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NATIONAL CANCER REGISTRY PROGRAMME

Indian Council of Medical Research

Consolidated Report of Hospital Based Cancer Registries 2004-2006

An Assessment of the Burden and Care of Cancer Patients

Bangalore, India

October 2009

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October 2009

Hospital Based Cancer Registries provided individual core data. Quality Control checks, tabulations and statistical analysis were done at the Coordinating Unit of NCRP, Bangalore.

The publications of NCRP are intended to contribute to the dissemination of authentic information on cancer incidence by age (Five-year age groups), sex and site (ICD-10).

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** Thiruvananthapuram is referred as Thi'puram in the tables and figures.*

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Former Director, Kidwai Memorial Institute of Oncology, Bangalore & Principal Investigator, Bangalore PBCR and HBCR: 1982-1990.

A great teacher, strict disciplinarian and above all one of a kind hospital and medical institution administrator.

FOREWORD

I am happy to write the foreword on this consolidated report for the years 2004-2006 of the five Hospital Based Cancer Registries (HBCRs) located at the respective institutions in different parts of the country.

This three year report signifies the successful completion of 24 years of systematic and organized data collection by the HBCRs under the National Cancer Registry Programme (NCRP) of the Council.

The main objectives of HBCRs are to assess and evaluate patient care. The report brings into focus the complex issues involved in cancer patient care in the Indian setting. In bringing out such an assessment in terms of numbers, the report has highlighted the basic requirement of systematic and standardised recording of clinical information. Majority of patients continue to seek treatment only when the disease has reached an advanced clinical stage when curative treatment becomes difficult. Besides this, the report underscores the difficulties in obtaining follow-up details on a regular and sustained basis for evaluation of outcome of treatment.

Information about types of cancers and the different treatment modalities helps in planning the facilities required in the respective hospital, thereby facilitating health services research. HBCRs provide database for developing appropriate strategies to aid in National Cancer Control Programme.

This report will hopefully, serve as a handbook to the treating oncologist, researcher and health administrator to observe the various facets of cancer patient management and evolve institutional policies to provide more comprehensive evidence based care to the average patient.

The registries with all their team members and the Coordinating Unit of the NCRP along with its staff deserve appreciation for their dedicated work and providing quality data which enabled the successful completion of this report.

Dr V. M. Katoch
Secretary,
Department of Health Research &
Director General, ICMR

PREFACE

The Hospital Based Cancer Registries (HBCRs) under the National Cancer Registry Programme (NCRP) have, over the years, given an assessment of the magnitude and patterns of cancer in the particular region, furnished information to the Population Based Cancer Registries (PBCRs), provided data to the project on 'Development of an Atlas of Cancer in India' and in more recent years, commenced detailed systematic study on 'Patterns of Cancer Patient Care and Survival' in three important sites of cancer, viz., cancer cervix, cancer breast and head and neck cancers.

The advent and optimal use of electronic information technology in data checking, processing and analysis has greatly helped in significantly improving the quality of data. The Coordinating Unit has paid special emphasis on the various quality checks on the data in keeping with the international data quality indices.

It is heartening to note that several of the cancer hospitals where the HBCRs are functioning have computerized their data and the time interval between calendar year of data and calendar year of report availability is shortened. It is hoped that this report will encourage other cancer centres throughout the country to establish their own HBCRs and commence patterns of care studies.

While the HBCR reports have strived to provide quality, internationally acceptable data; there are difficulties that one has to overcome to achieve this within the available infrastructure of our country. Issues such as correct assessment and recording of clinical stage, complete information on treatment given and a system to recall and reassess regression of disease or otherwise are critical. Though such details would be available in a small clinical series or for patients under the care of an individual clinician, for the HBCR as a whole, such data are not available. It is hoped that these difficulties will be overcome through the study on "Patterns of care" undertaken by the HBCRs and other institutions.

The coordination and management of the data received along with publication of this report is the result of the mammoth effort made by staff of these registries as well as that of the Coordinating Unit under the leadership of Dr A. Nandakumar, Officer-in-Charge, NCRP. They deserve a special appreciation for their dedicated work which has enabled this successful completion of more than twenty four years of data collection.

Dr Bela Shah

Head, Division of Non-Communicable Diseases, ICMR

National Cancer Registry Programme

The National Cancer Registry Programme (NCRP) was commenced by the Indian Council of Medical Research (ICMR) with a network of cancer registries across the country in December 1981. The main objectives of this Programme were: 1. To generate reliable data on the magnitude and patterns of cancer; 2. Undertake epidemiological studies based on results of registry data; 3. Help in designing, planning, monitoring and evaluation of cancer control activities under the National Cancer Control Programme (NCCP); 4. Develop training programmes in cancer registration and epidemiology.

With these objectives three Population Based Cancer Registries (PBCRs) at Bangalore, Chennai and Mumbai and three Hospital Based Cancer Registries (HBCRs) at Chandigarh, Dibrugarh and Thiruvananthapuram were commenced from 1 January 1982. The PBCRs have gradually expanded over the years and as of now there are 23 PBCRs under the NCRP network and these are illustrated in the adjoining map.

The NCRP is a long term activity of the ICMR and the office of the NCRP is located in Bangalore. It is assisted by a Steering Committee and a Monitoring Committee that meets periodically to oversee and guide its functioning. A review meeting is held annually where the Principal Investigators and staff of the registries present results and participate in the discussions. The meeting is preceded by a workshop.

Cancer registration in India is active and staff of all registries visit hospitals, pathology laboratories and all other sources of registration of cancer cases on a routine basis. Death certificates are also scrutinized from the municipal corporation units and information collected on all cases where cancer is mentioned on the death certificates.

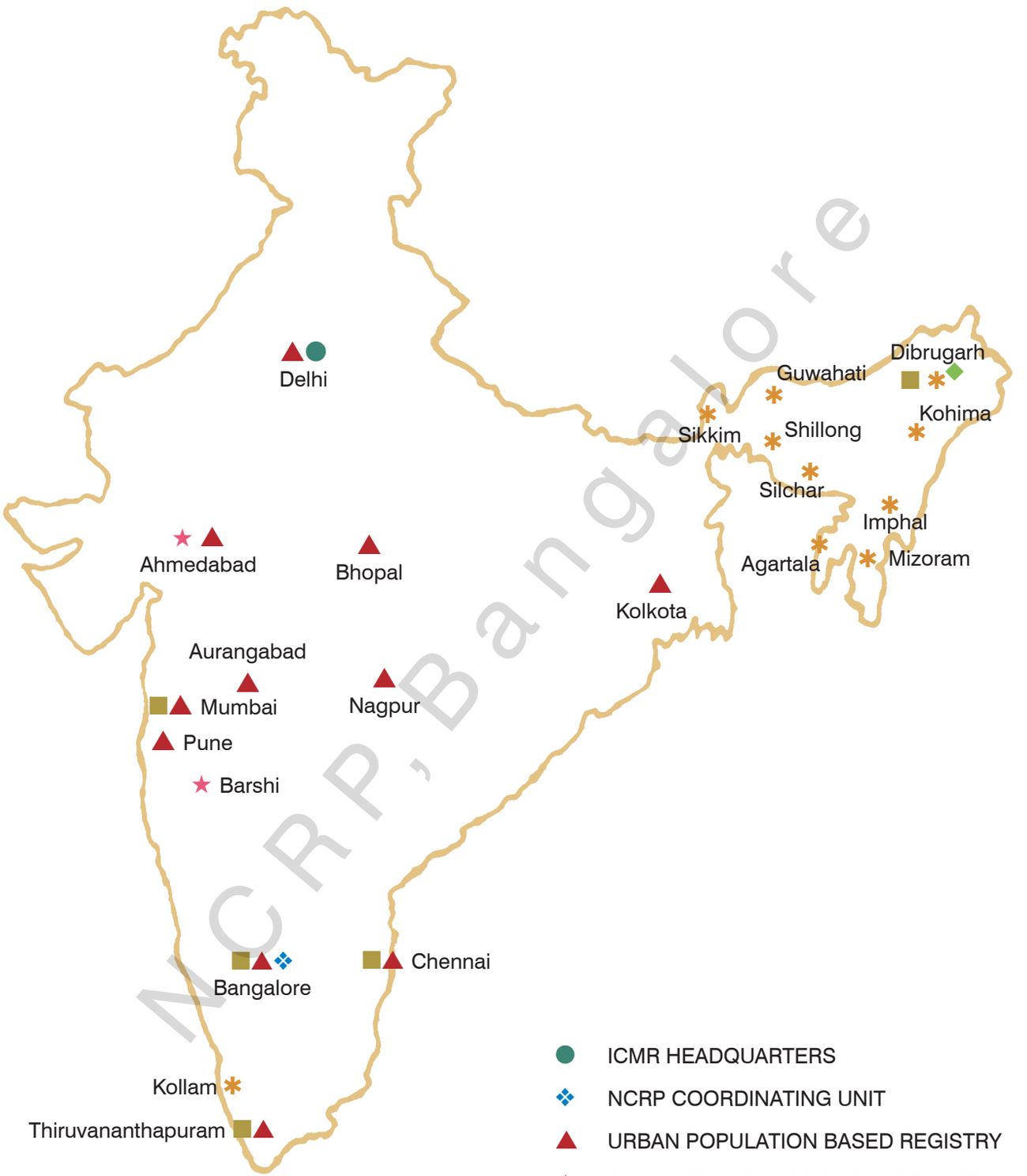
The information that is collected on a core form that is computer ready is subsequently entered in to a computer. Over the years, the registries and the office of the NCRP have used modern advances in electronic information technology to not only enter the data but also help in specific activities that involves checking of the data, verification of duplicates and matching mortality and incidence records. Electronic processing of data is now being tried out in some registries.

Data quality and completeness of coverage is a prime requisite for good cancer registration. This is ensured to the best possible extent by the NCRP.

Over the years, the staff from registries and the NCRP have benefited from both short term and long term training fellowships in established institutions in developed countries. This has helped the working of the cancer registries and also to evolve epidemiological studies. Data from the NCRP registries is regularly published in succeeding volumes of Cancer Incidence in Five Continents published by the International Agency for Research on Cancer - the cancer research arm of the World Health Organization (WHO).

NATIONAL CANCER REGISTRY PROGRAMME

(Indian Council of Medical Research)



Three-Year Consolidated Report of the Hospital Based Cancer Registries: 2004-2006

An Assessment of the Burden and Care of Cancer Patients

SUMMARY

The primary purpose of Hospital Based Cancer Registries is to contribute to patient care by providing readily accessible information on the patients with cancer, the treatment received and its results. The data is also used for clinical research and for epidemiological purposes. Hospital based cancer registries are concerned with recording of information on the cancer patients seen in a particular hospital (Isabel dos Santos Silva *et al*, 1999). Within the hospital, a registry is often considered to be an integral part of the hospital's cancer programme or health care delivery system.

The stated Objectives of Hospital Based Cancer Registries (HBCRs) (Maclennan *et al*, 1978; Young, J.L. 1991) are outlined below:

1. GENERAL:

    1.1 Assess Patient Care;

    1.2 Participate in Clinical Research to Evaluate Therapy;

    1.3 Provide an idea of the patterns of cancer in the area;

    1.4 Help plan hospital facilities.

2. SPECIFIC:

    2.1 Contribute to active follow-up of the cancer patient;

    2.2 Describe length and quality of survival in relation to anatomical site, clinical stage and aspects of types of treatment;

    2.3 Contribute to the Population Based Cancer Registries (PBCRs) in the given area;

    2.4 Undertake epidemiological research through short-term case control studies;

    2.5 Show time trends in proportion of early to late stages at the time of diagnosis;

    2.6 Help assess quality of hospital care and cancer services in covered area.

Data collection is done by the individual registries using a standardised common core form. The information in this form mainly consists of patient identifying and demographic information, details of diagnosis the clinical stage of the disease and the broad type of treatment instituted.

Registries send the data to the Coordinating Unit as soft copy in MS-Excel, ASCII or other formats. These data are then converted to a uniform format at the Coordinating Unit and quality control exercises (NCRP, HBCR Report, 2007) are carried out. Once data is finalized in correspondence with the individual registries, annexure tables are generated and reports prepared.

The three year (2004-2006) report of the five HBCRs is the contribution of data from the hospitals at Tata Memorial Hospital, Mumbai; Kidwai Memorial Institute of Oncology, Bangalore; Cancer Institute-Adyar, Chennai; Regional Cancer Centre, Thiruvananthapuram and Assam Medical College, Dibrugarh. This three year report marks the successful completion of 24 years of systematic and organized data collection by these registries.

This report essentially identifies the patients who registered in these institutions and had a diagnosis of cancer. It further distinguishes those that received cancer directed treatment (CDT) or not. Those who had received prior CDT i.e., before registration at the reporting institution were considered as 'non-analytic cases'. Those who had not received prior CDT were considered as 'analytic cases'. The rationale behind such classification is simple. The main function and objective of HBCRs is to assess and evaluate patient care of that particular hospital or reporting institution. So, if a proportion of patients received some form of cancer directed treatment elsewhere, they are not expected to be reflected in the patient care of the reporting institution, even if this group had received the additional or major course of treatment at this institution. Therefore, this report deals in detail with the analysis of analytic cases.

The report is mainly in the form of statistical tables and graphs with the corresponding text giving only the factual description. While the report has tried to analyse, compile and consolidate the data provided by the different registries in a set format, it has in no way tried to compare and therefore comment or interpret the data between or among registries. Thus, no judgement is made of the figures in the tables. This is mainly because the individual institutions where the registries are located would have, their own policies in patient care and management which is beyond the purview of this report. Individual registries, could however view their data, interpret its possible meaning and observe where, if at all modifications are required in administering patient care.

The report provides several pointers to policy makers. It gives an idea of the load of cancer patients in the main cancer hospitals of the country, the proportion and sites of cancers presenting at a late stage of the disease, the resources necessary for diagnosing and treatment according to different modalities, the proportion of patients who require palliative care, and so on. The report forms a base for both policy makers and institutions to plan for the future and would give a fair idea of the optimum number of patients a cancer centre/hospital would be able to effectively handle. The report could also form the basis of working out treatment costs and hospital stay. For the registries themselves the report should be a starting point in conducting follow-up and survival studies on at least selected sites of cancer and also initiating clinical trials.

A brief outline of the purpose and ways of interpreting each of the chapters and some areas where additional information should be gathered in order to get a more complete picture is indicated below.

Chapter 1 gives a picture of the overall magnitude of cancers diagnosed at the respective centres. This has to be further examined in the context of number of patients registered and number who were diagnosed earlier. The chapter gives the relative frequencies of the leading sites of cancer in broad age groups.

Chapter 2 deals with different types of cancers in childhood.

Chapter 3 indicates the impact of the use of tobacco in the causation of cancer both in proportions and anatomical site 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.

The basis of diagnosis in Chapter 4, is one index of the reliability of diagnosis. It indicates the proportion of methods of diagnosis used in cancer cases which are classified into microscopic, all imaging techniques, clinical and others. Microscopic diagnosis that includes histology, cytology and haematology constitutes the basis for establishing a diagnosis of cancer.

Chapter 5 gives an overview of the proportion of patients presenting in various conditions of diagnoses and treatment. It emphasises the need for distinguishing patients who have been treated elsewhere and those treated only at the reporting hospital/institution.

The proportion of patients presenting in different clinical extents of disease is shown in Chapter 6. Clinical extent of disease at presentation of cancer is directly related to the type and effectiveness of treatment. 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 at presentation of relevant sites of cancer.

Chapter 7 gives the details of different types 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. The types of treatment and their relative proportions give an idea of the forms of treatment pursued in a given institution.

Chapter 8 deals with the relative proportions of histological types of cancer for certain specific sites.

Chapter 9 summarises the relative proportion of cases according to educational status, religion and language spoken.

Chapters 10-16 summarize important selected sites of cancer with the comprehensive tables given in the earlier Chapters. The numbers in these tables of individual sites become more meaningful. These Chapters do not form part of the printed report, but are available on the website (www.pbcrindia.org) in electronic format.

A. Nanda Kumar

Dr A. Nandakumar
Officer-in-Charge, NCRP

HOSPITAL BASED CANCER REGISTRY

Tata Memorial Hospital, Mumbai

Dr Rajan Badwe, Principal Investigator

Dr Ganesh B., Co-Investigator

Dr Rajesh Dikshit, Consultant Epidemiologist

Tata Memorial Hospital

The Tata Memorial Centre (TMC) comprising the Tata Memorial Hospital and the Advanced Centre for Treatment, Research and Education in Cancer (ACTREC) engaged in research, education and Comprehensive care of cancer patients is a grant-in-aid Institution and it is under the administrative control of The Department of Atomic Energy, Government of India. The ACTREC situated at Kharghar, Navi Mumbai consists of two wings - the Cancer Research Institute (CRI) relocated from Parel and the Clinical Research Centre (CRC) which will undertake basic and clinical research using GCP guidelines. The Hospital is a comprehensive cancer centre for diagnosis, treatment, education and is also a research institution with state of art technology in all areas of cancer management. The Hospital has 558 beds, 18 operation theatres and Intensive Care units. The hospital is a recognized centre for Postgraduate teaching in areas such as Surgery, Radiation Therapy, Radio-diagnosis, Pathology, Biochemistry, Radiation Physics, Cytology etc. On an average, over 1500 patients visit every day for availing various services.

Patients who seek all facilities such as diagnosis, treatment and allied facilities are registered as routine case file registrations. These patients carry unique hospital number and they are included in the cancer registry when diagnosed as cancer. Patients who require only cancer checkup are registered under care of Preventive Oncology Department and different registration numbers are allocated (PO) as long as these patients are free from cancer. For patients who require certain facilities like expert pathological opinion by submitting specimens or slides etc, or diagnostic investigations such as CT Scan, MRI, other rehabilitation facilities like breast prosthesis etc. are registered as Referral patients (RF) and a RF number is allocated to them. Some of the RF and PO registered patients eventually register as a regular case if they are diagnosed as cancer. The Hospital Cancer Registry includes only patients registered for comprehensive care where all necessary information like, date of diagnosis, method of diagnosis, clinical extent of disease, primary treatment and continuous follow-up are available.

The Cancer Registry is currently using the International Classification of Diseases 9th version and in this year all cancer cases are coded using both ICD9 and ICD10 and tables are generated using both type of codes. For histological classification, the data is coded as per ICDO III version.

Data validation

The Cancer Registry staff scrutinizes the source document for confirmed cancer cases and collect relevant information in pre-designed proforma after sufficient time has elapsed so that the information on primary treatment (normally available in about six months from the date of diagnosis). The abstracted data is then recorded in the computer. The Software developed ensures entry of valid codes thus minimizing the storage space in the registry database. In addition, special software is used to validate data for range

checks, cross checks, duplicate checks and blank checks as there are items which are to be entered without blanks in the data field. The registry data is also validated at the NCRP headquarters. To ensure quality and corrections in data, a random sampling procedure was carried where a sample of 5% of case records were scrutinized and checked with the routine recording of cases.

The infrastructure, available expertise and patient cooperation depend largely in identifying the correct diagnosis, clinical extent of disease and proper evidence based treatment and these are some of the standards required to achieve optimum patient care. Even in a Comprehensive Care Cancer Hospital there are patients diagnosed as primary unknown or secondary in some parts of the body with unknown primary etc. Such data in a Cancer Registry may provide little information for proper health care and percentage of such patients should be kept to a minimum.

Tata Memorial Hospital - Hospital Based Cancer Registry joined the NCRP Network during the year 1984 and since then the registry started submitting cancer related information to the Network. During the years 1984-2004, over 4,82,588 patients were registered in the hospital and out of which 3,13,558 patients were diagnosed as cancer cases.

Since TMH is a comprehensive Cancer hospital, patients from all parts of India and neighbouring countries like Pakistan, Bangladesh and Nepal attend for expert care and opinion. It is evident that cancer pattern remained same among males and females. The detection rate remained same whether patients attended from neighbouring areas or from far remote corners of India.

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Dr K. Ramachandra Reddy, Professor and Head & Co-Principal Investigator

Dr C. Ramesh, Associate Professor

Introduction

Kidwai Memorial Institute of Oncology is a comprehensive and Regional Centre for Cancer Research and treatment in Karnataka. The Institute has all the state-of-the-art facilities for diagnosis and treatment of cancer and in view of this, patients from all over Karnataka as well as from the adjoining areas of neighbouring states of Andhra Pradesh, Tamil Nadu, Kerala and other regions attend this hospital. The Institute which was established in 1973 with 50 inpatient beds, a pathology laboratory and a radiology department has achieved a bed strength of 505 apart from the Dharmashala. This is a unique project in the country and has been built with support from the Bangalore Mahanagara Palike. It provides accommodation to about 250 ambulatory patients and for an equal number of their attendants. The patients and attendants are provided with free food through the perpetual free feeding Endowment donation Scheme. Another Dharmashala built with support of Infosys Foundation has general wards for poor patients and also palliative care unit.

The Mobile Cancer Education and Detection Unit (Department of Community Oncology) organizes cancer detection clinics on Wednesdays and Saturdays at the Institute. KMIO as an apex body for overall cancer control in the state, has initiated several cancer control programmes / activities at different places. The Institute has been recognized as a National Centre of Excellence. Medical and paramedical personnel from all over the country come for training in various specialities / branches on Oncology.

KMIO offers super speciality courses which are recognized by Medical Council of India. These are in Surgical Oncology (M.Ch.), Medical Oncology (D.M). It also offers postgraduate courses (MD) and Diploma courses in Radiotherapy (D.M.R.T), undergraduate courses (B.Sc.) in Allied Health Sciences (M.L.T, RD/RT & OT / AT) Anaesthesiology, Pathology and Radio diagnosis. Many Clinical / Para clinical departments offers Ph.D programmes under RGUHS.

In order to provide anti-cancer drugs at reasonably reduced prices, the Kidwai Cancer Drug Foundation Trust has been established where the costly anti cancer drugs are available at nearly 30% cheaper rates compared to market prices. Free drugs are provided to poor needy patients through Karnataka Chief Minister's Relief Fund.

The KMIO is a well equipped comprehensive cancer centre consisting of the departments of Surgical Oncology (General, Head & Neck, Oral, Gynaecology), Radiotherapy, Medical Oncology, Paediatrics, Radiodiagnosis, Pathology, Biochemistry, Blood Transfusion and Immuno Haematology, Microbiology, Cytogenetics, Nuclear Medicine, Radiation Physics, Anaesthetics and Pain Relief, Epidemiology & Biostatistics, Community Oncology, Social Welfare and Public Relations, Library & Information Centre, Administration and Supportive care facilities for cancer patients like Physiotherapy, Ostomy Clinic occupational therapy are also available.

The Hospital Based Cancer Registry has been functioning since the inception of the Institute in 1973. However, the registry was included in the network of NCRP in 1984 and supported with nominal grants from the Indian Council of Medical Research. All new cases attending at the Institute are interviewed during registration and required clinical data are abstracted later from the records using a standard proforma. The computerized data is checked for consistency for unlikely combinations of variables included using in-house computer programme.

Case control studies on breast and oesophagus have been completed and case control study on pharyngeal cancers and oral cancers are in progress. Reports on the activities of Hospital are published regularly on an annual basis. The faculty members of the Registry are actively involved in the clinical trails / research projects being carried out by the Institute apart from teaching.

The HBCR has initiated action to conduct special studies on pattern of care and survival studies on Head and Neck cancers, breast and cervical cancers as proposed by the National Cancer Registry Programme of the ICMR. KMIO being a referral cancer centre, about 70% of the patients are referred by the various medical institutions and private practitioners. During the period 2004-2006, a total number of 46,226 new patients were registered, of which 23,870 (old + new) cases were confirmed to have cancer. About 20% of the patients registered annually are from the adjacent states. On an average, about 55 new cases are registered every day and 720 follow-up patients come for regular treatment. Of the total number of confirmed cancers of 23,870 (old + new), the proportion of cancers in females were higher and counted for 54% (12,849) of the total cancer compared to 46% (11,021) in males.

Staff of Registry

Mr D. J. Jayaram	:	Sr. Investigator / Scientific Assistant
Mr C. Shivanna	:	Asst. Social Scientist
Mr V. Bhadraiah	:	Asst. Social Scientist
Mr A. V. Srinivasa Gowda	:	Asst. Social Scientist
Mr R. Lingaraju	:	Asst. Social Scientist
Mr M. K. M. Gowda	:	Asst. Social Scientist
Mrs B. J. Kumudhini	:	Asst. Social Scientist
Mr M. R. Balakrishnoji Rao	:	Asst. Social Scientist (On deputation from Comm. Oncology)
Mr K. Venkatesh	:	Statistician Assistant (On deputation from DCCP)
Mrs S. H. Sudha	:	Typist
Mr A. Subramani	:	Coding Clerk
Mr C. Kumar	:	Data Entry Operator
Mr Chinna Nayak	:	Literate Attender

HOSPITAL BASED CANCER REGISTRY

Cancer Institute (WIA), Adyar, Chennai

Dr V. Shanta, Principal Investigator

Dr R. Swaminathan, Co-Investigator

Mrs R. Rama, Statistician

The Base Institution

The Cancer Institute (W.I.A.) is the first comprehensive cancer care centre to be established in South India and is the second in India. It comprises a hospital, a research centre, a centre of preventive oncology and the Dr. Muthulakshmi College of Oncologic Sciences. It is the seat of both demographic and hospital cancer registries. The hospital has 423 beds and more than 50% of the patients are boarded, lodged and treated free of cost. Being a Regional Cancer Centre for Cancer Research and Treatment in the Ministry of Health & Family Welfare of the Government of India, this autonomous, non-profit organization draws attendances from all over the country. It offers state-of-the-art facilities for cancer diagnosis, treatment and research. The proportion (%) of patients attending the institute from Southern India in 2007 accounts for 95%: Tamil Nadu (72%), Andhra Pradesh (22%) and Kerala (1%). The research departments are recognized by the University of Madras, Anna University and the Dr. M.G.R. Medical University, for doctoral and super speciality degrees.

The Registry

The hospital cancer registry is functioning at the Cancer Institute (W.I.A.) since its inception in 1954. Data collection on the lines of ICMR started in 1984. New cases are registered using the hospital computer system and interviewed by social investigators for identification, demographic and epidemiological details. The remaining data as per ICMR Core form are abstracted from the medical records. The forms are then scrutinized by Medical Officer. The data are then entered into the computer. Computerized data are then checked by the statistician for validity and consistency using NCRP, IARC and in-house computer programs. Quality control measures include regular exercises on coding for topography and morphology and re-abstraction of cases on a random sample.

The total number of new patients (malignant and non-malignant) registered during the years 2004-2005 was 27,996. Of these, 19,098 (68%) were cancer cases with the male-female ratio of 1:1.09. The leading cancers among males are oral cavity (UICC), stomach and lung. Among females, the order is cancer of the cervix, breast and oral cavity. Breast cancer emerged at the top among those receiving cancer directed treatment at the institute.

Follow-up

The major focus of the hospital cancer registry is on the continued well-being and care of the patient. This is achieved by the life time follow-up of all treated patients. Besides the clinical follow-up of patients who are regular for check-up, an efficient active follow-up system is inherent in the functioning of the registry to get information on the vital status of all treated patients comprising postal, telephone and

house visit enquiries. Assistance is also sought from government servants (like postal personnel, village administrative personnel, etc.), medical practitioners, local service organizations and cured patients to get information on the vital status of treated patients. These measures have rendered it possible for the registry to publish the overall survival of top ranking cancers in all its reports as a routine. Complete follow-up information at five years from diagnosis ranged between 80 to 90% for cancer patients treated in 2000-2001 and followed through 2006.

Activities

Hospital cancer registry publishes reports on various hospital statistics periodically, besides publication of results of analytical studies in reputed journals for dissemination of information. A clinical secretariat, carved out of the registry, specializes in high resolution data collection for retrospective studies, data entry, analysis and slides for presentation for the faculty. Workshops on Cancer Registration are held for students of medical record/documentation and personnel from other hospitals. The NCRP project on Patterns of Care and Survival Studies is an offshoot of and integrated with the functioning of hospital registry. The registry assists in the conduct of several randomized clinical trials.

Staff of the Hospital Cancer Registry – ICMR

Mrs R. Rama	:	Statistician
Ms T. M. B. Bhavani	:	Social Investigator
Mrs Hepsi	:	Assistant

HOSPITAL BASED CANCER REGISTRY

Regional Cancer Centre, Thiruvananthapuram

Dr Paul Sebastian, Principal Investigator

Dr B. Rajan, Principal Investigator *(till October 2008)*

Dr Aleyamma Mathew, Additional Professor in Statistics & Epidemiology (in-charge)

The Hospital Based Cancer Registry (HBCR) of the Regional Cancer Centre (RCC), Thiruvananthapuram started in 1982 under the network of Indian Council of Medical Research (ICMR). Initially the HBCR collected information on cancer patients attending RCC and Medical College Hospitals. All the above hospitals are located in the same campus. Since 1997, the medial college hospitals were de-linked from the HBCR, and the registry is restricted to patients from RCC only.

The registry has made significant achievements in data abstraction in the last 10 years. The data abstraction and retrieval has been made online via intranet "rccintranet.org" with easy data management. This is the first paperless registry in the country. The demographic details are collected by the social investigators and entered into the computer at the time of new patient registration at RCC and transferred to the national cancer registry core-form of ICMR. The data transfer avoids manual documentation of the first part (demographic details) of the ICMR core-form. The second part (diagnostic, treatment and follow-up) is entered using the above software after retrieving case-sheets from the medical records division.

Using the above in-house software, the variables in the core form are selected from a selection box in the hypertext mark up language (HTML) form. The selection box contains all the codes along with their descriptions for each variable. This helps to avoid mistakes beyond the range of values for each variable. The selection box corresponding to the variables topography and morphology contains the third edition of International Classification of Diseases for Oncology (ICD-O-3) and the tenth revision of International Statistical Classification of Diseases (ICD-10). The electronic data entry and processing has greatly enhanced the quality of data. Before the computerization, there used to be a three-year delay for completing data abstraction. Now the delay is less than one year even after the patient registration is increased to nearly 3-fold.

Since its inception in 1982 (n=3596), the HBCR has been recorded increasing number of cancer cases and in 2006 (n=9441) this is 163% more than in 1982. In 2006, the percentage increases of the leading five cancers in males are 216% for lung cancer (n=187 in 1982 and n=591 in 2006), 159% for tongue cancer (n=135 in 1982 and n=350 in 2006), 43% for mouth cancers (n=315 in 1982 and n=450 in 2006), 908% for leukaemia (n=38 in 1982 and n=383 in 2006) and 306% for lymphoma (n=70 in 1982 and n=284 in 2006) compared to the patient registration in 1982. The corresponding percentage increases of the leading five cancers in females are 18% for cervix uteri cancer (n=400 in 1982 and n=473 in 2006), 466% for breast cancer (n=245 in 1982 and n=1386 in 2006), 221% for ovarian cancer (n=68 in 1982 and n=218 in 2006), 960% for thyroid cancer (n=48 in 1982 and n=509 in 2006), 191% for tongue cancer (n=47 in 1982 and n=137 in 2006) and 34% for mouth cancers (n=176 in 1982 and n=236 in 2006).

During the year 2006 (after 25 years since the inception of HBCR), 9441 (males: 4834; females: 4607) patients with cancer were recorded in the HBCR of the RCC, Thiruvananthapuram. The mean age at diagnosis was 54 years in males and 49 years in females. Children (0-14 years) constituted 4% and 62% were in the age group 35-64 years. The ten leading cancer sites altogether contributed to 69% of all cancers in males and 81% of all cancers in females. Cancer of the oral cavity (17.0%) was the leading site among males followed by lung (12.2%). Among females, cancer of the breast (30.1%) was the leading site followed by cancer of the thyroid gland (11.0%). The third and fourth common cancers were leukaemia (8.0%) and lymphoma (6.0%) in males and cervix cancer (10.3%) and oral cancers (8.4%) in females.

Other ongoing programmes utilizing HBCR data

1. Cancer Registry, Thiruvananthapuram Taluk

The Population Based Cancer Registry (PBCR), Thiruvananthapuram under the network of the National Cancer Registry Programme of ICMR aims to obtain the annual incidence and mortality rates as well as community based survival probability for each type of cancer. The Thiruvananthapuram taluk [Thiruvananthapuram corporation (urban population) as well as the rural area in the taluk] with a population of approximately 1.12 million (population from 2001 census) is the registry area. There are approximately 60 government and private hospitals, and pathology laboratories located in the taluk other than the RCC, Thiruvananthapuram. 'Active' case finding methodology is used by visiting the above hospitals and laboratories and record the necessary information using a standard format.

Seventy five percent of the PBCR, Thiruvananthapuram data is obtained from the HBCR, Thiruvananthapuram.

2. District Cancer Registry, Thiruvananthapuram

The Government of India has identified RCC as the Nodal Agency for implementing District Cancer Control Programme in Thiruvananthapuram district. In order to evaluate the programme in terms of cancer incidence, mortality and staging, a cancer registry is started in the district along with the control programmes. The district cancer registry, Thiruvananthapuram aims to record all cancer cases arising among residents in the district and analyze the outcome. The registry covers an area of 2192 sq. kms with a population of 32 lakhs of which 34% are urban population (2001 census of India). The registry has adopted an active case finding methodology by collecting data mainly from the RCC, Medical College Hospital (MCH), Thiruvananthapuram, Sree Chitra Thirunal hospital, Thiruvananthapuram located in the same campus of MCH and a few major private hospitals where cancer patients are treated in the district of Thiruvananthapuram. Additionally, death information on cancer patients from the above area is collected from the Thiruvananthapuram Corporation and the 78 panchayats (vital statistics offices) in the district. The programme has been started since 2005.

Seventy percent of the Thiruvananthapuram district cancer registry data is obtained from the HBCR, Thiruvananthapuram.

3. Rural Cancer Registry, Thiruvananthapuram

The registry provides annual data on cancer incidence and mortality covering a population of nearly 5 lakhs in a rural population in Thiruvananthapuram district. The rural area consists of three community development blocks (CD): Kazhakuttom, Chirayinkil and Thiruvananthapuram rural. The registration system was started in 1994 and the data compilation began retrospectively for the period starting from 1st January

1991. The data for the past two 5-year periods such as 1993-1997 and 1998-2002 have been published in the Volumes 8 and 9 of the Cancer Incidence in Five Continents, IARC, WHO respectively. Finnish Cancer Society is supporting the registry.

Seventy percent of the Thiruvananthapuram district cancer registry data is obtained from the HBCR, Thiruvananthapuram.

4. District Cancer Registry, Kollam

The district cancer registry, Kollam, aims to record all cancer cases arising among residents in the district and analyze the outcome. The registry covers an area of 2490 sq. kms with a population of 26 lakhs of which 82% are rural population (2001 census of India). Similar to the above registry, data is collected based on an active case finding methodology by visiting the major hospitals, laboratories and death registration offices in the entire district and record the necessary information. Additionally, information on cancer patients from the above area whom will be reported at the Regional Cancer Centre (RCC), Thiruvananthapuram and Medical College Hospitals at Thiruvananthapuram, Alappuzha and Kottayam is also collected. The annual cancer incidence and mortality rates will be estimated and detailed report will be submitted in the next year.

Fifty percent of the Kollam district cancer registry data is obtained from the HBCR, Thiruvananthapuram.

5. Cancer Control Programme, Thiruvananthapuram Corporation

Cancer awareness classes and cancer detection camps in the above area are conducted regularly. Cervical cancer screening is conducted regularly in a peripheral government hospital in Thiruvananthapuram Corporation. The programme is evaluated based on the cancer registry data.

6. Pattern of Care and Survival of Head & Neck, Breast and Cervix Cancer

HBCR, Thiruvananthapuram is one of the collaborating centres for the ICMR initiated network of pattern of care and survival studies on cancer cervix, breast and head & neck cancers. The main objective of the study is to assess the pattern of care and survival of breast, cervix, head and neck cancer patients reporting at the Regional Cancer Centre, Thiruvananthapuram. Details diagnostic, stage and treatment and follow-up details are abstracted using the site-specific proforma for the above type of cancers from the patient medical records. Currently a total of 4050 female breast cancer (n=1234), cervix cancer (n=691) and head & neck (n=2125) cancer cases are abstracted and computerized using the specifically designed 'Patient Information Form'.

7. Feasibility study for a Prospect Dietary Cohort- Part C

Part C of the above study aims to evaluate the follow-up and end-point ascertainment to establish a large prospective cohort in Thiruvananthapuram district to assess diet and other exposures in the etiology of cancers and other chronic diseases. More specifically, the feasibility study aims to evaluate Thiruvananthapuram cancer registry coverage, to determine whether supplementary activities are required to optimize case ascertainment, to assess the reliability of information provided by the cancer patients/ proxy and to determine whether there is a differential disease ascertainment by socioeconomic status. A total of 750 cancer cases were obtained from the HBCR database and information collected through house-visit using a structured questionnaire and is compared with the cancer registry database.

8. Time trend analysis of Cancer Registry data (1989-2008)

Time-trend analysis aims to study the change in cancer incidence by age and type of residence (urban/rural) for the various type of cancers in Thiruvananthapuram, to predict cancer cases for Kerala for future period, to estimate the burden of cancers in terms of potential years of life lost due to pre-mature mortality and to estimate economic implications of cancers in Kerala.

9. Utilization of HBCR data for other programmes

The HBCR has interactive programmes with other divisions of RCC. This has led to wide utilization of the registry database for a variety of analyses resulting in several scientific publications.

10. Epidemiologic studies

i) A prospective life-style and dietary cohort study in Thiruvananthapuram, Kerala, India

The study aims to establish a large prospective cohort in India to assess diet and other exposures in the etiology of cancers and other chronic diseases. The study will ultimately cover approximately 250,000 populations from Thiruvananthapuram district using questionnaire data collection and bio-specimens. Currently conducting a pilot study to assess the feasibility of establishing a large cohort in India with objectives of Evaluation of conducting chronic disease and diet research in India (Part A) (n=2400) and detailed characterization of the Indian diet (n=600 a sub-set of 2400 from Part A).

ii) Case-control study of bladder & kidney cancers

This is a hospital-based case-control study investigating the role of risk factors such as tobacco smoking, alcohol consumption, occupation, obesity, hypertension and other factors such as fluid intake, analgesics consumption, fruits and vegetables consumption etc. on the risk of developing bladder and kidney cancers. Cases include new patients with a histologically confirmed diagnosis of bladder and kidney cancers reported at the Regional Cancer Centre (RCC), and at the Medical College Hospital (MCH), Thiruvananthapuram. All cases are interviewed after the initial diagnosis by a trained interviewer who will obtain information on their risk factor information. This information is obtained using a standardized pre-tested questionnaire. Age (+/- 5 years) and gender matched controls are recruited from visitors reporting at RCC or MCH and similar interview is conducted. The same interviewers are used for both cases and controls.

iii) Nutritional factors and risk of breast cancer: a case-control study

The study objective is to investigate the role of nutritional factors such as a) Total fat and its subtypes, b) Protein, c) Fiber and its subtypes, d) Vitamins and minerals, on the risk of breast cancer. Study design: Hospital based case-control study. The study is ongoing at the Regional Cancer Centre (RCC), Thiruvananthapuram. Study design: Hospital based case-control study. Cases are women with histologically confirmed incident primary breast cancer. The controls are subjects who did not have cancer and accompanied cancer patients other than those with breast cancer attending the same cancer hospital during the same time period, and matched to cases by age (+ 5 years) and residence from the state of Kerala. Collection of dietary information is based on a locally adapted diet history questionnaire, designed with the aid of dietary recall information obtained in the pilot stage of the study.

iv) Supervision of PhD programmes – Five students who have registered under the Kerala University are undergoing doctoral programmes.

v) List of indexed publications during the last three years

Binukumar B, Mathew A. Dietary fat and risk of breast cancer. *World Journal of Surgical Oncology*, 2005, 3:45-58.

Mathew A and Rajan B. Epidemiology of cancer and prevention of cancer in India. In Marsh RW and Samuel J (editors). *The essentials of clinical oncology*, Jaypee Brothers Medical Publisheres (P) Ltd., Haryana (2005).

Balaram P, Krishnan SM, James S, Cheriyan VT, Thankappan ST, Mathew A. Epstein-Barr Virus down regulates expression of DNA-double strand break repair proeteins in nasopharyngeal cancer. *Gene therapy and Molecular Biology* Vol 10, 123-132 (2006).

Rastogi T, Devesa S, Mangtani P, Mathew A, Cooper N, Kao R and Sinha R. Cancer incidence rates among South Asians in four geographic regions: India, Singapore, UK and US. *Int J of Epidemiology* 1-13 (2007).

Mathew A, Gajalakshmi V, Rajan B, Kanimozhi V, Brennan P, Mathew BS and Boffetta P. Pattern of anthropometric factors among urban and rural women in South India and the risk of breast cancer: a multicentric case-control study, *British Journal of Cancer*, 99:207-213 (2008).

Mathew A, Gajalakshmi V, Rajan B, Kanimozhi V, Brennan P, Binukumar B, Boffetta P. Physical activity level among urban and rural women in South India and the risk of breast cancer: a case-control study. *European Journal of Cancer Prevention* (2008).

Jose S, George PS, Mathew A. Assessment of confounding and interaction using the Mantel-Haenszel risk estimation method. *Asian Pacific J Cancer Prev*, 9:323-326 (2008).

Iype EM, Sebastian, Mathew A, Balagopal PG, Varghese BT, Thomas S. The role of selective neck dissection (I-III) in the treatment of node negative (N0) neck in oral cancer. *Oral Oncology* (2008).

Gajalakshmi V, Mathew A, Brennan P, Rajan B, Kanimozhi V, Rai RR, Mathews A, Mathew BS. Boffetta P. Breastfeeding and breast cancer risk in India: a multicenter case-control study. *Int J Cancer* (2008).

List of other staff working for the registry

Dr Kalavathy M.C.	:	Assistant Professor in Epidemiology
Ms Padmakumari Amma G.	:	Lecturer in Bio-statistics
Dr Preethi Sara George	:	Lecturer in Bio-statistics
Ms Anita Nayar	:	Social Investigator, Sr. Grade
Ms Asha N.M.	:	Clerk

HOSPITAL BASED CANCER REGISTRY

Assam Medical College, Dibrugarh

Dr U. C. Sharmah, Director of Medical Education, Assam

Dr T. R. Borborah, Principal cum Chief Supdt. & Principal Investigator

Dr M. S. Ali, Office-in-Charge

Dr (Ms) R. Akhtar, Research Officer

The HBCR at Assam Medical College Hospital, Dibrugarh started in 1982 under the network National Cancer Registry Programme (NCRP) of Indian Council of Medical Research (ICMR). The base institution is a tertiary general hospital and therefore, lacks the required infrastructure of a comprehensive cancer centre. Because of this, compared with other HBCRs under NCRP, the number of cancer patients attending the hospital over the years have been relatively low. Over a period of 26 years, the registry has been able to generate and project authentic data on the burden, pattern and stages at presentation of cancer patients in the hospital.

The registry has successfully completed two epidemiological case-control studies during 1988-91 on cancer pharynx and cancer oesophagus and identified a number of potential risk factors particularly associated with the practices of the indigenous populations.

Several popular articles on the pattern, causative factors of common cancers, high risk group etc. have been published both in English and vernacular languages in the regional newspapers for the awareness of both the medical personnel and common population.

The registry staff has presented several scientific papers in various national and international conference, seminars and meetings and has also published articles in indexed journals. Staff has participated as resource persons in several WHO, NCRP and UGC sponsored workshops.

The registry database has been widely used for a variety of analysis resulting in several scientific publications both by the P.G. students and clinicians of the institute. Moreover the registry has been extending expertise and guidance to a large number of P.G. students in the matter of planning, designing and statistical analysis.

Two candidates have already obtained their Ph.D. degrees by utilizing the expertise and data of HBCR and another one is about to submit his thesis for Ph.D. under Dibrugarh University. In a big way HBCR, Dibrugarh is very much involved in human resource development in cancer epidemiology.

HBCR, Dibrugarh is one of the collaborating centres of the ICMR initiated project on patterns of care and survival studies on cancer cervix, female breast and head & neck cancers. The data collection from

patients with the above specific sites was started from 1 January, 2007. Till August, 2008, a total of 186 cases of head and neck, 65 breasts and 55 cancer cervixes have been abstracted using the specifically designed 'Patient Information Form'. These patients are being followed-up and transmitted on-line to the Coordinating Unit, Bangalore.

Other Staff of the Hospital Based Cancer Registry, Dibrugarh:

Mrs P. Dutta	:	Medical Record Officer
Mrs S. Ahmed	:	Social Investigator
Mrs S. Neog	:	Social Investigator
Sri K. Saikia	:	Clerk (Sr. Gr)
Mrs I. Baruah	:	Clerk (Sr. Gr)
Sri S. R. Nath	:	Clerk
Mrs R. Begum	:	Clerk
Mrs J. Sonowal	:	Clerk
Sri P. Deuri	:	Typist
Sri B. Mech	:	Helper

Chapter 1

MAGNITUDE AND LEADING SITES OF CANCER

Table 1.1(a) gives the total number of new cancers registered at the five hospital based cancer registries (HBCRs), over the period of three years from 1st January 2004 to 31st December 2006 (except for Mumbai, which is for a two year period – up to 31st December 2005). Accordingly, there were 109761 new cancers (56560 males and 53201 females) registered at the five HBCRs. The relative proportion of cancers in each of the HBCRs was as follows: 31.6% at Tata Memorial Hospital, Mumbai, 20.2% at Kidwai Memorial Institute of Oncology, Bangalore, 23.8 % at Cancer Institute, Chennai, 21.8% at Regional Cancer Centre, Thiruvananthapuram and 2.6% at Assam Medical College, Dibrugarh. In Bangalore and Chennai there were more female than males were registered. In Mumbai, Thiruvananthapuram and Dibrugarh more male than females were registered. Table 1.1 (b) gives in addition to that given in Table 1.1(a) the number of new patients registered with a diagnosis of cancer made in earlier years. Table1.1(c) gives a summary of all new registrations.

Figure 1 gives the trends in the actual total number of cancers registered from 1984 to 2006 in the different HBCRs.

The number, relative proportion and rank of the ten leading sites (ICD-10) in males and females for the year 2004-06 is given in Table 1.2 and represented in Figures 1.1(a) and 1.1(b).

Table 1.1(a): Number (#) and Proportion (%) according to Sex, Sex Ratio Percent and Relative Proportion (Rel. Prop.) of Cancers - New Cases (2004-2006)

Registry	Males		Females		Sex$^{\$}$ Ratio%	Total Cases	Rel. Prop.
	#	%	#	%			
Mumbai *	19399	55.9	15313	44.1	127	34712	31.6
Bangalore	10293	46.5	11842	53.5	87	22135	20.2
Chennai	12523	48.0	13589	52.0	92	26112	23.8
Thi'puram	12563	52.4	11394	47.6	110	23957	21.8
Dibrugarh	1782	62.6	1063	37.4	168	2845	2.6
Total	**56560**	**51.5**	**53201**	**48.5**	**106**	**109761**	**100.0**

** Only 2004-05 data; $^{\$}$ Number of male patients per 100 female patients*

Table 1.1(b): Distribution of Cancer Cases according to Registration Year and Date of Diagnosis (2004-2006)

Registry	Males		Females	
	New registrations with date of diagnosis in same calendar year	New registrations with date of diagnosis in other calendar years	New registrations with date of diagnosis in same calendar year	New registrations with date of diagnosis in other calendar years
Mumbai*	19399	0	15313	0
Bangalore	10293	728	11842	1007
Chennai	12523	2319	13589	2892
Thi'puram	12563	1534	11394	1565
Dibrugarh	1782	2	1063	2
Total	**56560**	**4583**	**53201**	**5466**

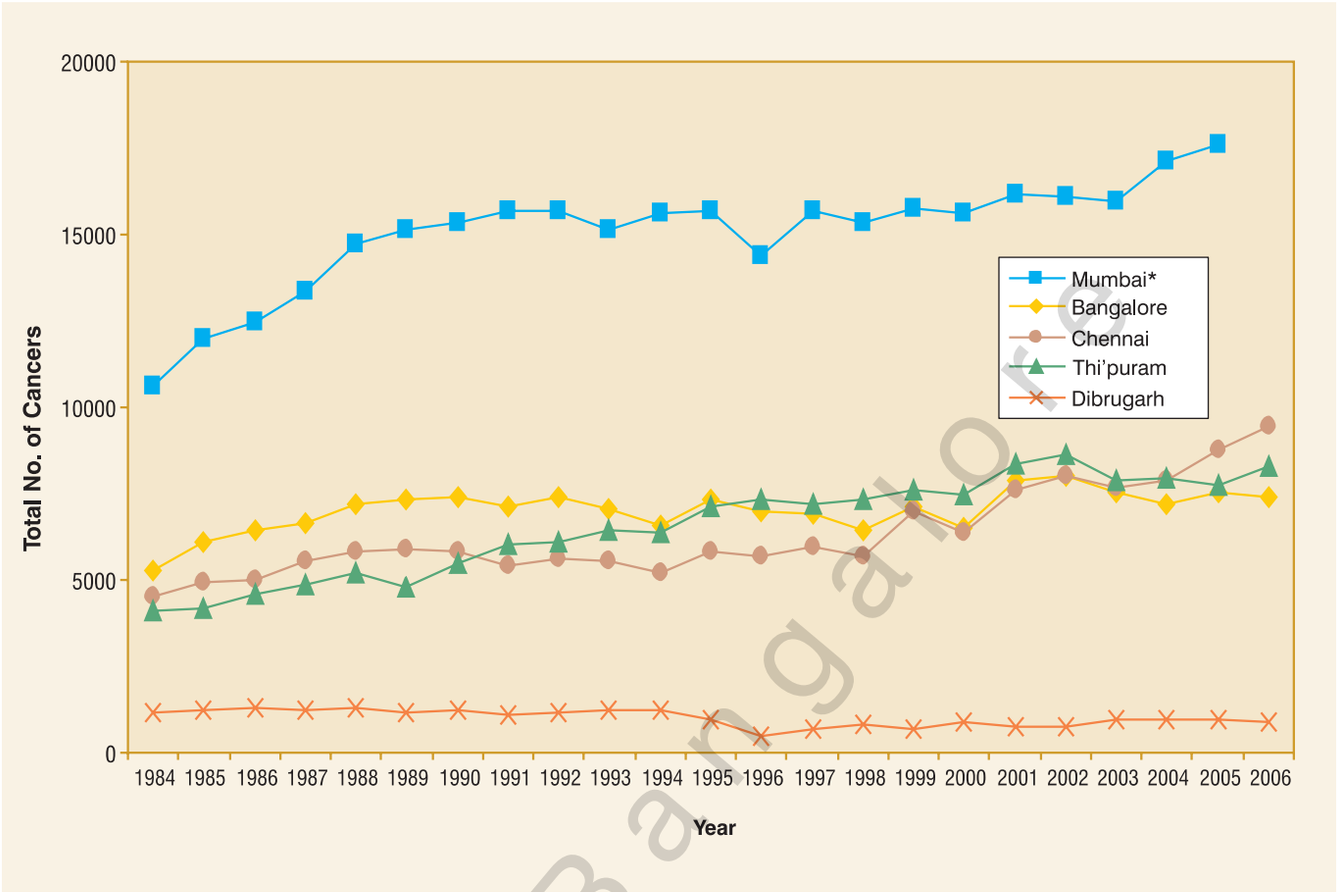
** Only 2004-05 data.*

Table 1.1(c): Number (#) and Proportion (%) according to Sex, Sex Ratio Percent and Relative Proportion (Rel. Prop.) of all New Registrations (2004-2006)

Registry	Males		Females		Sex$^{\$}$ Ratio%	Total Cases	Rel. Prop.
	#	%	#	%			
Mumbai*	19399	55.9	15313	44.1	127	34712	28.6
Bangalore	11021	46.2	12849	53.8	86	23870	19.7
Chennai	14842	49.5	16481	54.7	90	31323	25.1
Thi'puram	14097	52.1	12959	47.9	109	27056	22.3
Dibrugarh	1784	40.4	2628	59.6	68	4412	3.6
Total	**61143**	**50.4**	**60230**	**49.6**	**102**	**121373**	**100.0**

** Only 2004-05 data; $^{\$}$ Number of male patients per 100 female patients*

Fig. 1: Trends in total number of cancers registered (both sexes) 1984-2006



Males: (The proportion (%) of a given site relative to all sites of cancer in that sex are given in parentheses).

