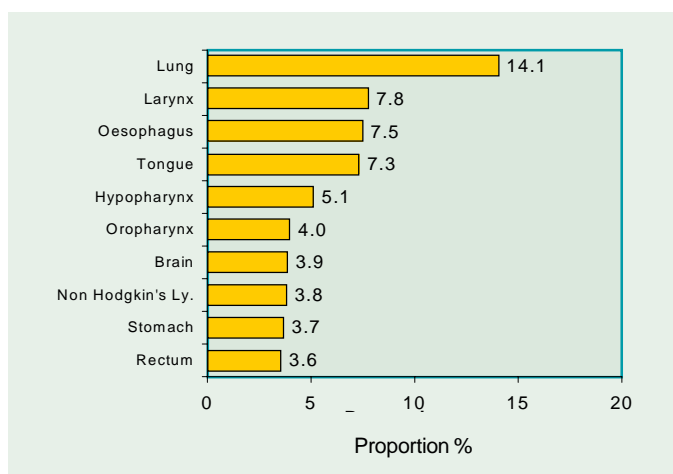
Chennai



Thi'puram



Chandigarh



Dibrugarh

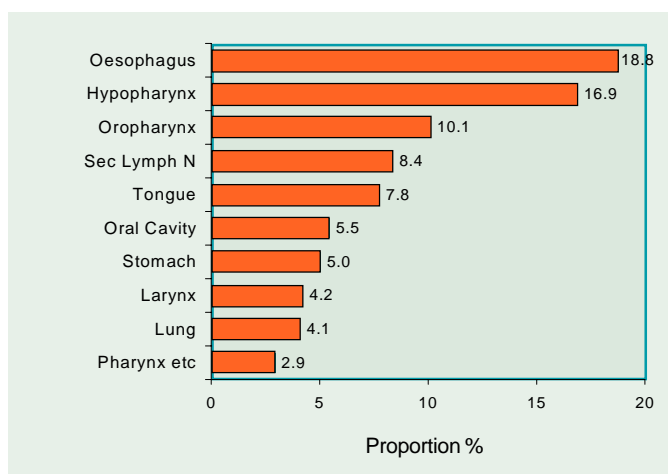
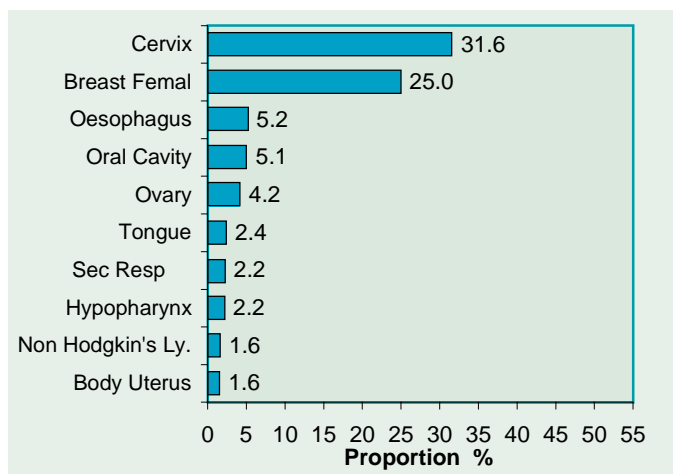


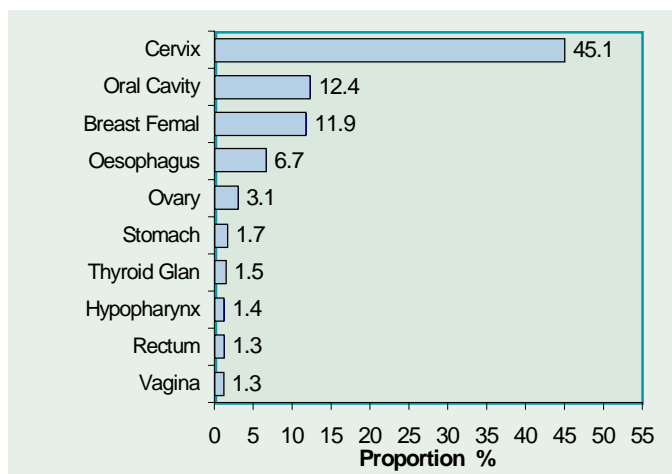
Fig. 1.4(b): Leading Sites in Broad Age Group (35-64 Years)

Females

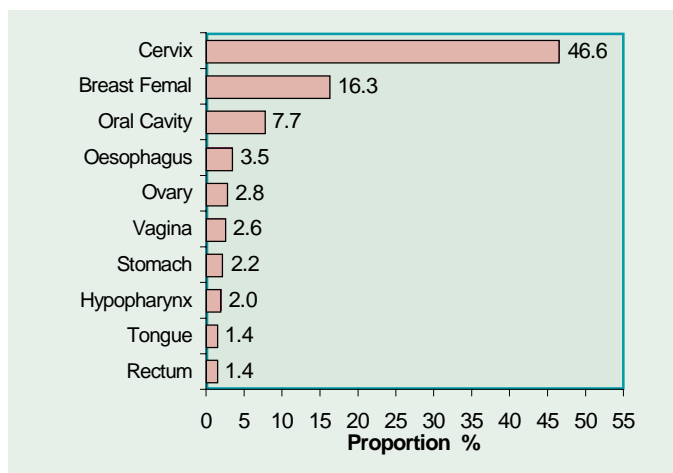
Mumbai



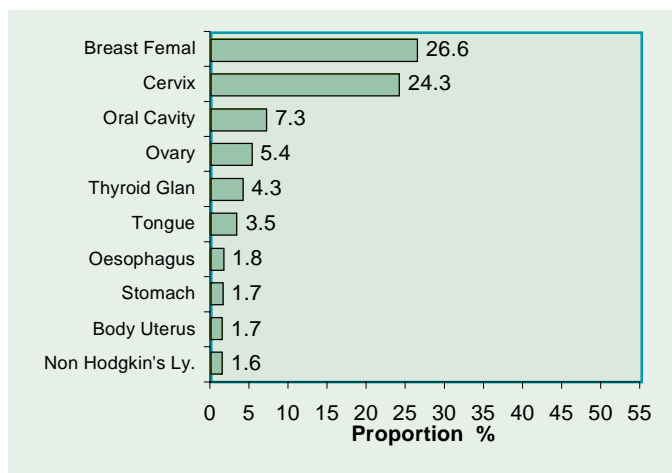
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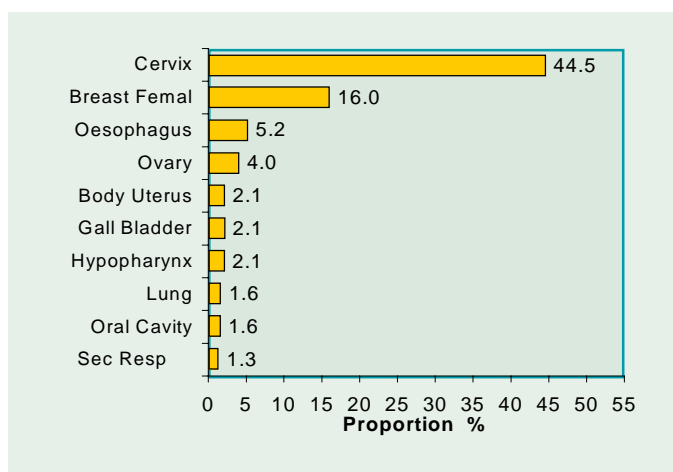
Chennai



Thi'puram



Chandigarh



Dibrugarh

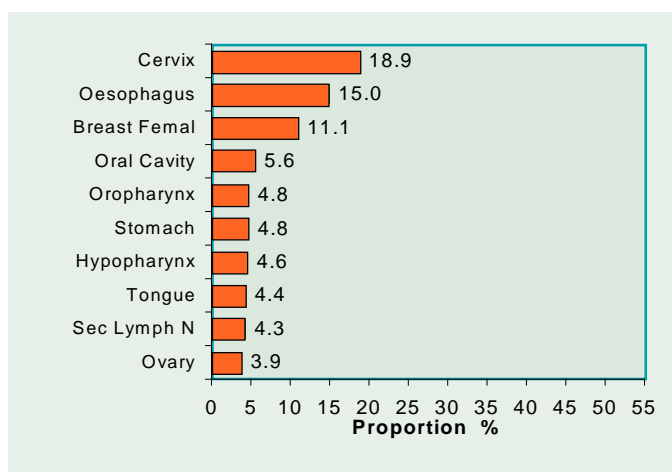
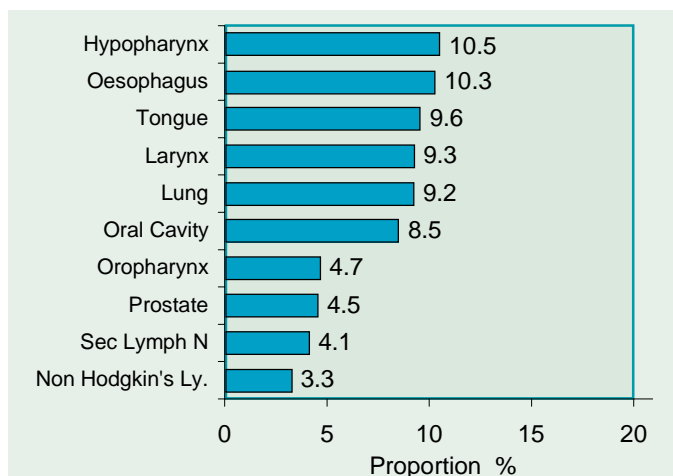


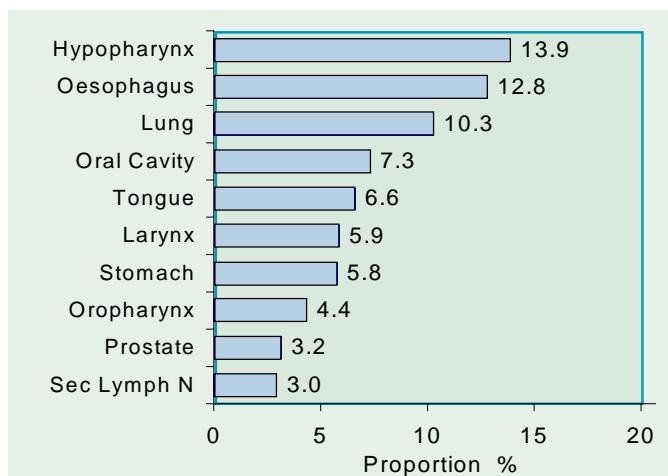
Fig. 1.5(a): Leading Sites in Broad Age Group (65 Years and above)

Males

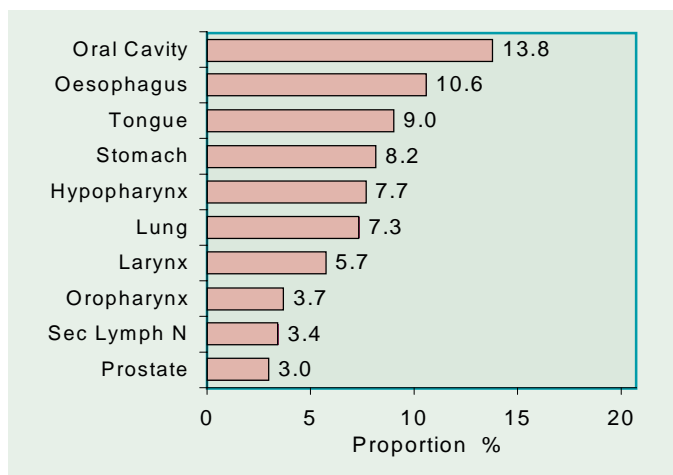
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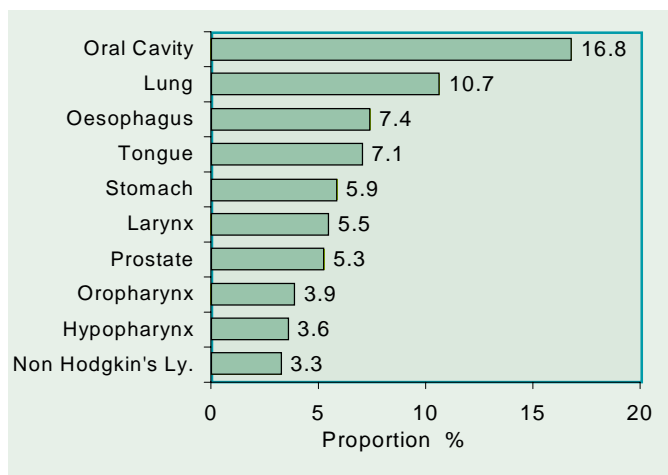
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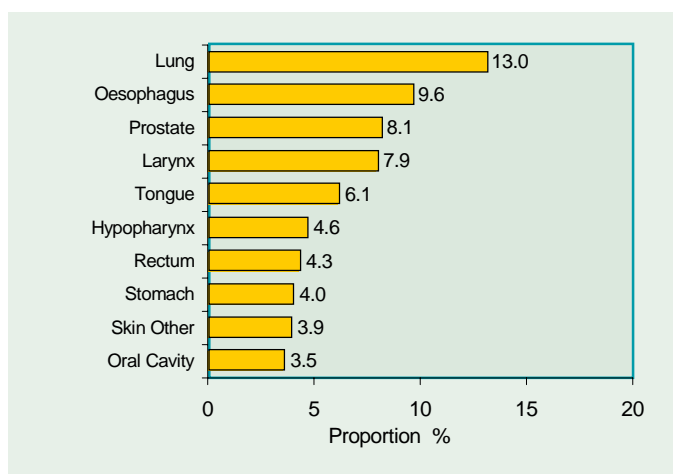
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Thi'puram



Chandigarh



Dibrugarh

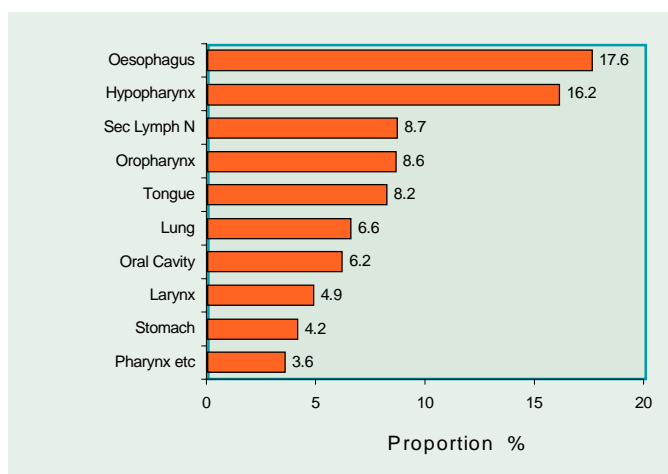
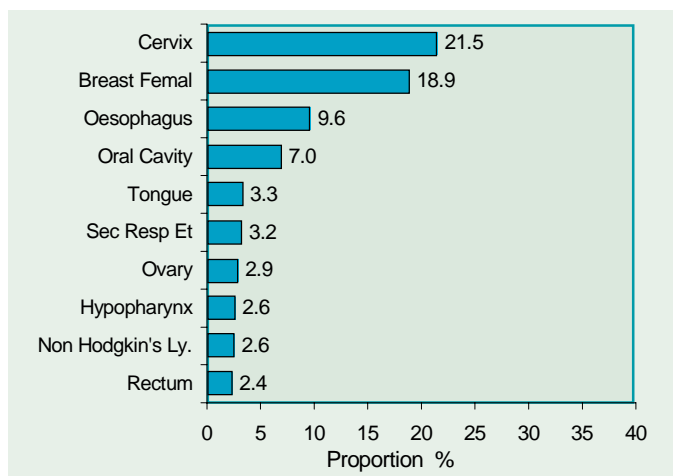


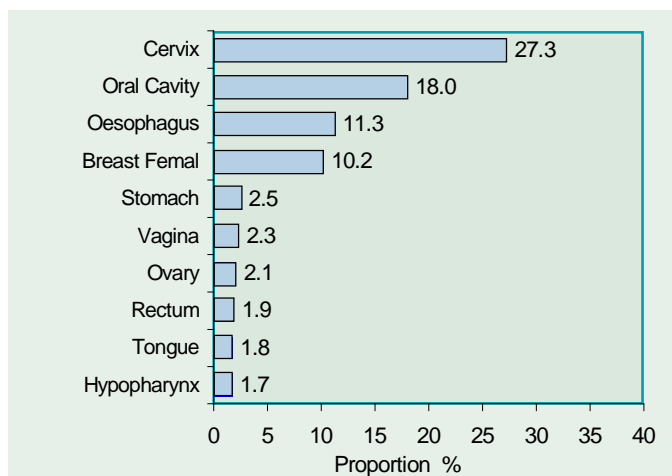
Fig. 1.5(b): Leading Sites in Broad Age Group (65 Years and above)

Females

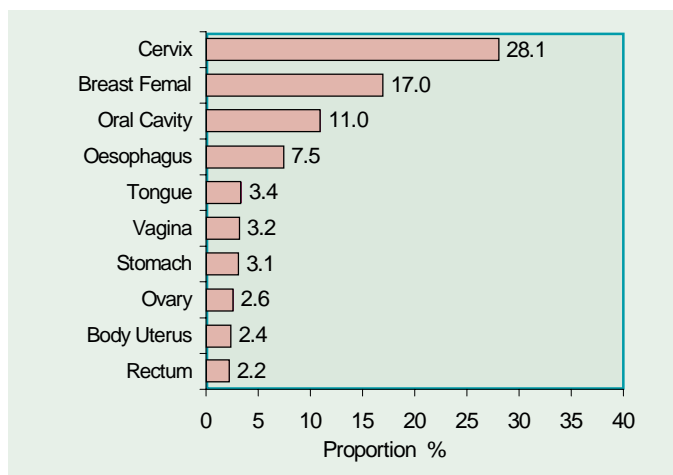
Mumbai



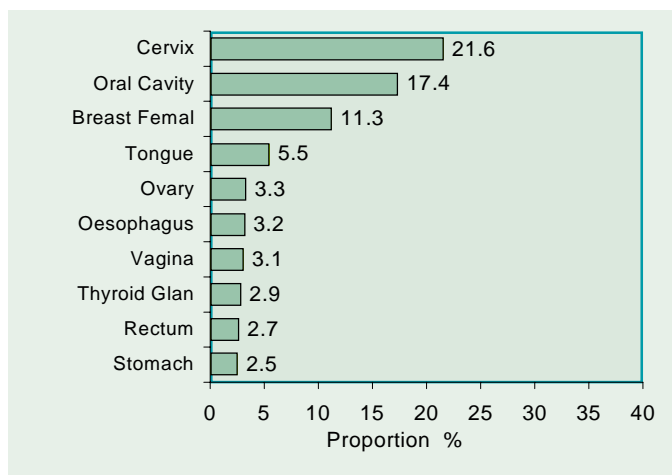
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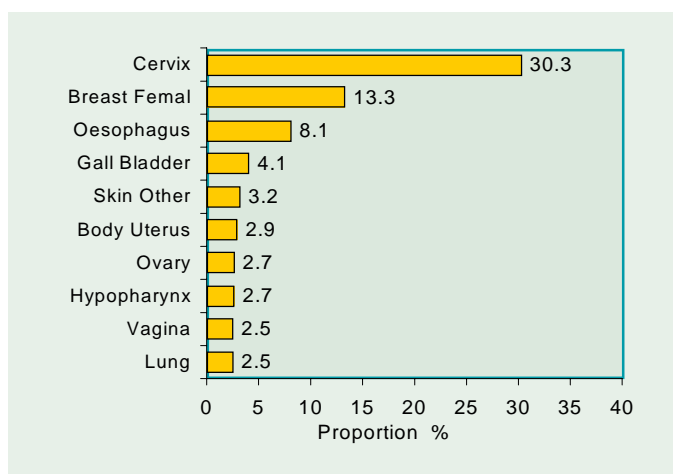
Chennai



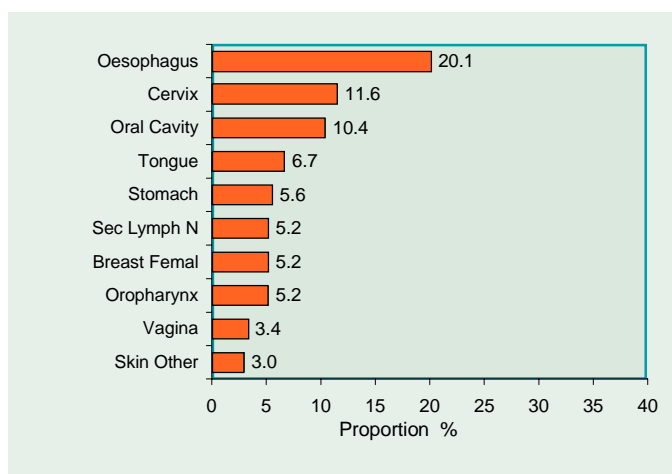
Thi'pura



Chandigarh



Dibrugarh



Chapter 2

CANCERS IN CHILDHOOD

This chapter dwells with childhood cancers, its magnitude and types in different areas expressed in terms of proportions. Since most childhood cancers, now have effective treatment, it appears most important to know their numbers and types to plan and initiate activity towards ensuring prompt and appropriate complete treatment.

Cancers in childhood constitute one of the most important groups of tumours, not only because of the age of occurrence, connoting a different set of aetiological factors from those commonly seen in adult cancers, but also because, in the past decade or so, with advances particularly in chemotherapy, many of the childhood cancers have gained a remarkably high potency for cure.

The proportion of cancers in childhood (0-14 years of age) relative to cancers in all age groups varied from 1.9 percent among females in Chennai to 7.5 percent in males at Chandigarh (Table 2.1).

TABLE 2.1: Number(#) & Proportion(%) of cancers in childhood relative to all cancers

	Males			Females		
	All Cancers	#	%	All Cancers	#	%
Mumbai	78588	4305	5.5	61602	2071	3.4
Bangalore	31116	1637	5.3	36188	881	2.4
Chennai	24588	900	3.7	28685	547	1.9
Thi'puram	27808	1153	4.1	23604	897	3.8
Chandigarh	6909	517	7.5	7383	205	2.8
Dibrugarh	8309	166	2.0	3736	108	2.9
Total	177318	8678	4.9	161198	4709	2.9

TABLE 2.2: Number (#) & Proportion (%) of Childhood Cancers by 5-year Age Group**Males**

Registry	0-4 Age Group		5-9 Age Group		10-14 Age Group		All Childhood Cancers
	#	%	#	%	#	%	
Mumbai	1327	30.8	1479	34.4	1499	34.8	4305
Bangalore	524	32.0	532	32.5	581	35.5	1637
Chennai	252	28.0	303	33.7	345	38.3	900
Thi'puram	429	37.2	367	31.8	357	31.0	1153
Chandigarh	193	37.3	164	31.7	160	30.9	517
Dibrugarh	57	34.3	48	28.9	61	36.7	166

Females

Registry	0-4 Age Group		5-9 Age Group		10-14 Age Group		All Childhood Cancers
	#	%	#	%	#	%	
Mumbai	691	33.4	634	30.6	746	36.0	2071
Bangalore	292	33.1	278	31.6	311	35.3	881
Chennai	168	30.7	160	29.3	219	40.0	547
Thi'puram	323	36.0	277	30.9	297	33.1	897
Chandigarh	69	33.7	60	29.3	76	37.1	205
Dibrugarh	48	44.4	32	29.6	28	25.9	108

Both Sexes

Registry	0-4 Age Group		5-9 Age Group		10-14 Age Group		All Childhood Cancers
	#	%	#	%	#	%	
Mumbai	2018	31.6	2113	33.1	2245	35.2	6376
Bangalore	816	32.4	810	32.2	892	35.4	2518
Chennai	420	29.0	463	32.0	564	39.0	1447
Thi'puram	752	36.7	644	31.4	654	31.9	2050
Chandigarh	262	36.3	224	31.0	236	32.7	722
Dibrugarh	105	38.3	80	29.2	89	32.5	274

Table 2.2 gives the number and proportion of childhood cancers according to five-year age group. When all types of cancers in children are considered, the distribution across the three five-year age groups, seems to be uniform in almost all registries in either sex, except in the 0-4 age group in female children in

Dibrugarh whose relative proportion is slightly higher. Also comparatively speaking Chennai appears to have a slightly higher relative proportion of older (10-14 year age group) children.

An international classification scheme (IARC Scientific Pub. 87) was followed to classify the cancers in childhood. Table 2.3 gives the number and relative proportion of the broad types of these cancers for individual registries. Similarly, Tables 2.4 (a & b) gives the number and relative proportion of specific types of childhood cancer. Figures 2.1(a) and 2.1(b) diagrammatically portray the broad types of cancers in childhood.

TABLE 2.3: Number (#) and Relative Proportion (%) of Broad Types of Cancers in childhood

Males

Broad Types of Cancers in Childhood	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
I Leukaemias	1827	42.4	543	33.2	315	35.0	422	36.6	160	30.9	46	27.7
II Lymphomas	682	15.8	347	21.2	210	23.3	130	11.3	86	16.6	33	19.9
III C.N.S. Tumours	250	5.8	205	12.5	24	2.7	192	16.7	77	14.9	6	3.6
IV S.N.S. Tumours	151	3.5	70	4.3	22	2.4	62	5.4	16	3.1	4	2.4
V Retinoblastomas	202	4.7	72	4.4	83	9.2	40	3.5	49	9.5	16	9.6
VI Renal Tumours	143	3.3	73	4.5	16	1.8	50	4.3	29	5.6	8	4.8
VII Hepatic Tumours	43	1.0	15	0.9	6	0.7	29	2.5	4	0.8	1	0.6
VIII Bone Tumours	310	7.2	98	6.0	98	10.9	60	5.2	22	4.3	15	9.0
IX Soft-tissue Sarcoma	309	7.2	97	5.9	58	6.4	82	7.1	38	7.4	10	6.0
X Germ-cell Tumours	80	1.9	30	1.8	10	1.1	12	1.0	14	2.7	4	2.4
XI Others Carcinomas	133	3.1	55	3.4	39	4.3	58	5.0	14	2.7	18	10.8
XII Others	175	4.1	32	2.0	19	2.1	16	1.4	8	1.5	5	3.0
All Types	4305	100	1637	100	900	100	1153	100	517	100	166	100

Females

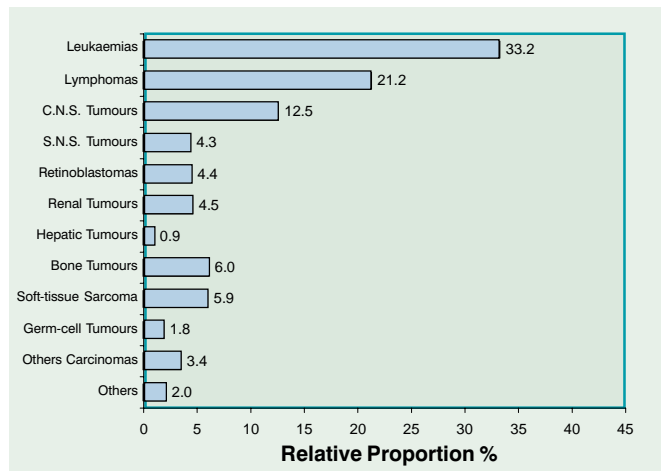
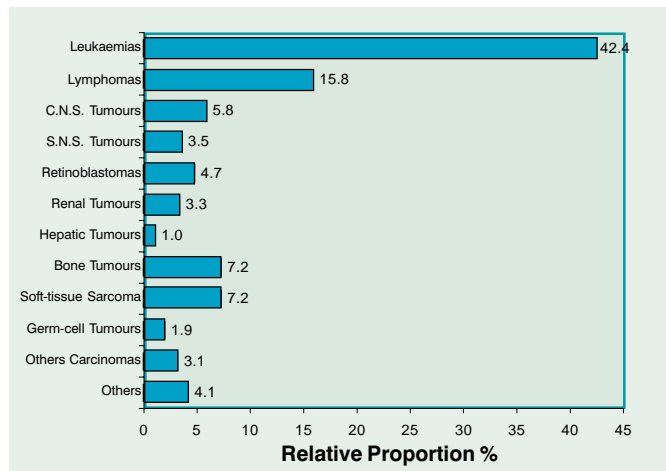
Broad Types of Cancers in Childhood	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
I Leukaemias	841	40.6	263	29.9	167	30.5	271	30.2	43	21.0	24	22.2
II Lymphomas	143	6.9	94	10.7	70	12.8	44	4.9	22	10.7	17	15.7
III C.N.S. Tumours	125	6.0	124	14.1	13	2.4	194	21.6	47	22.9	3	2.8
IV S.N.S. Tumours	87	4.2	49	5.6	9	1.6	37	4.1	10	4.9	1	0.9
V Retinoblastomas	136	6.6	54	6.1	67	12.2	43	4.8	25	12.2	16	14.8
VI Renal Tumours	89	4.3	44	5.0	13	2.4	54	6.0	6	2.9	9	8.3
VII Hepatic Tumours	19	0.9	11	1.2	4	0.7	11	1.2	0	0.0	1	0.9
VIII Bone Tumours	211	10.2	71	8.1	72	13.2	66	7.4	15	7.3	8	7.4
IX Soft-tissue Sarcoma	142	6.9	71	8.1	62	11.3	65	7.2	17	8.3	7	6.5
X Germ-cell Tumours	125	6.0	35	4.0	21	3.8	66	7.4	15	7.3	8	7.4
XI Others Carcinomas	74	3.6	50	5.7	36	6.6	36	4.0	3	1.5	9	8.3
XII Others	79	3.8	15	1.7	13	2.4	10	1.1	2	1.0	5	4.6
All Types	2071	100	881	100	547	100	897	100	205	100	108	100

Fig. 2.1(a): Proportion of Broad Types of Childhood Cancers

Males

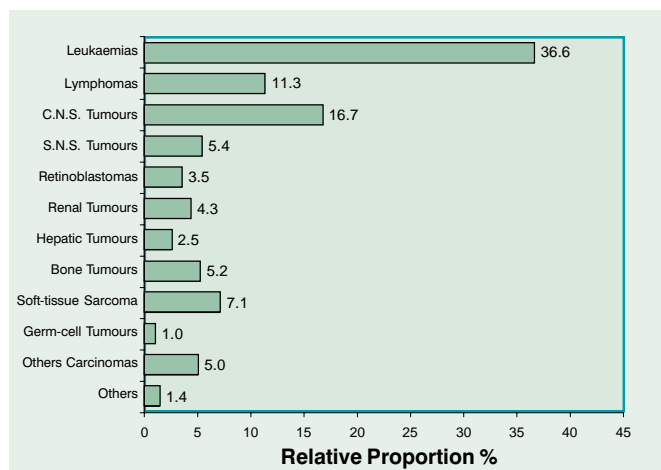
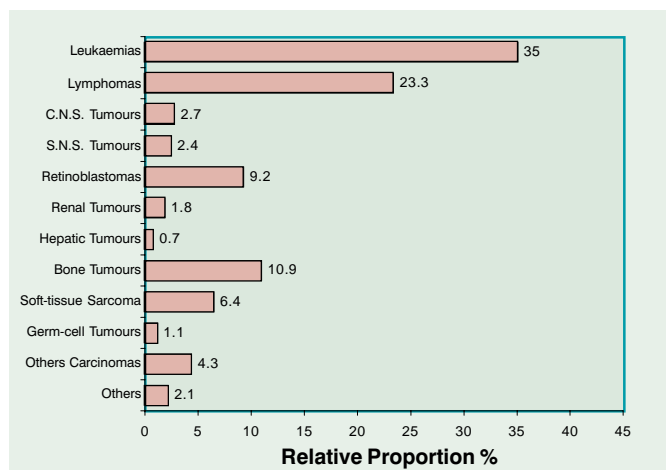
Mumbai

Bangalore



Chennai

Thi'puram



Chandigarh

Dibrugarh

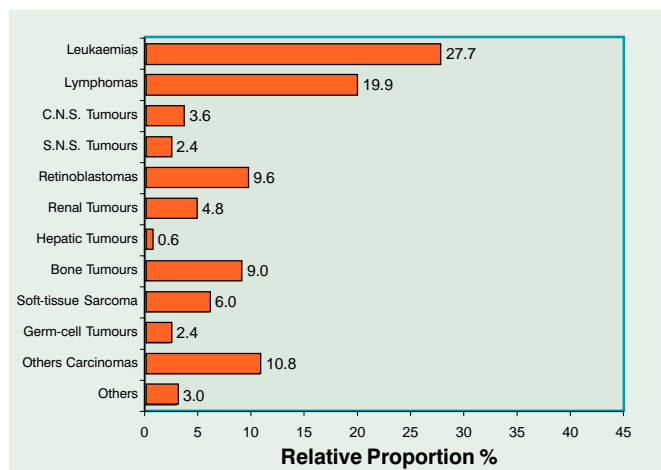
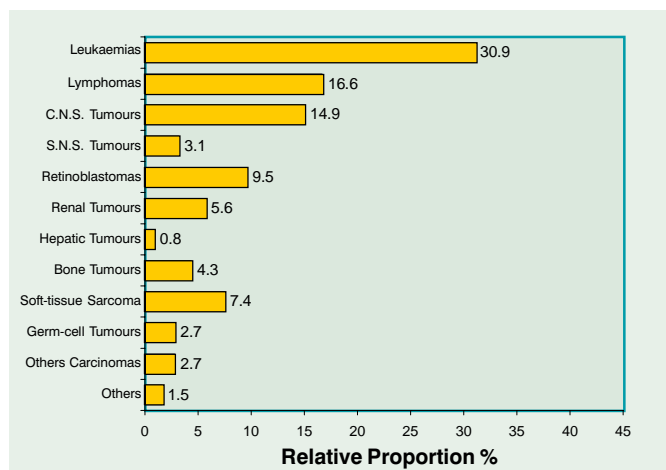
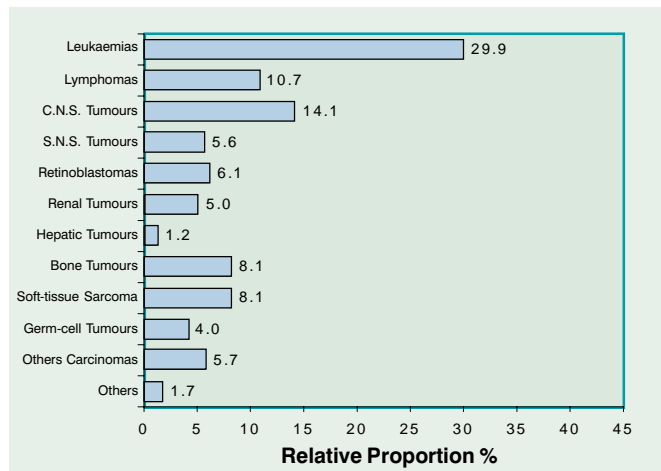
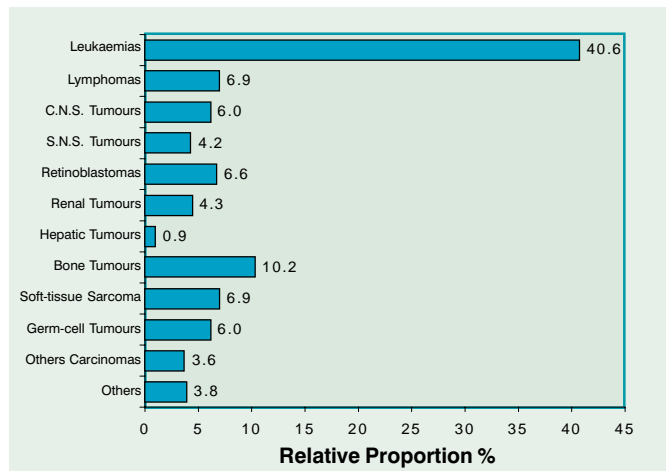


Fig. 2.1(b): Proportion of Broad Types of Childhood Cancers

Females

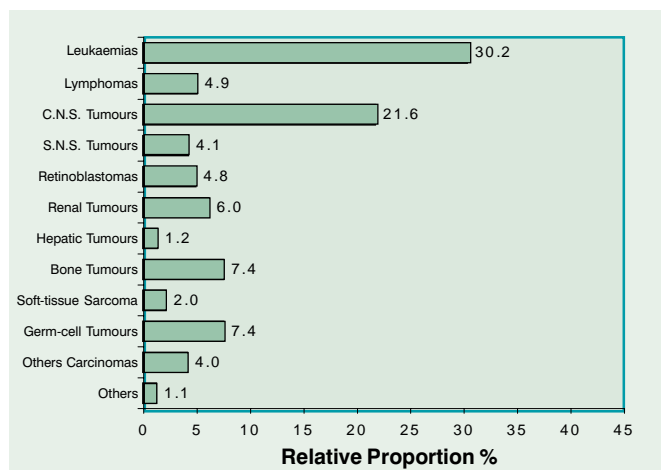
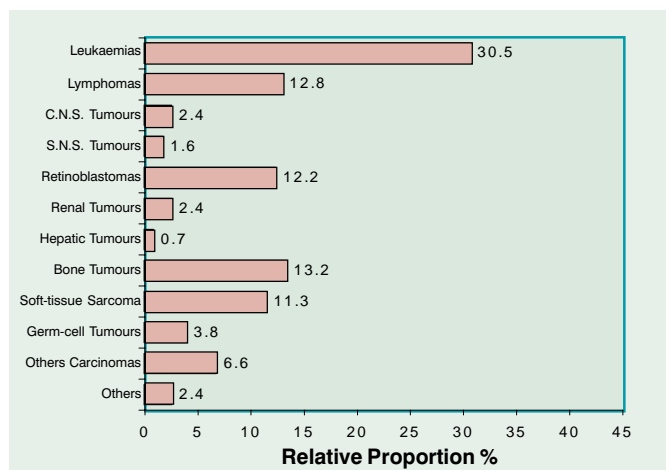
Mumbai

Bangalore



Chennai

Thi'puram



Chandigarh

Dibrugarh

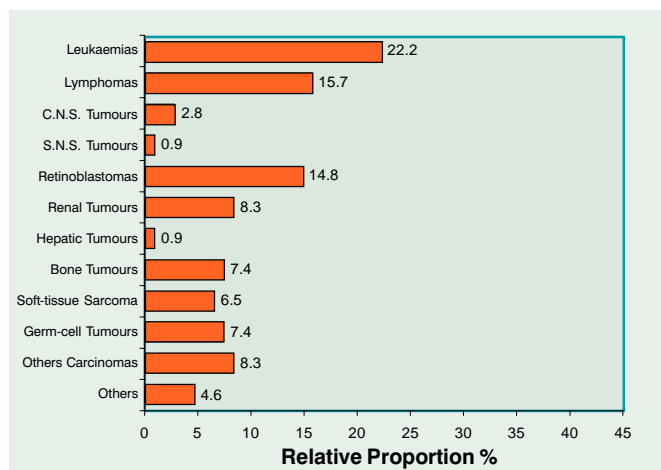
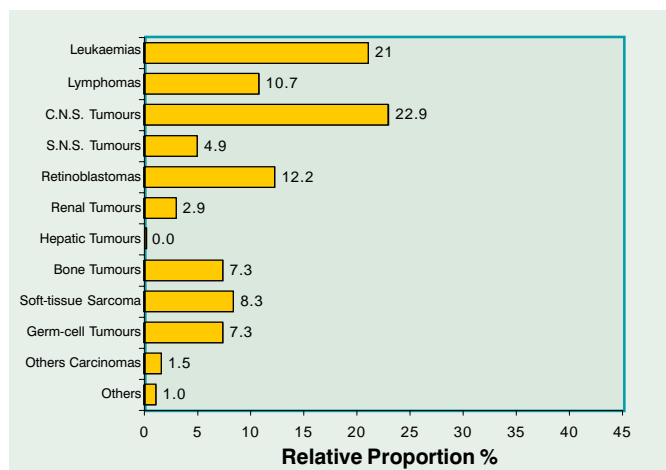


TABLE 2.4(a): Number(#) and Relative Proportion(%) of Specific Types of cancer in childhood**Males**

Specific Types of Cancers in Childhood	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
I. Leukaemias	1827	42.4	543	33.2	315	35.0	422	36.6	160	30.9	46	27.7
a) Acute lymphocytic	1381	32.1	311	19.0	188	20.9	308	26.7	131	25.3	25	15.1
b) Other lymphoid	0	0.0	19	1.2	2	0.2	8	0.7	1	0.2	1	0.6
c) Acute non-lymphocytic	334	7.8	140	8.6	82	9.1	81	7.0	23	4.4	10	6.0
d) Chronic myeloid	70	1.6	23	1.4	13	1.4	10	0.9	5	1.0	5	3.0
e) Others	42	1.0	50	3.1	30	3.3	15	1.3	0	0.0	5	3.0
II. Lymphomas	682	15.8	347	21.2	210	23.3	130	11.3	86	16.6	33	19.9
a) Hodgkin's	476	11.1	170	10.4	99	11.0	42	3.6	44	8.5	12	7.2
b) Non-Hodgkin's	87	2.0	96	5.9	96	10.7	80	6.9	31	6.0	19	11.4
c) Burkitt's	14	0.3	44	2.7	3	0.3	2	0.2	6	1.2	0	0.0
d) Unspecified	100	2.3	28	1.7	12	1.3	2	0.2	2	0.4	2	1.2
e) Histiocytosis	1	0.0	5	0.3	0	0.0	3	0.3	1	0.2	0	0.0
f) Others	4	0.1	4	0.2	0	0.0	1	0.1	2	0.4	0	0.0
III. C.N.S. Tumours	250	5.8	205	12.5	24	2.7	192	16.7	77	14.9	6	3.6
a) Ependymoma	15	0.3	17	1.0	0	0.0	12	1.0	4	0.8	1	0.6
b) Astrocytoma	103	2.4	72	4.4	7	0.8	52	4.5	41	7.9	2	1.2
c) Medulloblastoma	88	2.0	67	4.1	9	1.0	53	4.6	20	3.9	2	1.2
d) Other gliomas	26	0.6	23	1.4	2	0.2	12	1.0	4	0.8	0	0.0
e) Others	18	0.4	26	1.6	6	0.7	63	5.5	8	1.5	1	0.6
IV. S.N.S. Tumours	151	3.5	70	4.3	22	2.4	62	5.4	16	3.1	4	2.4
a) Neuroblastomas	141	3.3	66	4.0	20	2.2	57	4.9	16	3.1	3	1.8
b) Others	10	0.2	4	0.2	2	0.2	5	0.4	0	0.0	1	0.6
V. Retinoblastomas	202	4.7	72	4.4	83	9.2	40	3.5	49	9.5	16	9.6
VI. Renal Tumours	143	3.3	73	4.5	16	1.8	50	4.3	29	5.6	8	4.8
a) Renal Tumours	139	3.2	71	4.3	13	1.4	47	4.1	28	5.4	4	2.4
b) Renal Carcinoma	3	0.1	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
c) Others	1	0.0	2	0.1	2	0.2	3	0.3	1	0.2	4	2.4
VII. Hepatic Tumours	43	1.0	15	0.9	6	0.7	29	2.5	4	0.8	1	0.6
a) Hepatoblastoma	30	0.7	7	0.4	4	0.4	12	1.0	4	0.8	0	0.0
b) Hepatic Carcinoma	2	0.0	6	0.4	2	0.2	15	1.3	0	0.0	1	0.6
c) Others	11	0.3	2	0.1	0	0.0	2	0.2	0	0.0	0	0.0
VIII. Bone Tumours	310	7.2	98	6.0	98	10.9	60	5.2	22	4.3	15	9.0
a) Osteosarcoma	138	3.2	43	2.6	44	4.9	38	3.3	6	1.2	8	4.8
b) Chondrosarcoma	0	0.0	3	0.2	6	0.7	1	0.1	1	0.2	0	0.0
c) Ewing's Sarcoma	134	3.1	40	2.4	39	4.3	17	1.5	15	2.9	3	1.8
d) Others	38	0.9	12	0.7	9	1.0	4	0.3	0	0.0	4	2.4
IX. Soft-tissue Sarcoma	309	7.2	97	5.9	58	6.4	82	7.1	38	7.4	10	6.0
a) Rhabdomyosarcoma	193	4.5	63	3.8	27	3.0	51	4.4	20	3.9	3	1.8
b) Fibrosarcoma	24	0.6	9	0.5	13	1.4	3	0.3	7	1.4	2	1.2
c) Others	92	2.1	25	1.5	18	2.0	28	2.4	11	2.1	5	3.0
X. Germ-cell Tumours	80	1.9	30	1.8	10	1.1	12	1.0	14	2.7	4	2.4
a) Non-gonadal germ-cell	28	0.7	7	0.4	4	0.4	5	0.4	7	1.4	1	0.6
b) Gonadal germ-cell	51	1.2	23	1.4	6	0.7	6	0.5	7	1.4	3	1.8
c) Gonadal carcinomas	1	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
d) Others	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
XI. Others Carcinomas	133	3.1	55	3.4	39	4.3	58	5.0	14	2.7	18	10.8
a) Adrenocortical carcinoma	3	0.1	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
b) Thyroid carcinoma	10	0.2	6	0.4	1	0.1	6	0.5	0	0.0	1	0.6
c) Nasopharyngeal carcinoma	51	1.2	17	1.0	10	1.1	10	0.9	1	0.2	1	0.6
d) Melanomatous tumours	1	0.0	0	0.0	0	0.0	3	0.3	0	0.0	0	0.0
e) Others	68	1.6	32	2.0	28	3.1	38	3.3	13	2.5	16	9.6
XII. Others	175	4.1	32	2.0	19	2.1	16	1.4	8	1.5	5	3.0
All Types	4305	100	1637	100	900	100	1153	100	517	100	166	100