In Mumbai, mouth (12.8%) was the leading site of cancer, followed by lung (7.9%), tongue (6.9%), Non-Hodgkin's Lymphoma (NHL) (5.5%) and hypopharynx (5.1%).

In Bangalore, hypopharynx (9.3%), oesophagus (8.1%), lung (7.0%), tongue (5.7%) and mouth (5.6%) were the five leading sites in that order.

In Chennai, stomach (8.7%) and mouth (8.2%) were the leading sites. These two sites were followed by lung (7.8%), oesophagus (7.1%), and tongue (6.9%).

In Thiruvananthapuram, lung (14.2%) was the leading site followed by mouth (9.4%), tongue (6.9%), oesophagus (5.1%) and larynx (4.8%).

In Dibrugarh, hypopharynx (17.1%) and oesophagus (15.5%) were the leading sites followed by mouth (7.6%), tongue (5.4%) and tonsil (5.2%).

Females:

In Mumbai, breast (27.5%) was the leading site of cancer followed by cervix (15.5%), ovary (5.4%), mouth (5.0%) and gall bladder (3.4%).

Table 1.2: Number (#), Relative Proportion (%) and Rank (R) of Leading Sites of Cancer (2004-2006)

Males

Sites	Mumbai*			Bangalore			Chennai			Thi'puram			Dibrugarh		
	#	%	R	#	%	R	#	%	R	#	%	R	#	%	R
Mouth	2488	12.8	1	578	5.6	5	1031	8.2	2	1182	9.4	2	136	7.6	3
Lung	1526	7.9	2	719	7.0	3	983	7.8	3	1787	14.2	1	59	3.3	8
Tongue	1347	6.9	3	585	5.7	4	868	6.9	5	865	6.9	3	96	5.4	4
NHL	1073	5.5	4	411	4.0	8	566	4.5	7	591	4.7	6	28	1.6	÷
Hypopharynx	988	5.1	5	953	9.3	1	685	5.5	6	387	3.0	÷	305	17.1	1
Oesophagus	956	4.9	6	837	8.1	2	886	7.1	4	644	5.1	4	276	15.5	2
Myeloid Leukaemia	888	4.6	7	410	4.0	9	498	4.0	8	492	3.9	8	27	1.5	÷
Larynx	742	3.8	8	415	4.0	7	488	3.9	9	597	4.8	5	91	5.1	6
Lymphoid Leuk.	610	3.1	9	361	3.5	÷	362	2.8	÷	471	3.7	9	3	0.1	÷
Stomach	594	3.1	10	561	5.5	6	1086	8.7	1	537	4.3	7	72	4.0	7
Brain, NS	222	2.3	÷	404	3.9	10	100	0.8	÷	440	3.5	10	25	1.4	÷
Rectum	245	2.5	÷	244	2.4	÷	373	3.0	10	344	2.7	÷	27	1.5	÷
Tonsil	128	1.3	÷	157	1.5	÷	209	1.6	÷	113	0.9	÷	92	5.2	5
Pharynx Unsp.	8	0.1	÷	135	1.3	÷	25	0.2	÷	18	0.1	÷	48	2.7	9
Lip	53	0.5	÷	16	0.2	÷	29	0.2	÷	38	0.3	÷	31	1.7	10
Total	**11868**	**64.5**		**6786**	**65.9**		**8189**	**65.2**		**8506**	**67.5**		**1316**	**73.7**	
All Sites	**19399**	**100.0**		**10293**	**100.0**		**12523**	**100.0**		**12563**	**100.0**		**1782**	**100.0**	

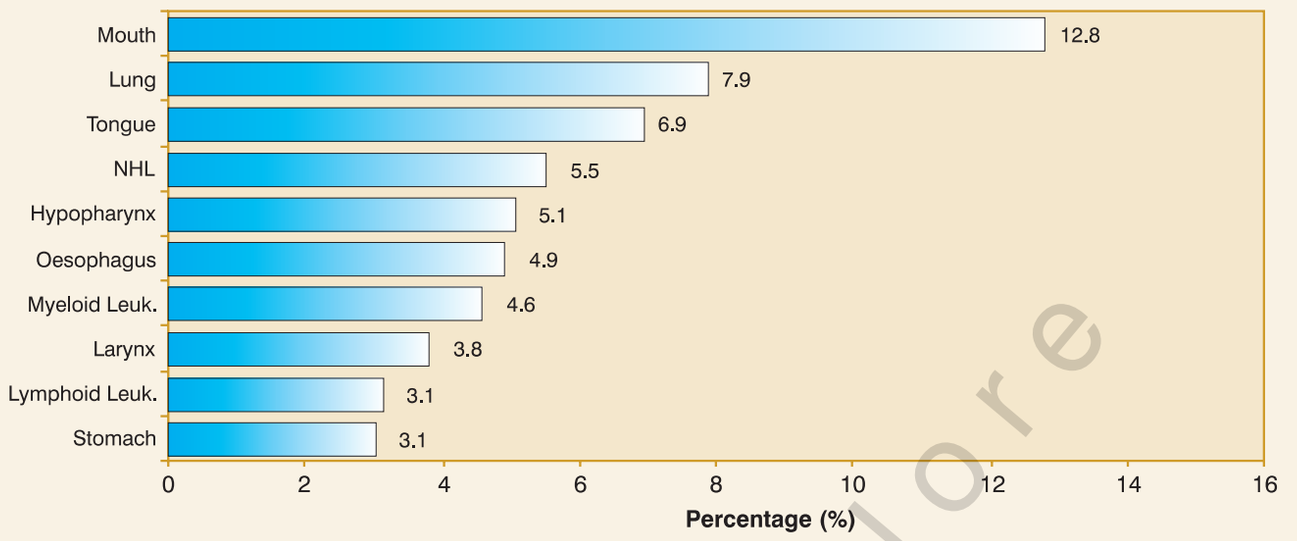
Females

Sites	Mumbai*			Bangalore			Chennai			Thi'puram			Dibrugarh		
	#	%	R	#	%	R	#	%	R	#	%	R	#	%	R
Breast	4211	27.5	1	1825	15.4	2	2934	21.6	2	3086	27.1	1	152	14.3	2
Cervix Uteri	2366	15.5	2	3252	27.5	1	3804	28.0	1	1307	11.5	2	153	14.4	1
Ovary	823	5.4	3	605	5.1	5	671	4.9	4	553	4.9	5	85	8.0	4
Mouth	759	5.0	4	1200	10.1	3	703	5.2	3	658	5.8	4	56	5.3	5
Gallbladder	523	3.4	5	66	0.6	÷	89	0.6	÷	33	0.2	÷	44	4.1	7
Oesophagus	511	3.3	6	679	5.7	4	542	4.0	5	202	1.7	÷	146	13.7	3
Lung	443	2.9	7	171	1.4	÷	248	1.8	÷	261	2.2	÷	14	1.3	÷
Thyroid	439	2.9	8	500	4.2	6	322	2.4	8	1133	9.9	3	13	1.2	÷
NHL	434	2.8	9	313	2.6	7	260	1.9	10	330	2.9	8	11	1.0	÷
Myeloid Leukaemia	406	2.7	10	173	1.5	÷	328	2.4	7	407	3.5	6	11	1.0	÷
Stomach	145	1.9	÷	260	2.2	8	518	3.8	6	128	1.1	÷	40	3.8	8
Brain, NS	89	1.1	÷	220	1.9	9	59	0.4	÷	278	2.4	10	12	1.1	÷
Rectum	134	1.8	÷	193	1.6	10	198	1.4	÷	222	1.9	÷	19	1.7	÷
Hypopharynx	111	1.5	÷	169	1.4	÷	311	2.3	9	65	0.5	÷	49	4.6	6
Tongue	180	2.4	÷	165	1.4	÷	220	1.6	÷	347	3.0	7	27	2.5	9
Corpus Uteri	160	2.1	÷	55	1.3	÷	196	1.4	÷	305	2.6	9	18	1.6	÷
Colon	73	1.0	÷	103	0.9	÷	98	0.7	÷	118	1.0	÷	20	1.9	10
Total	**11807**	**83.0**		**9949**	**84.9**		**11501**	**84.4**		**9433**	**82.4**		**870**	**81.6**	
All Sites	**15313**	**100.0**		**11842**	**100.0**		**13589**	**100.0**		**11394**	**100.0**		**1063**	**100.0**	

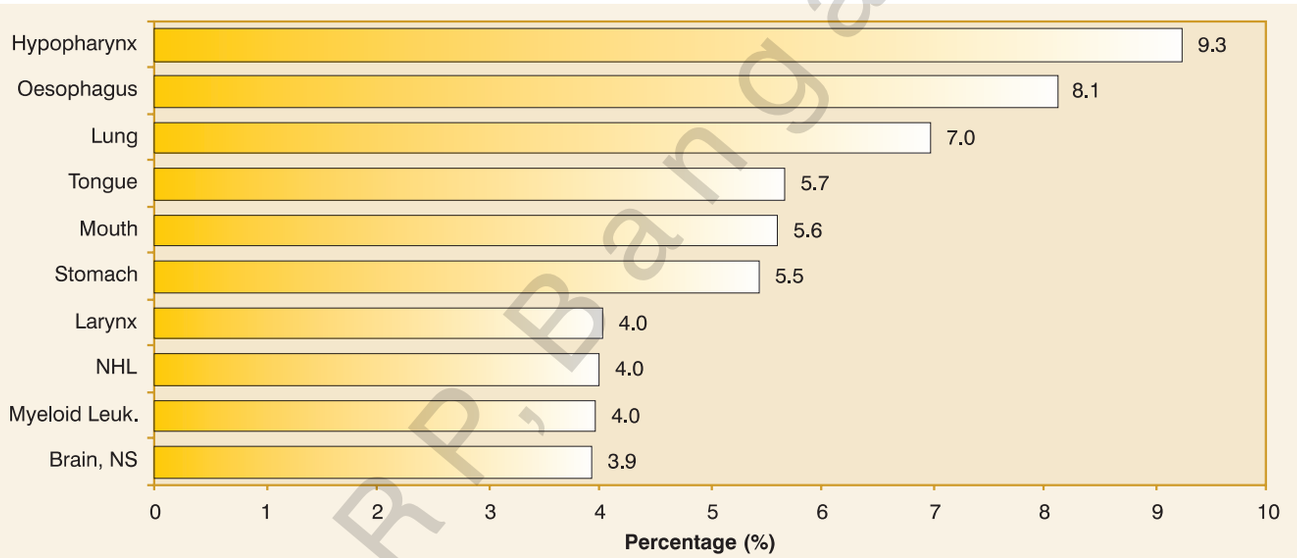
** Only 2004-05 data; ÷ Rank not within first ten*

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

Mumbai



Bangalore



Chennai

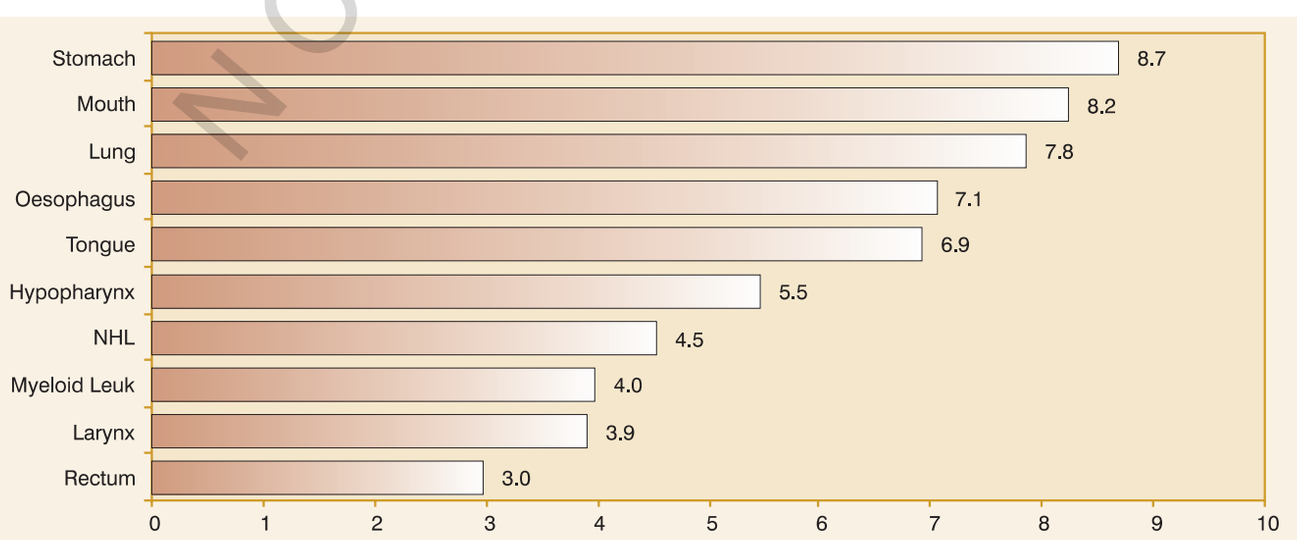
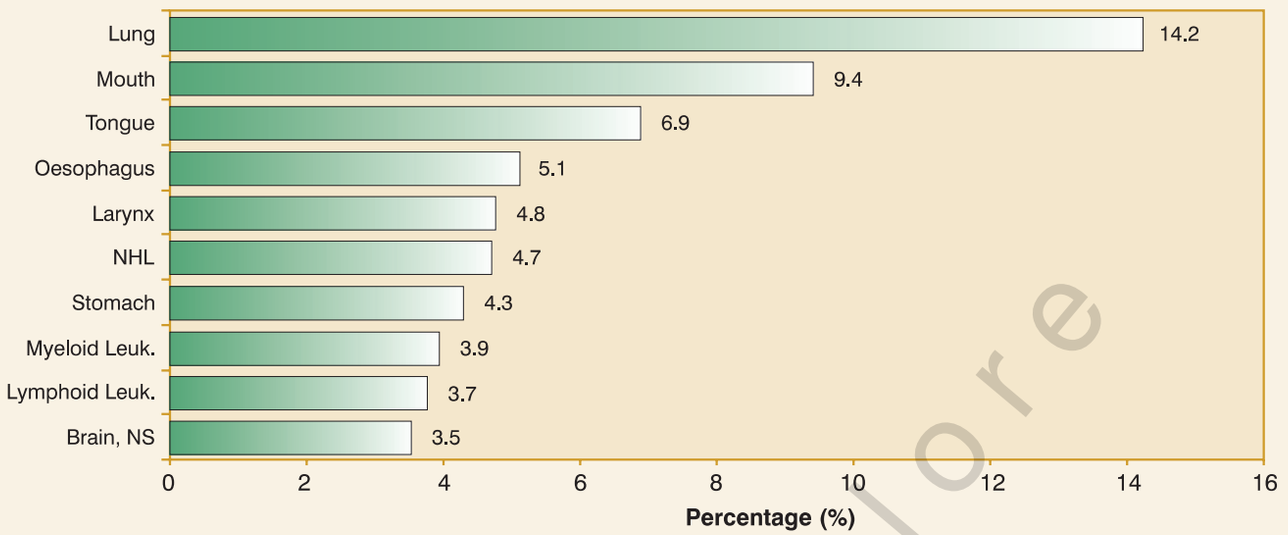
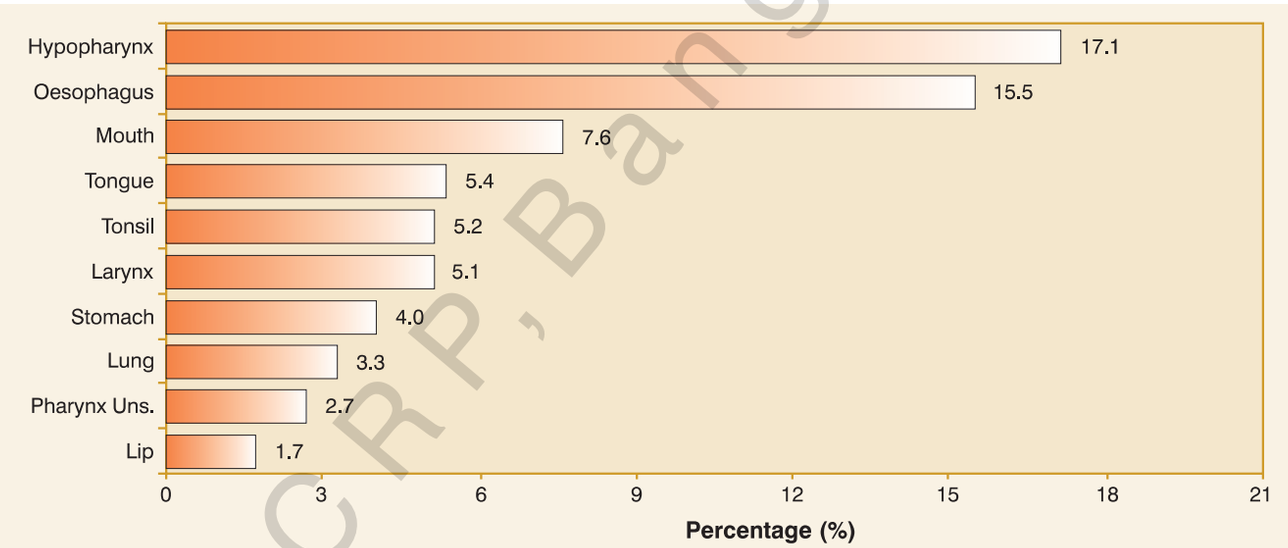


Fig. 1.1(a): Ten Leading Sites of Cancer - Males (Contd.)

Thiruvananthapuram



Dibrugarh



In Bangalore, cancer of the cervix was the leading site, accounting for about 27.5% of cancer in females, followed by breast (15.4%), mouth (10.1%), oesophagus (5.7%) and ovary (5.1%).

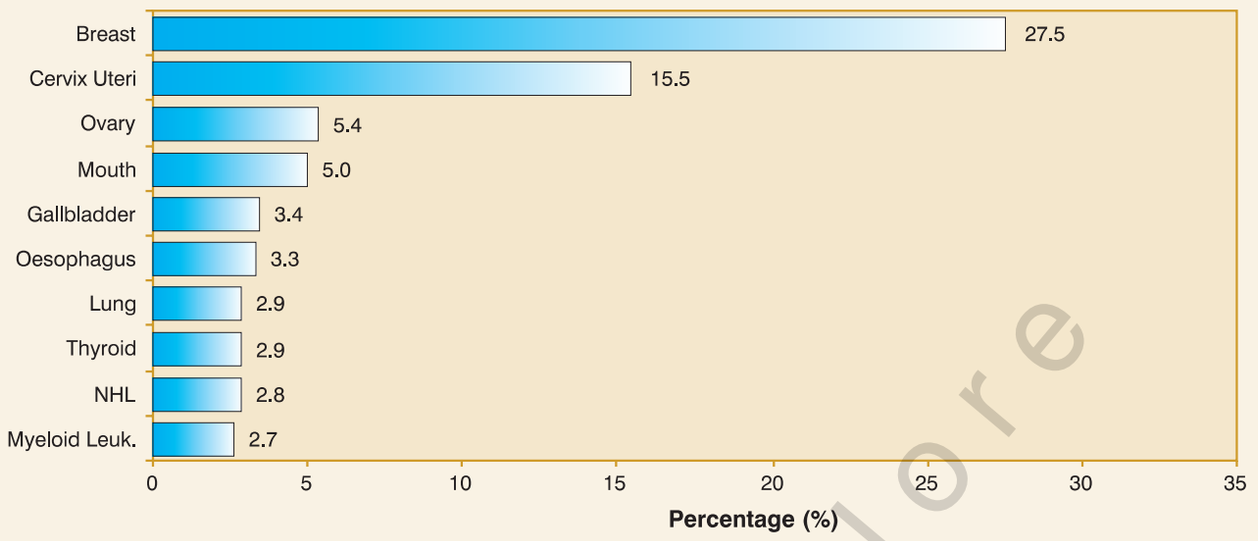
In Chennai the first three leading sites were same as Bangalore. The first leading site was cancer cervix (28.0%) followed by breast (21.6%) and mouth (5.2%). The fourth and fifth sites were ovary (4.9%) and oesophagus (4.0%) respectively.

In Thiruvananthapuram, thyroid gland (9.9%) was the third leading site after breast (27.1%) and cervix (11.5%). Thyroid gland was followed by the cancers of mouth (5.8%) and ovary (4.9%).

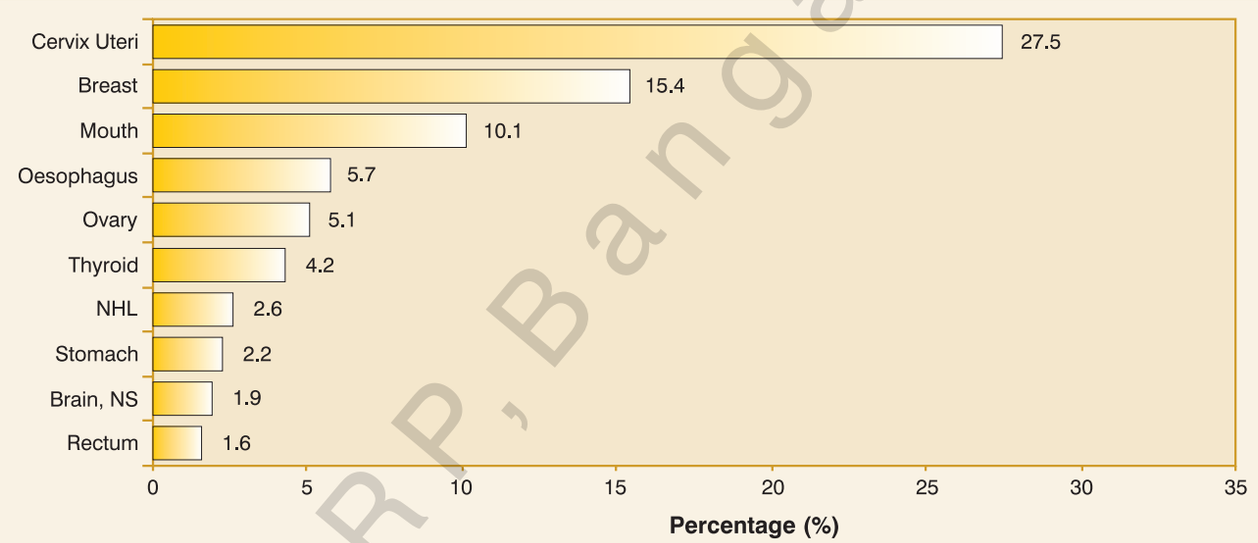
In Dibrugarh, cancer cervix was the leading site, accounting for 14.4% of cancers in females, closely followed by breast (14.3%), oesophagus (13.7%), ovary (8.0%), mouth (5.3%).

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

Mumbai



Bangalore



Chennai

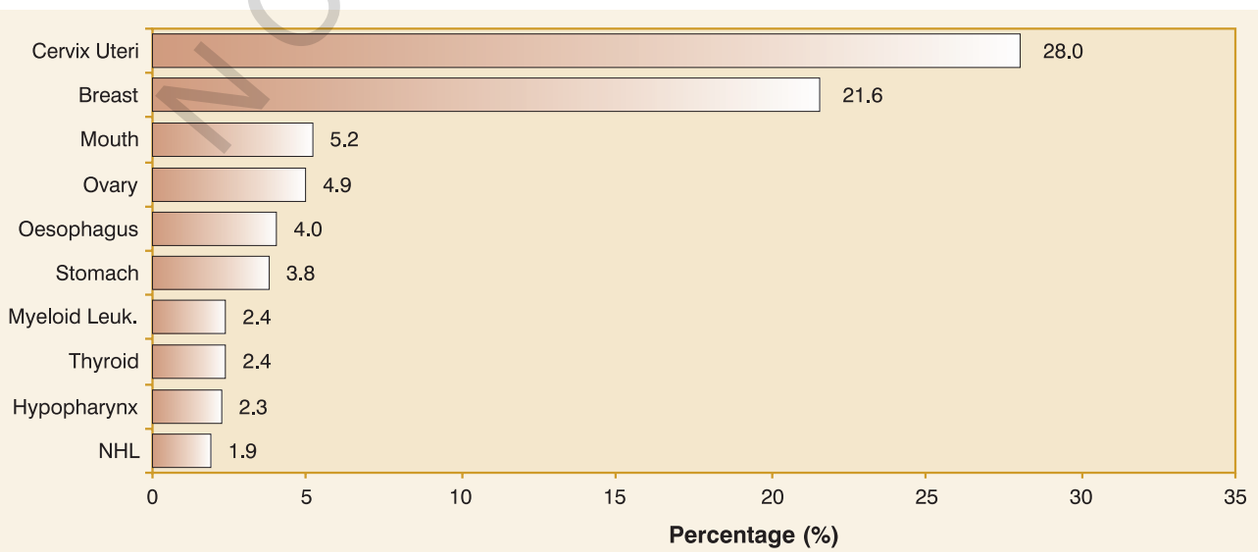
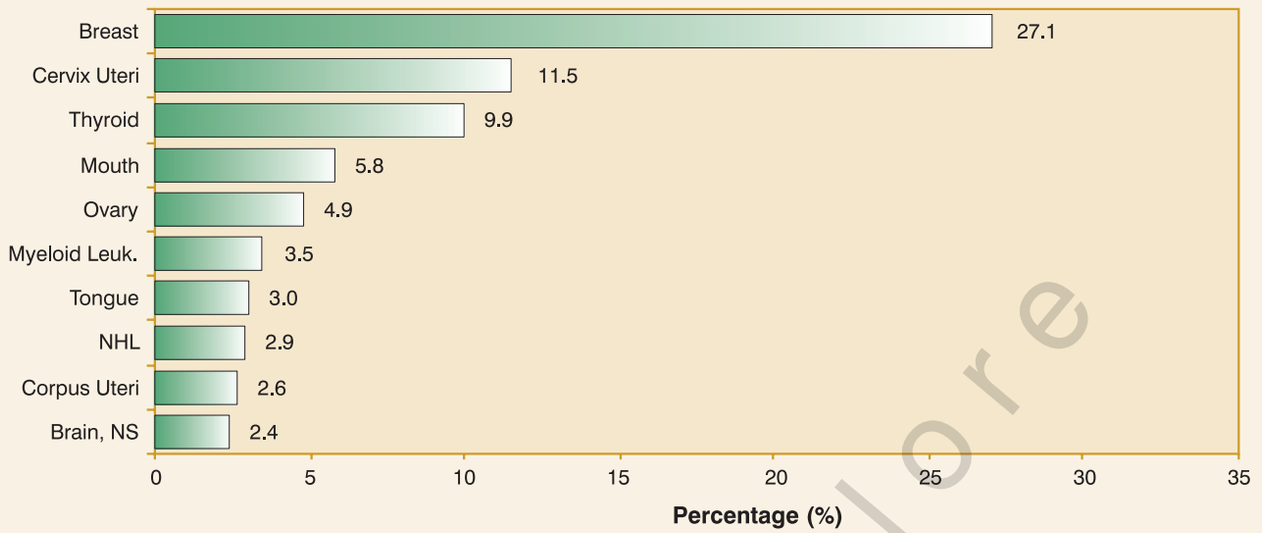
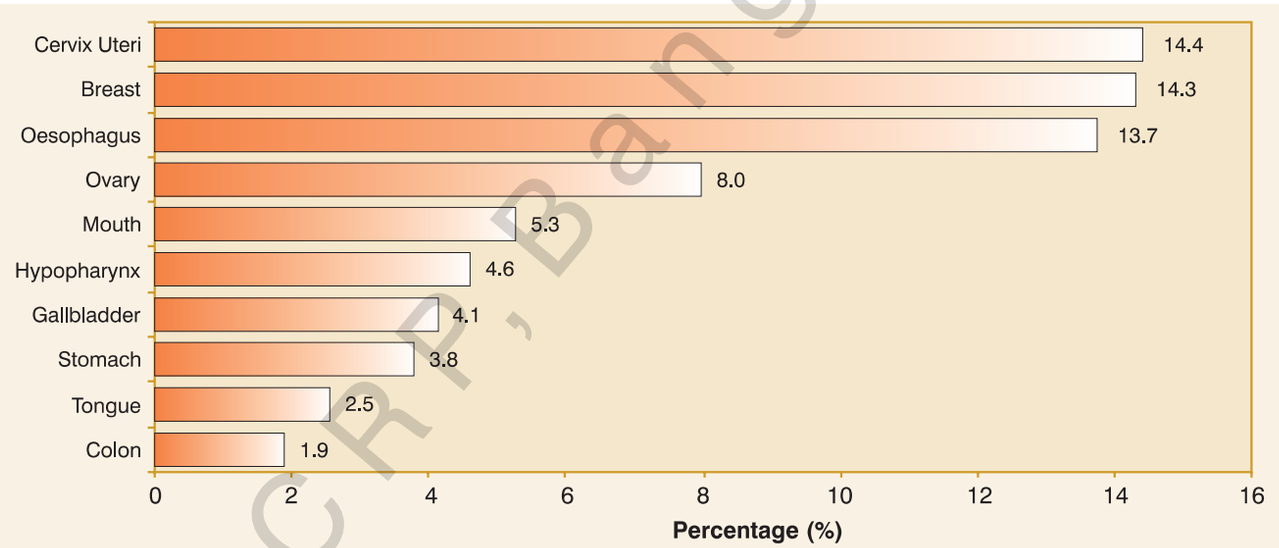


Fig. 1.1(b): Ten Leading Sites of Cancer - Females (Contd.)

Thiruvananthapuram



Dibrugarh



LEADING SITES IN BROAD AGE GROUPS

The numbers and relative proportions of cancers according to broad age groups (0-14, 15-34, 35-64 and 65 and above years of age), for both sexes across the five registries is shown in Table 1.3 and diagrammatically represented in Fig. 1.2. Figures 1.3 to 1.5 give the bar diagrams of the leading sites with their relative proportions in each of these broad age groups, except, childhood cancers (which is given separately in Chapter 2).

The relative proportion of young adults (15-34 years) with cancer varied from 6.5% in males in Dibrugarh to 13.7% in Mumbai and in females from 9.8% in Chennai and Dibrugarh to 11.8% in Thiruvananthapuram. The relative proportion of cancers in the age group 35-64 years varied from 57.0% in males in Dibrugarh to 62.6% in Dibrugarh, while in females it varied from 64.1% in Thiruvananthapuram to 72.7% in Chennai.

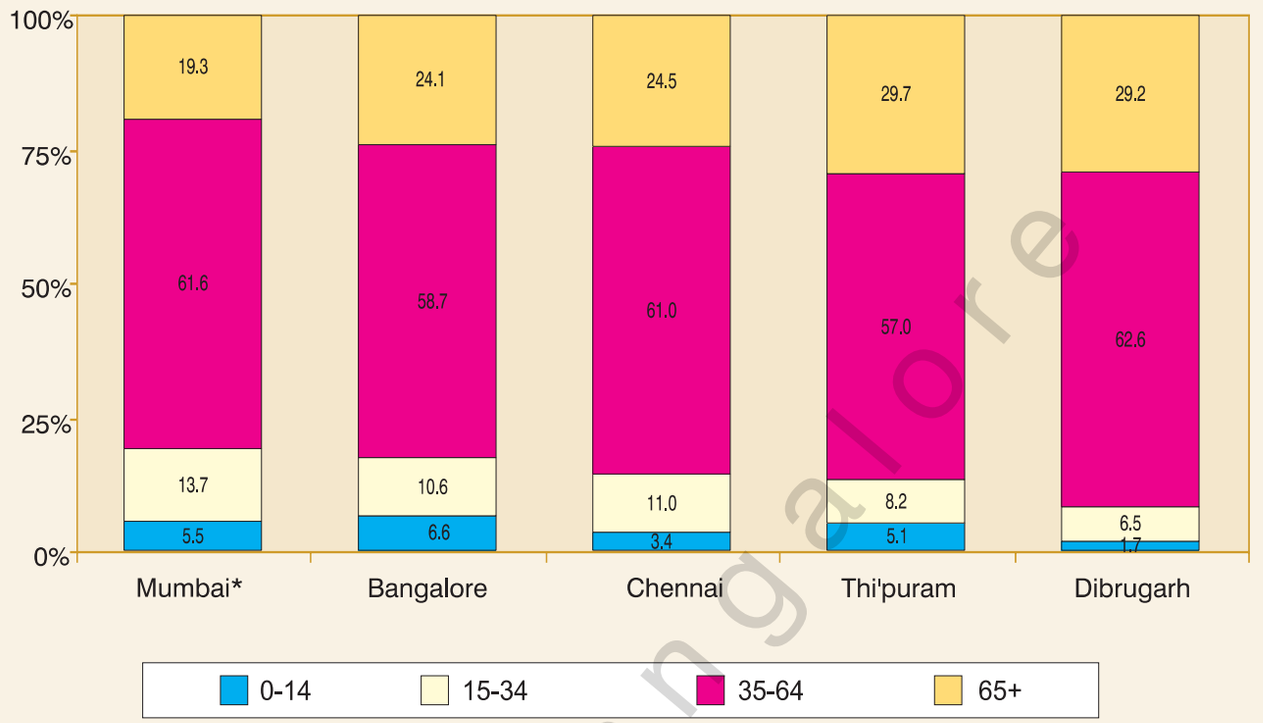
Table 1.3: Number (#) and Proportion (%) of Cancers by Broad Age Groups (2004-2006)

Registry	0-14		15-34		35-64		65+		All Ages
	#	%	#	%	#	%	#	%	#
Males									
Mumbai*	1060	5.5	2651	13.7	11943	61.6	3745	19.3	19399
Bangalore	681	6.6	1089	10.6	6043	58.7	2480	24.1	10293
Chennai	428	3.4	1379	11.0	7644	61.0	3072	24.5	12523
Thi'puram	645	5.1	1027	8.2	7160	57.0	3731	29.7	12563
Dibrugarh	30	1.7	116	6.5	1115	62.6	521	29.2	1782
Females									
Mumbai*	500	3.3	1777	11.6	10924	71.3	2112	13.8	15313
Bangalore	400	3.4	1260	10.6	8434	71.2	1748	14.8	11842
Chennai	294	2.2	1327	9.8	9876	72.7	2092	15.4	13589
Thi'puram	483	4.2	1346	11.8	7301	64.1	2264	19.9	11394
Dibrugarh	32	3.0	104	9.8	767	72.2	160	15.1	1063
Both Sexes									
Mumbai*	1560	4.5	4428	12.8	22867	65.9	5857	16.9	34712
Bangalore	1081	4.9	2349	10.6	14477	65.4	4228	19.1	22135
Chennai	722	2.8	2706	10.4	17520	67.1	5164	19.8	26112
Thi'puram	1128	4.7	2373	9.9	14461	60.4	5995	25.0	23957
Dibrugarh	62	2.2	220	7.7	1882	66.2	681	23.9	2845

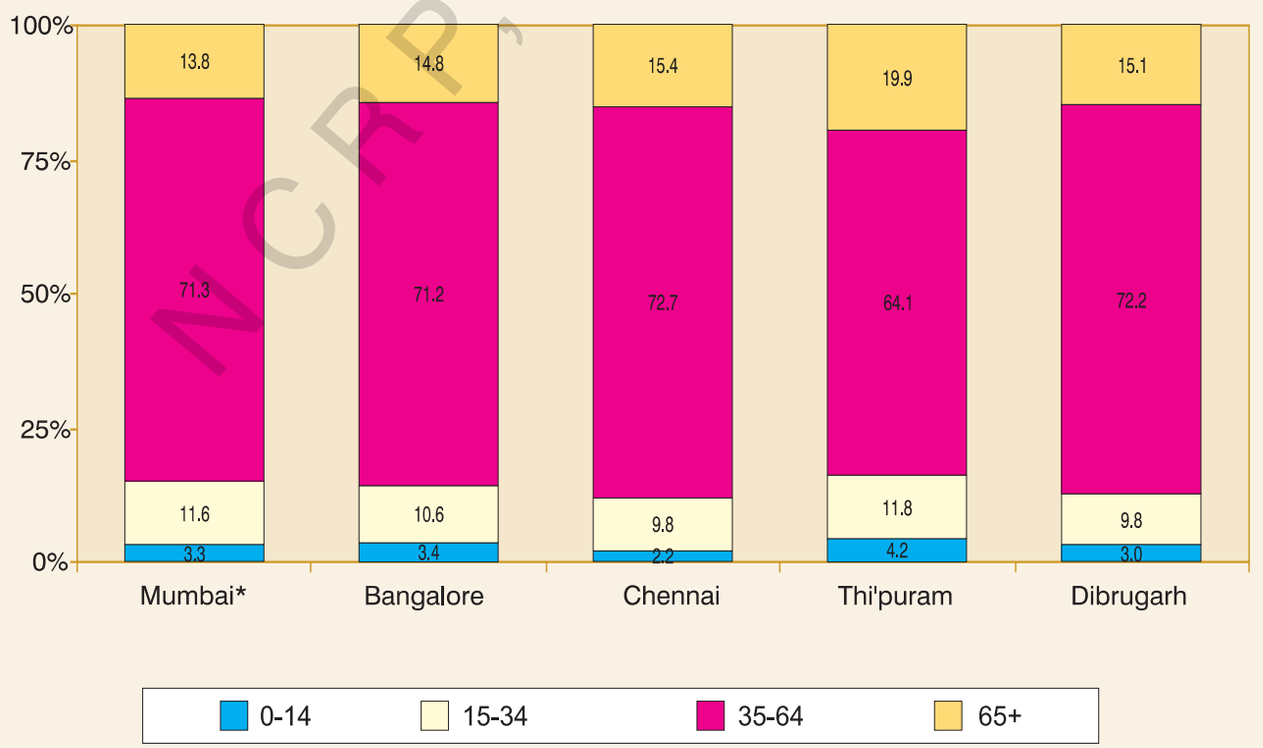
**Only 2004-05 data.*

Fig. 1.2: Stack (100%) diagram showing Proportion of Cancer by Broad Age Groups - 2004-2006

Males



Females



Age Group (15-34 Years)

Males:

Myeloid leukaemia was the leading site in Mumbai, Chennai, Bangalore and Thiruvananthapuram and the third leading site in Dibrugarh. Brain was the second leading site in Bangalore and Dibrugarh while NHL occupied the second leading site in Mumbai. Bone was among the first three leading sites in all HBCRs except Thiruvananthapuram and Dibrugarh where it was the fifth and sixth leading site respectively. NHL was an important site figuring within first six at all the registries.

Females:

Breast was the leading site in Mumbai and Chennai whereas cervix uteri in Bangalore, thyroid in Thiruvananthapuram and ovary in Dibrugarh were the leading sites.

Age Group (35-64 Years)

Males:

Mouth was the leading site in Mumbai, second leading site in Chennai and Thiruvananthapuram, third in Dibrugarh and fifth in Bangalore. Hypopharynx was the leading site in Bangalore and Dibrugarh and within first six in other registries except in Thiruvananthapuram where it was the ninth leading site. Stomach was first in Chennai and within ten in other registries. Lung was the leading site in Thiruvananthapuram and within three in other registries except in Dibrugarh.

Females:

Breast and cervix were the leading sites in all the registries. Ovary and mouth were other important sites within first five. Oesophagus was within first five leading sites in all the registries except in Mumbai and Thiruvananthapuram. Thyroid gland was third leading site only in Thiruvananthapuram and within first ten in Bangalore and Chennai.

Age Group (65 Years and above)

Males:

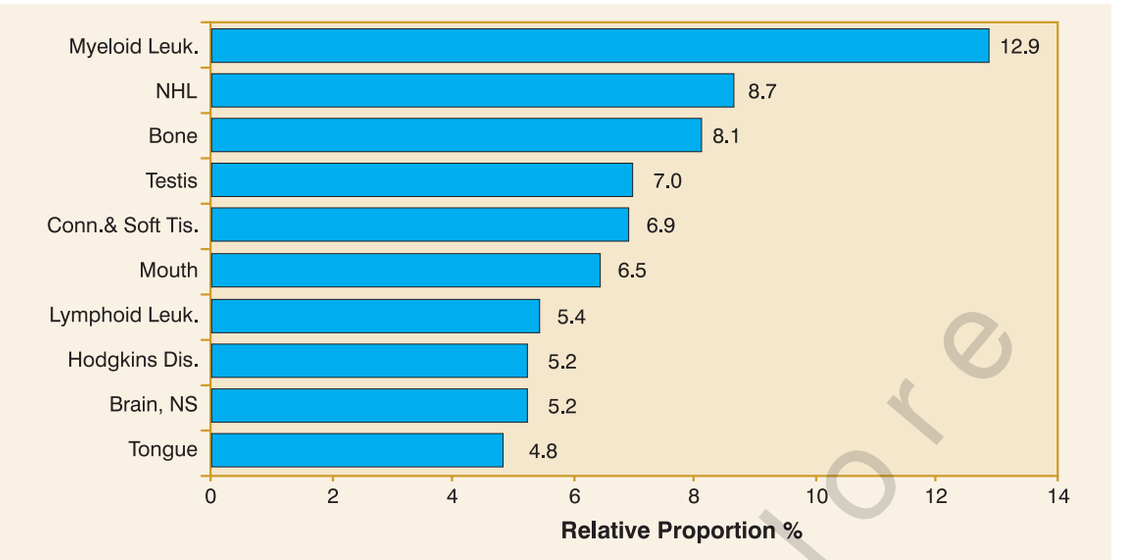
In this age group, lung was the leading site in Mumbai, Chennai and Thiruvananthapuram, second in Bangalore and fifth in Dibrugarh. Hypopharynx was the leading site in Bangalore and oesophagus in Dibrugarh. Mouth was among the first six sites in all the registries.

Females:

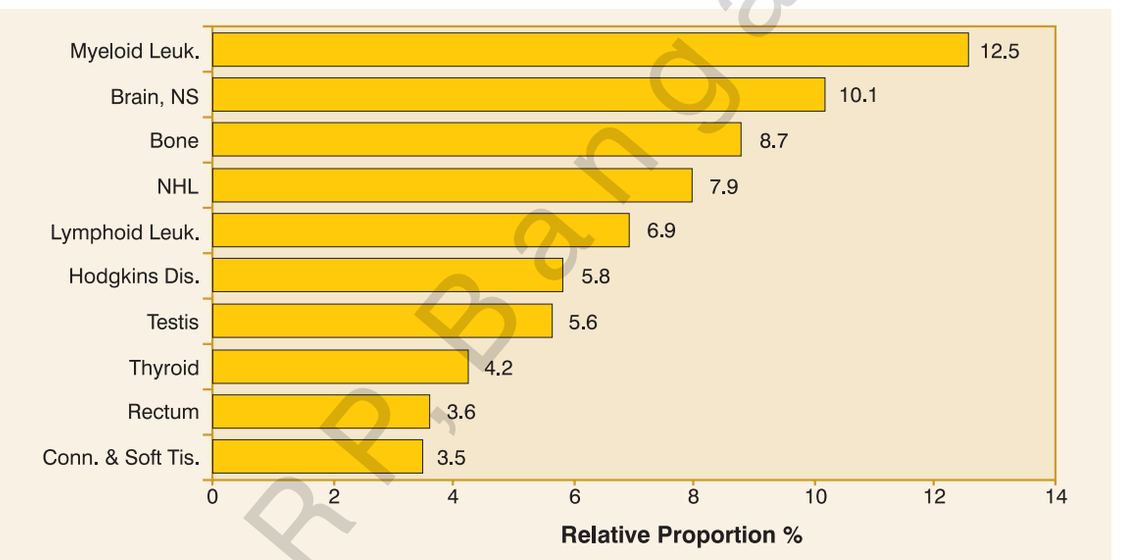
Cervix was the leading site in this age group in Bangalore, Chennai and Thiruvananthapuram while it was the second leading site in other two registries. Breast was the leading site in Mumbai while it was in the first three in other registries except Dibrugarh where it occupies the seventh leading site. Mouth was within the first five leading sites in all the registries.

Fig 1.3 (a) : Leading Sites in Broad Age Groups (15-34 years) - Males (2004-2006)

Mumbai



Bangalore



Chennai

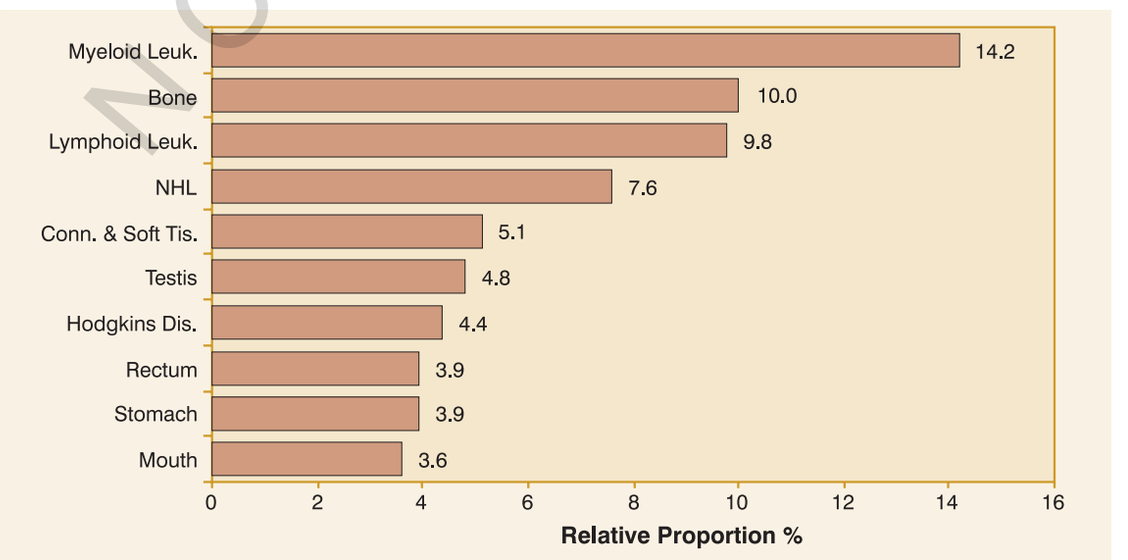
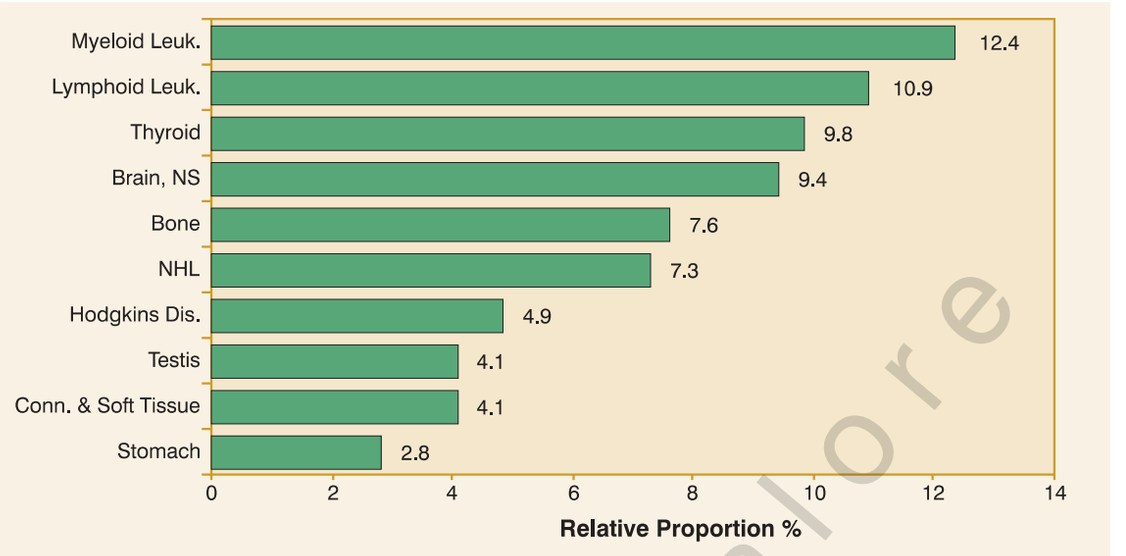


Fig 1.3 (a) : Leading Sites in Broad Age Groups (15-34 years) - Males (2004-2006) (Contd..)

Thiruvananthapuram



Dibrugarh

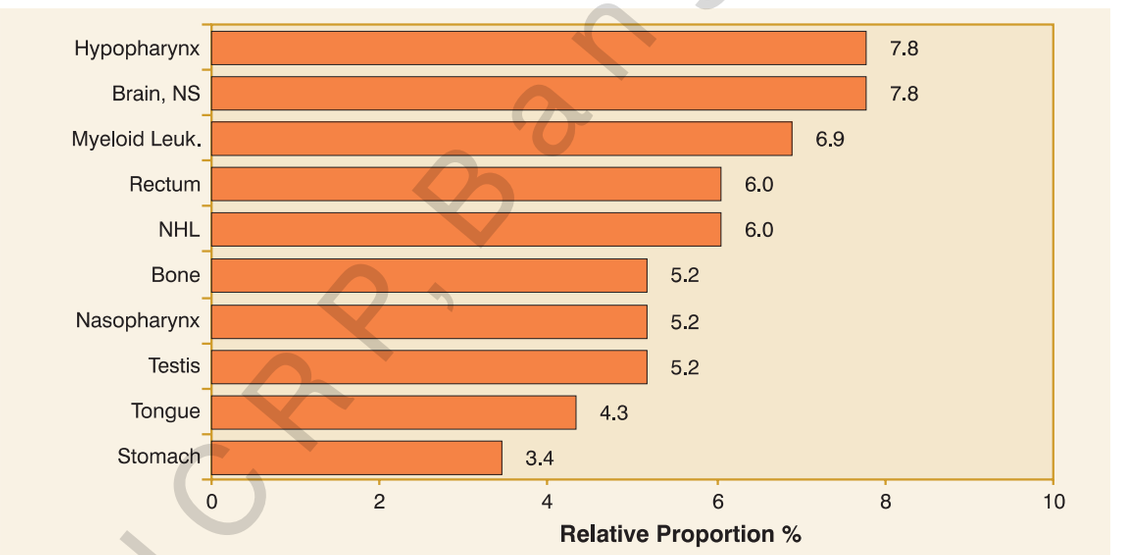
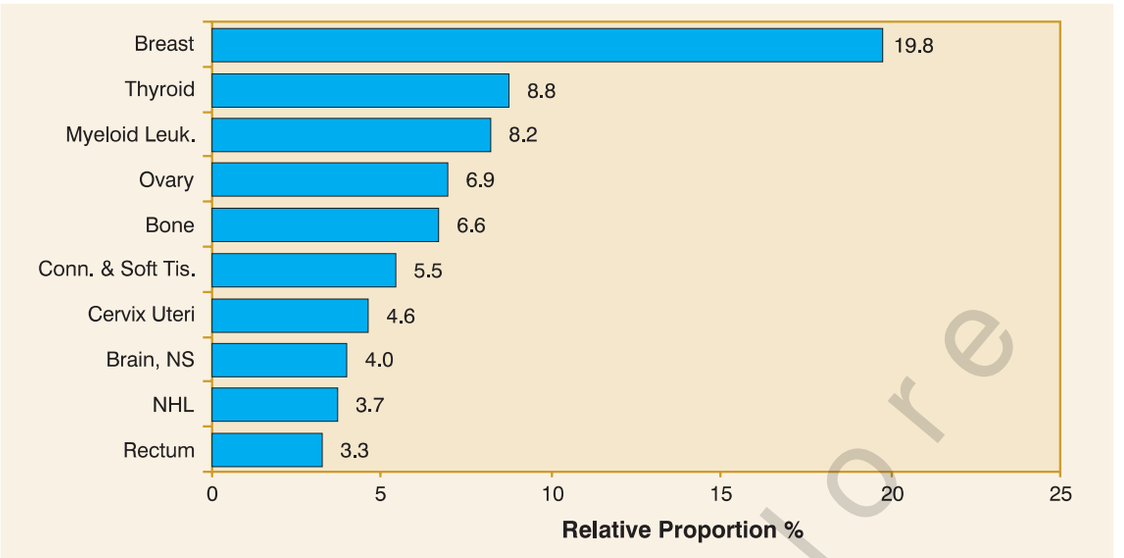
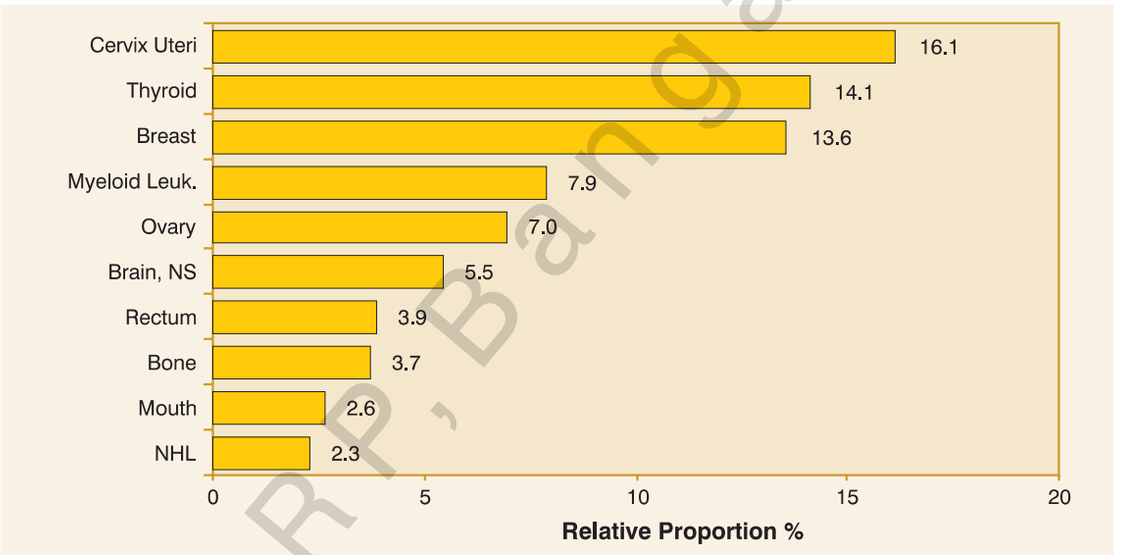


Fig 1.3 (b) : Leading Sites in Broad Age Groups (15-34 years) - Females (2004-2006)

Mumbai



Bangalore



Chennai

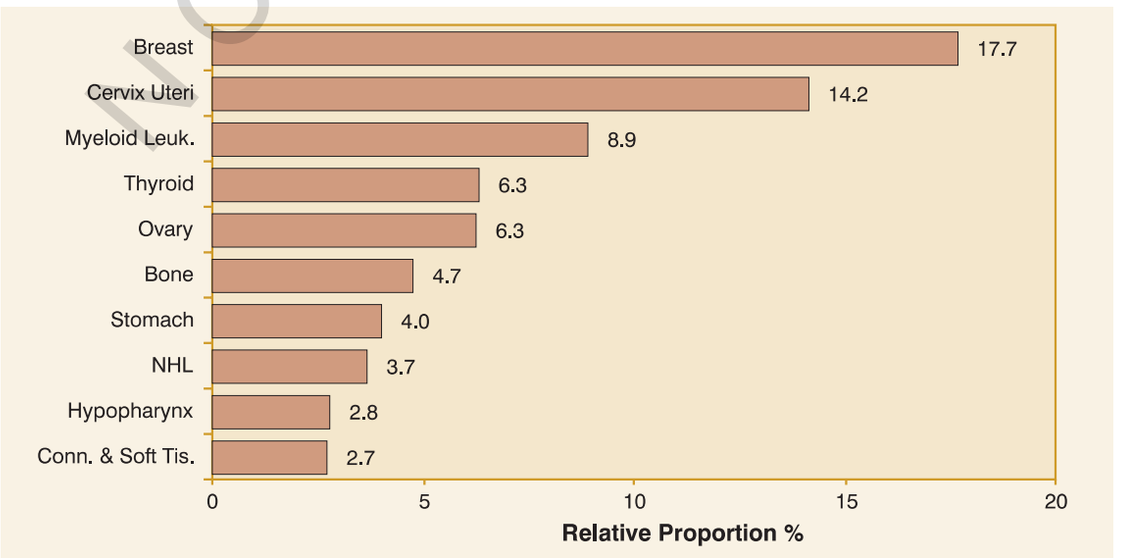
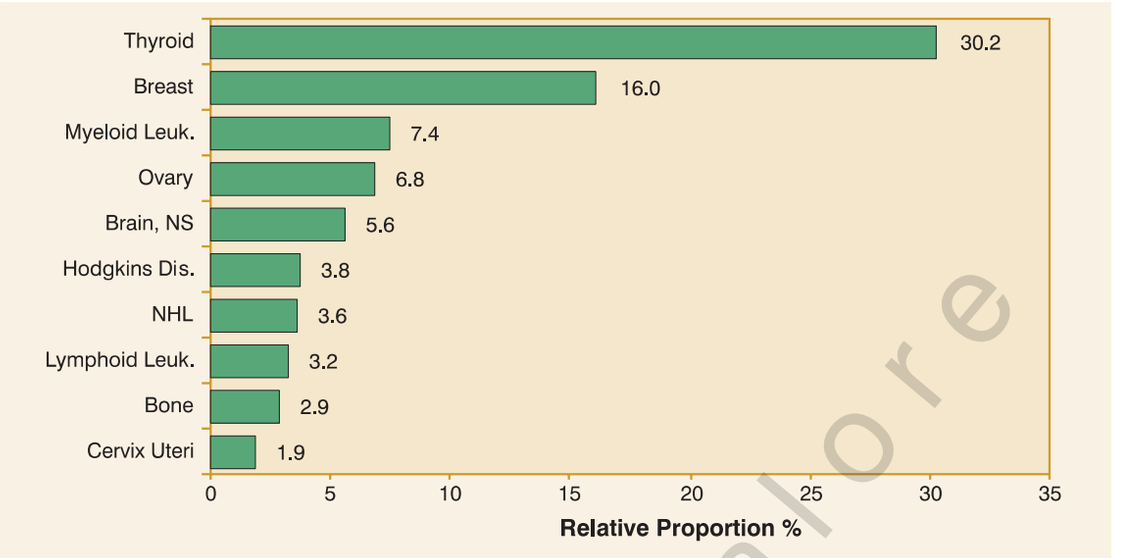


Fig 1.3 (b) : Leading Sites in Broad Age Groups (15-34 years) - Females (2004-2006) (Contd..)

Thiruvananthapuram



Dibrugarh

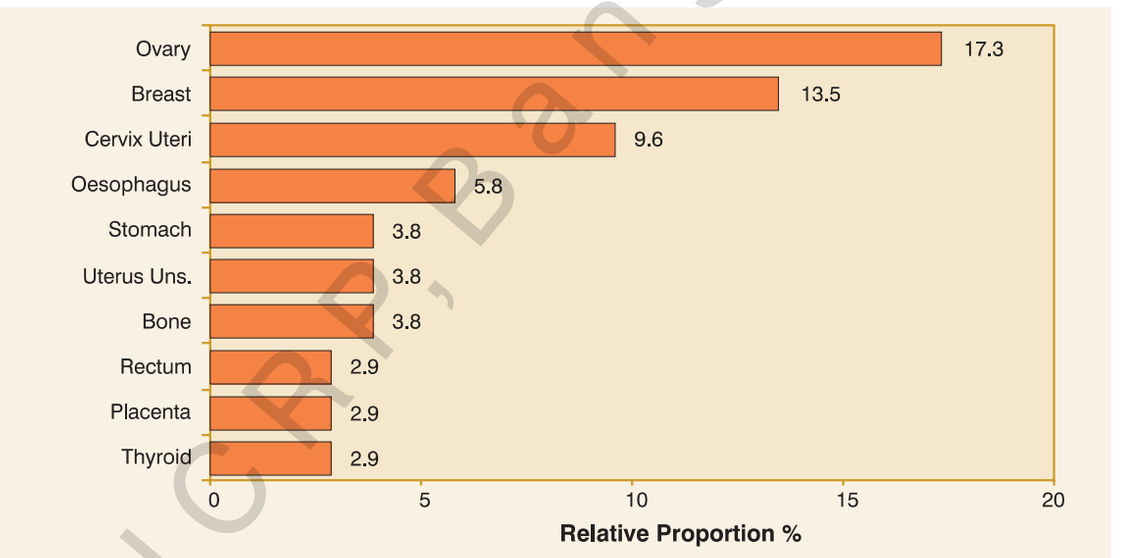
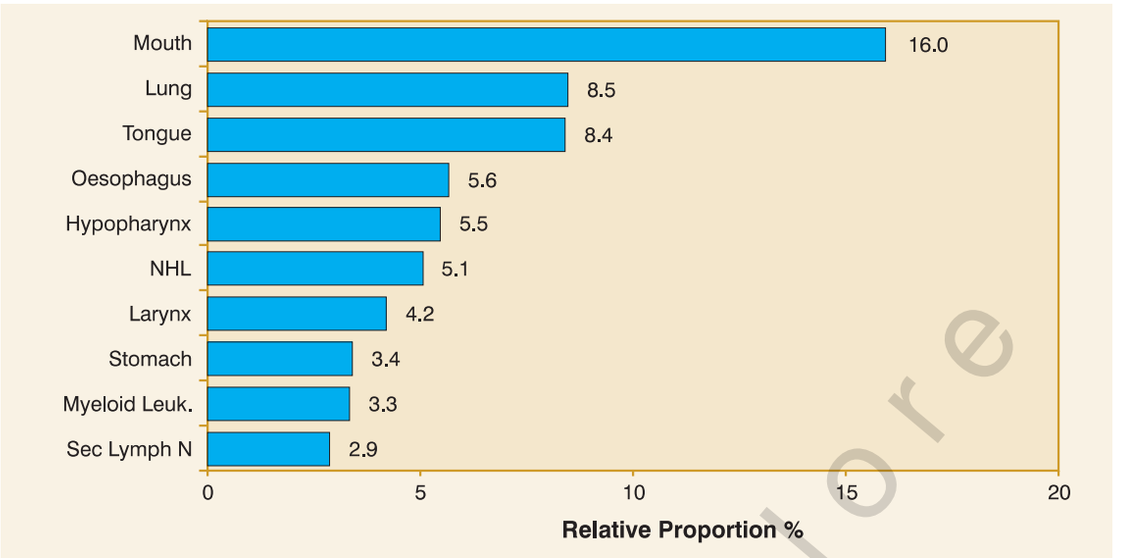
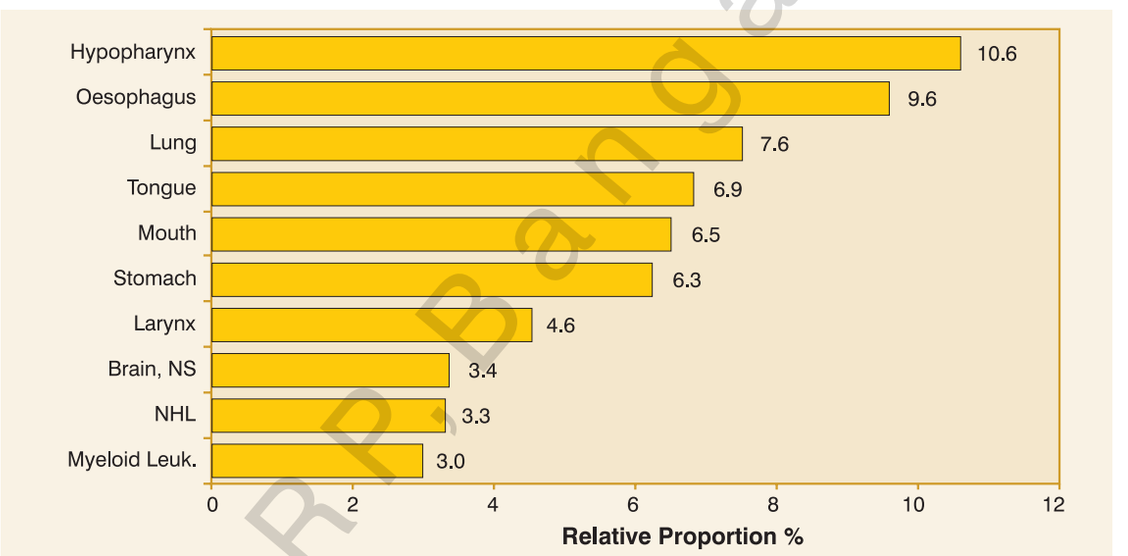


Fig 1.4 (a) : Leading Sites in Broad Age Groups (35-64 years) - Males (2004-2006)

Mumbai



Bangalore



Chennai

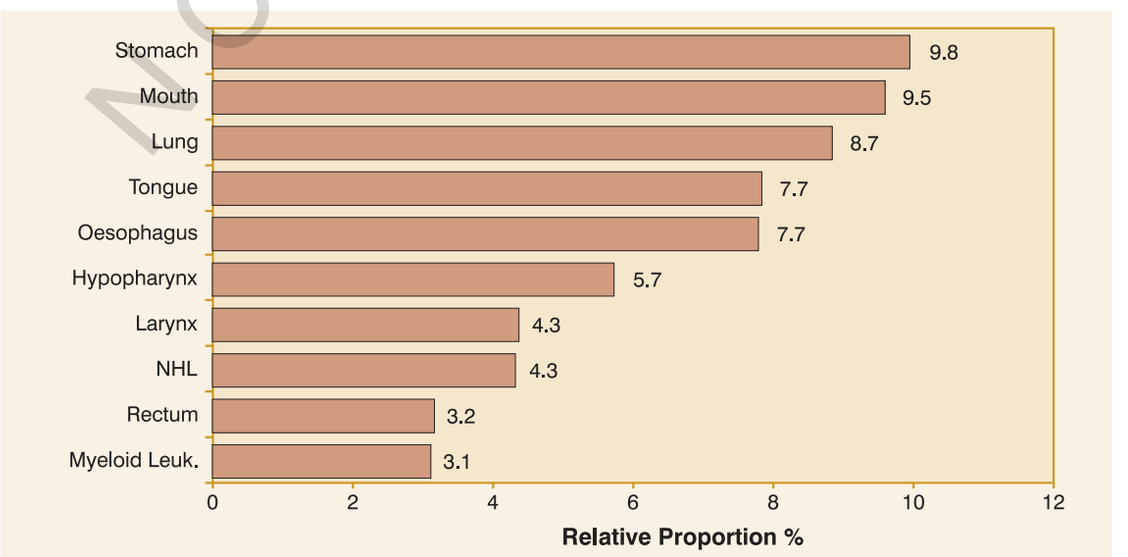
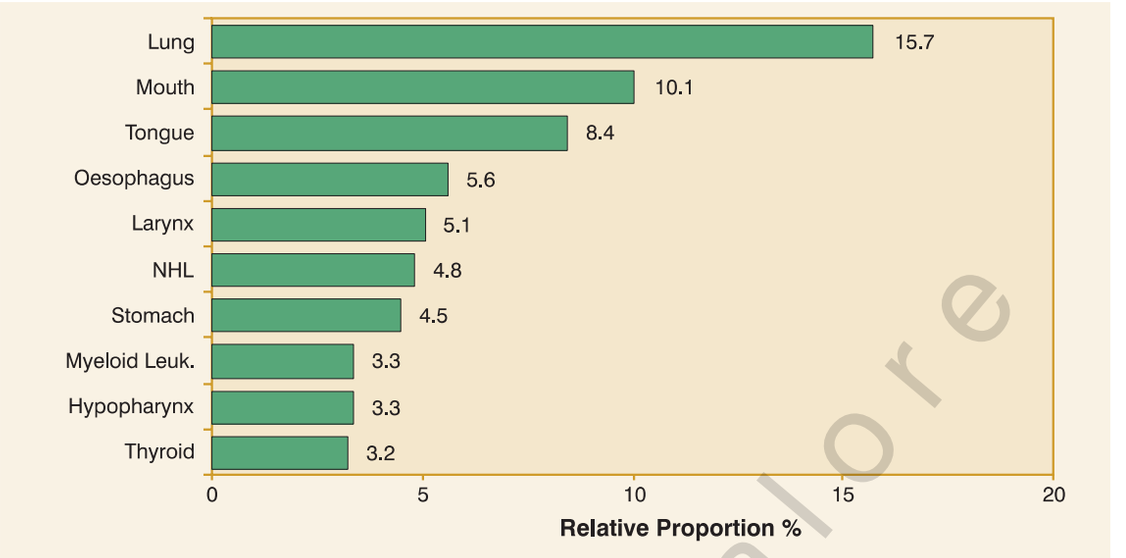


Fig 1.4 (a) : Leading Sites in Broad Age Groups (35-64 years) - Males (2004-2006) (Contd..)

Thiruvananthapuram



Dibrugarh

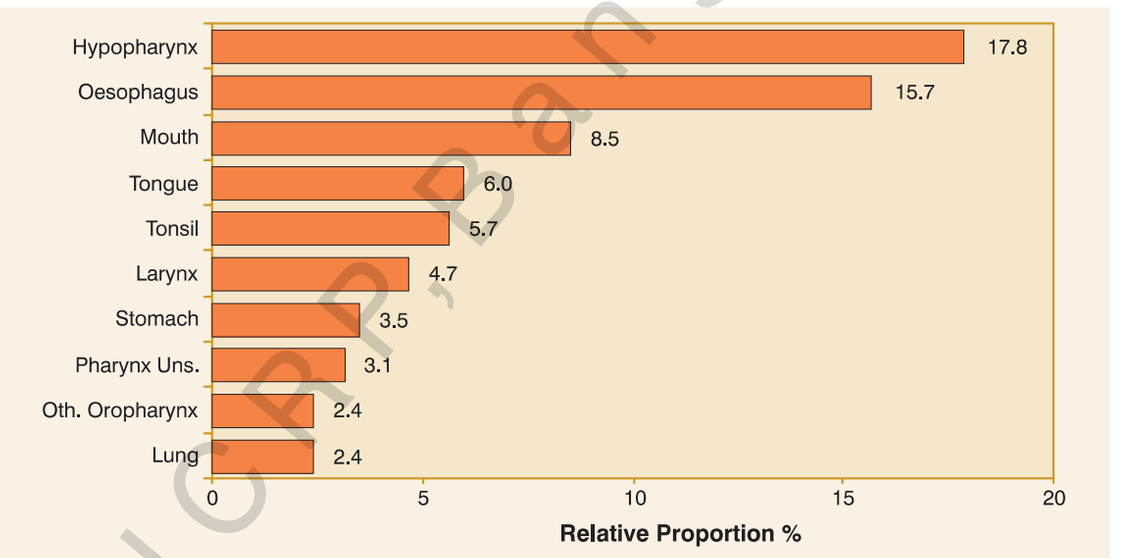
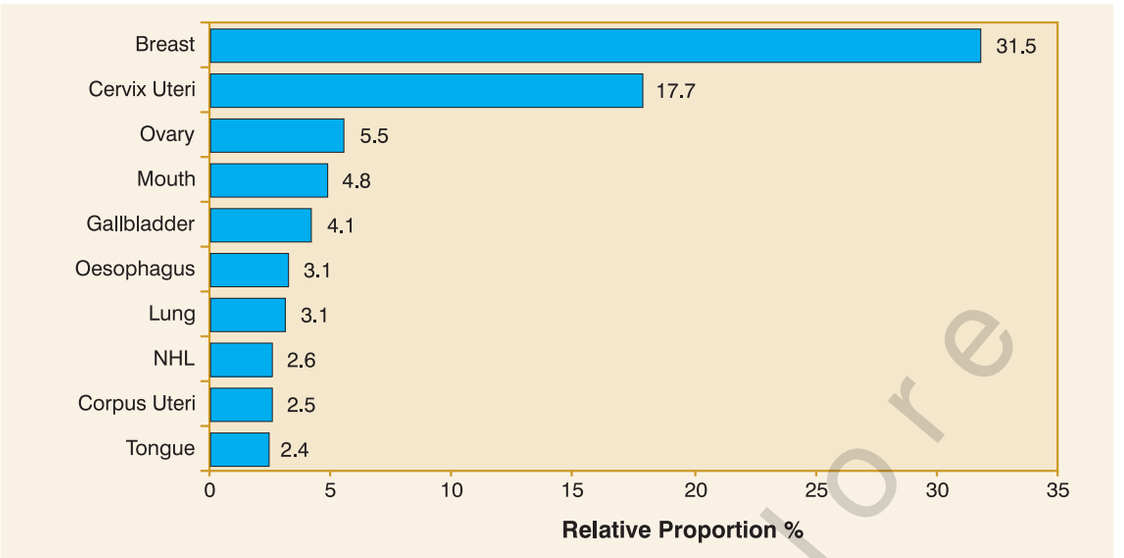
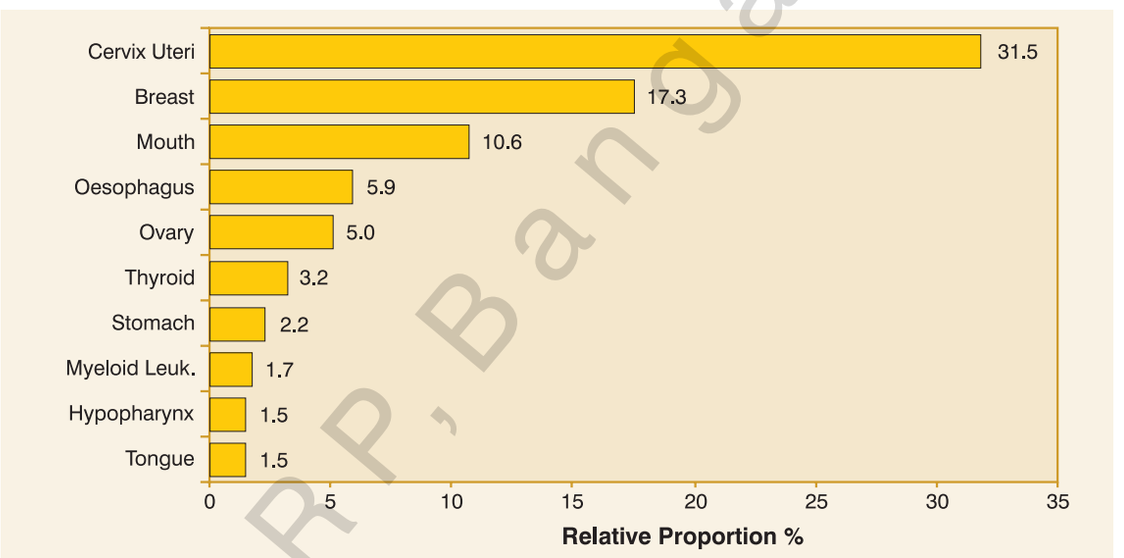


Fig 1.4 (b) : Leading Sites in Broad Age Groups (35-64 years) - Females (2004-2006)

Mumbai



Bangalore



Chennai

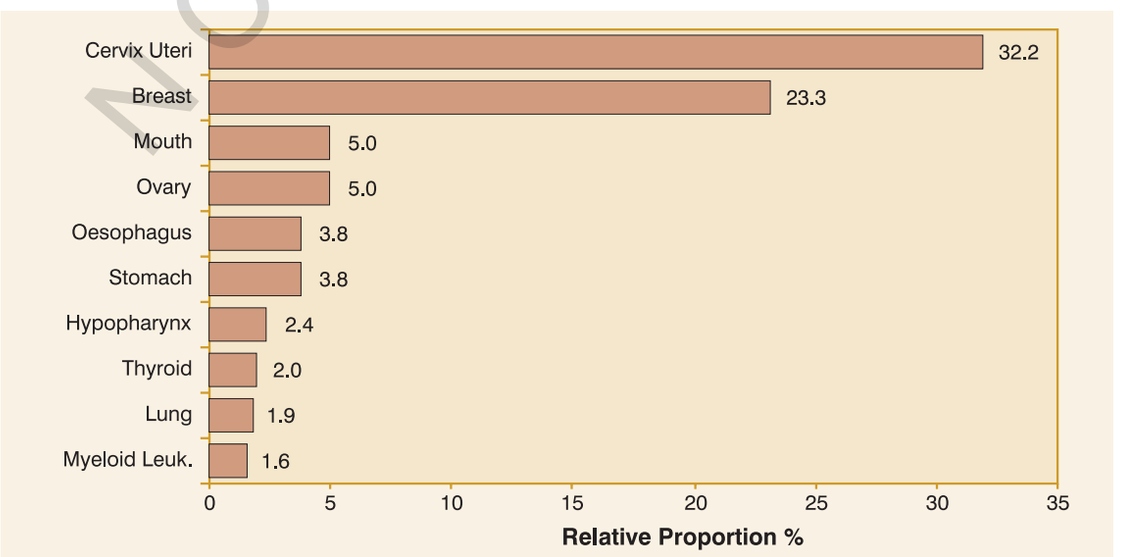
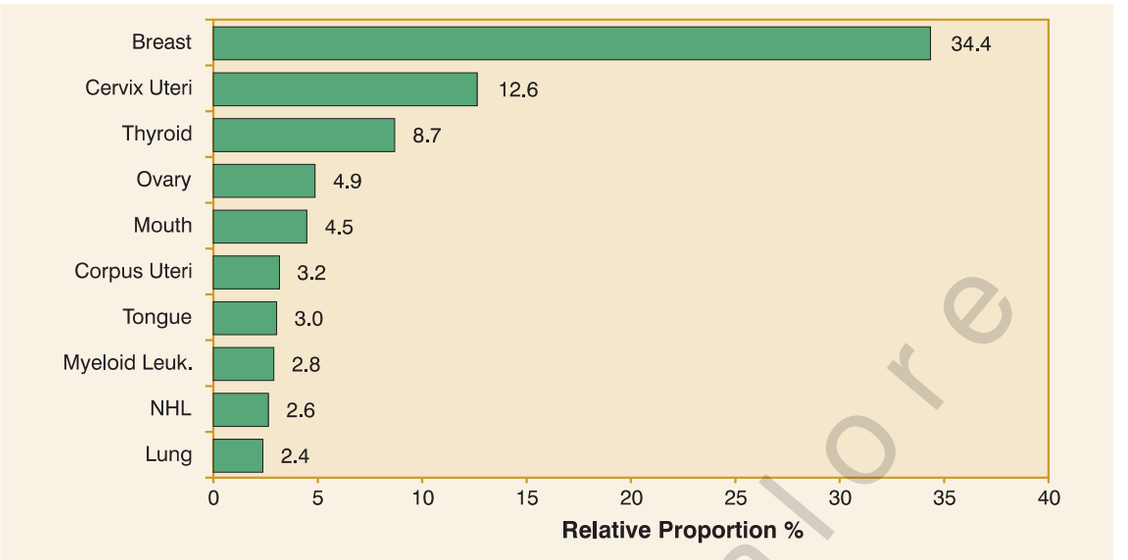


Fig 1.4 (b) : Leading Sites in Broad Age Groups (35-64 years) - Females (2004-2006) (Contd..)

Thiruvananthapuram



Dibrugarh

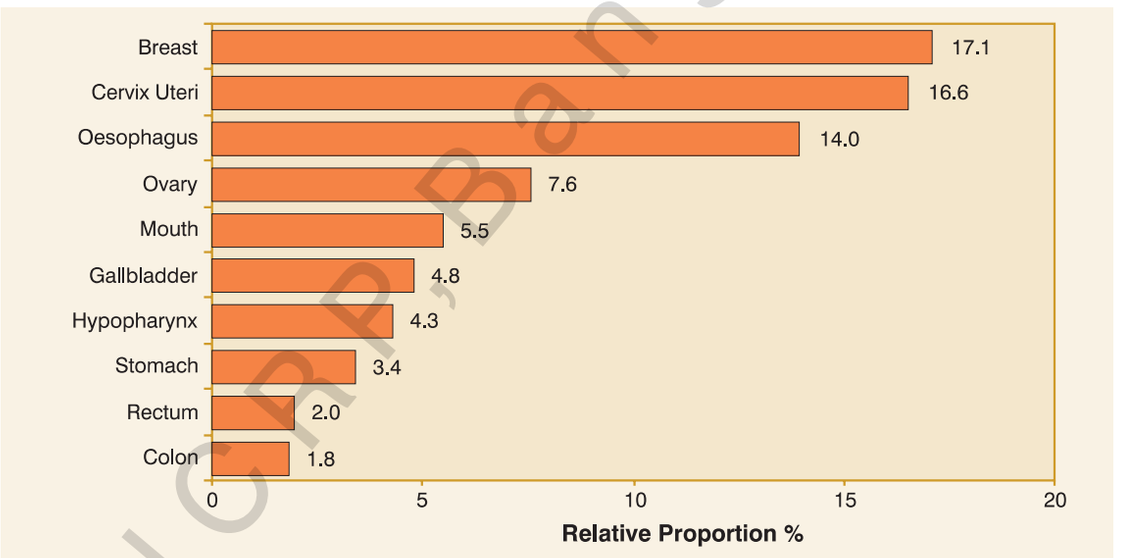
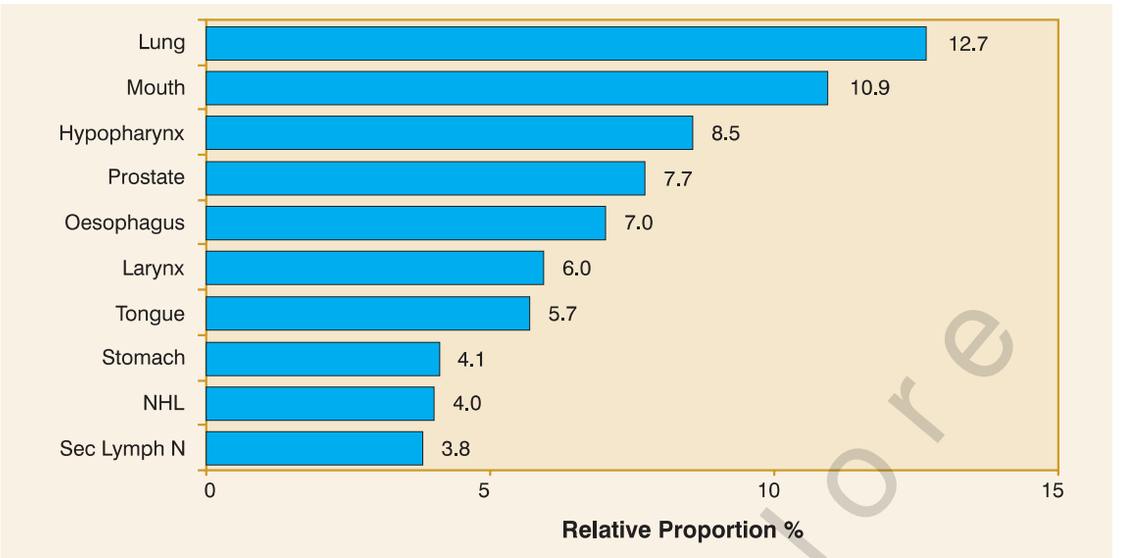
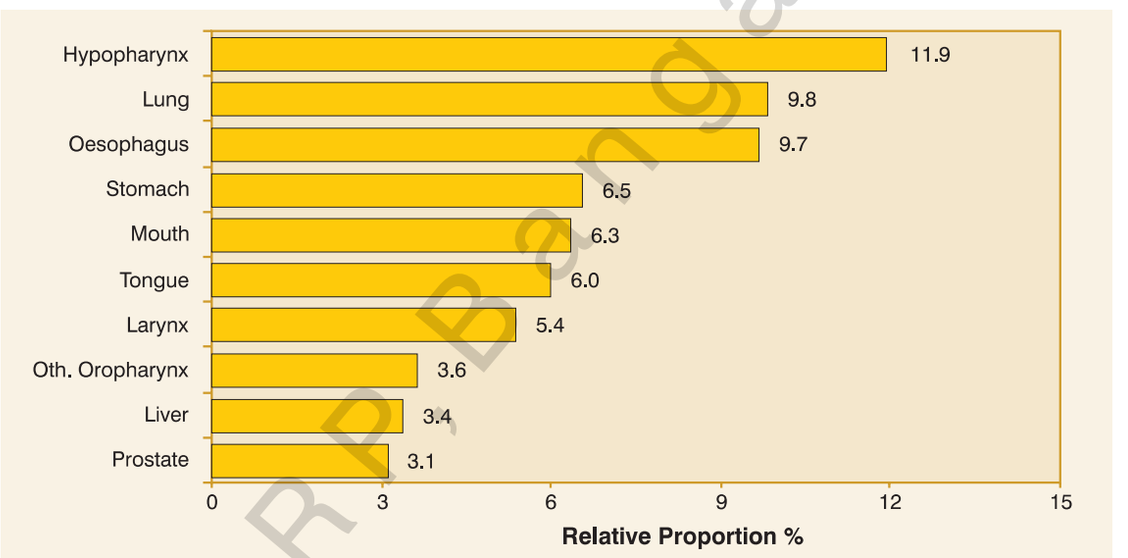


Fig 1.5(a) : Leading Sites in Broad Age Groups (65 years and above) - Males (2004-2006)

Mumbai



Bangalore



Chennai

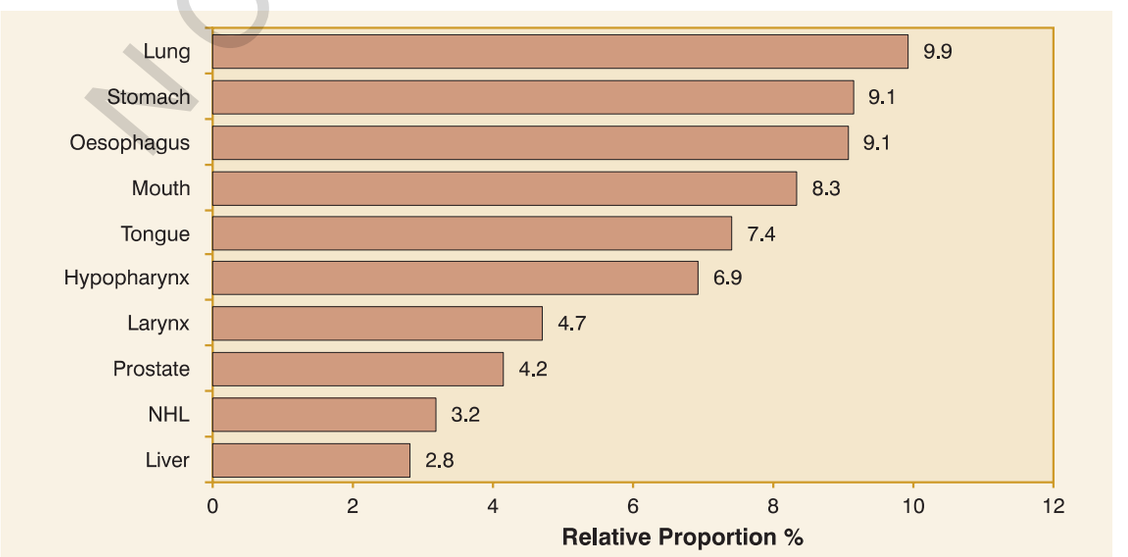
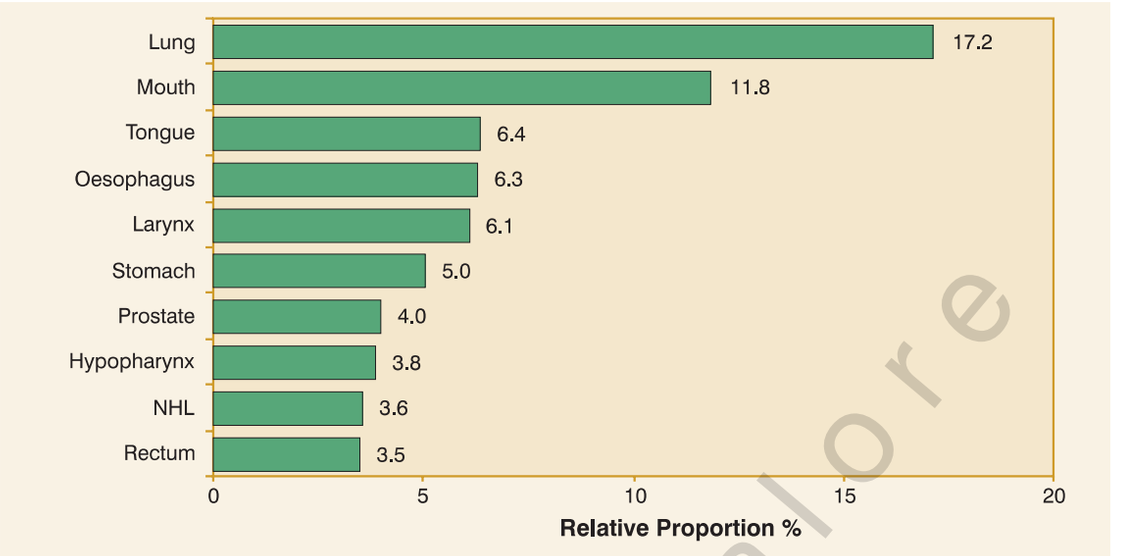


Fig 1.5(a) : Leading Sites in Broad Age Groups (65 years and above) - Males (2004-2006) (Contd..)

Thiruvananthapuram



Dibrugarh

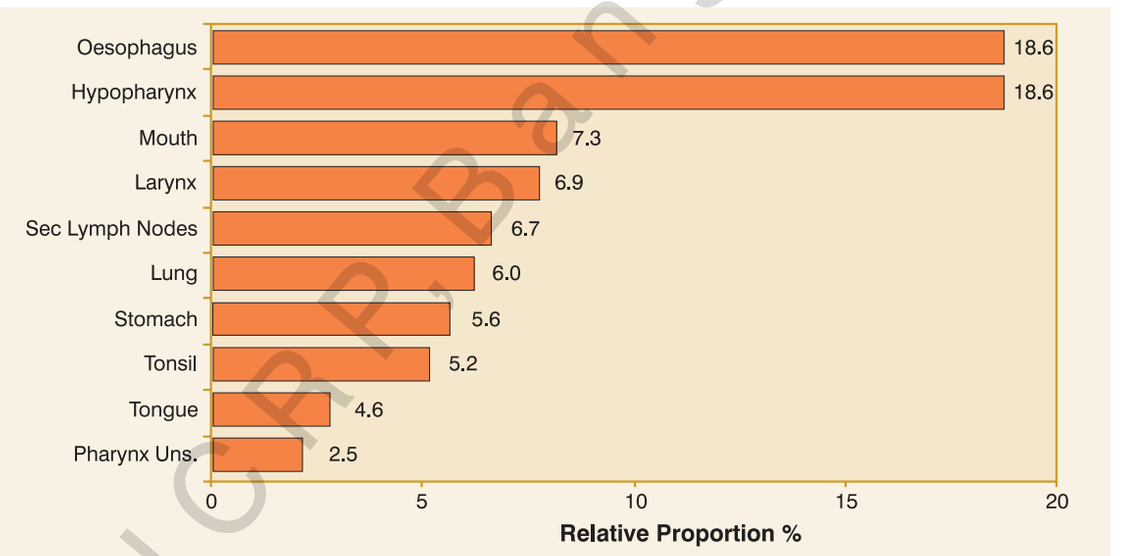
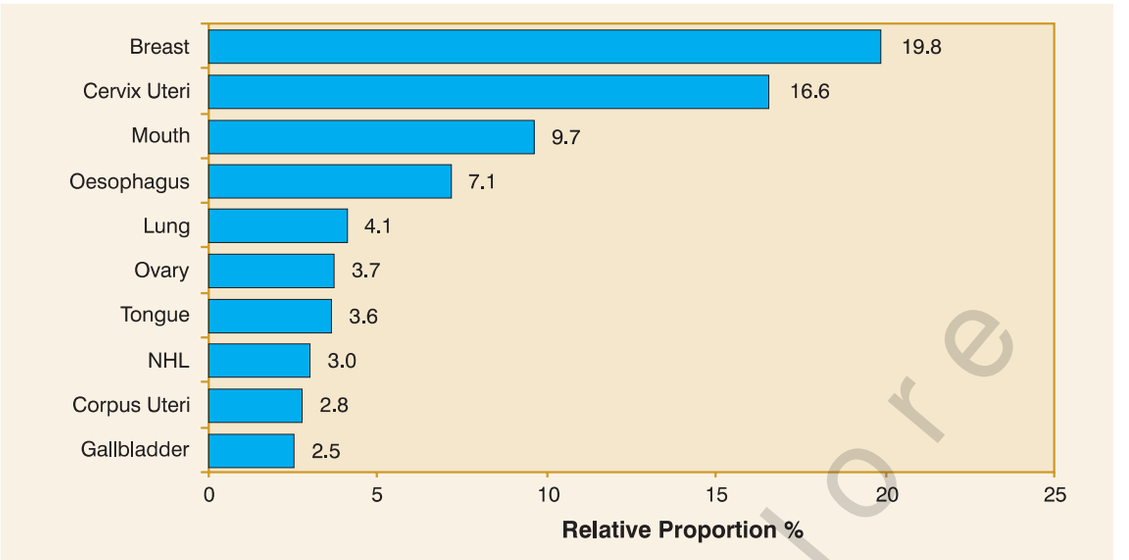
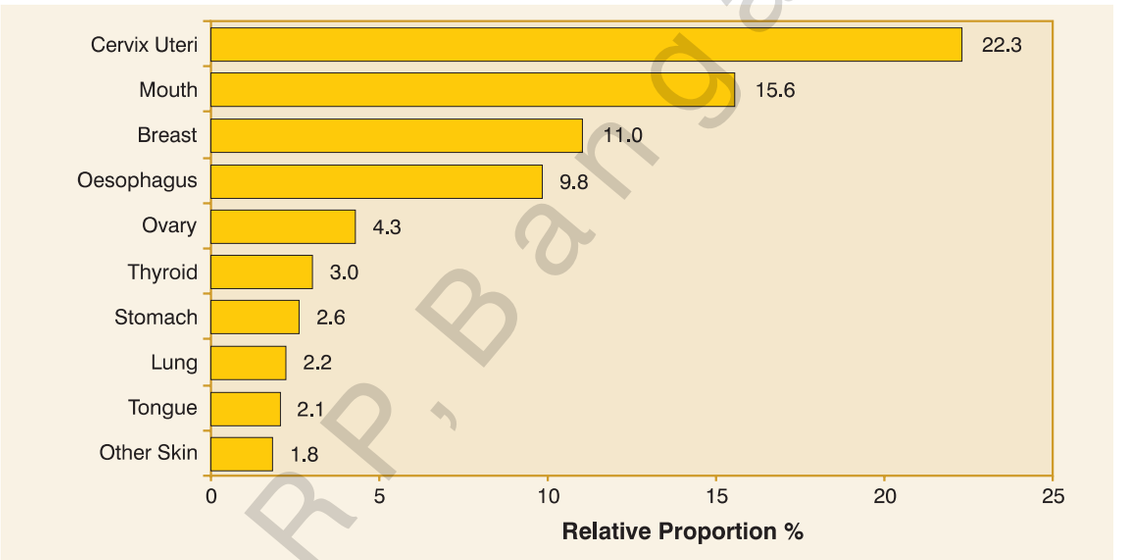


Fig 1.5(b) : Leading Sites in Broad Age Groups (65 years and above) - Females (2004-2006)

Mumbai



Bangalore



Chennai

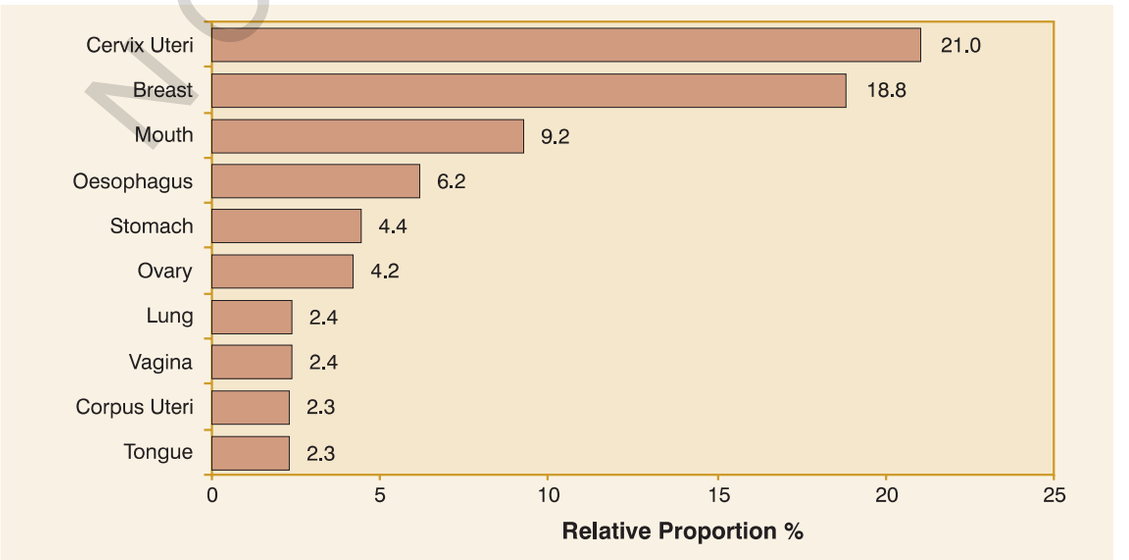
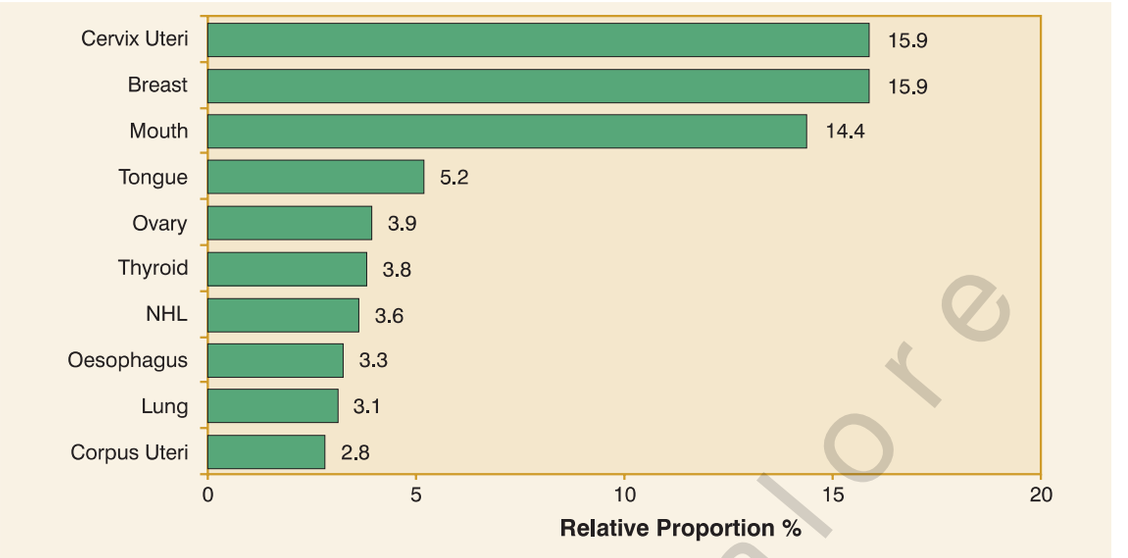
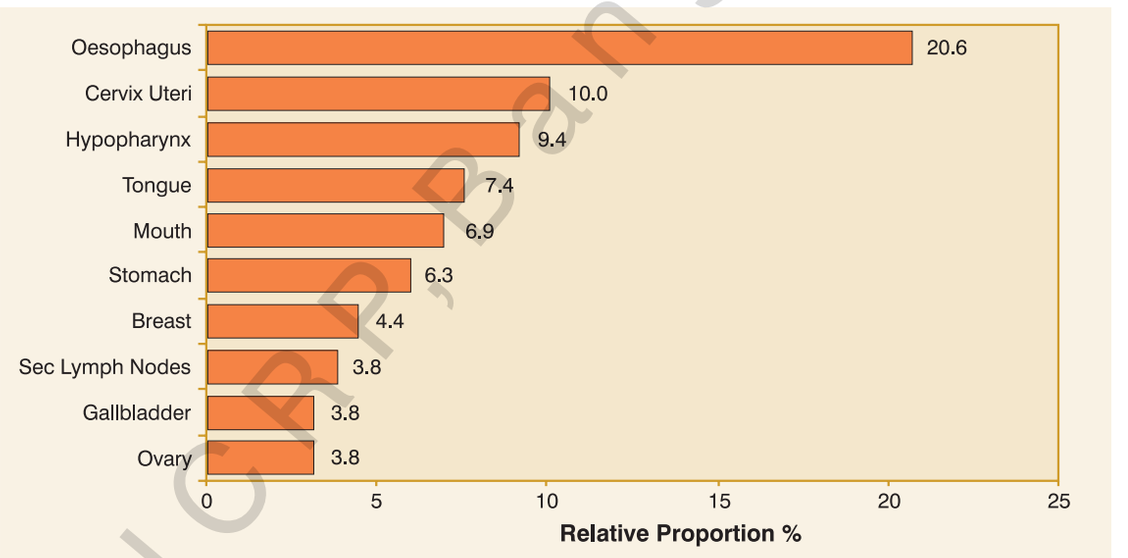


Fig 1.5(b) : Leading Sites in Broad Age Groups (65 years and above) - Females (2004-2006) (Contd..)

Thiruvananthapuram



Dibrugarh



Chapter 2

CANCERS IN CHILDHOOD

The proportion childhood cancers relative to cancers in all age groups varied between 1.7-6.6% (Table 2.1). In boys, the relative proportion was lowest in Dibrugarh (1.7%) and highest in Bangalore (6.6%). In girls, it varied from 2.2% at Chennai to 4.2% at Thiruvananthapuram.

The five year age distribution of childhood cancers in different HBCRs has been given in Table 2.2. The relative proportion in the age group 0-4 varied from 27.6% in boys in Bangalore and 32.0% in girls in Mumbai to a high of 41.4% and 47.6% in boys and girls respectively in Thiruvananthapuram. The relative proportion in the age group 5-9 years varied from 30.1% in boys in Chennai to 38.8% in Bangalore. Correspondingly this percentage varied in girls between 26.2% in Chennai to 34.4% in Dibrugarh. Among the age group 10-14 years, the relative percentage of cancers in boys varied from 28.4% in Thiruvananthapuram to 37% in Mumbai. In girls this ranged from 24.4% in Thiruvananthapuram to 41.2% in Chennai.

Table 2.3 and Figures 2.1(a) and 2.1(b) present the relative proportion according to broad types of childhood cancers. Tables 2.4(a) and 2.4(b) give further details of types of childhood cancer. Leukaemia is the predominant form of childhood cancer followed by lymphomas. Tumours of the central nervous system, bone tumours, soft-tissue sarcomas and germ-cell tumours are other important types of cancer in childhood. The relative proportion of lymphomas was higher in boys compared to that in girls.