TABLE 2.4(b): Number(#) and Relative Proportion(%) of Specific Types of cancer in childhood**Females**

Specific Types of Cancers in Childhood	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
I. Leukaemias	841	40.6	263	29.9	167	30.5	271	30.2	43	21.0	24	22.2
a) Acute lymphocytic	602	29.1	153	17.4	90	16.5	200	22.3	32	15.6	11	10.2
b) Other lymphoid	2	0.1	9	1.0	0	0.0	5	0.6	0	0.0	3	2.8
c) Acute non-lymphocytic	182	8.8	60	6.8	55	10.1	51	5.7	5	2.4	5	4.6
d) Chronic myeloid	31	1.5	16	1.8	8	1.5	5	0.6	6	2.9	4	3.7
e) Others	24	1.2	25	2.8	14	2.6	10	1.1	0	0.0	1	0.9
II. Lymphomas	143	6.9	94	10.7	70	12.8	44	4.9	22	10.7	17	15.7
a) Hodgkin's	91	4.4	37	4.2	25	4.6	15	1.7	9	4.4	5	4.6
b) Non-Hodgkin's	19	0.9	36	4.1	41	7.5	18	2.0	10	4.9	11	10.2
c) Burkitt's	2	0.1	7	0.8	1	0.2	0	0.0	2	1.0	0	0.0
d) Unspecified	29	1.4	7	0.8	3	0.5	3	0.3	0	0.0	1	0.9
e) Histiocytosis	0	0.0	1	0.1	0	0.0	3	0.3	0	0.0	0	0.0
f) Others	2	0.1	6	0.7	0	0.0	5	0.6	1	0.5	0	0.0
III. C.N.S. Tumours	125	6.0	124	14.1	13	2.4	194	21.6	47	22.9	3	2.8
a) Ependymoma	8	0.4	5	0.6	0	0.0	3	0.3	1	0.5	0	0.0
b) Astrocytoma	63	3.0	46	5.2	6	1.1	68	7.6	28	13.7	0	0.0
c) Medulloblastoma	25	1.2	34	3.9	3	0.5	40	4.5	12	5.9	1	0.9
d) Other gliomas	24	1.2	13	1.5	1	0.2	15	1.7	1	0.5	1	0.9
e) Others	5	0.2	26	3.0	3	0.5	68	7.6	5	2.4	1	0.9
IV. S.N.S. Tumours	87	4.2	49	5.6	9	1.6	37	4.1	10	4.9	1	0.9
a) Neuroblastomas	76	3.7	49	5.6	9	1.6	34	3.8	10	4.9	1	0.9
b) Others	11	0.5	0	0.0	0	0.0	3	0.3	0	0.0	0	0.0
V. Retinoblastomas	136	6.6	54	6.1	67	12.2	43	4.8	25	12.2	16	14.8
VI. Renal Tumours	89	4.3	44	5.0	13	2.4	54	6.0	6	2.9	9	8.3
a) Renal Tumours	85	4.1	42	4.8	11	2.0	53	5.9	5	2.4	4	3.7
b) Renal Carcinoma	2	0.1	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
c) Others	2	0.1	2	0.2	1	0.2	1	0.1	1	0.5	5	4.6
VII. Hepatic Tumours	19	0.9	11	1.2	4	0.7	11	1.2	0	0.0	1	0.9
a) Hepatoblastoma	14	0.7	5	0.6	3	0.5	5	0.6	0	0.0	1	0.9
b) Hepatic Carcinoma	1	0.0	5	0.6	0	0.0	2	0.2	0	0.0	0	0.0
c) Others	4	0.2	1	0.1	1	0.2	4	0.4	0	0.0	0	0.0
VIII. Bone Tumours	211	10.2	71	8.1	72	13.2	66	7.4	15	7.3	8	7.4
a) Osteosarcoma	113	5.5	40	4.5	36	6.6	43	4.8	4	2.0	2	1.9
b) Chondrosarcoma	0	0.0	2	0.2	3	0.5	3	0.3	0	0.0	0	0.0
c) Ewing's Sarcoma	75	3.6	21	2.4	28	5.1	14	1.6	11	5.4	2	1.9
d) Others	23	1.1	8	0.9	5	0.9	6	0.7	0	0.0	4	3.7
IX. Soft-tissue Sarcoma	142	6.9	71	8.1	62	11.3	65	7.2	17	8.3	7	6.5
a) Rhabdomyosarcoma	79	3.8	51	5.8	28	5.1	38	4.2	12	5.9	4	3.7
b) Fibrosarcoma	17	0.8	1	0.1	14	2.6	3	0.3	0	0.0	1	0.9
c) Others	46	2.2	19	2.2	20	3.7	24	2.7	5	2.4	2	1.9
X. Germ-cell Tumours	125	6.0	35	4.0	21	3.8	66	7.4	15	7.3	8	7.4
a) Non-gonadal germ-cell	27	1.3	9	1.0	3	0.5	15	1.7	3	1.5	1	0.9
b) Gonadal germ-cell	94	4.5	22	2.5	15	2.7	51	5.7	11	5.4	2	1.9
c) Gonadal carcinomas	2	0.1	1	0.1	1	0.2	0	0.0	0	0.0	3	2.8
d) Others	2	0.1	3	0.3	2	0.4	0	0.0	1	0.5	2	1.9
XI. Others Carcinomas	74	3.6	50	5.7	36	6.6	36	4.0	3	1.5	9	8.3
a) Adrenocortical carcinoma	1	0.0	0	0.0	1	0.2	1	0.1	0	0.0	0	0.0
b) Thyroid carcinoma	17	0.8	8	0.9	3	0.5	11	1.2	0	0.0	0	0.0
c) Nasopharyngeal carcinoma	12	0.6	10	1.1	7	1.3	4	0.4	0	0.0	0	0.0
d) Melanomatous tumours	1	0.0	2	0.2	0	0.0	1	0.1	0	0.0	0	0.0
e) Others	43	2.1	30	3.4	25	4.6	19	2.1	3	1.5	9	8.3
XII. Others	79	3.8	15	1.7	13	2.4	10	1.1	2	1.0	5	4.6
All Types	2071	100	881	100	547	100	897	100	205	100	108	100

Leukaemias and lymphomas constitute over 55% of cancers among male children and nearly 43% of that in female children. Acute lymphatic leukaemia constitutes about 25% of all childhood cancers in either sex. About 50% of all lymphomas are Hodgkin's disease. Astrocytomas and Medulloblastomas are the predominant tumours of the Central Nervous System, while Osteosarcoma and Ewing's sarcoma are the predominant bone tumours.

The data from individual registries show that leukaemias constitute the largest group in all centres varying from 21 percent in females at Chandigarh to over 42 percent among males in Mumbai. Lymphomas are the next most important group and along with leukaemias form about one third of childhood cancers at the lowest (in Chandigarh females) to about 60% of those (in males at Mumbai and Chennai) at their highest relative proportion. The relative proportion of central nervous system tumours is comparatively high in Chandigarh, Thiruvananthapuram and Bangalore in either sex. Retinoblastomas are particularly seen in higher proportion at Dibrugarh, Chandigarh and Chennai. There appears to be a remarkable consistency among registries in the relative proportions of these specific cancers in childhood.

The relative proportions of some types of cancer show variation by sex. The higher relative proportion of retinoblastomas and bone tumours in girls compared to boys is seen in all registries though in absolute numbers the figure is lower.

Chapter 3

SITES OF CANCER ASSOCIATED WITH USE OF TOBACCO

This chapter indicates the impact of the use of tobacco in the causation of cancer both in proportions and type of cancer. In planning tobacco control activity across the country this baseline is most important. Though not in a defined population it gives a fair picture of the problem of cancer associated with the use of tobacco.

Sites of cancer that have been associated with use of tobacco [Tobacco Related Cancers (TRC)] include, oral cavity including lip and tongue, oropharynx, hypopharynx, pharynx, oesophagus, larynx, lung and urinary bladder.

TABLE 3.1: Number (#) & Proportion (%) of cancers related to use of tobacco relative to all sites of cancer

Registry	Males			Females		
	All sites	#	%	All sites	#	%
Mumbai	78588	42180	53.7	61602	10918	17.7
Bangalore	31116	16434	52.8	36188	8465	23.4
Chennai	24588	12758	51.9	28685	4892	17.1
Thi'puram	27808	13882	49.9	23604	4077	17.3
Chandigarh	6909	2995	43.3	7383	994	13.5
Dibrugarh	8309	5617	67.6	3736	1359	36.4
All Registries	177318	93866	52.9	161198	30705	19.0

Table 3.1 and Figure 3.1 give the number and relative proportion of these sites of cancer. As may be observed the highest relative proportion of these sites in either sex (67.6 and 36.4%) was in Dibrugarh. The overall proportion of tobacco related cancers in all registries combined, indicates that over 50 percent (52.9%) of males and nearly 20 percent (19.0%) of females have cancers that are directly attributed to the sites associated with tobacco habit.

Fig. 3.1: Proportion (%) of Tobacco Related Cancers Relative to All Sites

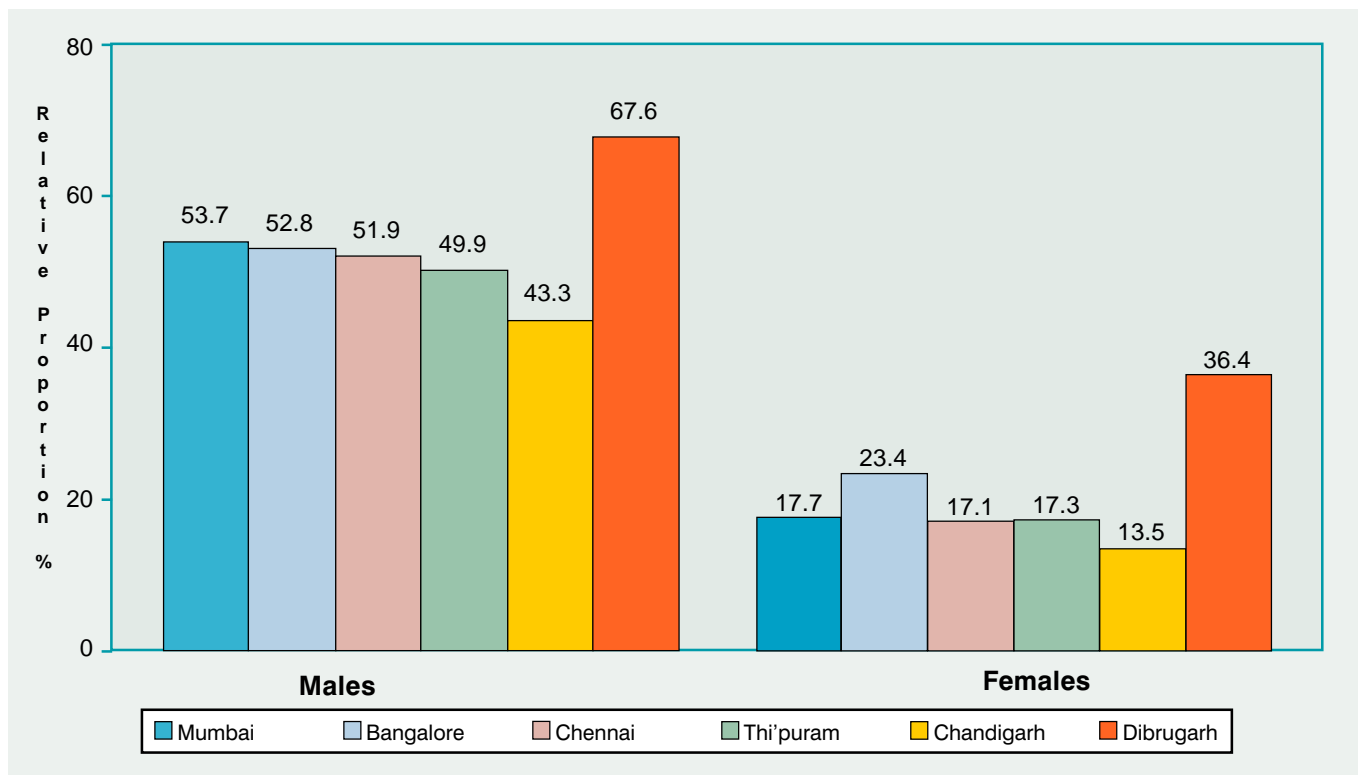
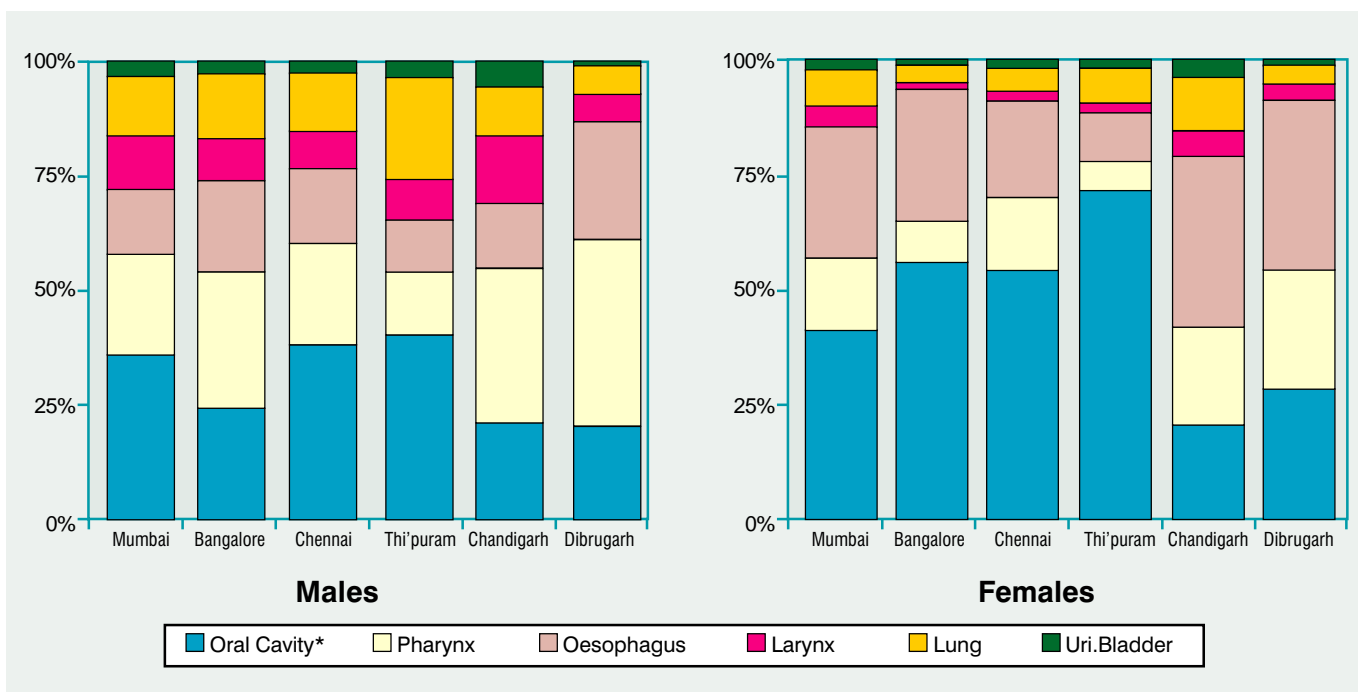


Fig. 3.2 Proportion of Specific Tobacco Related Sites Relative to All Tobacco Related Cancers



* Includes lip and tongue.

Tables 3.2 and 3.3 and Figure 3.2 give the number and relative proportion according to the specific sites of TRC indicated above. The proportion relative to all sites of cancer, and the proportion relative to all tobacco related sites are given in the tables. Cancers of the oral cavity constitute in males and females, one-third and one-half respectively of all TRCs.

In males cancers of the oral cavity constitute about 20 percent of all sites of cancer and 35 to 40 percent of TRCs, in the registries at Mumbai, Chennai and Thiruvananthapuram making it the single most important site related to use of tobacco. This fact is further established if one looks at the figures for females, particularly the proportions relative to all TRCs. It varies from 41.2 percent in Mumbai to 71.7 percent at Thiruvananthapuram with Bangalore also showing a comparatively high relative proportion

TABLE 3.2: Number(#) & Proportion(%) of specific sites of cancer related to use of tobacco relative to all sites of cancer

Males

Site of Cancer	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Oral Cavity*	15084	19.2	3963	12.7	4864	19.8	5615	20.2	618	8.9	1128	13.6
Pharynx	9340	11.9	4892	15.7	2833	11.5	1864	6.7	551	8.0	2317	27.9
Oesophagus	5966	7.6	3323	10.7	2073	8.4	1573	5.7	463	6.7	1434	17.3
Larynx	4937	6.3	1477	4.7	1073	4.4	1235	4.4	429	6.2	341	4.1
Lung	5421	6.9	2368	7.6	1603	6.5	3104	11.2	762	11.0	345	4.2
U.Bladder	1432	1.8	411	1.3	312	1.3	491	1.8	172	2.5	52	0.6
TRC	42180	53.7	16434	52.8	12758	51.9	13882	49.9	2995	43.3	5617	67.6
All sites	78588	100.0	31116	100.0	24588	100.0	27808	100.0	6909	100.0	8309	100.0

Females

Site of Cancer	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Oral Cavity*	4501	7.3	4751	13.1	2647	9.2	2924	12.4	203	2.7	387	10.4
Pharynx	1693	2.7	745	2.1	790	2.8	262	1.1	212	2.9	349	9.3
Oesophagus	3145	5.1	2422	6.7	1024	3.6	431	1.8	372	5.0	506	13.5
Larynx	516	0.8	143	0.4	106	0.4	88	0.4	57	0.8	44	1.2
Lung	837	1.4	325	0.9	235	0.8	305	1.3	113	1.5	65	1.7
U.Bladder	226	0.4	79	0.2	90	0.3	67	0.3	37	0.5	8	0.2
TRC	10918	17.7	8465	23.4	4892	17.1	4077	17.3	994	13.5	1359	36.4
All sites	61602	100.0	36188	100.0	28685	100.0	23604	100.0	7383	100.0	3736	100.0

* Includes lip and tongue

(56.1%). Next to oral cavity cancers of the pharynx and oesophagus appear important in Dibrugarh, Bangalore, Mumbai and Chennai in both sexes. Cancer of the lung appears to have a particularly high relative proportion among males at Chandigarh.

There appeared to be no variation, in either sex, in the relative proportion of TRCs over the years in different registries.

Table 3.4 and Figure 3.3 show the age distribution of these sites of cancer put together. All registries in either sex show similarity in the distribution with the relative proportion increasing from age 30-34 years, reaching a peak at about 60 years of age in males and 55 years in females, except that in Thiruvananthapuram, especially in females, the average age at onset of these cancers appears to be slightly higher.

TABLE 3.3: Number(#) & Relative Proportion(%) of specific sites of cancer related to use of tobacco relative to all Tobacco Related Cancers (TRC)

Males

Site of Cancer	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Oral Cavity*	15084	35.8	3963	24.1	4864	38.1	5615	40.4	618	20.6	1128	20.1
Pharynx	9340	22.1	4892	29.8	2833	22.2	1864	13.4	551	18.4	2317	41.2
Oesophagus	5966	14.1	3323	20.2	2073	16.2	1573	11.3	463	15.5	1434	25.5
Larynx	4937	11.7	1477	9.0	1073	8.4	1235	8.9	429	14.3	341	6.1
Lung	5421	12.9	2368	14.4	1603	12.6	3104	22.4	762	25.4	345	6.1
U.Bladder	1432	3.4	411	2.5	312	2.4	491	3.5	172	5.7	52	0.9
TRC	42180	100.0	16434	100.0	12758	100.0	13882	100.0	2995	100.0	5617	100.0

Females

Site of Cancer	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Oral Cavity*	4501	41.2	4751	56.1	2647	54.1	2924	71.7	203	20.4	387	28.5
Pharynx	1693	15.5	745	8.8	790	16.1	262	6.4	212	21.3	349	25.7
Oesophagus	3145	28.8	2422	28.6	1024	20.9	431	10.6	372	37.4	506	37.2
Larynx	516	4.7	143	1.7	106	2.2	88	2.2	57	5.7	44	3.2
Lung	837	7.7	325	3.8	235	4.8	305	7.5	113	11.4	65	4.8
U.Bladder	226	2.1	79	0.9	90	1.8	67	1.6	37	3.7	8	0.6
TRC	10918	100.0	8465	100.0	4892	100.0	4077	100.0	994	100.0	1359	100.0

* Includes lip and tongue

TABLE 3.4: Number(#) & Relative Proportion(%) of Tobacco Related Cancers by five-year age groups**Males**

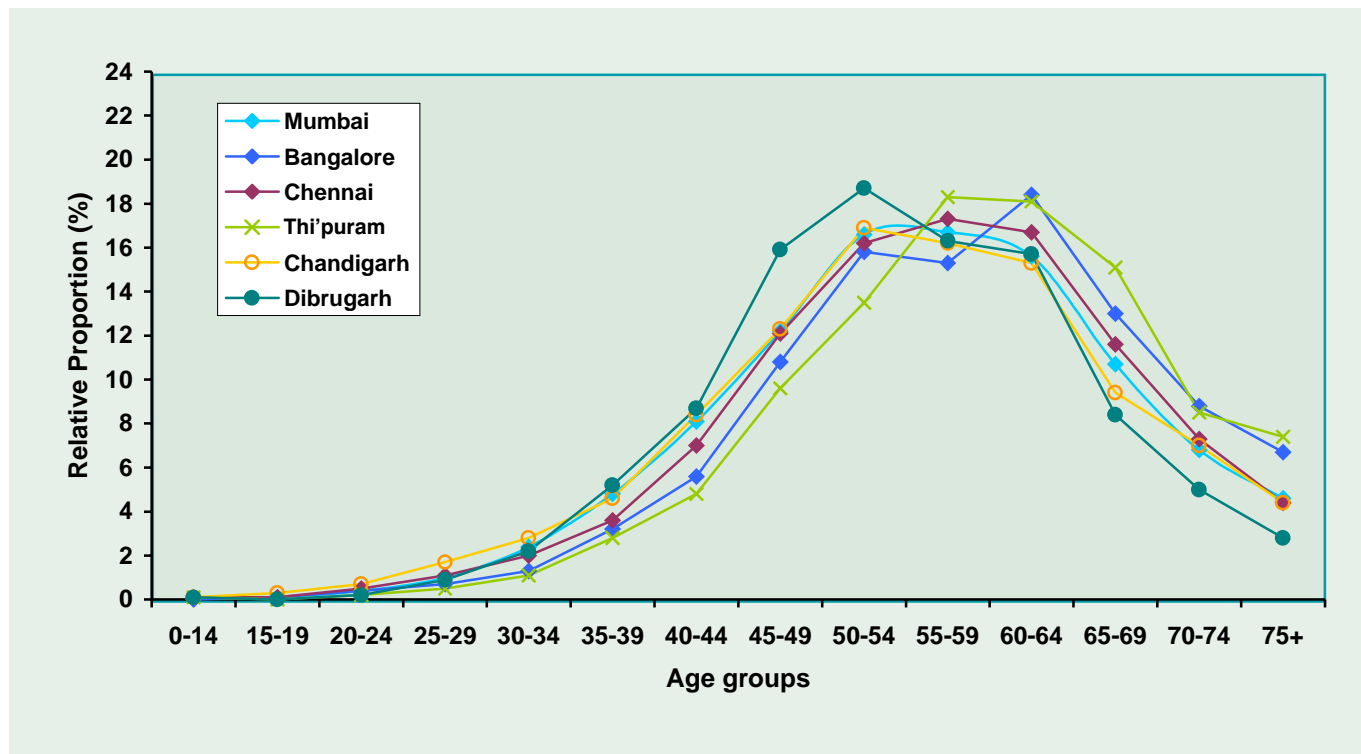
Age Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
0-14	49	0.1	7	0.0	13	0.1	13	0.1	4	0.1	3	0.1
15-19	30	0.1	20	0.1	18	0.1	5	0.0	10	0.3	2	0.0
20-24	151	0.4	60	0.4	67	0.5	32	0.2	20	0.7	11	0.2
25-29	421	1.0	117	0.7	143	1.1	64	0.5	51	1.7	48	0.9
30-34	1014	2.4	219	1.3	255	2.0	149	1.1	84	2.8	124	2.2
35-39	2027	4.8	518	3.2	455	3.6	394	2.8	139	4.6	291	5.2
40-44	3427	8.1	915	5.6	896	7.0	660	4.8	251	8.4	486	8.7
45-49	5143	12.2	1769	10.8	1538	12.1	1339	9.6	367	12.3	895	15.9
50-54	6993	16.6	2596	15.8	2061	16.2	1875	13.5	505	16.9	1049	18.7
55-59	7027	16.7	2514	15.3	2209	17.3	2539	18.3	485	16.2	916	16.3
60-64	6567	15.6	3026	18.4	2130	16.7	2506	18.1	457	15.3	882	15.7
65-69	4533	10.7	2133	13.0	1482	11.6	2091	15.1	281	9.4	470	8.4
70-74	2865	6.8	1443	8.8	927	7.3	1182	8.5	210	7.0	282	5.0
75+	1933	4.6	1097	6.7	564	4.4	1033	7.4	131	4.4	158	2.8
All Ages	42180	100.0	16434	100.0	12758	100.0	13882	100.0	2995	100.0	5617	100.0

Females

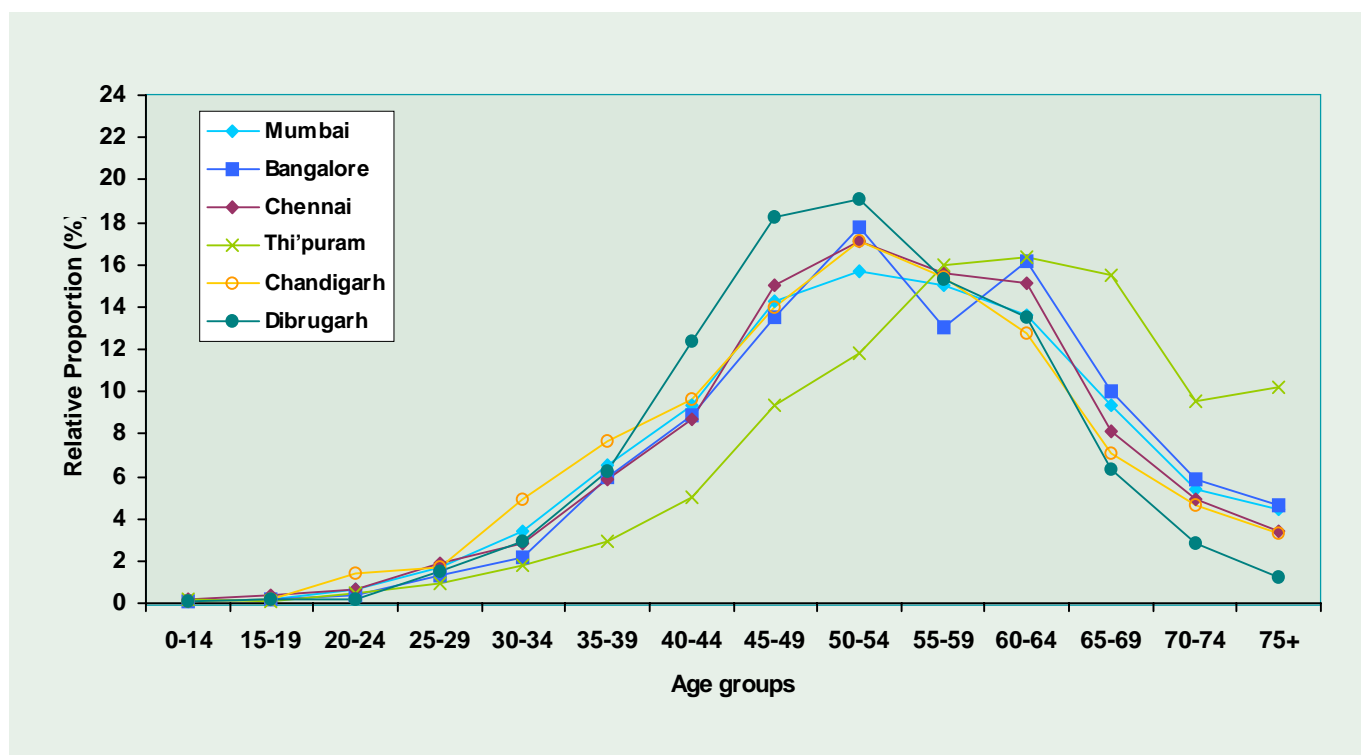
Age Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
0-14	12	0.1	9	0.1	10	0.2	7	0.2	1	0.1	1	0.1
15-19	22	0.2	14	0.2	21	0.4	4	0.1	2	0.2	3	0.2
20-24	79	0.7	36	0.4	35	0.7	22	0.5	14	1.4	3	0.2
25-29	182	1.7	107	1.3	95	1.9	36	0.9	17	1.7	21	1.5
30-34	369	3.4	190	2.2	136	2.8	73	1.8	49	4.9	40	2.9
35-39	714	6.5	505	6.0	289	5.9	120	2.9	77	7.7	84	6.2
40-44	1030	9.4	752	8.9	427	8.7	203	5.0	95	9.6	168	12.4
45-49	1564	14.3	1147	13.5	734	15.0	383	9.4	139	14.0	248	18.2
50-54	1717	15.7	1503	17.8	838	17.1	481	11.8	170	17.1	260	19.1
55-59	1638	15.0	1100	13.0	764	15.6	652	16.0	153	15.4	208	15.3
60-64	1490	13.6	1368	16.2	738	15.1	663	16.3	127	12.8	183	13.5
65-69	1027	9.4	848	10.0	397	8.1	630	15.5	71	7.1	86	6.3
70-74	595	5.4	500	5.9	242	4.9	388	9.5	46	4.6	38	2.8
75+	479	4.4	386	4.6	166	3.4	415	10.2	33	3.3	16	1.2
All Ages	10918	100.0	8465	100.0	4892	100.0	4077	100.0	994	100.0	1359	100.0

Fig. 3.3: Relative Proportion(%) of Tobacco Related Cancers by Five-Year Age Group

Males



Females



Chapter 4

BASIS OF DIAGNOSIS

The basis of diagnosis in this chapter is one index of the reliability of diagnosis. The use and value of cytology in diagnosis, the introduction of fine needle aspiration cytology, and changes in trends in the method of diagnosis are all important. It would be important to know the level of correlation between cytology and histopathology diagnosis as well as that between radiological and histological diagnosis.

The basis of diagnosis of cancers registered at the various centres is shown in Table 4.1 and diagrammatically represented in Figure 4.1. All registries show a slightly higher proportion of microscopic confirmation of diagnosis in females as compared to males, though this proportion is identical in the sexes at Dibrugarh.

The degree of microscopic confirmation varies from 69.5 percent in males at Chennai to 96.1 percent among females at Chandigarh. Correspondingly, there is a relatively higher proportion of clinical diagnosis in both sexes at Chennai (23.4% in males and 26.1% in females). Similarly the proportion of diagnoses based on radiology (X-ray) is slightly higher in both sexes at Dibrugarh (9.2% in males & 6.7% in females) and in males at Thiruvananthapuram (6.3%).

Table 4.2 and Figure 4.2 give further details of the number and relative proportion of different types of microscopic diagnosis. In Bangalore and Chandigarh the proportion of diagnoses based on cytology is relatively high. Dibrugarh has a high proportion of cases based on secondary histology.

The trends in the proportion of microscopic diagnosis over the years and the results of tests of statistical significance are shown in Table 4.3. There appears to be a statistically significant increase in the proportions of microscopic diagnosis in both males and females at Chennai, Thiruvananthapuram and Dibrugarh.

TABLE 4.1: Number(#) & Relative Proportion(%) of cancers based on different methods of diagnosis**Males**

Registry	Microscopic		Clinical		X-ray		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai	71781	91.3	1376	1.8	1462	1.9	3969	5.1	78588	100.0
Bangalore	28360	91.1	1174	3.8	960	3.1	622	2.0	31116	100.0
Chennai	17092	69.5	5756	23.4	1146	4.7	594	2.4	24588	100.0
Thi'puram	23918	86.0	1546	5.6	1757	6.3	587	2.1	27808	100.0
Chandigarh	6528	94.5	50	0.7	160	2.3	171	2.5	6909	100.0
Dibrugarh	7335	88.3	80	1.0	761	9.2	133	1.6	8309	100.0

Females

Registry	Microscopic		Clinical		X-ray		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai	56369	91.5	1019	1.7	705	1.1	3509	5.7	61602	100.0
Bangalore	34318	94.8	875	2.4	462	1.3	533	1.5	36188	100.0
Chennai	20504	71.5	7491	26.1	446	1.6	244	0.9	28685	100.0
Thi'puram	21306	90.3	1418	6.0	597	2.5	283	1.2	23604	100.0
Chandigarh	7095	96.1	114	1.5	68	0.9	106	1.4	7383	100.0
Dibrugarh	3298	88.3	96	2.6	251	6.7	91	2.4	3736	100.0

Fig. 4.1(a): Proportion (%) of Patients according to Method of Diagnosis

Males

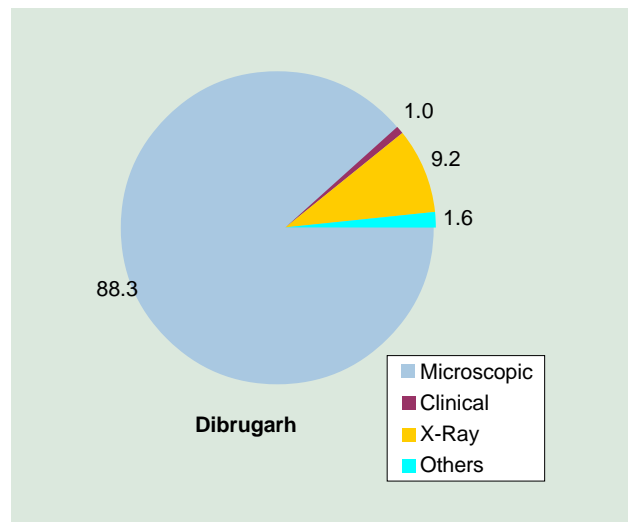
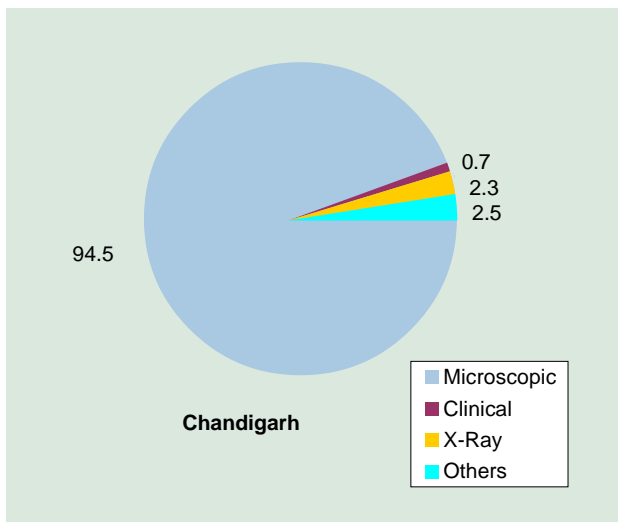
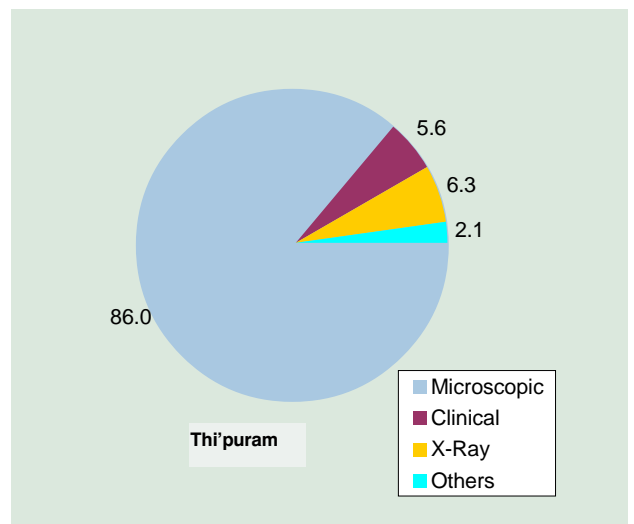
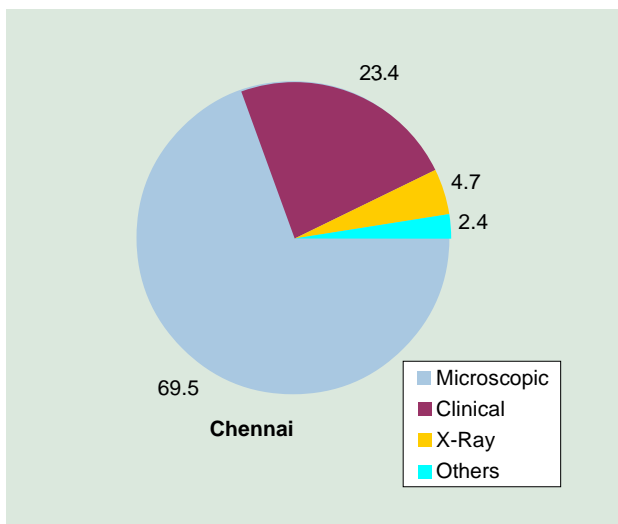
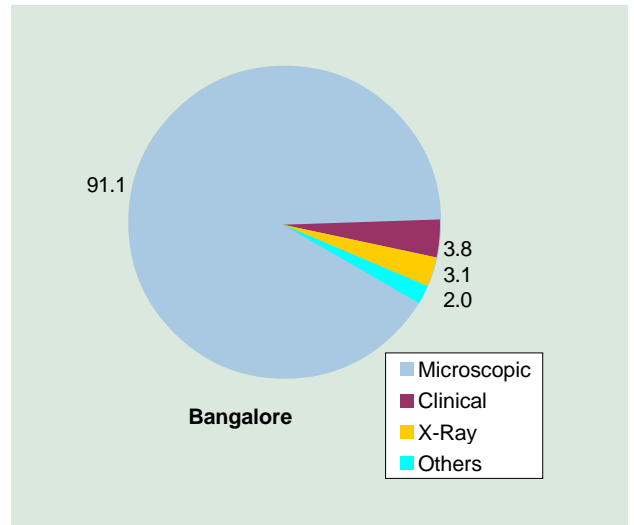
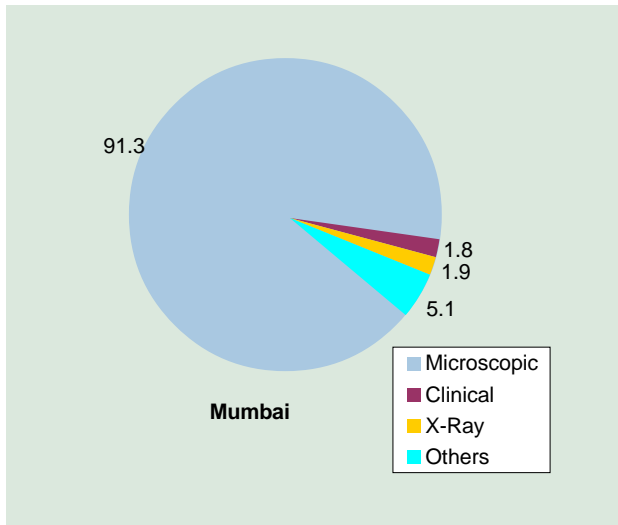


Fig. 4.1(b): Proportion (%) of Patients according to Method of Diagnosis

Females

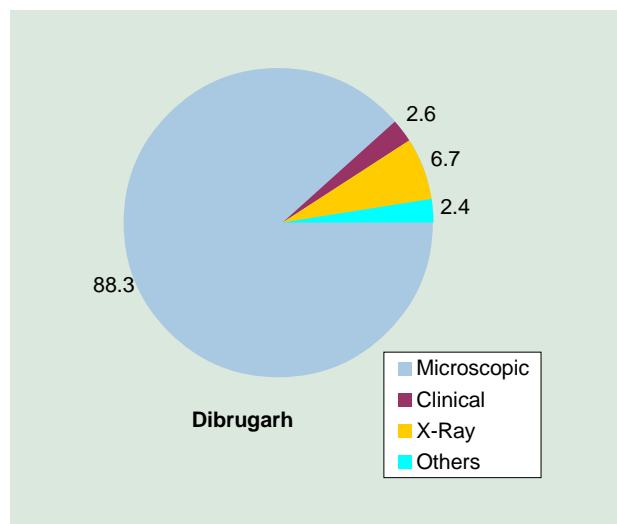
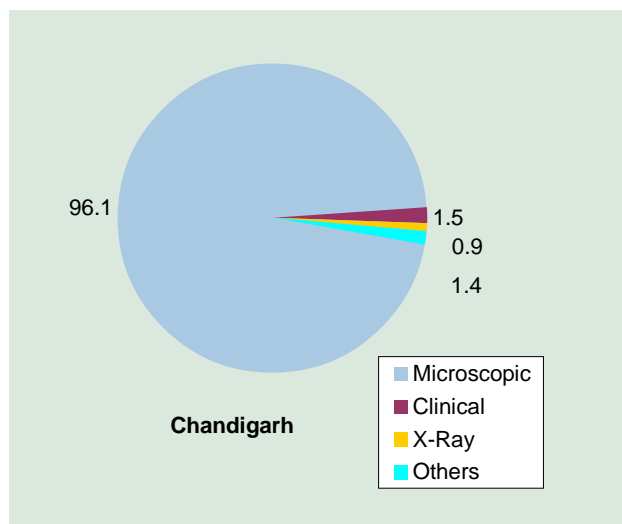
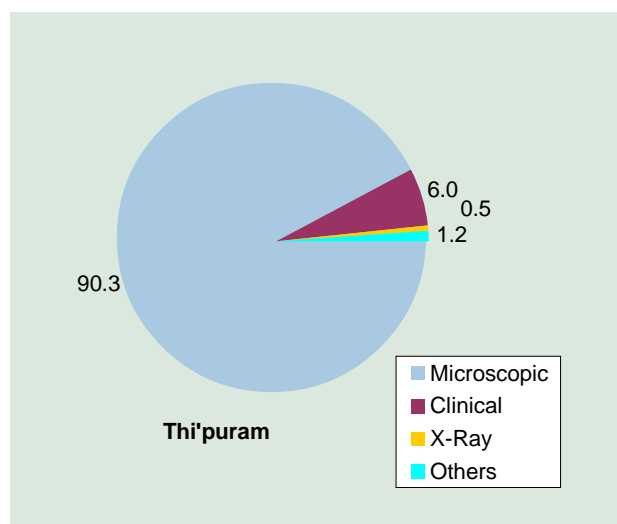
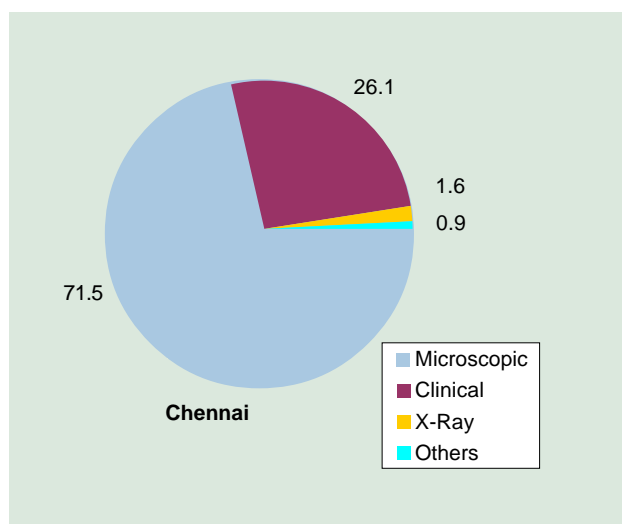
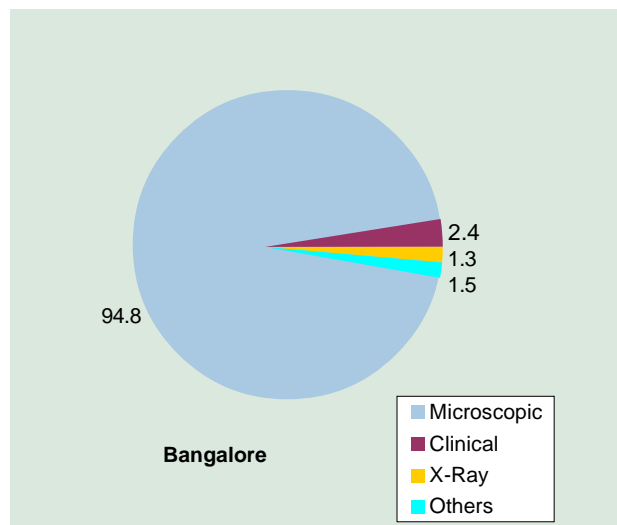
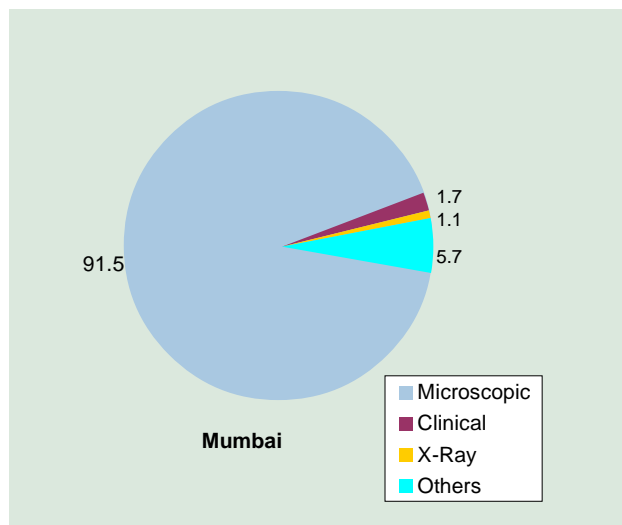


TABLE 4.2: Number (#) & Relative Proportion (%) of cancers based on different types of Microscopic Diagnosis**Males**

Type of Microscopic Diagnosis	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Primary Histology	52322	72.9	18580	65.5	14049	82.2	18264	76.4	4862	74.5	5988	81.6
Secondary Histology	3861	5.4	1337	4.7	1048	6.1	1708	7.1	198	3.0	976	13.3
Cytology	9521	13.3	6582	23.2	677	4.0	2297	9.6	1047	16.0	193	2.6
Peripheral Blood	32	0.0	400	1.4	96	0.6	136	0.6	17	0.3	166	2.3
Bone Marrow	6043	8.4	1461	5.2	1222	7.1	1512	6.3	404	6.2	11	0.1
All Microscopic*	71779	100.0	28360	100.0	17092	100.0	23917	100.0	6528	100.0	7334	100.0

Females

Type of Microscopic Diagnosis	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Primary Histology	47404	84.1	29726	86.6	18446	90.0	18328	86.0	6151	84.1	2807	85.5
Secondary Histology	1741	3.1	628	1.8	468	2.3	700	3.3	119	3.1	296	9.0
Cytology	4624	8.2	2932	8.5	860	4.2	1195	5.6	633	8.9	120	3.6
Peripheral Blood	11	0.0	244	0.7	66	0.3	116	0.5	5	0.1	69	2.1
Bone Marrow	2587	4.6	787	2.3	664	3.2	967	4.5	187	4.6	6	0.2
All Microscopic*	56367	100.0	34317	100.0	20504	100.0	21306	100.0	7095	100.0	3298	100.0

* Excludes few cases diagnosed by autopsy.

Fig. 4.2(a): Proportion (%) of Microscopically Diagnosed patients according to specific Microscopic Diagnosis

Males

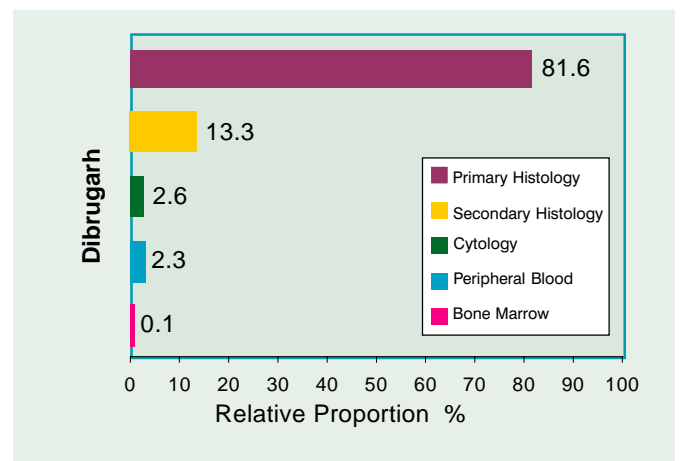
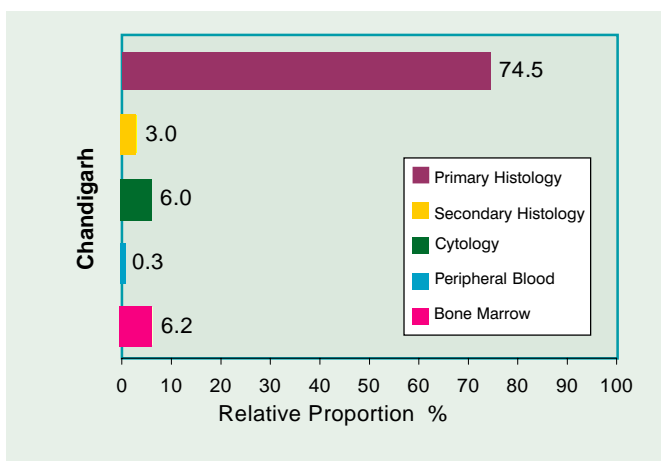
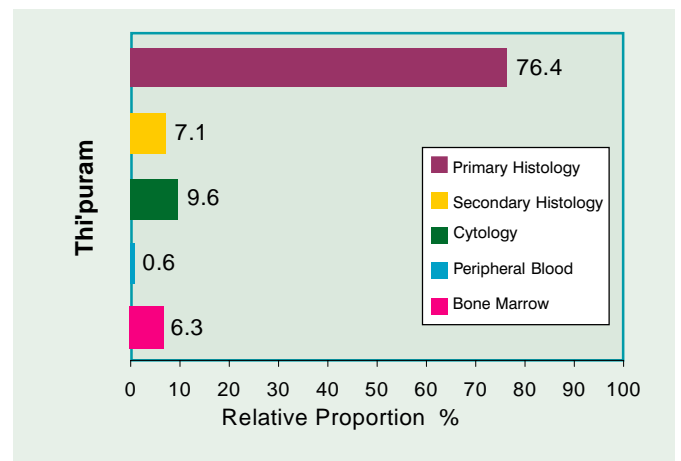
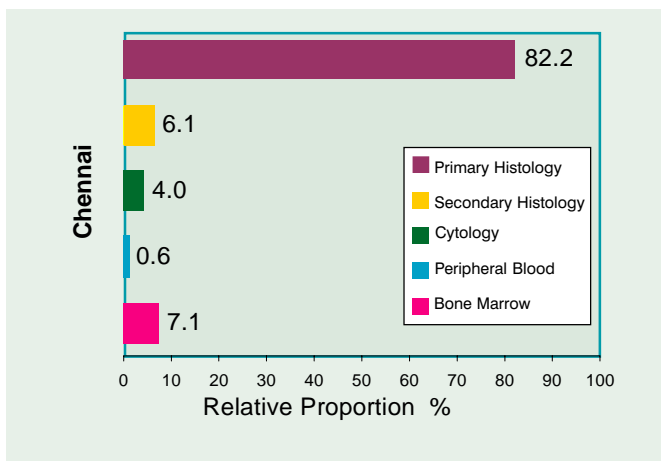
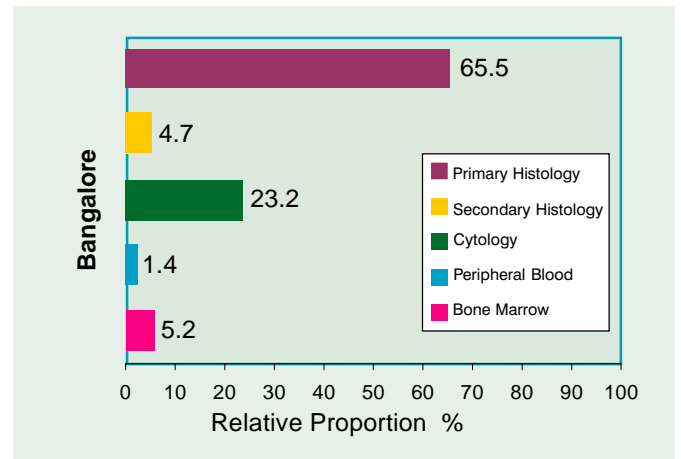
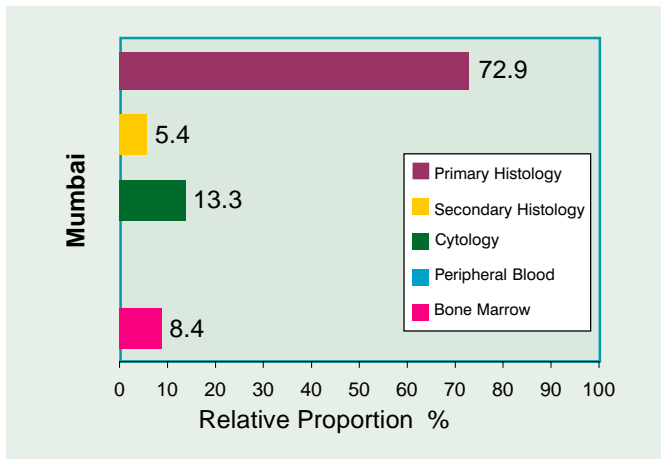


Fig. 4.2(b): Proportion (%) of Microscopically Diagnosed patients according to specific Microscopic Diagnosis

Females

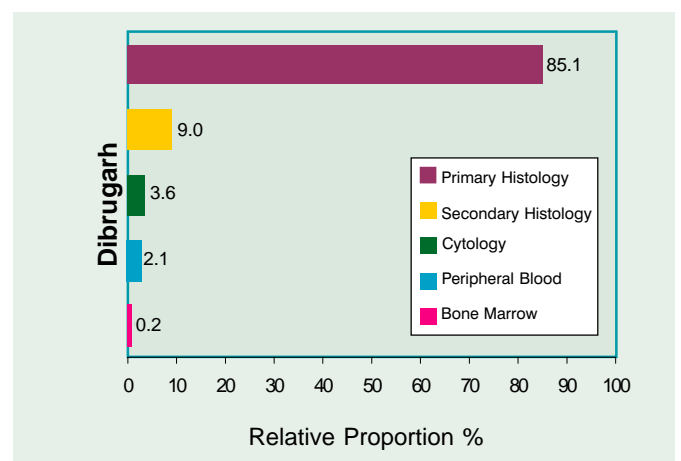
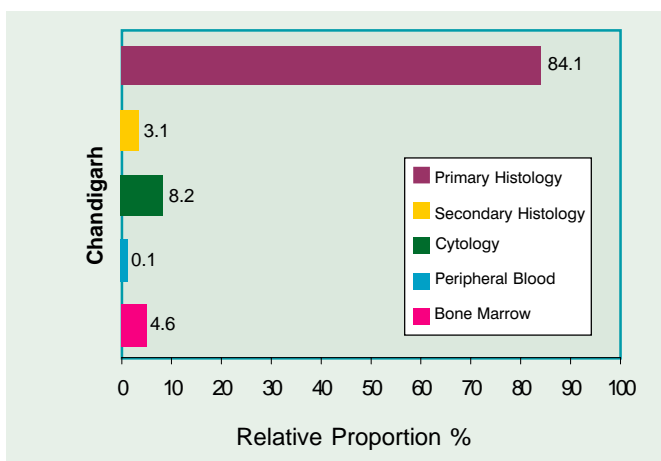
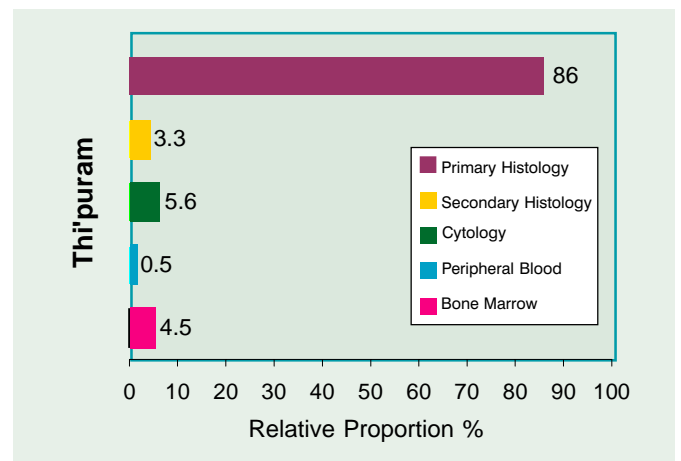
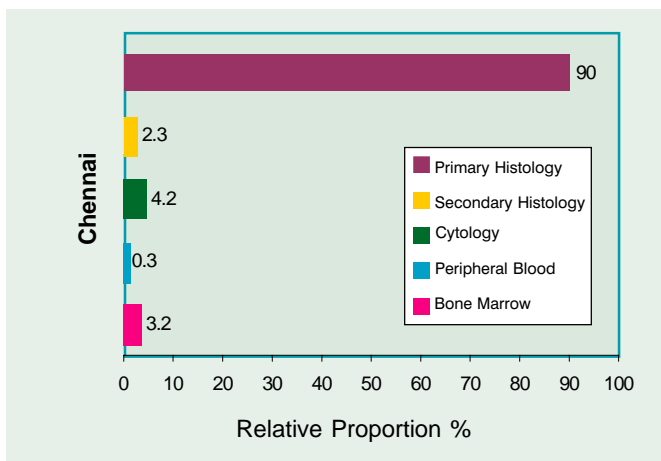
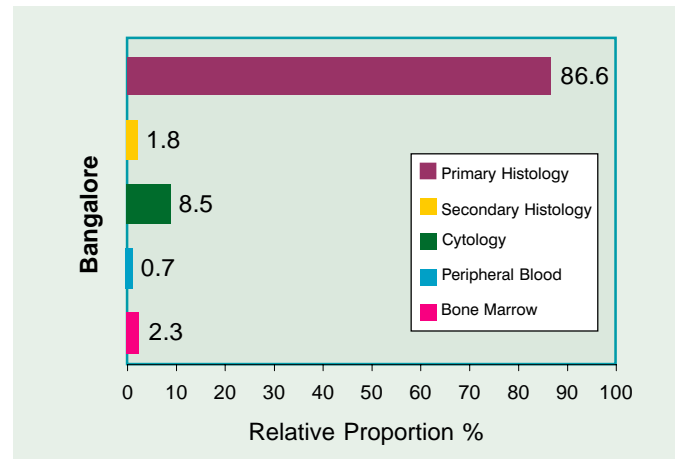
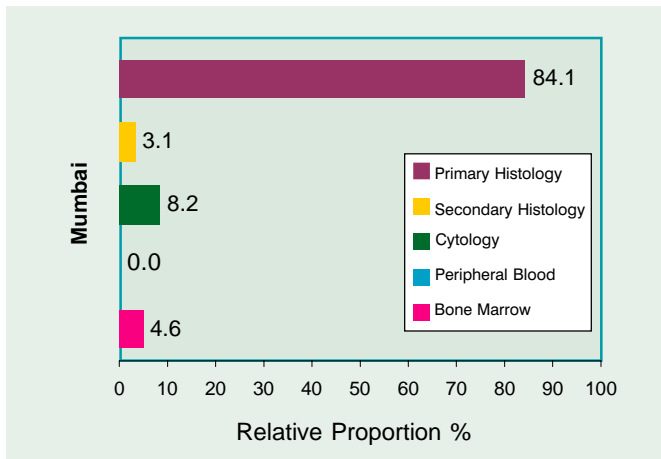


TABLE 4.3: Number (#) & Relative Proportion (%) of Microscopic Diagnosis across different years of diagnosis**Males**

Year of Diagnosis	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
1984	5358	93.3	2132	88.9	1262	61.4	1875	83.5	1126	93.4	713	82.9
1985	6078	93.0	2436	84.7	1453	63.9	1861	83.5	1053	92.1	743	86.8
1986	6461	93.1	2763	89.9	1614	70.4	2056	83.6	1020	93.6	805	86.7
1987	6916	92.5	2804	92.5	1785	70.7	2218	83.9	1144	96.9	754	87.9
1988	7737	93.0	3074	92.7	1917	71.2	2396	86.6	1141	94.6	770	88.0
1989	7884	91.1	3029	90.9	1885	69.1	2220	85.2	1044	96.3	738	89.6
1990	7846	89.2	3037	91.3	1783	68.1	2545	85.8	-	-	722	89.4
1991	8030	90.4	3091	92.5	1788	71.8	2840	87.3	-	-	662	90.2
1992	7858	89.4	3105	93.1	1866	72.6	2864	88.2	-	-	696	90.5
1993	7613	90.0	2889	93.6	1739	74.2	3043	89.7	-	-	732	91.8
1984-1990	71781	91.3	28360	91.1	17092	69.5	23918	86.0	6528	94.5	7335	88.3

* b-value
p-value- 0.49
<0.001[@]+ 0.66
<0.02+ 1.05
<0.01+ 0.68
<0.001+ 0.72
0.10+ 0.79
<0.001**Females**

Year of Diagnosis	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
1984	4534	93.1	2670	92.3	1570	64.1	1654	87.5	1146	93.9	282	83.4
1985	5141	94.1	2930	91.8	1702	63.8	1717	87.6	1219	94.9	304	85.6
1986	5169	93.8	3172	95.2	1866	68.6	1875	89.4	1279	96.5	325	84.4
1987	5465	93.1	3497	96.0	2082	69.7	1939	88.5	1229	97.2	323	83.7
1988	5981	93.5	3717	96.0	2276	73.8	2182	91.1	1160	97.0	359	88.9
1989	5889	90.4	3780	95.4	2272	71.6	1974	90.6	1062	97.2	326	90.6
1990	5900	90.0	3825	95.2	2265	71.8	2227	89.0	-	-	368	90.9
1991	6188	90.5	3571	94.8	2065	71.6	2529	91.2	-	-	302	91.0
1992	6149	88.9	3779	95.1	2181	75.3	2593	92.6	-	-	327	90.3
1993	5953	89.3	3377	95.5	2225	83.2	2616	92.8	-	-	382	93.4
1984-1990	56369	91.5	34318	94.8	20504	71.5	21306	90.3	7095	96.1	3298	88.3

* b-value
p-value- 0.60
<0.001[@]+ 0.28
0.1+ 1.65
<0.001+ 0.56
<0.001+ 0.67
<0.02+ 1.09
<0.001

* = Test of Significance for trend

@ = significant for declining trend

Chapter 5

CERTAIN ASPECTS IN MANAGEMENT OF THE CANCER PATIENT: ANALYTIC AND NON-ANALYTIC CASES

This chapter gives an overview of the proportion of patients presenting in various states of diagnoses and treatment. It emphasizes the need for distinguishing patients who have been treated elsewhere and those treated only at the reporting hospital/institution.

Cancer patients at any centre present at various stages of diagnoses and treatment.

This could be:

1. Clinical suspicion, to rule out malignancy;
2. Clinical diagnosis, to confirm malignancy;
3. Radiological diagnosis, to confirm malignancy;
4. Confirmed microscopic diagnosis of malignancy, no cancer directed treatment whatsoever; this has to be initiated.
5. Confirmed diagnosis, some form of cancer directed treatment given; further cancer directed treatment required;
6. Confirmed diagnosis, all possible forms of cancer directed treatment given; referred for assessment/pain relief;
7. Confirmed diagnosis, but no cancer directed treatment given, either prior to registration or after.

To know and assess the quantum and quality of diagnosis, separation of the first four categories is required. For purposes of assessing and evaluating stage and treatment it is necessary to separate the last three from those who have come for the first time for cancer directed treatment (first four above). The nature of work-up and type of management could be different in these groups. Therefore, for examining and analysing patient information pertaining to clinical stage and treatment, the data from the Hospital Based Cancer Registries has been categorised into the following groups:

- A. **Prior Treatment Only:** Those patients who have received some or complete cancer directed treatment before registration and have not received any further treatment at the reporting institution. Usually, 'Prior Treatment' refers to treatment had elsewhere, other than the reporting institution, though in some instances (see below) it could be that the patient has re-registered.
- B. **Prior Treatment & Treatment at Reporting Institution:** These are patients who have received cancer directed treatment prior to registration and have received further cancer directed treatment at the reporting institution.
- C. **Treatment Only at Reporting Institution:** Patients who have come for the first time to the reporting institution with or without a confirmed diagnosis of malignancy, have not received any cancer directed treatment earlier and have received cancer directed treatment at the Reporting Institution.
- D. **No Cancer Directed Treatment:** This group includes patients who have either not received or not accepted any cancer directed treatment. It also includes patients who have not completed any form of treatment and where the treatment status is unknown.

The above typifies the main categories of patients at presentation and the data from most centres fall into these. However, some subtle differences in interpretation could exist. There could be patients, who, though newly registered had been diagnosed and treated earlier in the reporting institution or elsewhere. Some registries have coded these cases as 'recurrent cancers' against the item "Clinical Extent of Disease". However, as all of these cases fall under the category 'Prior Treatment Only' or 'Prior Treatment & Treatment at Reporting Institution' these are not separately considered.

Such categorization enables one to obtain a more correct picture of clinical stage at presentation, treatment or type of treatment given and other details including outcome. In order to avoid such mixing up of cases and make the interpretation more meaningful, the standard practice in Hospital Based Cancer Registries is to divide the first two groups (A & B) as 'Non-Analytic cases' and the previously untreated patients in the next two groups (C & D) as 'Analytic Cases' (Young, JL, 1991). The category 'D' where generally patients have not received any form of cancer directed treatment (including those who have received incomplete treatment) is probably peculiar to the Indian set-up as opposed to that of a western country. The reasons as to why a proportion of patients in all the centres go without treatment or at least recorded as such, is for individual registries/centres to determine and is beyond the purview of this report. Similarly, it is possible that some of these patients categorised as 'No Cancer Directed Treatment' go elsewhere to receive treatment.

Before considering the detailed description of the analyses of these groups in the subsequent chapters, an overview of the data under these four categories in the different registries is presented.

Table 5.1 and Figure 5.1 show the number and relative proportions according to these broad groups, in different registries. Overall, 18-23% of patients registered in the hospital cancer registry had received some form of cancer directed treatment or the other with about 50% of these receiving further such treatment

in the reporting institution. On the average, approximately one-third of patients in either sex fall in the category 'No Cancer Directed Treatment'. Thus, the proportion of patients who received cancer directed treatment was less than 50% of all cancer patients registered with the hospital registry and therefore with the institution.

TABLE 5.1: Number(#) & Relative Proportion(%) of cancer patients according to Broad Groups of Treatment(Tmt) at Reporting Institution(RI) and/or elsewhere

Males

Treatment Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	9545	12.1	2245	7.2	4393	17.9	1418	5.1	200	2.9	48	0.6
Prior & Tmt. at RI	8060	10.3	2443	7.9	908	3.7	2274	8.2	339	4.9	277	3.3
Tmt. Only at RI	35432	45.1	14189	45.6	8038	32.7	16671	60.0	4776	69.1	6647	80.0
No CDT*	25551	32.5	12239	39.3	11249	45.7	7445	26.8	1594	23.1	1337	16.1
Total Patients	78588	100.0	31116	100.0	24588	100.0	27808	100.0	6909	100.0	8309	100.0

Females

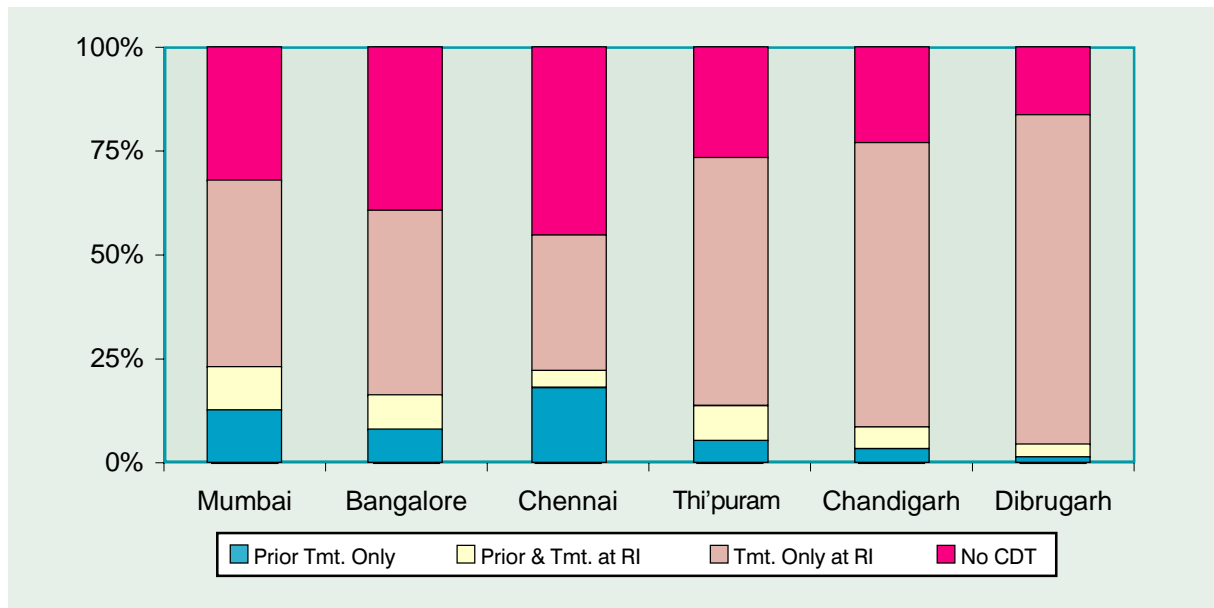
Treatment Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	8737	14.2	2454	6.8	4143	14.4	1761	7.5	269	3.6	35	0.9
Prior & Tmt. at RI	10595	17.2	3426	9.5	1733	6.0	4080	17.3	872	11.8	201	5.4
Tmt. Only at RI	26581	43.1	17004	47.0	11404	39.8	13297	56.3	4667	63.2	2934	78.5
No CDT*	15689	25.5	13304	36.8	11405	39.8	4466	18.9	1575	21.3	566	15.1
Total Patients	61602	100.0	36188	100.0	28685	100.0	23604	100.0	7383	100.0	3736	100.0

* CDT = Cancer Directed Treatment

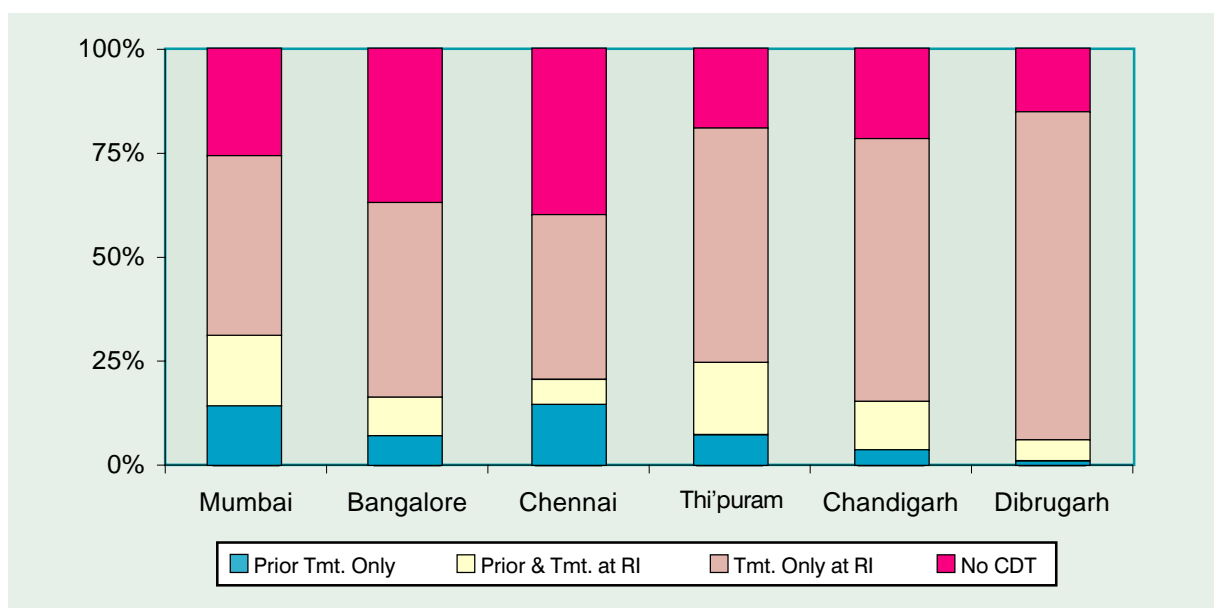
Among individual registries the proportion of patients who received prior cancer directed treatment and registered at the reporting institution but received no further treatment varied from less than one percent among males in Dibrugarh to 17.9 percent among males in Chennai. Similarly, the relative proportion in the second group, viz., those patients who received prior treatment as well as treatment at the reporting institution, also show variation among centres, being low in both males and females in Dibrugarh (3.3% and 5.4% respectively) and fairly high in Mumbai (10.3% and 17.2% in males and females respectively). The relative proportion of patients treated only at the reporting institution is comparatively higher in the centres at Thiruvananthapuram, Chandigarh and Dibrugarh.

Fig. 5.1: Proportion(%) According to Broad Groups of Treatment(Tmt)

Males



Females



RI = Reporting Institution

TABLE 5.2: Total number of cancer patients (Pts) registered, total number of treatment procedures (Proc) performed and procedures/patients ratio

Registry	Males			Females		
	Total Pts.	Total Proc.	Ratio	Total Pts.	Total Proc.	Ratio
Mumbai	78588	56191	0.72	61602	49855	0.81
Bangalore	31116	21441	0.69	36188	26591	0.73
Chennai	24588	10692	0.43	28685	18664	0.65
Thi'puram	27808	23791	0.86	23604	23756	1.01
Chandigarh	6909	7055	1.02	7383	7516	1.02
Dibrugarh	8309	7454	0.90	3736	3601	0.96

While the number of patients registered at a given institution is one measure of the quantum or burden of cancers in that institution, the overall number of treatment procedures, whether surgery, radiotherapy, chemotherapy, etc., is another. Table 5.2 gives the total number of treatment procedures and the total number of patients registered during the same period. The ratio of total procedures to total patients is also shown. This is fairly high in Chandigarh, Dibrugarh and Thiruvananthapuram and relatively lower at Mumbai, Bangalore and Chennai.

While patients registered and total treatment procedures given, is some indication of the patient load, they by no means give the complete picture of the workload of the institution with reference to patient care. Several aspects need to be emphasized here.

First, diagnostic procedures, which constitute a substantial workload has not been considered here. As mentioned earlier, all patients referred to the reporting institution need not be proved to have cancer. Several diagnostic procedures would be done for these patients who eventually may not be diagnosed to have cancer.

Secondly, total treatments refers to newly registered patients of that year and do not take into account treatments given once again to already treated patients during the previous year(s).

Thirdly, it is likely that for various practical difficulties, all registries may not have strictly followed the cut-off date (six months from date of diagnosis) for recording treatment.

Despite the above, the patient procedure ratio, gives some indication of treatments given in different registries.

In summary, the proportion of Analytic Cases relative to all patients registered in the combined data of the HBCRs was 82% among males and 76% in females. Of the Analytic Cases, 59% of males and 62% of females are reported to have received some form of single or combination of cancer directed treatment at the reporting institution.

Chapter 6

ANALYTIC CASES I: CLINICAL EXTENT OF DISEASE AT PRESENTATION

The proportion of patients presenting at various clinical stages is shown in this Chapter. Clinical stage or extent of disease at presentation of cancer is directly related to the type and effectiveness of treatment and along with survival data represents the acuteness of the cancer problem. This is one of the most important baseline indicators for initiating cancer control activity in the area and the success of any education and early detection programmes in the area will be reflected in changes in proportions of stage of presentation of relevant sites of cancer.

From the discussion in the preceding chapter, in examining clinical stage at presentation patients who have undergone previous treatment have to be excluded. Thus the number and relative proportions of patients in different clinical stages at presentation given below, includes the 'Analytic Cases' - Group C (Patients who received treatment at Reporting Institution only) and Group D (Patients under the category No Cancer Directed Treatment). It excludes the 'Non-Analytic Cases', which consists of the broad treatment groups - Group A (Patients who received Prior Treatment Only) and Group B (Patients who received Prior Treatment and Treatment at Reporting Institution).

Table 6.1 and Figure 6.1 give the number and relative proportion of cancer patients in various clinical stages of disease presenting at the time of registering at the reporting institution. The relative proportion of patients presenting with localised disease varies from 5.1 percent in males in Chennai to 24.3 percent among males in Dibrugarh. Similarly, the relative proportion of patients presenting with distant metastases and/or advanced disease varies from 8.9 percent among males in Dibrugarh to 18.1 percent of males in Bangalore. The overall figures of all registries suggest that, on an average, 17.4 percent of male patients and about 14.9 percent of female patients present at an early stage of cancer when the disease is localised. Almost 50 (48.3%) percent of males and another one-third (62.6%) of females have disease that has extended or spread to beyond the local site of cancer but is not advanced or spread to the distant areas of the body. Over 16 percent of males and nearly 13 (12.7%) percent of females present with fairly advanced cancer. The proportions under the category 'Others' mainly refers to Lymphomas and Leukaemias, which are generally not staged according to the above system.

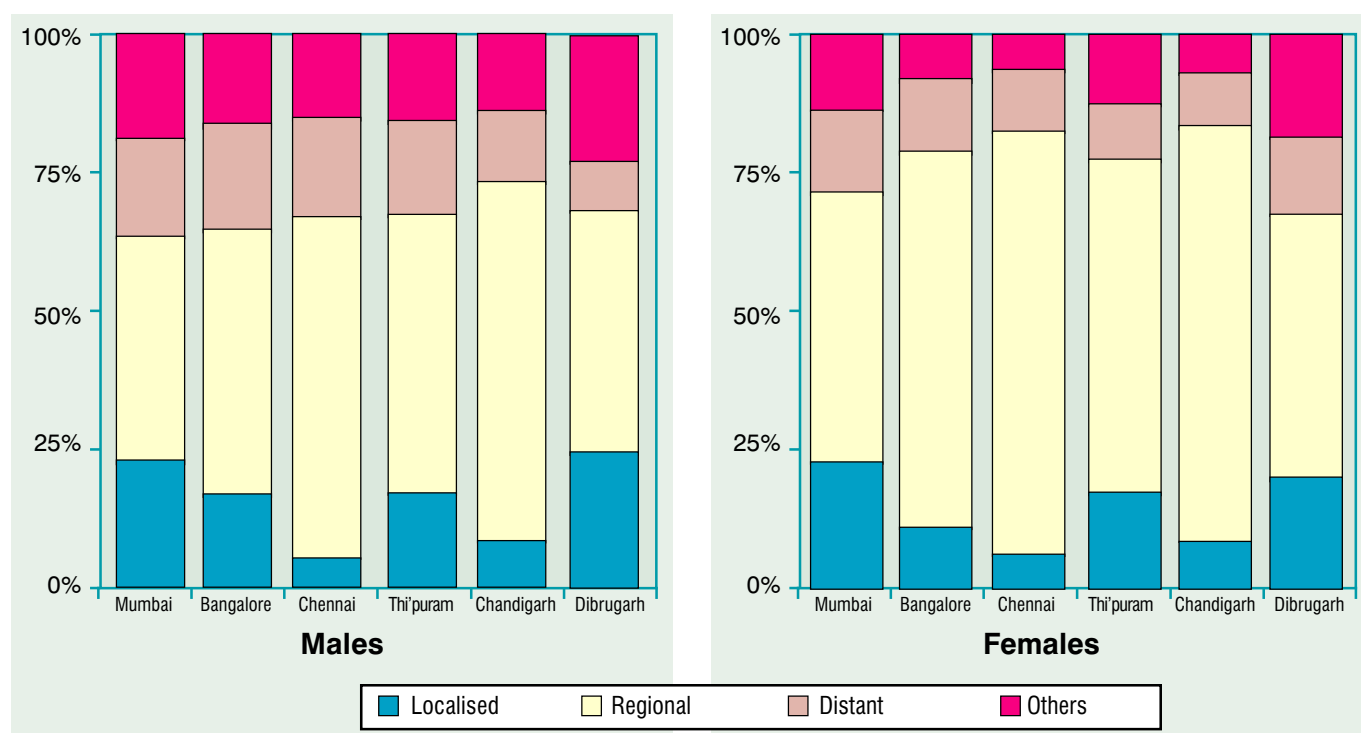
The variation in the relative proportion of cancers by clinical extent of disease over the ten-year time period 1984-93 was examined for each registry as well as for data of all registries combined. Overall a slight fall in the proportion of cancers presenting with advanced (distant) disease was found, but generally no specific steady trend in any particular direction was observed.

TABLE 6.1: Number(#) and Relative Proportion(%) of patients according to Clinical Extent of Disease (Excludes Patients Previously Treated)**Males**

Registry	Localised		Regional		Distant		Others		Unknown		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai	13644	22.4	25388	41.6	10256	16.8	10532	17.3	1163	1.9	60983	100.0
Bangalore	4141	15.7	12952	49.0	4796	18.1	3689	14.0	850	3.2	26428	100.0
Chennai	986	5.1	11915	61.8	3433	17.8	2108	10.9	845	4.4	19287	100.0
Thi'puram	4046	16.8	12171	50.5	3969	16.5	2809	11.6	1121	4.6	24116	100.0
Chandigarh	500	7.8	4175	65.5	764	12.0	897	14.1	34	0.5	6370	100.0
Dibrugarh	1938	24.3	3459	43.3	712	8.9	1266	15.9	609	7.6	7984	100.0

Females

Registry	Localised		Regional		Distant		Others		Unknown		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai	9626	22.8	20878	49.4	6366	15.1	4622	10.9	778	1.8	42270	100.0
Bangalore	3206	10.6	20955	69.1	3905	12.9	1819	6.0	423	1.4	30308	100.0
Chennai	1279	5.6	17801	78.0	2375	10.4	1005	4.4	349	1.5	22809	100.0
Thi'puram	3021	17.0	10816	60.9	1820	10.2	1525	8.6	581	3.3	17763	100.0
Chandigarh	508	8.1	4747	76.0	609	9.8	362	5.8	16	0.3	6242	100.0
Dibrugarh	692	19.8	1681	48.0	502	14.3	464	13.3	161	4.6	3500	100.0

Fig. 6.1: Proportion of Patients According to Clinical Extent of Disease

Chapter 7

ANALYTIC CASES II: TREATMENT ONLY AT REPORTING INSTITUTION

This chapter gives the details of treatment at the reporting institution. This is for patients who have not received treatment earlier. The types of treatment and their proportions have been tabulated. They give an idea of the forms of treatment pursued in a given institution based on which the costs and outcome can be worked out.

This category is by far the most important of the broad treatment groups, since it best represents the contribution to the treatment aspect of patient care of a given registry/institution. This chapter gives an overview of all the sites of cancer combined, but it has to be emphasised that this would be more meaningful and interesting when these same tables are examined separately for individual sites. As examples, oral cancers, cancer cervix and female breast cancer are discussed in the subsequent chapters.

The first table (Table 7.1) gives an overview of the number of patients treated during the period and the total number of treatment procedures instituted. Unlike the previous table (Table 5.2) on the same aspect, all patients counted here, have received one or more forms of cancer directed treatment. Thus, the procedure/patient ratio gives a better picture of the treatment(s) received by a given patient in an institution. As may be observed these ratios are indeed comparable between registries, except for the slightly lower ratio seen at Dibrugarh. Table 7.1 is further diagrammatically represented in Figure 7.1.

TYPES OF TREATMENT

Table 7.2 and corresponding figures (figures 7.2 & 7.3) give the numbers and relative proportions of cancer patients according to type of specific treatment given, whether only one type of treatment has been given (Single Modality Therapy) or more than one type of treatment (Combination Therapy) has been given. It also gives the overall number and relative proportion of any treatment with reference to the total patients treated.