Table 2.1: Number (#) and Proportion (%) of Cancers in Childhood relative to all Cancers (2004-2006)

Registry	Males			Females		
	All Cancers	#	%	All Cancers	#	%
Mumbai*	19399	1060	5.5	15313	500	3.3
Bangalore	10293	681	6.6	11842	400	3.4
Chennai	12523	429	3.4	13589	294	2.2
Thi'puram	12563	645	5.1	11394	483	4.2
Dibrugarh	1782	30	1.7	1063	32	3.0

** Only 2004-05 data*

Table 2.2: Number (#) and Proportion (%) of Childhood Cancers by 5-year Age Group (2004-2006)

Males

Registry	Age Group (years)						All Childhood Cancers
	0-4		5-9		10-14		
	#	%	#	%	#	%	
Males							
Mumbai*	305	28.8	363	34.2	392	37.0	1060
Bangalore	188	27.6	264	38.8	229	33.6	681
Chennai	147	34.3	129	30.1	153	35.7	429
Thi'puram	267	41.4	195	30.2	183	28.4	645
Dibrugarh	10	33.3	11	36.7	9	30.0	30
Females							
Mumbai*	160	32.0	163	32.6	177	35.4	500
Bangalore	147	36.8	125	31.3	128	32.0	400
Chennai	96	32.7	77	26.2	121	41.2	294
Thi'puram	230	47.6	135	28.0	118	24.4	483
Dibrugarh	11	34.4	11	34.4	10	31.3	32
Both Sexes							
Mumbai*	465	29.8	526	33.7	569	36.5	1560
Bangalore	335	31.0	389	36.0	357	33.0	1081
Chennai	243	33.6	206	28.5	274	37.9	723
Thi'puram	497	44.1	330	29.3	301	26.7	1128
Dibrugarh	21	33.9	22	35.5	19	30.6	62

** Only 2004-05 data*

Table 2.3: Number (#) and Relative Proportion (%) of Broad Types of Cancers in Childhood (0-14 years) (2004-2006)

Males

Broad Types of Cancers in Childhood		Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
		#	%	#	%	#	%	#	%	#	%
I	Leukaemias	448	42.3	319	46.8	186	43.4	333	50.3	7	23.3
II	Lymphomas	179	16.9	120	17.6	82	19.1	68	10.8	1	3.3
III	C.N.S Tumours	84	7.9	65	9.5	9	2.1	90	13.7	3	10.0
IV	S.N.S Tumours	23	2.2	25	3.7	20	4.7	23	3.6	2	6.7
V	Retinoblastoma	40	3.8	19	2.8	15	3.5	8	1.3	2	6.7
VI	Renal Tumours	38	3.6	24	3.5	14	3.3	20	3.5	6	20.0
VII	Hepatic Tumours	7	0.7	6	0.9	7	1.6	9	1.3	2	6.7
VIII	Bone Tumours	99	9.3	36	5.3	41	9.6	29	4.8	1	3.3
IX	Soft-tissue Sarcomas	95	9.0	23	3.4	30	7.0	21	3.8	1	3.3
X	Germ-cell Tumours	13	1.2	14	2.1	8	1.9	16	2.5	1	3.3
XI	Oth. Carcinomas	14	1.3	15	2.2	11	2.6	22	3.5	1	3.3
XII	Oth. Malignant Neop.	20	1.9	15	2.2	6	1.4	6	1.0	3	10.0
XIII	Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	All Types	**1060**	**100.0**	**681**	**100.0**	**429**	**100.0**	**645**	**100.0**	**30**	**100.0**

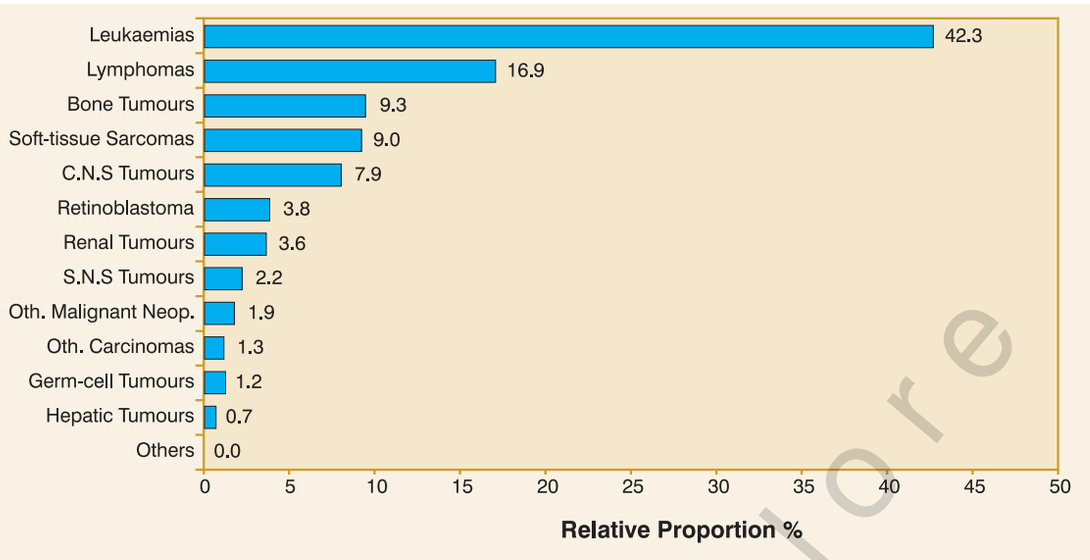
Females

Broad Types of Cancers in Childhood		Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
		#	%	#	%	#	%	#	%	#	%
I	Leukaemias	192	38.4	181	45.3	121	41.2	241	49.9	8	25.0
II	Lymphomas	42	8.4	27	6.8	40	13.6	20	4.1	1	3.1
III	C.N.S Tumours	36	7.2	47	11.8	13	4.4	77	15.9	2	6.3
IV	S.N.S Tumours	19	3.8	13	3.3	15	5.1	24	5.0	1	3.1
V	Retinoblastoma	28	5.6	19	4.8	9	3.1	5	1.0	5	15.6
VI	Renal Tumours	22	4.4	14	3.5	5	1.7	25	5.2	3	9.4
VII	Hepatic Tumours	6	1.2	2	0.5	2	0.7	7	1.4	0	0.0
VIII	Bone Tumours	58	11.6	27	6.8	40	13.6	26	5.4	2	6.3
IX	Soft-tissue Sarcomas	42	8.4	25	6.3	24	8.2	21	4.3	4	12.5
X	Germ-cell Tumours	25	5.0	21	5.3	13	4.4	17	3.5	4	12.5
XI	Oth. Carcinomas	16	3.2	11	2.8	8	2.7	18	3.7	1	3.1
XII	Oth. Malignant Neop.	14	2.8	13	3.3	4	1.4	2	0.4	1	3.1
XIII	Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	All Types	**500**	**100.0**	**400**	**100.0**	**294**	**100.0**	**483**	**100.0**	**32**	**100.0**

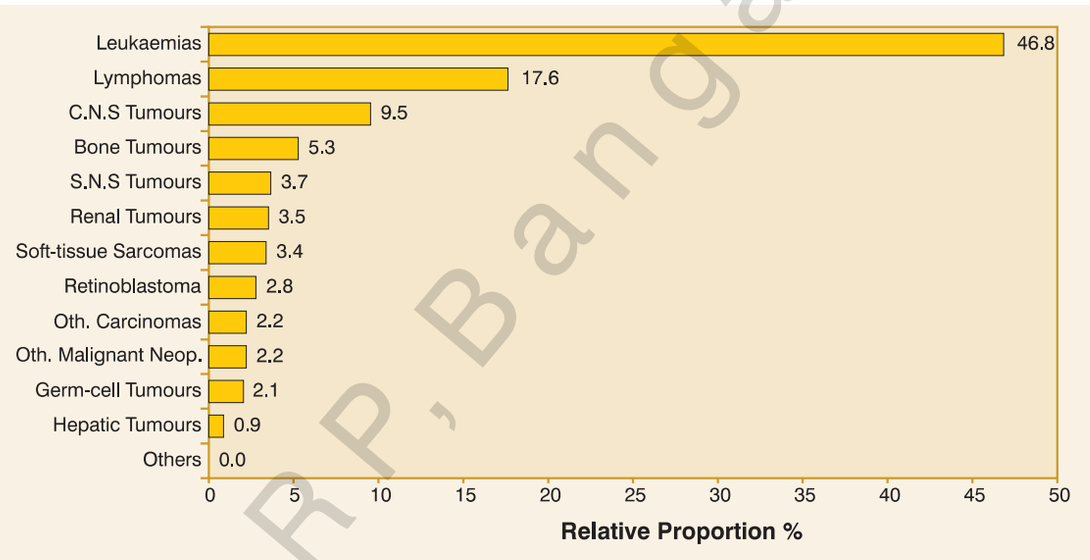
** Only 2004-05 data*

Fig. 2.1(a): Proportion of Broad Types of Childhood Cancers (0-14 years) – Males (2004-2006)

Mumbai



Bangalore



Chennai

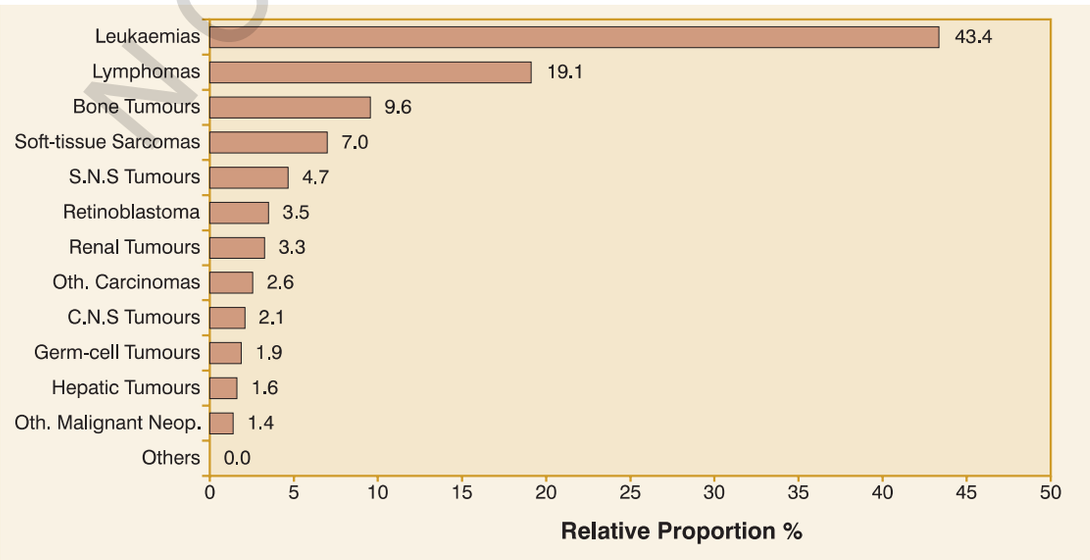
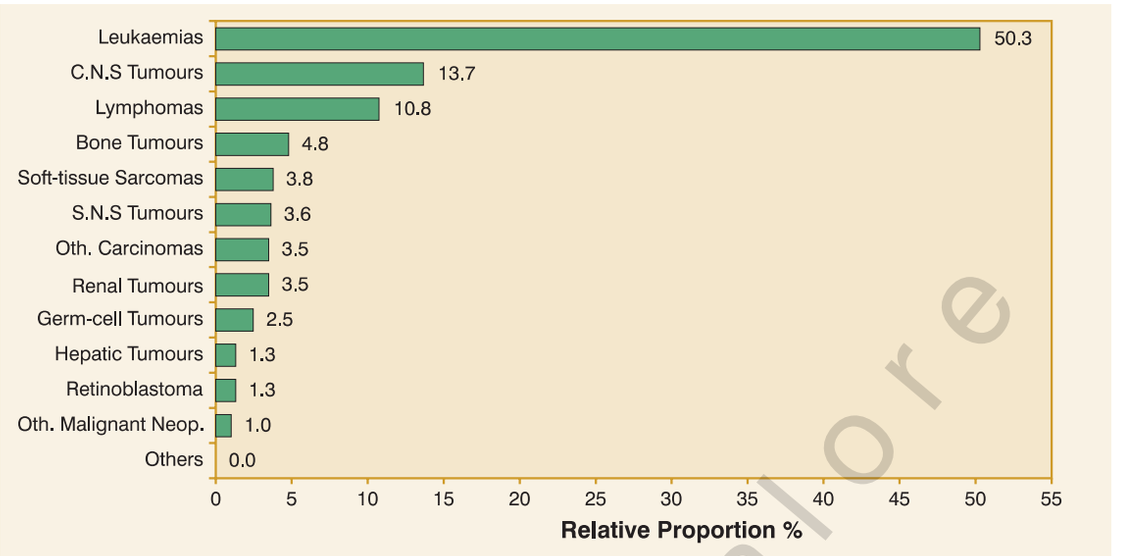


Fig. 2.1(a): Proportion of Broad Types of Childhood Cancers (0-14 years) – Males (2004-2006) (Contd.)

Thiruvananthapuram



Dibrugarh

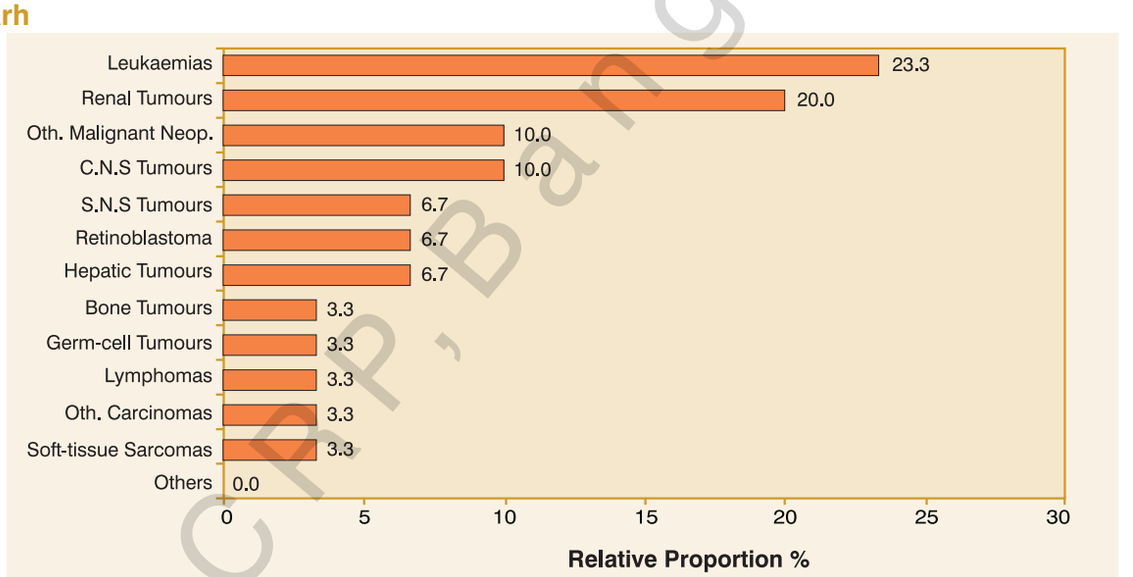
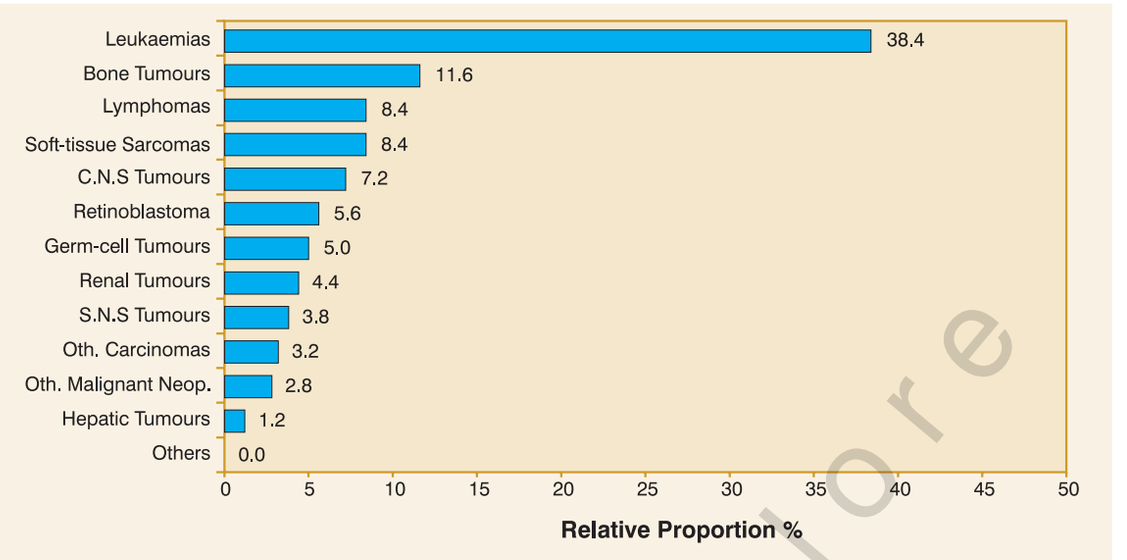
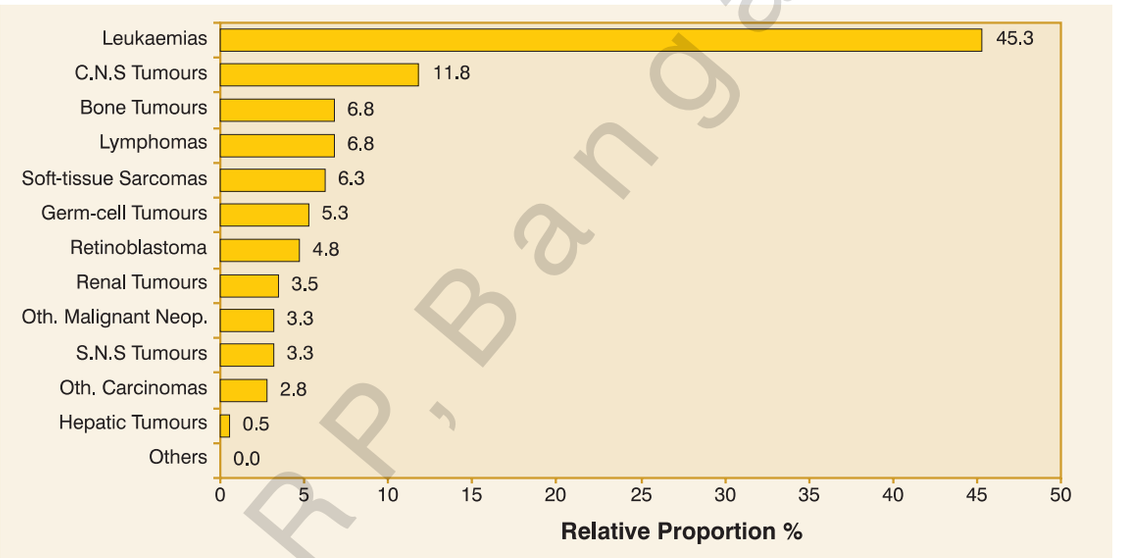


Fig. 2.1(b): Proportion of Broad Types of Childhood Cancers (0-14 years) – Females (2004-2006)

Mumbai



Bangalore



Chennai

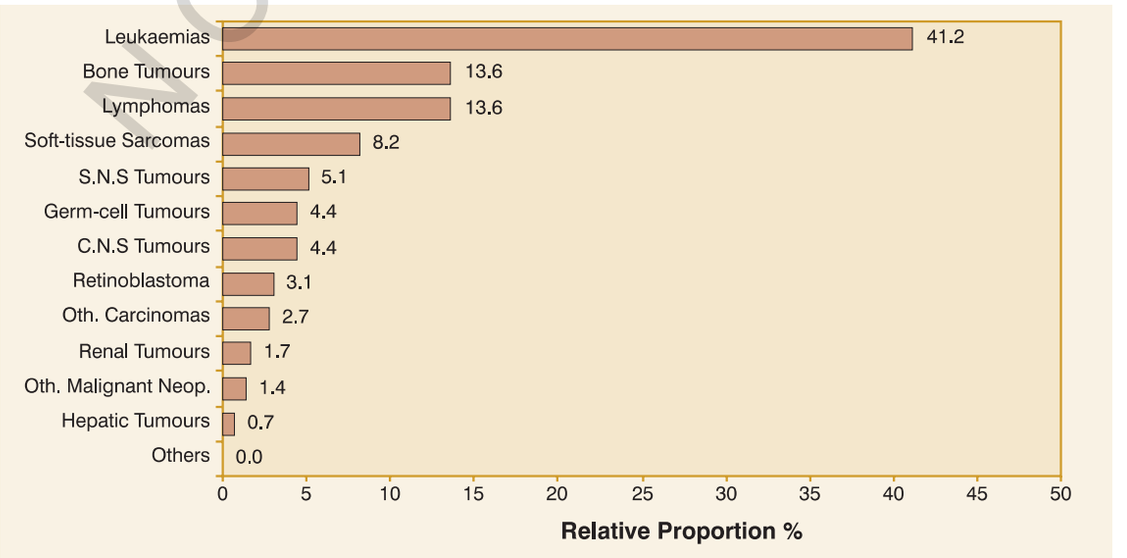
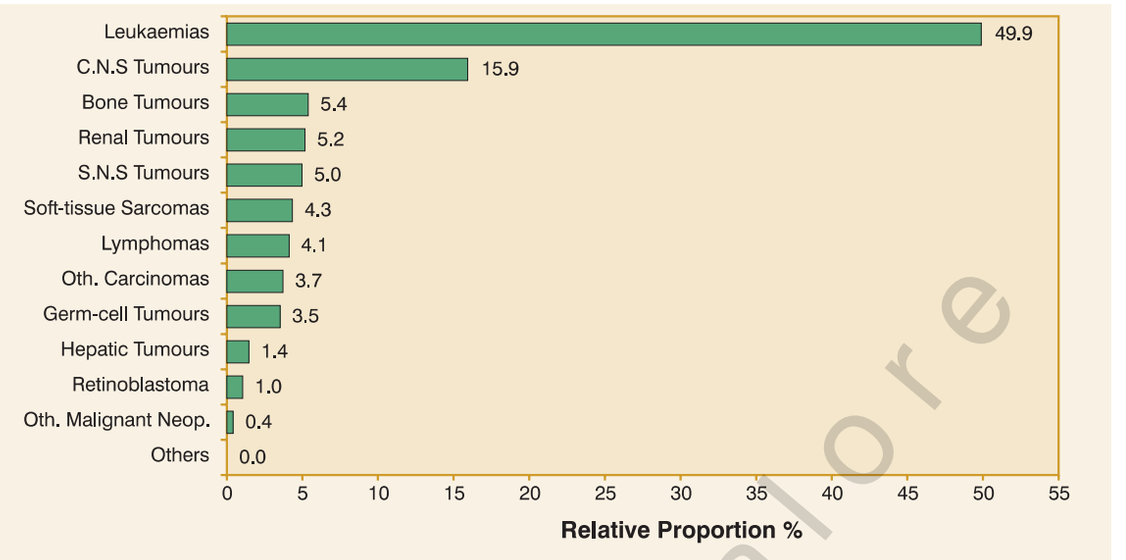


Fig. 2.1(b): Proportion of Broad Types of Childhood Cancers (0-14 years) – Females (2004-2006) (Contd.)

Thiruvananthapuram



Dibrugarh

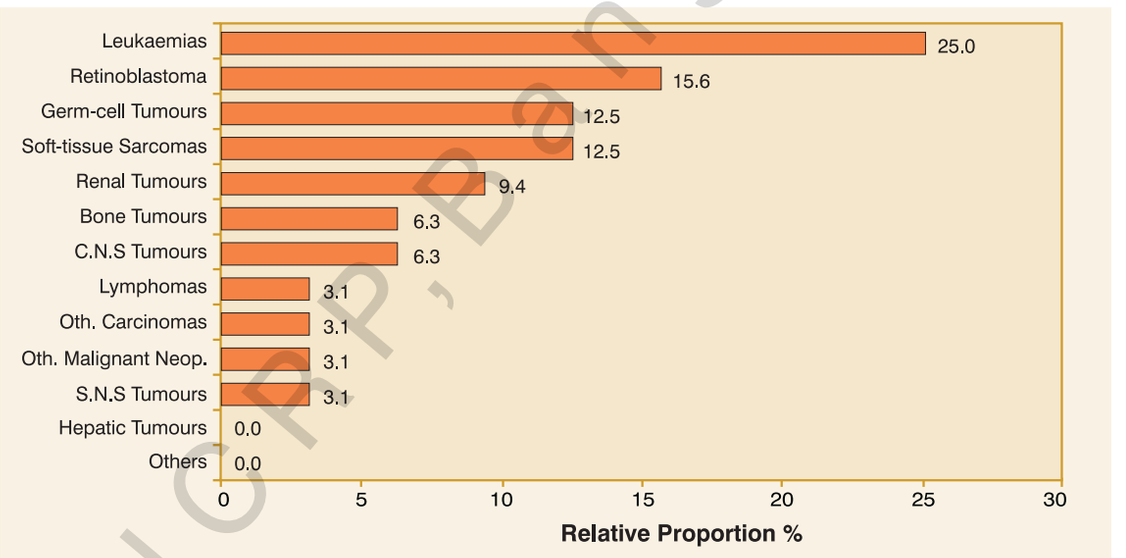


Table 2.4(a): Number (#) and Relative Proportion (%) of Specific Types of Cancer in Childhood (0-14 years) (2004-2006)

Males

Specific Types of Cancers in Childhood		Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
		#	%	#	%	#	%	#	%	#	%
I	LEUKAEMIAS	448	42.3	319	46.8	186	43.4	333	51.6	7	23.3
	(a) Lymphoid Leukaemia	307	29.0	214	31.4	143	33.3	251	38.9	2	6.7
	(b) Acute non-lymphocytic leukaemia	93	8.8	61	9.0	30	7.0	58	9.0	4	13.3
	(c) Chronic myeloid leukaemia	12	1.1	8	1.2	10	2.3	6	0.9	1	3.3
	(d) Other specified leukaemias	0	0.0	3	0.4	1	0.2	5	0.8	0	0.0
	(e) Unsp. leukaemias	36	3.4	33	4.8	2	0.5	13	2.0	0	0.0
II	LYMPHOMAS & RETICULOENDOTHELIAL NEOP.	179	16.9	120	17.6	82	19.1	68	10.5	1	3.3
	(a) Hodgkin's disease	97	9.2	62	9.1	45	10.5	30	4.7	0	0.0
	(b) Non-Hodgkin lymphoma	50	4.7	25	3.7	26	6.1	22	3.4	1	3.3
	(c) Burkitt's lymphoma	31	2.9	13	1.9	7	1.6	12	1.9	0	0.0
	(d) Misc lymphoreticular neop.	0	0.0	6	0.9	1	0.2	1	0.2	0	0.0
	(e) Unsp. lymphomas	1	0.1	14	2.1	3	0.7	3	0.5	0	0.0
III	C.N.S. & MISC. INTRACRANIAL & INTRASPINAL NEOP.	84	7.9	65	9.5	9	2.1	90	14.0	3	10.0
	(a) Ependymoma	12	1.1	7	1.0	1	0.2	9	1.4	0	0.0
	(b) Astrocytoma	23	2.2	13	1.9	3	0.7	24	3.7	2	6.7
	(c) Primitive neuroectodermal tumors	38	3.6	28	4.1	3	0.7	19	2.9	1	3.3
	(d) Other gliomas	10	0.9	8	1.2	1	0.2	11	1.7	0	0.0
	(e) Other specified intracranial and intraspinal neop.	1	0.1	2	0.3	0	0.0	2	0.3	0	0.0
	(f) Unsp. intracranial and intraspinal neop.	0	0.0	7	1.0	1	0.2	25	3.9	0	0.0
IV	SYMPATHETIC NERVOUS SYSTEM TUMOURS	23	2.2	25	3.7	20	4.7	23	3.6	2	6.7
	(a) Neuroblastoma and ganglioneuroblastoma	22	2.1	23	3.4	19	4.4	23	3.6	2	6.7
	(b) Other SNS tumors	1	0.1	2	0.3	1	0.2	0	0.0	0	0.0
V	RETINOBLASTOMA	40	3.8	19	2.8	15	3.5	8	1.2	2	6.7
VI	RENAL TUMOURS	38	3.6	24	3.5	14	3.3	20	3.1	6	20.0
	(a) Wilms's tumor, rhabdoid and clear cell sarcoma	38	3.6	22	3.2	9	2.1	20	3.1	3	10.0
	(b) Renal carcinoma	0	0.0	1	0.1	2	0.5	0	0.0	0	0.0
	(c) Unsp. malignant renal tumors	0	0.0	1	0.1	3	0.7	0	0.0	3	10.0
VII	HEPATIC TUMOURS	7	0.7	6	0.9	7	1.6	9	1.4	2	6.7
	(a) Hepatoblastoma	7	0.7	4	0.6	7	1.6	8	1.2	0	0.0
	(b) Hepatic carcinoma	0	0.0	2	0.3	0	0.0	1	0.2	1	3.3
	(c) Unsp. malignant hepatic tumours	0	0.0	0	0.0	0	0.0	0	0.0	1	3.3
VIII	MALIGNANT BONE TUMOURS	99	9.3	36	5.3	41	9.6	29	4.5	1	3.3
	(a) Osteosarcoma	69	6.5	15	2.2	18	4.2	20	3.1	1	3.3
	(b) Chondrosarcoma	2	0.2	1	0.1	0	0.0	0	0.0	0	0.0
	(c) Ewing's sarcoma	27	2.5	14	2.1	21	4.9	9	1.4	0	0.0
	(d) Other specified malignant bone tumours	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
	(e) Unsp. malignant bone tumours	1	0.1	5	0.7	2	0.5	0	0.0	0	0.0
IX	SOFT-TISSUE(S-T) SARCOMAS(S)	95	9.0	23	3.4	30	7.0	21	3.3	1	3.3
	(a) Rhabdomyosarcoma and embryonal sarcoma	53	5.0	14	2.1	17	4.0	15	2.3	0	0.0
	(b) Fibros.neurofibros. and other fibromatous neop.	2	0.2	0	0.0	1	0.2	0	0.0	1	3.3
	(c) Kaposi's sarcoma	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	(d) Other specified soft tissue sarcomas	30	2.8	4	0.6	4	0.9	3	0.5	0	0.0
	(e) Unsp. soft tissue sarcomas	10	0.9	5	0.7	8	1.9	3	0.5	0	0.0
X	GERM CELL TROPHOBLASTIC & OTH. GONADAL NEOP.	13	1.2	14	2.1	8	1.9	16	2.5	1	3.3
	(a) Intracranial and intraspinal gc tumours	1	0.1	3	0.4	0	0.0	1	0.2	0	0.0
	(b) Other and unsp. non-gonadal gc tumours	2	0.2	3	0.4	2	0.5	3	0.5	0	0.0
	(c) Gonadal gc tumours	10	0.9	8	1.2	6	1.4	11	1.7	1	3.3
	(d) Gonadal carcinomas	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0
	(e) Other and unsp. gonadal tumours	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
XI	CARCINOMA & OTH MALIGNANT EPITHELIAL NEOP.	14	1.3	15	2.2	11	2.6	22	3.4	1	3.3
	(a) Adrenocortical carcinoma	0	0.0	0	0.0	0	0.0	2	0.3	0	0.0
	(b) Thyroid carcinoma	3	0.3	2	0.3	1	0.2	6	0.9	0	0.0
	(c) Nasopharyngeal carcinoma	6	0.6	2	0.3	2	0.5	3	0.5	0	0.0
	(d) Malignant melanoma	0	0.0	1	0.1	1	0.2	0	0.0	0	0.0
	(e) Skin carcinoma	0	0.0	1	0.1	3	0.7	1	0.2	0	0.0
	(f) Other and unsp. carcinomas	5	0.5	9	1.3	4	0.9	10	1.6	1	3.3
XII	OTHER & UNSP. MALIGNANT NEOPLASMS	20	1.9	15	2.2	6	1.4	6	0.9	3	10.0
	(a) Other specified malignant tumours	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	(b) Other unsp. malignant tumours	20	1.9	15	2.2	6	1.4	6	0.9	3	10.0
XIII	OTHERS (Not Classified)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	All Types	**1060**	**100.0**	**681**	**100.0**	**429**	**100.0**	**645**	**100.0**	**30**	**100.0**

** Only 2004-05 data.*

Table 2.4(b): Number (#) and Relative Proportion(%) of Specific Types of Cancer in Childhood (0-14 years) (2004-2006)

Females

Specific Types of Cancers in Childhood		Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
		#	%	#	%	#	%	#	%	#	%
I	LEUKAEMIAS	192	38.4	181	45.3	121	41.2	241	49.9	8	25.0
	(a) Lymphoid Leukaemia	127	25.4	112	28.0	84	28.6	183	37.9	4	12.5
	(b) Acute non-lymphocytic leukaemia	45	9.0	41	10.3	29	9.9	48	9.9	4	12.5
	(c) Chronic myeloid leukaemia	1	0.2	11	2.8	6	2.0	2	0.4	0	0.0
	(d) Other specified leukaemias	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	(e) Unsp. leukaemias	19	3.8	17	4.3	2	0.7	8	1.7	0	0.0
II	LYMPHOMAS & RETICULOENDOTHELIAL NPLMS	42	8.4	27	6.8	40	13.6	20	4.1	1	3.1
	(a) Hodgkin's disease	17	3.4	13	3.3	22	7.5	9	1.9	0	0.0
	(b) Non-Hodgkin lymphoma	17	3.4	7	1.8	16	5.4	7	1.4	1	3.1
	(c) Burkitt's lymphoma	5	1.0	4	1.0	2	0.7	3	0.6	0	0.0
	(d) Misc lymphoreticular neop.	1	0.2	1	0.3	0	0.0	0	0.0	0	0.0
	(e) Unsp. lymphomas	2	0.4	2	0.5	0	0.0	1	0.2	0	0.0
III	C.N.S. & MISC. INTRACRANIAL & INTRASPINAL NEOP.	36	7.2	47	11.8	13	4.4	77	15.9	2	6.3
	(a) Ependymoma	3	0.6	9	2.3	1	0.3	5	1.0	0	0.0
	(b) Astrocytoma	11	2.2	9	2.3	7	2.4	13	2.7	1	3.1
	(c) Primitive neuroectodermal tumors	16	3.2	22	5.5	3	1.0	27	5.6	0	0.0
	(d) Other gliomas	6	1.2	4	1.0	1	0.3	5	1.0	0	0.0
	(e) Other specified intracranial and intraspinal neop.	0	0.0	2	0.5	1	0.3	0	0.0	0	0.0
	(f) Unsp. intracranial and intraspinal neop.	0	0.0	1	0.3	0	0.0	27	5.6	1	3.1
IV	SYMPATHETIC NERVOUS SYSTEM TUMOURS	19	3.8	13	3.3	15	5.1	24	5.0	1	3.1
	(a) Neuroblastoma and ganglioneuroblastoma	18	3.6	13	3.3	15	5.1	24	5.0	1	3.1
	(b) Other SNS tumors	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0
V	RETINOBLASTOMA	28	5.6	19	4.8	9	3.1	5	1.0	5	15.6
VI	RENAL TUMOURS	22	4.4	14	3.5	5	1.7	25	5.2	3	9.4
	(a) Wilms's tumor, rhabdoid and clear cell sarcoma	22	4.4	14	3.5	4	1.4	23	4.8	3	9.4
	(b) Renal carcinoma	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0
	(c) Unsp. malignant renal tumors	0	0.0	0	0.0	1	0.3	2	0.4	0	0.0
VII	HEPATIC TUMOURS	6	1.2	2	0.5	2	0.7	7	1.4	0	0.0
	(a) Hepatoblastoma	6	1.2	1	0.3	2	0.7	7	1.4	0	0.0
	(b) Hepatic carcinoma	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0
	(c) Unsp. malignant hepatic tumours	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
VIII	MALIGNANT BONE TUMOURS	58	11.6	27	6.8	40	13.6	26	5.4	2	6.3
	(a) Osteosarcoma	31	6.2	9	2.3	26	8.8	16	3.3	1	3.1
	(b) Chondrosarcoma	2	0.4	1	0.3	0	0.0	0	0.0	0	0.0
	(c) Ewing's sarcoma	25	5.0	7	1.8	12	4.1	9	1.9	1	3.1
	(d) Other specified malignant bone tumours	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	(e) Unsp. malignant bone tumours	0	0.0	10	2.5	2	0.7	1	0.2	0	0.0
IX	SOFT-TISSUE(S-T) SARCOMAS(S)	42	8.4	25	6.3	24	8.2	21	4.3	4	12.5
	(a) Rhabdomyos. and embryonal sarcoma	24	4.8	9	2.3	8	2.7	10	2.1	2	6.3
	(b) Fibros.neurofibros. and oth fibromatous neop.	0	0.0	4	1.0	1	0.3	0	0.0	1	3.1
	(c) Kaposi's sarcoma	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	(d) Other specified soft tissue sarcomas	13	2.6	7	1.8	7	2.4	9	1.9	0	0.0
	(e) Unsp. soft tissue sarcomas	5	1.0	5	1.3	8	2.7	2	0.4	1	3.1
X	GERM-CELL TROPHOBLASTIC & OTH. GONADAL NEOP.	25	5.0	21	5.3	13	4.4	17	3.5	4	12.5
	(a) Intracranial and intraspinal gc tumours	1	0.2	0	0.0	0	0.0	2	0.4	0	0.0
	(b) Other and unsp. non-gonadal gc tumours	6	1.2	5	1.3	1	0.3	3	0.6	0	0.0
	(c) Gonadal gc tumours	18	3.6	15	3.8	12	4.1	12	2.5	1	3.1
	(d) Gonadal carcinomas	0	0.0	1	0.3	0	0.0	0	0.0	3	9.4
	(e) Other and unsp. gonadal tumours	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
XI	CARCINOMA & OTH MALIGNANT EPITHELIAL NEOP.	16	3.2	11	2.8	8	2.7	18	3.7	1	3.1
	(a) Adrenocortical carcinoma	1	0.2	0.00	0.0	0	0.0	3	0.6	0	0.0
	(b) Thyroid carcinoma	6	1.2	3	0.8	3	1.0	7	1.4	0	0.0
	(c) Nasopharyngeal carcinoma	0	0.0	1	0.3	0	0.0	1	0.2	0	0.0
	(d) Malignant melanoma	2	0.4	0	0.0	0	0.0	0	0.0	1	3.1
	(e) Skin carcinoma	0	0.0	1	0.3	0	0.0	2	0.4	0	0.0
	(f) Other and unsp. carcinomas	7	1.4	6	1.5	5	1.7	5	1.0	0	0.0
XII	OTHER & UNSP. MALIGNANT NEOPLASMS	14	2.8	13	3.3	4	1.4	2	0.4	1	3.1
	(a) Other specified malignant tumours	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	(b) Other unsp. malignant tumours	14	2.8	13	3.3	4	1.4	2	0.4	1	3.1
XIII	OTHERS (Not Classified)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	All Types	**500**	**100.0**	**400**	**100.0**	**294**	**100.0**	**483**	**100.0**	**32**	**100.0**

** Only 2004-05 data.*

Chapter 3

TOBACCO RELATED CANCERS

There are several anatomical sites associated with the use of tobacco (TRCs) and NCRP has been using the conservative basis which is the International Agency for Research on Cancer (IARC) monographs on overall evaluations of carcinogenicity (IARC, 1987). The list of anatomical sites of cancer (along with corresponding ICD-10 codes) considered to be associated with the use of tobacco is given in Table 3.1.

In 2004, IARC (IARC 2004) in a newer monograph states, that, there is now sufficient evidence to establish a causal association between cigarette smoking and cancers of the nasal cavities and nasal sinuses, oesophagus (Adenocarcinoma), stomach, liver, kidney (Renal Cell Carcinoma), uterine cervix and myeloid leukaemia apart from the sites in the earlier monograph (IARC,1987).

Table 3.1: Sites of Cancer included in TRCs along with corresponding ICD Codes

Site	ICD-10 Code
Lip	C00
Tongue	C01-C02
Mouth	C03-C06
Pharynx	C10 and C12-C14
Oesophagus	C15
Larynx	C32
Lung	C33-34
Urinary Bladder	C67

Table 3.2: Number (#) and Proportion (%) of Cancers associated with Use of Tobacco relative to all sites of Cancer (2004-2006)

Registry	Males			Females		
	All sites	#	%	All sites	#	%
Mumbai*	19399	8819	45.5	15313	2556	16.7
Bangalore	10293	4650	45.2	11842	2547	21.5
Chennai	12523	5357	42.8	13589	2214	16.3
Thi'puram	12563	5984	47.6	11394	1654	14.5
Dibrugarh	1782	1092	61.3	1063	310	29.2
All Registries	**56560**	**25902**	**45.8**	**53201**	**9281**	**17.4**

** Only 2004-05 data*

Table 3.2 and Figure 3.1 provide the number and relative proportion of sites of cancer associated with use of tobacco as a whole relative to all sites of cancer, in different registries. The highest percentage of TRC was observed in Dibrugarh: both in males (61.3%) and in females (29.2%). In the other registries, it varied from 42.8 to 47.6% of all cancers in males and from 14.5 to 21.5% in females.

Table 3.3 and Figure 3.2 indicate the number and relative proportion according to the specific sites of TRC in different HBCRs.

Males (Relative proportion (%) of TRC is given in parentheses)

Mumbai: Mouth (28.2%), lung (17.3%) and tongue (15.3%) were the main sites that contributed to overall TRCs.

Bangalore: Hypopharynx (20.5%), Oesophagus (18.0%) and lung (15.5%) were the three leading sites among TRCs.

Chennai: Mouth (19.2%) was the leading contributor to TRCs followed by lung (18.3%) and oesophagus (16.5%).

Thiruvananthapuram: Cancer of lung accounted for 29.9% of TRCs followed by mouth (19.8%) and tongue (14.5%).

Dibrugarh: Cancer of the hypopharynx constituted 27.9% of TRCs followed by oesophagus (25.3%) and mouth (12.5%).

Females

Mumbai: Mouth (29.7%), oesophagus (20.0%) and lung (17.3%) were the leading sites among TRCs.

Bangalore: Mouth (47.1%) contributed almost half of the TRCs. Another important site was oesophagus (26.7%).

Chennai: Mouth (31.8%) accounted for most of TRCs followed by oesophagus (24.5%) and hypopharynx (14.0%).

Thiruvananthapuram: Like in Chennai, in Thiruvananthapuram also mouth (39.8%) accounted for most of TRCs followed by tongue (21.0%) and lung (15.8%).

Dibrugarh: Oesophagus (47.1%) was the leading site in TRCs followed by mouth (18.1%) and hypopharynx (15.8%).

Table 3.4 gives the number and proportion of the TRCs by five year age groups. Among males the higher proportion of TRCs was seen in 50-54 year age group in Mumbai, in 55-59 year age group in Bangalore & Thiruvananthapuram and in 60-64 year age group in Chennai & Dibrugarh. In females, the higher proportion of TRCs was seen in age groups above 60 years except in Chennai where the age group 55-59 years had higher values.

Among males, the mean age (+SD) of TRCs varied between 55.1+12.0 in Mumbai to 59.8 + 10.84 in Thiruvananthapuram. In females, the mean age (+SD) of TRCs varied between 54.8 + 12.4 in Mumbai to 59.5 + 12.2 in Thiruvananthapuram.

Fig. 3.1: Proportion (%) of Tobacco Related Cancers Relative to All Sites - 2004-2006

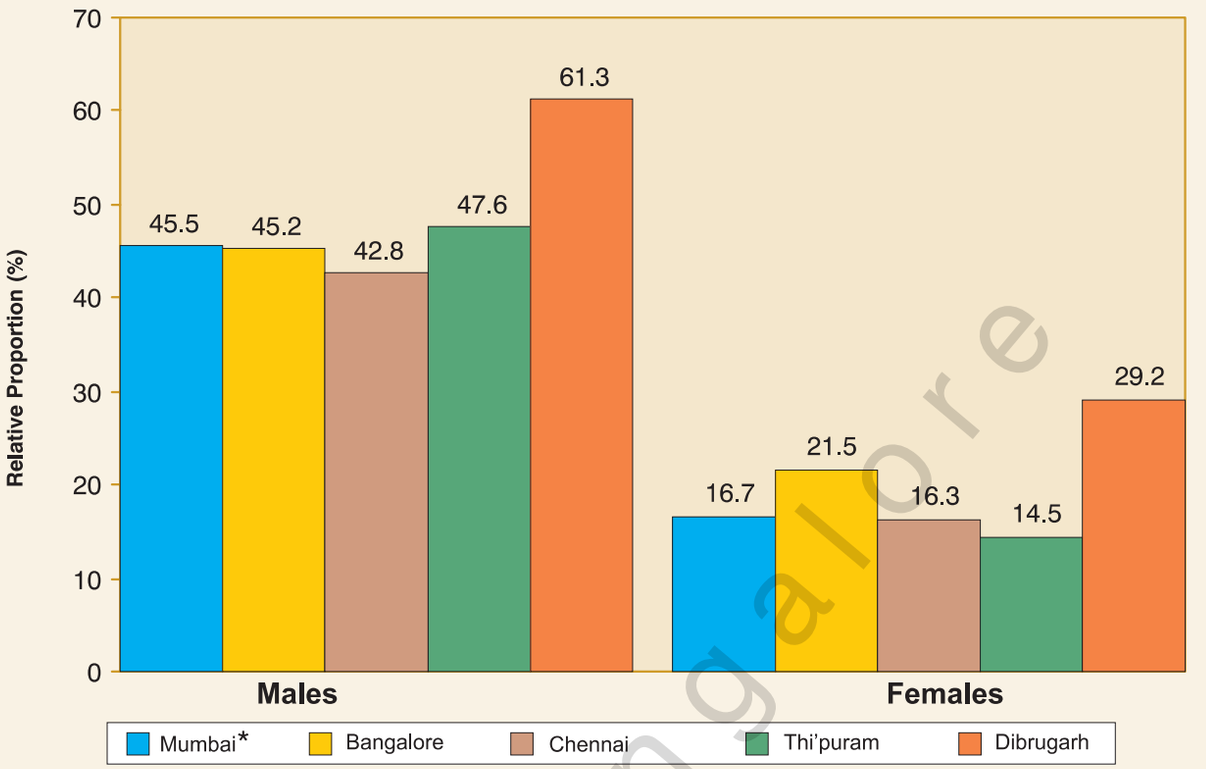


Fig. 3.2: Stack (100%) Diagram showing Proportion of Specific Tobacco Related Sites Relative to all Tobacco Related Cancers (2004-2006)

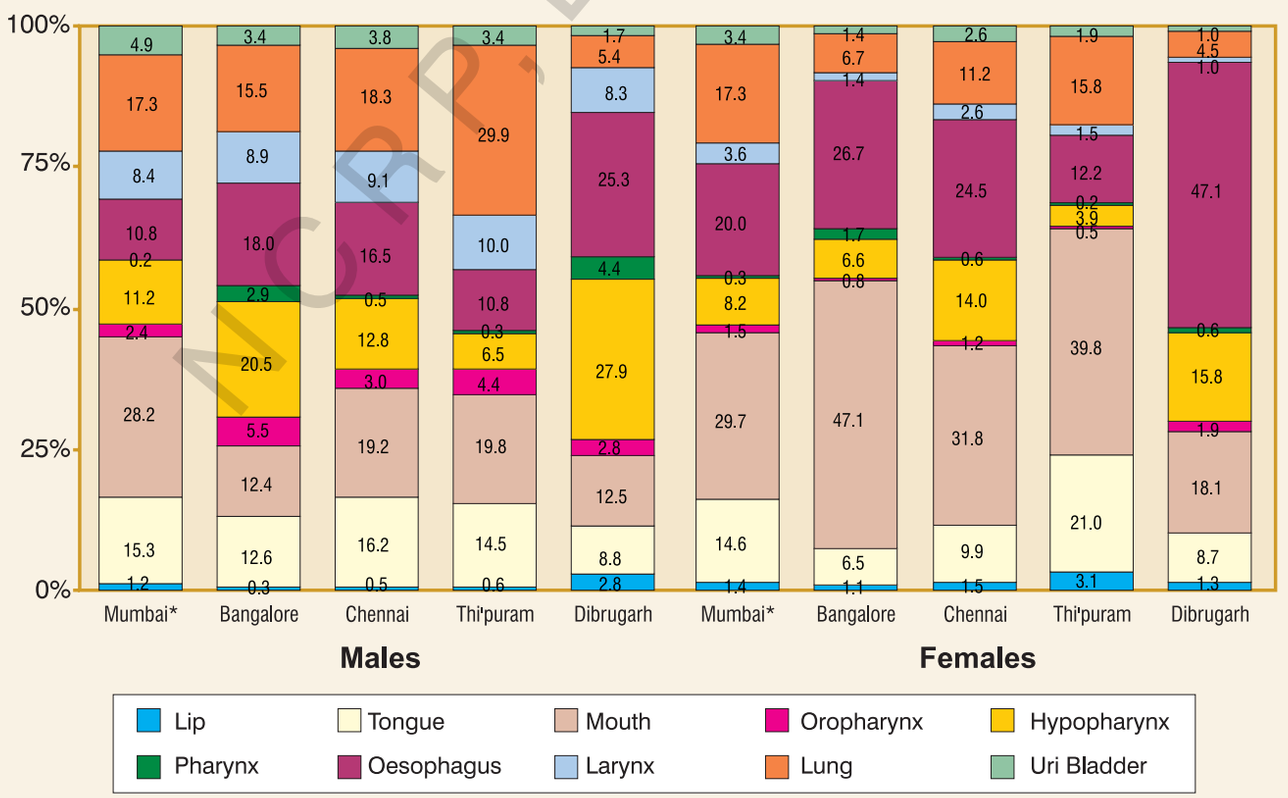


Table 3.3: Number and Relative Proportion of Specific Sites of Cancer among Tobacco Related Cancers (TRC) - (2004-2006)

Males

Sites of Cancer	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Lip	103	1.2	16	0.3	29	0.5	38	0.6	31	2.8
Tongue	1347	15.3	585	12.6	868	16.2	865	14.5	96	8.8
Mouth	2488	28.2	578	12.4	1031	19.2	1182	19.8	136	12.5
Oropharynx	213	2.4	256	5.5	160	3.0	261	4.4	31	2.8
Hypopharynx	988	11.2	953	20.5	685	12.8	387	6.5	305	27.9
Pharynx	21	0.2	135	2.9	25	0.5	18	0.3	48	4.4
Oesophagus	956	10.8	837	18.0	886	16.5	644	10.8	276	25.3
Larynx	742	8.4	415	8.9	488	9.1	597	10.0	91	8.3
Lung	1526	17.3	719	15.5	983	18.3	1787	29.9	59	5.4
Uri. Bladder	435	4.9	156	3.4	202	3.8	205	3.4	19	1.7
TRC	**8819**	**100.0**	**4650**	**100.0**	**5357**	**100.0**	**5984**	**100.0**	**1092**	**100.0**

Females

Sites of Cancer	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Lip	35	1.4	28	1.1	34	1.5	51	3.1	4	1.3
Tongue	374	14.6	165	6.5	220	9.9	347	21.0	27	8.7
Mouth	759	29.7	1200	47.1	703	31.8	658	39.8	56	18.1
Oropharynx	39	1.5	21	0.8	27	1.2	9	0.5	6	1.9
Hypopharynx	210	8.2	169	6.6	311	14.0	65	3.9	49	15.8
Pharynx	7	0.3	44	1.7	13	0.6	4	0.2	2	0.6
Oesophagus	511	20.0	679	26.7	542	24.5	202	12.2	146	47.1
Larynx	91	3.6	35	1.4	58	2.6	25	1.5	3	1.0
Lung	443	17.3	171	6.7	248	11.2	261	15.8	14	4.5
Uri. Bladder	87	3.4	35	1.4	58	2.6	32	1.9	3	1.0
TRC	**2556**	**100.0**	**2547**	**100.0**	**2214**	**100.0**	**1654**	**100.0**	**310**	**100.0**

** Only 2004-05 data*

Table 3.4: Number and Relative Proportion of Tobacco Related Cancer by Five-Year Age Groups with Standard Deviation (SD) (2004-2006)

Males

Age Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-14	6	0.1	1	0.0	1	0.0	4	0.1		0
15-19	5	0.1	3	0.1	4	0.1	0	0.0	1	0.1
20-24	39	0.4	15	0.3	25	0.5	10	0.2	2	0.2
25-29	116	1.3	34	0.7	52	1.0	15	0.3	9	0.8
30-34	259	2.9	63	1.4	108	2.0	56	0.9	14	1.3
35-39	531	6.0	127	2.7	210	3.9	124	2.1	42	3.8
40-44	736	8.3	270	5.8	354	6.6	259	4.3	61	5.6
45-49	1104	12.5	489	10.5	492	9.2	557	9.3	121	11.1
50-54	1352	15.3	715	15.4	771	14.4	851	14.2	158	14.5
55-59	1331	15.1	774	16.6	874	16.3	996	16.6	142	13.0
60-64	1229	13.9	751	16.2	896	16.7	974	16.3	186	17.0
65-69	1073	12.2	605	13.0	709	13.2	911	15.2	153	14.0
70-74	631	7.2	456	9.8	505	9.4	640	10.7	109	10.0
75+	407	4.6	347	7.5	356	6.6	587	9.8	94	8.6
All Ages	**8819**	**100.0**	**4650**	**100.0**	**5357**	**100.0**	**5984**	**100.0**	**1092**	**100.0**
Mean		55.09		58.13		57.49		59.80		58.36
SD		12.00		11.25		11.71		10.84		11.62

Females

Age Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-14	3	0.2	1	0.0	4	0.2	2	0.1		0.0
15-19	6	0.5	4	0.2	2	0.1	3	0.2		0.0
20-24	14	1.1	15	0.6	24	1.1	8	0.5	1	0.3
25-29	44	3.5	25	1.0	36	1.6	12	0.7	2	0.6
30-34	79	6.3	49	1.9	55	2.5	20	1.2	10	3.2
35-39	141	11.3	138	5.4	137	6.2	58	3.5	22	7.1
40-44	258	20.7	212	8.3	188	8.5	75	4.5	33	10.6
45-49	325	26.0	376	14.8	260	11.7	168	10.2	32	10.3
50-54	335	26.8	376	14.8	310	14.0	196	11.9	43	13.9
55-59	345	27.6	363	14.3	348	15.7	235	14.2	35	11.3
60-64	376	30.1	407	16.0	335	15.1	215	13.0	54	17.4
65-69	334	26.8	284	11.2	223	10.1	284	17.2	41	13.2
70-74	171	13.7	170	6.7	174	7.9	182	11.0	19	6.1
75+	125	10.0	127	5.0	118	5.3	196	11.9	18	5.8
All Ages	**2556**	**204.8**	**2547**	**100.0**	**2214**	**100.0**	**1654**	**100.0**	**310**	**100.0**
Mean		54.8		55.3		55.0		59.5		55.4
SD		12.4		11.7		12.5		12.2		12.1

** Only 2004-05 data*

Chapter 4

BASIS OF DIAGNOSIS

An important item of information that depicts quality of data is the basis of diagnosis. A microscopic confirmation of cancer is almost always required before initiation of cancer directed treatment.