TABLE 7.1: Total number of cancer patients (Pts) registered, total number of treatment procedures (Proc) performed and procedures/patients ratio

Registry	Males			Females		
	Total Pts.	Total Proc.	Ratio	Total Pts.	Total Proc.	Ratio
Mumbai	35432	45873	1.29	26581	35443	1.33
Bangalore	14189	18386	1.30	17004	21537	1.27
Chennai	8038	9604	1.19	11404	15554	1.36
Thi'puram	16671	21153	1.27	13297	18067	1.36
Chandigarh	4776	6603	1.38	4667	6393	1.37
Dibrugarh	6647	7131	1.07	2934	3368	1.15

Fig. 7.1: Procedure - Patient Ratio (Patients Treated only at Reporting Institution)

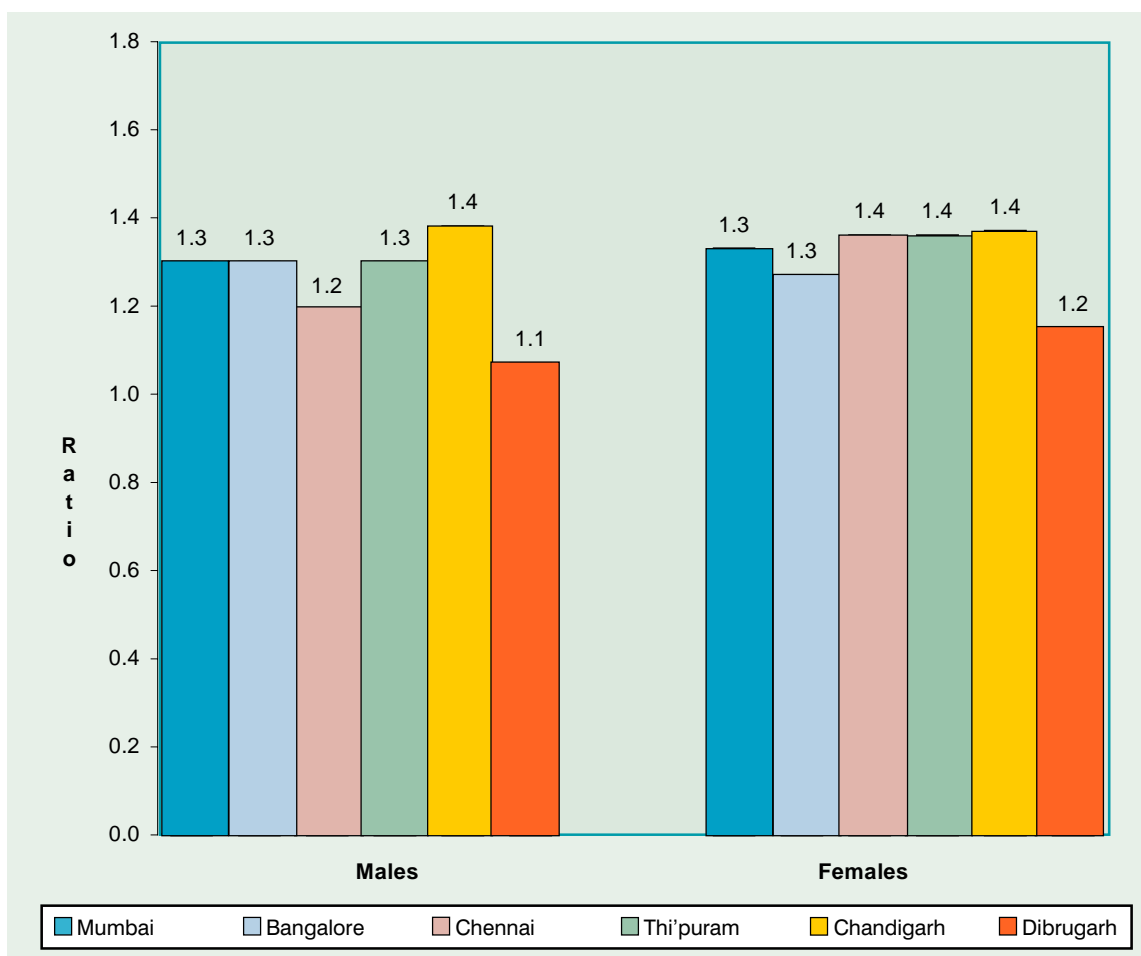


TABLE 7.2: Number (#) & Relative Proportion (%) of patients according to Type of Treatment given**Males**

Type of Treatment	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total Patients	35432	100.0	14189	100.0	8038	100.0	16671	100.0	4776	100.0	6647	100.0
Specific Treatments												
Surgery(S)	6505	18.4	1034	7.3	581	7.2	1815	10.9	662	13.9	600	9.0
Radiotherapy(R)	12938	36.5	5951	41.9	4588	57.1	8399	50.4	1850	38.7	4965	74.7
Chemotherapy(C)	5924	16.7	3189	22.5	1393	17.3	2058	12.3	607	12.7	610	9.2
S + R	3421	9.7	746	5.3	338	4.2	1085	6.5	725	15.2	226	3.4
S + C	1243	3.5	338	2.4	177	2.2	303	1.8	163	3.4	104	1.6
R + C	4690	13.2	1784	12.6	848	10.5	2460	14.8	472	9.9	122	1.8
S + R + C	499	1.4	182	1.3	92	1.1	230	1.4	186	3.9	9	0.1
Others	212	0.6	965	6.8	21	0.3	321	1.9	111	2.3	11	0.2
Modality of therapy*												
Single	25367	71.6	10174	71.7	6562	81.6	12272	73.6	3119	65.3	6175	92.9
Combination	9853	27.8	3050	21.5	1455	18.1	4078	24.5	1546	32.4	461	6.9
Type of Any Treatment*												
Any Surgery	11706	33.0	2356	16.6	1197	14.9	3515	21.1	1786	37.4	943	14.2
Any R	21579	60.9	8841	62.3	5874	73.1	12242	73.4	3275	68.6	5326	80.1
Any C	12376	34.9	6224	43.9	2512	31.3	5075	30.4	1431	30.0	851	12.8

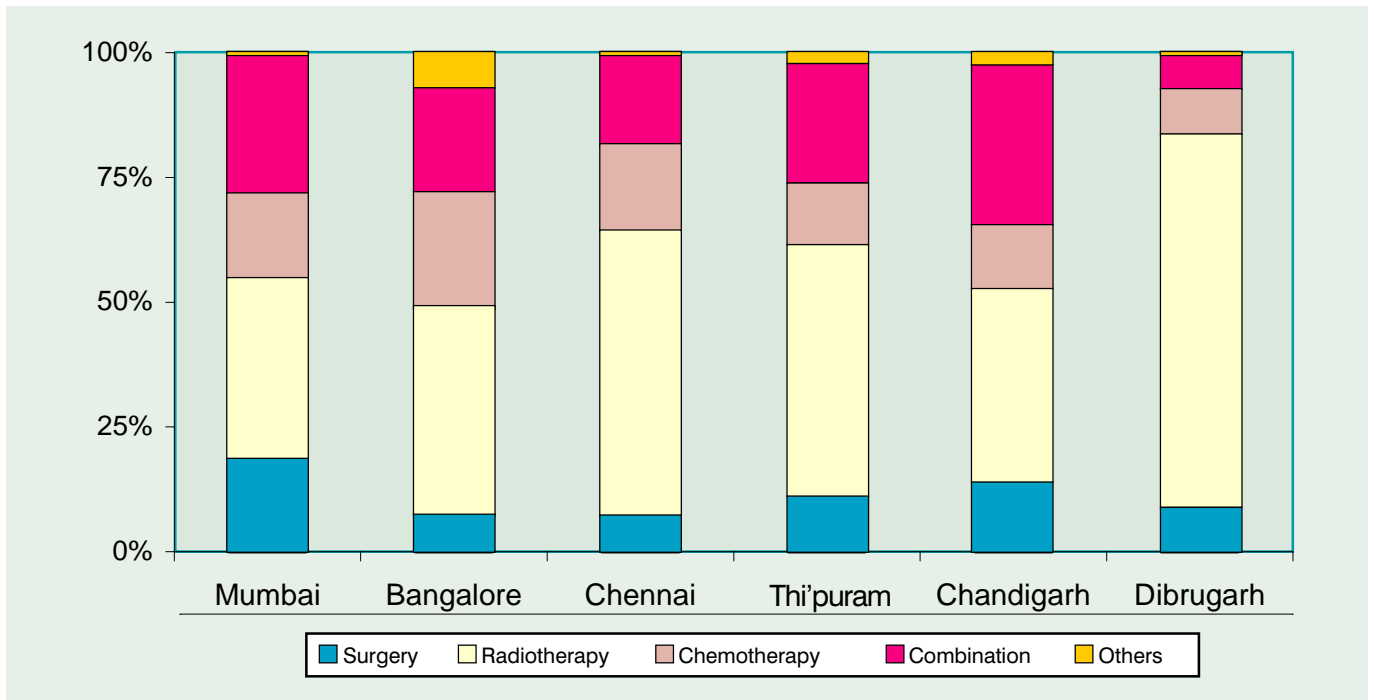
Females

Type of Treatment	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total Patients	26581	100.0	17004	100.0	11404	100.0	13297	100.0	4667	100.0	2934	100.0
Specific Treatments												
Surgery(S)	4885	18.4	780	4.6	280	2.5	1835	13.8	440	9.4	493	16.8
Radiotherapy(R)	11319	42.6	10323	60.7	7193	63.1	6391	48.1	2523	54.1	1757	59.9
Chemotherapy(C)	2876	10.8	2193	12.9	933	8.2	1188	8.9	345	7.4	266	9.1
S + R	2384	9.0	807	4.7	301	2.6	1134	8.5	596	12.8	229	7.8
S + C	1526	5.7	382	2.2	119	1.0	349	2.6	132	2.8	119	4.1
R + C	1667	6.3	1114	6.6	1298	11.4	1163	8.7	192	4.1	52	1.8
S + R + C	779	2.9	505	3.0	465	4.1	478	3.6	227	4.9	13	0.4
Others	1145	4.3	900	5.3	815	7.1	759	5.7	212	4.5	5	0.2
Modality of therapy*												
Single	19080	71.8	13296	78.2	8406	73.7	9414	70.8	3308	70.9	2516	85.8
Combination	6356	23.9	2808	16.5	2183	19.1	3124	23.5	1147	24.6	413	14.1
Type of Any Treatment*												
Any Surgery	10482	39.4	2856	16.8	1483	13.0	4343	32.7	1527	32.7	858	29.2
Any R	16515	62.1	13120	77.2	9835	86.2	9662	72.7	3664	78.5	2055	70.0
Any C	7301	27.5	4661	27.4	3421	30.0	3303	24.8	990	21.2	450	15.3

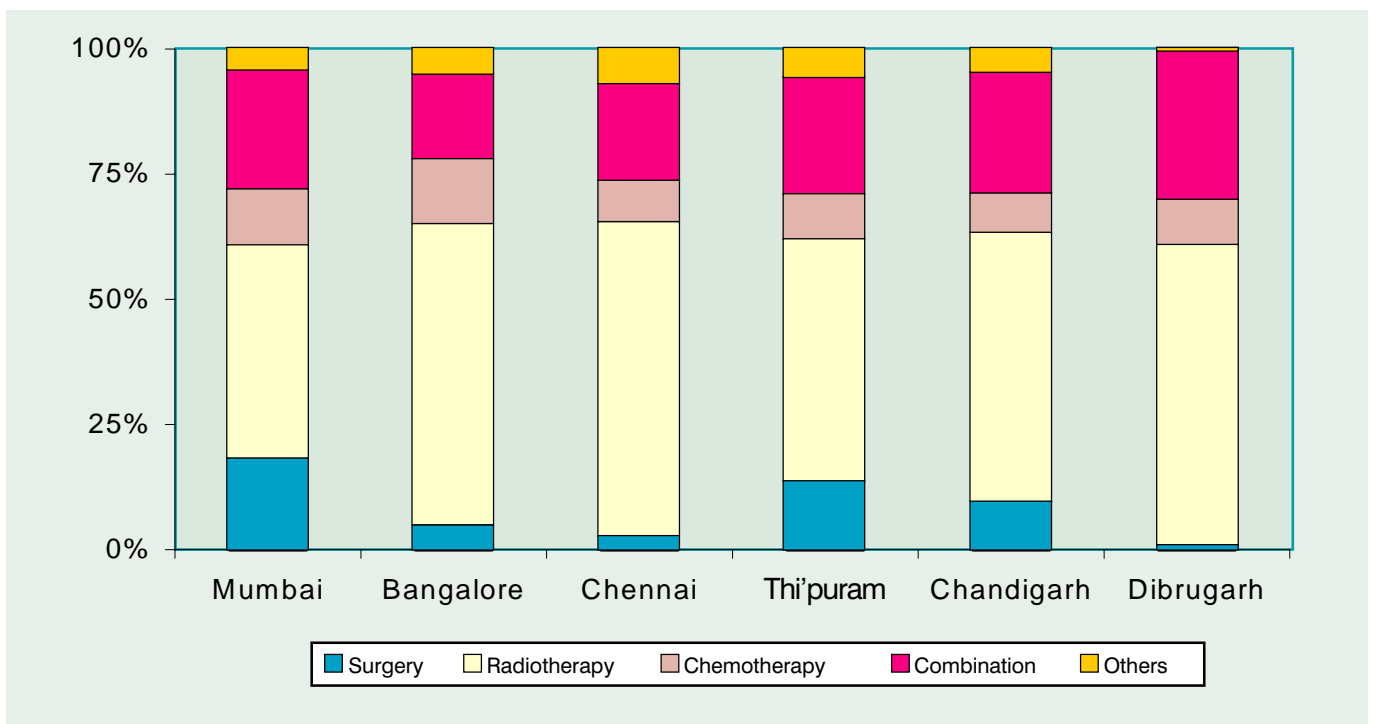
* Excludes specific treatment classified as 'Others'

**Fig. 7.2: Proportion of Types of Treatment
(Patients Treated Only at Reporting Institution)**

Males



Females



Radiotherapy alone or in combination with other modalities was the predominant form of treatment in either sex. About 25% of patients received chemotherapy alone or in combination. A similar proportion received surgery alone or in combination. About half the patients who received surgery or chemotherapy received it as part of combination therapy.

The single and also predominant form of therapy received by patients at any centre is radiotherapy, which however varies in relative proportion from 36.5% in males in Mumbai and 38.7% in males in Chandigarh to 63.1 percent in females in Chennai and 74.7 percent in males in Dibrugarh. Similarly the relative proportion of patients who received only surgery as a form of treatment was highest in Mumbai (18.4%) in either sex though Dibrugarh also shows a similar figure (16.8%) in females. Bangalore had the highest relative proportion of patients receiving chemotherapy only (22.5% in males & 12.9% in females). Chandigarh males also had the highest proportion of patients receiving combination therapy (32.4%) followed by relatively higher proportions in Mumbai as well (27.8% in males and 23.9% in females), whereas Dibrugarh had the lowest proportion of patients receiving combination therapy (6.9% and 14.1% in males and females respectively).

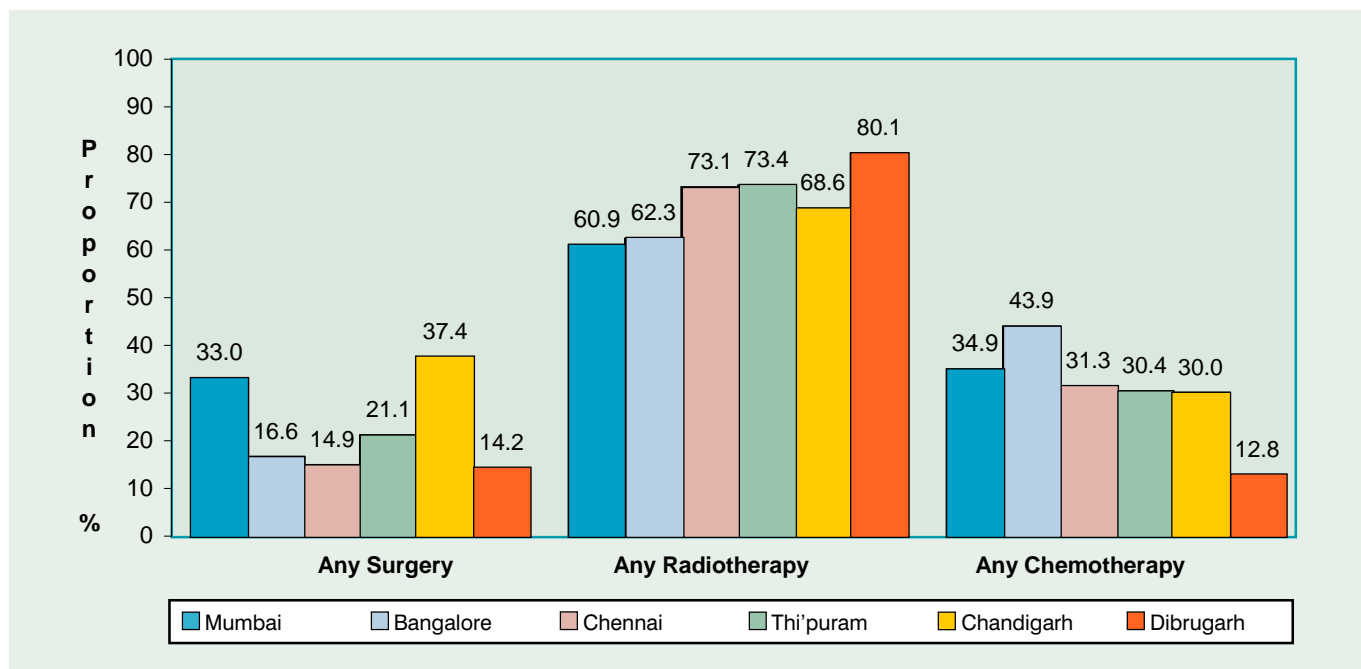
The above provides an idea of the types of treatment given relative to all patients treated. If an example of cancer of the oral cavity is considered, nearly 50% of males and over 60% of female patients in Mumbai have undergone surgery alone or in combination with other types of treatment. In other registries this proportion of patients who have undergone such surgical treatment is lower.

The patterns of treatment followed by different centres can also be observed from Table 7.3 wherein the number and proportion of any given procedure singly and in combination relative to total number of treatment procedures is considered. In other words the numerator denotes the total number of patients having received a particular form of treatment and the denominator denotes the total of such procedures for all patients.

Surgery constitutes over a quarter of all procedures in either sex in Mumbai, whereas this is comparatively lower in males at other centres, except Chandigarh and also among females in Bangalore and Chennai. The relative proportion of patients who received 'Any Radiotherapy' among males was high at Dibrugarh compared to other centres. There are a corresponding lower relative proportion of patients who have received 'Any Chemotherapy' in Dibrugarh compared to the high of 33.9% in Bangalore males.

**Fig. 7.3: Proportion of Specific Treatments
(Patients Treated only at Reporting Institution)**

Males



Females

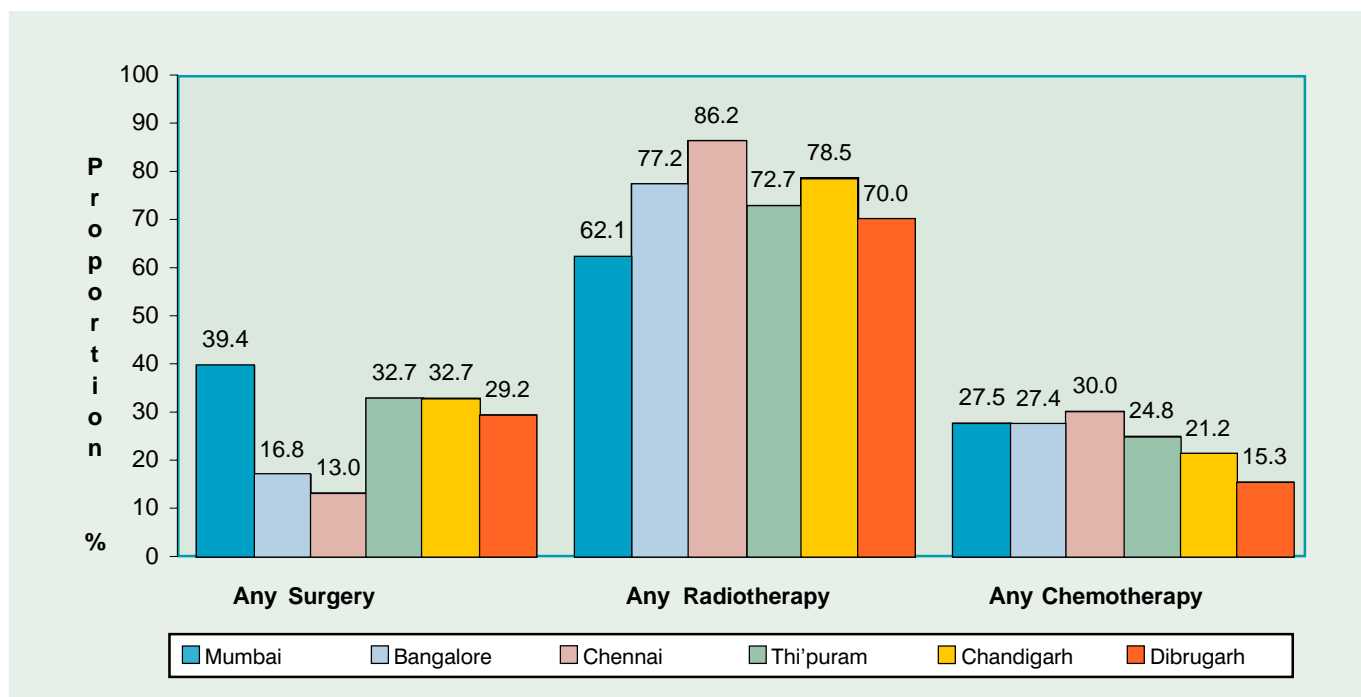


TABLE 7.3: Number (#) and Proportion (%) of cancer patients according to Any Specific Treatment at Reporting Institution relative to All Treatment procedures (Proced.)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Proced.
MALES									
Mumbai	11706	25.5	21579	47.0	12376	27.0	212	0.5	45873
Bangalore	2356	12.8	8841	48.1	6224	33.9	965	5.2	18386
Chennai	1197	12.5	5874	61.2	2512	26.2	21	0.2	9604
Thi'puram	3515	16.6	12242	57.9	5075	24.0	321	1.5	21153
Chandigarh	1786	27.0	3275	49.6	1431	21.7	111	1.7	6603
Dibrugarh	943	13.2	5326	74.7	851	11.9	11	0.2	7131
FEMALES									
Mumbai	10482	29.6	16515	46.6	7301	20.6	1145	3.2	35443
Bangalore	2856	13.3	13120	60.9	4661	21.6	900	4.2	21537
Chennai	1483	9.5	9835	63.2	3421	22.0	815	5.2	15554
Thi'puram	4343	24.0	9662	53.5	3303	18.3	759	4.2	18067
Chandigarh	1527	23.9	3664	57.3	990	15.5	212	3.3	6393
Dibrugarh	858	25.5	2055	61.0	450	13.4	5	0.1	3368

Type of Treatment and Clinical Extent of Disease

Depending on the site of cancer, the type of treatment and/or combinations of treatments given, could vary with the clinical extent of disease. In order to observe whether such differences exist, the relative proportions of the various types of treatments and also the proportion of patients that were given any of the main treatments, viz., surgery, radiotherapy, chemotherapy were examined and these are shown in Tables 7.4 and 7.5 with corresponding figures 7.4 and 7.5. The overall type of treatment for all sites of cancer according to the clinical extent of disease is given here. ***These proportions and comparisons become more meaningful when individual sites of cancer are considered separately.***

The relative proportion of patients who undergo only surgery is highest in all the centres (except Dibrugarh) when the disease was localised, much less, when the cancer was thought to have spread to the regional nodes/organs and almost negligible (as could be expected) with advanced disease. Radiotherapy was the predominant mode of treatment when the disease was localised and more so when the clinical extent was stated as 'Regional'. The graphs and tables when the clinical extent of disease was stated as 'Distant' and 'Other' show that chemotherapy is the predominant mode of treatment in these groups.

There was not much variation in the relative proportions of patients receiving single or combination therapy when observed according to clinical extent of disease by sex or registry wise.

TABLE 7.4 (a): Number(#) & Relative Proportion(%) of types of treatment according to Clinical Extent of Disease**Males**

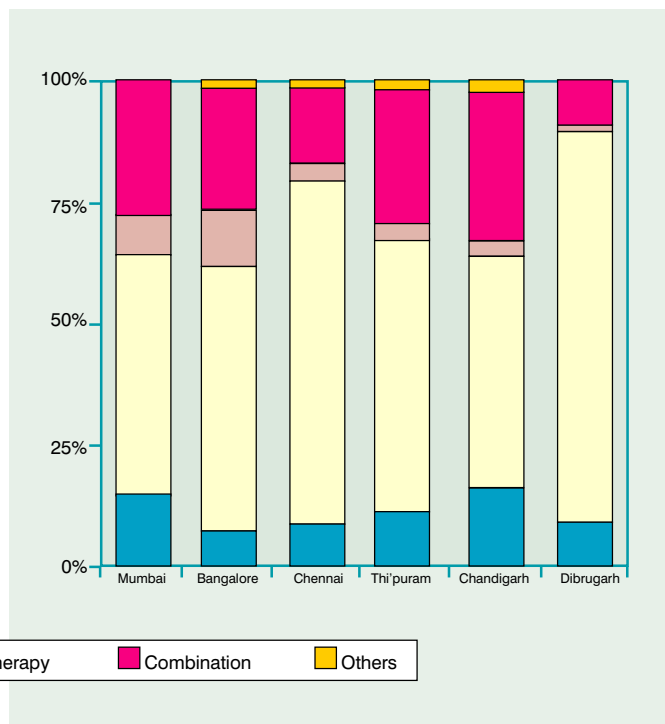
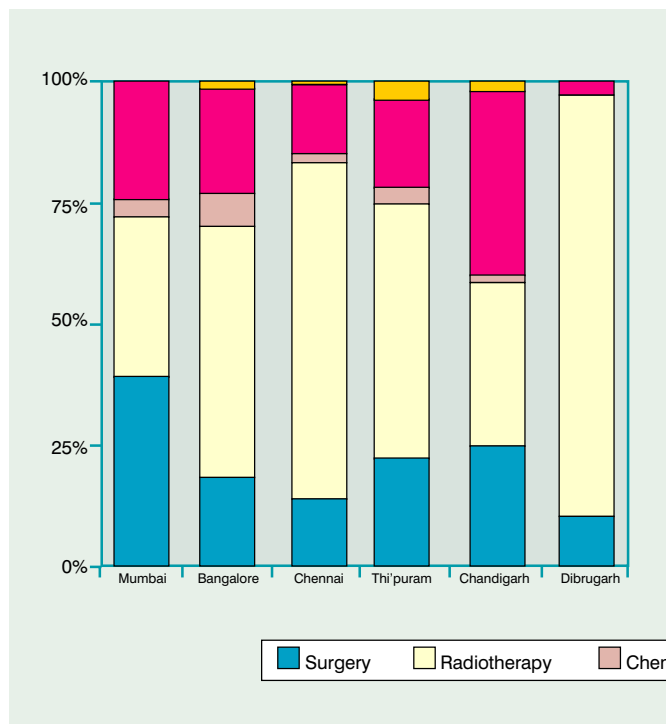
Clinical Extent	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Localised												
Surgery(S)	3918	39.8	406	18.3	87	13.4	654	22.2	102	24.7	175	10.0
Radiotherapy(R)	3268	33.2	1154	51.9	453	70.0	1546	52.5	139	33.7	1523	86.8
Chemotherapy(C)	333	3.4	153	6.9	10	1.5	95	3.2	6	1.5	9	0.5
S + R	949	9.7	179	8.0	23	3.6	224	7.6	103	24.9	20	1.1
S + C	609	6.2	84	3.8	28	4.3	57	1.9	18	4.4	13	0.7
R + C	583	5.9	182	8.2	34	5.3	236	8.0	7	1.7	14	0.8
S + R + C	157	1.6	39	1.8	11	1.7	30	1.0	31	7.5	0	0.0
Others	15	0.2	27	1.2	1	0.2	105	3.6	7	1.7	1	0.1
ALL TREATMENTS	9832	100.0	2224	100.0	647	100.0	2947	100.0	413	100.0	1755	100.0
Regional												
Surgery(S)	2360	14.7	525	7.1	464	8.5	1003	11.3	506	16.1	268	8.9
Radiotherapy(R)	7954	49.6	4019	54.6	3884	70.8	4981	55.9	1504	47.8	2424	80.9
Chemotherapy(C)	1299	8.1	858	11.7	211	3.8	302	3.4	100	3.2	32	1.1
S + R	2246	14.0	505	6.9	304	5.5	767	8.6	592	18.8	160	5.3
S + C	446	2.8	198	2.7	124	2.3	173	1.9	92	2.9	56	1.9
R + C	1437	9.0	1060	14.4	408	7.4	1385	15.5	161	5.1	48	1.6
S + R + C	254	1.6	120	1.6	77	1.4	174	2.0	122	3.9	4	0.1
Others	51	0.3	73	1.0	16	0.3	126	1.4	72	2.3	6	0.2
ALL TREATMENTS	16047	100.0	7358	100.0	5488	100.0	8911	100.0	3149	100.0	2998	100.0
Distant												
Surgery(S)	144	4.1	72	3.7	27	6.3	106	4.6	50	10.8	108	22.5
Radiotherapy(R)	1174	33.8	491	25.1	107	24.8	1405	61.4	176	38.1	156	32.4
Chemotherapy(C)	1183	34.0	930	47.5	226	52.3	309	13.5	73	15.8	164	34.1
S + R	137	3.9	37	1.9	10	2.3	64	2.8	24	5.2	16	3.3
S + C	126	3.6	39	2.0	15	3.5	32	1.4	34	7.4	19	4.0
R + C	538	15.5	233	11.9	41	9.5	297	13.0	59	12.8	12	2.5
S + R + C	31	0.9	17	0.9	2	0.5	16	0.7	14	3.0	3	0.6
Others	142	4.1	139	7.1	4	0.9	61	2.7	32	6.9	3	0.6
ALL TREATMENTS	3475	100.0	1958	100.0	432	100.0	2290	100.0	462	100.0	481	100.0
Others												
Surgery(S)	60	1.0	12	0.5	1	0.1	18	0.9	3	0.4	46	5.0
Radiotherapy(R)	418	7.1	206	8.6	37	2.8	162	8.1	27	3.6	432	47.0
Chemotherapy(C)	3109	52.6	1163	48.3	909	69.1	1263	63.1	425	57.2	361	39.3
S + R	70	1.2	12	0.5	0	0.0	7	0.3	6	0.8	21	2.3
S + C	62	1.0	14	0.6	9	0.7	34	1.7	19	2.6	15	1.6
R + C	2131	36.1	283	11.8	357	27.1	483	24.1	244	32.8	42	4.6
S + R + C	57	1.0	2	0.1	2	0.2	9	0.4	19	2.6	1	0.1
Others	4	0.1	714	29.7	0	0.0	26	1.3	0	0.0	1	0.1
ALL TREATMENTS	5911	100.0	2406	100.0	1315	100.0	2002	100.0	743	100.0	919	100.0

Fig. 7.4(a): Proportion of Types of Treatment According to Clinical Extent of Disease (Patients treated only at Reporting Institution)

Males

Localised

Regional



Distant

Others

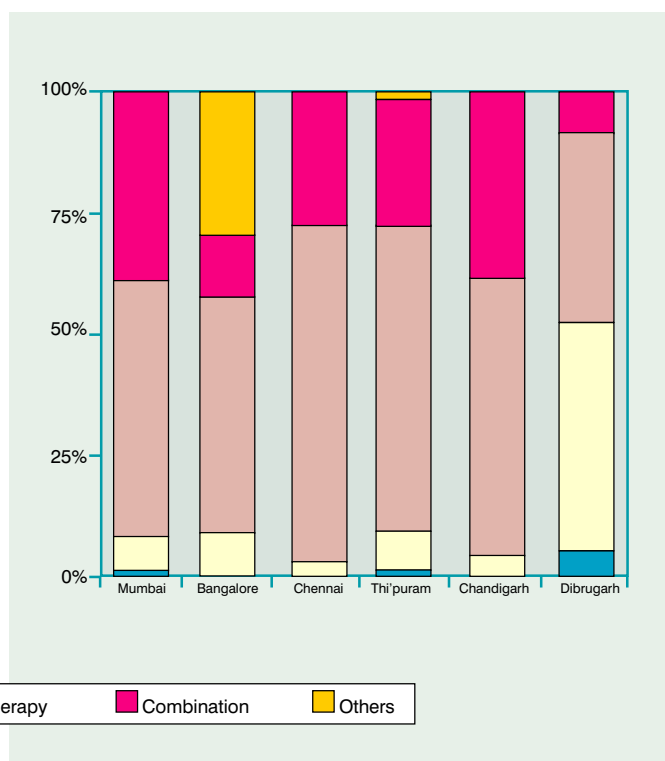
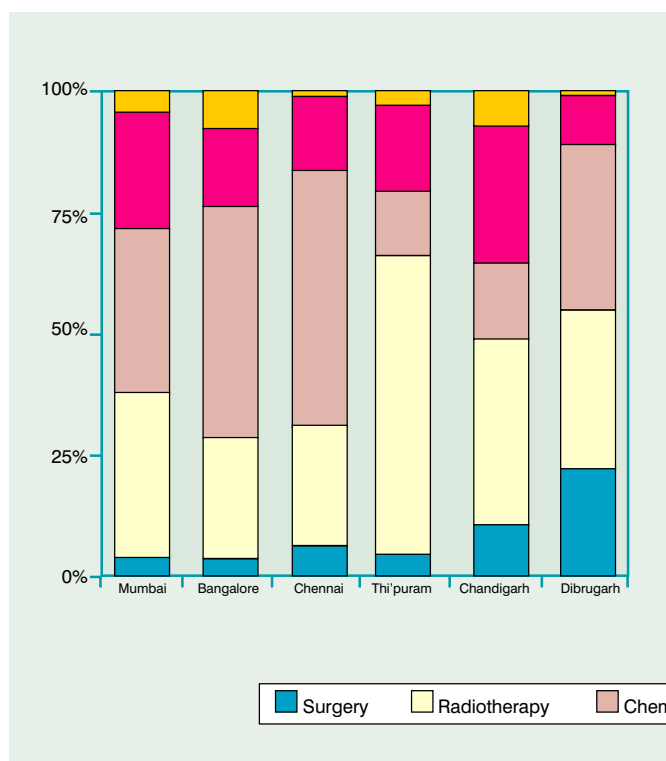


TABLE 7.4 (b): Number(#) & Relative Proportion(%) of types of treatment according to Clinical Extent of Disease**Females**

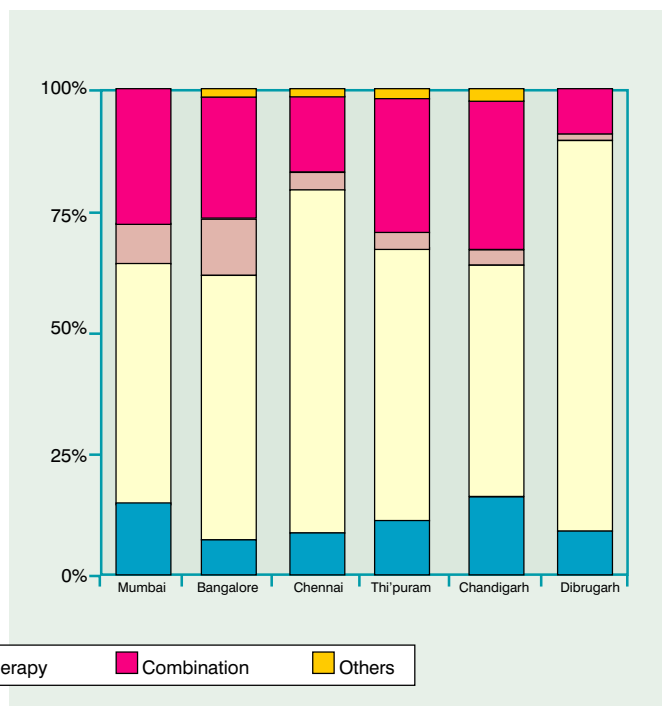
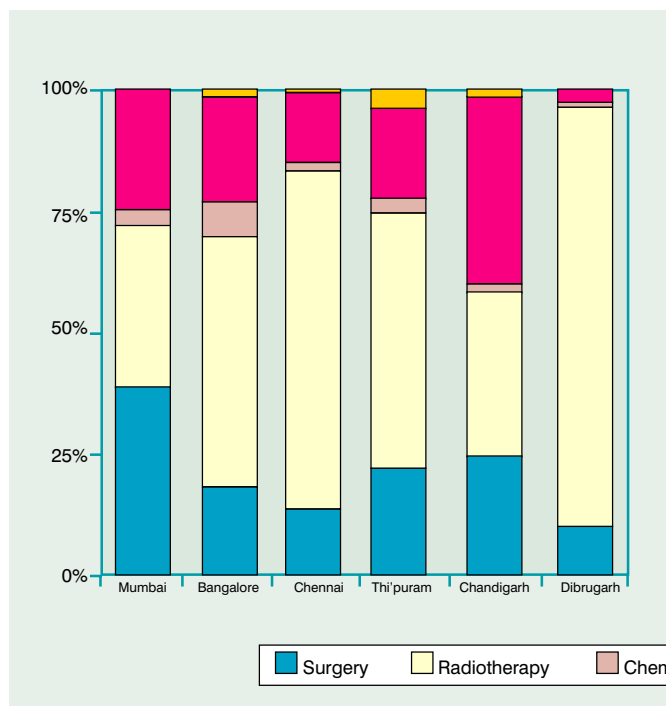
Clinical Extent	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Localised												
Surgery(S)	3282	44.4	317	16.6	63	6.6	760	31.5	81	19.0	134	21.4
Radiotherapy(R)	1820	24.6	853	44.8	632	66.5	1013	41.9	143	33.6	452	72.1
Chemotherapy(C)	126	1.7	103	5.4	16	1.7	52	2.2	1	0.2	3	0.5
S + R	1060	14.3	248	13.0	102	10.7	267	11.1	149	35.0	28	4.5
S + C	406	5.5	72	3.8	20	2.1	56	2.3	10	2.3	4	0.6
R + C	227	3.1	108	5.7	36	3.8	109	4.5	3	0.7	4	0.6
S + R + C	171	2.3	108	5.7	25	2.6	38	1.6	28	6.6	1	0.2
Others	299	4.0	96	5.0	57	6.0	120	5.0	11	2.6	1	0.2
ALL TREATMENTS	7391	100.0	1905	100.0	951	100.0	2415	100.0	426	100.0	627	100.0
Regional												
Surgery(S)	1384	9.5	382	3.1	205	2.2	966	11.4	308	8.6	254	17.0
Radiotherapy(R)	8753	60.1	8816	71.1	6433	69.6	4772	56.2	2290	63.7	959	64.3
Chemotherapy(C)	564	3.9	935	7.5	261	2.8	192	2.3	79	2.2	17	1.1
S + R	1235	8.5	518	4.2	192	2.1	801	9.4	432	12.0	165	11.1
S + C	851	5.8	232	1.9	91	1.0	216	2.5	94	2.6	63	4.2
R + C	529	3.6	803	6.5	1063	11.5	664	7.8	72	2.0	19	1.3
S + R + C	566	3.9	371	3.0	434	4.7	390	4.6	185	5.1	11	0.7
Others	682	4.7	335	2.7	570	6.2	486	5.7	136	3.8	3	0.2
ALL TREATMENTS	14564	100.0	12392	100.0	9249	100.0	8487	100.0	3596	100.0	1491	100.0
Distant												
Surgery(S)	137	6.1	63	4.3	12	2.1	74	6.8	46	13.7	83	23.5
Radiotherapy(R)	555	24.7	431	29.6	75	13.4	428	39.4	72	21.5	102	28.9
Chemotherapy(C)	888	39.5	560	38.5	189	33.7	185	17.1	78	23.3	94	26.6
S + R	56	2.5	35	2.4	5	0.9	50	4.6	12	3.6	13	3.7
S + C	248	11.0	66	4.5	5	0.9	59	5.4	24	7.2	45	12.7
R + C	180	8.0	88	6.0	82	14.6	114	10.5	26	7.8	15	4.2
S + R + C	25	1.1	21	1.4	6	1.1	45	4.1	12	3.6	0	0.0
Others	161	7.2	191	13.1	187	33.3	130	12.0	65	19.4	1	0.3
ALL TREATMENTS	2250	100.0	1455	100.0	561	100.0	1085	100.0	335	100.0	353	100.0
Others												
Surgery(S)	57	2.5	10	0.9	0	0.0	19	1.8	3	1.0	20	5.8
Radiotherapy(R)	140	6.1	172	15.2	21	3.7	59	5.7	18	5.9	153	44.7
Chemotherapy(C)	1298	56.8	563	49.7	432	75.4	669	65.0	185	60.5	129	37.7
S + R	18	0.8	3	0.3	1	0.2	4	0.4	3	1.0	20	5.8
S + C	21	0.9	9	0.8	3	0.5	11	1.1	4	1.3	5	1.5
R + C	731	32.0	105	9.3	116	20.2	246	23.9	91	29.7	14	4.1
S + R + C	17	0.7	2	0.2	0	0.0	5	0.5	2	0.7	1	0.3
Others	2	0.1	269	23.7	0	0.0	17	1.7	0	0.0	0	0.0
ALL TREATMENTS	2284	100.0	1133	100.0	573	100.0	1030	100.0	306	100.0	342	100.0

Fig. 7.4(b): Proportion of Different Types of Treatment According to Clinical Extent of Disease (Patients treated only at Reporting Institution)

Females

Localised

Regional



Distant

Others

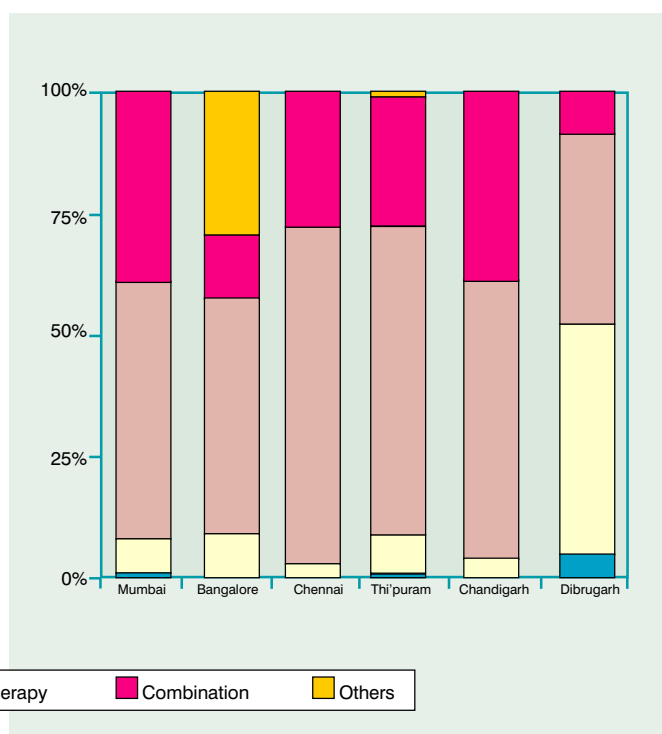
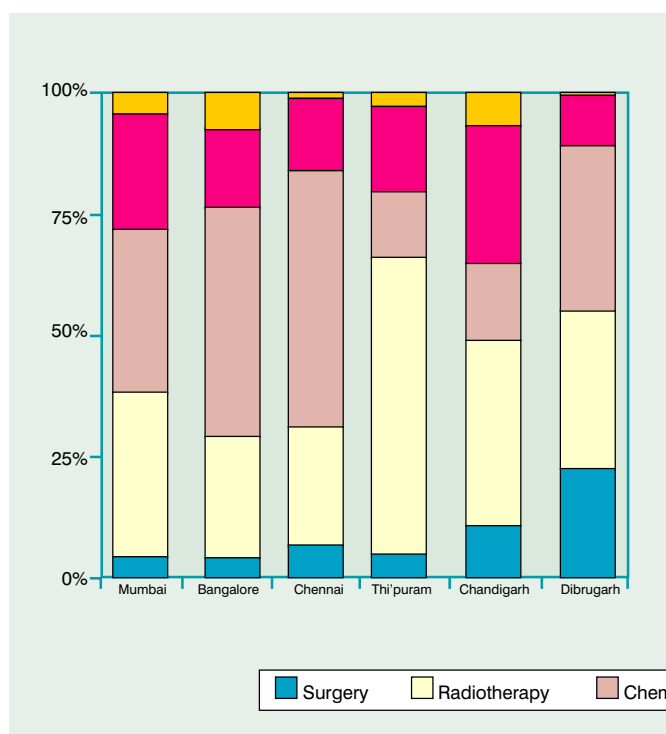


TABLE 7.5 (a): Number(#) and Proportion(%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease**Males**

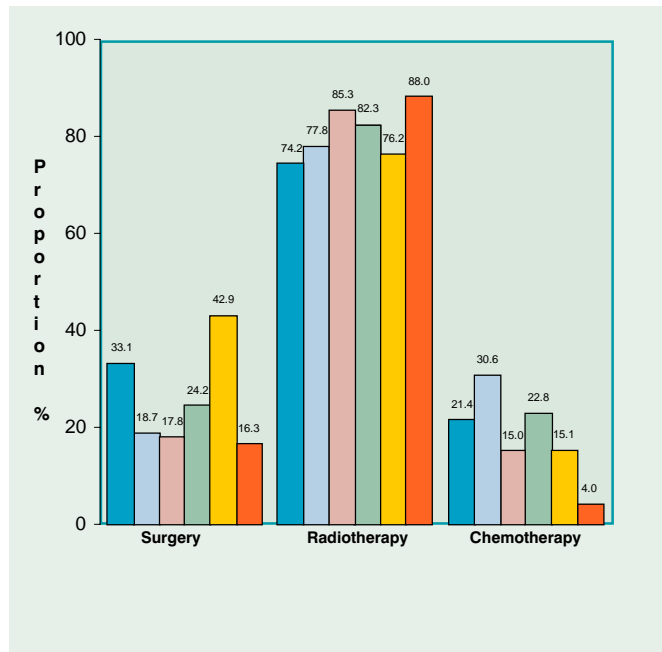
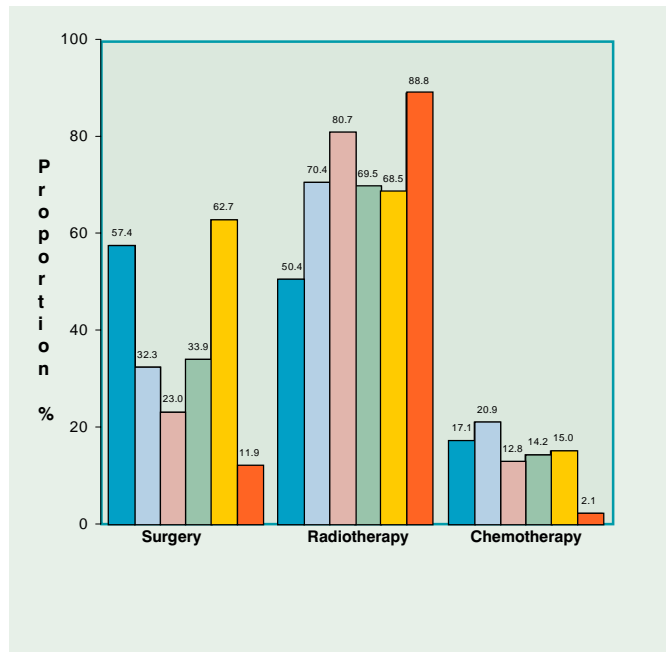
	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Patients
	#	%	#	%	#	%	#	%	
LOCALISED									
Mumbai	5639	57.4	4958	50.4	1683	17.1	15	0.2	9832
Bangalore	718	32.3	1565	70.4	464	20.9	27	1.2	2224
Chennai	149	23.0	522	80.7	83	12.8	1	0.2	647
Thi'puram	1000	33.9	2048	69.5	418	14.2	105	3.6	2947
Chandigarh	259	62.7	283	68.5	62	15.0	7	1.7	413
Dibrugarh	209	11.9	1558	88.8	36	2.1	1	0.1	1755
REGIONAL									
Mumbai	5319	33.1	11900	74.2	3440	21.4	51	0.3	16047
Bangalore	1373	18.7	5722	77.8	2249	30.6	73	1.0	7358
Chennai	978	17.8	4680	85.3	821	15.0	16	0.3	5488
Thi'puram	2155	24.2	7331	82.3	2035	22.8	129	1.4	8911
Chandigarh	1350	42.9	2400	76.2	475	15.1	72	2.3	3149
Dibrugarh	490	16.3	2638	88.0	143	4.8	6	0.2	2998
DISTANT									
Mumbai	456	13.1	1901	54.7	1889	54.4	142	4.1	3475
Bangalore	180	9.2	793	40.5	1239	63.3	139	7.1	1958
Chennai	54	12.5	160	37.0	285	66.0	4	0.9	432
Thi'puram	226	9.9	1810	79.0	656	28.6	61	2.7	2290
Chandigarh	129	27.9	291	63.0	183	39.6	32	6.9	462
Dibrugarh	146	30.4	187	38.9	201	41.8	3	0.6	481
OTHERS									
Mumbai	250	4.2	2676	45.3	5363	90.7	4	0.1	5911
Bangalore	45	1.9	634	26.4	2149	89.3	714	29.7	2406
Chennai	12	0.9	396	30.1	1277	97.1	0	0.0	1315
Thi'puram	69	3.4	664	33.2	1810	90.4	26	1.3	2002
Chandigarh	47	6.3	296	39.8	707	95.2	0	0.0	743
Dibrugarh	84	9.1	497	54.1	419	45.6	1	0.1	919

Fig. 7.5(a): Proportion of Specific Treatments according to Clinical Extent of Disease

Males

LOCALISED

REGIONAL



DISTANT

OTHERS

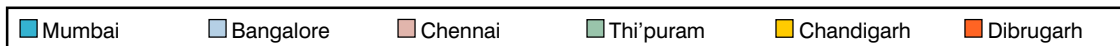
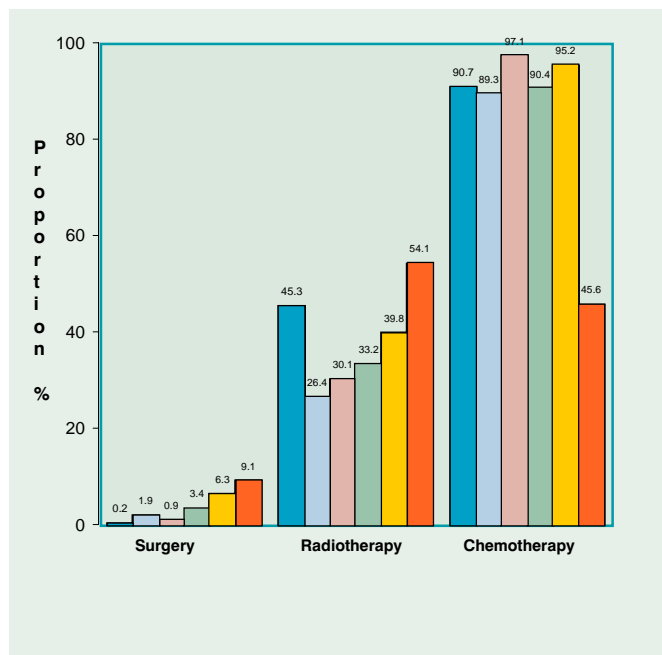
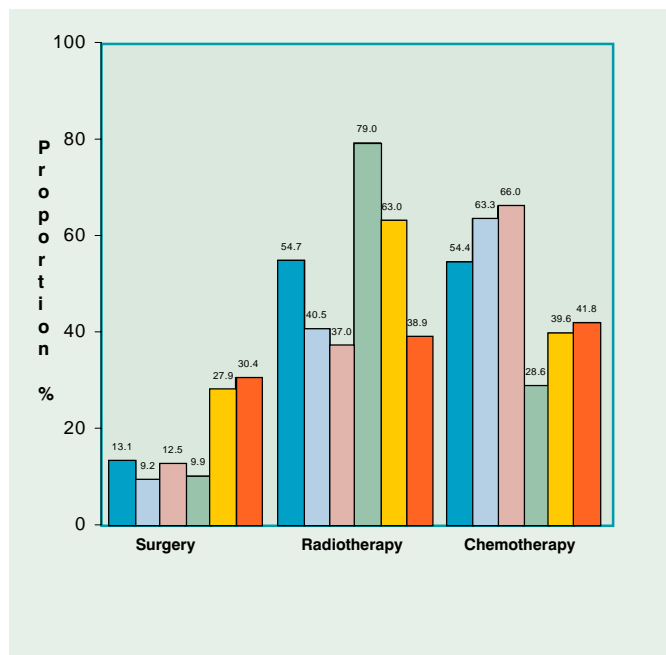


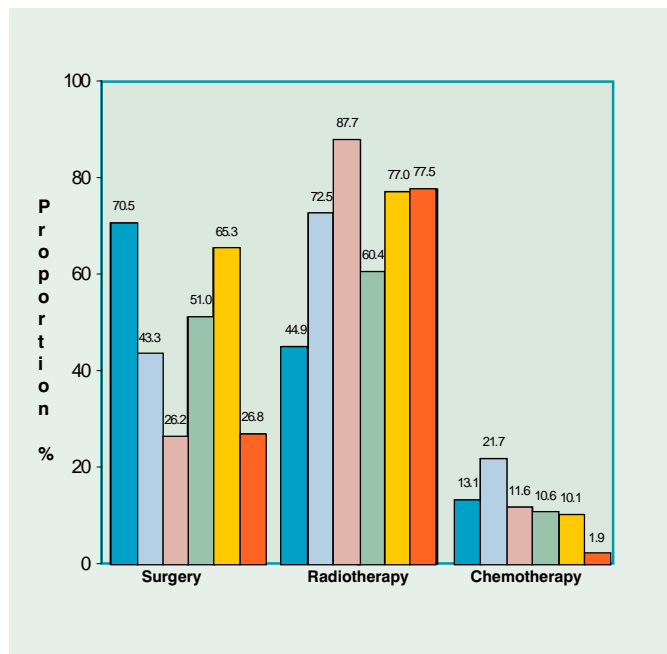
TABLE 7.5 (b): Number(#) and Proportion(%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease**Females**

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Patients
	#	%	#	%	#	%	#	%	
LOCALISED									
Mumbai	5212	70.5	3320	44.9	969	13.1	299	4.0	7391
Bangalore	824	43.3	1381	72.5	414	21.7	96	5.0	1905
Chennai	249	26.2	834	87.7	110	11.6	57	6.0	951
Thi'puram	1232	51.0	1459	60.4	255	10.6	120	5.0	2415
Chandigarh	278	65.3	328	77.0	43	10.1	11	2.6	426
Dibrugarh	168	26.8	486	77.5	12	1.9	1	0.2	627
REGIONAL									
Mumbai	4616	31.7	11351	77.9	2823	19.4	682	4.7	14564
Bangalore	1766	14.3	10732	86.6	2455	19.8	310	2.5	12392
Chennai	1194	12.9	8576	92.7	2293	24.8	570	6.2	9249
Thi'puram	2760	32.5	6990	82.4	1538	18.1	486	5.7	8487
Chandigarh	1123	31.2	3078	85.6	482	13.4	136	3.8	3596
Dibrugarh	496	33.3	1157	77.6	110	7.4	3	0.2	1491
DISTANT									
Mumbai	500	22.2	870	38.7	1441	64.0	161	7.2	2250
Bangalore	220	15.1	608	41.8	798	54.8	191	13.1	1455
Chennai	35	6.2	252	44.9	430	76.6	187	33.3	561
Thi'puram	274	25.3	732	67.5	439	40.5	130	12.0	1085
Chandigarh	112	33.4	144	43.0	181	54.0	65	19.4	335
Dibrugarh	141	39.9	130	36.8	154	43.6	1	0.3	353
OTHERS									
Mumbai	114	5.0	907	39.7	2068	90.5	2	0.1	2284
Bangalore	29	2.6	329	29.0	942	83.1	269	23.7	1133
Chennai	4	0.7	138	24.1	551	96.2	0	0.0	573
Thi'puram	41	4.0	317	30.8	944	91.7	17	1.7	1030
Chandigarh	12	3.9	114	37.3	282	92.2	0	0.0	306
Dibrugarh	46	13.5	188	55.0	149	43.6	0	0.0	342

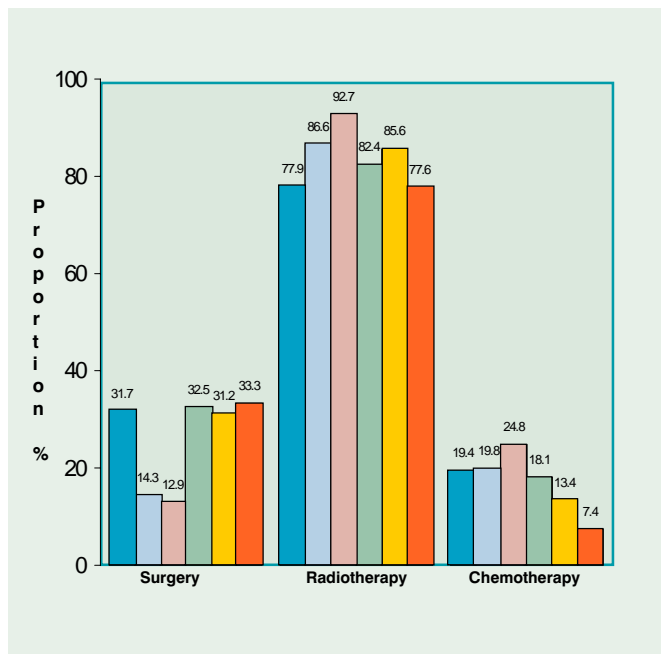
Fig. 7.5(b): Proportion of Specific Treatments according to Clinical Extent of Disease

Females

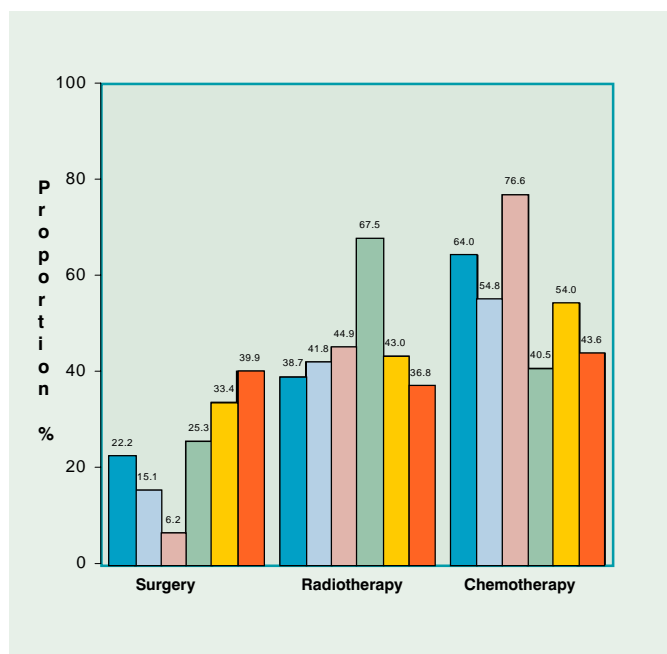
LOCALISED



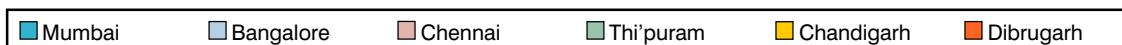
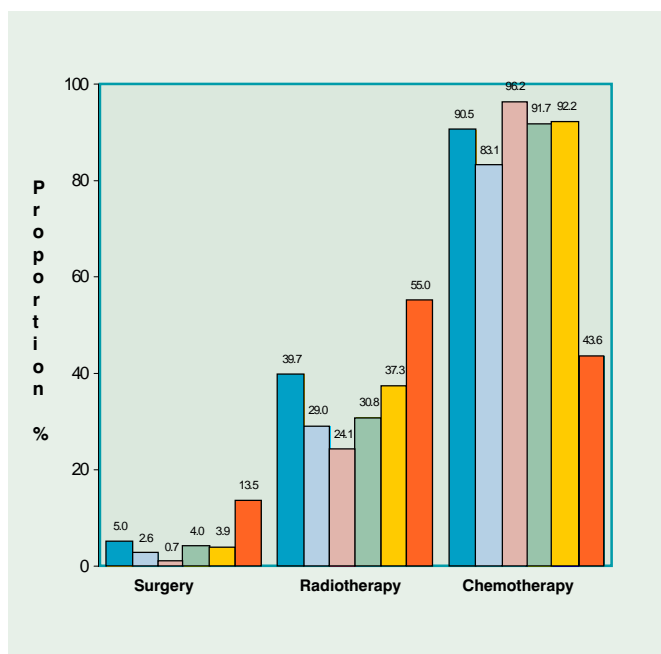
REGIONAL



DISTANT



OTHERS



Chapter 8

ANALYTIC CASES III: NO CANCER DIRECTED TREATMENT GROUP

Despite the presence of comprehensive cancer centres offering optimum cancer treatment, the registries have recorded a fair proportion of patients whose records indicate that they have not received any form of cancer directed treatment, or even if they have received this is incomplete. The number and proportions of these patients is shown in the present Chapter.

The group of patients under the category No Cancer Directed Treatment includes patients who have not received or not accepted treatment, those patients who had incomplete treatment and patients in whom the treatment status was not known. The number and proportion of these patients relative to all patients registered in a given centre is shown in Table 8.1 and diagrammatically depicted in Fig. 8.1. The relative proportion of patients that fell in this category varied from a low of 15.1 percent among females in Dibrugarh to a high of 45.7 percent in males in Chennai.

Overall about one-third of patients do not appear to receive cancer directed treatment, though there is the possibility that some patients may go elsewhere and receive treatment.

TABLE 8.1: Number of Patients registered and Number (#) and Relative Proportion (%) who had No Cancer Directed Treatment (No CDT)

Registry	Males			Females		
	Total Patients Registered	No CDT		Total Patients Registered	No CDT	
		#	%		#	%
Mumbai	78588	25551	32.5	61602	15689	25.5
Bangalore	31116	12239	39.3	36188	13304	36.8
Chennai	24588	11249	45.7	28685	11405	39.8
Thi'puram	27808	7445	26.8	23604	4466	18.9
Chandigarh	6909	1594	23.1	7383	1575	21.3
Dibrugarh	8309	1337	16.1	3736	566	15.1

Fig. 8.1: Proportion of Patients Under Category 'No Cancer Directed Treatment'

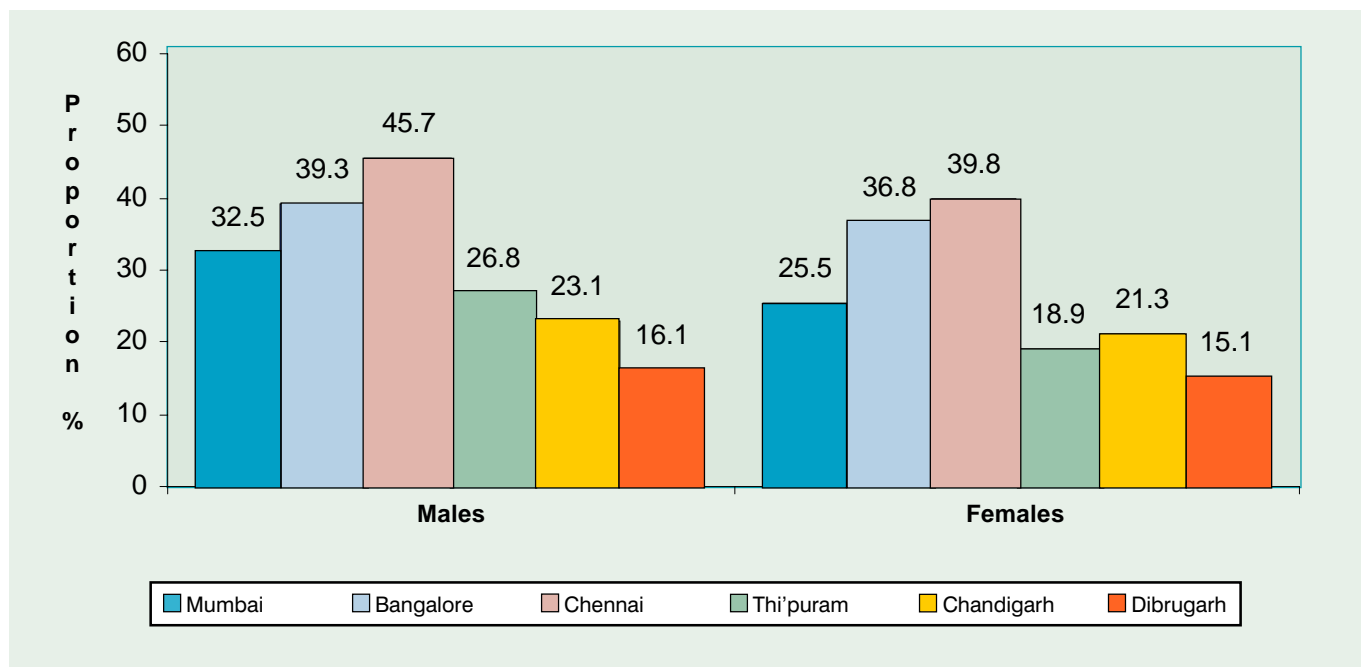


Table 8.2 gives the number and relative proportion of patients who did not accept or receive treatment and those who received incomplete treatment. The major group in any centre is those who did not receive (not accepted or not received) treatment, but, in Bangalore, Thiruvananthapuram and Chandigarh a good proportion (16.9% in males in Bangalore to 31% in females in Chandigarh) received incomplete treatment.

Tables 8.3 and 8.4 with their corresponding Figures 8.2 and 8.3 try to examine the No Cancer Directed Treatment group as a whole according to clinical extent of disease. The proportion of patients with localised disease, relative to all patients in this category varies from 2.9 percent among females in Chennai to 15.7 percent in males in Bangalore. Looked at in another way (Table 8.4 and Fig. 8.3), the proportion of localised cancers that constituted the No Cancer Directed Treatment group varies from 9.4 percent in Dibrugarh to 46.3 percent in Bangalore males. Tables 8.3 and 8.4 as well as Fig. 8.3 also show the number and relative proportions when, the clinical extent of disease was stated as 'Regional', 'Distant', or 'Others'.

TABLE 8.2: Number(#) and Relative Proportion(%) by Treatment (Tmt.) Status in Patients with No Cancer Directed Treatment (CDT)

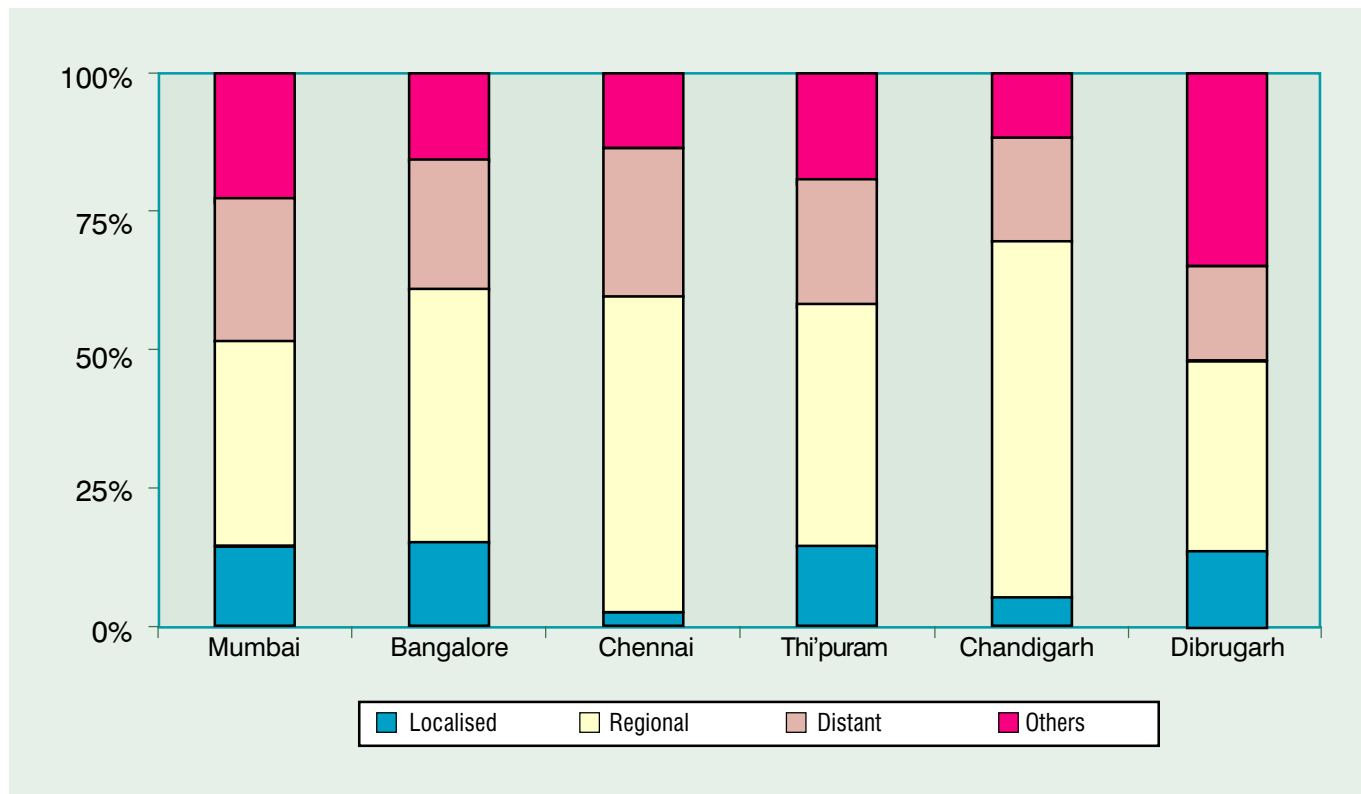
	Not Received		Not Accepted		Incomplete Tmt.		Tmt. Unknown		Total No CDT	
	#	%	#	%	#	%	#	%	#	%
MALES										
Mumbai	13605	53.2	8800	34.4	463	1.8	2683	10.5	25551	100.0
Bangalore	7809	63.8	2347	19.2	2064	16.9	19	0.2	12239	100.0
Chennai	9965	88.6	951	8.5	333	3.0	0	0.0	11249	100.0
Thi'puram	3652	49.1	1913	25.7	1668	22.4	212	2.8	7445	100.0
Chandigarh	477	29.9	659	41.3	454	28.5	4	0.3	1594	100.0
Dibrugarh	984	73.6	238	17.8	114	8.5	1	0.1	1337	100.0
FEMALES										
Mumbai	8562	54.6	5077	32.4	405	2.6	1645	10.5	15689	100.0
Bangalore	7695	57.8	2255	16.9	3339	25.1	15	0.1	13304	100.0
Chennai	10280	90.1	652	5.7	473	4.1	0	0.0	11405	100.0
Thi'puram	1901	42.6	1131	25.3	1329	29.8	105	2.4	4466	100.0
Chandigarh	383	24.3	697	44.3	489	31.0	6	0.4	1575	100.0
Dibrugarh	425	75.1	93	16.4	47	8.3	1	0.2	566	100.0

TABLE 8.3: Number(#) and Relative Proportion(%) of Clinical Extent of Disease in Patients with No Cancer Directed Treatment (CDT)

	Localised		Regional		Distant		Others		All	
	#	%	#	%	#	%	#	%	#	%
MALES										
Mumbai	3812	14.9	9341	36.6	6781	26.5	5617	22.0	25551	100.0
Bangalore	1917	15.7	5594	45.7	2838	23.2	1890	15.4	12239	100.0
Chennai	339	3.0	6427	57.1	3001	26.7	1482	13.2	11249	100.0
Thi'puram	1099	14.8	3260	43.8	1679	22.6	1407	18.9	7445	100.0
Chandigarh	87	5.5	1026	64.4	302	18.9	179	11.2	1594	100.0
Dibrugarh	183	13.7	461	34.5	231	17.3	462	34.6	1337	100.0
FEMALES										
Mumbai	2235	14.2	6314	40.2	4116	26.2	3024	19.3	15689	100.0
Bangalore	1301	9.8	8563	64.4	2450	18.4	990	7.4	13304	100.0
Chennai	328	2.9	8552	75.0	1814	15.9	711	6.2	11405	100.0
Thi'puram	606	13.6	2329	52.1	735	16.5	796	17.8	4466	100.0
Chandigarh	82	5.2	1151	73.1	274	17.4	68	4.3	1575	100.0
Dibrugarh	65	11.5	190	33.6	149	26.3	162	28.6	566	100.0

Fig. 8.2: Relative proportion of Clinical Extent of Disease in Patients with 'No Cancer Directed Treatment'

Males



Females

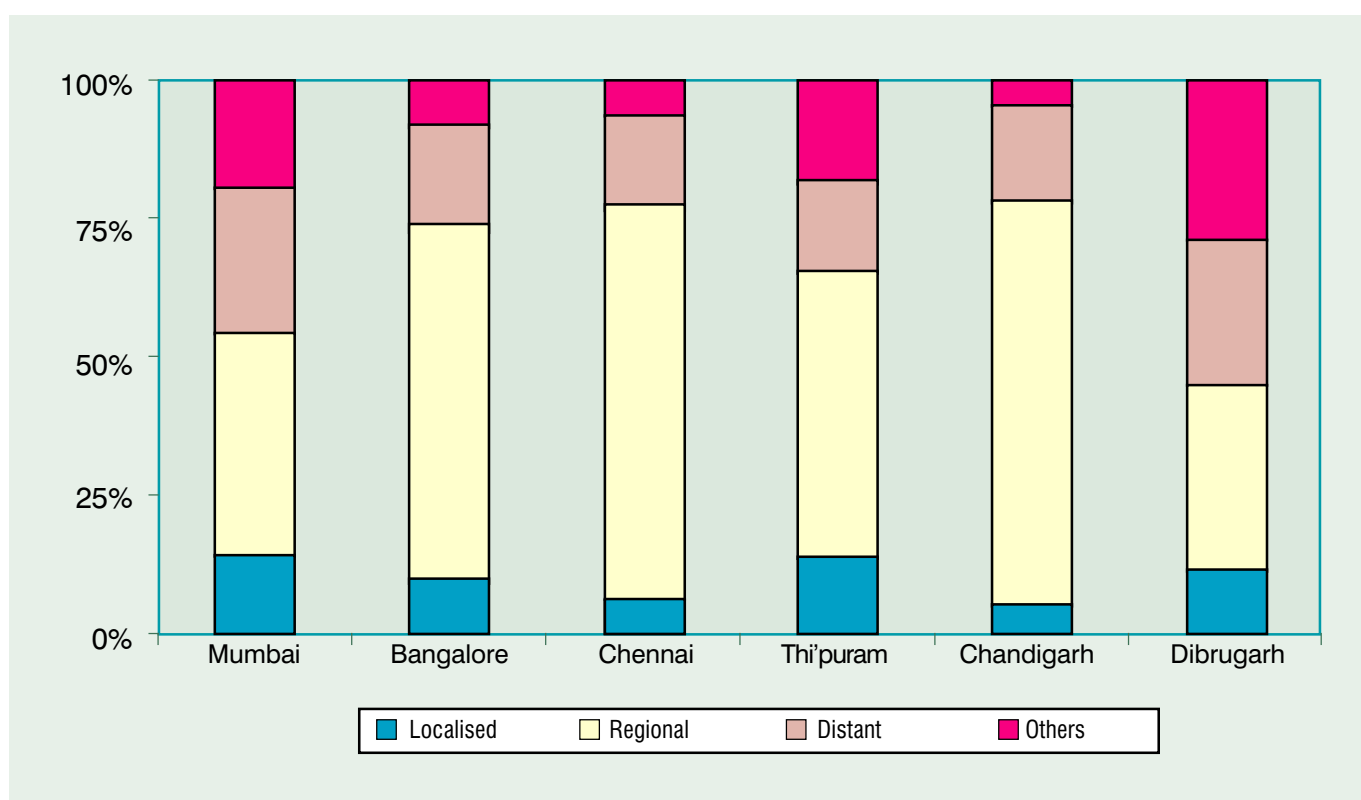


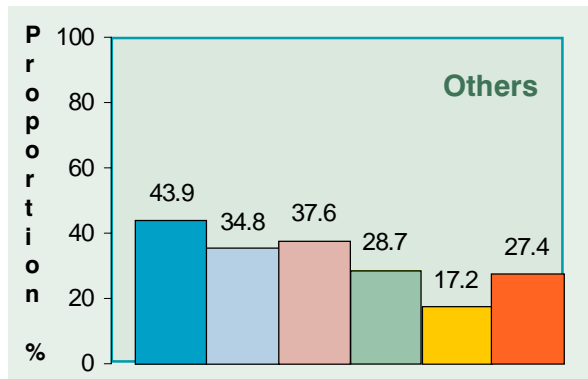
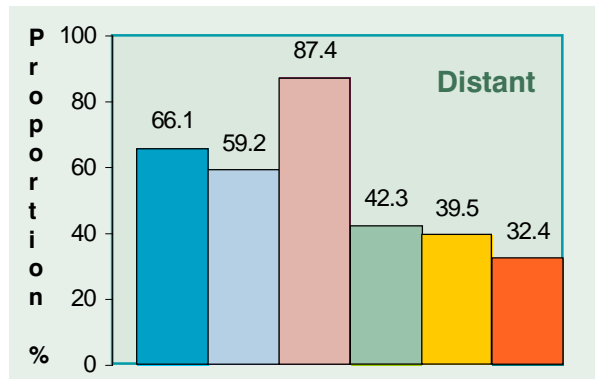
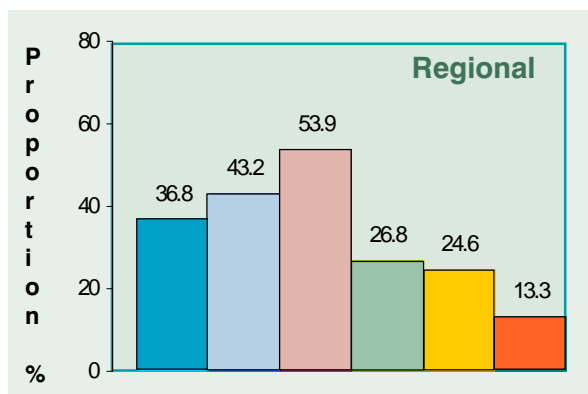
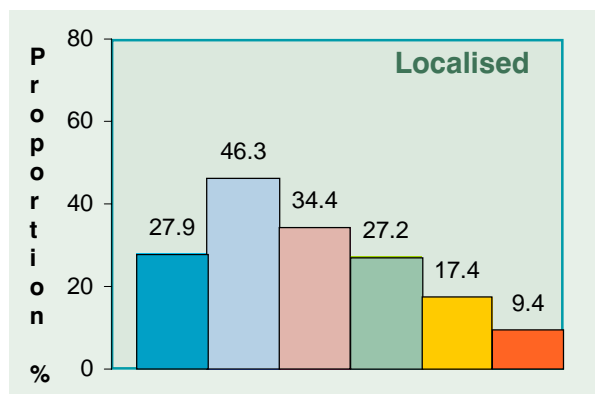
TABLE 8.4: Number (#) and Relative Proportion (%) who received (CDT-Y) and did not receive (CDT-N) Cancer Directed Treatment in each category of Clinical Extent of Disease*

	MALES					FEMALES				
	Total Cases	CDT-Y		CDT-N		Total Cases	CDT-Y		CDT-N	
		#	%	#	%		#	%	#	%
LOCALISED										
Mumbai	13644	9832	72.1	3812	27.9	9626	7391	76.8	2235	23.2
Bangalore	4141	2224	53.7	1917	46.3	3206	1905	59.4	1301	40.6
Chennai	986	647	65.6	339	34.4	1279	951	74.4	328	25.6
Thi'puram	4046	2947	72.8	1099	27.2	3021	2415	79.9	606	20.1
Chandigarh	500	413	82.6	87	17.4	508	426	83.9	82	16.1
Dibrugarh	1938	1755	90.6	183	9.4	692	627	90.6	65	9.4
REGIONAL										
Mumbai	25388	16047	63.2	9341	36.8	20878	14564	69.8	6314	30.2
Bangalore	12952	7358	56.8	5594	43.2	20955	12392	59.1	8563	40.9
Chennai	11915	5488	46.1	6427	53.9	17801	9249	52.0	8552	48.0
Thi'puram	12171	8911	73.2	3260	26.8	10816	8487	78.5	2329	21.5
Chandigarh	4175	3149	75.4	1026	24.6	4747	3596	75.8	1151	24.2
Dibrugarh	3459	2998	86.7	461	13.3	1681	1491	88.7	190	11.3
DISTANT										
Mumbai	10256	3475	33.9	6781	66.1	6366	2250	35.3	4116	64.7
Bangalore	4796	1958	40.8	2838	59.2	3905	1455	37.3	2450	62.7
Chennai	3433	432	12.6	3001	87.4	2375	561	23.6	1814	76.4
Thi'puram	3969	2290	57.7	1679	42.3	1820	1085	59.6	735	40.4
Chandigarh	764	462	60.5	302	39.5	609	335	55.0	274	45.0
Dibrugarh	712	481	67.6	231	32.4	502	353	70.3	149	29.7
OTHERS										
Mumbai	10532	5911	56.1	4621	43.9	4622	2284	49.4	2338	50.6
Bangalore	3689	2406	65.2	1283	34.8	1819	1133	62.3	686	37.7
Chennai	2108	1315	62.4	793	37.6	1005	573	57.0	432	43.0
Thi'puram	2809	2002	71.3	807	28.7	1525	1030	67.5	495	32.5
Chandigarh	897	743	82.8	154	17.2	362	306	84.5	56	15.5
Dibrugarh	1266	919	72.6	347	27.4	464	342	73.7	122	26.3

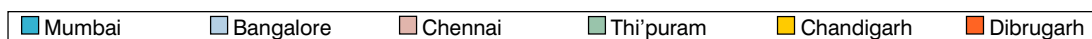
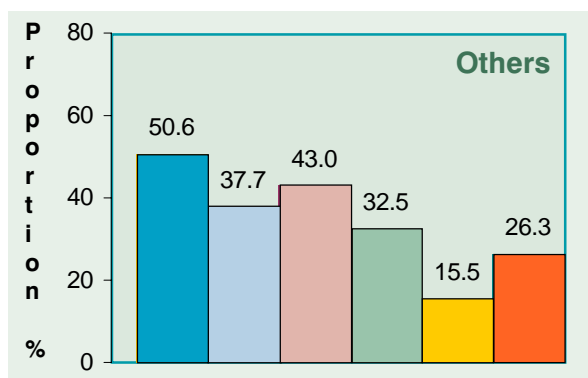
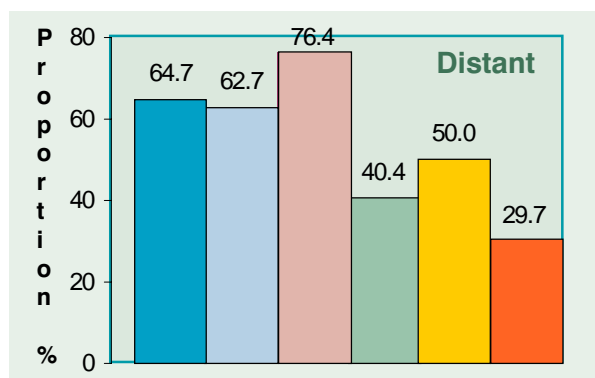
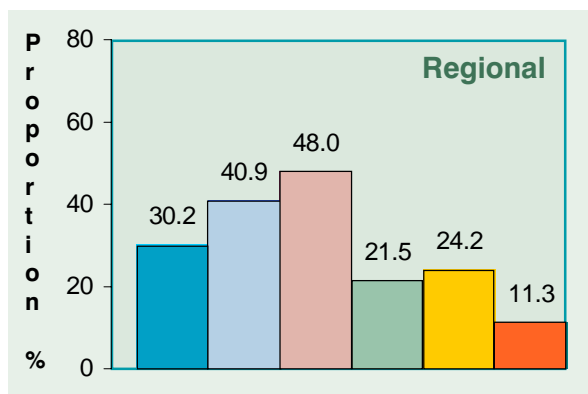
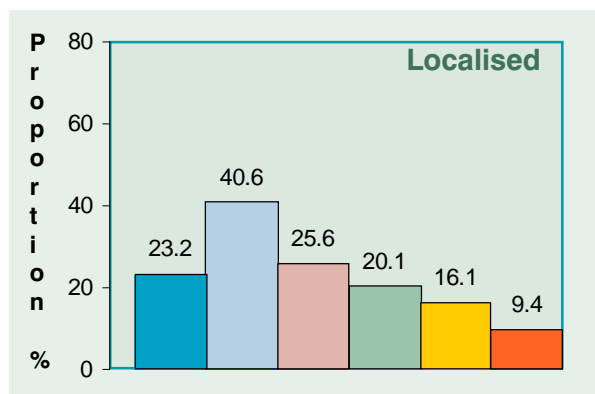
* Excludes patients whose clinical extent was unknown

Fig. 8.3: Proportion of 'No Cancer Directed Treatment' in each Category of Clinical Extent of Disease

Males



Females



Chapter 9

NON-ANALYTIC CASES: PATIENTS WHO HAVE UNDERGONE PREVIOUS TREATMENT

This chapter represents the treatment including its type given at the Reporting Institution to patients who were previously treated. The costs of such care vis-a-vis for patients who are exclusively treated at the registry centre may be relevant when allocating budget for treatment. The type of previous treatment also gives an indication of the cancer facilities available in the region other than that at the centre.

This chapter includes discussion on the broad treatment groups (outlined in Chapter 5), viz, Group A - Patients who have undergone prior treatment only, and Group B - Patients who have undergone prior treatment and have also received further treatment at the reporting institution. These two groups as indicated constitute the 'Non-Analytic Cases'.

The proportion of patients who have received prior treatment (Table 9.1) before registration at reporting institution varies from a low of 3.9 percent in males at Dibrugarh to a high of 31.4 percent among females at Mumbai.

Table 9.2 and Figures 9.1 and 9.2 show the different types of treatment received by these patients. In all centres (excluding Dibrugarh where the numbers are small) it may be noted that 75 to just over 90 percent of patients have received some form or the other of single modality therapy, with surgery, being the most common form of single treatment. The proportion of patients having received prior radiotherapy alone varies from 3 percent in females at Thiruvananthapuram to nearly 30 percent (29.5%) in females at Chandigarh. The marked difference between the sexes in the proportion of patients who have received radiotherapy in Chandigarh (7.1% in males versus 29.5% in females) is noteworthy. The proportion of patients who have had prior chemotherapy alone varies from 1.8 percent in females at Chandigarh to 16.9 percent among males at Mumbai.

The proportion of patients who have received more than one form of cancer directed treatment varied from 5.8 percent among females in Chandigarh to 20.6 percent among males in Chennai.

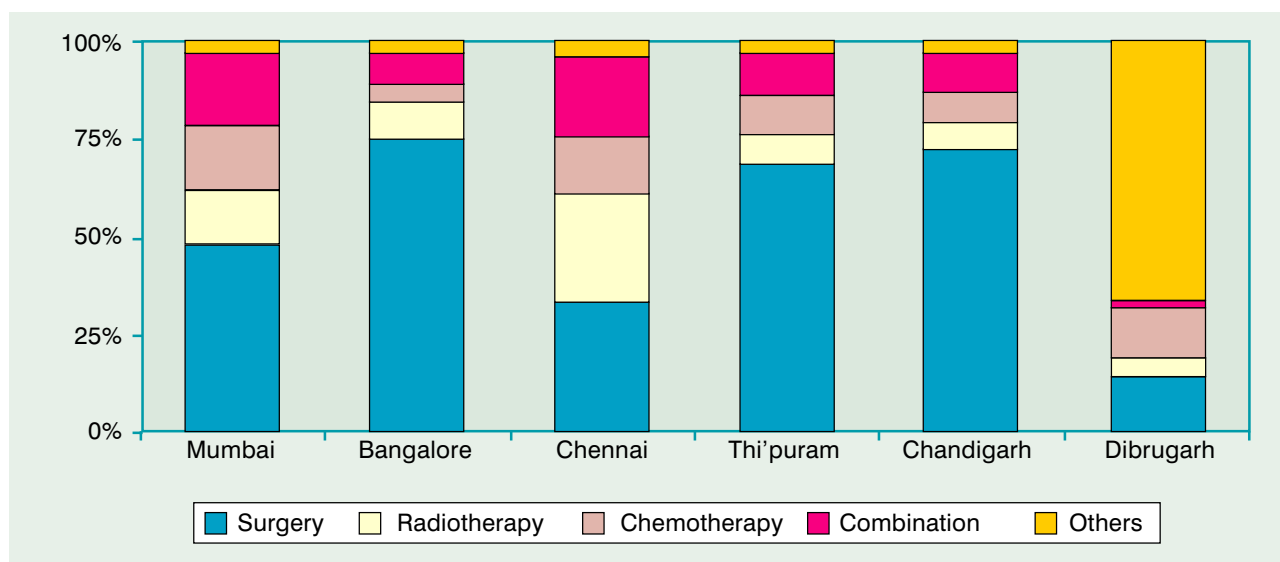
Table 9.3 and Figure 9.3 summarise the number and proportion of previously treated patients who received further cancer directed treatment at the reporting institution. The proportion of patients further treated at reporting institution, relative to all patients previously treated varies from 17.1 percent among males in Chennai to over 85 percent in either sex at Dibrugarh.