The basis of diagnosis of cancers registered at the various HBCRs is shown in Table 4.1 and depicted as Pie (∏) diagrams in Figure 4.1. The proportion of microscopic confirmation was 90% in both sexes in all HBCRs, except in Chennai where it was 83.2% in males and 88.3% in females.

Table 4.2 and Figure 4.2 give further details of microscopically verified cancers by various types of microscopic diagnosis. Primary Histology was the predominant form of microscopic diagnosis in all registries in both sexes. The percentage of diagnoses based on cytology was highest in Bangalore with 28.1% in males and 15.8% in females respectively. Dibrugarh (14.5%) had a high proportion of cases based on cytology in males.

Table 4.1: Number (#) and Relative Proportion (%) of Cancers Based on Different Methods of Diagnosis

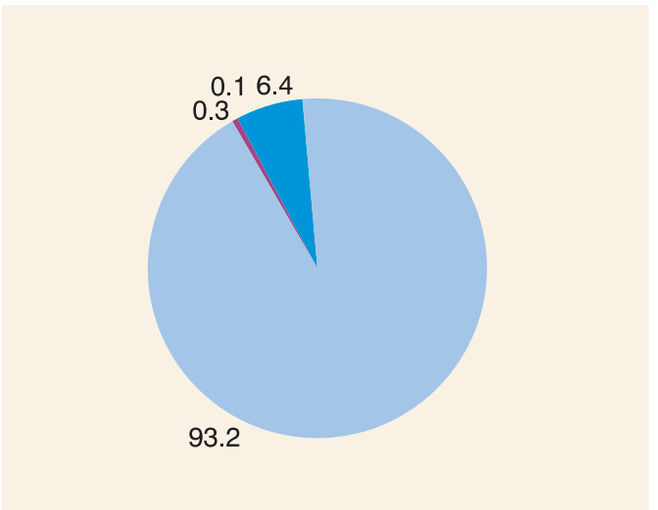
Registry	Microscopic		All imaging techniques		Clinical		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Males										
Mumbai*	18074	93.2	61	0.3	18	0.1	1246	6.4	19399	100.0
Bangalore	9726	94.5	149	1.4	283	2.7	135	1.3	10293	100.0
Chennai	10421	83.2	1119	8.9	800	6.4	183	1.5	12523	100.0
Thi'puram	11583	92.2	693	5.5	209	1.7	78	0.6	12563	100.0
Dibrugarh	1691	94.9	63	3.5	8	0.4	20	1.1	1782	100.0
Females										
Mumbai*	14262	93.1	46	0.3	19	0.1	986	6.4	15313	100.0
Bangalore	11343	95.8	94	0.8	234	2.0	171	1.4	11842	100.0
Chennai	12001	88.3	567	4.2	926	6.8	95	0.7	13589	100.0
Thi'puram	10969	96.3	227	2.0	165	1.4	33	0.3	11394	100.0
Dibrugarh	949	89.3	73	6.9	11	1.0	30	2.8	1063	100.0

** Only 2004-05 data*

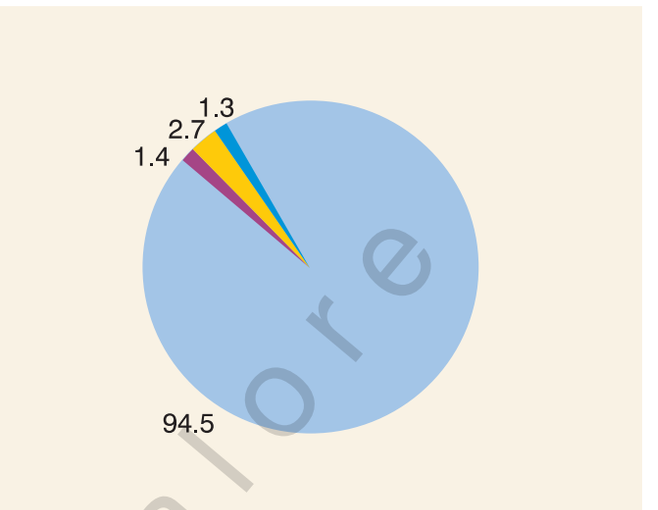
Fig. 4.1(a): Pie Diagram showing Proportion (%) of Patients according to Method of Diagnosis (2004-2006)

Males

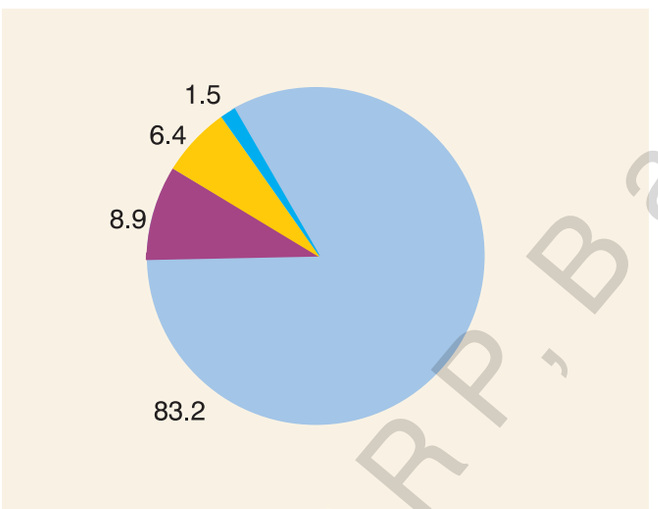
Mumbai



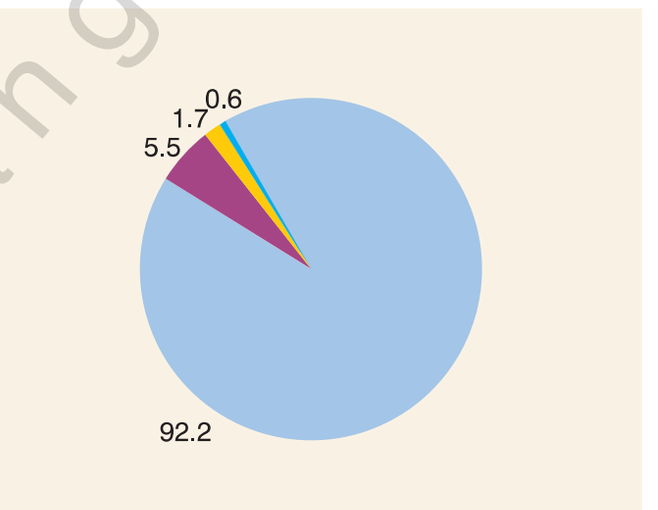
Bangalore



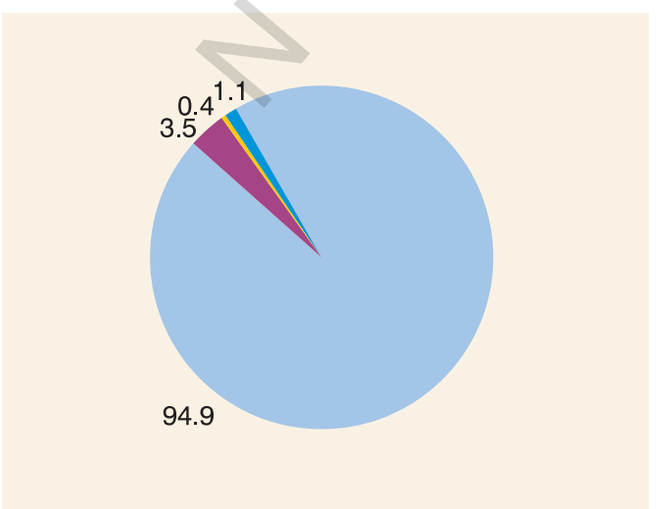
Chennai



Thiruvananthapuram



Dibrugarh



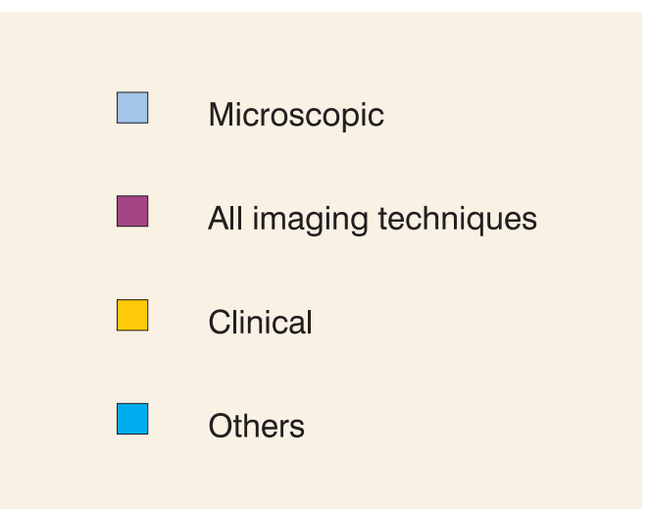
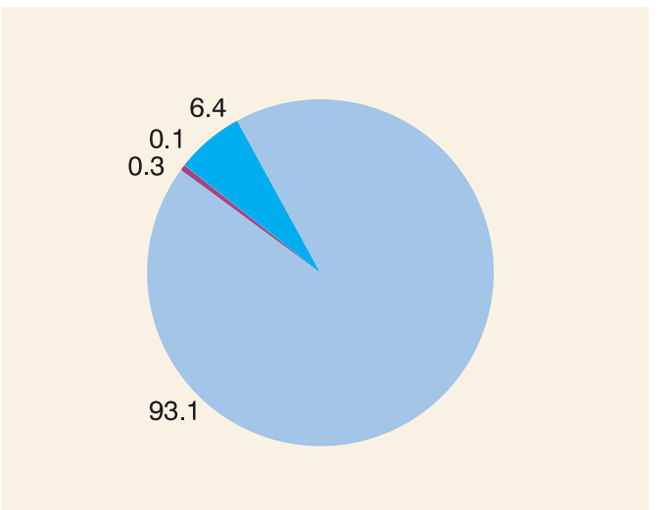


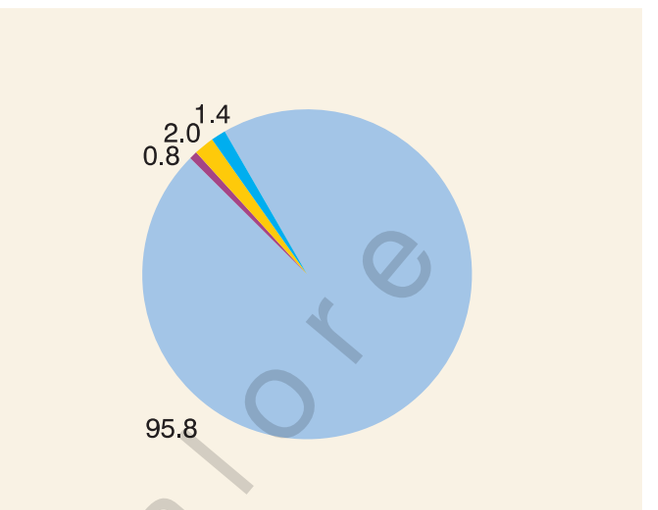
Fig. 4.1(b): Pie Diagram showing Proportion (%) of Patients according to Method of Diagnosis (2004-2006)

Females

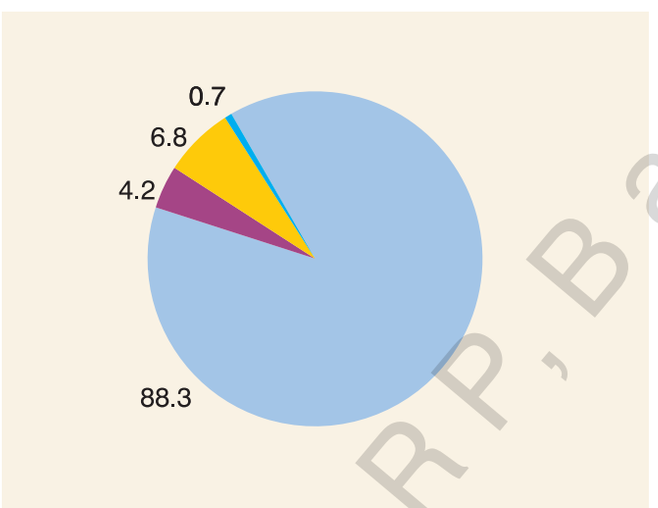
Mumbai



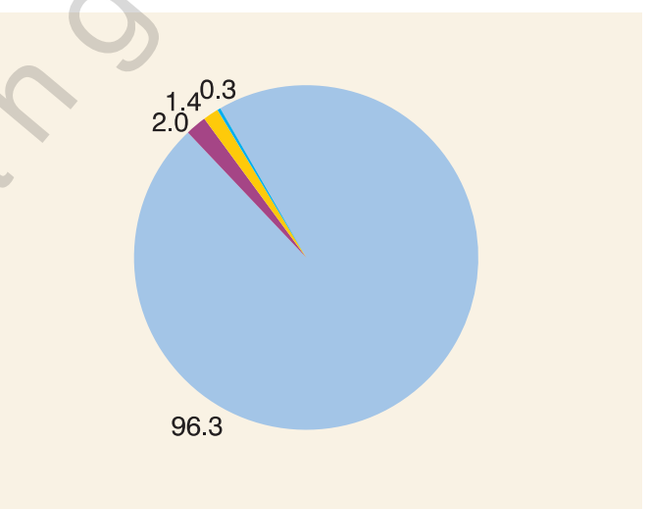
Bangalore



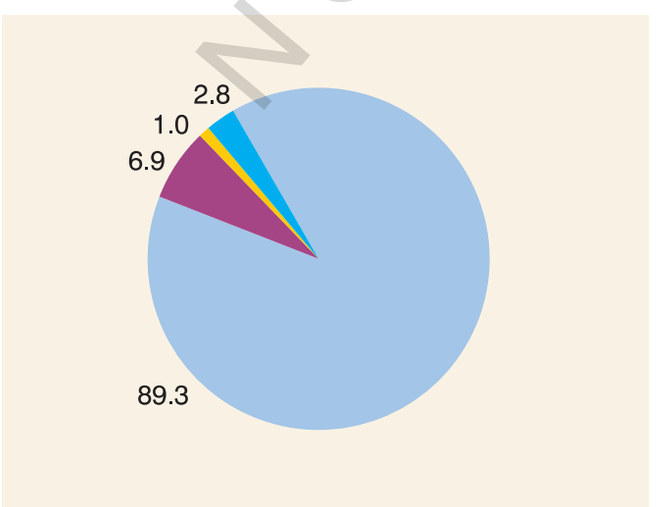
Chennai



Thiruvananthapuram



Dibrugarh



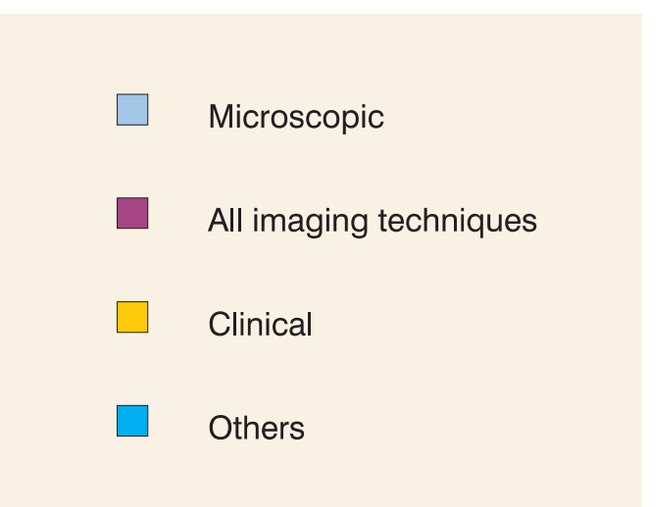
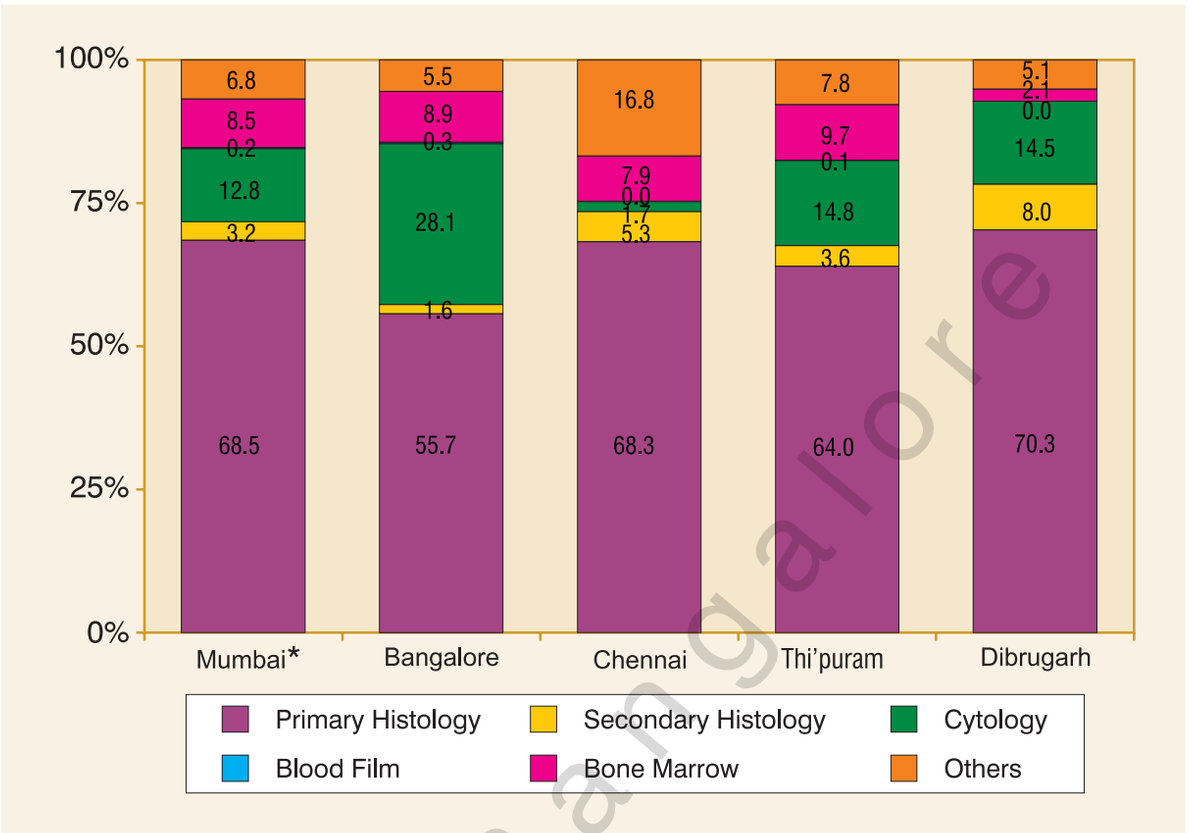


Fig. 4.2(a): Stack (100%) Diagram showing Proportion (%) of Microscopically diagnosed Patients according to Specific Microscopic Diagnosis - (2004-2006)

Males



Females

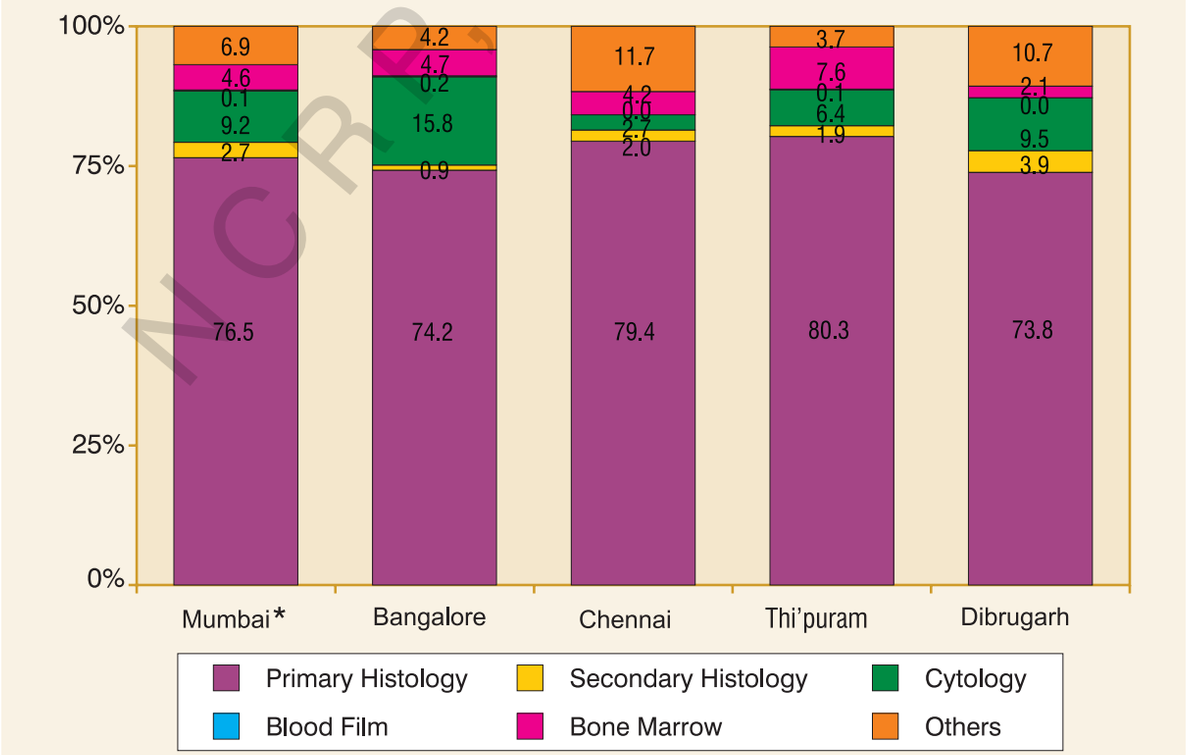


Table 4.2: Number (#) and Relative Proportion (%) of Cancers based on Different Types of Microscopic Diagnosis (2004-2006)

Type of Microscopic Diagnosis	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Males										
Primary Histology	13293	68.5	5730	55.7	8547	68.3	8037	64.0	1253	70.3
Secondary Histology	622	3.2	166	1.6	659	5.3	454	3.6	142	8.0
Cytology	2474	12.8	2889	28.1	217	1.7	1863	14.8	258	14.5
Blood Film	38	0.2	27	0.3	4	0.0	9	0.1	0	0.0
Bone Marrow	1647	8.5	914	8.9	994	7.9	1220	9.7	38	2.1
Others	1325	6.8	567	5.5	2102	16.8	980	7.8	91	5.1
All microscopic	**19399**	**100.0**	**10293**	**100.0**	**12523**	**100.0**	**12563**	**100.0**	**1782**	**100.0**
Females										
Primary Histology	11708	76.5	8789	74.2	10791	79.4	9145	80.3	785	73.8
Secondary Histology	421	2.7	110	0.9	273	2.0	219	1.9	41	3.9
Cytology	1412	9.2	1870	15.8	372	2.7	733	6.4	101	9.5
Blood Film	20	0.1	19	0.2	0	0.0	12	0.1	0	0.0
Bone Marrow	701	4.6	555	4.7	565	4.2	860	7.5	22	2.1
Others	1051	6.9	499	4.2	1588	11.7	425	3.7	114	10.7
All microscopic	**15313**	**100.0**	**11842**	**100.0**	**13589**	**100.0**	**11394**	**100.0**	**1063**	**100.0**

** Only 2004-05 data*

Table 4.3 presents the proportion of microscopic diagnosis from 1994-2006. The proportion has been more or less the same in both sexes in all the registries, except in Chennai where an increase is observed.

Table 4.4 provides the proportion of microscopic diagnosis for the five time periods of publication of HBCR reports.

The relative proportion of cytological diagnosis during the five periods has been presented in Table 4.5. The proportion has shown an increasing trend in Bangalore and Dibrugarh among males and females.

Table 4.3: Number (#) and Relative Proportion (%) of Microscopic Diagnosis across Different Years of Diagnosis

Year of Diagnosis	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
1994	7914	90	2913	92.9	1970	72.3	3092	88.2	710	92.8
1995	7758	88.4	3163	94.2	2041	75.8	3318	87.3	579	93.4
1996	7269	90.2	3018	94.2	2052	78.1	3563	89.7	286	92.9
1997	7945	90.9	3076	94.8	2180	78.3	3460	90.2	396	94.5
1998	7870	91.0	2838	95.1	2027	78.4	3540	91.6	513	96.2
1999	7991	90.7	2812	94.8	2270	76.4	3676	92.2	421	93.8
2000	8073	90.9	2955	93.6	2481	75.0	3625	93.4	518	93.4
2001	8375	92.1	3397	95.4	2781	82.1	4149	94.0	474	95.8
2002	8288	91.8	3285	94.8	2724	80.4	4108	93.7	470	94.8
2003	8278	92.5	3608	94.3	2989	82.3	3843	93.2	552	90.3
2004	8908	92.8	3121	93.8	3132	83.6	3942	92.8	611	94.6
2005	9166	93.5	3374	93.9	3575	83.3	3676	91.0	561	94.8
2006	-	-	3231	95.8	3714	82.8	3965	92.8	519	95.4
1994-2006	**97835**	**91.1**	**40791**	**94.5**	**33936**	**79.9**	**47957**	**91.6**	**6610**	**94.0**
FEMALES										
1994	6098	89.2	3485	94.8	2521	81.4	2921	93	397	90.2
1995	6113	88.8	3780	96.0	2592	83.0	3069	92.8	290	90.9
1996	5673	89.4	3614	95.8	2603	84.6	3173	94.3	178	90.8
1997	6283	90.4	3558	96.1	2670	84.5	3200	94.8	240	92.3
1998	6041	90.2	3320	95.9	2609	83.5	3312	95.8	264	93.3
1999	6253	90.5	3636	96.1	2986	85.5	2472	96.2	185	86.0
2000	6180	90.7	3581	93.5	3097	80.7	4488	95.6	292	92.0
2001	6454	91.4	4013	95.5	3549	89.1	3742	96.8	224	93.0
2002	6415	90.8	4020	96.5	3366	87.1	3897	96.6	260	90.3
2003	6445	92.1	4144	95.2	3606	89.3	3582	96.3	332	87.1
2004	6986	92.7	3713	96.0	3685	88.6	3570	96.6	270	89.1
2005	7276	93.5	3751	95.3	3942	88.5	3545	95.7	345	90.1
2006	-	-	3879	96.0	4374	87.8	3854	96.4	334	88.6
1994-2006	**76217**	**90.6**	**48494**	**95.9**	**41600**	**86.7**	**44825**	**95.6**	**3611**	**90.0**

** Only 2004-05 data*

Table 4.4: Proportion (%) of Microscopic Diagnosis during the Five Periods 1984-93, 1994-98, 1999-00, 2001-03 and 2004-2006

Registry	Males					Females				
	1984-93	1994-98	1999-00	2001-03	2004-06	1984-93	1994-98	1999-00	2001-03	2004-06
Mumbai*	91.3	90.1	91.1	92.1	93.2	91.5	89.6	90.9	91.4	93.1
Bangalore	91.1	94.2	94.2	94.9	94.5	94.8	95.7	94.8	95.8	95.8
Chennai	69.5	76.6	75.7	82.2	83.2	71.5	83.4	83.1	88.9	88.3
Thi'puram	86.0	89.4	92.8	93.6	92.2	90.3	94.2	95.9	96.5	96.3
Dibrugarh	88.3	93.9	94.2	93.4	94.9	88.3	91.4	89.0	89.7	89.3

Table 4.5: Proportion (%) of Cytological Diagnosis during the Five Periods 1984-93, 1994-98, 1999-00, 2001-03 and 2004-2006

Registry	Males					Females				
	1984-93	1994-98	1999-00	2001-03	2004-06	1984-93	1994-98	1999-00	2001-03	2004-06
Mumbai*	13.3	13.2	13.6	14.3	12.8	8.2	9.9	9.7	10.7	9.2
Bangalore	23.2	23.6	23.2	23.7	28.1	8.5	10.7	13.5	14.7	15.8
Chennai	4.0	4.7	7.0	3.5	1.7	4.2	4.7	9.1	6.3	2.7
Thi'puram	9.6	12.8	16.0	15.5	14.8	5.6	7.3	8.4	8.0	6.4
Dibrugarh	2.6	8.1	9.7	11.9	14.5	3.6	7.6	8.4	7.8	9.5

** Only 2004-05 data.*

Fine Needle Aspiration Cytology (FNAC) has been in vogue for the quick and easy diagnosis of cancer since 1980s. This is reflected in the reports of the HBCRs although this method of cytological diagnosis of cancer is mixed up with smear cytology diagnosis. However, this distinction can be made when one examines anatomical sitewise cytological diagnosis (given in Annexure tabulations).

FNAC is particularly relevant in the Indian context because several patients present in an advanced stage of cancer when even biopsy diagnosis and histological examinations become difficult.

Chapter 5

BROAD TREATMENT GROUPS

In the Indian setting, cancer patients register at a given cancer treatment facility in varying states of diagnosis and treatment. Subsequent to the registration for reasons which are beyond the scope of this report, patient may or may not receive the cancer directed treatment at the reporting institution (RI). Therefore, to study different aspects in the management of cancer patients the data from the HBCRs are categorized into the following four groups:

Prior Treatment Only (Prior Tmt. Only):

Those patients who have received some or complete cancer directed treatment before registration and have not received any further treatment at the RI.

Prior Treatment & Treatment at Reporting Institution (Prior & Tmt. at RI):

These are patients who have received cancer directed treatment prior to registration and have received further treatment at the reporting institution.

Treatment Only at Reporting Institution (Tmt. only at RI):

Patients who have come for the first time to the reporting institution with or without a confirmed diagnosis of malignancy and have not received any cancer directed treatment earlier and received complete cancer directed treatment at the reporting institution.

No Cancer Directed Treatment (No CDT):

This group includes patients who have neither received nor accepted any treatment. It also includes the patients who have not completed any form of treatment and where the treatment status is unknown.

Table 5.1 and stack diagram (Fig. 5.1) shows the number and relative proportion of the patients by the above four broad treatment groups in different HBCRs for the year 2004-06. The proportion of patients in the group - “Prior Tmt. Only”, varied from less than one percent in either sex in Dibrugarh to 12.3% in males in Chennai and 12.4% in females in Mumbai. Similarly, the relative proportion in the second group, viz., “Prior and Tmt” at RI ranged - from 2.7% in Chennai to 12.2% in Thiruvananthapuram in males and 4.0% in Chennai to 28.5% in Thiruvananthapuram in females. The relative proportion of the patients treated only at the reporting institution (Tmt. only at RI) was comparatively higher in the centres at Thiruvananthapuram and Dibrugarh with a correspondingly lower relative proportion in the ‘No CDT’ category as compared with the centres at Mumbai, Bangalore and Chennai.

Table 5.1: Number (#) and Relative Proportion (%) of Cancer Patients according to Broad Groups of Treatment (Tmt) at Reporting Institution (RI) and/or elsewhere (2004-2006)

Treatment Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Prior Tmt. Only	2174	11.2	672	6.5	1543	12.3	735	5.9	2	0.1
Prior & Tmt. at RI	1945	10.0	518	5.0	344	2.7	1538	12.2	50	2.8
Tmt. Only at RI	5889	30.4	4405	42.8	3582	28.6	7808	62.2	1524	85.5
No CDT*	9391	48.4	4698	45.6	7054	56.3	2482	19.8	206	11.6
Total Patients	**19399**	**100.0**	**10293**	**100.0**	**12523**	**100.0**	**12563**	**100.0**	**1782**	**100.0**
FEMALES										
Prior Tmt. Only	1892	12.4	853	7.2	1512	11.1	907	8.0	3	0.3
Prior & Tmt. at RI	2352	15.4	1176	9.9	549	4.0	3249	28.5	50	4.7
Tmt. Only at RI	4396	28.7	6223	52.6	5330	39.2	6030	52.9	863	81.2
No CDT*	6673	43.6	3590	30.3	6198	45.6	1208	10.6	147	13.8
Total Patients	**15313**	**100.0**	**11842**	**100.0**	**13589**	**100.0**	**11394**	**100.0**	**1063**	**100.0**

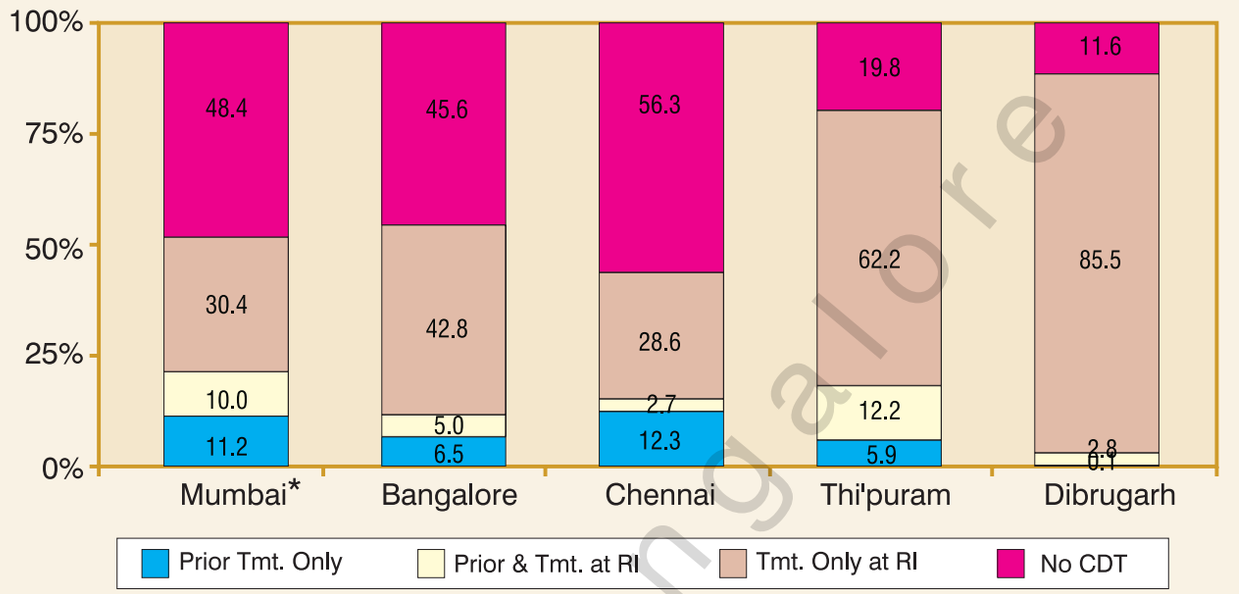
** Only 2004-05 data; CDT*=Cancer Directed Treatment*

No Cancer Directed Treatment (No CDT):

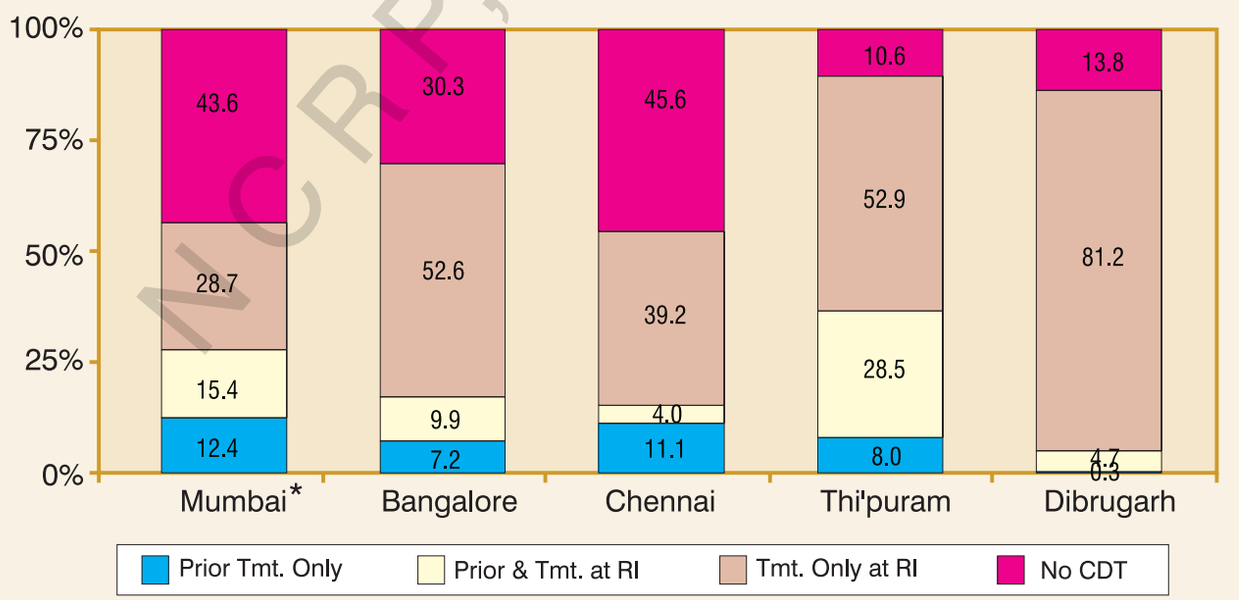
This group of patients is of particular importance in the Indian setting as it brings into focus the difficulties faced by patients in appreciating the importance of receiving cancer directed treatment and also the economic problems faced by them to achieve this.

Fig. 5.1: Stack (100%) Diagram showing Proportion (%) according to Broad Groups of Treatment (tmt) - (2004-2006)

Males



Females



Chapter 6

CLINICAL EXTENT OF DISEASE AT PRESENTATION

The Clinical Extent of Disease provides an idea of the degree of spread of cancer when the patient presents himself or herself to the Reporting Institution (RI). Table 6.1 gives the number and relative proportion of cancer patients in diverse clinical extent of disease at the time of registering at the RI. The proportion of patients with localised disease varied from 1.7% in females at Dibrugarh to 13.3% also in females in Mumbai. Among males, the proportion of patients with distant or advanced cancer was 5.8% in Dibrugarh and 12.5 - 16.1% in the other four HBCRs. Correspondingly, among females, the proportion of patients with advanced cancer, was 9.8% in Chennai and varied between 10.1 to 13.3% in the other HBCRs. The proportion under the category 'Others' mainly refers to Lymphomas and Leukaemias, which are generally not staged according to the above system.

Due to a number of reasons (which are beyond the scope of this report) there have been difficulties in abstracting and standardizing this particular information (Clinical Extent of Disease) in a uniform way by all registries. Therefore, noticeable variations in relative proportions of clinical extent of disease are observed (as also in previous reports). The same problem is seen in individual site chapters as well. The

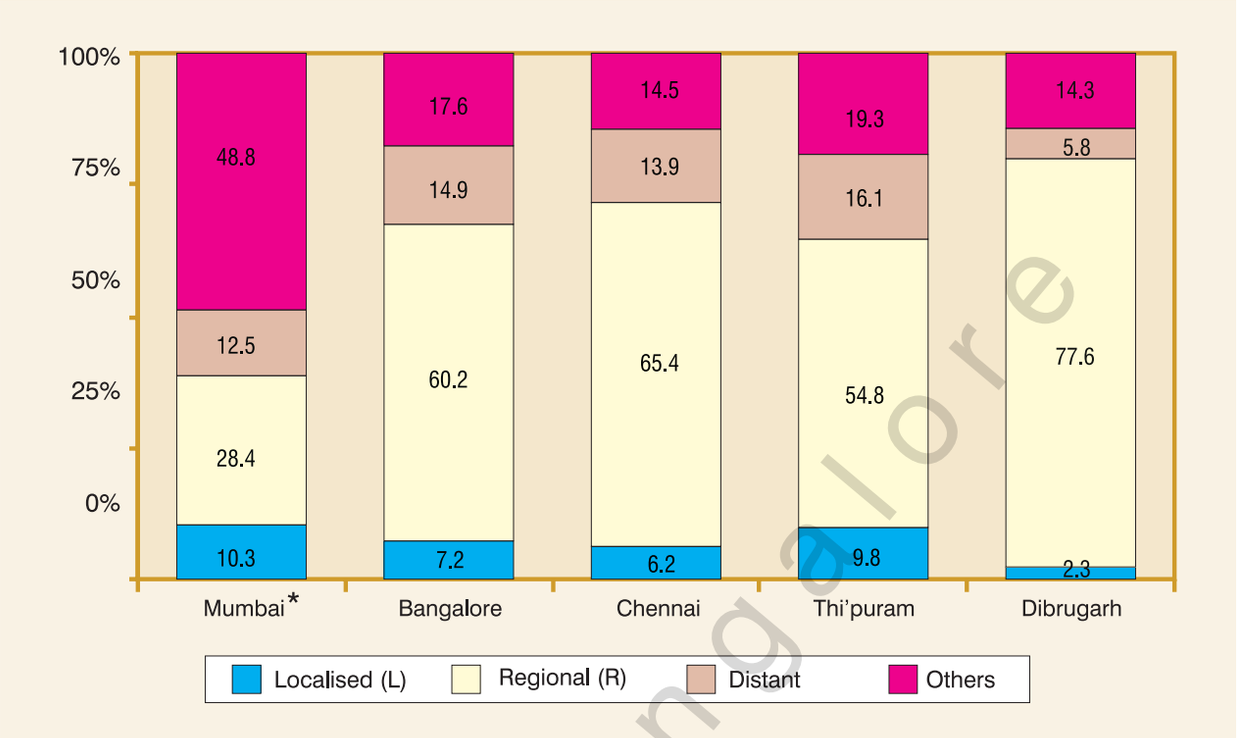
Table 6.1: Number (#) and Relative Proportion (%) of Patients according to Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Mumbai*	1574	10.3	4332	28.4	5906	38.7	1913	12.5	7461	48.8	15280	100.0
Bangalore	614	7.2	5100	60.2	5714	67.5	1262	14.9	1495	17.6	8471	100.0
Chennai	615	6.2	6521	65.4	7136	71.6	1386	13.9	1443	14.5	9965	100.0
Thi'puram	951	9.8	5312	54.8	6263	64.6	1563	16.1	1869	19.3	9695	100.0
Dibrugarh	38	2.3	1275	77.6	1313	79.9	95	5.8	235	14.3	1643	100.0
FEMALES												
Mumbai*	1469	13.3	2923	26.4	4392	39.7	1474	13.3	5203	47.0	11069	100.0
Bangalore	895	9.4	6764	71.2	7659	80.6	1047	11.0	795	8.4	9501	100.0
Chennai	751	6.7	8595	76.5	9346	83.2	1102	9.8	789	7.0	11237	100.0
Thi'puram	820	11.9	4136	60.0	4956	71.9	697	10.1	1243	18.0	6896	100.0
Dibrugarh	17	1.7	727	73.4	744	75.2	116	11.7	130	13.1	990	100.0

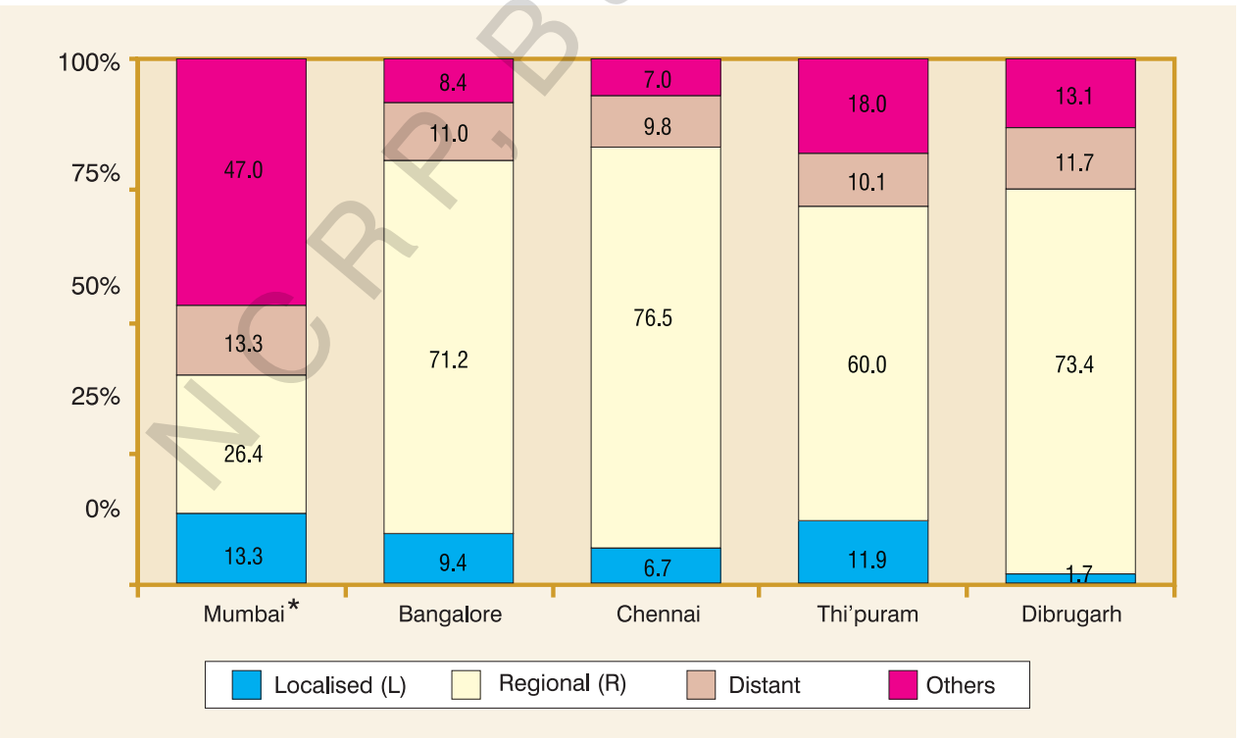
** Only 2004-05 data.*

Fig. 6.1: Stack (100%) Diagram showing Proportion (%) of Patients according to Clinical Extent of Disease (2004-2006)

Males



Females



patterns of care and survival studies commenced by HBCRs is expected to overcome this issue. The above may be kept in mind, while observing or comparing the relative proportion of Clinical Extent of Disease among the HBCRs.

Chapter 7

TREATMENT ONLY AT REPORTING INSTITUTION

This is the most important category of broad treatment groups presented in chapter 5, since it best represents the contribution to the treatment aspect of patient care of a given institution.

Table 7.1 gives a summary of the number of patients treated during the period and the total number of treatment procedures instituted. These ratios are comparable between registries located at regional cancer centres. The ratio is slightly lower at Dibrugarh which is in a medical college setup. Table 7.1 is further diagrammatically represented in Figure 7.1.

TYPES OF TREATMENT

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

Single modality of therapy ranged between 57.2% in Mumbai to 89.6% in Dibrugarh in males. In females, the lowest and highest percentages were observed in Mumbai (47.7%) and Dibrugarh (62.2%) respectively.