TABLE 9.1: Total number of cancer patients registered (Pts Regd) and total number(#) and proportion(%) who have undergone previous treatment (Prev Tmt) before registration at Reporting Institutions

Registry	Males			Females		
	Pts. Regd.	Prev. Tmt		Pts. Regd.	Prev. Tmt	
		#	%		#	%
Mumbai	78588	17605	22.4	61602	19332	31.4
Bangalore	31116	4688	15.1	36188	5880	16.2
Chennai	24588	5301	21.6	28685	5876	20.5
Thi'puram	27808	3692	13.3	23604	5841	24.7
Chandigarh	6909	539	7.8	7383	1141	15.5
Dibrugarh	8309	325	3.9	3736	236	6.3

Fig. 9.1: Proportion of Type of Prior Treatment

Males



Females

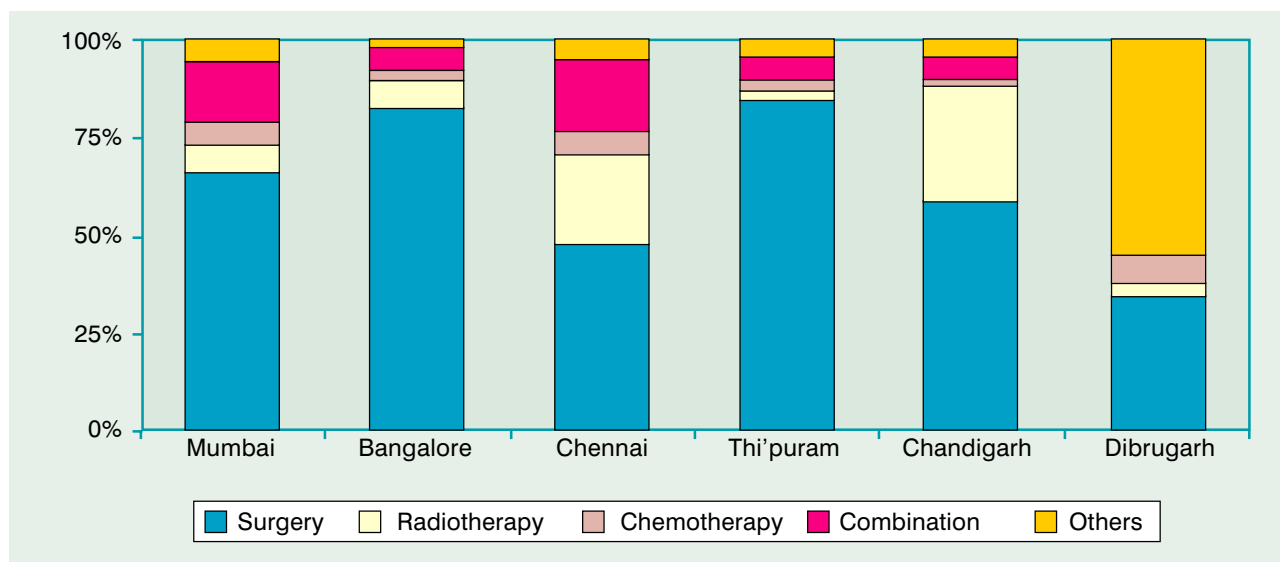


TABLE 9.2: Number(#) & Relative Proportion(%) according to Type of Treatment given before registration at Reporting Institutions**Males**

Type of Treatment	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total Patients	17605	100.0	4688	100.0	5301	100.0	3692	100.0	539	100.0	325	100.0
Specific Treatments												
Surgery(S)	8384	47.6	3528	75.3	1751	33.0	2552	69.1	390	72.4	46	14.2
Radiotherapy(R)	2456	14.0	436	9.3	1489	28.1	273	7.4	38	7.1	16	4.9
Chemotherapy(C)	2972	16.9	226	4.8	762	14.4	369	10.0	43	8.0	41	12.6
S + R	910	5.2	106	2.3	219	4.1	80	2.2	13	2.4	1	0.3
S + C	693	3.9	147	3.1	317	6.0	117	3.2	25	4.6	4	1.2
R + C	1246	7.1	86	1.8	469	8.8	139	3.8	10	1.9	1	0.3
S + R + C	419	2.4	32	0.7	86	1.6	35	0.9	5	0.9	0	0.0
Others/Unknown	525	3.0	127	2.7	208	3.9	127	3.4	15	2.8	216	66.5
Modality of therapy*												
Single	13812	78.5	4190	89.4	4002	75.5	3194	86.5	471	87.4	103	31.7
Combination	3268	18.6	371	7.9	1091	20.6	371	10.0	53	9.8	6	1.8
Type of Any Treatment*												
Any Surgery	10697	60.8	3857	82.3	2387	45.0	2824	76.5	440	81.6	51	15.7
Any Radiotherapy	5078	28.8	668	14.2	2273	42.9	532	14.4	68	12.6	18	5.5
Any Chemotherapy	5354	30.4	539	11.5	1637	30.9	661	17.9	83	15.4	46	14.2

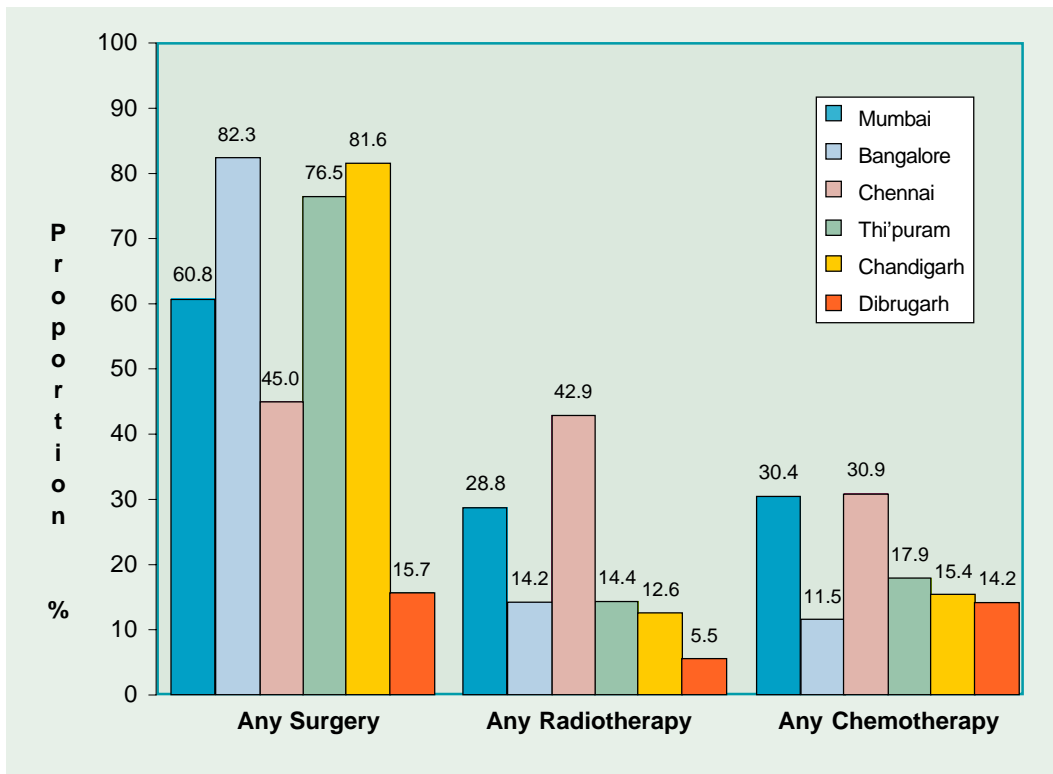
Females

Type of Treatment	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total Patients	19332	100.0	5880	100.0	5876	100.0	5841	100.0	1141	100.0	236	100.0
Specific Treatments												
Surgery(S)	12751	66.0	4851	82.5	2784	47.4	4898	83.9	668	58.5	80	33.9
Radiotherapy(R)	1356	7.0	421	7.2	1345	22.9	177	3.0	337	29.5	9	3.8
Chemotherapy(C)	1152	6.0	123	2.1	372	6.3	161	2.8	21	1.8	17	7.2
S + R	924	4.8	133	2.3	263	4.5	61	1.0	18	1.6	0	0.0
S + C	1118	5.8	143	2.4	383	6.5	186	3.2	38	3.3	0	0.0
R + C	347	1.8	40	0.7	221	3.8	51	0.9	1	0.1	0	0.0
S + R + C	542	2.8	43	0.7	196	3.3	45	0.8	9	0.8	0	0.0
Others/Unknown	1142	5.9	126	2.1	312	5.3	262	4.5	49	4.3	130	55.1
Modality of therapy*												
Single	15259	78.9	5395	91.8	4501	76.6	5236	89.6	1026	89.9	106	44.9
Combination	2931	15.2	359	6.1	1063	18.1	343	5.9	66	5.8	0	0.0
Type of Any Treatment*												
Any Surgery	16384	84.8	5248	89.3	3771	64.2	5438	93.1	777	68.1	81	34.3
Any Radiotherapy	3655	18.9	658	11.2	2104	35.8	376	6.4	371	32.5	10	4.2
Any Chemotherapy	3663	18.9	394	6.7	1259	21.4	481	8.2	80	7.0	17	7.2

* Excludes specific treatment classified as 'Others'

Fig. 9.2: Proportion of Any Specific Prior Treatment Before Registration at Reporting Institution

Males



Females

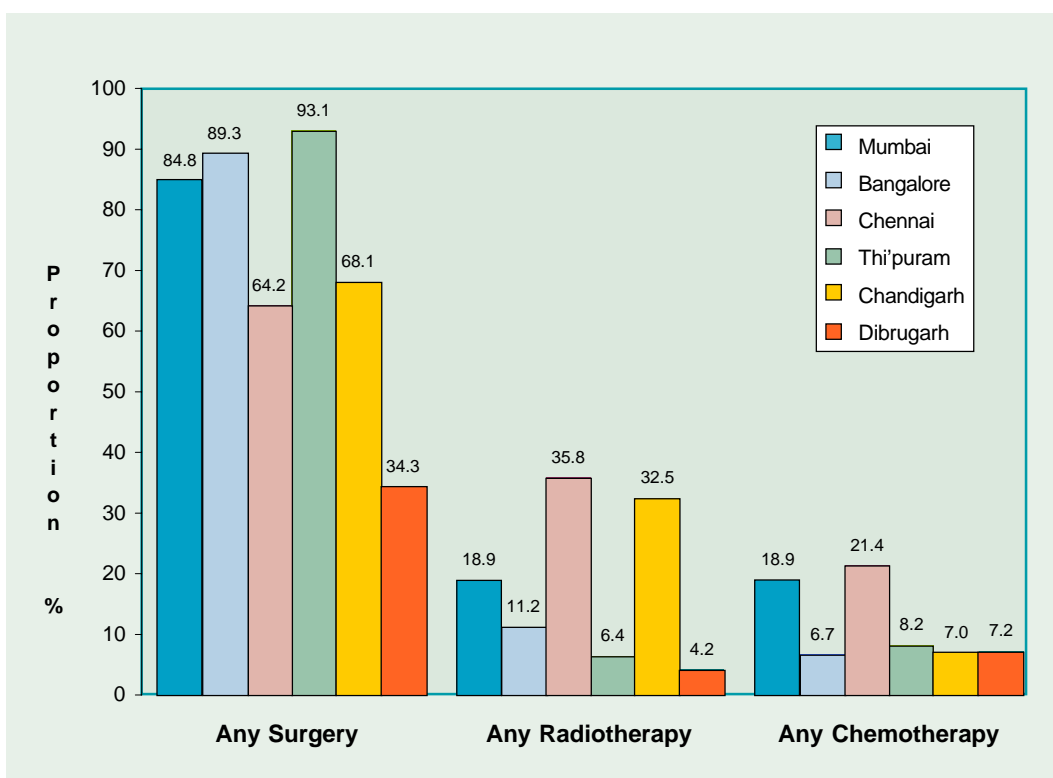


TABLE 9.3: Total number of patients who have undergone pervious treatment(Prev Tmt) before registration and number(#) and propotion(%) who received further treatment at Reporting Institutions (Tmt. at RI).

Registry	Males			Females		
	Prev. Tmt.	Tmt. at RI		Prev. Tmt.	Tmt. at RI	
		#	%		#	%
Mumbai	17605	8060	45.8	19332	10595	54.8
Bangalore	4688	2443	52.1	5880	3426	58.3
Chennai	5301	908	17.1	5876	1733	29.5
Thi'puram	3692	2274	61.6	5841	4080	69.9
Chandigarh	539	339	62.9	1141	872	76.4
Dibrugarh	325	277	85.2	236	201	85.2

Tables 9.4 with the corresponding figures (Fig. 9.4 & 9.5) give an idea of the various types of further treatment received by these patients at their respective reporting institutions. The proportion of patients who received surgery is relatively higher in either sex at Mumbai and Dibrugarh. However, every centre (except males in Mumbai) has the highest relative proportion of patients receiving radiotherapy, with Dibrugarh having the highest proportion among males and Chandigarh the highest among females. The relative proportion of patients receiving chemotherapy is quite high in all the centres especially in comparison to those patients being treated only at reporting institution (see Chapter 7).

Fig. 9.3: Proportion of Previously Treated Patients Who Received Further Treatment at Reporting Institution

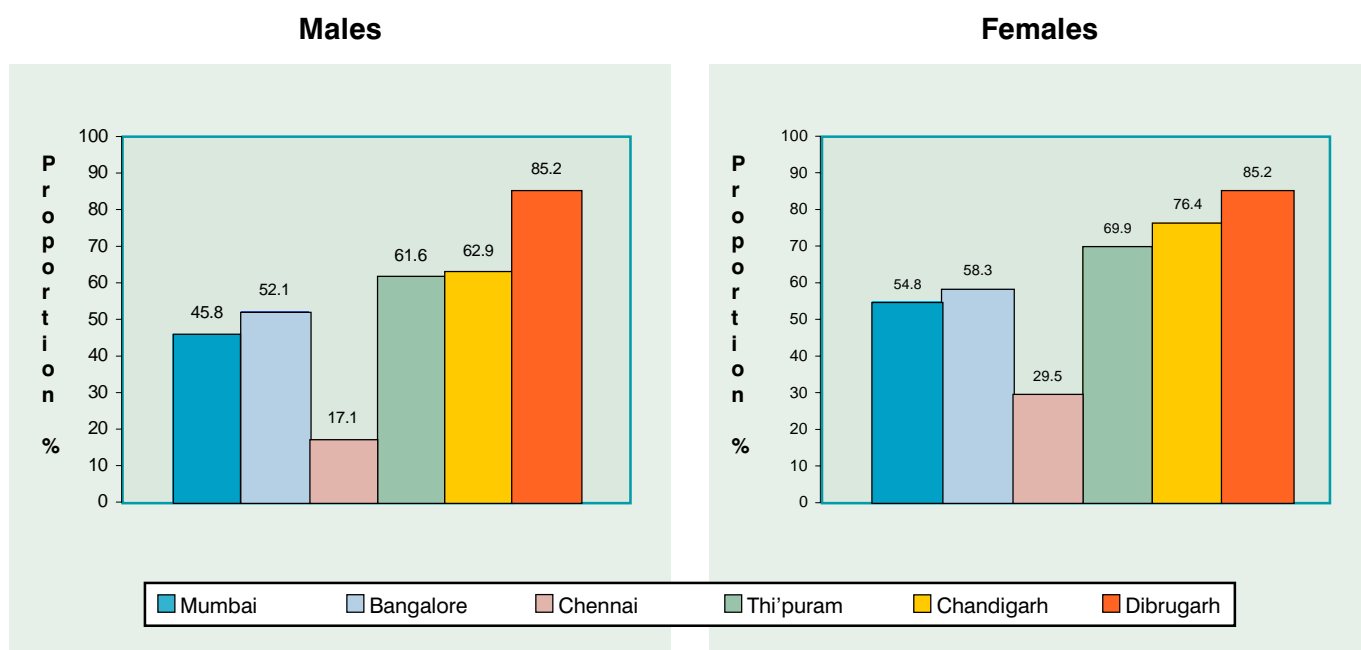


TABLE 9.4: Number(#) & Relative Proportion(%) of cancer patients according to Type of Further Treatment given at Reporting Institutions**Males**

Types of Treatment at RI	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total Patients	8060	100.0	2443	100.0	908	100.0	2274	100.0	339	100.0	277	100.0
Specific Treatments												
Surgery(S)	1587	19.7	117	4.8	94	10.4	135	5.9	28	8.3	30	10.8
Radiotherapy(R)	1784	22.1	1057	43.3	326	35.9	1303	57.3	132	38.9	160	57.8
Chemotherapy(C)	2391	29.7	613	25.1	315	34.7	423	18.6	68	20.1	46	16.6
S + R	474	5.9	63	2.6	25	2.8	57	2.5	23	6.8	5	1.8
S + C	339	4.2	57	2.3	24	2.6	14	0.6	8	2.4	18	6.5
R + C	1174	14.6	309	12.6	105	11.6	231	10.2	51	15.0	13	4.7
S + R + C	91	1.1	27	1.1	10	1.1	5	0.2	6	1.8	5	1.8
Others	220	2.7	200	8.2	9	1.0	106	4.7	23	6.8	0	0.0
Modality of therapy*												
Single	5762	71.5	1787	73.1	735	81.0	1861	81.8	228	67.3	236	85.2
Combination	2078	25.8	456	18.7	164	18.1	307	13.5	88	26.0	41	14.8
Type of Any Treatment*												
Any Surgery	2520	31.3	274	11.2	155	17.1	220	9.7	67	19.8	58	20.9
Any Radiotherapy	3565	44.2	1511	61.9	469	51.7	1639	72.1	226	66.7	183	66.1
Any Chemotherapy	4013	49.8	1070	43.8	455	50.1	673	29.6	136	40.1	82	29.6

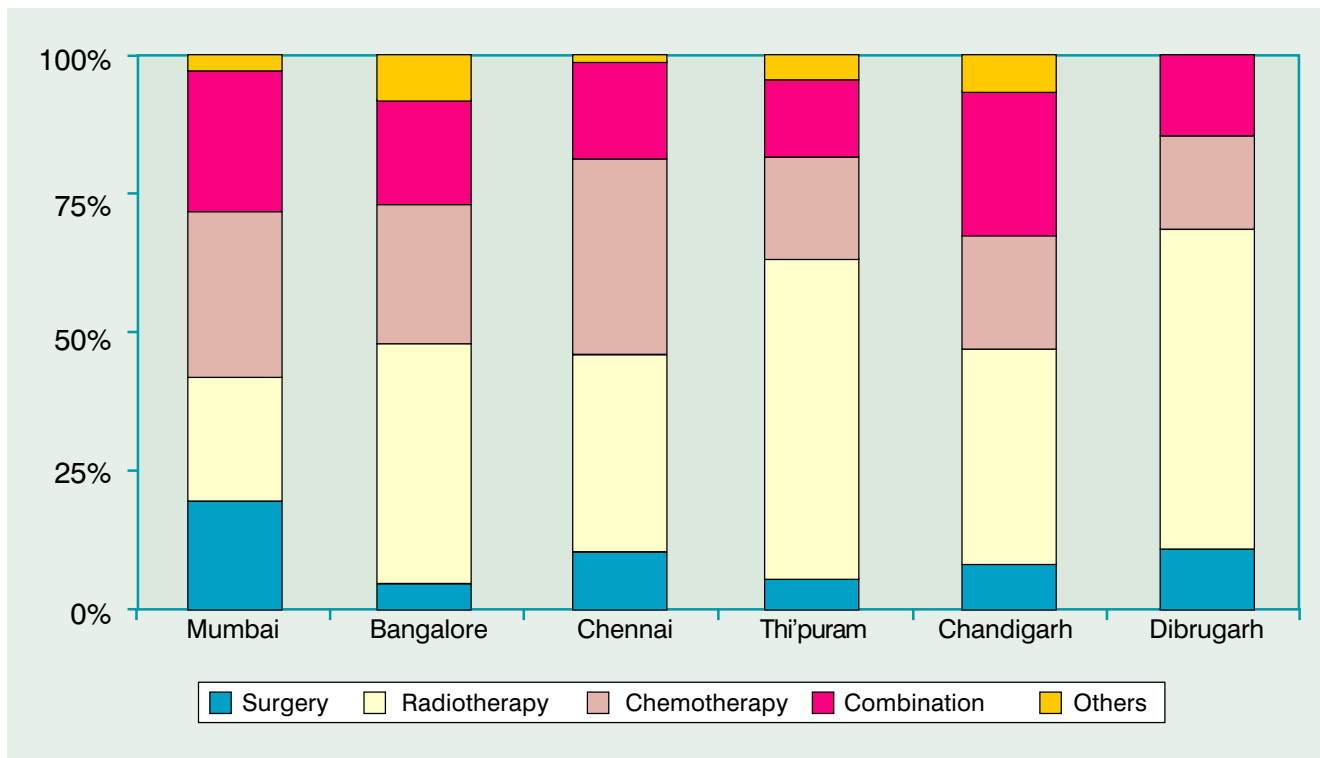
Females

Types of Treatment at RI	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total Patients	10595	100.0	3426	100.0	1733	100.0	4080	100.0	872	100.0	201	100.0
Specific Treatments												
Surgery(S)	1501	14.2	92	2.7	45	2.6	188	4.6	17	1.9	23	11.4
Radiotherapy(R)	3001	28.3	1300	37.9	358	20.7	1669	40.9	559	64.1	124	61.7
Chemotherapy(C)	2481	23.4	618	18.0	336	19.4	548	13.4	67	7.7	23	11.4
S + R	394	3.7	106	3.1	28	1.6	124	3.0	24	2.8	11	5.5
S + C	692	6.5	89	2.6	23	1.3	32	0.8	4	0.5	13	6.5
R + C	1051	9.9	529	15.4	439	25.3	570	14.0	109	12.5	6	3.0
S + R + C	275	2.6	111	3.2	67	3.9	73	1.8	20	2.3	1	0.5
Others	1200	11.3	581	17.0	437	25.2	876	21.5	72	8.3	0	0.0
Modality of therapy*												
Single	6983	65.9	2010	58.7	739	42.6	2405	58.9	643	73.7	170	84.6
Combination	2412	22.8	835	24.4	557	32.1	799	19.6	157	18.0	31	15.4
Type of Any Treatment*												
Any Surgery	3156	29.8	501	14.6	270	15.6	509	12.5	71	8.1	48	23.9
Any Radiotherapy	5110	48.2	2417	70.5	1220	70.4	2976	72.9	759	87.0	142	70.6
Any Chemotherapy	4946	46.7	1555	45.4	1183	68.3	1328	32.5	221	25.3	43	21.4

* Excludes specific treatment classified as 'Others'

Fig. 9.4: Proportion of Types of Treatment at Reporting Institution

Males



Females

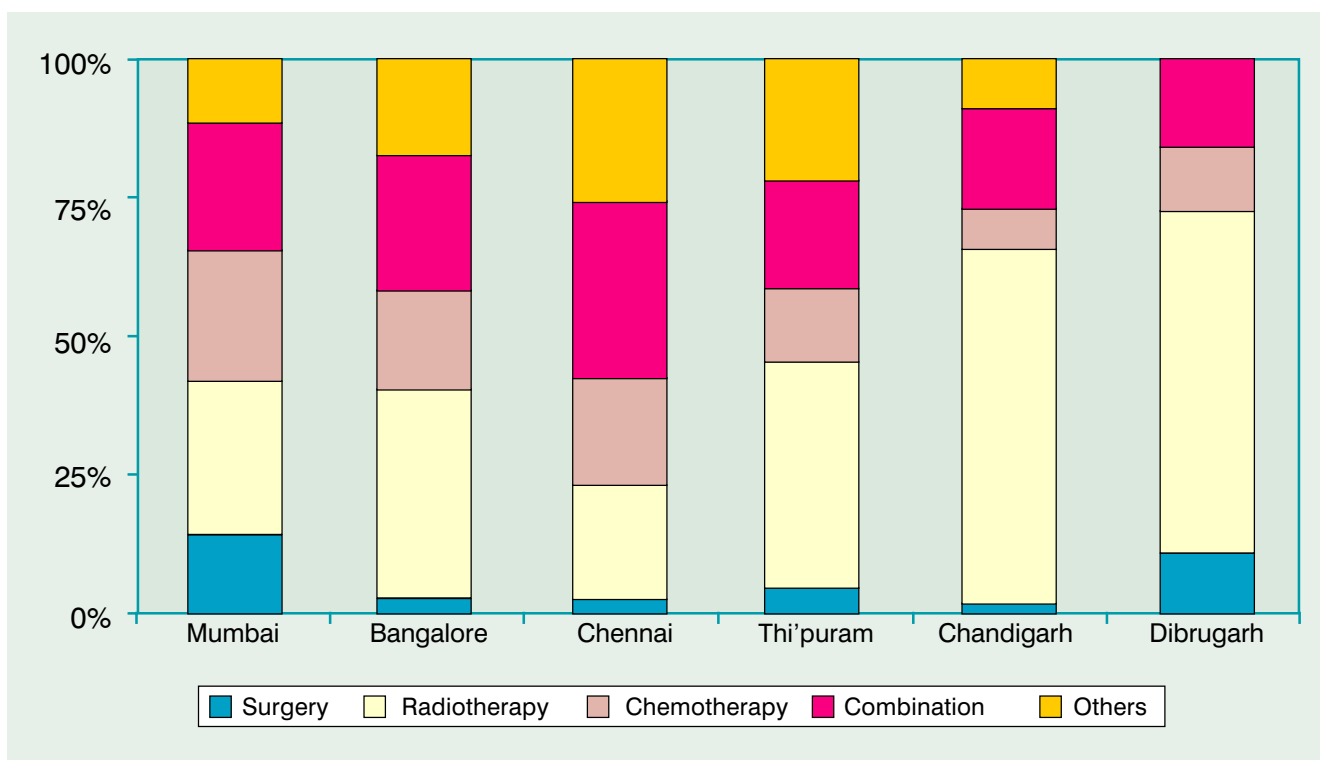
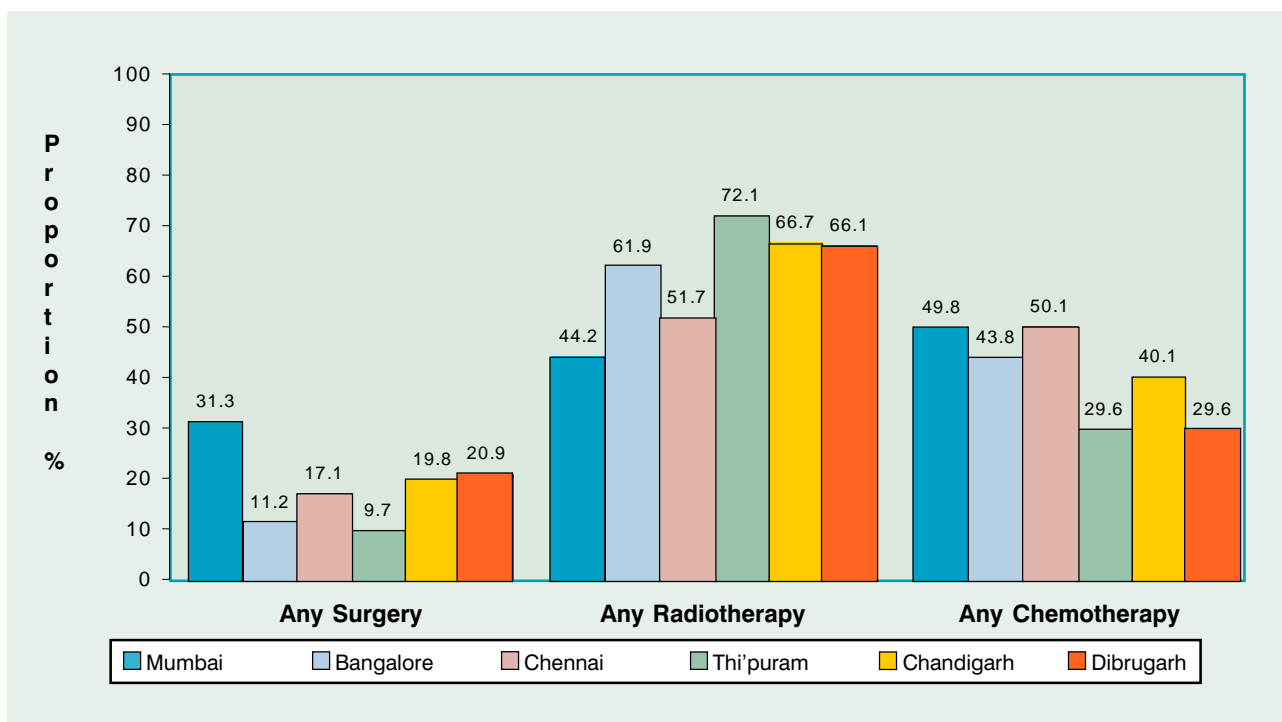
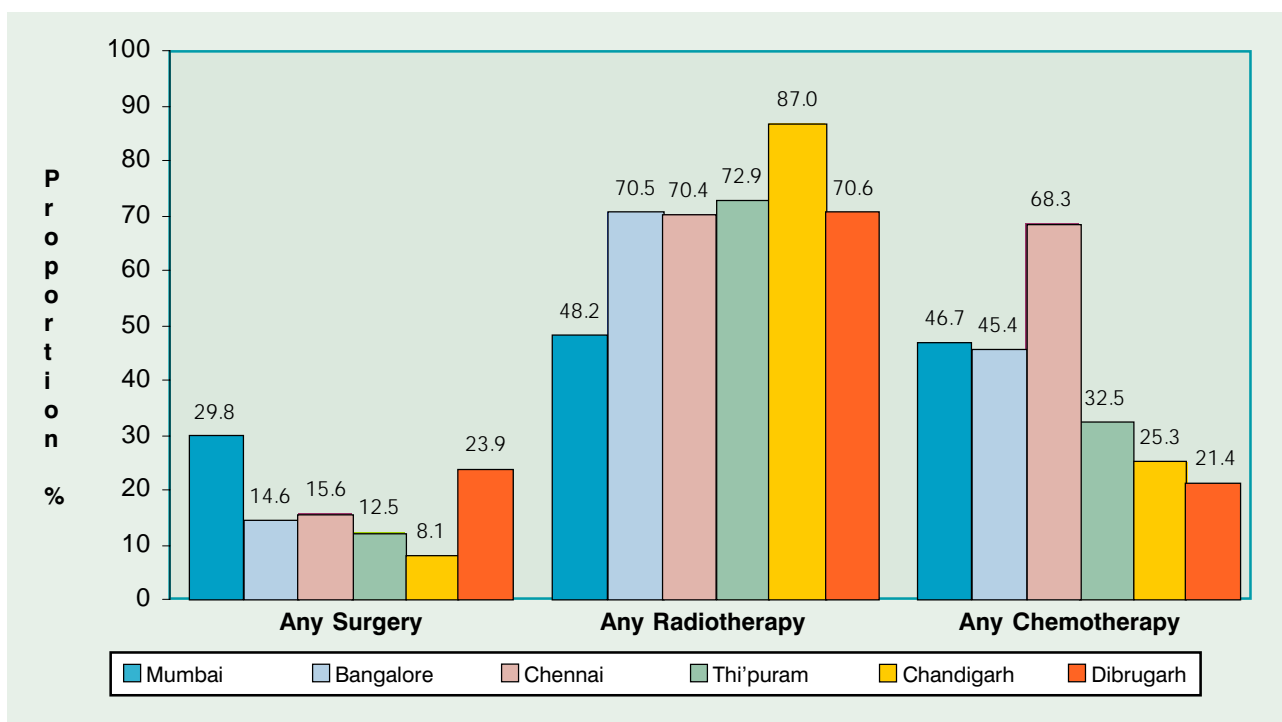


Fig. 9.5: Proportion of Any Specific Treatment at Reporting Institutions

Males



Females



Chapter 10

ORAL CANCERS

Chapters 10-12 summarize three important selected sites of cancer with the comprehensive tables given in Chapters 1-9. The numbers and proportions in these tables of individual sites now become more meaningful.

The proportion of Oral Cancers (Lip, Tongue, Oral Cavity; ICD-9: 140, 141, 143-145) relative to all sites in males, was almost the same (19.2-20.2%) in the Registries at Mumbai, Chennai and Thiruvananthapuram, where it was the number one cancer. The relative proportion of this combined sites of cancer among females is lower, in all centres except in Bangalore. In Bangalore the relative proportion of cancer of the oral cavity (combined sites) in females was not only higher than that in males, but also had the highest comparative relative proportion among all registries in that sex (Table 1).

The five-year age distribution (Table 10.2) of the patients appears similar in all registries among males, with peak age distribution being 45-60 years of age. In females however, there appear to be more number of younger women in Bangalore and older ones in Thiruvananthapuram.

The basis of diagnosis (Table 10.3) was predominantly microscopic in all registries, except in Chennai and Thiruvananthapuram, which had correspondingly higher proportion of clinical diagnosis.

Table 10.4 gives the number and relative proportion of patients according to broad treatment groups.

The number and proportion of patients (excluding those previously treated) according to the clinical extent of disease is shown in Table 10.5. Over 70 percent of all patients have regional involvement at time of presentation. In Dibrugarh 35.2 percent among females and 36 percent in males had localised disease at presentation, with correspondingly lower proportion having regional involvement.

The different types of treatment given, or the total number of any specific treatment with their proportion is shown in Table 10.6. Mumbai has the highest relative proportion of patients receiving only surgery (28.4% and 38.4% in males and females respectively) or any surgery (48.6% and 63.1%) whereas, Bangalore has the highest proportion of those receiving only chemotherapy (15.0% and 27%) or any chemotherapy (37.6% and 52.3%). The latter indicates that about two-thirds of female patients treated at Bangalore, have received chemotherapy, with or without other forms of therapy. Over 90 to almost 100 percent of patients in other centres have received “any radiotherapy”. The proportion of patients receiving more than one form of treatment (combination therapy) is highest in Bangalore females and Thiruvananthapuram males.

TABLE 10.1: Number(#), Relative Proportion(%) and Rank(R) of cancers of the oral cavity (combined sites)

Registry	Males				Females			
	Total	#	%	R	Total	#	%	R
Mumbai	78588	15084	19.2	1	61602	4501	7.3	3
Bangalore	31116	3963	12.7	2	36188	4751	13.1	2
Chennai	24588	4864	19.8	1	28685	2647	9.2	3
Thi'puram	27808	5615	20.2	1	23604	2924	12.4	3
Chandigarh	6909	618	8.9	2	7383	203	2.7	6
Dibrugarh	8309	1128	13.6	3	3736	387	10.4	4

TABLE 10.2: Number(#) and Relative Proportion(%) according to five-year age group

Age Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
0- 4	10	0.1	0	0.0	2	0.0	1	0.0	1	0.2	0	0.0
5- 9	1	0.0	1	0.0	2	0.0	1	0.0	0	0.0	0	0.0
10-14	7	0.0	0	0.0	4	0.1	2	0.0	0	0.0	1	0.1
15-19	12	0.1	4	0.1	6	0.1	2	0.0	0	0.0	0	0.0
20-24	75	0.5	11	0.3	16	0.3	12	0.2	4	0.6	4	0.4
25-29	195	1.3	36	0.9	43	0.9	31	0.6	16	2.6	16	1.4
30-34	565	3.7	90	2.3	94	1.9	75	1.3	23	3.7	31	2.7
35-39	1039	6.9	150	3.8	184	3.8	199	3.5	34	5.5	69	6.1
40-44	1557	10.3	268	6.8	357	7.4	297	5.3	53	8.6	89	7.9
45-49	2080	13.8	466	11.8	584	12.0	597	10.6	95	15.4	194	17.2
50-54	2580	17.1	651	16.4	788	16.2	739	13.2	104	16.8	212	18.8
55-59	2292	15.2	575	14.5	816	16.8	934	16.6	99	16.0	168	14.9
60-64	2009	13.3	695	17.5	825	17.0	910	16.2	70	11.3	159	14.1
65-69	1319	8.7	450	11.4	545	11.2	806	14.4	49	7.9	89	7.9
70-74	777	5.2	314	7.9	361	7.4	481	8.6	45	7.3	58	5.1
75+	558	3.7	252	6.4	237	4.9	528	9.4	25	4.0	38	3.4
ANS	8	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	15084	100.0	3963	100.0	4864	100.2	5615	100.0	618	100.0	1128	100.0
FEMALES												
0- 4	1	0.0	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
5- 9	1	0.0	1	0.0	2	0.1	1	0.0	0	0.0	1	0.3
10-14	2	0.0	0	0.0	3	0.1	3	0.1	0	0.0	0	0.0
15-19	13	0.3	4	0.1	6	0.2	1	0.0	1	0.5	2	0.5
20-24	23	0.5	14	0.3	6	0.2	14	0.5	3	1.5	2	0.5
25-29	72	1.6	46	1.0	39	1.5	14	0.5	4	2.0	8	2.1
30-34	146	3.2	101	2.1	62	2.3	37	1.3	6	3.0	14	3.6
35-39	320	7.1	296	6.2	128	4.8	76	2.6	12	5.9	20	5.2
40-44	494	11.0	461	9.7	239	9.0	140	4.8	16	7.9	52	13.4
45-49	690	15.3	673	14.2	384	14.5	266	9.1	35	17.2	75	19.4
50-54	668	14.8	870	18.3	509	19.2	333	11.4	37	18.2	68	17.6
55-59	660	14.7	575	12.1	410	15.5	461	15.8	39	19.2	46	11.9
60-64	626	13.9	769	16.2	425	16.1	477	16.3	24	11.8	50	12.9
65-69	371	8.2	449	9.5	203	7.7	480	16.4	9	4.4	27	7.0
70-74	233	5.2	274	5.8	131	4.9	289	9.9	12	5.9	15	3.9
75+	178	4.0	217	4.6	99	3.7	332	11.4	5	2.5	7	1.8
ANS	3	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	4501	100.0	4751	100.0	2647	100.0	2924	100.0	203	100.0	387	100.0

TABLE 10.3: Number(#) and Relative Proportion(%) based on different methods of diagnosis

	Microscopic		Clinical		X-ray		Others		Total	
	#	%	#	%	#	%	#	%	#	%
MALES										
Mumbai	14211	94.2	387	2.6	13	0.1	473	3.1	15084	100.0
Bangalore	3813	96.2	115	2.9	1	0.0	34	0.9	3963	100.0
Chennai	2770	56.9	2087	42.9	1	0.0	6	0.1	4864	100.0
Thi'puram	4845	86.3	743	13.2	16	0.3	11	0.2	5615	100.0
Chandigarh	605	97.9	8	1.3	5	0.8	0	0.0	618	100.0
Dibrugarh	1111	98.5	7	0.6	1	0.1	9	0.8	1128	100.0
FEMALES										
Mumbai	4252	94.5	95	2.1	10	0.2	144	3.2	4501	100.0
Bangalore	4603	96.9	126	2.7	2	0.0	20	0.4	4751	100.0
Chennai	1449	54.7	1197	45.2	1	0.0	0	0.0	2647	100.0
Thi'puram	2474	84.6	436	14.9	7	0.2	7	0.2	2924	100.0
Chandigarh	191	94.1	12	5.9	0	0.0	0	0.0	203	100.0
Dibrugarh	379	97.9	7	1.8	0	0.0	1	0.3	387	100.0

TABLE 10.4: Number(#) and Relative Proportion(%) according to Broad Groups of Treatment(Tmt.)

	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Prior Tmt. Only	1405	9.3	111	2.8	832	17.1	178	3.2	5	1.0	3	0.3
Prior & Tmt. at RI	988	6.5	85	2.1	45	0.9	180	3.2	11	2.1	18	1.6
Tmt. Only at RI	8161	54.1	2300	58.0	2074	42.6	3990	71.1	482	93.1	970	86.0
No CDT	4530	30.0	1467	37.0	1913	39.3	1267	22.6	120	23.2	137	12.1
Total Patients	15084	100.0	3963	100.0	4864	100.0	5615	100.0	618	119.3	1128	100.0
FEMALES												
Prior Tmt. Only	354	7.9	55	1.2	399	15.1	61	2.1	5	2.5	3	0.8
Prior & Tmt. at RI	308	6.8	72	1.5	18	0.7	81	2.8	3	1.5	9	2.3
Tmt. Only at RI	2483	55.2	2827	59.5	1223	46.2	2120	72.5	138	68.0	316	81.7
No CDT	1356	30.1	1797	37.8	1007	38.0	662	22.6	57	28.1	59	15.2
Total Patients	4501	100.0	4751	100.0	2647	100.0	2924	100.0	203	100.0	387	100.0

RI = Reporting Institution

TABLE 10.5: Number(#) and Relative Proportion(%) according to the Clinical Extent of Disease (Excludes Patients Previously Treated)**Males**

Registry	Localised		Regional		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%
Mumbai	2486	19.6	9357	73.7	377	3.0	471	3.7	12691	100.0
Bangalore	350	9.3	3154	83.7	250	6.6	13	0.3	3767	100.0
Chennai	223	5.6	3457	86.7	307	7.7	0	0.0	3987	100.0
Thi'puram	829	15.8	4306	81.9	119	2.3	3	0.1	5257	100.0
Chandigarh	71	11.8	527	87.5	4	0.7	0	0.0	602	100.0
Dibrugarh	398	36.0	684	61.8	17	1.5	8	0.7	1107	100.0

Females

Registry	Localised		Regional		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%
Mumbai	854	22.2	2739	71.3	113	2.9	133	3.5	3839	100.0
Bangalore	340	7.4	3900	84.3	376	8.1	8	0.2	4624	100.0
Chennai	106	4.8	2011	90.2	113	5.1	0	0.0	2230	100.0
Thi'puram	492	17.7	2223	79.9	61	2.2	6	0.2	2782	100.0
Chandigarh	42	21.5	151	77.4	2	1.0	0	0.0	195	100.0
Dibrugarh	132	35.2	226	60.3	12	3.2	5	1.3	375	100.0

Observation of treatments by clinical extent of disease (Tables 10.7 & 10.8) shows the decline in the proportion of patients undergoing surgery with advancing disease and the high proportion of patients with 'distant' disease receiving chemotherapy at Mumbai and Bangalore.

TABLE 10.6: Patients treated only at Reporting Institution: Number(#) and Relative Proportion(%) according to Type of Treatment**Males**

Types of Treatment	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total patients	8161	100.0	2300	100.0	2074	100.0	3990	100.0	482	100.0	970	100.0
Specific Tmts												
Surgery(S)	2320	28.4	69	3.0	3	0.1	158	4.0	11	2.3	58	6.0
Radiotherapy(R)	3050	37.4	1241	54.0	1794	86.5	2560	64.2	406	84.2	851	87.7
Chemotherapy(C)	651	8.0	346	15.0	2	0.1	59	1.5	1	0.2	6	0.6
S + R	1320	16.2	118	5.1	85	4.1	400	10.0	36	7.5	36	3.7
S + C	184	2.3	16	0.7	7	0.3	11	0.3	0	0.0	4	0.4
R + C	496	6.1	453	19.7	177	8.5	707	17.7	23	4.8	15	1.5
S + R + C	139	1.7	49	2.1	6	0.3	95	2.4	4	0.8	0	0.0
Others	1	0.0	8	0.3	0	0.0	0	0.0	1	0.2	0	0.0
Modality of therapy												
Single	6021	73.8	1656	72.0	1799	86.7	2777	69.6	418	86.7	915	94.3
Combination	2139	26.2	636	27.7	275	13.3	1213	30.4	63	13.1	55	5.7
Type of Any Treatment												
Any Surgery	3963	48.6	252	11.0	101	4.9	664	16.6	51	10.6	98	10.1
Any R	5005	61.3	1862	81.0	2062	99.4	3762	94.3	469	97.3	902	93.0
Any C	1470	18.0	865	37.6	192	9.3	872	21.9	28	5.8	25	2.6

Females

Types of Treatment	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total patients	2483	100.0	2827	100.0	1223	100.0	2120	100.0	138	100.0	316	100.0
Specific Tmts												
Surgery(S)	954	38.4	90	3.2	3	0.2	154	7.3	3	2.2	14	4.4
Radiotherapy(R)	613	24.7	1102	39.0	1054	86.2	1391	65.6	97	70.3	289	91.5
Chemotherapy(C)	213	8.6	762	27.0	1	0.1	33	1.6	0	0.0	1	0.3
S + R	521	21.0	155	5.5	52	4.3	241	11.4	32	23.2	5	1.6
S + C	58	2.3	47	1.7	3	0.2	6	0.3	0	0.0	2	0.6
R + C	91	3.7	592	20.9	104	8.5	261	12.3	5	3.6	2	0.6
S + R + C	33	1.3	78	2.8	6	0.5	33	1.6	1	0.7	2	0.6
Others	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0	1	0.3
Modality of therapy												
Single	1780	71.7	1954	69.1	1058	86.5	1578	74.4	100	72.5	304	96.2
Combination	703	28.3	872	30.8	165	13.5	541	25.5	38	27.5	11	3.5
Type of Any Treatment												
Any Surgery	1566	63.1	370	13.1	64	5.2	435	20.5	36	26.1	24	7.6
Any R	1258	50.7	1927	68.2	1216	99.4	1926	90.8	135	97.8	299	94.6
Any C	395	15.9	1479	52.3	114	9.3	333	15.7	6	4.3	7	2.2

* Excludes specific treatment classified as 'Others'

TABLE 10.7(a): Patients treated only at Reporting Institution: Number(#) and Relative Proportion(%) by Type of Treatment given according to Clinical Extent of Disease**Males**

Types of Treatment at RI	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
LOCALISED												
Surgery(S)	1020	52.9	22	10.3	2	1.2	64	9.5	4	6.3	30	8.2
Radiotherapy(R)	622	32.2	131	61.2	147	91.3	493	73.0	49	77.8	320	87.4
Chemotherapy(C)	5	0.3	10	4.7	0	0.0	6	0.9	0	0.0	1	0.3
S + R	215	11.1	23	10.7	6	3.7	49	7.3	7	11.1	10	2.7
S + C	20	1.0	2	0.9	1	0.6	1	0.1	0	0.0	2	0.5
R + C	36	1.9	20	9.3	5	3.1	56	8.3	3	4.8	3	0.8
S + R + C	11	0.6	6	2.8	0	0.0	6	0.9	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Patients	1929	100.0	214	100.0	161	100.0	675	100.0	63	100.0	366	100.0
REGIONAL												
Surgery(S)	1282	21.1	45	2.3	1	0.1	94	2.9	7	1.7	27	4.6
Radiotherapy(R)	2372	39.1	1052	53.8	1636	86.1	2023	62.2	354	85.1	520	88.4
Chemotherapy(C)	589	9.7	290	14.8	2	0.1	46	1.4	1	0.2	2	0.3
S + R	1088	17.9	94	4.8	79	4.2	349	10.7	29	7.0	25	4.3
S + C	163	2.7	13	0.7	6	0.3	10	0.3	0	0.0	2	0.3
R + C	449	7.4	416	21.3	170	8.9	641	19.7	20	4.8	12	2.0
S + R + C	127	2.1	42	2.1	6	0.3	88	2.7	4	1.0	0	0.0
Others	1	0.0	4	0.2	0	0.0	0	0.0	1	0.2	0	0.0
Total Patients	6071	100.0	1956	100.0	1900	100.0	3251	100.0	416	100.0	588	100.0
DISTANT												
Surgery(S)	4	3.9	0	0.0	0	0.0	0	0.0	0	0.0	1	7.7
Radiotherapy(R)	27	26.5	54	44.3	11	84.6	43	68.3	3	100.0	8	61.5
Chemotherapy(C)	57	55.9	45	36.9	0	0.0	7	11.1	0	0.0	3	23.1
S + R	1	1.0	0	0.0	0	0.0	2	3.2	0	0.0	1	7.7
S + C	1	1.0	1	0.8	0	0.0	0	0.0	0	0.0	0	0.0
R + C	11	10.8	17	13.9	2	15.4	10	15.9	0	0.0	0	0.0
S + R + C	1	1.0	1	0.8	0	0.0	1	1.6	0	0.0	0	0.0
Others	0	0.0	4	3.3	0	0.0	0	0.0	0	0.0	0	0.0
Total Patients	102	100.0	122	100.0	13	100.0	63	100.0	3	100.0	13	100.0

There were no patients in almost all registres where the clinical extent was stated to be 'Others'.