Table 7.1: Total Number of Cancer Patients (Pts.) Treated, Total Number of Treatment Procedures (Proc.) Performed and Procedures / Patient Ratio (2004-2006)

Registry	Males			Females		
	Total Pts.	Total Proc.	Ratio	Total Pts.	Total Proc.	Ratio
Mumbai*	5889	8603	1.5	4396	7970	1.8
Bangalore	4405	5843	1.3	6221	9515	1.5
Chennai	3582	5141	1.4	5330	9926	1.9
Thi'puram	7806	10601	1.4	6030	9886	1.6
Dibrugarh	1523	1690	1.1	1154	1007	0.9

** Only 2004-05 data.*

Fig. 7.1: Procedure - Patient Ratio (Patients Treated only at Reporting Institution) - 2004-2006

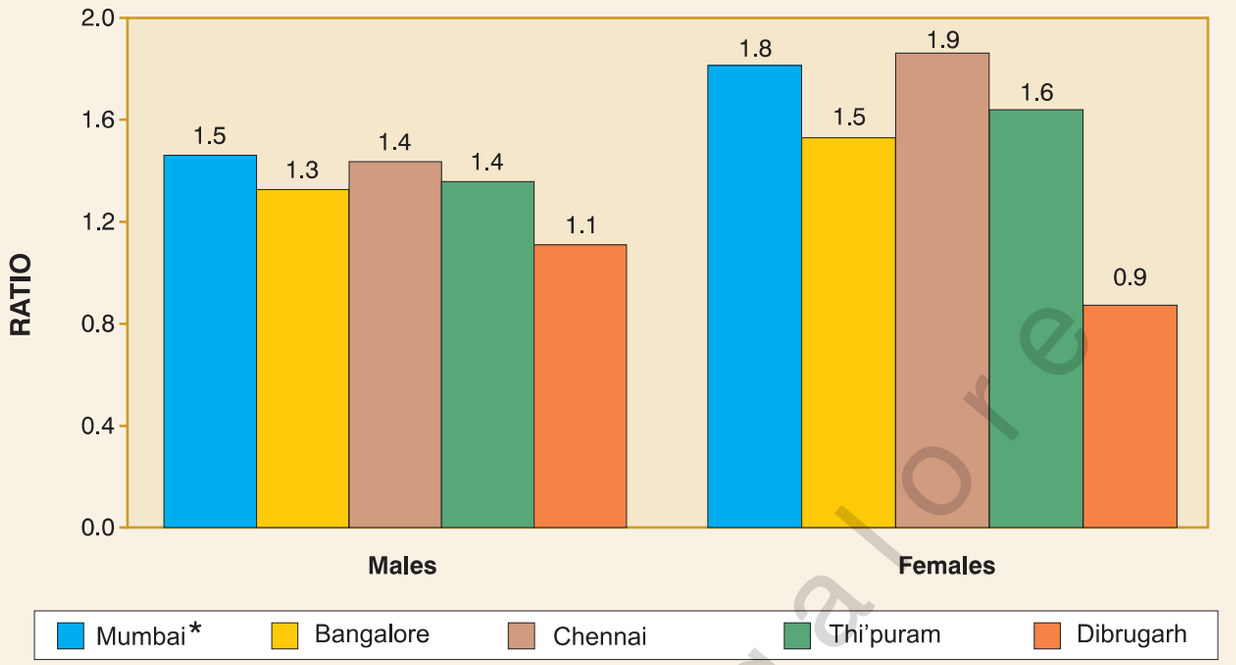


Fig. 7.2: Stack (100%) Diagram showing Proportion of Different Types of Treatment (Patients Treated only at Reporting Institution) - 2004-2006

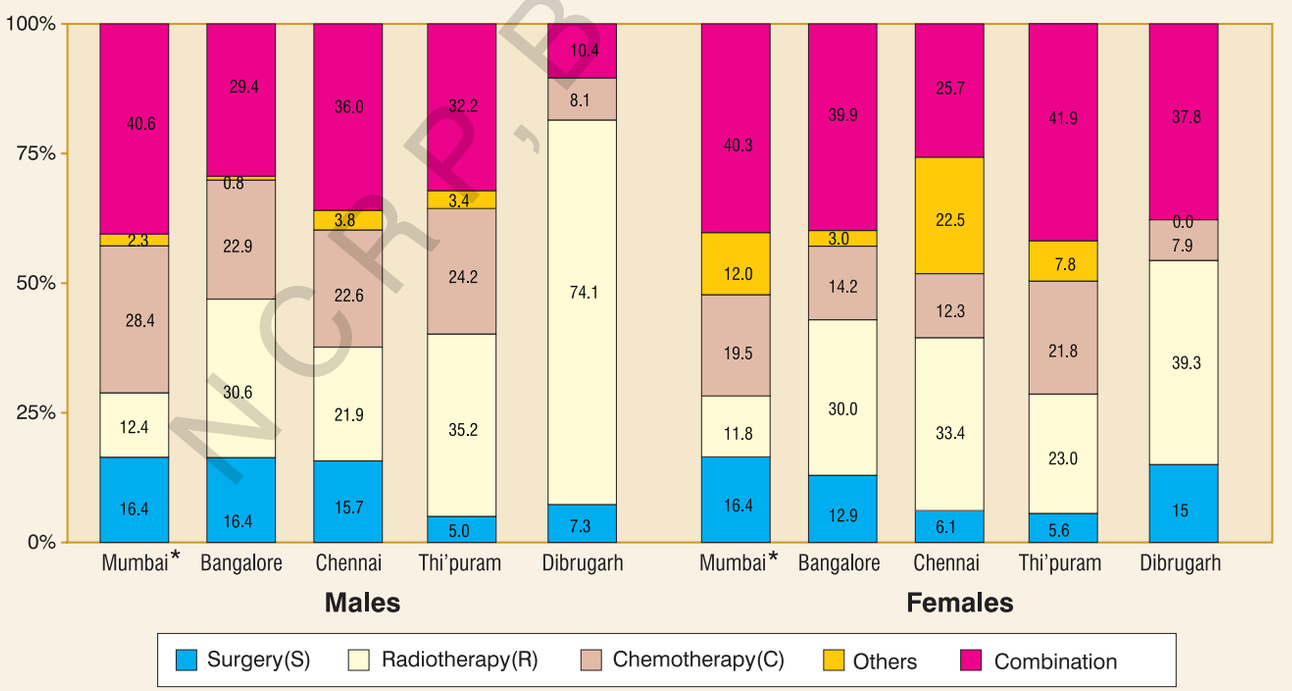


Table 7.2: Number (#) and Relative Proportion (%) of Patients according to Type of Treatment given (2004-2006)

Males

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**5889**	**100.0**	**4405**	**100.0**	**3582**	**100.0**	**7806**	**100.0**	**1523**	**100.0**
Specific Treatments										
Surgery (S)	966	16.4	720	16.3	563	15.7	391	5.0	111	7.3
Radiotherapy (R)	732	12.4	1347	30.6	785	21.9	2744	35.2	1129	74.1
Chemotherapy (C)	1669	28.3	1010	22.9	810	22.6	1891	24.2	124	8.1
S+R	905	15.4	414	9.4	292	8.2	381	4.9	71	4.7
S+C	288	4.9	150	3.4	125	3.5	143	1.8	35	2.3
R+C	937	15.9	634	14.4	735	20.5	1740	22.3	46	3.0
S+R+C	258	4.4	97	2.2	136	3.8	248	3.2	7	0.5
Others	134	2.3	33	0.7	136	3.8	268	3.4	-	-
Modality of Therapy#										
Single	3367	57.2	3077	69.9	2158	60.2	5026	64.4	1364	89.6
Combination	2388	40.6	1295	29.4	1288	36.0	2512	32.2	159	10.4

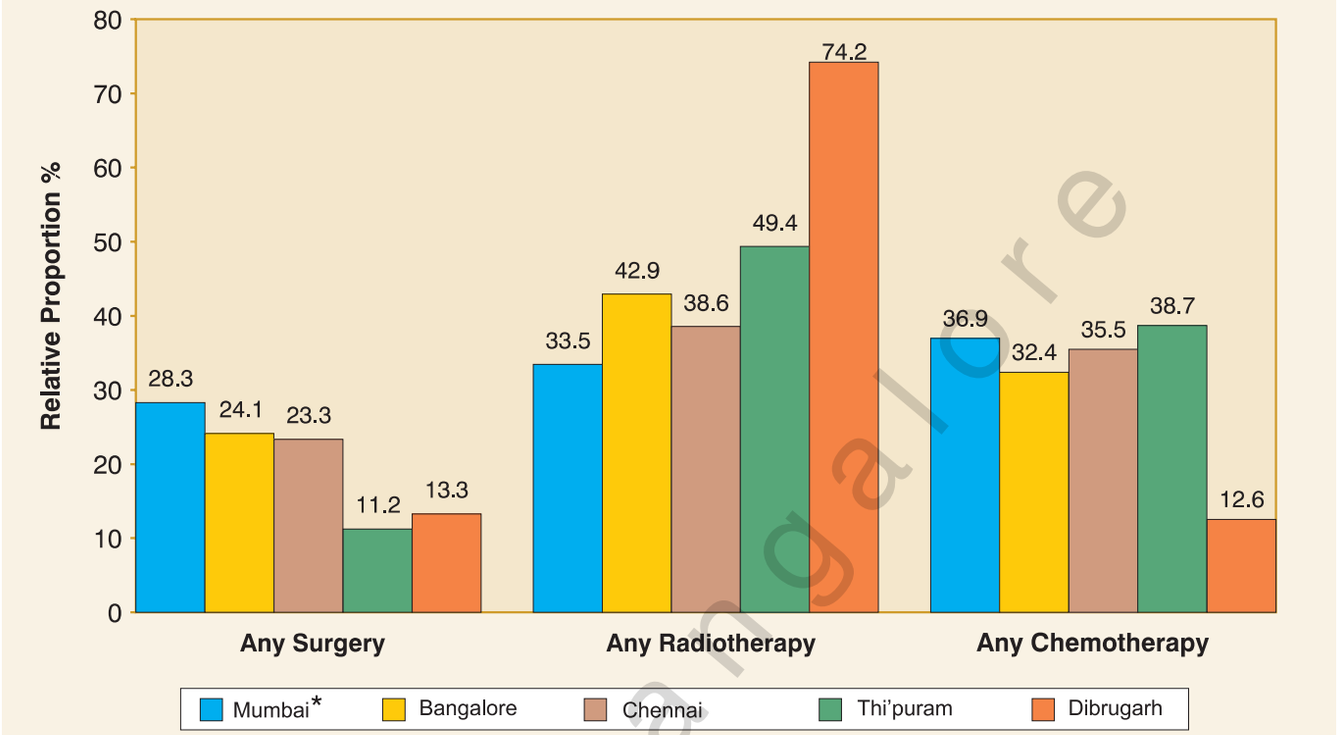
Females

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**4396**	**100.0**	**6221**	**100.0**	**5330**	**100.0**	**6030**	**100.0**	**1154**	**100.0**
Specific Treatments										
Surgery (S)	723	16.4	803	12.9	325	6.1	335	5.6	173	15.0
Radiotherapy (R)	518	11.8	1866	30.0	1779	33.4	1389	23.0	454	39.3
Chemotherapy (C)	857	19.5	885	14.2	657	12.3	1314	21.8	91	7.9
S+R	354	8.1	521	8.4	242	4.5	364	6.0	43	3.7
S+C	351	8.0	515	8.3	128	2.4	475	7.9	86	7.5
R+C	542	12.3	1015	16.3	709	13.3	1120	18.6	15	1.3
S+R+C	523	11.9	429	6.9	292	5.5	565	9.4	292	25.3
Others	528	12.0	187	3.0	1198	22.5	468	7.8	-	-
Modality of Therapy#										
Single	2098	47.7	3554	57.1	2761	51.8	3038	50.4	718	62.2
Combination	1770	40.3	2480	39.9	1371	25.7	2524	41.9	436	37.8

** Only 2004 data; # Excludes specific treatment classified as 'Others'*

Fig. 7.3: Proportion of Type of Treatment (Patients Treated only at Reporting Institution) - 2004-2006

Males



Females

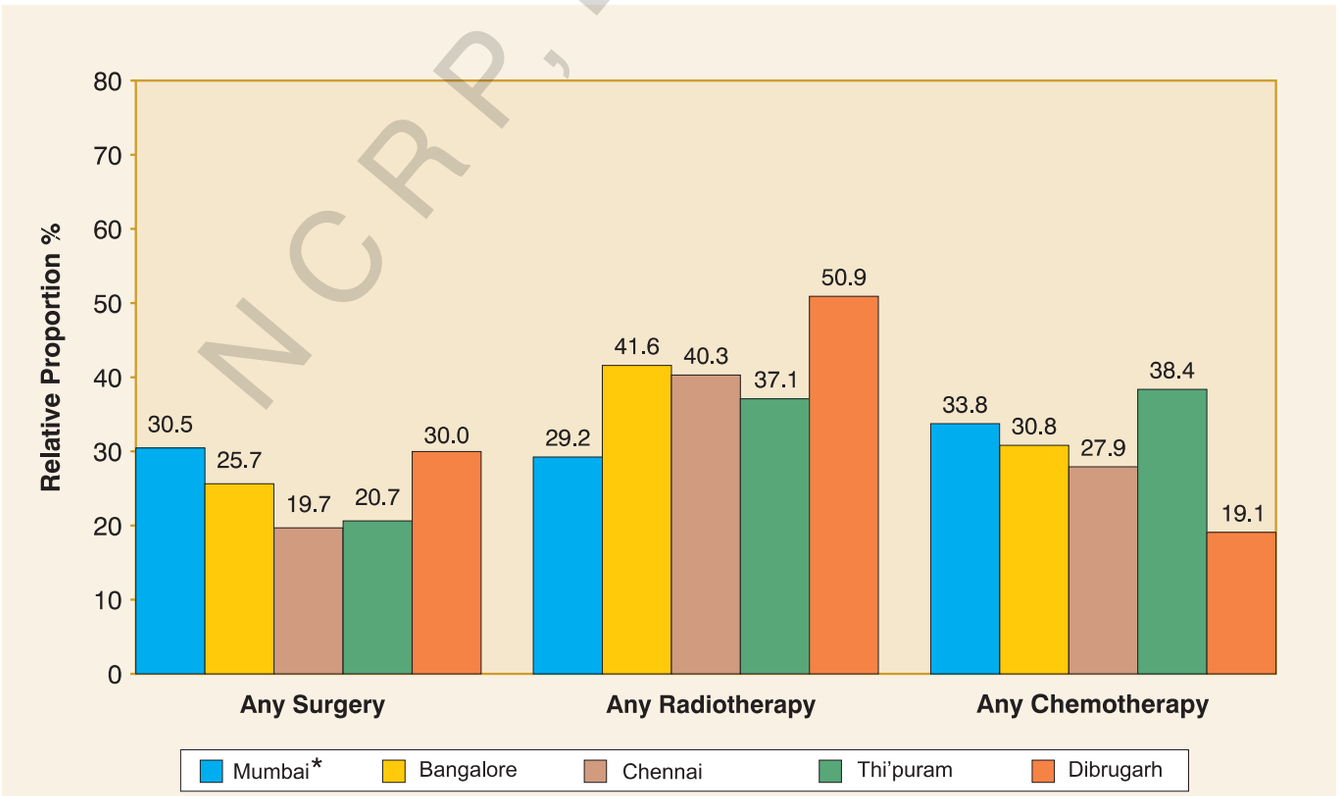


Table 7.3 and Fig. 7.3 present the total treatment procedures according to specific treatment. In males, radiotherapy was the predominant form of treatment modality in all registries, except Mumbai. In females, radiotherapy was the pre-dominant form in the registries of Chennai, Bangalore and Dibrugarh.

Tables 7.4(a) and 7.4(b) give the number and relative proportion of various types of treatment within different categories of clinical extent of disease (viz. Localised, Regional, Distant and Others).

Tables 7.5(a) and 7.5(b) provide the number and proportion of specific types of treatment relative to all patients within each category of clinical extent of disease.

Table 7.3: Number (#) and Relative Proportion (%) of Cancer Patients according to Any Specific Treatment at Reporting Institution relative to all Treatment Procedures (2004-2006)

Registry	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Procedures
	#	%	#	%	#	%	#	%	
MALES									
Mumbai*	2431	28.3	2879	33.5	3178	36.9	115	1.3	8603
Bangalore	1409	24.1	2508	42.9	1893	32.4	33	0.6	5843
Chennai	1199	23.3	1982	38.6	1824	35.5	136	2.6	5141
Thi'puram	1169	11.2	5137	49.4	4025	38.7	78	0.7	10409
Dibrugarh	224	13.3	1253	74.2	212	12.6	0	0.0	1689
FEMALES									
Mumbai*	2431	30.5	2330	29.2	2690	33.8	519	6.5	7970
Bangalore	2440	25.7	3956	41.6	2931	30.8	184	1.9	9511
Chennai	1956	19.7	4000	40.3	2772	27.9	1198	12.1	9926
Thi'puram	2024	20.7	3635	37.1	3759	38.4	380	3.9	9798
Dibrugarh	302	30.0	512	50.9	192	19.1	0	0.0	1006

** Only 2004-05 data.*

Table 7.4(a): Number (#) and Relative Proportion (%) of Types of Treatment according to Clinical Extent of Disease - Males (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	449	39.4	130	37.5	71	12.9	129	18.0	10	27.8
Radiotherapy (R)	138	12.1	83	23.9	257	46.7	353	49.3	20	55.6
Chemotherapy (C)	61	5.3	27	7.8	6	1.1	30	4.2	0	0.0
S+R	197	17.3	47	13.5	99	18.0	38	5.3	5	13.9
S+C	116	10.2	16	4.6	4	0.7	38	5.3	1	2.8
R+C	69	6.0	29	8.4	103	18.7	91	12.7	0	0.0
S+R+C	84	7.4	9	2.6	10	1.8	24	3.4	0	0.0
Others	27	2.4	6	1.7	0	0.0	13	1.8	0	0.0
All Treatments	**1141**	**100.0**	**347**	**100.0**	**550**	**100.0**	**716**	**100.0**	**36**	**100.0**
Regional										
Surgery (S)	434	16.8	535	19.4	462	24.0	250	6.1	87	7.3
Radiotherapy (R)	391	15.1	1065	38.6	456	23.7	1632	39.8	927	77.9
Chemotherapy (C)	330	12.8	272	9.9	119	6.2	471	11.5	44	3.7
S+R	668	25.9	330	12.0	186	9.7	321	7.8	58	4.9
S+C	115	4.5	106	3.8	99	5.1	86	2.1	27	2.3
R+C	472	18.3	349	12.6	410	21.3	1040	25.3	39	3.3
S+R+C	152	5.9	80	2.9	121	6.3	216	5.3	7	0.6
Others	19	0.7	24	0.9	71	3.7	88	2.1	1	0.1
All Treatments	**2581**	**100.0**	**2761**	**100.0**	**1924**	**100.0**	**4104**	**100.0**	**1190**	**100.0**
Distant										
Surgery (S)	31	3.8	39	9.9	27	13.0	9	0.8	10	13.9
Radiotherapy (R)	128	15.6	133	33.7	22	10.6	529	47.6	22	30.6
Chemotherapy (C)	402	49.1	92	23.3	47	22.7	237	21.3	22	30.6
S+R	13	1.6	14	3.5	6	2.9	12	1.1	3	4.2
S+C	42	5.1	83	21.0	11	5.3	30	2.7	14	19.4
R+C	124	15.1	28	7.1	28	13.5	203	18.3	1	1.4
S+R+C	14	1.7	5	1.3	2	1.0	3	0.3	0	0.0
Others	65	7.9	1	0.3	64	30.9	88	7.9	0	0.0
All Treatments	**819**	**100.0**	**395**	**100.0**	**207**	**100.0**	**1111**	**100.0**	**72**	**100.0**
Others										
Surgery (S)	52	3.9	16	1.6	3	0.3	3	0.2	4	1.7
Radiotherapy (R)	75	5.6	66	6.7	50	5.6	230	12.2	160	68.7
Chemotherapy (C)	876	65.0	619	63.3	638	71.5	1153	60.9	58	24.9
S+R	27	2.0	23	2.4	1	0.1	10	0.5	5	2.1
S+C	15	1.1	21	2.1	3	0.3	5	0.3	0	0.0
R+C	272	20.2	228	23.3	194	21.7	406	21.4	6	2.6
S+R+C	8	0.6	3	0.3	3	0.3	5	0.3	0	0.0
Others	23	1.7	2	0.2	0	0.0	81	4.3	0	0.0
All Treatments	**1348**	**100.0**	**978**	**100.0**	**892**	**100.0**	**1893**	**100.0**	**233**	**100.0**

** Only 2004-05 data.*

Table 7.4(b): Number (#) and Relative Proportion (%) of Types of Treatment according to Clinical Extent of Disease - Females (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	377	33.8	163	25.9	41	6.2	123	17.5	7	41.2
Radiotherapy (R)	61	5.5	115	18.3	253	38.1	173	24.7	5	29.4
Chemotherapy (C)	41	3.7	36	5.7	21	3.2	18	2.6	0	0.0
S+R	125	11.2	71	11.3	106	16.0	80	11.4	1	5.9
S+C	97	8.7	65	10.3	18	2.7	85	12.1	4	23.5
R+C	64	5.7	85	13.5	64	9.6	80	11.4	0	0.0
S+R+C	162	14.5	44	7.0	32	4.8	72	10.3	0	0.0
Others	188	16.9	51	8.1	129	19.4	70	10.0	0	0.0
All Treatments	**1115**	**100.0**	**630**	**100.0**	**664**	**100.0**	**701**	**100.0**	**17**	**100.0**
Regional										
Surgery (S)	268	13.5	591	12.5	260	6.7	196	5.5	150	23.0
Radiotherapy (R)	322	16.2	1614	34.2	1471	37.8	982	27.6	360	55.2
Chemotherapy (C)	161	8.1	448	9.5	225	5.8	291	8.2	26	4.0
S+R	208	10.5	424	9.0	135	3.5	268	7.5	38	5.8
S+C	133	6.7	356	7.5	95	2.4	357	10.0	68	10.4
R+C	301	15.2	792	16.8	486	12.5	729	20.5	10	1.5
S+R+C	320	16.1	366	7.7	253	6.5	478	13.4	0	0.0
Others	269	13.6	132	2.8	965	24.8	255	7.2	0	0.0
All Treatments	**1982**	**100.0**	**4723**	**100.0**	**3890**	**100.0**	**3556**	**100.0**	**652**	**100.0**
Distant										
Surgery (S)	41	5.7	38	12.2	23	7.2	13	2.5	14	16.5
Radiotherapy (R)	100	14.0	105	33.7	37	11.6	127	24.7	29	34.1
Chemotherapy (C)	313	43.8	97	31.1	95	29.9	164	31.8	29	34.1
S+R	13	1.8	12	3.8	1	0.3	12	2.3	2	2.4
S+C	107	15.0	7	2.2	19	6.0	14	2.7	7	8.2
R+C	57	8.0	32	10.3	36	11.3	89	17.3	4	4.7
S+R+C	32	4.5	16	5.1	6	1.9	12	2.3	0	0.0
Others	51	7.1	5	1.6	101	31.8	84	16.3	0	0.0
All Treatments	**714**	**100.0**	**312**	**100.0**	**318**	**100.0**	**515**	**100.0**	**85**	**100.0**
Others										
Surgery (S)	37	6.3	11	2.3	1	0.2	3	0.2	2	2.0
Radiotherapy (R)	35	6.0	32	6.6	18	3.9	107	8.6	60	58.8
Chemotherapy (C)	342	58.5	304	63.1	316	67.8	841	67.7	36	35.3
S+R	8	1.4	14	2.9	0	0.0	4	0.3	2	2.0
S+C	14	2.4	11	2.3	4	0.9	3	0.2	0	0.0
R+C	120	20.5	106	22.0	123	26.4	222	17.9	1	1.0
S+R+C	9	1.5	3	0.6	1	0.2	3	0.2	0	0.0
Others	20	3.4	1	0.2	3	0.6	59	4.8	1	1.0
All Treatments	**585**	**100.0**	**482**	**100.0**	**466**	**100.0**	**1242**	**100.0**	**102**	**100.0**

** Only 2004-05 data.*

Table 7.5(a): Number (#) and Proportion (%) of any Specific Treatment relative to all Treated Patients according to Clinical Extent of Disease - Males (2004-2006)

Registry	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Patients
	#	%	#	%	#	%	#	%	
LOCALISED									
Mumbai*	851	95.9	504	56.8	337	38.0	6	0.7	1698
Bangalore	208	45.3	169	36.8	82	17.9	0	0.0	459
Chennai	184	23.7	469	60.4	123	15.8	1	0.1	777
Thi'puram	230	24.7	509	54.6	183	19.6	10	1.1	932
Dibrugarh	16	38.1	25	59.5	1	2.4	0	0.0	42
REGIONAL									
Mumbai*	1377	33.1	1697	40.8	1078	25.9	5	0.1	4157
Bangalore	1072	28.8	1839	49.4	807	21.7	1	0.0	3719
Chennai	929	32.2	1190	41.2	758	26.3	8	0.3	2885
Thi'puram	876	14.6	3221	53.8	1813	30.3	76	1.3	5986
Dibrugarh	179	13.5	1031	77.6	117	8.8	1	0.1	1328
DISTANT									
Mumbai*	101	9.8	293	28.5	589	57.4	44	4.3	1027
Bangalore	65	17.2	180	47.6	132	34.9	1	0.3	378
Chennai	76	26.8	75	26.4	105	37.0	28	9.9	284
Thi'puram	40	3.0	756	56.8	460	34.6	74	5.6	1330
Dibrugarh	20	26.3	26	34.2	30	39.5	0	0.0	76
OTHERS									
Mumbai*	102	6.1	385	23.2	1173	70.6	1	0.1	1661
Bangalore	64	5.1	320	25.5	872	69.4	0	0.0	1256
Chennai	10	0.9	248	22.6	838	76.5	0	0.0	1096
Thi'puram	23	1.0	651	28.0	1569	67.5	81	3.5	2324
Dibrugarh	9	3.7	171	70.1	64	26.2	0	0.0	244

** Only 2004-05 data.*

Table 7.5(b): Number (#) and Proportion (%) of any Specific Treatment relative to all Treated Patients according to Clinical Extent of Disease - Females (2004-2006)

Registry	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total Patients
	#	%	#	%	#	%	#	%	
LOCALISED									
Mumbai*	947	48.0	542	27.5	484	24.5	1	0.1	1974
Bangalore	389	40.2	335	34.6	240	24.8	3	0.3	967
Chennai	312	28.3	557	50.5	231	20.9	4	0.4	1104
Thi'puram	425	36.4	434	37.2	304	26.0	5	0.4	1168
Dibrugarh	12	54.5	6	27.3	4	18.2	0	0.0	22
REGIONAL									
Mumbai*	1187	31.9	1378	37.0	1154	31.0	6	0.2	3725
Bangalore	1859	25.8	3299	45.8	2036	28.3	4	0.1	7198
Chennai	1580	23.8	3166	47.7	1872	28.2	17	0.3	6635
Thi'puram	1510	24.4	2601	42.0	2037	32.9	39	0.6	6187
Dibrugarh	256	33.3	408	53.1	104	13.5	0	0.0	768
DISTANT									
Mumbai*	217	21.6	230	22.9	556	55.3	2	0.2	1005
Bangalore	152	27.6	166	30.2	231	42.0	1	0.2	550
Chennai	57	13.4	134	31.6	223	52.6	10	2.4	424
Thi'puram	76	10.7	262	36.8	348	48.9	25	3.5	711
Dibrugarh	30	26.8	35	31.3	47	42.0	0	0.0	112
OTHERS									
Mumbai*	80	10.6	180	23.8	496	65.6	0	0.0	756
Bangalore	40	6.5	156	25.2	424	68.4	0	0.0	620
Chennai	7	1.2	143	24.0	446	74.7	1	0.2	597
Thi'puram	13	0.9	338	22.9	1070	72.4	57	3.9	1478
Dibrugarh	4	3.8	63	60.0	37	35.2	1	1.0	105

** Only 2004-05 data.*

Chapter 8

HISTOLOGIC TYPES OF SELECTED SITES OF CANCER

The number and relative proportion of the specific histologic types of cancer (for Microscopically Diagnosed Cases) as appropriate for the selected anatomical sites of cancer is given below.

Tongue (ICD-10: C01-C02)

Table 8.1: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	50	7.9	140	24.9	13	1.9	30	3.6	27	28.1
Carcinomas	4	0.6	47	8.3	114	17.0	14	1.7	2	2.1
Verrucous Carcinoma	1	0.2		0.0	3	0.4	2	0.2		0.0
Squamous Cell Carc.	568	89.7	370	65.7	536	79.8	783	93.8	66	68.8
Adeno Carcinoma	3	0.5	3	0.5	3	0.4	2	0.2	1	1.0
Others	7	1.1	3	0.5	3	0.4	4	0.5	0	0.0
All Histologic Types	**633**	**100.0**	**563**	**100.0**	**672**	**100.0**	**835**	**100.0**	**96**	**100.0**
FEMALES										
Neoplasm Malignant	6	3.5	8	5.0	4	2.2	4	1.2	4	14.8
Carcinomas	0	0.0	27	17.0	18	10.1	3	0.9	0	0.0
Verrucous Carcinoma	0	0.0	0	0.0	0	0.0	2	0.6	0	0.0
Squamous Cell Carc.	162	94.7	121	76.1	152	85.4	330	96.8	23	85.2
Adeno Carcinoma	2	1.2	2	1.3	2	1.1	2	0.6	0	0.0
Others	1	0.6	1	0.6	2	1.1		0.0	0	0.0
All Histologic Types	**171**	**100.0**	**159**	**100.0**	**178**	**100.0**	**341**	**100.0**	**27**	**100.0**

**Only 2004-05 data*

Mouth (ICD-10: C03-C06)

Table 8.2: Number (#) and Relative Proportion (%) of Different Histologic Types(2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	17	1.4	35	6.3	6	0.7	24	2.2	15	11.0
Carcinomas	7	0.6	52	9.4	133	16.1	10	0.9	4	2.9
Verrucous Carcinoma	11	0.9	14	2.5	6	0.7	20	1.8	1	0.7
Squamous Cell Carc.	1152	95.0	441	79.5	654	79.3	1030	93.6	115	84.6
Adeno Carcinoma	14	1.2	3	0.5	15	1.8	10	0.9	0	0.0
Others	11	0.9	10	1.8	11	1.3	6	0.5	1	0.7
All Histologic Types	**1212**	**100.0**	**555**	**100.0**	**825**	**100.0**	**1100**	**100.0**	**136**	**100.0**
FEMALES										
Neoplasm Malignant	4	1.1	22	1.9	5	0.9	13	2.1	6	11.1
Carcinomas	4	1.1	92	7.9	88	16.6	2	0.3	0	0.0
Verrucous Carcinoma	3	0.8	26	2.2	2	0.4	17	2.8	2	3.7
Squamous Cell Carc.	332	94.1	998	86.0	413	77.9	561	91.2	45	83.3
Adeno Carcinoma	6	1.7	10	0.9	8	1.5	15	2.4	1	1.9
Others	4	1.1	12	1.0	14	2.6	7	1.1	0	0.0
All Histologic Types	**353**	**100.0**	**1160**	**100.0**	**530**	**100.0**	**615**	**100.0**	**54**	**100.0**

Pharynx (ICD-10: C09-C10 and C12-C14)

Table 8.3: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	74	9.8	474	33.0	33	3.8	107	14.1	103	21.9
Carcinomas	15	2.0	74	5.2	154	17.5	20	2.6	1	0.2
Verrucous Carcinoma	0	0.0	1	0.1	0	0.0	1	0.1	0	0.0
Squamous Cell Carc.	664	88.1	878	61.1	689	78.3	626	82.5	366	77.9
Adeno Carcinoma	0	0.0	3	0.2	3	0.3	4	0.5	0	0.0
Others	1	0.1	6	0.4	1	0.1	1	0.1	0	0.0
All Histologic Types	**754**	**100.0**	**1436**	**100.0**	**880**	**100.0**	**759**	**100.0**	**470**	**100.0**
FEMALES										
Neoplasm Malignant	12	8.7	55	23.2	6	1.8	7	7.4	12	18.2
Carcinomas	1	0.7	9	3.8	65	19.2	3	3.2	0	0.0
Verrucous Carcinoma	0	0.0	0	0.0	0	0.0	0	0.0	1	1.5
Squamous Cell Carc.	125	90.6	172	72.6	268	79.1	83	88.3	53	80.3
Adeno Carcinoma	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	0	0.0	1	0.4	0	0.0	1	1.1	0	0.0
All Histologic Types	**138**	**100.0**	**237**	**100.0**	**339**	**100.0**	**94**	**100.0**	**66**	**100.0**

**Only 2004-05 data*

Oesophagus (ICD-10: C15)

Table 8.4: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	11	2.5	29	3.6	23	3.0	18	3.0	7	2.6
Carcinomas	26	5.8	63	7.9	117	15.0	42	7.0	4	1.5
Squamous Cell Carc.	356	79.6	627	78.6	511	65.6	443	73.8	241	90.9
Adeno Carcinoma	53	11.9	71	8.9	116	14.9	93	15.5	13	4.9
Others	1	0.2	8	1.0	12	1.5	4	0.7	0	0.0
All Histologic Types	**447**	**100.0**	**798**	**100.0**	**779**	**100.0**	**600**	**100.0**	**265**	**100.0**
FEMALES										
Neoplasm Malignant	5	2.1	20	3.0	7	1.5	5	2.6	0	0.0
Carcinomas	14	6.0	29	4.4	59	12.7	10	5.3	2	1.5
Squamous Cell Carc.	205	87.6	585	88.9	358	77.3	156	82.1	130	95.6
Adeno Carcinoma	9	3.8	23	3.5	34	7.3	17	8.9	4	2.9
Others	1	0.4	1	0.2	5	1.1	2	1.1	0	0.0
All Histologic Types	**234**	**100.0**	**658**	**100.0**	**463**	**100.0**	**190**	**100.0**	**136**	**100.0**

Stomach (ICD-10: C16)

Table 8.5: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	18	6.3	33	6.7	45	5.0	21	4.2	7	12.7
Carcinomas	10	3.5	49	9.9	184	20.5	39	7.7	4	7.3
Adeno Carcinoma	193	67.0	321	65.0	546	60.7	368	72.9	41	74.5
Papillary Adeno Carc.	0	0.0	4	0.8	4	0.4	4	0.8	0	0.0
Mucinous Adeno Carc.	7	2.4	9	1.8	41	4.6	31	6.1	3	5.5
Signet Ring Cell Carc.	57	19.8	73	14.8	65	7.2	36	7.1	0	0.0
Sarcoma	0	0.0	0	0.0	5	0.6	0	0.0	0	0.0
Others	3	1.0	5	1.0	9	1.0	6	1.2	0	0.0
All Histologic Types	**288**	**100.0**	**494**	**100.0**	**899**	**100.0**	**505**	**100.0**	**55**	**100.0**
FEMALES										
Neoplasm Malignant	9	6.6	22	9.2	21	4.9	4	3.4	0	0.0
Carcinomas	3	2.2	18	7.6	87	20.4	9	7.6	3	10.3
Adeno Carcinoma	78	57.4	146	61.3	234	54.9	71	60.2	23	79.3
Papillary Adeno Carc.	0	0.0	0	0.0	3	0.7	2	1.7	0	0.0
Mucinous Adeno Carc.	0	0.0	4	1.7	26	6.1	7	5.9	2	6.9
Signet Ring Cell Carc.	46	33.8	47	19.7	50	11.7	21	17.8	1	3.4
Sarcoma	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	0	0.0	1	0.4	5	1.2	4	3.4	0	0.0
All Histologic Types	**136**	**100.0**	**238**	**100.0**	**426**	**100.0**	**118**	**100.0**	**29**	**100.0**

**Only 2004-05 data*

Lung (ICD-10: C33-C34)

Table 8.6: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	92	13.2	128	19.7	112	17.1	512	34.7	9	16.1
Large Cell Carcinoma	0	0.0	22	3.4	4	0.6	14	0.9	0	0.0
Undiff/Anaplastic Carc.	0	0.0	3	0.5	3	0.5	1	0.1	1	1.8
Small Cell Carcinoma	87	12.5	81	12.5	42	6.4	95	6.4	3	5.4
Non Small Cell Carc.	142	20.4	177	27.2	83	12.7	264	17.9	0	0.0
Squamous Cell Carc.	164	23.6	84	12.9	126	19.3	249	16.9	22	39.3
Other Carcinomas	16	2.3	38	5.8	169	25.8	76	5.2	1	1.8
Adeno Carcinoma	194	27.9	112	17.2	111	17.0	261	17.7	20	35.7
Others	1	0.1	5	0.8	4	0.6	2	0.1	0	0.0
All Histologic Types	**696**	**100.0**	**650**	**100.0**	**654**	**100.0**	**1474**	**100.0**	**56**	**100.0**
FEMALES										
Neoplasm Malignant	49	22.3	31	19.9	33	18.3	66	28.7	2	18.2
Large Cell Carcinoma		0.0	4	2.6	0	0.0	0	0.0	0	0.0
Undiff/Anaplastic Carc.	1	0.5	1	0.6	1	0.6	0	0.0	0	0.0
Small Cell Carcinoma	11	5.0	11	7.1	5	2.8	4	1.7	3	27.3
Non Small Cell Carc.	40	18.2	31	19.9	21	11.7	32	13.9	0	0.0
Squamous Cell Carc.	25	11.4	5	3.2	12	6.7	13	5.7	3	27.3
Other Carcinomas	4	1.8	11	7.1	41	22.8	12	5.2	1	9.1
Adeno Carcinoma	88	40.0	58	37.2	66	36.7	101	43.9	2	18.2
Others	2	0.9	4	2.6	1	0.6	2	0.9	0	0.0
All Histologic Types	**220**	**100.0**	**156**	**100.0**	**180**	**100.0**	**230**	**100.0**	**11**	**100.0**

Bone (ICD-10: C40-C41)

Table 8.7: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	4	2.1	2	1.2	7	3.3	2	1.4	1	5.6
Sarcomas	3	1.6	24	14.6	26	12.3	7	5.1	6	33.3
Osteosarcomas	123	63.7	79	48.2	95	44.8	77	55.8	3	16.7
Chondrosarcomas	27	14.0	12	7.3	25	11.8	12	8.7	3	16.7
Giant Cell Tumour	0	0.0	5	3.0	14	6.6	0	0.0	1	5.6
Ewing's Sarcoma	24	12.4	28	17.1	42	19.8	35	25.4	1	5.6
Chondroma	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	12	6.2	14	8.5	3	1.4	5	3.6	3	16.7
All Histologic Types	**193**	**100.0**	**164**	**100.0**	**212**	**100.0**	**138**	**100.0**	**18**	**100.0**
FEMALES										
Neoplasm Malignant	2	1.8	3	3.3	3	2.4	1	1.3	2	15.4
Sarcomas	0	0.0	13	14.1	6	4.9	3	3.9	5	38.5
Osteosarcomas	72	65.5	34	37.0	72	58.5	45	59.2	1	7.7
Chondrosarcomas	13	11.8	8	8.7	12	9.8	8	10.5	1	7.7
Giant Cell Tumour	1	0.9	5	5.4	6	4.9	1	1.3	0	0.0
Ewing's Sarcoma	19	17.3	14	15.2	20	16.3	15	19.7	2	15.4
Chondroma	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	3	2.7	15	16.3	4	3.3	3	3.9	2	15.4
All Histologic Types	**110**	**100.0**	**92**	**100.0**	**123**	**100.0**	**76**	**100.0**	**13**	**100.0**

**Only 2004-05 data*

Soft Tissue (ICD 10: C47 & C49)

Table 8.8: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	11	2.2	3	2.4	7	3.2	4	2.4	0	0.0
Sarcoma NOS	46	9.3	17	13.8	65	29.5	20	11.8	2	15.4
Spindle Cell Sarcoma	87	17.7	22	17.9	42	19.1	49	29.0	1	7.7
Pleomorphic Cell Sarc.	32	6.5	18	14.6	15	6.8	25	14.8	0	0.0
Fibrous Histiocytoma	18	3.7	2	1.6	9	4.1	5	3.0	2	15.4
Fibrosarcoma	5	1.0	4	3.3	4	1.8	3	1.8	2	15.4
Liposarcoma	34	6.9	6	4.9	14	6.4	13	7.7	2	15.4
Leiomyosarcoma	22	4.5	0	0.0	7	3.2	4	2.4	1	7.7
Rhabdomyosarcoma	62	12.6	8	6.5	19	8.6	14	8.3	1	7.7
Synovial Sarcoma	55	11.2	16	13.0	21	9.5	10	5.9	0	0.0
Neurofibrosarcoma	20	4.1	4	3.3	1	0.5	7	4.1	0	0.0
Neurilemmona	0	0.0	2	1.6	1	0.5	1	0.6	0	0.0
Others	100	20.3	21	17.1	15	6.8	14	8.3	2	15.4
All Histologic Types	**492**	**100.0**	**123**	**100.0**	**220**	**100.0**	**169**	**100.0**	**13**	**100.0**
FEMALES										
Neoplasm Malignant	4	1.6	3	4.1	1	0.9	0	0.0	3	42.9
Sarcoma, NOS	27	11.0	6	8.1	36	32.1	13	13.5	2	28.6
Spindle Cell Sarcoma	46	18.7	16	21.6	23	20.5	26	27.1	1	14.3
Pleomorphic Cell Sarc.	19	7.7	7	9.5	10	8.9	13	13.5	0	0.0
Fibrous Histiocytoma	2	0.8	0	0.0	5	4.5	5	5.2	0	0.0
Fibrosarcoma	2	0.8	2	2.7	2	1.8	0	0.0	0	0.0
Liposarcoma	11	4.5	6	8.1	6	5.4	3	3.1	0	0.0
Leiomyosarcoma	14	5.7	1	1.4	6	5.4	1	1.0	0	0.0
Rhabdomyosarcoma	25	10.2	4	5.4	5	4.5	5	5.2	1	14.3
Synovial Sarcoma	33	13.4	13	17.6	5	4.5	9	9.4	0	0.0
Neurofibrosarcoma	6	2.4	5	6.8	2	1.8	6	6.3	0	0.0
Neurilemmona	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0
Others	57	23.2	10	13.5	11	9.8	15	15.6	0	0.0
All Histologic Types	**246**	**100.0**	**74**	**100.0**	**112**	**100.0**	**96**	**100.0**	**7**	**100.0**

**Only 2004-05 data*

Female Breast (ICD-10: C50)

Table 8.9: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Neoplasm Malignant	138	3.5	49	2.8	36	1.3	27	0.9	7	4.8
Carcinomas	23	0.6	69	3.9	254	9.2	189	6.2	5	3.4
Papillary Carcinoma	42	1.1	12	0.7	6	0.2	11	0.4	1	0.7
Squamous Cell Carc.	2	0.1	11	0.6	4	0.1	0	0.0	0	0.0
Adeno Carcinoma NOS	14	0.4	20	1.1	10	0.4	4	0.1	1	0.7
Mucinous Adeno Carc.	18	0.5	19	1.1	36	1.3	31	1.0	2	1.4
Infil. Duct Carcinoma	3531	90.2	1495	85.1	2317	83.5	2710	88.7	121	82.9
Medullary Carcinoma	1	0.0	14	0.8	29	1.0	1	0.0	3	2.1
Lobular Carcinoma	65	1.7	32	1.8	42	1.5	48	1.6	3	2.1
Paget's Disease	17	0.4	4	0.2	2	0.1	5	0.2	0	0.0
Cystosarc. Phyllodes	23	0.6	20	1.1	25	0.9	23	0.8	2	1.4
Others	39	1.0	11	0.6	13	0.5	7	0.2	1	0.7
All Histologic Types	**3913**	**100.0**	**1756**	**100.0**	**2774**	**100.0**	**3056**	**100.0**	**146**	**100.0**

Cervix (ICD-10: C53)

Table 8.10: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Neoplasm Malignant	32	1.5	30	1.0	24	0.7	4	0.3	2	1.4
Carcinomas	47	2.1	104	3.3	386	11.3	33	2.6	5	3.4
Non-kerat Large Cell	144	6.5	661	21.3	1178	34.6	469	37.6	60	40.5
Non-kerat Small Cell	1	0.0	4	0.1	6	0.2	6	0.5	4	2.7
Kerat Squa Cell Carc. NOS	72	3.3	292	9.4	665	19.5	371	29.7	12	8.1
Squa Cell Carc. NOS	1679	76.3	1782	57.4	847	24.9	243	19.5	51	34.5
Other Squa Cell Carc.	11	0.5	31	1.0	48	1.4	9	0.7		0.0
Adeno Carcinoma	9	0.4	133	4.3	124	3.6	81	6.5	10	6.8
Adeno squa Carcinoma	27	1.2	52	1.7	107	3.1	14	1.1	2	1.4
Others	178	8.1	17	0.5	21	0.6	18	1.4	2	1.4
All Histologic Types	**2200**	**100.0**	**3106**	**100.0**	**3406**	**100.0**	**1248**	**100.0**	**148**	**100.0**

**Only 2004-05 data*

Ovary (ICD-10: C56)

Table 8.11: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Neoplasm Malignant	195	26.3	32	5.4	22	3.7	50	9.3	3	4.8
Carcinomas	9	1.2	48	8.1	119	20.0	26	4.8	1	1.6
Other Carcinomas	9	1.2	4	0.7	6	1.0	1	0.2	0	0.0
Papillary Carcinoma	2	0.3	10	1.7	3	0.5	3	0.6	1	1.6
Squamous Cell Carc.	0	0.0	10	1.7	7	1.2	4	0.7	2	3.2
Adeno Carcinoma	117	15.8	186	31.4	199	33.4	134	24.9	18	29.0
Papillary Adeno Carc.	14	1.9	37	6.2	54	9.1	16	3.0	7	11.3
Clear Cell Adeno Carc.	17	2.3	14	2.4	9	1.5	23	4.3	0	0.0
Endometroid Carc.	54	7.3	11	1.9	2	0.3	27	5.0	1	1.6
Papi/Serous Cyst.	214	28.8	131	22.1	59	9.9	135	25.0	14	22.6
Muc Adeno/Cystadeno	29	3.9	40	6.7	41	6.9	46	8.5	10	16.1
Granulosa Cell Tumour	5	0.7	4	0.7	16	2.7	6	1.1	1	1.6
Sarcomas	3	0.4	0	0.0	5	0.8	2	0.4	2	3.2
Stromal Tumours	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Dysgerminoma	25	3.4	32	5.4	27	4.5	26	4.8	0	0.0
Endodermal Sinus Tum.	13	1.8	11	1.9	5	0.8	14	2.6	1	1.6
Teratomas	20	2.7	17	2.9	15	2.5	23	4.3	0	0.0
Others	15	2.0	6	1.0	6	1.0	3	0.6	1	1.6
All Histologic Types	**742**	**100.0**	**593**	**100.0**	**595**	**100.0**	**539**	**100.0**	**62**	**100.0**

Kidney (ICD-10: C64)

Table 8.12: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	22	10.0	3	3.1	9	10.3	9	8.8	1	9.1
Carcinoma NOS	2	0.9	2	2.0	9	10.3	5	4.9	0	0.0
Transitional Cell Carc.	1	0.5	2	2.0	3	3.4	4	3.9	1	9.1
Adenocarcinoma	19	8.6	3	3.1	3	3.4	1	1.0	0	0.0
Clear Cell Adeno Carc.	112	50.9	2	2.0	2	2.3	2	2.0	1	9.1
Renal Cell Carcinoma	9	4.1	59	60.2	48	55.2	57	55.9	5	45.5
Nephroblastoma	27	12.3	18	18.4	9	10.3	16	15.7	3	27.3
Others	28	12.7	9	9.2	4	4.6	8	7.8	0	0.0
All Histologic Types	**220**	**100.0**	**98**	**100.0**	**87**	**100.0**	**102**	**100.0**	**11**	**100.0**
FEMALES										
Neoplasm Malignant	5	5.7	2	4.0	1	2.2	3	7.0	0	0.0
Carcinoma NOS	1	1.1	0	0.0	2	4.4	2	4.7	0	0.0
Transitional Cell Carc.	1	1.1	1	2.0	1	2.2	1	2.3	0	0.0
Adenocarcinoma	3	3.4	2	4.0	5	11.1	2	4.7	0	0.0
Clear Cell Adeno Carc.	41	47.1	0	0.0	2	4.4	1	2.3	2	22.2
Renal Cell Carcinoma	0	0.0	28	56.0	28	62.2	10	23.3	3	33.3
Nephroblastoma	16	18.4	14	28.0	5	11.1	22	51.2	3	33.3
Others	20	23.0	3	6.0	1	2.2	2	4.7	1	11.1
All Histologic Types	**87**	**100.0**	**50**	**100.0**	**45**	**100.0**	**43**	**100.0**	**9**	**100.0**

**Only 2004-05 data*

Brain (ICD-10: C70-C72)

Table 8.13: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	2	0.5	3	0.8	2	2.2	7	1.8	0	0.0
Gliomas	23	5.8	26	6.7	7	7.6	111	28.2	1	5.6
Ependymoma	26	6.5	12	3.1	3	3.3	8	2.0	1	5.6
Astrocytoma	183	45.8	124	32.0	40	43.5	133	33.8	9	50.0
Glioblastoma	91	22.8	124	32.0	25	27.2	83	21.1	2	11.1
Oligodendroglioma	13	3.3	46	11.9	3	3.3	19	4.8	1	5.6
Medulloblastoma	47	11.8	31	8.0	3	3.3	24	6.1	1	5.6
Others	15	3.8	22	5.7	9	9.8	8	2.0	3	16.7
All Histologic Types	**400**	**100.0**	**388**	**100.0**	**92**	**100.0**	**393**	**100.0**	**18**	**100.0**
FEMALES										
Neoplasm Malignant	2	1.1	1	0.5	0	0.0	1	0.4	1	14.3
Gliomas	11	6.3	12	5.6	4	7.3	53	21.8	0	0.0
Ependymoma	8	4.6	12	5.6	1	1.8	10	4.1	0	0.0
Astrocytoma	70	40.0	60	27.9	23	41.8	75	30.9	5	71.4
Glioblastoma	37	21.1	71	33.0	16	29.1	50	20.6	0	0.0
Oligodendroglioma	18	10.3	21	9.8	2	3.6	7	2.9	0	0.0
Medulloblastoma	14	8.0	25	11.6	2	3.6	27	11.1	0	0.0
Others	15	8.6	13	6.0	7	12.7	20	8.2	1	14.3
All Histologic Types	**175**	**100.0**	**215**	**100.0**	**55**	**100.0**	**243**	**100.0**	**7**	**100.0**

Thyroid Gland (ICD-10: C73)

Table 8.14: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Neoplasm Malignant	22	9.0	7	3.7	10	5.0	5	1.3	0	0.0
Other Carcinomas	3	1.2	9	4.7	14	7.0	14	3.6	0	0.0
Undifferentiated Carc.	4	1.6	13	6.8	13	6.5	13	3.3	1	16.7
Papillary Carc. NOS	1	0.4	106	55.8	30	15.1	133	34.2	1	16.7
Papillary Adeno Carc.	133	54.5	17	8.9	72	36.2	116	29.8	1	16.7
Follicular Carcinoma	11	4.5	5	2.6	24	12.1	27	6.9	2	33.3
Mixed papi & Folli Carc.	38	15.6	22	11.6	11	5.5	63	16.2	0	0.0
Medullary Carcinoma	30	12.3	7	3.7	18	9.0	15	3.9	0	0.0
Others	2	0.8	4	2.1	7	3.5	3	0.8	1	16.7
All Histologic Types	**244**	**100.0**	**190**	**100.0**	**199**	**100.0**	**389**	**100.0**	**6**	**100.0**
FEMALES										
Neoplasm Malignant	28	6.6	10	2.0	5	1.6	13	1.2	2	15.4
Other Carcinomas	4	0.9	28	5.7	12	3.9	14	1.2	0	0.0
Undifferentiated Carc.	20	4.7	15	3.0	12	3.9	8	0.7	1	7.7
Papillary Carc.NOS	1	0.2	262	53.1	59	19.1	369	32.7	2	15.4
Papillary Adeno Carc.	216	51.1	44	8.9	127	41.1	361	32.0	0	0.0
Follicular Carcinoma	40	9.5	28	5.7	43	13.9	92	8.1	7	53.8
Mixed papi & Folli Carc.	92	21.7	90	18.3	30	9.7	256	22.7	0	0.0
Medullary Carcinoma	19	4.5	7	1.4	12	3.9	16	1.4	0	0.0
Others	3	0.7	9	1.8	9	2.9	0	0.0	1	7.7
All Histologic Types	**423**	**100.0**	**493**	**100.0**	**309**	**100.0**	**1129**	**100.0**	**13**	**100.0**

**Only 2004-05 data*

Tumours of Lymphoid and Haematopoietic System (ICD-10: C81-C85 and C90-C96)

Table 8.15: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
NHL	882	29.1	255	16.7	495	28.7	470	23.7	28	40.0
HD	292	9.6	90	5.9	99	5.7	137	6.9	1	1.4
MM	173	5.7	55	3.6	97	5.6	224	11.3	7	10.0
Leukaemias	1501	49.6	905	59.3	925	53.6	1066	53.8	30	42.9
Others	181	6.0	220	14.4	111	6.4	84	4.2	4	5.7
All Histologic Types	**3029**	**100.0**	**1525**	**100.0**	**1727**	**100.0**	**1981**	**100.0**	**70**	**100.0**
FEMALES										
NHL	373	30.8	104	13.0	225	25.2	256	20.1	11	29.7
HD	65	5.4	27	3.4	50	5.6	82	6.5	0	0.0
MM	74	6.1	44	5.5	63	7.1	156	12.3	6	16.2
Leukaemias	645	53.3	528	66.1	498	55.8	727	57.2	16	43.2
Others	53	4.4	96	12.0	57	6.4	50	3.9	4	10.8
All Histologic Types	**1210**	**100.0**	**799**	**100.0**	**893**	**100.0**	**1271**	**100.0**	**37**	**100.0**

NHL = Non-Hodgkin's Lymphoma; HD = Hodgkin's Disease; MM = Multiple Myeloma

Hodgkin's Disease (ICD-10: C81)

Table 8.16: Number (#) and Relative Proportion (%) of Different Histologic Types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Hodgkins Disease NOS	45	13.2	86	48.9	68	41.0	19	12.2	1	33.3
HD LP	19	5.6	5	2.8	4	2.4	24	15.4	1	33.3
HD MC	188	55.1	26	14.8	53	31.9	65	41.7	0	0.0
HD LD	1	0.3	1	0.6	3	1.8	6	3.8	0	0.0
HD NS	84	24.6	58	33.0	38	22.9	42	26.9	1	33.3
Others	4	1.2	0	0.0	0	0.0	0	0.0	0	0.0
All Histologic Types	**341**	**100.0**	**176**	**100.0**	**166**	**100.0**	**156**	**100.0**	**3**	**100.0**
FEMALES										
Hodgkins Disease NOS	14	17.7	25	48.1	34	40.5	7	7.9	2	100.0
HD LP	7	8.9	2	3.8	0	0.0	7	7.9	0	0.0
HD MC	36	45.6	9	17.3	26	31.0	32	36.0	0	0.0
HD LD	0	0.0	0	0.0	2	2.4	1	1.1	0	0.0
HD NS	22	27.8	16	30.8	22	26.2	42	47.2	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Histologic Types	**79**	**100.0**	**52**	**100.0**	**84**	**100.0**	**89**	**100.0**	**2**	**100.0**

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

**Only 2004-05 data*

Leukaemias (ICD-10: C91-C95)

Table 8.17: Number (#) and Relative Proportion (%) of Different Histologic types (2004-2006)

Histologic Type	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Acut Lymph. Leuk.	477	31.8	306	34.7	329	36.7	409	40.5	2	6.5
Chronic Lymp. Leuk.	76	5.1	59	6.7	31	3.5	53	5.2	1	3.2
Other Lymph. Leuk.	0	0.0	1	0.1	0	0.0	3	0.3	1	3.2
Acute Myeloid Leuk.	389	25.9	190	21.6	220	24.5	282	27.9	9	29.0
Chronic Myeloid leuk.	430	28.6	211	24.0	270	30.1	172	17.0	15	48.4
Other Myeloid leuk.	6	0.4	6	0.7	7	0.8	31	3.1	2	6.5
Others	123	8.2	108	12.3	40	4.5	60	5.9	1	3.2
All Histologic Types	**1501**	**100.0**	**881**	**100.0**	**897**	**100.0**	**1010**	**100.0**	**31**	**100.0**
FEMALE										
Acut Lymph. Leuk.	186	28.8	146	27.6	147	29.5	246	34.1	4	23.5
Chronic Lymp. Leuk.	21	3.3	9	1.7	13	2.6	21	2.9	0	0.0
Other Lymph. Leuk.	0	0.0	0	0.0	0	0.0	2	0.3	0	0.0
Acute Myeloid Leuk.	207	32.1	156	29.5	178	35.7	278	38.6	8	47.1
Chronic Myeloid leuk.	173	26.8	150	28.4	147	29.5	92	12.8	2	11.8
Other Myeloid leuk.	1	0.2	4	0.8	3	0.6	32	4.4	0	0.0
Others	57	8.8	64	12.1	10	2.0	50	6.9	3	17.6
All Histologic Types	**645**	**100.0**	**529**	**100.0**	**498**	**100.0**	**721**	**100.0**	**17**	**100.0**

**Only 2004-05 data*

Chapter 9

EDUCATIONAL 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 9.1: Number (#) and Relative Proportion (%) by Educational Status (All Sites of Cancer) (2004-2006)

Educational Status	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Illiterate	2510	12.9	4477	43.5	2982	23.8	1015	8.1	662	37.1
Literate	187	1.0	1183	11.5	664	5.3	470	3.7	529	29.7
Primary	3652	18.8	1023	9.9	2289	18.3	3564	28.4	184	10.3
Middle	704	3.6	952	9.2	2024	16.2	2587	20.6	111	6.2
Secondary	6324	32.6	1569	15.2	3096	24.7	3012	24.0	200	11.2
Technical	431	2.2	138	1.3	151	1.2	294	2.3	1	0.1
College	4468	23.0	679	6.6	1116	8.9	1034	8.2	44	2.5
Below 5 years	729	3.8	180	1.7	179	1.4	267	2.1	11	0.6
Oth. & Unk.	394	2.0	92	0.9	22	0.2	320	2.5	40	2.2
Total	**19399**	**100.0**	**10293**	**100.0**	**12523**	**100.0**	**12563**	**100.0**	**1782**	**100.0**
FEMALES										
Illiterate	4634	30.3	7522	63.5	6602	48.6	1466	12.9	546	51.4
Literate	130	0.8	1189	10.0	578	4.3	468	4.1	202	19.0
Primary	2692	17.6	781	6.6	2345	17.3	2515	22.1	113	10.6
Middle	454	3.0	662	5.6	1197	8.8	1919	16.8	67	6.3
Secondary	3941	25.7	982	8.3	2027	14.9	2948	25.9	100	9.4
Technical	52	0.3	83	0.7	22	0.2	238	2.1	0	0.0
College	2559	16.7	384	3.2	659	4.8	1338	11.7	12	1.1
Below 5 years	625	4.1	145	1.2	118	0.9	230	2.0	11	1.0
Oth. & Unk.	226	1.5	94	0.8	41	0.3	272	2.4	12	1.1
Total	**15313**	**100.0**	**11842**	**100.0**	**13589**	**100.0**	**11394**	**100.0**	**1063**	**100.0**

**Only 2004-05 data*

Table 9.2: Number (#) and Relative Proportion (%) by Marital Status (All Sites of Cancer) (2004-2006)

Marital Status	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Unmarried	2753	14.2	1274	12.4	1356	10.8	1466	11.7	92	5.2
Married	16053	82.8	8912	86.6	10766	86.0	10659	84.8	1559	87.5
Widowed	531	2.7	92	0.9	378	3.0	385	3.1	81	4.5
Divorced	16	0.1	4	0.0	5	0.0	23	0.2	0	0.0
Separated	21	0.1	7	0.1	18	0.1	26	0.2	0	0.0
Others & Unk.	25	0.1	4	0.0	0	0.0	4	0.0	50	2.8
Total	**19399**	**100.0**	**10293**	**100.0**	**12523**	**100.0**	**12563**	**100.0**	**1782**	**100.0**
FEMALES										
Unmarried	1173	7.7	627	5.3	649	4.8	1055	9.3	39	3.7
Married	11446	74.7	9281	78.4	9937	73.1	7683	67.4	887	83.4
Widowed	1521	9.9	1905	16.1	2856	21.0	2420	21.2	106	10.0
divorced	46	0.3	7	0.1	23	0.2	216	1.9	1	0.1
Separated	11	0.1	20	0.2	124	0.9	15	0.1	2	0.2
Others & Unk.	1116	7.3	2	0.0	0	0.0	5	0.0	28	2.6
Total	**15313**	**100.0**	**11842**	**100.0**	**13589**	**100.0**	**11394**	**100.0**	**1063**	**100.0**

Table 9.3: Number (#) and Relative Proportion (%) of Cancer Patients by Religion (2004-2006)

Religion	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Hindu	15814	81.5	9106	88.5	11089	88.5	7365	58.6	1580	88.7
Muslim	2570	13.2	1027	10.0	939	7.5	2461	19.6	130	7.3
Christian	520	2.7	154	1.5	473	3.8	2733	21.8	31	1.7
Sikh	66	0.3	1	0.0	1	0.0	0	0.0	2	0.1
Jain	134	0.7	3	0.0	20	0.2	4	0.0	2	0.1
Neo-Buddhist	249	1.3	1	0.0	1	0.0	0	0.0	10	0.6
Parsi	14	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Others	30	0.2	0	0.0	0	0.0	0	0.0	27	1.5
Unknown	2	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Total	**19399**	**100.0**	**10293**	**100.0**	**12523**	**100.0**	**12563**	**100.0**	**1782**	**100.0**
FEMALES										
Hindu	12718	83.1	10577	89.3	12055	88.7	7017	61.6	935	88.0
Muslim	1646	10.7	1064	9.0	873	6.4	1895	16.6	80	7.5
Christian	429	2.8	191	1.6	627	4.6	2478	21.7	19	1.8
Sikh	78	0.5	4	0.0	1	0.0	0	0.0	0	0.0
Jain	127	0.8	2	0.0	32	0.2	3	0.0	1	0.1
Neo-Budhist	265	1.7	1	0.0	0	0.0	1	0.0	11	1.0
Parsi	28	0.2	0	0.0	0	0.0	0	0.0	0	0.0
Others	22	0.1	2	0.0	1	0.0	0	0.0	17	1.6
Unknown	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
Total	**15313**	**100.0**	**11842**	**100.0**	**13589**	**100.0**	**11394**	**100.0**	**1063**	**100.0**

**Only 2004-05 data*

Table 9.4: Number (#) and Relative Proportion (%) by Language Spoken (All Sites of Cancer) 2004-2006

Language Spoken	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Assamese	368	1.9	9	0.1	325	2.6	2	0.0	1272	71.4
Bengali	2150	11.1	127	1.2	62	0.5	1	0.0	129	7.2
Gujarati	929	4.8	4	0.0	15	0.1	1	0.0	0	0.0
Hindi	7163	36.9	120	1.2	204	1.6	3	0.0	122	6.8
Kannada	212	1.1	6355	61.7	39	0.3	1	0.0	0	0.0
Kashmiri	35	0.2	3	0.0	2	0.0	1	0.0	0	0.0
Malayalam	215	1.1	102	1.0	349	2.8	11201	89.2	0	0.0
Marathi	5407	27.9	127	1.2	17	0.1	2	0.0	0	0.0
Oriya	470	2.4	42	0.4	17	0.1	1	0.0	95	5.3
Punjabi	164	0.8	3	0.0	1	0.0	2	0.0	4	0.2
Sanskrit	4	0.0	2	0.0	0	0.0	1	0.0	1	0.1
Sindhi	177	0.9	3	0.0	2	0.0	0	0.0	0	0.0
Tamil	158	0.8	778	7.6	8059	64.4	1216	9.7	3	0.2
Telugu	286	1.5	1580	15.4	3155	25.2	1	0.0	0	0.0
Urdu	787	4.1	975	9.5	232	1.9	0	0.0	89	5.0
English	81	0.4	4	0.0	10	0.1	0	0.0	65	3.6
Others(specify)	534	2.8	55	0.5	29	0.2	130	1.0	2	0.1
Unknown	259	1.3	4	0.0	5	0.0		0.0	0	0.0
Total	**19399**	**100.0**	**10293**	**100.0**	**12523**	**100.0**	**12563**	**100.0**	**1782**	**100.0**
FEMALES										
Assamese	207	1.4	6	0.1	122	0.9	0	0.0	698	65.7
Bengali	1532	10.0	60	0.5	48	0.4	1	0.0	77	7.2
Gujarati	705	4.6	9	0.1	24	0.2	1	0.0	0	0.0
Hindi	4840	31.6	102	0.9	191	1.4	1	0.0	82	7.7
Kannada	188	1.2	7022	59.3	38	0.3	0	0.0	0	0.0
Kashmiri	31	0.2	1	0.0	0	0.0	1	0.0	0	0.0
Malayalam	188	1.2	121	1.0	271	2.0	10045	88.2	0	0.0
Marathi	5318	34.7	116	1.0	11	0.1	0	0.0	0	0.0
Oriya	263	1.7	20	0.2	15	0.1	2	0.0	91	8.6
Punjabi	193	1.3	2	0.0	5	0.0	0	0.0	1	0.1
Sanskrit	4	0.0	1	0.0	2	0.0	0	0.0	0	0.0
Sindhi	197	1.3	2	0.0	8	0.1	1	0.0	0	0.0
Tamil	170	1.1	1043	8.8	8608	63.3	1197	10.5	2	0.2
Telugu	244	1.6	2275	19.2	3916	28.8	1	0.0	0	0.0
Urdu	536	3.5	1007	8.5	278	2.0	0	0.0	65	6.1
English	80	0.5	5	0.0	13	0.1	1	0.0	46	4.3
Others(specify)	415	2.7	44	0.4	35	0.3	143	1.3	1	0.1
Unknown	202	1.3	6	0.1	4	0.0	0	0.0	0	0.0
Total	**15313**	**100.0**	**11842**	**100.0**	**13589**	**100.0**	**11394**	**100.0**	**1063**	**100.0**

**Only 2004-05 data*

Chapter 10

MOUTH (ICD-10: C03-C06)

The total number, relative proportion and rank of the cancer of mouth in respective registries among males and females for the years 2004 to 2006 is given in Table 10.1(a). Cancer of the mouth ranked as the leading site in Mumbai in males and was within the first five leading sites in all registries in males.

Table 10.1(b) gives the sub-site distribution of cancers of the mouth. Table 10.1(c) gives the sub- site distribution of cancer of gum in all registries in both sexes. A higher proportion of cancers were seen in the lower gum except in Bangalore where other & unspecified is more. Table 10.1(d) gives the sub-site distribution of cancer of palate. The distribution of the relative proportion of hard palate and soft palate cancers show interesting variation among the registries and between the sexes. Among males there was no particular variation between these subsites and in females the proportion of hard palate cancers were markedly higher.

Table 10.1(e) shows the relative proportion of the sub-sites of cancer of other and unspecified parts of the mouth. Cheek mucosa accounted for the vast majority of cancers of this site in either sex.

Figure 10.1 gives the trends in actual number of mouth cancers from 1984 to 2006. An increasing trend in actual number was observed in Chennai and Mumbai (in males & females).

Table 10.2 and Figure 10.2 give the distribution of mouth cancers by five year age group. Among males the maximum number of mouth cancers were seen after the age of 55 years except in Mumbai where it was higher in 45-49 year age group among males. Among females the maximum number of mouth cancers varies.

Table 10.1(a): Number(#), Relative Proportion(%) and Rank(R) of cancers of the mouth (2004-2006)

Registry	Males				Females			
	Total	#	%	R	Total	#	%	R
Mumbai*	19399	2488	12.8	1	15313	759	5.0	4
Bangalore	10293	578	5.6	5	11842	1200	10.1	3
Chennai	12523	1031	8.2	2	13589	703	5.2	3
Thi'puram	12563	1182	9.4	2	11394	658	5.8	4
Dibrugarh	1782	136	7.6	3	1063	56	5.3	5

** Only 2004-05 data.*

Table 10.1(b): Cancers of Mouth - Number(#) and Relative Proportion(%) according to sub-site (2004-2006)

	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Gums	561	22.5	50	8.7	186	18.0	261	22.1	39	28.7
Floor of mouth	92	3.7	72	12.5	104	10.1	154	13.0	5	3.7
Palate	229	9.2	123	21.3	170	16.5	137	11.6	16	11.8
Other & Uns.	1606	64.5	333	57.6	571	55.4	630	53.3	76	55.9
Total	**2488**	**100.0**	**578**	**100.0**	**1031**	**100.0**	**1182**	**100.0**	**136**	**100.0**
FEMAELS										
Gums	212	27.9	141	11.8	156	22.2	191	29.0	18	32.1
Floor of mouth	17	2.2	10	0.8	26	3.7	18	2.7	3	5.4
Palate	59	7.8	64	5.3	46	6.5	42	6.4	1	1.8
Other & Uns.	471	62.1	985	82.1	475	67.6	407	61.9	34	60.7
Total	**759**	**100.0**	**1200**	**100.0**	**703**	**100.0**	**658**	**100.0**	**56**	**100.0**

Table 10.1(c): Cancer of Gum - Number(#) and Relative Proportion(%) according to sub-site (2004-2006)

	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Upper gum	84	15.0	3	6.0	33	17.7	50	19.2	4	10.3
Lower gum	412	73.4	13	26.0	151	81.2	201	77.0	33	84.6
Other & Uns.	65	11.6	34	68.0	2	1.1	10	3.8	2	5.1
Total	561	100.0	50	100.0	186	100.0	261	100.0	39	100.0
FEMALES										
Upper gum	46	21.7	15	10.6	23	14.7	31	16.2	3	16.7
Lower gum	141	66.5	43	30.5	132	84.6	154	80.6	12	66.7
Other & Uns.	25	11.8	83	58.9	1	0.6	6	3.1	3	16.7
Total	**212**	**100.0**	**141**	**100.0**	**156**	**100.0**	**191**	**100.0**	**18**	**100.0**

** Only 2004-05 data.*

The predominant form of diagnosis in all registries for mouth cancer was through microscopic examination (Table 10.3), though this proportion was slightly lower in Chennai. Table 10.4 gives the distribution of cancers according to the clinical extent of disease. The proportion of mouth cancers regional extent were above 80% in all registries except Mumbai.

Table 10.1(d): Cancer of Palate - Number(#) and Relative Proportion(%) according to sub-site (2004-2006)

	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Hard palate	43	72.9	31	25.2	85	50.0	51	37.2	2	12.5
Soft palate	9	15.3	56	45.5	56	32.9	57	41.6	7	43.8
Other & Uns.	7	11.9	36	29.3	29	17.1	29	21.2	7	43.8
Total	**59**	**100.0**	**123**	**100.0**	**170**	**100.0**	**137**	**100.0**	**16**	**100.0**
FEMALES										
Hard palate	119	52.0	28	43.8	34	73.9	31	73.8		0.0
Soft palate	91	39.7	8	12.5	5	10.9	4	9.5	1	100.0
Other & Uns.	19	8.3	28	43.8	7	15.2	7	16.7		0.0
Total	**229**	**100.0**	**64**	**100.0**	**46**	**100.0**	**42**	**100.0**	**1**	**100.0**

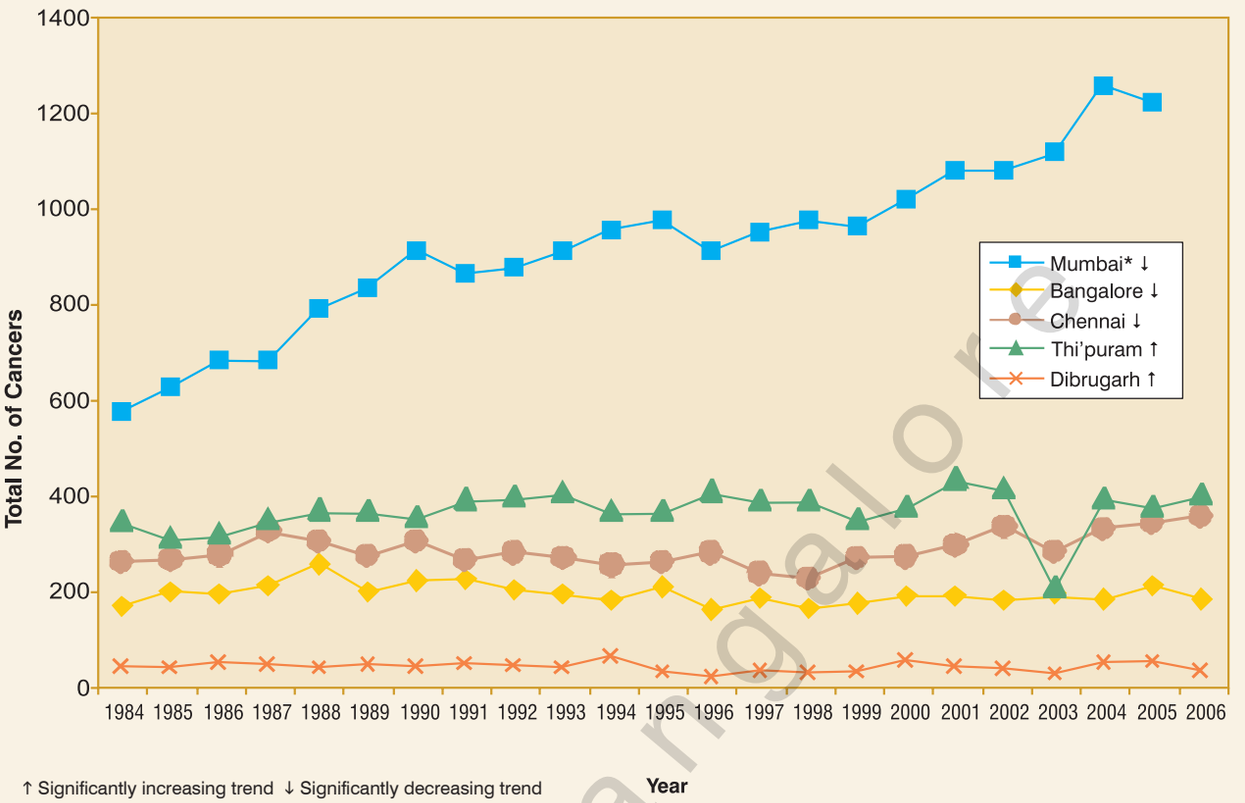
Table 10.1(e): Cancer of other and Unspecified parts of mouth - Number(#) and Relative Proportion (%) according to sub-site (2004-2006)

	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Cheek mucosa	1134	70.6	212	63.7	463	81.1	567	90.0	54	71.1
Vestibule of Mouth	279	17.4	20	6.0	13	2.3	6	1.0	4	5.3
Retromolar area	186	11.6	65	19.5	70	12.3	53	8.4	10	13.2
Other & UNS	7	0.4	36	10.8	25	4.4	4	0.6	8	10.5
Total	**1606**	**100.0**	**333**	**100.0**	**571**	**100.0**	**630**	**100.0**	**76**	**100.0**
FEMALES										
Cheek mucosa	342	72.6	757	76.9	426	89.7	382	93.9	28	82.4
Vestibule of Mouth	88	18.7	74	7.5	10	2.1		0.0	1	2.9
Retromolar area	40	8.5	64	6.5	22	4.6	19	4.7	2	5.9
Other & UNS	1	0.2	90	9.1	17	3.6	6	1.5	3	8.8
Total	**471**	**100.0**	**985**	**100.0**	**475**	**100.0**	**407**	**100.0**	**34**	**100.0**

** Only 2004-05 data.*

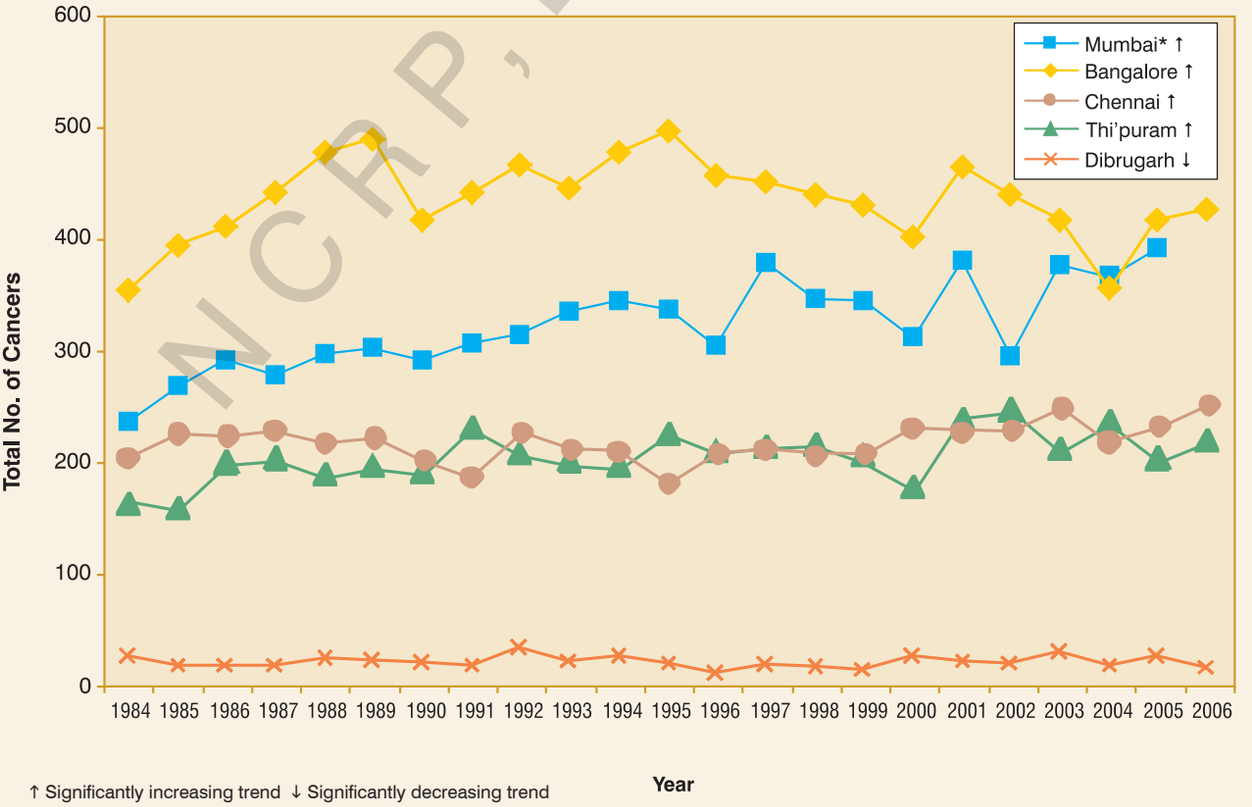
Fig 10.1 : Trends in Actual Numbers - Mouth Cancers

Males



↑ Significantly increasing trend ↓ Significantly decreasing trend

Females



↑ Significantly increasing trend ↓ Significantly decreasing trend

Table 10.2: Number(#) and Relative Proportion(%) of Mouth Cancers according to five year age groups (2004-2006)

Males

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0- 4	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
10-14	2	0.2	1	0.2	0	0.0	0	0.0	0	0.0
15-19	0	0.0	1	0.2	0	0.0	0	0.0	0	0.0
20-24	4	0.3	1	0.2	4	0.4	3	0.3	0	0.0
25-29	48	3.8	8	1.4	11	1.1	1	0.1	1	0.7
30-34	119	9.4	16	2.8	35	3.4	17	1.4	2	1.5
35-39	235	18.6	18	3.1	48	4.7	17	1.4	8	5.9
40-44	322	25.5	40	6.9	81	7.9	53	4.5	10	7.4
45-49	393	31.2	68	11.8	103	10.0	108	9.1	18	13.2
50-54	365	28.9	87	15.1	152	14.7	153	12.9	21	15.4
55-59	335	26.6	87	15.1	172	16.7	197	16.7	13	9.6
60-64	255	20.2	94	16.3	169	16.4	192	16.2	25	18.4
65-69	224	17.8	77	13.3	114	11.1	165	14.0	12	8.8
70-74	108	8.6	42	7.3	80	7.8	132	11.2	11	8.1
75+	78	6.2	38	6.6	62	6.0	144	12.2	15	11.0
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**2488**	**197.3**	**578**	**100.0**	**1031**	**100.0**	**1182**	**100.0**	**136**	**100.0**
Mean		51.68		56.65		56.14		60.32		57.26
SD		11.95		11.90		11.89		11.04		12.19

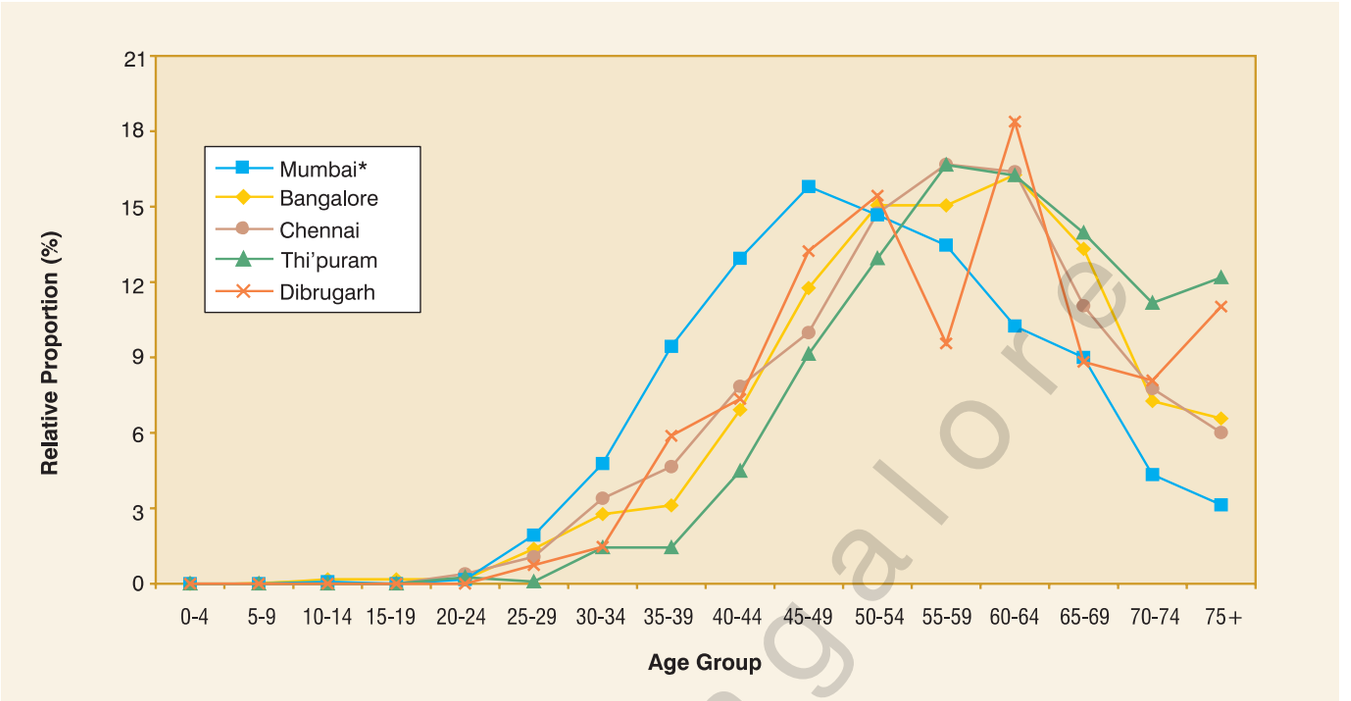
Females

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0- 4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5- 9	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
10-14	0	0.0	1	0.1	1	0.1	1	0.2	0	0.0
15-19	1	0.1	2	0.2	0	0.0	1	0.2	0	0.0
20-24	2	0.3	4	0.3	3	0.4	0	0.0	1	1.8
25-29	9	1.2	10	0.8	2	0.3	1	0.2	2	3.6
30-34	16	2.1	17	1.4	9	1.3	0	0.0	6	10.7
35-39	36	4.7	57	4.8	35	5.0	16	2.4	7	12.5
40-44	74	9.7	106	8.8	40	5.7	19	2.9	5	8.9
45-49	118	15.5	191	15.9	71	10.1	44	6.7	11	19.6
50-54	86	11.3	192	16.0	109	15.5	65	9.9	5	8.9
55-59	94	12.4	158	13.2	115	16.4	97	14.7	8	14.3
60-64	118	15.5	190	15.8	125	17.8	88	13.4	6	10.7
65-69	109	14.4	116	9.7	93	13.2	129	19.6	3	5.4
70-74	59	7.8	84	7.0	63	9.0	87	13.2	2	3.6
75+	36	4.7	72	6.0	37	5.3	110	16.7	0	0.0
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**759**	**100.0**	**1200**	**100.0**	**703**	**100.0**	**658**	**100.0**	**56**	**100.0**
Mean		55.70		55.52		57.36		62.70		47.98
SD		12.03		11.61		11.14		10.92		12.15

** Only 2004-05 data*

Fig 10.2 : Five Year Age Group Distribution - Mouth Cancers (2004-2006)

Males



Females

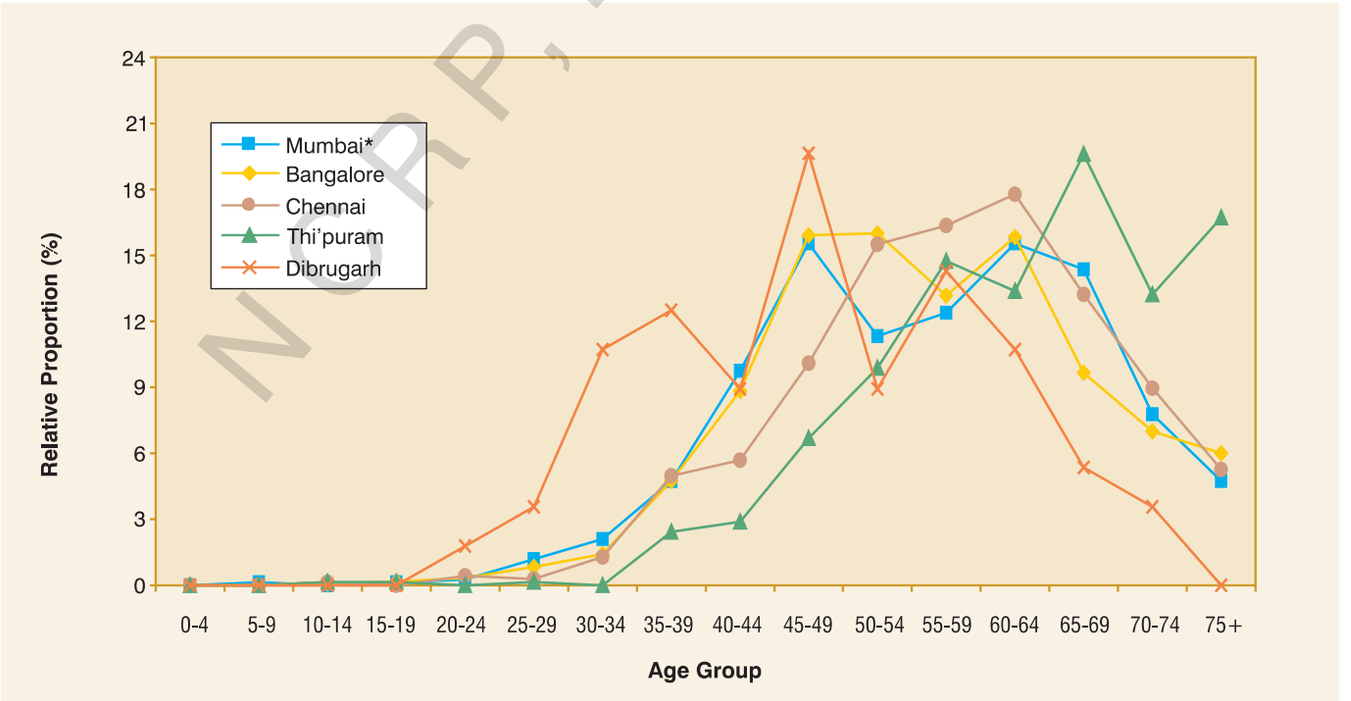


Table 10.3: Number(#) and Relative Proportion(%) of Mouth Cancers based on different Methods of Diagnosis (2004-2006)

Registry	Microscopic		Clinical		All imaging Techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
MALES										
Mumbai*	2404	96.6	3	0.1	0	0.0	81	3.3	2488	100.0
Bangalore	555	96.0	17	2.9	1	0.2	5	0.9	578	100.0
Chennai	825	80.0	203	19.7	0	0.0	3	0.3	1031	100.0
Thi'puram	1100	93.1	81	6.9	1	0.1	0	0.0	1182	100.0
Dibrugarh	136	100.0	0	0.0	0	0.0	0	0.0	136	100.0
FEMALES										
Mumbai*	738	97.2	0	0.0	0	0.0	21	2.8	759	100.0
Bangalore	1160	96.7	32	2.7	0	0.0	8	0.7	1200	100.0
Chennai	530	75.4	173	24.6	0	0.0	0	0.0	703	100.0
Thi'puram	615	93.5	43	6.5	0	0.0	0	0.0	658	100.0
Dibrugarh	54	96.4	2	3.6	0	0.0	0	0.0	56	100.0

Table 10.4: Number(#) and Relative Proportion(%) of Mouth Cancer patients according to the Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Mumbai*	233	9.4	1176	47.3	1409	56.6	63	2.53	1016	40.8	2488	100.0
Bangalore	48	8.3	436	75.4	484	83.7	54	9.34	40	6.9	578	100.0
Chennai	115	11.2	772	74.9	887	86.0	6	0.58	138	13.4	1031	100.0
Thi'puram	87	7.4	986	83.4	1073	90.8	6	0.51	103	8.7	1182	100.0
Dibrugarh	1	0.7	122	89.7	123	90.4	1	0.74	12	8.8	136	100.0
FEMALES												
Mumbai*	70	9.3	387	51.2	457	60.4	22	2.91	277	36.6	756	100.0
Bangalore	83	6.9	953	79.4	1036	86.3	100	8.33	64	5.3	1200	100.0
Chennai	80	11.4	537	76.4	617	87.8	2	0.28	84	11.9	703	100.0
Thi'puram	60	9.1	536	81.5	596	90.6	8	1.22	54	8.2	658	100.0
Dibrugarh	2	3.6	48	85.7	50	89.3	2	3.57	4	7.1	56	100.0

** Only 2004-05 data*

Table 10.5: Number(#) and Relative Proportion(%) of mouth cancer patients according to Broad Groups of Treatment(Tmt) (2004-2006)

	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Prior Tmt. Only	206	8.3	29	5.0	130	12.6	32	2.7	0	0.0
Prior & Tmt. at RI	147	5.9	9	1.6	8	0.8	71	6.0	6	4.4
Tmt. Only at RI	1014	40.8	322	55.7	441	42.8	925	78.3	125	91.9
No Treatment	1121	45.1	218	37.7	452	43.8	154	13.0	5	3.7
Total Patients	**2488**	**100.0**	**578**	**100.0**	**1031**	**100.0**	**1182**	**100.0**	**136**	**100.0**
FEMALES										
Prior Tmt. Only	50	6.6	40	3.3	83	11.8	22	3.3	0	0.0
Prior & Tmt. at RI	29	3.8	22	1.8	1	0.1	32	4.9	1	1.8
Tmt. Only at RI	294	38.7	648	54.0	307	43.7	513	78.0	46	82.1
No Treatment	386	50.9	490	40.8	312	44.4	91	13.8	9	16.1
Total Patients	**759**	**100.0**	**1200**	**100.0**	**703**	**100.0**	**658**	**100.0**	**56**	**100.0**

** Only 2004-05 data*

Table 10.5 gives the number and relative proportion according to the broad groups of treatment and Tables 10.6, 10.7 & 10.8 give an idea of the type of treatment instituted by these registries.

Table 10.6: Number(#) and Relative Proportion(%) of Mouth Cancer patients according to Type of Treatment given(Patients treated only at Reporting Institution) (2004-2006)

Males

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	1014	186.7	322	100.0	441	100.0	925	100.0	125	100.0
Specific Treatments										
Surgery(S)	271	49.9	52	16.1	8	1.8	39	4.2	11	8.8
Radiotherapy(R)	63	11.6	145	45.0	210	47.6	476	51.5	101	80.8
Chemotherapy(C)	101	18.6	47	14.6	4	0.9	48	5.2	0	0.0
S+R	474	87.3	47	14.6	32	7.3	111	12.0	10	8.0
S+C	10	1.8	5	1.6	0	0.0	6	0.6	1	0.8
R+C	42	7.7	15	4.7	167	37.9	194	21.0	2	1.6
S+R+C	53	9.8	11	3.4	20	4.5	48	5.2	0	0.0
Others	0	0.0	0	0.0	0	0.0	3	0.3	0	0.0
Modality of Therapy										
Single	435	80.1	244	75.8	222	50.3	563	60.9	122	89.6
Combination	579	106.6	78	24.2	219	49.7	359	38.8	13	10.4
Type of Any Treatment										
Any Surgery	808	148.8	115	35.7	60	13.6	204	22.1	22	17.6
Any R	632	116.4	218	67.7	429	97.3	829	89.6	113	90.4
Any C	206	37.9	78	24.2	191	43.3	296	32.0	3	2.4

Females

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	294	100.0	648	100.0	307	100.0	513	100.0	46	100.0
Specific Treatments										
Surgery(S)	106	36.1	101	15.6	8	2.6	16	3.1	1	2.2
Radiotherapy(R)	15	5.1	213	32.9	163	53.1	297	57.9	43	93.5
Chemotherapy(C)	14	4.8	140	21.6	3	1.0	23	4.5	0	0.0
S+R	141	48.0	110	17.0	39	12.7	76	14.8	2	4.3
S+C	1	0.3	15	2.3	0	0.0	0	0.0	0	0.0
R+C	5	1.7	39	6.0	87	28.3	78	15.2	0	0.0
S+R+C	12	4.1	29	4.5	7	2.3	22	4.3	0	0.0
Others	0	0.0	1	0.2	0	0.0	1	0.2	0	0.0
Modality of Therapy										
Single	135	45.9	454	70.1	174	56.7	336	65.5	44	95.7
Combination	159	54.1	193	29.8	133	43.3	176	34.3	2	4.3
Type of Any Treatment										
Any Surgery	260	88.4	255	39.4	54	17.6	114	22.2	3	6.5
Any R	173	58.8	391	60.3	296	96.4	473	92.2	45	97.8
Any C	32	10.9	223	34.4	97	31.6	123	24.0	0	0.0

** Only 2004-05 data*

Table 10.7(a): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease -Mouth Males (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
LOCALISED										
Surgery (S)	92	51.7	6	20.7	2	1.9	8	11.1	0	0.0
Radiotherapy (R)	8	4.5	5	17.2	51	49.5	61	84.7	1	100.0
Chemotherapy (C)	0	0.0	2	6.9	2	1.9	0	0.0	0	0.0
S+R	70	39.3	9	31.0	9	8.7	2	2.8	0	0.0
S+C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
R+C	2	1.1	4	13.8	37	35.9	1	1.4	0	0.0
S+R+C	6	3.4	3	10.3	2	1.9	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**178**	**100.0**	**29**	**100.0**	**103**	**100.0**	**72**	**100.0**	**1**	**100.0**
REGIONAL										
Surgery (S)	168	21.1	44	16.2	5	1.5	31	3.7	11	9.2
Radiotherapy (R)	51	6.4	127	46.9	158	47.0	414	48.8	96	80.7
Chemotherapy (C)	90	11.3	39	14.4	2	0.6	47	5.5	0	0.0
S+R	396	49.7	37	13.7	23	6.8	109	12.9	9	7.6
S+C	10	1.3	5	1.8	0	0.0	6	0.7	1	0.8
R+C	35	4.4	11	4.1	130	38.7	190	22.4	2	1.7
S+R+C	47	5.9	8	3.0	18	5.4	48	5.7	0	0.0
Others	0	0.0	0	0.0	0	0.0	3	0.4	0	0.0
All Treatments	**797**	**100.0**	**271**	**100.0**	**336**	**100.0**	**848**	**100.0**	**119**	**100.0**
DISTANT										
Surgery (S)	0	0.0	2	8.3	1	50.0	0	0.0	0	0.0
Radiotherapy (R)	4	25.0	12	50.0	1	50.0	1	20.0	0	0.0
Chemotherapy (C)	10	62.5	6	25.0	0	0.0	1	20.0	0	0.0
S+R	2	12.5	1	4.2	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
R+C	0	0.0	3	12.5	0	0.0	3	60.0	0	0.0
S+R+C	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
All Treatments	**16**	**100.0**	**24**	**100.0**	**2**	**100.0**	**5**	**100.0**	**0**	**0.0**
OTHERS										
Surgery (S)	12	57.1	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	0	0.0	1	100.0	0	0.0	0	0.0	4	80.0
Chemotherapy (C)	1	4.8	0	0.0	0	0.0	0	0.0	0	0.0
S+R	6	28.6	0	0.0	0	0.0	0	0.0	1	20.0
S+C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
R+C	2	9.5	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**21**	**100.0**	**1**	**100.0**	**0**	**0.0**	**0**	**0.0**	**5**	**100.0**

** Only 2004-05 data*

Table 10.7(b): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease - Mouth Females (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
LOCALISED										
Surgery (S)	23	46.9	19	38.8	6	8.6	4	8.0	0	0.0
Radiotherapy (R)	2	4.1	7	14.3	38	54.3	41	82.0	2	100.0
Chemotherapy (C)	0	0.0	3	6.1	0	0.0	0	0.0	0	0.0
S+R	22	44.9	13	26.5	9	12.9	3	6.0	0	0.0
S+C	0	0.0	3	6.1	0	0.0	0	0.0	0	0.0
R+C	1	2.0	2	4.1	16	22.9	2	4.0	0	0.0
S+R+C	1	2.0	2	4.1	1	1.4	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**49**	**100.0**	**49**	**100.0**	**70**	**100.0**	**50**	**100.0**	**2**	**100.0**
REGIONAL										
Surgery (S)	80	33.5	82	14.4	2	0.8	12	2.6	1	2.5
Radiotherapy (R)	12	5.0	193	33.9	125	52.7	251	55.0	37	92.5
Chemotherapy (C)	13	5.4	125	22.0	3	1.3	22	4.8	0	0.0
S+R	118	49.4	96	16.9	30	12.7	73	16.0	2	5.0
S+C	1	0.4	12	2.1	0	0.0	0	0.0	0	0.0
R+C	4	1.7	35	6.2	71	30.0	75	16.4	0	0.0
S+R+C	11	4.6	26	4.6	6	2.5	22	4.8	0	0.0
Others	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0
All Treatments	**239**	**100.0**	**569**	**100.0**	**237**	**100.0**	**456**	**100.0**	**40**	**100.0**
DISTANT										
Surgery (S)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	1	25.0	13	22.4	0	0.0	5	35.7	2	50.0
Chemotherapy (C)	1	25.0	12	20.7	0	0.0	1	7.1	0	0.0
S+R	0	0.0	1	1.7	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
R+C	0	0.0	2	3.4	0	0.0	1	7.1	0	0.0
S+R+C	0	0.0	1	1.7	0	0.0	0	0.0	0	0.0
Others	2	50.0	29	50.0	0	0.0	7	50.0	2	50.0
All Treatments	**4**	**100.0**	**58**	**100.0**	**0**	**0.0**	**14**	**100.0**	**4**	**100.0**
OTHERS										
Surgery (S)	10	90.9	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0
Chemotherapy (C)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S+R	1	9.1	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
R+C	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**11**	**100.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**2**	**100.0**

** Only 2004-05 data*

Table 10.8(a): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Mouth Males (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	168	64.1	86	32.8	8	3.1	0	0.0	262
Bangalore	18	37.5	21	43.8	9	18.8	0	0.0	48
Chennai	13	8.5	99	64.7	41	26.8	0	0.0	153
Thi'puram	10	13.3	64	85.3	1	1.3	0	0.0	75
Dibrugarh	0	0.0	1	100.0	0	0.0	0	0.0	1
REGIONAL									
Mumbai*	621	46.6	529	39.7	182	13.7	0	0.0	1332
Bangalore	94	27.6	183	53.8	63	18.5	0	0.0	340
Chennai	46	8.8	329	62.7	150	28.6	0	0.0	525
Thi'puram	194	15.5	761	60.9	291	23.3	3	0.2	1249
Dibrugarh	21	16.0	107	81.7	3	2.3	0	0.0	131
DISTANT									
Mumbai*	2	8.3	9	37.5	13	54.2	0	0.0	24
Bangalore	3	13.6	13	59.1	6	27.3	0	0.0	22
Chennai	1	50.0	1	50.0	0	0.0	0	0.0	2
Thi'puram	0	0.0	4	50.0	4	50.0	0	0.0	8
Dibrugarh	0	0.0	0	0.0	0	0.0	0	0.0	0
OTHERS									
Mumbai*	17	60.7	8	28.6	3	10.7	0	0.0	28
Bangalore	0	0.0	1	100.0	0	0.0	0	0.0	1
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	1	16.7	5	83.3	0	0.0	0	0.0	6

** Only 2004-05 data*

Table 10.8(b): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Mouth Females (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	46	62.2	26	35.1	2	2.7	0	0.0	74
Bangalore	37	52.1	24	33.8	10	14.1	0	0.0	71
Chennai	16	16.5	64	66.0	17	17.5	0	0.0	97
Thi'puram	7	12.7	46	83.6	2	3.6	0	0.0	55
Dibrugarh	0	0.0	2	100.0	0	0.0	0	0.0	2
REGIONAL									
Mumbai*	210	54.7	145	37.8	29	7.6	0	0.0	384
Bangalore	216	28.3	350	45.8	198	25.9	0	0.0	764
Chennai	38	10.9	232	66.3	80	22.9	0	0.0	350
Thi'puram	107	16.5	421	65.0	119	18.4	1	0.2	648
Dibrugarh	3	7.1	39	92.9	0	0.0	0	0.0	42
DISTANT									
Mumbai*	0	0.0	1	50.0	1	50.0	0	0.0	2
Bangalore	2	5.7	17	48.6	15	42.9	1	2.9	35
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	6	75.0	2	25.0	0	0.0	8
Dibrugarh	0	0.0	2	100.0	0	0.0	0	0.0	2
OTHERS									
Mumbai*	4	80.0	1	20.0	0	0.0	0	0.0	5
Bangalore	0	0.0	0	0.0	0	0.0	0	0.0	0
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	2	100.0	0	0.0	0	0.0	2

** Only 2004-05 data*

Chapter 11

TONGUE (ICD-10: C01-C02)

The total number, relative proportion and rank of cancer of tongue in males and females for the years 2004 to 2006 is given in Table 11.1(a). Cancer of the tongue was among the five leading sites in all registries in males.

Table 11.1(b) gives the number and relative proportion of tongue cancer according to sub-site. Bangalore(57.4%) in males and Dibrugarh(63.5%) had a higher proportion of base tongue cancer, whereas Thiruvananthapuram(16.3%) had relatively lower proportion.

Figure 11.1 gives the trends in actual number of tongue cancers from 1984 to 2006. A decrease in numbers is seen in Dibrugarh while a slight increase in numbers is seen in Bangalore.

Table 11.2 and Figure 11.2 show the distribution of tongue cancers by five year age group. The predominant form of diagnosis of tongue cancer was through microscopic examination (Table 11.3).

Tale 11.4 gives the distribution of tongue cancer according to the clinical extent of disease. The regional spread of the disease varied from 50.4% in Mumbai to 89.9% in Dibrugarh.

Table 11.5 gives the relative proportion of tongue cancer according to the broad groups of treatment.

Tables 11.6, 11.7 and 11.8 give the picture of the different types of treatment given to these patients.