TABLE 10.7(b): Patients treated only at Reporting Institution: Number(#) and Relative Proportion(%) by Type of Treatment given according to Clinical Extent of Disease**Females**

Types of Treatment at RI	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
LOCALISED												
Surgery(S)	419	62.0	16	7.8	1	1.4	69	17.2	2	5.4	6	5.1
Radiotherapy(R)	150	22.2	99	48.1	62	86.1	263	65.4	25	67.6	105	89.7
Chemotherapy(C)	4	0.6	21	10.2	0	0.0	5	1.2	0	0.0	0	0.0
S + R	86	12.7	26	12.6	5	6.9	30	7.5	8	21.6	2	1.7
S + C	3	0.4	2	1.0	0	0.0	0	0.0	0	0.0	2	1.7
R + C	11	1.6	35	17.0	3	4.2	28	7.0	1	2.7	1	0.9
S + R + C	3	0.4	7	3.4	1	1.4	6	1.5	1	2.7	0	0.0
Others	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	1	0.9
Total Patients	676	100.0	206	100.0	72	100.0	402	100.0	37	100.0	117	100.0
REGIONAL												
Surgery(S)	524	29.7	72	3.0	2	0.2	84	5.0	1	1.0	7	3.8
Radiotherapy(R)	452	25.6	971	39.9	986	86.2	1110	65.8	71	71.0	172	92.5
Chemotherapy(C)	195	11.1	620	25.5	1	0.1	24	1.4	0	0.0	1	0.5
S + R	432	24.5	126	5.2	46	4.0	209	12.4	24	24.0	3	1.6
S + C	55	3.1	42	1.7	3	0.3	6	0.4	0	0.0	0	0.0
R + C	77	4.4	534	21.9	101	8.8	229	13.6	4	4.0	1	0.5
S + R + C	29	1.6	68	2.8	5	0.4	25	1.5	0	0.0	2	1.1
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Patients	1764	100.0	2433	100.0	1144	100.0	1687	100.0	100	100.0	186	100.0
DISTANT												
Surgery(S)	1	4.3	0	0.0	0	0.0	0	0.0	0	0.0	1	12.5
Radiotherapy(R)	3	13.0	31	16.9	6	85.7	15	55.6	1	100.0	7	87.5
Chemotherapy(C)	14	60.9	119	65.0	0	0.0	4	14.8	0	0.0	0	0.0
S + R	1	4.3	3	1.6	1	14.3	2	7.4	0	0.0	0	0.0
S + C	0	0.0	3	1.6	0	0.0	0	0.0	0	0.0	0	0.0
R + C	3	13.0	23	12.6	0	0.0	4	14.8	0	0.0	0	0.0
S + R + C	1	4.3	3	1.6	0	0.0	2	7.4	0	0.0	0	0.0
Others	0	0.0	1	0.5	0	0.0	0	0.0	0	0.0	0	0.0
Total Patients	23	100.0	183	100.0	7	100.0	27	100.0	1	100.0	8	100.0

There were no patients in almost all registres where the clinical extent was stated to be 'Others'.

TABLE 10.8(a): Patients treated only at Reporting Institution: Number(#) and Proportion(%) of Any Specific Treatment Procedure relative to all treated patients according to Clinical Extent of Disease

Males

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai	1266	65.6	884	45.8	72	3.7	0	0.0	1929
Bangalore	53	24.8	180	84.1	38	17.8	0	0.0	214
Chennai	9	5.6	158	98.1	6	3.7	0	0.0	161
Thi'puram	120	17.8	604	89.5	69	10.2	0	0.0	675
Chandigarh	11	17.5	59	93.7	3	4.8	0	0.0	63
Dibrugarh	42	11.5	333	91.0	6	1.6	0	0.0	366
REGIONAL									
Mumbai	2660	43.8	4036	66.5	1328	21.9	1	0.0	6071
Bangalore	194	9.9	1605	82.1	762	39.0	4	0.2	1956
Chennai	92	4.8	1891	99.5	184	9.7	0	0.0	1900
Thi'puram	541	16.6	3101	95.4	785	24.1	0	0.0	3251
Chandigarh	40	9.6	407	97.8	25	6.0	1	0.2	416
Dibrugarh	54	9.2	557	94.7	16	2.7	0	0.0	588
DISTANT									
Mumbai	7	6.9	40	39.2	70	68.6	0	0.0	102
Bangalore	2	1.6	72	59.0	64	52.5	4	3.3	122
Chennai	0	0.0	13	100.0	2	15.4	0	0.0	13
Thi'puram	3	4.8	56	88.9	18	28.6	0	0.0	63
Chandigarh	0	0.0	3	100.0	0	0.0	0	0.0	3
Dibrugarh	2	15.4	9	69.2	3	23.1	0	0.0	13

There were no patients in almost all registries when the clinical extent was stated to be 'Others'.

TABLE 10.8(b): Patients treated only at Reporting Institution: Number(#) and Proportion(%) of Any Specific Treatment Procedure relative to all treated patients according to Clinical Extent of Disease

Females

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Patients
	#	%	#	%	#	%	#	%	
LOCALISED									
Mumbai	511	75.6	250	37.0	21	3.1	0	0.0	676
Bangalore	51	24.8	167	81.1	65	31.6	0	0.0	206
Chennai	7	9.7	71	98.6	4	5.6	0	0.0	72
Thi'puram	106	26.4	327	81.3	39	9.7	1	0.2	402
Chandigarh	11	29.7	35	94.6	2	5.4	0	0.0	37
Dibrugarh	11	9.4	109	93.2	3	2.6	1	0.9	117
REGIONAL									
Mumbai	1040	59.0	990	56.1	356	20.2	0	0.0	1764
Bangalore	308	12.7	1699	69.8	1264	52.0	0	0.0	2433
Chennai	56	4.9	1138	99.5	110	9.6	0	0.0	1144
Thi'puram	324	19.2	1573	93.2	284	16.8	0	0.0	1687
Chandigarh	25	25.0	99	99.0	4	4.0	0	0.0	100
Dibrugarh	12	6.5	178	95.7	4	2.2	0	0.0	186
DISTANT									
Mumbai	3	13.0	8	34.8	18	78.3	0	0.0	23
Bangalore	9	4.9	60	32.8	148	80.9	1	0.5	183
Chennai	1	14.3	7	100.0	0	0.0	0	0.0	7
Thi'puram	4	14.8	23	85.2	10	37.0	0	0.0	27
Chandigarh	0	0.0	1	100.0	0	0.0	0	0.0	1
Dibrugarh	1	12.5	7	87.5	0	0.0	0	0.0	8

There were no patients in almost all registries when the clinical extent was stated to be 'Others'.

Chapter 11

CERVIX

Cancer of the cervix (ICD-9:180) was the most common cancer in women in all registries except Thiruvananthapuram (Table 11.1) and the relative proportion of these cancers varied from 17.4% in Dibrugarh to 42.2% in Chennai.

The five-year age distribution (Table 11.2) shows a peak relative proportion between 45-49 years in Mumbai, Bangalore and Chennai. This peak is in the slightly higher age group at other registries.

Table 11.3 gives the number and relative proportion of the basis of diagnosis, while Table 11.4 gives an idea of the proportions in the broad treatment groups.

The proportion of patients who were grouped as 'No Cancer Directed' treatment was comparatively higher in Mumbai, Bangalore and Chennai. The proportions of cervix cancers presenting with localised disease (Table 11.5) was less than 10% in Bangalore, Chennai and Chandigarh and between 11 and 14% in the other registries.

Radiotherapy was the predominant mode of treatment (Table 11.6) in all centres and the relative proportion of patients having received surgery was less than 5% in all registries except Mumbai and Dibrugarh.

The relative proportions of various types of treatment according to clinical extent of disease are shown in Tables 11.7 and 11.8.

TABLE 11.1: Number (#), Relative Proportion(%) and Rank(R) of cancers of the cervix

Registry	Total	#	%	R
Mumbai	61602	17030	27.6	1
Bangalore	36188	14607	40.4	1
Chennai	28685	12113	42.2	1
Thi'puram	23604	4837	20.5	2
Chandigarh	7383	2939	39.8	1
Dibrugarh	3736	650	17.4	1

TABLE 11.2: Number(#) and Relative Proportion(%) according to five-year age group

Age Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
0- 4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5- 9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	2	0.0	3	0.0	4	0.0	0	0.0	0	0.0	0	0.0
20-24	54	0.3	67	0.5	42	0.3	5	0.1	9	0.3	7	1.1
25-29	342	2.0	321	2.2	263	2.2	31	0.6	56	1.9	13	2.0
30-34	935	5.5	797	5.5	673	5.6	117	2.4	191	6.5	55	8.5
35-39	1990	11.7	1784	12.2	1437	11.9	346	7.2	350	11.9	105	16.2
40-44	2720	16.0	2165	14.8	1812	15.0	456	9.4	412	14.0	107	16.5
45-49	3070	18.0	2738	18.7	2376	19.6	712	14.7	508	17.3	106	16.3
50-54	2597	15.2	2336	16.0	2034	16.8	727	15.0	536	18.2	110	16.9
55-59	2055	12.1	1579	10.8	1554	12.8	779	16.1	405	13.8	67	10.3
60-64	1667	9.8	1543	10.6	1113	9.2	689	14.2	256	8.7	49	7.5
65-69	882	5.2	719	4.9	490	4.0	509	10.5	127	4.3	23	3.5
70-74	476	2.8	357	2.4	219	1.8	254	5.3	61	2.1	4	0.6
75+	215	1.3	198	1.4	96	0.8	212	4.4	28	1.0	4	0.6
ANS	25	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	17030	100.0	14607	100.0	12113	100.0	4837	100.0	2939	100.0	650	100.0

TABLE 11.3: Number(#) and Relative Proportion(%) based on different methods of diagnosis

Registry	Microscopic		Clinical		X-ray		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai	16277	95.6	285	1.7	27	0.2	441	2.6	17030	100.0
Bangalore	14229	97.4	253	1.7	0	0.0	125	0.9	14607	100.0
Chennai	8031	66.3	4081	33.7	0	0.0	1	0.0	12113	100.0
Thi'puram	4407	91.1	416	8.6	9	0.2	5	0.1	4837	100.0
Chandigarh	2875	97.8	64	2.2	0	0.0	0	0.0	2939	100.0
Dibrugarh	615	94.6	32	4.9	1	0.2	2	0.3	650	100.0

TABLE 11.4: Number(#) and Relative Proportion(%) according to Broad Groups of Treatment(Tmt.)

Treatment Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	1393	8.2	404	2.8	1141	9.4	66	1.4	55	1.9	8	1.2
Prior & Tmt. at RI	1585	9.3	402	2.8	140	1.2	210	4.3	348	11.8	29	4.5
Tmt. Only at RI	9380	55.1	7738	53.0	5412	44.7	3654	75.5	1960	66.7	547	84.2
No CDT	4672	27.4	6063	41.5	5420	44.7	907	18.8	576	19.6	66	10.2
Total Patients	17030	100.0	14607	100.0	12113	100.0	4837	100.0	2939	100.0	650	100.0

TABLE 11.5: Number(#) and Relative Proportion(%) according to the Clinical Extent of Disease (Excludes Patients Previously Treated)

Registry	Localised		Regional		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%
Mumbai	1659	11.8	10982	78.2	1015	7.2	396	2.8	14052	100.0
Bangalore	508	3.7	12215	88.5	1052	7.6	26	0.2	13801	100.0
Chennai	592	5.5	9809	90.6	430	4.0	1	0.0	10832	100.0
Thi'puram	641	14.1	3771	82.7	146	3.2	3	0.1	4561	100.0
Chandigarh	95	3.7	2394	94.4	44	1.7	3	0.1	2536	100.0
Dibrugarh	73	11.9	469	76.5	62	10.1	9	1.5	613	100.0

TABLE 11.6: Patients treated Only at Reporting Institution: Number(#) and Relative Proportion(%) according to Type of Treatment given

	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total patients	9380	100.0	7738	100.0	5412	100.0	3654	100.0	1960	100.0	547	100.0
Specific Tmts												
Surgery(S)	409	4.4	59	0.8	21	0.4	32	0.9	4	0.2	52	9.5
Radiotherapy(R)	7892	84.1	7398	95.6	4890	90.4	3345	91.5	1925	98.2	444	81.2
Chemotherapy(C)	44	0.5	13	0.2	8	0.1	17	0.5	1	0.1	3	0.5
S + R	832	8.9	123	1.6	118	2.2	66	1.8	14	0.7	33	6.0
S + C	9	0.1	2	0.0	2	0.0	1	0.0	0	0.0	2	0.4
R + C	162	1.7	99	1.3	365	6.7	185	5.1	16	0.8	11	2.0
S + R + C	31	0.3	18	0.2	7	0.1	5	0.1	0	0.0	1	0.2
Others	1	0.0	26	0.3	1	0.0	3	0.1	0	0.0	1	0.2
Modality of therapy												
Single	8345	89.0	7470	96.5	4919	90.9	3394	92.9	1930	98.5	499	91.2
Combination	1034	11.0	242	3.1	492	9.1	257	7.0	30	1.5	47	8.6
Type of Any Treatment												
Any Surgery	1282	13.7	202	2.6	148	2.7	105	2.9	18	0.9	89	16.3
Any R	8918	95.1	7639	98.7	5381	99.4	3602	98.6	1955	99.7	490	89.6
Any C	246	2.6	133	1.7	382	7.1	208	5.7	17	0.9	17	3.1

TABLE 11.7: Patients treated Only at Reporting Institution: Number(#) and Relative Proportion(%) by Type of Treatment given according to Clinical Extent of Disease

Types of Treatment at RI	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Localised												
Surgery(S)	353	26.9	43	12.9	10	2.1	23	4.3	4	4.8	23	33.3
Radiotherapy(R)	506	38.5	240	72.1	400	85.8	463	87.5	77	91.7	37	53.6
Chemotherapy(C)	1	0.1	0	0.0	0	0.0	2	0.4	0	0.0	0	0.0
S + R	417	31.7	40	12.0	50	10.7	24	4.5	3	3.6	9	13.0
S + C	3	0.2	1	0.3	0	0.0	1	0.2	0	0.0	0	0.0
R + C	17	1.3	5	1.5	3	0.6	15	2.8	0	0.0	0	0.0
S + R + C	17	1.3	4	1.2	2	0.4	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	1	0.2	1	0.2	0	0.0	0	0.0
Total Patients	1314	100.0	333	100.0	466	100.0	529	100.0	84	100.0	69	100.0
Regional												
Surgery(S)	54	0.7	13	0.2	11	0.2	9	0.3	0	0.0	25	6.0
Radiotherapy(R)	7166	91.8	6907	96.8	4464	90.8	2803	92.5	1821	98.7	356	85.0
Chemotherapy(C)	30	0.4	12	0.2	5	0.1	12	0.4	0	0.0	1	0.2
S + R	407	5.2	80	1.1	68	1.4	41	1.4	11	0.6	24	5.7
S + C	5	0.1	1	0.0	2	0.0	0	0.0	0	0.0	1	0.2
R + C	133	1.7	90	1.3	359	7.3	158	5.2	13	0.7	10	2.4
S + R + C	14	0.2	14	0.2	5	0.1	5	0.2	0	0.0	1	0.2
Others	1	0.0	16	0.2	0	0.0	2	0.1	0	0.0	1	0.2
Total Patients	7810	100.0	7133	100.0	4914	100.0	3030	100.0	1845	100.0	419	100.0
Distant												
Surgery(S)	1	0.4	3	1.2	0	0.0	0	0.0	0	0.0	4	7.7
Radiotherapy(R)	200	85.8	237	91.9	26	81.3	76	82.6	24	85.7	44	84.6
Chemotherapy(C)	13	5.6	1	0.4	3	9.4	3	3.3	1	3.6	2	3.8
S + R	6	2.6	3	1.2	0	0.0	1	1.1	0	0.0	0	0.0
S + C	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	1	1.9
R + C	12	5.2	4	1.6	3	9.4	12	13.0	3	10.7	1	1.9
S + R + C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	0	0.0	10	3.9	0	0.0	0	0.0	0	0.0	0	0.0
Total Patients	233	100.0	258	100.0	32	100.0	92	100.0	28	100.0	52	100.0
Others												
Surgery(S)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy(R)	13	100.0	9	100.0	0	0.0	1	100.0	3	100.0	7	100.0
Chemotherapy(C)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S + R	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S + C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
R + C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S + R + C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total Patients	13	100.0	9	100.0	0	0.0	1	100.0	3	100.0	7	100.0

TABLE 11.8: Patients treated Only at Reporting Institution: Number(#) and Proportion(%) by Any Specific Treatment procedure relative to all treated patients according to Clinical Extent of Disease

Registry	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Patients
	#	%	#	%	#	%	#	%	
Localised									
Mumbai	790	60.1	957	72.8	38	2.9	0	0.0	1314
Bangalore	88	26.4	289	86.8	10	3.0	0	0.0	333
Chennai	62	13.3	456	97.9	5	1.1	1	0.2	466
Thi'puram	49	9.3	502	94.9	18	3.4	1	0.2	529
Chandigarh	7	8.3	80	95.2	0	0.0	0	0.0	84
Dibrugarh	32	46.4	46	66.7	0	0.0	0	0.0	69
Regional									
Mumbai	481	6.2	7721	98.9	182	2.3	1	0.0	7810
Bangalore	108	1.5	7092	99.4	118	1.7	16	0.2	7133
Chennai	86	1.8	4896	99.6	371	7.5	0	0.0	4914
Thi'puram	55	1.8	3008	99.3	175	5.8	2	0.1	3030
Chandigarh	11	0.6	1845	100.0	13	0.7	0	0.0	1845
Dibrugarh	52	12.4	392	93.6	13	3.1	1	0.2	419
Distant									
Mumbai	8	3.4	218	93.6	26	11.2	0	0.0	233
Bangalore	6	2.3	244	94.6	5	1.9	10	3.9	258
Chennai	0	0.0	29	90.6	6	18.8	0	0.0	32
Thi'puram	1	1.1	89	96.7	15	16.3	0	0.0	92
Chandigarh	0	0.0	27	96.4	4	14.3	0	0.0	28
Dibrugarh	5	9.6	45	86.5	4	7.7	0	0.0	52
Others									
Mumbai	0	0.0	13	100.0	0	0.0	0	0.0	13
Bangalore	0	0.0	9	100.0	0	0.0	0	0.0	9
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	1	100.0	0	0.0	0	0.0	1
Chandigarh	0	0.0	3	100.0	0	0.0	0	0.0	3
Dibrugarh	0	0.0	7	100.0	0	0.0	0	0.0	7

Chapter 12

FEMALE BREAST

Cancer of the female breast (ICD-9:174) was the most common cancer in women in Thiruvananthapuram (Table 12.1), the second most common in the registries at Mumbai, Chennai and Chandigarh, while in Bangalore and Dibrugarh it was the third most frequent site. The relative proportion of cancer breast in females varied from 17.0% in Dibrugarh to 23% in Mumbai.

The five-year age distribution (Table 12.2) shows a peak relative proportion between 45-49 years in all registries except Dibrugarh where the peak is seen in the ten-year younger age group - 35-39 years.

Table 12.3 gives the number and relative proportion of the basis of diagnosis, with over 85% of cancers in all registries recording a microscopic diagnosis.

Compared to similar proportions in other sites of cancer, the proportion of breast cancers categorised as 'No' treatment is low in all registries (Table 12.4) whereas the proportion that have undergone prior treatment is comparatively high.

The proportions of breast cancers presenting with localised disease (Table 12.5) varies from 2.6% at Chennai to 31.9% at Mumbai.

Surgery as a modality of treatment either singly or in combination was received by over 79% of patients in all registries (Table 12.6) except Chennai.

The relative proportions of various types of treatment according to clinical extent of disease are shown in Tables 12.7 and 12.8.

TABLE 12.1: Number(#), Relative Proportion(%) and Rank(R) of female breast cancers

Registry	Total	#	%	R
Mumbai	61602	14160	23.0	2
Bangalore	36188	4109	11.4	3
Chennai	28685	4546	15.8	2
Thi'puram	23604	5123	21.7	1
Chandigarh	7383	1132	15.3	2
Dibrugarh	3736	412	11.0	3

TABLE 12.2: Number(#) and Relative Proportion(%) according to five-year age group

Age Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
0- 4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5- 9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	3	0.0	7	0.2	6	0.1	1	0.0	1	0.1	0	0.0
20-24	84	0.6	40	1.0	22	0.5	34	0.7	6	0.5	6	1.5
25-29	451	3.2	145	3.5	127	2.8	164	3.2	42	3.7	31	7.5
30-34	1076	7.6	245	6.0	289	6.4	354	6.9	101	8.9	42	10.2
35-39	1794	12.7	513	12.5	575	12.6	668	13.0	155	13.7	81	19.7
40-44	2253	15.9	585	14.2	654	14.4	767	15.0	179	15.8	76	18.4
45-49	2404	17.0	677	16.5	742	16.3	886	17.3	203	17.9	63	15.3
50-54	2085	14.7	617	15.0	711	15.6	696	13.6	147	13.0	47	11.4
55-59	1471	10.4	423	10.3	547	12.0	618	12.1	121	10.7	31	7.5
60-64	1132	8.0	380	9.2	386	8.5	424	8.3	82	7.2	21	5.1
65-69	704	5.0	232	5.6	237	5.2	267	5.2	55	4.9	9	2.2
70-74	397	2.8	135	3.3	148	3.3	139	2.7	32	2.8	4	1.0
75+	280	2.0	110	2.7	102	2.2	103	2.0	8	0.7	1	0.2
ANS	26	0.2	0	0.0	0	0.0	2	0.0	0	0.0	0	0.0
All Ages	14160	100.0	4109	100.0	4546	100.0	5123	100.0	1132	100.0	412	100.0

TABLE 12.3: Number(#) and Relative Proportion(%) based on different methods of diagnosis

Registry	Microscopic		Clinical		X-ray		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai	12344	87.2	343	2.4	77	0.5	1396	9.9	14160	100.0
Bangalore	3849	93.7	134	3.3	11	0.3	115	2.8	4109	100.0
Chennai	3845	84.6	680	15.0	21	0.5	0	0.0	4546	100.0
Thi'puram	4868	95.0	218	4.3	12	0.2	25	0.5	5123	100.0
Chandigarh	1113	98.3	14	1.2	4	0.4	1	0.1	1132	100.0
Dibrugarh	372	90.3	13	3.2	7	1.7	20	4.9	412	100.0

TABLE 12.4: Number(#) and Relative Proportion(%) according to Broad Groups of Treatment(Tmt)

Treatment Group	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	3107	21.9	746	18.2	963	21.2	658	12.8	101	8.9	2	0.5
Prior & Tmt. at RI	5079	35.9	1385	33.7	930	20.5	2076	40.5	344	30.4	48	11.7
Tmt. Only at RI	4726	33.4	1189	28.9	1879	41.3	2049	40.0	547	48.3	332	80.6
No CDT	1248	8.8	789	19.2	774	17.0	340	6.6	140	12.4	30	7.3
Total Patients	14160	100.0	4109	100.0	4546	100.0	5123	100.0	1132	100.0	412	100.0

TABLE 12.5: Number(#) and Relative Proportion(%) according to the Clinical Extent of Disease (Excludes Patients Previously Treated)

Registry	Localised		Regional		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%
Mumbai	1908	31.9	3100	51.9	723	12.1	243	4.1	5974	100.0
Bangalore	316	16.0	1226	62.0	410	20.7	26	1.3	1978	100.0
Chennai	70	2.6	2086	78.6	495	18.7	2	0.1	2653	100.0
Thi'puram	441	18.5	1700	71.2	240	10.0	8	0.3	2389	100.0
Chandigarh	98	14.3	491	71.5	98	14.3	0	0.0	687	100.0
Dibrugarh	48	13.3	253	69.9	56	15.5	5	1.4	362	100.0

TABLE 12.6: Patients Treated Only at Reporting Institution: Number(#) and Relative Proportion(%) according to Type of Treatment given

	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Total	4726	100.0	1189	100.0	1879	100.0	2049	100.0	547	100.0	332	100.0
Specific Tmts												
Surgery(S)	1264	26.7	80	6.7	14	0.7	567	27.7	21	3.8	136	41.0
Radiotherapy(R)	120	2.5	24	2.0	23	1.2	63	3.1	3	0.5	48	14.5
Chemotherapy(C)	315	6.7	82	6.9	105	5.6	33	1.6	9	1.6	10	3.0
S + R	370	7.8	163	13.7	13	0.7	365	17.8	198	36.2	122	36.7
S + C	835	17.7	58	4.9	10	0.5	49	2.4	4	0.7	8	2.4
R + C	126	2.7	17	1.4	559	29.7	64	3.1	7	1.3	4	1.2
S + R + C	570	12.1	309	26.0	393	20.9	307	15.0	133	24.3	3	0.9
Others	1126	23.8	456	38.4	762	40.6	601	29.3	172	31.4	1	0.3
Modality of therapy												
Single	1699	36.0	186	15.6	142	7.6	663	32.4	33	6.0	194	58.4
Combination	1901	40.2	547	46.0	975	51.9	785	38.3	342	62.5	137	41.3
Type of Any Treatment												
Any Surgery	3937	83.3	943	79.3	725	38.6	1730	84.4	459	83.9	270	81.3
Any R	1547	32.7	796	66.9	1523	81.1	1251	61.1	455	83.2	178	53.6
Any C	2293	48.5	644	54.2	1665	88.6	565	27.6	242	44.2	25	7.5

TABLE 12.7: Patients Treated Only at Reporting Institution: Number(#) and Relative Proportion(%) by Type of Treatment given according to Clinical Extent of Disease

Types of Treatment at RI	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Localised												
Surgery(S)	865	52.9	28	13.1	2	3.6	220	54.6	8	9.4	33	70.2
Radiotherapy(R)	18	1.1	3	1.4	0	0.0	6	1.5	1	1.2	3	6.4
Chemotherapy(C)	2	0.1	1	0.5	2	3.6	1	0.2	0	0.0	0	0.0
S + R	201	12.3	40	18.8	2	3.6	101	25.1	59	69.4	11	23.4
S + C	180	11.0	6	2.8	0	0.0	4	1.0	0	0.0	0	0.0
R + C	4	0.2	2	0.9	8	14.5	3	0.7	0	0.0	0	0.0
S + R + C	75	4.6	63	29.6	15	27.3	15	3.7	12	14.1	0	0.0
Others	291	17.8	70	32.9	26	47.3	53	13.2	5	5.9	0	0.0
Total Patients	1636	100.0	213	100.0	55	100.0	403	100.0	85	100.0	47	100.0
Regional												
Surgery(S)	355	13.5	45	6.0	12	0.8	335	23.0	12	3.1	98	40.8
Radiotherapy(R)	58	2.2	8	1.1	21	1.4	43	3.0	0	0.0	25	10.4
Chemotherapy(C)	172	6.5	32	4.2	56	3.7	14	1.0	2	0.5	2	0.8
S + R	159	6.1	114	15.1	11	0.7	254	17.4	138	35.8	104	43.3
S + C	637	24.2	42	5.6	9	0.6	42	2.9	4	1.0	6	2.5
R + C	86	3.3	14	1.9	486	32.0	48	3.3	3	0.8	1	0.4
S + R + C	484	18.4	237	31.3	373	24.5	279	19.1	119	30.8	3	1.3
Others	677	25.8	264	34.9	553	36.4	442	30.3	108	28.0	1	0.4
Total Patients	2628	100.0	756	100.0	1521	100.0	1457	100.0	386	100.0	240	100.0
Distant												
Surgery(S)	11	2.8	6	2.9	0	0.0	10	5.4	1	1.3	4	10.0
Radiotherapy(R)	19	4.9	9	4.4	2	0.7	14	7.6	2	2.6	16	40.0
Chemotherapy(C)	137	35.3	47	22.8	47	15.5	18	9.8	7	9.2	8	20.0
S + R	2	0.5	8	3.9	0	0.0	9	4.9	1	1.3	7	17.5
S + C	17	4.4	9	4.4	1	0.3	3	1.6	0	0.0	2	5.0
R + C	36	9.3	1	0.5	65	21.5	13	7.1	4	5.3	3	7.5
S + R + C	10	2.6	8	3.9	5	1.7	13	7.1	2	2.6	0	0.0
Others	156	40.2	118	57.3	183	60.4	104	56.5	59	77.6	0	0.0
Total Patients	388	100.0	206	100.0	303	100.0	184	100.0	76	100.0	40	100.0
Other												
Surgery(S)	17	39.5	1	12.5	0	0.0	1	25.0	0	0.0	1	20.0
Radiotherapy(R)	16	37.2	4	50.0	0	0.0	0	0.0	0	0.0	4	80.0
Chemotherapy(C)	4	9.3	1	12.5	0	0.0	0	0.0	0	0.0	0	0.0
S + R	3	7.0	0	0.0	0	0.0	1	25.0	0	0.0	0	0.0
S + C	1	2.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
R + C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S + R + C	1	2.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	1	2.3	2	25.0	0	0.0	2	50.0	0	0.0	0	0.0
Total Patients	43	100.0	8	100.0	0	0.0	4	100.0	0	0.0	5	100.0

TABLE 12.8: Patients Treated Only at Reporting Institution: Number(#) and Proportion(%) by Any Specific Treatment relative to all treated patients according to Clinical Extent of Disease

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Patients
	#	%	#	%	#	%	#	%	
Localised									
Mumbai	1607	98.2	339	20.7	299	18.3	291	17.8	1636
Bangalore	199	93.4	164	77.0	92	43.2	70	32.9	213
Chennai	43	78.2	36	65.5	36	65.5	26	47.3	55
Thi'puram	389	96.5	152	37.7	23	5.7	53	13.2	403
Chandigarh	84	98.8	75	88.2	13	15.3	5	5.9	85
Dibrugarh	44	93.6	14	29.8	0	0.0	0	0.0	47
Regional									
Mumbai	2214	84.2	1052	40.0	1691	64.3	677	25.8	2628
Bangalore	677	89.6	573	75.8	427	56.5	264	34.9	756
Chennai	670	44.0	1332	87.6	1365	89.7	553	36.4	1521
Thi'puram	1263	86.7	974	66.8	459	31.5	442	30.3	1457
Chandigarh	354	91.7	350	90.7	177	45.9	108	28.0	386
Dibrugarh	212	88.3	134	55.8	12	5.0	1	0.4	240
Distant									
Mumbai	72	18.6	120	30.9	297	76.5	156	40.2	388
Bangalore	61	29.6	52	25.2	118	57.3	118	57.3	206
Chennai	12	4.0	155	51.2	264	87.1	183	60.4	303
Thi'puram	73	39.7	122	66.3	82	44.6	104	56.5	184
Chandigarh	21	27.6	30	39.5	52	68.4	59	77.6	76
Dibrugarh	13	32.5	26	65.0	13	32.5	0	0.0	40
Other									
Mumbai	23	53.5	21	48.8	6	14.0	1	2.3	43
Bangalore	3	37.5	5	62.5	3	37.5	2	25.0	8
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	4	100.0	3	75.0	1	25.0	2	50.0	4
Chandigarh	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	1	20.0	4	80.0	0	0.0	0	0.0	5

Chapter 13

SUB-SITE DISTRIBUTION OF SELECTED SITES OF CANCER

This chapter gives the sub-site distribution of two relevant sites of cancer, viz., oral cavity and oesophagus.

Oral Cancers (ICD-9: 140, 141, 143-145)

Tables 13.1 and 13.2 below give the sub-site distribution of cancers of the oral cavity for the combined data of all registries as well as for that for individual registries.

The relative proportion of base tongue cancers is higher than that of the anterior tongue among males in the combined data as well as in all the registries except at Thiruvananthapuram (1:3). The difference in this proportion varies from over 6 times in Bangalore (6.6:1) and Dibrugarh (6.7:1) to less than 2 times in Mumbai (1.9:1) and Chennai (1.3:1), with the registry at Chandigarh having a ratio of 3:1. Among females, the relative proportion of cancers of the base of tongue is less than that seen in males in all registries. However, when compared with the relative proportion of cancer of the anterior tongue in the same sex, base tongue cancers are much less in Thiruvananthapuram (ratio of base tongue to anterior tongue cancers = 1:15), Chennai (1:3.5) and Mumbai (1:2). In Chandigarh females the ratio of base tongue to anterior tongue cancers is about 3:4, in Bangalore 1.2:1, whereas in Dibrugarh it is 4.7:1.

The relative proportion of cancers of the floor of the mouth was higher among males compared to females in all registries except Dibrugarh. Similarly the relative proportion of cancers of the Buccal mucosa was higher in females compared to males in all registries.

Oesophagus (ICD-9: 150)

Tables 13.3 and 13.4 below give the sub-site distribution of cancers of the oesophagus for the combined data of all registries as well as that for individual registries. Unlike that seen for cancers of the oral cavity the distribution between the different sites does not show variation by registry or by sex.

TABLE 13.1: Oral Cancers- Number (#) and Relative Proportion (%) according to sub-site

Sub-site	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Lip	367	2.4	73	1.8	139	2.9	155	2.8	10	1.6	66	5.9
Base of Tongue	4493	29.8	1307	33.0	1025	21.1	418	7.4	299	48.4	491	43.5
Anterior Tongue	2351	15.6	198	5.0	809	16.6	1287	22.9	100	16.2	73	6.5
Tongue NOS*	102	0.7	300	7.6	96	2.0	135	2.4	2	0.3	55	4.9
Gum	1872	12.4	473	11.9	567	11.7	655	11.7	47	7.6	85	7.5
Floor of Mouth	513	3.4	235	5.9	294	6.0	305	5.4	22	3.6	34	3.0
Buccal Mucosa.	3972	26.3	745	18.8	1217	25.0	2092	37.3	91	14.7	176	15.6
Other Mouth	1413	9.4	619	15.6	701	14.4	540	9.6	43	7.0	136	12.1
Oral NOS*	1	0.0	13	0.3	16	0.3	28	0.5	4	0.6	12	1.1
Total Oral Cancers	15084	100.0	3963	100.0	4864	100.0	5615	100.0	618	100.0	1128	100.0
FEMALES												
Lip	136	3.0	67	1.4	81	3.1	172	5.9	8	3.9	28	7.2
Base of Tongue	443	9.8	106	2.2	95	3.6	46	1.6	37	18.2	113	29.2
Anterior Tongue	977	21.7	85	1.8	334	12.6	718	24.6	51	25.1	24	6.2
Tongue NOS*	26	0.6	161	3.4	19	0.7	57	1.9	1	0.5	19	4.9
Gum	911	20.2	1041	21.9	518	19.6	455	15.6	26	12.8	47	12.1
Floor of Mouth	72	1.6	47	1.0	39	1.5	43	1.5	5	2.5	15	3.9
Buccal Mucosa.	1570	34.9	2785	58.6	1208	45.6	1243	42.5	63	31.0	80	20.7
Other Mouth	365	8.1	448	9.4	334	12.6	176	6.0	10	4.9	57	14.7
Oral NOS*	1	0.0	11	0.2	19	0.7	14	0.5	2	1.0	4	1.0
Total Oral Cancers	4501	100	0 4751	100.0	2647	100.0	2924	100.0	203	100.0	387	100.0

TABLE 13.2: Oesophageal Cancers-Number (#) and Relative Proportion (%) according to sub-site

Sub-site	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Cervical-Upper 3rd	906	15.2	297	8.9	242	11.7	178	11.3	39	8.4	190	13.2
Thoracic-Middle 3rd	3034	50.9	1477	44.4	772	37.2	584	37.1	184	39.7	711	49.6
Abdominal-Lower 3rd	1782	29.9	917	27.6	700	33.8	627	39.9	190	41.0	371	25.9
Overlap of Subsites	7	0.1	93	2.8	156	7.5	64	4.1	50	10.8	59	4.1
NOS*	237	4.0	539	16.2	203	9.8	120	7.6	0	0.0	103	7.2
Total Oesophagus	5966	100.0	3323	100.0	2073	100.0	1573	100.0	463	100.0	1434	100.0
FEMALES												
Cervical-Upper 3rd	365	11.6	187	7.7	115	11.2	58	13.5	46	12.4	64	12.6
Thoracic-Middle 3rd	1689	53.7	1133	46.8	360	35.2	172	39.9	176	47.3	250	49.4
Abdominal-Lower 3rd	967	30.7	625	25.8	395	38.6	161	37.4	116	31.2	136	26.9
Overlap of Subsites	2	0.1	94	3.9	61	6.0	20	4.6	33	8.9	21	4.2
NOS*	122	3.9	383	15.8	93	9.1	20	4.6	1	0.3	35	6.9
Total Oesophagus	3145	100.0	2422	100.0	1024	100.0	431	100.0	372	100.0	506	100.0

NOS = Not Otherwise Specified

Chapter 14

HISTOLOGIC TYPES OF SELECTED SITES OF CANCER

This chapter deals with the relative proportions of histological types of cancer for certain specific sites.

The number and relative proportion of the specific histologic types of cancer as appropriate for the different anatomical sites of cancer is given below.

ORAL CANCERS (ICD-9: 140, 141, 143-145)

TABLE 14.1: Number(#) and Relative Proportion(%) of different histologic Types of Oral Cancers

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	58	0.4	4	0.1	3	0.1	55	1.1	0	0.0	2	0.2
Carcinomas (Ca.)	137	1.0	138	3.6	34	1.2	56	1.2	22	3.6	28	2.5
Verrucous Ca.	229	1.6	84	2.2	3	0.1	262	5.4	3	0.5	4	0.4
Squamous Cell Ca.	13616	95.8	3511	92.1	2686	97.0	4420	91.2	567	93.7	1072	96.5
Adeno Ca.	70	0.5	36	0.9	16	0.6	25	0.5	4	0.7	1	0.1
Others	101	0.7	40	1.0	28	1.0	27	0.6	9	1.5	4	0.4
All Types	14211	100.0	3813	100.0	2770	100.0	4845	100.0	605	100.0	1111	100.0
FEMALES												
Neoplasm-Malignant	17	0.4	2	0.0	4	0.3	28	1.1	0	0.0	0	0.0
Carcinomas (Ca.)	53	1.2	77	1.7	9	0.6	25	1.0	4	2.1	9	2.4
Verrucous Ca.	75	1.8	195	4.2	2	0.1	165	6.7	1	0.5	1	0.3
Squamous Cell Ca.	4011	94.3	4266	92.7	1395	96.3	2211	89.4	176	92.1	364	96.0
Adeno Ca.	40	0.9	25	0.5	23	1.6	27	1.1	5	2.6	2	0.5
Others	56	1.3	38	0.8	16	1.1	18	0.7	5	2.6	3	0.8
All Types	4252	100.0	4603	100.0	1449	100.0	2474	100.0	191	100.0	379	100.0

PHARYNX (ICD-9: 146, 148, 149)**TABLE 14.2: Number(#) and Relative Proportion(%) of different histologic types of Pharyngeal Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	106	1.2	5	0.1	4	0.2	31	1.8	3	0.6	1	0.0
Carcinomas(Ca.)	163	1.9	414	9.0	26	1.5	71	4.1	31	5.8	54	2.3
Squamous Cell Ca.	8449	96.7	4160	90.3	1682	97.7	1613	93.5	501	93.3	2236	97.2
Others	23	0.3	26	0.6	10	0.6	10	0.6	2	0.4	9	0.4
All Types	8741	100.0	4605	100.0	1722	100.0	1725	100.0	537	100.0	2300	100.0
Females												
Neoplasm-Malignant	5	0.3	3	0.4	0	0.0	2	0.8	1	0.5	0	0.0
Carcinomas	36	2.3	56	8.1	7	1.4	23	9.5	7	3.4	7	2.0
Squamous Cell Ca.	1519	97.1	617	89.6	489	97.2	215	88.5	197	95.6	341	98.0
Others	5	0.3	13	1.9	7	1.4	3	1.2	1	0.5	0	0.0
All Types	1565	100.0	689	100.0	503	100.0	243	100.0	206	100.0	348	100.0

OESOPHAGUS (ICD-9: 150)**TABLE 14.3: Number(#) and Relative Proportion(%) of different histologic types of Oesophageal Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	77	1.4	14	0.5	7	0.5	6	0.5	1	0.2	2	0.2
Carcinomas(Ca.)	185	3.5	214	7.6	30	2.0	67	5.2	7	1.6	35	3.3
Sq.Cell Ca.	4560	85.7	2350	83.9	1278	87.1	1003	77.3	388	91.3	1002	93.1
Adeno Ca.	470	8.8	198	7.1	131	8.9	167	12.9	17	4.0	32	3.0
Others	28	0.5	25	0.9	22	1.5	54	4.2	12	2.8	5	0.5
All Types	5320	100.0	2801	100.0	1468	100.0	1297	100.0	425	100.0	1076	100.0
FEMALES												
Neoplasm-Malignant	31	1.1	9	0.4	4	0.6	7	2.0	2	0.6	0	0.0
Carcinomas(Ca.)	85	3.0	160	7.6	18	2.5	17	4.9	10	2.9	9	2.3
Sq.Cell Ca.	2600	92.0	1863	88.9	658	90.9	285	81.9	325	94.2	373	94.9
Adeno Ca.	100	3.5	52	2.5	41	5.7	29	8.3	5	1.4	8	2.0
Others	10	0.4	12	0.6	3	0.4	10	2.9	3	0.9	3	0.8
All Types	2826	100.0	2096	100.0	724	100.0	348	100.0	345	100.0	393	100.0

STOMACH (ICD-9: 151)**TABLE 14.4: Number (#) and Relative Proportion (%) of different histologic types of Stomach Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	25	1.5	13	1.0	10	0.9	28	2.8	0	0.0	2	0.8
Carcinomas(Ca.)	61	3.6	122	9.8	59	5.5	143	14.5	21	10.8	37	15.2
Adeno Ca (AdCa)	1224	71.7	934	75.0	848	79.6	567	57.6	113	58.2	170	70.0
Papillary AdCa.	3	0.2	43	3.5	10	0.9	35	3.6	3	1.5	1	0.4
Mucinous AdCa.	143	8.4	84	6.7	85	8.0	144	14.6	29	14.9	20	8.2
Sarcomas	31	1.8	8	0.6	1	0.1	20	2.0	3	1.5	0	0.0
Others	220	12.9	42	3.4	52	4.9	48	4.9	25	12.9	13	5.3
All Types	1707	100.0	1246	100.0	1065	100.0	985	100.0	194	100.0	243	100.0
Females												
Neoplasm-Malignant	7	1.0	2	0.4	6	1.5	12	4.3	0	0.0	2	1.7
Carcinomas(Ca.)	48	6.8	70	14.2	18	4.5	43	15.4	6	8.6	22	18.6
Adeno Ca (AdCa.)	459	64.7	340	69.1	314	78.9	156	55.7	46	65.7	81	68.6
Papillary AdCa.	6	0.8	17	3.5	2	0.5	3	1.1	4	5.7	0	0.0
Mucinous AdCa.	45	6.3	35	7.1	37	9.3	50	17.9	8	11.4	7	5.9
Sarcomas	12	1.7	3	0.6	1	0.3	6	2.1	2	2.9	0	0.0
Others	132	18.6	25	5.1	20	5.0	10	3.6	4	5.7	6	5.1
All Types	709	100.0	492	100.0	398	100.0	280	100.0	70	100.0	118	100.0

LUNG (ICD-9: 162)**TABLE 14.5: Number(#) and Relative Proportion(%) of different histologic types of Lung Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm Malig	364	7.6	30	1.4	32	3.1	182	7.6	9	1.4	7	5.7
Large Cell Ca.	57	1.2	210	10.1	68	6.5	52	2.2	23	3.6	2	1.6
Undiff/Anap Ca.	96	2.0	126	6.1	25	2.4	168	7.1	51	7.9	12	9.8
Small Cell Ca.	411	8.6	239	11.5	126	12.0	293	12.3	106	16.4	12	9.8
Oat Cell Ca.	163	3.4	10	0.5	40	3.8	39	1.6	13	2.0	6	4.9
Squa Cell Ca.	1924	40.2	820	39.5	315	30.1	948	39.8	338	52.3	50	40.7
Other Carc.	197	4.1	239	11.5	108	10.3	205	8.6	50	7.7	11	8.9
Papil.AdenoCa.	50	1.0	37	1.8	10	1.0	21	0.9	3	0.5	0	0.0
Adeno Squa Ca.	66	1.4	4	0.2	6	0.6	9	0.4	0	0.0	0	0.0
Adenoca.NOS	1364	28.5	308	14.8	300	28.6	377	15.8	41	6.3	20	16.3
Others	93	1.9	53	2.6	18	1.7	86	3.6	12	1.9	3	2.4
All Types	4785	100.0	2076	100.0	1048	100.0	2380	100.0	646	100.0	123	100.0
FEMALES												
Neoplasm Malig	59	8.0	6	2.1	2	1.3	14	5.7	4	4.3	7	21.9
Large Cell Ca.	10	1.3	34	11.7	5	3.2	2	0.8	0	0.0	0	0.0
Undiff/Anap Ca.	15	2.0	12	4.1	0	0.0	10	4.1	6	6.5	1	3.1
Small Cell Ca.	33	4.4	14	4.8	4	2.6	12	4.9	9	9.8	1	3.1
Oat Cell Ca.	16	2.2	2	0.7	0	0.0	0	0.0	0	0.0	4	12.5
Squa Cell Ca.	161	21.7	66	22.7	27	17.5	73	29.9	40	43.5	6	18.8
Other Carc.	26	3.5	24	8.2	13	8.4	18	7.4	10	10.9	6	18.8
Papil.AdenoCa.	17	2.3	15	5.2	3	1.9	8	3.3	0	0.0	0	0.0
Adeno Squa Ca.	9	1.2	0	0.0	1	0.6	0	0.0	0	0.0	0	0.0
Adenoca.NOS	344	46.4	103	35.4	88	57.1	80	32.8	21	22.8	5	15.6
Others	52	7.0	15	5.2	11	7.1	27	11.1	2	2.2	2	6.3
All Types	742	100.0	291	100.0	154	100.0	244	100.0	92	100.0	32	100.0

BONE (ICD-9: 170)**TABLE 14.6: Number(#) and Relative Proportion(%) of different histologic types of Bone Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	36	3.2	7	1.1	5	1.3	5	1.5	1	1.0	0	0.0
Sarcomas(Sa.)	55	4.8	20	3.2	0	0.0	9	2.7	2	1.9	1	1.6
Osteo Sa.	618	54.2	241	39.1	204	52.2	189	57.1	25	23.8	21	33.9
Chondro Sa.	112	9.8	64	10.4	46	11.8	42	12.7	19	18.1	5	8.1
Giant Cell Tum.	1	0.1	41	6.7	29	7.4	6	1.8	7	6.7	11	17.7
Ewing's Sa.	285	25.0	103	16.7	92	23.5	50	15.1	36	34.3	9	14.5
Chordoma	10	0.9	8	1.3	0	0.0	5	1.5	0	0.0	0	0.0
Others	24	2.1	132	21.4	15	3.8	25	7.6	15	14.3	15	24.2
All Types	1141	100.0	616	100.0	391	100.0	331	100.0	105	100.0	62	100.0
FEMALES												
Neoplasm-Malignant	12	2.4	4	1.2	2	0.8	2	1.1	0	0.0	0	0.0
Sarcomas(Sa.)	23	4.5	9	2.7	0	0.0	5	2.7	0	0.0	1	3.3
Osteo Sa.	282	55.4	124	37.3	106	44.5	89	48.6	18	34.0	8	26.7
Chondro Sa.	41	8.1	25	7.5	35	14.7	17	9.3	3	5.7	1	3.3
Giant Cell Tum.	1	0.2	18	5.4	35	14.7	6	3.3	8	15.1	9	30.0
Ewing's Sa.	136	26.7	47	14.2	57	23.9	42	23.0	20	37.7	4	13.3
Chordoma	0	0.0	1	0.3	1	0.4	6	3.3	1	1.9	1	3.3
Others	14	2.8	104	31.3	2	0.8	16	8.7	3	5.7	6	20.0
All Types	509	100.0	332	100.0	238	100.0	183	100.0	53	100.0	30	100.0

SOFT TISSUE (ICD-9: 171, 195)**TABLE 14.7: Number(#) and Relative Proportion(%) of different histologic types of Soft Tissue Tumours**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	48	2.9	6	1.1	10	1.8	16	3.9	9	4.9	2	2.4
Sarcoma (Sa.)	124	7.6	43	7.9	49	9.0	38	9.4	16	8.7	4	4.8
Spindle Cell Sa.	221	13.6	55	10.1	10	1.8	27	6.7	0	0.0	0	0.0
Pleomorphic Sa.	109	6.7	8	1.5	12	2.2	1	0.2	3	1.6	4	4.8
Fibr.Hist.cytoma	107	6.6	54	9.9	26	4.8	39	9.6	33	18.0	3	3.6
Dermato FibroSa.	58	3.6	4	0.7	0	0.0	2	0.5	3	1.6	0	0.0
LipoSa.	118	7.2	21	3.8	36	6.6	38	9.4	12	6.6	4	4.8
Leiomyo Sa.	28	1.7	5	0.9	10	1.8	5	1.2	7	3.8	0	0.0
Rhabdomyo Sa.	148	9.1	57	10.4	52	9.5	39	9.6	16	8.7	11	13.1
Synovial Sa.	161	9.9	73	13.4	57	10.5	59	14.5	13	7.1	2	2.4
Neurofibro Sa.	129	7.9	16	2.9	9	1.7	29	7.1	1	0.5	1	1.2
Neurilemmoma	65	4.0	18	3.3	8	1.5	18	4.4	8	4.4	0	0.0
Others	313	19.2	186	34.1	266	48.8	95	23.4	62	33.9	53	63.1
All Types	1629	100.0	546	100.0	545	100.0	406	100.0	183	100.0	84	100.0
FEMALES												
Neoplasm-Malignant	20	2.7	7	2.1	10	3.3	12	4.0	5	4.0	1	2.9
Sarcoma (Sa.)	39	5.3	19	5.6	23	7.7	25	8.4	13	10.3	0	0.0
Spindle Sa.	123	16.7	44	13.1	5	1.7	20	6.7	0	0.0	0	0.0
Pleomorphic Sa.	38	5.2	12	3.6	4	1.3	1	0.3	0	0.0	1	2.9
Fibr.Hist.Cytoma	32	4.4	31	9.2	18	6.0	26	8.8	14	11.1	0	0.0
Dermato Fibro Sa.	25	3.4	7	2.1	0	0.0	0	0.0	0	0.0	0	0.0
Lipo Sa.	47	6.4	20	5.9	20	6.7	22	7.4	5	4.0	2	5.7
Leiomyo Sa.	9	1.2	1	0.3	8	2.7	7	2.4	5	4.0	1	2.9
Rhabdomyo Sa.	50	6.8	31	9.2	34	11.3	34	11.4	15	11.9	4	11.4
Synovial Sa.	92	12.5	28	8.3	25	8.3	37	12.5	12	9.5	1	2.9
Neurofibro Sa.	77	10.5	11	3.3	11	3.7	15	5.1	1	0.8	0	0.0
Neurilemmoma	29	3.9	15	4.5	3	1.0	13	4.4	1	0.8	0	0.0
Others	154	21.0	111	32.9	139	46.3	85	28.6	55	43.7	25	71.4
All Types	735	100.0	337	100.0	300	100.0	297	100.0	126	100.0	35	100.0

FEMALE BREAST (ICD-9: 174)**TABLE 14.8: Number(#) and Relative Proportion(%) of different histologic types of Female Breast Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Neoplasm-Malignant	364	2.9	14	0.4	58	1.5	156	3.2	8	0.7	0	0.0
Carcinomas(Ca.)	509	4.1	199	5.2	97	2.5	192	3.9	16	1.4	22	5.9
Papillary Ca.	92	0.7	29	0.8	3	0.1	22	0.5	5	0.4	0	0.0
Squamous Ca.	9	0.1	52	1.4	8	0.2	9	0.2	6	0.5	6	1.6
AdenoCa(AdCa.)NOS	217	1.8	37	1.0	343	8.9	60	1.2	13	1.2	9	2.4
Mucinous AdCa.	109	0.9	26	0.7	46	1.2	52	1.1	8	0.7	5	1.3
Infil. Duct Ca.	10286	83.3	3273	85.0	2926	76.1	4048	83.2	1006	90.4	217	58.3
Medullary Ca.	169	1.4	58	1.5	154	4.0	103	2.1	6	0.5	53	14.2
Lobular Ca.	334	2.7	64	1.7	42	1.1	77	1.6	23	2.1	17	4.6
Paget's Disease	49	0.4	9	0.2	10	0.3	26	0.5	3	0.3	2	0.5
Cystosarcoma Ph	54	0.4	42	1.1	40	1.0	27	0.6	4	0.4	1	0.3
Others	152	1.2	46	1.2	118	3.1	96	2.0	15	1.3	40	10.8
All Types	12344	100.0	3849	100.0	3845	100.0	4868	100.0	1113	100.0	372	100.0

CERVIX (ICD-9: 180)**TABLE 14.9: Number(#) and Relative Proportion(%) of different histologic types of Cervical Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Neoplasm-Malignant	20	0.1	4	0.0	7	0.1	43	1.0	1	0.0	1	0.2
Carcinomas(Ca.)	347	2.1	326	2.3	59	0.7	73	1.7	14	0.5	10	1.6
Large cell n.k.	8	0.0	5146	36.2	2745	34.2	730	16.6	786	27.3	355	57.7
Small cell n.k.	1	0.0	107	0.8	355	4.4	35	0.8	32	1.1	43	7.0
Sq C Ca kerat.	45	0.3	1811	12.7	509	6.3	533	12.1	462	16.1	46	7.5
Sq C Ca NOS	15080	92.6	6222	43.7	3777	47.0	2824	64.1	1497	52.1	112	18.2
Other Sq C Ca.	6	0.0	142	1.0	204	2.5	24	0.5	2	0.1	11	1.8
Adeno Ca.	523	3.2	246	1.7	188	2.3	68	1.5	57	2.0	23	3.7
Adeno Sq Ca.	178	1.1	72	0.5	151	1.9	22	0.5	6	0.2	1	0.2
Others	69	0.4	153	1.1	36	0.4	55	1.2	18	0.6	13	2.1
All Types	16277	100.0	14229	100.0	8031	100.0	4407	100.0	2875	100.0	615	100.0

OVARY (ICD-9: 183)**TABLE 14.10: Number(#) and Relative Proportion(%) of different histologic types of Ovarian Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
Neoplasm-Malignant	38	1.6	14	1.3	7	0.9	17	1.4	3	1.0	1	0.8
Carcinomas(Ca.)	45	1.9	54	4.8	31	4.1	23	1.9	7	2.4	1	0.8
Other Ca.	22	0.9	12	1.1	9	1.2	9	0.7	7	2.4	9	6.9
Papillary Ca.	28	1.2	10	0.9	1	0.1	15	1.2	1	0.3	9	6.9
Squam.Cell Ca.	1	0.0	14	1.3	5	0.7	12	1.0	8	2.7	8	6.1
Adeno Ca(AdCa.)	646	27.3	210	18.8	293	39.1	151	12.3	34	11.6	47	35.9
Papillary AdCa.	500	21.1	287	25.7	73	9.7	169	13.7	45	15.4	5	3.8
Clear Cell AdCa.	22	0.9	7	0.6	9	1.2	13	1.1	2	0.7	1	0.8
Endometrioid Ca.	114	4.8	6	0.5	9	1.2	32	2.6	11	3.8	1	0.8
Papillary/Serous Cyst AdCa(CAdCa.)	427	18.0	229	20.5	133	17.7	375	30.5	77	26.3	10	7.6
Mucinous CAdCa.	144	6.1	86	7.7	54	7.2	146	11.9	47	16.0	12	9.2
Granulosa Cell T.	7	0.3	26	2.3	30	4.0	22	1.8	10	3.4	1	0.8
Sarcomas	4	0.2	7	0.6	9	1.2	3	0.2	2	0.7	2	1.5
Stromal Tumours	19	0.8	4	0.4	2	0.3	6	0.5	2	0.7	0	0.0
Dysgerminoma	169	7.1	60	5.4	39	5.2	118	9.6	11	3.8	4	3.1
Endoderm.Sinus T	92	3.9	26	2.3	18	2.4	48	3.9	9	3.1	0	0.0
Teratomas	37	1.6	29	2.6	11	1.5	33	2.7	12	4.1	5	3.8
Others	54	2.3	37	3.3	17	2.3	39	3.2	5	1.7	15	11.5
All Types	2369	100.0	1118	100.0	750	100.0	1231	100.0	293	100.0	131	100.0

KIDNEY (ICD-9: 189)**TABLE 14.11: Number(#) and Relative Proportion(%) of different histologic types of Renal Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	9	1.6	2	0.8	0	0.0	4	2.0	1	1.0	0	0.0
Carcinoma NOS	10	1.8	10	4.1	8	6.5	6	2.9	3	3.0	0	0.0
Papillary Ca.	6	1.1	0	0.0	0	0.0	1	0.5	0	0.0	0	0.0
Squamous Cell Ca.	30	5.4	6	2.5	10	8.1	5	2.4	9	9.1	2	16.7
Trans.Cell Ca.	29	5.2	14	5.8	6	4.8	39	19.0	5	5.1	0	0.0
AdenoCa(Ad Ca.)	13	2.3	14	5.8	20	16.1	19	9.3	2	2.0	0	0.0
Clear Cell AdCa.	38	6.8	8	3.3	2	1.6	20	9.8	6	6.1	1	8.3
Renal Cell Ca.	280	50.3	107	44.2	56	45.2	48	23.4	39	39.4	4	33.3
Nephroblastoma	134	24.1	71	29.3	14	11.3	50	24.4	29	29.3	5	41.7
Others	8	1.4	10	4.1	8	6.5	13	6.3	5	5.1	0	0.0
All Types	557	100.0	242	100.0	124	100.0	205	100.0	99	100.0	12	100.0
FEMALES												
Neoplasm-Malignant	3	1.3	1	0.7	0	0.0	0	0.0	0	0.0	0	0.0
Carcinoma NOS	2	0.9	3	2.1	3	6.1	3	2.4	1	2.6	0	0.0
Papillary Ca.	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Squamous Cell Ca.	10	4.3	11	7.6	3	6.1	9	7.1	2	5.1	0	0.0
Trans.Cell Ca.	20	8.5	9	6.3	1	2.0	7	5.6	2	5.1	1	9.1
AdenoCa (AdCa.)	7	3.0	14	9.7	3	6.1	7	5.6	1	2.6	1	9.1
Clear Cell AdCa.	9	3.8	1	0.7	1	2.0	11	8.7	5	12.8	1	9.1
Renal Cell Ca.	91	38.9	52	36.1	23	46.9	27	21.4	18	46.2	4	36.4
Nephroblastoma	87	37.2	47	32.6	11	22.4	55	43.7	5	12.8	4	36.4
Others	5	2.1	6	4.2	4	8.2	7	5.6	5	12.8	0	0.0
All Types	234	100.0	144	100.0	49	100.0	126	100.0	39	100.0	11	100.0

BRAIN (ICD-9: 191)**TABLE 14.12: Number(#) and Relative Proportion(%) of different histologic types of Brain Tumours**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	2	0.2	2	0.2	1	1.4	2	0.3	3	0.9	0	0.0
Gliomas	37	4.5	86	10.3	8	11.1	99	13.7	27	8.3	1	5.6
Ependymoma	28	3.4	23	2.8	2	2.8	23	3.2	4	1.2	2	11.1
Astrocytoma	559	67.9	537	64.6	39	54.2	440	60.9	230	70.3	10	55.6
Glioblastoma	44	5.3	21	2.5	8	11.1	37	5.1	1	0.3	1	5.6
Oligodendroglioma	33	4.0	26	3.1	2	2.8	41	5.7	23	7.0	1	5.6
Medulloblastoma	101	12.3	96	11.6	9	12.5	65	9.0	31	9.5	2	11.1
Others	19	2.3	40	4.8	3	4.2	16	2.2	8	2.4	1	5.6
All Types	823	100.0	831	100.0	72	100.0	723	100.0	327	100.0	18	100.0
FEMALES												
Neoplasm-Malignant	3	0.9	1	0.3	0	0.0	2	0.4	1	0.7	0	0.0
Gliomas	25	7.4	32	9.2	5	14.7	57	12.8	10	6.8	2	22.2
Ependymoma	17	5.0	10	2.9	1	2.9	19	4.3	5	3.4	0	0.0
Astrocytoma	223	65.6	228	65.5	21	61.8	261	58.4	103	70.1	5	55.6
Glioblastoma	12	3.5	3	0.9	1	2.9	25	5.6	2	1.4	1	11.1
Oligodendroglioma	18	5.3	12	3.4	1	2.9	26	5.8	11	7.5	0	0.0
Medulloblastoma	32	9.4	39	11.2	4	11.8	46	10.3	14	9.5	1	11.1
Others	10	2.9	23	6.6	1	2.9	11	2.5	1	0.7	0	0.0
All Types	340	100.0	348	100.0	34	100.0	447	100.0	147	100.0	9	100.0

THYROID GLAND (ICD-9: 193)**TABLE 14.13: Number(#) and Relative Proportion(%) of different histologic types of Thyroid Cancers**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Neoplasm-Malignant	6	0.9	4	1.2	3	1.3	7	1.3	0	0.0	0	0.0
Undiff. Ca.	31	4.6	11	3.2	8	3.5	27	5.0	5	8.9	3	10.7
Papillary Ca.	309	45.8	168	49.0	68	29.8	309	57.3	24	42.9	2	7.1
Papillary AdenoCa.	2	0.3	8	2.3	48	21.1	11	2.0	1	1.8	0	0.0
Follicular Ca.	177	26.2	50	14.6	32	14.0	106	19.7	13	23.2	11	39.3
Mixed P & F Ca.	17	2.5	28	8.2	23	10.1	25	4.6	5	8.9	0	0.0
Medullary Ca.	121	17.9	35	10.2	16	7.0	40	7.4	4	7.1	3	10.7
Other Ca.	5	0.7	26	7.6	13	5.7	7	1.3	2	3.6	4	14.3
Others	7	1.0	13	3.8	17	7.5	7	1.3	2	3.6	5	17.9
All Types	675	100.0	343	100.0	228	100.0	539	100.0	56	100.0	28	100.0
FEMALES												
Neoplasm-Malignant	1	0.1	2	0.3	0	0.0	18	1.4	0	0.0	0	0.0
Undiff. Ca.	44	4.6	41	6.4	17	4.6	47	3.6	11	11.2	8	23.5
Papillary Ca.	450	47.5	278	43.7	100	27.2	720	55.6	40	40.8	0	0.0
Papillary AdenoCa.	2	0.2	21	3.3	66	18.0	31	2.4	3	3.1	2	5.9
Follicular Ca.	339	35.8	141	22.2	107	29.2	342	26.4	19	19.4	17	50.0
Mixed P & F Ca.	14	1.5	59	9.3	36	9.8	49	3.8	2	2.0	1	2.9
Medullary Ca.	74	7.8	37	5.8	13	3.5	47	3.6	6	6.1	0	0.0
Other Ca.	13	1.4	37	5.8	8	2.2	20	1.5	7	7.1	2	5.9
Others	10	1.1	20	3.1	20	5.4	21	1.6	10	10.2	4	11.8
All Types	947	100.0	636	100.0	367	100.0	1295	100.0	98	100.0	34	100.0

TUMOURS OF LYMPHOID AND HAEMATOPOIETIC SYSTEM (LHM) (ICD-9: 200-208)

TABLE 14.14(a): Number(#) and Relative Proportion(%) of main types

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
NHL	3351	30.6	1148	32.3	931	36.3	1134	37.3	349	37.0	201	47.5
HD	1581	14.4	566	15.9	325	12.7	313	10.3	155	16.5	41	9.7
MM	491	4.5	175	4.9	123	4.8	314	10.3	58	6.2	13	3.1
Leukaemias	5538	50.5	1660	46.8	1187	46.3	1280	42.1	380	40.3	168	39.7
All Types	10961	100.0	3549	100.0	2566	100.0	3041	100.0	942	100.0	423	100.0
FEMALES												
NHL	1187	28.1	418	25.5	346	29.5	437	27.3	126	34.0	68	44.4
HD	442	10.5	183	11.2	102	8.7	109	6.8	45	12.1	10	6.5
MM	210	5.0	111	6.8	71	6.1	168	10.5	29	7.8	4	2.6
Leukaemias	2380	56.4	928	56.6	652	55.7	886	55.4	171	46.1	71	46.4
All Types	4219	100.0	1640	100.0	1171	100.0	1600	100.0	371	100.0	153	100.0

NHL = Non-Hodgkin's Lymphoma

HD = Hodgkin's Disease

MM = Multiple Myeloma

The categories/groups of NHL under the Working Formulation (WF) mentioned in the following table [14 (b)] is given below:

WF Group A = Malignant Lymphoma (ML) small lymphocytic, plasmacytoid

WF Group B = ML follicular, small cleaved cell

WF Group C = ML follicular, mixed small cleaved & large cell

WF Group D = ML follicular, large cell

WF Group E = ML diffuse, small cleaved

WF Group F = ML diffuse, mixed small & large cell

WF Group G = ML diffuse, large cell cleaved/non-cleaved

WF Group H = ML diffuse, large cell, immunoblastic

WF Group I = ML diffuse, lymphoblastic

WF Group J = ML diffuse, small non cleaved

NON-HODGKIN'S LYMPHOMA (ICD-9: 200, 202)**TABLE 14.14(b): Number(#) and Relative Proportion(%) of different histologic sub-types of Non- Hodgkin's Lymphomas**

Histologic Sub-type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
NHL NOS	1610	48.0	623	54.3	538	57.8	505	44.5	155	44.4	44	21.9
WF Group A	115	3.4	52	4.5	23	2.5	117	10.3	24	6.9	56	27.9
WF Group B	180	5.4	14	1.2	3	0.3	40	3.5	8	2.3	5	2.5
WF Group C	77	2.3	16	1.4	26	2.8	26	2.3	1	0.3	1	0.5
WF Group D	17	0.5	1	0.1	2	0.2	2	0.2	0	0.0	0	0.0
WF Group E	453	13.5	125	10.9	58	6.2	189	16.7	91	26.1	56	27.9
WF Group F	99	3.0	124	10.8	122	13.1	124	10.9	8	2.3	7	3.5
WF Group G	648	19.3	15	1.3	47	5.0	45	4.0	19	5.4	20	10.0
WF Group H	21	0.6	17	1.5	40	4.3	15	1.3	17	4.9	0	0.0
WF Group I	51	1.5	47	4.1	31	3.3	4	0.4	2	0.6	0	0.0
WF Group J	16	0.5	56	4.9	3	0.3	2	0.2	13	3.7	1	0.5
NHL Follicular	8	0.2	28	2.4	7	0.8	34	3.0	2	0.6	2	1.0
Myc.Fungoides	16	0.5	1	0.1	1	0.1	12	1.1	3	0.9	1	0.5
Sezary's Dis	1	0.0	1	0.1	1	0.1	1	0.1	0	0.0	0	0.0
Hairy Cell Leuk	29	0.9	4	0.3	4	0.4	3	0.3	2	0.6	2	1.0
Others	10	0.3	23	2.1	25	2.7	15	1.3	3	1.1	5	3.0
All sub-types	3351	100.0	1147	100.0	931	100.0	1134	100.0	348	100.0	200	100.0
FEMALES												
NHL NOS	575	48.4	232	55.5	189	54.6	201	46.0	63	50.0	13	19.1
WF Group A	32	2.7	17	4.1	14	4.0	39	8.9	3	2.4	20	29.4
WF Group B	68	5.7	9	2.2	3	0.9	13	3.0	1	0.8	6	8.8
WF Group C	45	3.8	8	1.9	13	3.8	12	2.7	0	0.0	0	0.0
WF Group D	11	0.9	0	0.0	3	0.9	0	0.0	0	0.0	0	0.0
WF Group E	124	10.4	49	11.7	23	6.6	73	16.7	33	26.2	15	22.1
WF Group F	47	4.0	44	10.5	37	10.7	46	10.5	4	3.2	4	5.9
WF Group G	254	21.4	3	0.7	22	6.4	15	3.4	8	6.3	8	11.8
WF Group H	2	0.2	15	3.6	17	4.9	10	2.3	5	4.0	0	0.0
WF Group I	13	1.1	10	2.4	12	3.5	2	0.5	1	0.8	1	1.5
WF Group J	3	0.3	9	2.2	1	0.3	0	0.0	5	4.0	0	0.0
NHL Follicular	2	0.2	10	2.4	6	1.7	11	2.5	1	0.8	0	0.0
Myc.Fungoides	3	0.3	0	0.0	1	0.3	3	0.7	0	0.0	0	0.0
Sezary's Dis.	1	0.1	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0
Hairy Cell Leuk	4	0.3	2	0.5	0	0.0	0	0.0	0	0.0	0	0.0
Others	3	0.3	10	2.4	5	1.4	11	2.5	1	1.6	1	1.5
All sub-types	1187	100.0	418	100.0	346	100.0	437	100.0	125	100.0	68	100.0

HODGKIN'S DISEASE (ICD-9: 201)**TABLE 14.14(c): Number(#) and Relative Proportion(%) of different histologic sub-types* of Hodgkin's Disease (HD)**

Histologic Sub-type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
HD, NOS	177	11.2	114	20.0	91	28.0	57	18.2	23	14.2	13	29.3
HD LP	184	11.6	47	8.3	50	15.4	44	14.1	10	6.5	7	17.1
HD MC	995	62.9	268	47.3	110	33.8	135	43.1	95	61.3	16	39.0
HD LD	78	4.9	28	4.9	40	12.3	19	6.1	15	9.7	2	4.9
HD NS	147	9.3	110	19.4	34	10.5	58	18.5	13	8.4	4	9.8
All sub-types	1581	100.0	567	100.0	325	100.0	313	100.0	156	100.0	42	100.0
FEMALES												
HD, NOS	59	13.3	47	25.7	31	30.4	23	21.1	7	13.3	2	20.0
HD LP	60	13.6	17	9.3	13	12.7	14	12.8	4	8.9	1	10.0
HD MC	262	59.3	74	40.4	41	40.2	42	38.5	29	64.4	5	50.0
HD LD	13	2.9	9	4.9	6	5.9	3	2.8	4	8.9	1	10.0
HD NS	48	10.9	36	19.7	11	10.8	27	24.8	2	4.4	1	10.0
All sub-types	442	100.0	183	100.0	102	100.0	109	100.0	46	100.0	10	100.0

* LP = Lymphocyte Predominant MC = Mixed Cellularity LD = Lymphocyte Depletion NS = Nodular Sclerosis

LEUKAEMIAS (ICD-9: 204-208)**TABLE 14.14(d): Number(#) and Relative Proportion(%) of different sub-types of Leukaemias**

Histologic Sub-type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Leukaemia NOS	72	1.3	0	0.0	10	0.8	9	0.7	0	0.0	1	0.6
Ac.L. NOS	72	1.3	141	8.5	68	5.7	42	3.3	6	1.6	5	3.0
ALL	2284	41.2	442	26.6	377	31.8	586	45.8	184	48.4	49	29.2
CLL	323	5.8	88	5.3	60	5.1	47	3.7	25	6.6	7	4.2
AML	1193	21.5	502	30.2	291	24.5	397	31.0	85	22.4	43	25.6
CML	1535	27.7	405	24.4	338	28.5	177	13.8	74	19.5	59	35.1
Others	59	1.1	82	4.9	43	3.6	22	1.7	6	1.6	4	2.4
All sub-types	5538	100.0	1660	100.0	1187	100.0	1280	100.0	380	100.0	168	100.0
FEMALES												
Leukaemia NOS	31	1.3	0	0.0	4	0.6	4	0.5	0	0.0	1	1.4
Ac.L. NOS	34	1.4	55	5.9	45	6.9	38	4.3	1	0.6	3	4.2
ALL	935	39.3	201	21.7	154	23.6	345	38.9	55	32.2	22	31.0
CLL	120	5.0	39	4.2	26	4.0	26	2.9	8	4.7	0	0.0
AML	634	26.6	302	32.5	209	32.1	339	38.3	38	22.2	22	31.0
CML	608	25.5	289	31.1	185	28.4	117	13.2	69	40.4	23	32.4
Others	18	0.8	42	4.5	29	4.4	17	1.9	0	0.0	0	0.0
All sub-types	2380	100.0	928	100.0	652	100.0	886	100.0	171	100.0	71	100.0

Ac.L. = Acute Leukaemia

ALL = Acute Lymphatic Leukaemia

CLL = Chronic Lymphatic Leukaemia

AML = Acute Myeloid Leukaemia

CML = Chronic Myeloid Leukaemia

SALIVARY GLAND (ICD-9: 142)**TABLE 14.15: Number(#) and Relative Proportion(%) of different histologic types of tumours of Salivary Gland**

Histologic Type	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Carcinomas(Ca.)	34	12.4	54	32.3	19	17.3	39	25.2	15	24.2	20	74.1
Adeno Ca.	43	15.7	29	17.4	39	35.5	13	8.4	5	8.1	0	0.0
Adenoid Cystic	48	17.5	16	9.6	13	11.8	17	11.0	10	16.1	1	3.7
Mucoepidermoid	109	39.8	38	22.8	28	25.5	59	38.1	21	33.9	1	3.7
Acinar Cell Ca.	12	4.4	11	6.6	1	0.9	12	7.7	4	6.5	2	7.4
Malig Mix Tum	23	8.4	8	4.8	7	6.4	6	3.9	3	4.8	1	3.7
Others	5	1.8	11	6.6	3	2.7	9	5.8	4	6.5	2	7.4
All Types	274	100.0	167	100.0	110	100.0	155	100.0	62	100.0	27	100.0
FEMALES												
Carcinomas	13	7.7	35	33.3	8	11.6	19	19.4	4	15.4	4	66.7
Adeno Ca.	10	6.0	13	12.4	15	21.7	1	1.0	1	3.8	0	0.0
Adenoid Cystic	47	28.0	14	13.3	13	18.8	27	27.6	10	38.5	1	16.7
Mucoepidermoid	72	42.9	32	30.5	18	26.1	36	36.7	5	19.2	0	0.0
Acinar Cell Ca.	7	4.2	4	3.8	0	0.0	7	7.1	0	0.0	0	0.0
Malig Mix Tum	15	8.9	3	2.9	9	13.0	5	5.1	3	11.5	0	0.0
Others	4	2.4	4	3.8	6	8.7	3	3.1	3	11.5	1	16.7
All Types	168	100.0	105	100.0	69	100.0	98	100.0	26	100.0	6	100.0

Chapter 15

EDUCATIONAL AND MARITAL STATUS; RELIGION AND LANGUAGE SPOKEN

This chapter summarises the relative proportion of patients according to educational status and marital status; religion and language spoken.

The tables below provide the number and relative proportion of cancers (all sites) according to the educational level attained, marital status, pursuit of a specific religion and language spoken.

TABLE 15.1: Number(#) & Relative Proportion(%) by Educational Status (All Sites of Cancer)

Educational Status	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Illiterate	13799	17.6	12186	39.2	4530	18.4	3496	12.6	2794	40.5	2690	32.4
Literate	8312	10.6	3505	11.3	2058	8.4	351	1.3	892	12.9	1388	16.7
Primary	10572	13.5	3866	12.4	7318	29.8	8549	30.7	762	11.0	1302	15.7
Middle	7409	9.4	4103	13.2	4180	17.0	6051	21.8	823	11.9	1001	12.0
Secondary	13396	17.0	4459	14.3	4256	17.3	4163	15.0	615	8.9	1078	13.0
Technical	750	1.0	467	1.5	323	1.3	583	2.1	157	2.3	152	1.8
College	7433	9.5	1562	5.0	1641	6.7	1552	5.6	352	5.1	263	3.2
Below 5 year	1323	1.7	525	1.7	266	1.1	434	1.6	1	0.0	64	0.8
Others & Unknown	15594	19.8	443	1.4	16	0.1	2629	9.5	513	7.4	371	4.5
Total	78588	100.0	31116	100.0	24588	100.0	27808	100.0	6909	100.0	8309	100.0
FEMALES												
Illiterate	22751	36.9	25490	70.4	15277	53.3	5850	24.8	5185	70.2	2294	61.4
Literate	5218	8.5	2046	5.7	1572	5.5	274	1.2	520	7.0	305	8.2
Primary	4787	7.8	2206	6.1	5450	19.0	5945	25.2	474	6.4	427	11.4
Middle	3838	6.2	2461	6.8	2977	10.4	4148	17.6	376	5.1	222	5.9
Secondary	5973	9.7	2441	6.7	2317	8.1	3391	14.4	276	3.7	215	5.8
Technical	366	0.6	134	0.4	71	0.2	527	2.2	95	1.3	16	0.4
College	3371	5.5	671	1.9	833	2.9	1351	5.7	206	2.8	58	1.6
Below 5 year	689	1.1	293	0.8	179	0.6	324	1.4	0	0.0	48	1.3
Others & Unknown	14609	23.7	446	1.2	9	0.0	1794	7.6	251	3.4	151	4.0
Total	61602	100.0	36188	100.0	28685	100.0	23604	100.0	7383	100.0	3736	100.0

TABLE 15.2: Number(#) & Relative Proportion(%) by Marital Status (All Sites of Cancer)

Marital Status	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Unmarried	9762	12.4	3629	11.7	2573	10.5	3064	11.0	784	11.3	635	7.6
Married	62694	79.8	26051	83.7	20770	84.5	23489	84.5	5410	78.3	6986	84.1
Widowed	3425	4.4	1295	4.2	1179	4.8	600	2.2	265	3.8	454	5.5
Divorced	81	0.1	36	0.1	5	0.0	10	0.0	5	0.1	4	0.0
Separated	5	0.0	21	0.1	61	0.2	19	0.1	2	0.0	5	0.1
Others & Unknown	2621	3.3	84	0.3	0	0.0	626	2.3	443	6.4	225	2.7
Total	78588	100.0	31116	100.0	24588	100.0	27808	100.0	6909	100.0	8309	100.0
FEMALES												
Unmarried	4210	6.8	1642	4.5	1202	4.2	2046	8.7	221	3.0	230	6.2
Married	45834	74.4	24770	68.4	20044	69.9	15695	66.5	5932	80.3	2703	72.4
Widowed	10416	16.9	9494	26.2	6971	24.3	5217	22.1	1023	13.9	718	19.2
Divorced	143	0.2	29	0.1	33	0.1	83	0.4	17	0.2	12	0.3
Separated	4	0.0	179	0.5	435	1.5	91	0.4	28	0.4	5	0.1
Others & Unknown	995	1.6	74	0.2	0	0.0	472	2.0	162	2.2	68	1.8
Total	61602	100.0	36188	100.0	28685	100.0	23604	100.0	7383	100.0	3736	100.0

TABLE 15.3: Number(#) & Relative Proportion(%) by Religion (All Sites of Cancer)

Religion	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Hindu	64106	81.6	27342	87.9	21234	86.4	17765	63.9	4746	68.7	6986	84.1
Muslim	10626	13.5	2941	9.5	2162	8.8	3701	13.3	318	4.6	983	11.8
Christian	2491	3.2	711	2.3	1097	4.5	6306	22.7	18	0.3	245	2.9
Sikh	193	0.2	11	0.0	5	0.0	1	0.0	1784	25.8	16	0.2
Jain	96	0.1	67	0.2	82	0.3	5	0.0	5	0.1	9	0.1
Neo-Buddhist	162	0.2	12	0.0	5	0.0	0	0.0	14	0.2	26	0.3
Parsi	211	0.3	4	0.0	2	0.0	1	0.0	0	0.0	1	0.0
Others	247	0.3	17	0.1	0	0.0	5	0.0	3	0.0	29	0.3
Unknown	456	0.6	11	0.0	1	0.0	24	0.1	21	0.3	14	0.2
Total	78588	100.0	31116	100.0	24588	100.0	27808	100.0	6909	100.0	8309	100.0
Females												
Hindu	51296	83.3	32384	89.5	25308	88.2	15777	66.8	4793	64.9	3247	86.9
Muslim	6422	10.4	2720	7.5	1766	6.2	2496	10.6	230	3.1	317	8.5
Christian	2353	3.8	977	2.7	1526	5.3	5297	22.4	27	0.4	119	3.2
Sikh	236	0.4	9	0.0	13	0.0	1	0.0	2291	31.0	10	0.3
Jain	80	0.1	59	0.2	68	0.2	1	0.0	3	0.0	6	0.2
Neo-Buddhist	196	0.3	15	0.0	4	0.0	0	0.0	20	0.3	11	0.3
Parsi	342	0.6	3	0.0	0	0.0	0	0.0	2	0.0	0	0.0
Others	224	0.4	13	0.0	0	0.0	1	0.0	5	0.1	20	0.5
Unknown	453	0.7	8	0.0	0	0.0	31	0.1	12	0.2	6	0.2
Total	61602	100.0	36188	100.0	28685	100.0	23604	100.0	7383	100.0	3736	100.0

TABLE 15.4: Number(#) & Relative Proportion(%) by Language Spoken (All Sites of Cancer)

Language Spoken	Mumbai		Bangalore		Chennai		Thi'puram		Chandigarh		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Assamese	862	1.1	8	0.0	826	3.4	6	0.0	7	0.1	5090	61.3
Bengali	1401	1.8	15	0.0	124	0.5	12	0.0	9	0.1	1179	14.2
Gujarati	7950	10.1	46	0.1	66	0.3	7	0.0	2	0.0	11	0.1
Hindi	22378	28.5	272	0.9	298	1.2	15	0.1	3876	56.1	517	6.2
Kannada	1404	1.8	17737	57.0	162	0.7	10	0.0	5	0.1	1	0.0
Kashmiri	78	0.1	5	0.0	1	0.0	7	0.0	24	0.3	1	0.0
Malayalam	1283	1.6	472	1.5	1805	7.3	25908	93.2	5	0.1	4	0.0
Marathi	25922	33.0	368	1.2	53	0.2	2	0.0	5	0.1	0	0.0
Oriya	639	0.8	7	0.0	45	0.2	14	0.1	4	0.1	280	3.4
Punjabi	892	1.1	11	0.0	14	0.1	1	0.0	2652	38.4	22	0.3
Sanskrit	3	0.0	0	0.0	3	0.0	3	0.0	0	0.0	6	0.1
Sindhi	1186	1.5	8	0.0	15	0.1	2	0.0	0	0.0	1	0.0
Tamil	748	1.0	2724	8.8	12109	49.2	1657	6.0	1	0.0	8	0.1
Telugu	1728	2.2	5820	18.7	8107	33.0	22	0.1	3	0.0	10	0.1
Urdu	7442	9.5	2806	9.0	766	3.1	4	0.0	250	3.6	2	0.0
English	512	0.7	64	0.2	50	0.2	5	0.0	1	0.0	1	0.0
Others	3758	4.8	657	2.1	144	0.6	56	0.2	39	0.6	1152	13.9
Unknown	402	0.5	96	0.3	0	0.0	77	0.3	26	0.4	24	0.3
Total	78588	100.0	31116	100.0	24588	100.0	27808	100.0	6909	100.0	8309	100.0
FEMALES												
Assamese	346	0.6	1	0.0	170	0.6	2	0.0	11	0.1	2227	59.6
Bengali	901	1.5	18	0.0	68	0.2	11	0.0	5	0.1	426	11.4
Gujarati	5515	9.0	34	0.1	62	0.2	5	0.0	1	0.0	0	0.0
Hindi	14421	23.4	256	0.7	257	0.9	8	0.0	3853	52.2	280	7.5
Kannada	914	1.5	18376	50.8	163	0.6	5	0.0	2	0.0	0	0.0
Kashmiri	46	0.1	5	0.0	3	0.0	4	0.0	26	0.4	0	0.0
Malayalam	938	1.5	424	1.2	1211	4.2	21928	92.9	2	0.0	4	0.1
Marathi	25185	40.9	479	1.3	65	0.2	2	0.0	3	0.0	1	0.0
Oriya	359	0.6	4	0.0	23	0.1	10	0.0	2	0.0	182	4.9
Punjabi	1116	1.8	24	0.1	29	0.1	1	0.0	3232	43.8	11	0.3
Sanskrit	1	0.0	0	0.0	5	0.0	3	0.0	1	0.0	1	0.0
Sindhi	1282	2.1	25	0.1	16	0.1	1	0.0	1	0.0	0	0.0
Tamil	781	1.3	4334	12.0	14036	48.9	1464	6.2	2	0.0	1	0.0
Telugu	1309	2.1	8698	24.0	11565	40.3	16	0.1	6	0.1	4	0.1
Urdu	4466	7.2	2658	7.3	830	2.9	2	0.0	168	2.3	1	0.0
English	542	0.9	63	0.2	44	0.2	6	0.0	0	0.0	0	0.0
Others	3098	5.0	678	1.9	138	0.5	62	0.3	55	0.7	591	15.8
Unknown	382	0.6	111	0.3	0	0.0	74	0.3	13	0.2	7	0.2
Total	61602	100.0	36188	100.0	28685	100.0	23604	100.0	7383	100.0	3736	100.0

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PART II

INDIVIDUAL REGISTRY DATA - 1984 - 1993

Write up and Detailed Tabulations

BRIEF DESCRIPTION OF REGISTRY

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4. Number(#) and Proportion (%) of Cancers by Site (ICD-9) and Broad Treatment Groups
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