Table 11.1(a): Number(#), Relative Proportion(%) and Rank(R) of cancers of the Tongue (2004-2006)

Registry	Males				Females			
	Total	#	%	R	Total	#	%	R
Mumbai*	19399	1347	6.9	3	15313	374	2.4	>10
Bangalore	10293	585	5.7	4	11842	165	1.4	>10
Chennai	12523	868	6.9	5	13589	220	1.6	>10
Thi'puram	12563	865	6.9	3	11394	347	3	7
Dibrugarh	1782	96	5.4	4	1063	27	2.5	9

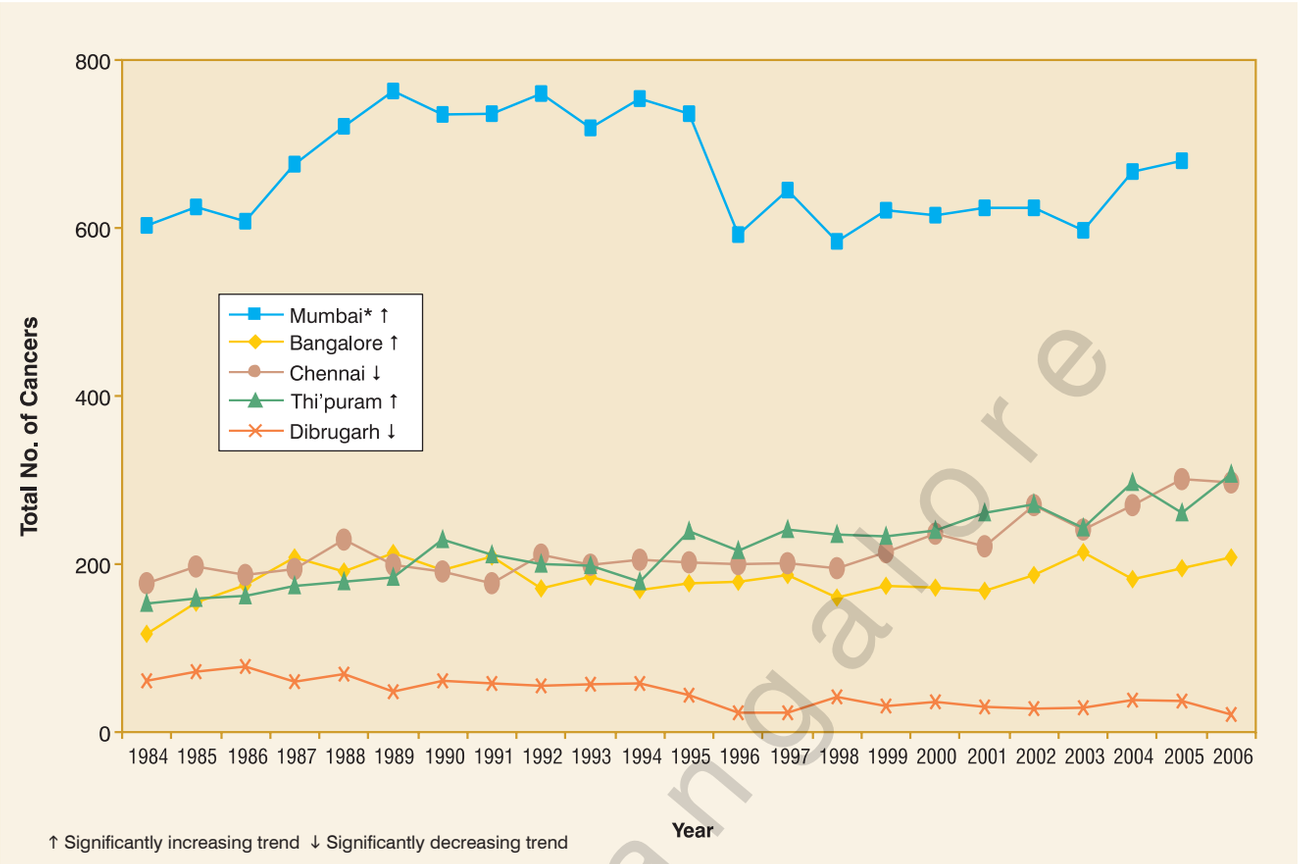
Table 11.1(b): Number(#) and Relative Proportion(%) of Tongue Cancer patients according to sub-site (2004-2006)

Sub-Site	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Base of Tongue	385	28.6	336	57.4	293	33.8	141	16.3	61	63.5
Rest of Tongue	677	50.3	83	14.2	536	61.8	215	24.9	25	26.0
NOS#	285	21.2	166	28.4	39	4.5	509	58.8	10	10.4
Total Tongue	**1347**	**100.0**	**585**	**100.0**	**868**	**100.0**	**865**	**100.0**	**96**	**100.0**
FEMALES										
Base of Tongue	40	10.7	39	23.6	25	11.4	3	0.9	19	70.4
Rest of Tongue	245	65.5	46	27.9	192	87.3	97	28.0	5	18.5
NOS#	89	23.8	80	48.5	3	1.4	247	71.2	3	11.1
Total Tongue	**374**	**100.0**	**165**	**100.0**	**220**	**100.0**	**347**	**100.0**	**27**	**100.0**

**Only 2004-05 data; #NOS = Not Otherwise Specified*

Fig. 11.1: Trends in Actual Numbers - Tongue Cancer

Males



Females

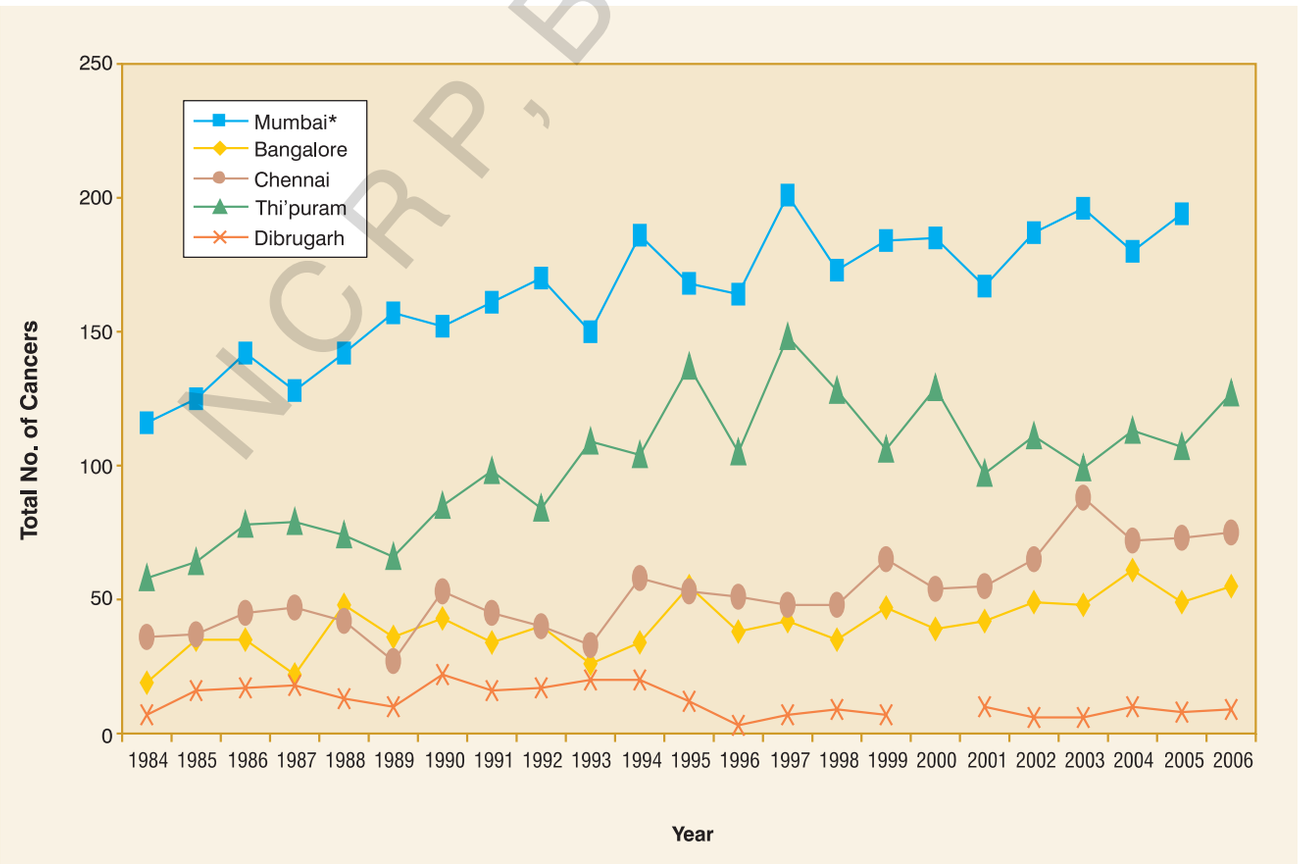


Fig 11.2(a) : Five Year Age Group Distribution - Tongue Cancer - Males (2004-2006)

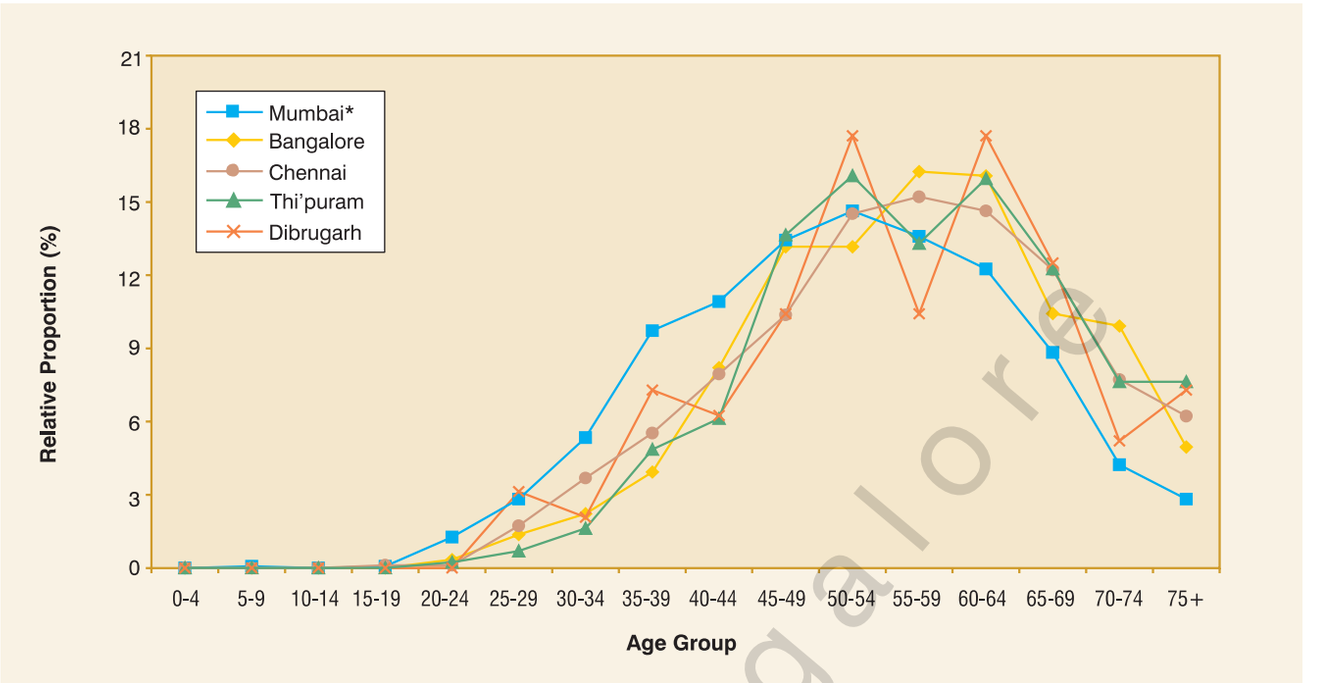


Fig 11.2(b) : Five Year Age Group Distribution - Tongue Cancer - Females (2004-2006)

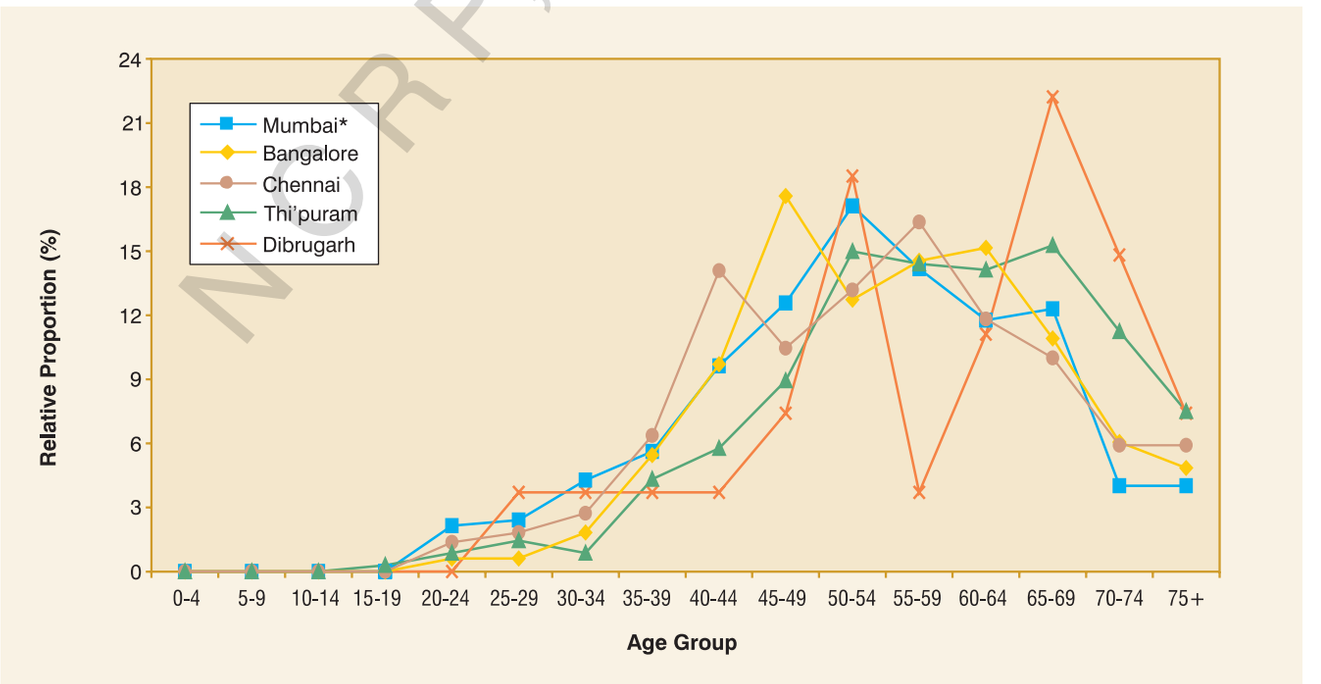


Table 11.2(a): Number(#) and Relative Proportion(%) of tongue cancers according to five year age group (2004-2006)

Males

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
5-9	1	0.1	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
15-19	1	0.1	0	0.0	1	0.1	0	0.0	0	0.0
20-24	17	1.3	2	0.3	1	0.1	2	0.2	0	0.0
25-29	38	2.8	8	1.4	15	1.7	6	0.7	3	3.1
30-34	72	5.3	13	2.2	32	3.7	14	1.6	2	2.1
35-39	131	9.7	23	3.9	48	5.5	42	4.9	7	7.3
40-44	147	10.9	48	8.2	69	7.9	53	6.1	6	6.3
45-49	181	13.4	77	13.2	90	10.4	118	13.6	10	10.4
50-54	197	14.6	77	13.2	126	14.5	139	16.1	17	17.7
55-59	183	13.6	95	16.2	132	15.2	115	13.3	10	10.4
60-64	165	12.2	94	16.1	127	14.6	138	16.0	17	17.7
65-69	119	8.8	61	10.4	106	12.2	106	12.3	12	12.5
70-74	57	4.2	58	9.9	67	7.7	66	7.6	5	5.2
75+	38	2.8	29	5.0	54	6.2	66	7.6	7	7.3
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**1347**	**100.0**	**585**	**100.0**	**868**	**100.0**	**865**	**100.0**	**96**	**100.0**
Mean		51.3		56.2		55.7		56.9		55.5
SD		12.5		11.7		12.3		11.5		12.40

Table 11.2(b): Number(#) and Relative Proportion(%) of tongue cancers according to five year age group (2004-2006)

Females

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	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
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0
20-24	8	2.1	1	0.6	3	1.4	3	0.9	0	0.0
25-29	9	2.4	1	0.6	4	1.8	5	1.4	1	3.7
30-34	16	4.3	3	1.8	6	2.7	3	0.9	1	3.7
35-39	21	5.6	9	5.5	14	6.4	15	4.3	1	3.7
40-44	36	9.6	16	9.7	31	14.1	20	5.8	1	3.7
45-49	47	12.6	29	17.6	23	10.5	31	8.9	2	7.4
50-54	64	17.1	21	12.7	29	13.2	52	15.0	5	18.5
55-59	53	14.2	24	14.5	36	16.4	50	14.4	1	3.7
60-64	44	11.8	25	15.2	26	11.8	49	14.1	3	11.1
65-69	46	12.3	18	10.9	22	10.0	53	15.3	6	22.2
70-74	15	4.0	10	6.1	13	5.9	39	11.2	4	14.8
75+	15	4.0	8	4.8	13	5.9	26	7.5	2	7.4
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**374**	**100.0**	**165**	**100.0**	**220**	**100.0**	**347**	**100.0**	**27**	**100.0**
Mean		12.6		54.9		53.8		57.9		58.4
SD		53.0		11.4		12.6		12.2		13.3

** Only 2004-05 data*

Table 11.3 : Number(#) and Relative Proportion(%) of tongue cancers based on different Methods of Diagnosis (2004-2006)

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Males										
Mumbai*	1282	95.2	2	0.1	0	0.0	63	4.7	1347	100.0
Bangalore	563	96.2	12	2.1	2	0.3	8	1.4	585	100.0
Chennai	672	78.0	190	22.0	0	0.0	0	0.0	862	100.0
Thi'puram	835	96.1	29	3.3	1	0.1	4	0.5	869	100.0
Dibrugarh	96	98.0	0	0.0	2	2.0	0	0.0	98	100.0
Females										
Mumbai*	358	95.7	0	0.0	1	0.3	15	4.0	374	100.0
Bangalore	159	96.4	6	3.6	0	0.0	0	0.0	165	100.0
Chennai	178	80.9	42	19.1	0	0.0	0	0.0	220	100.0
Thi'puram	341	98.3	6	1.7	0	0.0	0	0.0	347	100.0
Dibrugarh	27	100.0	0	0.0	0	0.0	0	0.0	27	100.0

Table 11.4 : Number(#) and Relative Proportion(%) of tongue cancer patients according to the Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Males												
Mumbai*	195	17.3	566	50.4	761	67.7	22	2.0	341	30.3	1124	100.0
Bangalore	30	5.5	473	86.0	503	91.5	47	8.5	0	0.0	550	100.0
Chennai	149	19.8	598	79.4	747	99.2	6	0.8	0	0.0	753	100.0
Thi'puram	128	16.6	637	82.6	765	99.2	6	0.4	0	0.0	771	100.0
Dibrugarh	3	3.0	89	89.9	92	92.9	6	3.2	1	1.0	99	100.0
Females												
Mumbai*	83	26.5	127	40.6	210	67.1	9	2.9	94	30.0	313	100.0
Bangalore	24	8.2	114	38.9	138	47.1	17	5.8	0	0.0	155	100.0
Chennai	61	16.1	129	33.9	190	50.0	0	0.0	0	0.0	190	100.0
Thi'puram	74	11.9	237	38.1	311	50.0	0	0.0	0	0.0	311	100.0
Dibrugarh	1	1.9	25	47.2	26	49.1	0	0.0	1	1.9	27	100.0

** Only 2004-05 data*

Table 11.5: Number(#) and Relative Proportion(%) of Tongue cancer patients according to Broad Groups of Treatment(Tmt) (2004-2006)

	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Prior Tmt. Only	152	11.3	24	4.1	110	12.7	42	4.9	0	0.0
Prior Tmt.+ at RI	71	5.3	10	1.7	5	0.6	52	6.0	2	2.1
Tmt. Only at RI	511	37.9	303	51.8	290	33.4	658	76.1	94	97.9
No Treatment	613	45.5	248	42.4	463	53.3	113	13.1	0	0.0
Total Patients	1347	100.0	585	100.0	868	100.0	865	100.0	96	100.0
FEMALES										
Prior Tmt. Only	39	10.4	7	4.2	23	10.5	15	4.3	0	0.0
Prior Tmt. at RI	22	5.9	1	0.6	7	3.2	21	6.1	0	0.0
Tmt. Only at RI	140	37.4	80	48.5	99	45.0	276	79.5	26	96.3
No Treatment	173	46.3	77	46.7	91	41.4	35	10.1	1	3.7
Total Patients	374	100.0	165	100.0	220	100.0	347	100.0	27	100.0

** Only 2004-05 data*

Table 11.6: Number(#) and Relative Proportion(%) of Tongue Cancer patients according to Type of Treatment given(Patients treated only at Reporting Institution) (2004-2006)

Males

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	511	100.0	303	100.0	290	100.0	657	100.0	94	100.0
Specific Treatments										
Surgery (S)	114	22.3	32	10.6	6	2.1	154	23.4	1	1.1
Radiotherpay (R)	102	20.0	180	59.4	128	44.1	118	18.0	89	94.7
Chemotherapy (C)	17	3.3	14	4.6	3	1.0	45	6.8	3	3.2
S+R	173	33.9	27	8.9	67	23.1	128	19.5	0	0.0
S+C	2	0.4	1	0.3	0	0.0	14	2.1	0	0.0
R+C	79	15.5	44	14.5	70	24.1	102	15.5	1	1.1
S+R+C	24	4.7	4	1.3	16	5.5	93	14.2	0	0.0
Others	0	0.0	1	0.3	0	0.0	3	0.5	0	0.0
Modality of Therapy #										
Single	233	45.6	226	74.6	137	47.2	317	48.2	93	98.9
Combination	278	54.4	76	25.1	153	52.8	337	51.3	1	1.1
Type of Any Treatment										
Any Surgery	313	61.3	64	21.1	89	30.7	389	59.2	1	1.1
Any R	378	74.0	255	84.2	281	96.9	441	67.1	90	95.7
Any C	122	23.9	63	20.8	89	30.7	254	38.7	4	4.3

Females

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	140	100.0	80	100.0	99	100.0	276	100.0	26	100.0
Specific Treatments										
Surgery (S)	52	37.1	24	30.0	2	2.0	82	29.7	0	0.0
Radiotherpay (R)	16	11.4	30	37.5	48	48.5	35	12.7	24	92.3
Chemotherapy (C)	4	2.9	6	7.5	0	0.0	18	6.5	1	3.8
S+R	59	42.1	13	16.3	19	19.2	68	24.6	1	3.8
S+C	0	0.0	1	1.3	1	1.0	6	2.2	0	0.0
R+C	6	4.3	3	3.8	18	18.2	25	9.1	0	0.0
S+R+C	3	2.1	3	3.8	11	11.1	42	15.2	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Modality of Therapy #										
Single	72	51.4	60	75.0	50	50.5	135	48.9	25	96.2
Combination	68	48.6	20	25.0	49	49.5	141	51.1	1	3.8
Type of Any Treatment										
Any Surgery	114	81.4	41	51.3	33	33.3	198	71.7	1	3.8
Any R	84	60.0	49	61.3	96	97.0	170	61.6	25	96.2
Any C	13	9.3	13	16.3	30	30.3	91	33.0	1	3.8

**Only 2004-05 data; #=Excludes specific treatment classified as 'Others'*

Table 11.7 (a): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease - Tongue Males (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	67	43.2	6	27.3	3	2.3	64	56.6	1	33.3
Radiotherapy (R)	12	7.7	6	27.3	51	39.2	22	19.5	2	66.7
Chemotherapy (C)	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0
S+R	74	47.7	3	13.6	50	38.5	17	15.0	0	0.0
S+C	0	0.0	0	0.0	0	0.0	3	2.7	0	0.0
R+C	2	1.3	2	9.1	22	16.9	2	1.8	0	0.0
S+R+C	0	0.0	5	22.7	4	3.1	4	3.5	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**155**	**100.0**	**22**	**100.0**	**130**	**100.0**	**113**	**100.0**	**3**	**100.0**
Regional										
Surgery (S)	40	12.1	25	9.4	3	1.9	90	16.6	0	0.0
Radiotherapy (R)	84	25.5	157	59.2	77	48.1	95	17.5	85	95.5
Chemotherapy (C)	15	4.5	14	5.3	3	1.9	44	8.1	3	3.4
S+R	94	28.5	22	8.3	17	10.6	111	20.5	0	0.0
S+C	2	0.6	1	0.4	0	0.0	11	2.0	0	0.0
R+C	76	23.0	41	15.5	48	30.0	99	18.3	1	1.1
S+R+C	19	5.8	4	1.5	12	7.5	89	16.4	0	0.0
Others	0	0.0	1	0.4	0	0.0	3	0.6	0	0.0
All Treatments	**330**	**100.0**	**265**	**100.0**	**160**	**100.0**	**542**	**100.0**	**89**	**100.0**
Distant										
Surgery (S)	0	0.0	1	5.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	4	50.0	16	80.0	0	0.0	1	33.3	1	100.0
Chemotherapy (C)	2	25.0	0	0.0	0	0.0	0	0.0	0	0.0
S+R	1	12.5	2	10.0	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
R+C	1	12.5	1	5.0	0	0.0	1	33.3	0	0.0
S+R+C	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	1	33.3	0	0.0
All Treatments	**8**	**100.0**	**20**	**100.0**	**0**	**0.0**	**3**	**100.0**	**1**	**100.0**
Others										
Surgery (S)	3	33.3	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	2	22.2	1	100.0	0	0.0	0	0.0	1	100.0
Chemotherapy (C)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S+R	4	44.4	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
R+C	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**9**	**100.0**	**1**	**100.0**	**0**	**0.0**	**0**	**0.0**	**1**	**100.0**

** Only 2004-05 data*

Table 11.7(b): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease -Tongue Females (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	38	55.9	8	57.1	2	3.8	33	51.6	0	0.0
Radiotherapy (R)	5	7.4	3	21.4	29	55.8	10	15.6	1	100.0
Chemotherapy (C)	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0
S+R	23	33.8	3	21.4	17	32.7	16	25.0	0	0.0
S+C	0	0.0	0	0.0	0	0.0	1	1.6	0	0.0
R+C	0	0.0	0	0.0	1	1.9	1	1.6	0	0.0
S+R+C	1	1.5	0	0.0	3	5.8	3	4.7	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**68**	**100.0**	**14**	**100.0**	**52**	**100.0**	**64**	**100.0**	**1**	**100.0**
Regional										
Surgery (S)	11	16.2	14	22.6	0	0.0	49	23.0	0	0.0
Radiotherapy (R)	11	16.2	27	43.5	19	44.2	25	11.7	22	91.7
Chemotherapy (C)	2	2.9	4	6.5	0	0.0	18	8.5	1	4.2
S+R	36	52.9	10	16.1	2	4.7	52	24.4	1	4.2
S+C	0	0.0	1	1.6	0	0.0	5	2.3	0	0.0
R+C	6	8.8	3	4.8	14	32.6	25	11.7	0	0.0
S+R+C	2	2.9	3	4.8	8	18.6	39	18.3	0	0.0
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**68**	**100.0**	**62**	**100.0**	**43**	**100.0**	**213**	**100.0**	**24**	**100.0**
Distant										
Surgery (S)	0	0.0	2	50.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chemotherapy (C)	1	100.0	2	50.0	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
S+C	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
S+R+C	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
All Treatments	**1**	**100.0**	**4**	**100.0**	**0**	**100.0**	**0**	**100.0**	**0**	**100.0**
Others										
Surgery (S)	3	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0
Chemotherapy (C)	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
S+C	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
S+R+C	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
All Treatments	3	100.0	0	100.0	0	100.0	0	100.0	1	100.0

** Only 2004-05 data*

Table 11.8(a): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Tongue - Males (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	146	59.3	93	37.8	7	2.8	0	0.0	246
Bangalore	9	40.9	11	50.0	2	9.1	0	0.0	22
Chennai	57	27.1	127	60.5	26	12.4	0	0.0	210
Thi'puram	88	61.5	45	31.5	10	7.0	0	0.0	143
Dibrugarh	1	33.3	2	66.7	0	0.0	0	0.0	3
REGIONAL									
Mumbai*	155	28.7	273	50.6	112	20.7	0	0.0	540
Bangalore	53	15.7	225	66.6	60	17.8	0	0.0	338
Chennai	32	12.9	154	61.8	63	25.3	0	0.0	249
Thi'puram	302	32.1	395	41.9	243	25.8	2	0.2	942
Dibrugarh	0	0.0	86	95.6	4	4.4	0	0.0	90
DISTANT									
Mumbai*	1	10.0	6	60.0	3	30.0	0	0.0	10
Bangalore	3	13.0	19	82.6	1	4.3	0	0.0	23
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	2	50.0	1	25.0	1	25.0	4
Dibrugarh	0	0.0	1	100.0	0	0.0	0	0.0	1
OTHERS									
Mumbai*	11	64.7	6	35.3	0	0.0	0	0.0	17
Bangalore	0	0.0	1	100.0	0	0.0	0	0.0	1
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	1	100.0	0	0.0	0	0.0	1

** Only 2004-05 data*

Table 11.8(b): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Toungue - Females (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	62	66.7	29	31.2	2	2.2	0	0.0	93
Bangalore	11	64.7	6	35.3	0	0.0	0	0.0	17
Chennai	23	27.4	53	63.1	8	9.5	0	0.0	84
Thi'puram	53	61.6	29	33.7	4	4.7	0	0.0	86
Dibrugarh	0	0.0	1	100.0	0	0.0	0	0.0	1
REGIONAL									
Mumbai*	49	43.0	55	48.2	10	8.8	0	0.0	114
Bangalore	28	34.1	43	52.4	11	13.4	0	0.0	82
Chennai	10	13.3	43	57.3	22	29.3	0	0.0	75
Thi'puram	145	38.9	141	37.8	87	23.3	0	0.0	373
Dibrugarh	1	4.0	23	92.0	1	4.0	0	0.0	25
DISTANT									
Mumbai*	0	0.0	0	0.0	1	100.0	0	0.0	1
Bangalore	2	50.0	0	0.0	2	50.0	0	0.0	4
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	0	0.0	0	0.0	0	0.0	0
OTHERS									
Mumbai*	3	100.0	0	0.0	0	0.0	0	0.0	3
Bangalore	0	0.0	0	0.0	0	0.0	0	0.0	0
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	1	100.0	0	0.0	0	0.0	1

** Only 2004-05 data*

Chapter 12

OESOPHAGUS (ICD-10: C15)

The total number, relative proportion and rank of cancer of oesophagus in males and females for the years 2004 to 2006 is given in Table 12.1(a). Cancer of the oesophagus ranked as the first five leading sites in all registries in both sexes, except in Mumbai in males and Thiruvananthapuram and mumbai in females. Oesophageal cancers were the leading site among females in Dibrugarh.

The sub-site distribution of oesophageal cancer is depicted in Table 12.1(b). All registries in both sexes had a lower proportion of cancers of the oesophagus in the upper third. In females the highest relative proportion was the middle third of the oesophagus, in all registries.

Figure 12.1 gives the trends in the actual number of oesophageal cancers in both males and females from 1984 to 2006.

Table 12.2 and Figure 12.2 give the distribution of cancer of oesophagus according to five year age group.

The predominant form of diagnosis was through microscopic examination(Table 12.3) followed by the category “others” which represents endoscopic diagnosis.

Table 12.4 gives the distribution of cancers according to the clinical extent of disease.

Table 12.5 gives the number and relative proportion according to the broad groups of treatment. Tables 12.6 to 12.8 give the number and relative proportion according to the different types of treatment.

Table 12.1(a) : Number(#), Relative Proportion(%) and Rank (R) of cancer of the Oesophagus (2004-2006)

Registry	Males				Females			
	Total	#	%	R	Total	#	%	R
Mumbai *	9596	956	10.0	6	7535	511	6.8	6
Bangalore	10293	837	8.1	2	11842	679	5.7	4
Chennai	12523	886	7.1	4	13589	542	4.0	5
Thi'puram	12563	644	5.1	4	11394	202	1.7	>10
Dibrugarh	1782	276	15.5	2	1063	146	13.7	3

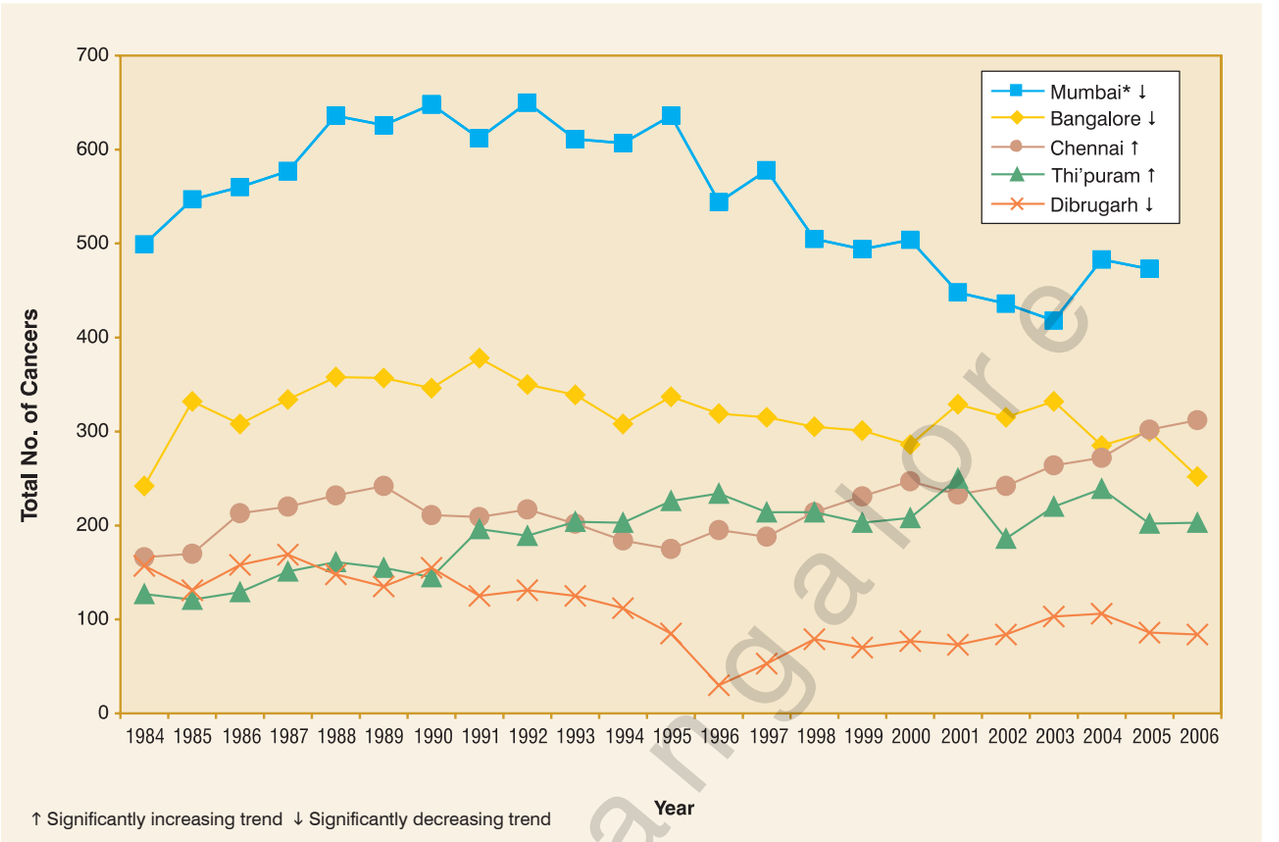
Table 12.1(b): Cancer of Oesophagus - Number(#) and Relative Proportion(%) according to sub-site (2004-2006)

Sub-site	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Cervical-upper 3rd	115	12.0	123	13.9	133	13.8	77	11.1	46	16.7
Thoracic-middle 3rd	292	30.5	309	34.9	296	30.8	204	29.4	123	44.6
Abdominal-lower 3rd	246	25.7	173	19.5	336	34.9	243	35.0	73	26.4
Overlap of subsite	0	0.0	17	1.9	60	6.2	21	3.0	7	2.5
NOS#	303	31.7	264	29.8	137	14.2	149	21.5	27	9.8
Total Oesphagus	**956**	**100.0**	**886**	**100.0**	**962**	**100.0**	**694**	**100.0**	**276**	**100.0**
FEMALES										
Cervical-upper 3rd	66	12.9	91	12.8	71	12.4	25	12.0	20	13.7
Thoracic-middle 3rd	180	35.2	282	39.6	215	37.6	68	32.5	65	44.5
Abdominal-lower 3rd	103	20.2	141	19.8	166	29.0	63	30.1	37	25.3
Overlap of subsite	0	0.0	12	1.7	32	5.6	8	3.8	6	4.1
NOS#	162	31.7	187	26.2	88	15.4	45	21.5	18	12.3
Total Oesphagus	**511**	**100.0**	**713**	**100.0**	**572**	**100.0**	**209**	**100.0**	**146**	**100.0**

**Only 2004-05 dara; #NOS = Not Otherwise Specified*

Fig. 12.1: Trends in Actual Numbers - Oesophageal Cancer

Males



Females

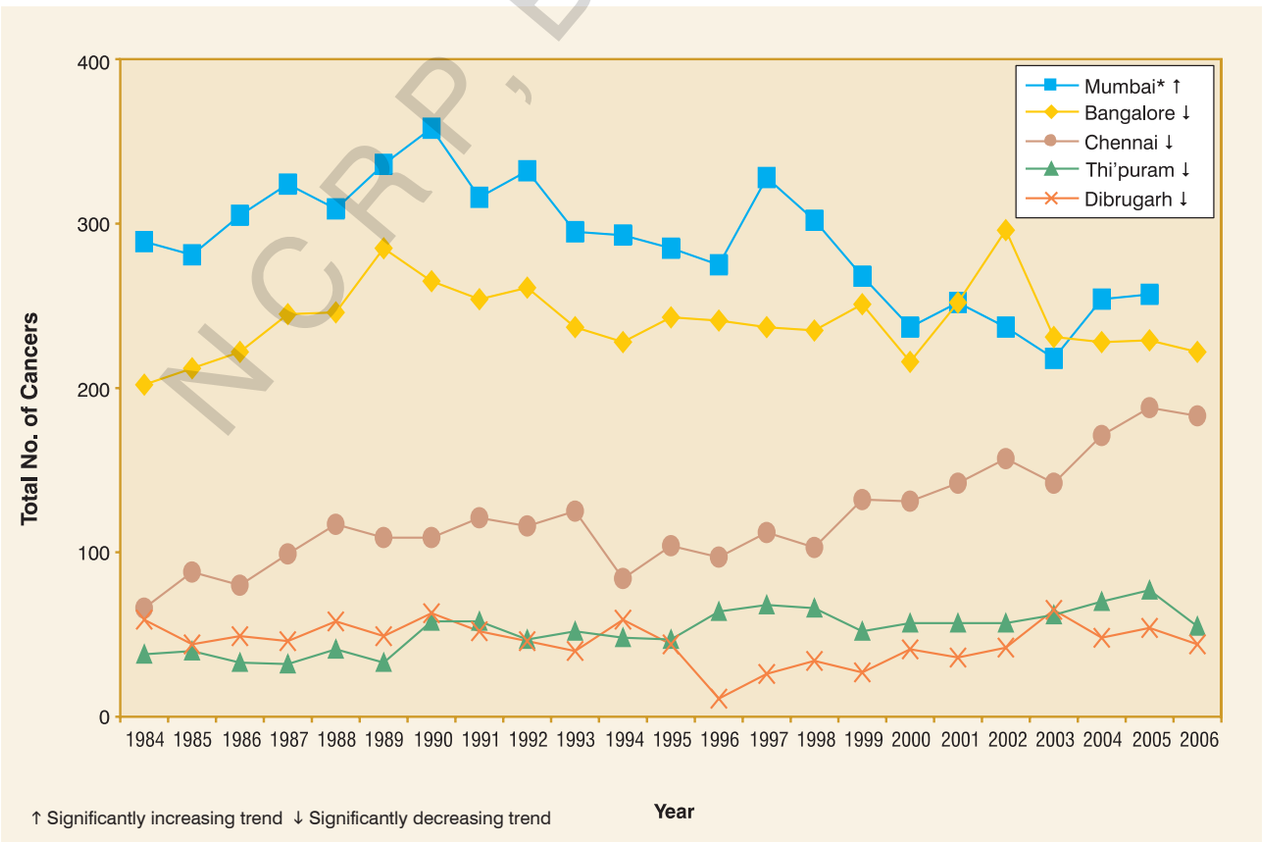


Table 12.2: Number(#) and Relative Proportion(%) of oesophageal cancers according to five year age group (2004-2006)

Males

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	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
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	2	0.2	0	0.0	1	0.1	0	0.0	1	0.4
20-24	4	0.4	1	0.1	2	0.2	0	0.0	0	0.0
25-29	4	0.4	6	0.7	5	0.6	1	0.2	1	0.4
30-34	9	0.9	8	1.0	9	1.0	5	0.8	2	0.7
35-39	30	3.1	25	3.0	32	3.6	11	1.7	5	1.8
40-44	63	6.6	44	5.3	46	5.2	20	3.1	15	5.4
45-49	111	11.6	77	9.2	77	8.7	57	8.9	28	10.1
50-54	168	17.6	149	17.8	114	12.9	93	14.4	41	14.9
55-59	151	15.8	155	18.5	164	18.5	119	18.5	39	14.1
60-64	151	15.8	132	15.8	157	17.7	104	16.1	47	17.0
65-69	134	14.0	103	12.3	121	13.7	97	15.1	46	16.7
70-74	87	9.1	76	9.1	97	10.9	73	11.3	32	11.6
75+	42	4.4	61	7.3	61	6.9	64	9.9	19	6.9
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**956**	**100.0**	**837**	**100.0**	**886**	**100.0**	**644**	**100.0**	**276**	**100.0**
Mean		57.1		58.1		58.7		60.3		59.3
SD		10.8		10.8		11.0		10.3		10.8

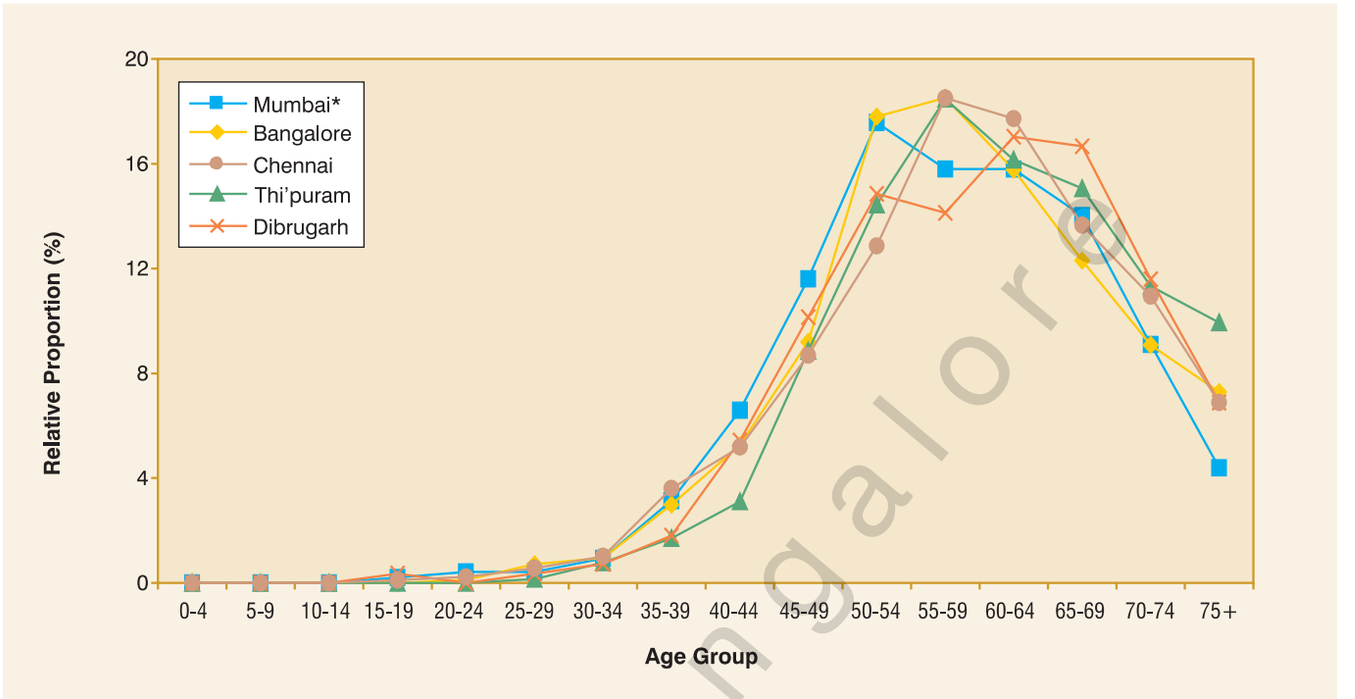
Females

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	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
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
20-24	0	0.0	3	0.4	7	1.3	1	0.5	0	0.0
25-29	6	1.2	3	0.4	6	1.1	4	2.0	0	0.0
30-34	10	2.0	7	1.0	20	3.7	4	2.0	6	4.1
35-39	27	5.3	28	4.1	29	5.4	7	3.5	9	6.2
40-44	38	7.4	38	5.6	43	7.9	6	3.0	16	11.0
45-49	58	11.4	88	13.0	57	10.5	29	14.4	18	12.3
50-54	64	12.5	115	16.9	81	14.9	22	10.9	21	14.4
55-59	71	13.9	109	16.1	83	15.3	26	12.9	16	11.0
60-64	86	16.8	116	17.1	87	16.1	29	14.4	27	18.5
65-69	77	15.1	92	13.5	52	9.6	29	14.4	18	12.3
70-74	38	7.4	49	7.2	42	7.7	22	10.9	9	6.2
75+	36	7.0	31	4.6	35	6.5	23	11.4	6	4.1
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**511**	**100.0**	**679**	**100.0**	**542**	**100.0**	**202**	**100.0**	**146**	**100.0**
Mean		57.0		56.9		55.5		58.7		55.0
SD		11.8		10.7		12.5		12.6		11.6

** Only 2004-05 data*

Fig 12.2 : Five Year Age Group Distribution - Oesophageal Cancer (2004-2006)

Males



Females

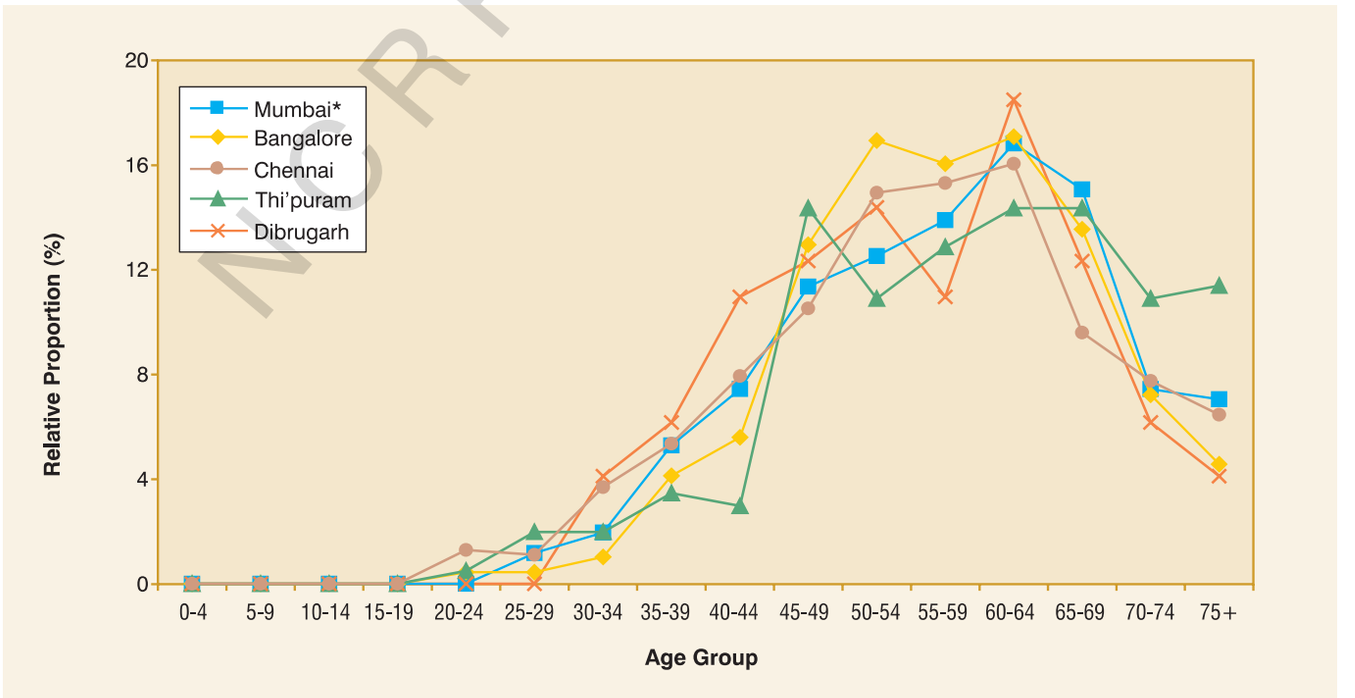


Table 12.3: Number(#) and Relative Proportion(%) of Oesophageal cancers based on different Methods of Diagnosis (2004-2006)

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Males										
Mumbai*	891	93.2	0	0.0	5	0.5	60	6.3	956	100.0
Bangalore	798	95.3	17	2.0	3	0.4	19	2.3	837	100.0
Chennai	779	87.9	18	2.0	38	4.3	51	5.8	886	100.0
Thi'puram	600	93.2	3	0.5	24	3.7	17	2.6	644	100.0
Dibrugarh	265	96.0	0	0.0	7	2.5	4	1.4	276	100.0
Females										
Mumbai*	473	0.0	0	0.0	0	0.0	38	7.4	511	100.0
Bangalore	658	96.9	4	0.6	3	0.4	14	2.1	679	100.0
Chennai	463	85.4	8	1.5	25	4.6	46	8.5	542	100.0
Thi'puram	190	94.1	1	0.5	9	4.5	2	1.0	202	100.0
Dibrugarh	136	93.2	0	0.0	7	4.8	3	2.1	146	100.0

Table 12.4: Number(#) and Relative Proportion(%) of oesophageal cancer patients according to the Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
MALES												
Mumbai*	101	11.5	290	33.0	391	44.5	205	23.3	282	32.1	878	100.0
Bangalore	88	11.1	600	75.9	688	87.0	103	13.0	0	0.0	791	100.0
Chennai	0	0.0	634	77.0	634	77.0	189	23.0	0	0.0	823	100.0
Thi'puram	103	17.2	375	62.6	478	79.8	121	20.2	0	0.0	599	100.0
Dibrugarh	5	1.8	248	90.5	253	92.3	6	2.2	15	15.0	274	100.0
FEMALES												
Mumbai*	82	17.2	159	33.3	241	50.4	82	17.2	155	155.0	478	100.0
Bangalore	72	11.2	520	81.0	592	92.2	50	7.8	0	0.0	642	100.0
Chennai	0	0.0	424	81.9	424	81.9	94	18.1	0	0.0	518	100.0
Thi'puram	43	22.1	125	64.1	168	86.2	27	13.8	0	0.0	195	100.0
Dibrugarh	0	0.0	127	87.0	127	87.0	5	3.4	14	14.0	146	100.0

** Only 2004-05 data*

Table 12.5: Number(#) and Relative Proportion(%) of oesophageal cancer patients according to Broad Groups of Treatment(Tmt) (2004-2006)

Treatment Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Prior Tmt. Only	58	6.1	32	3.8	61	6.9	20	3.1	0	0.0
Prior Tmt. +at RI	20	2.1	10	1.2	2	0.2	25	3.9	2	0.7
Tmt. Only at RI	300	31.4	421	50.3	136	15.3	443	68.8	248	89.9
No Treatment	578	60.5	374	44.7	687	77.5	156	24.2	26	9.4
Total Patients	956	100.0	837	100.0	886	100.0	644	100.0	276	100.0
FEMALES										
Prior Tmt. Only	25	4.9	20	2.9	22	4.1	3	1.5	0	0.0
Prior Tmt. +at RI	8	1.6	8	1.2	2	0.4	4	2.0	0	0.0
Tmt. Only at RI	160	31.3	378	55.7	99	18.3	144	71.3	135	92.5
No Treatment	318	62.2	273	40.2	419	77.3	51	25.2	11	7.5
Total Patients	511	100.0	679	100.0	542	100.0	202	100.0	146	100.0

** Only 2004-05 data*

Table 12.6: Number(#) and Relative Proportion(%) of Oesophageal Cancer patients according to Type of Treatment given(Patients treated only at Reporting Institution) (2004-2006)

Males

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total patients	**300**	**100.0**	**421**	**100.0**	**136**	**100.0**	**443**	**100.0**	**247**	**100.0**
Specific Treatments										
Surgery (S)	56	18.7	66	15.7	36	26.5	4	0.9	9	3.6
Radiotherpay (R)	54	18.0	164	39.0	47	34.6	231	52.1	219	88.7
Chemotherapy (C)	78	26.0	38	9.0	4	2.9	46	10.4	9	3.6
S+R	13	4.3	11	2.6	10	7.4	4	0.9	2	0.8
S+C	22	7.3	9	2.1	0	0.0	7	1.6	0	0.0
R+C	63	21.0	126	29.9	39	28.7	137	30.9	8	3.2
S+R+C	14	4.7	7	1.7	0	0.0	7	1.6	0	0.0
Others	0	0.0	0	0.0	0	0.0	7	1.6	0	0.0
Modality of Therapy										
Single	188	62.7	268	63.7	87	64.0	281	63.4	237	96.0
Combination	112	37.3	153	36.3	49	36.0	155	35.0	10	4.0
Type of Any Treatment										
Any Surgery	105	35.0	93	22.1	46	33.8	22	5.0	11	4.5
Any R	144	48.0	308	73.2	96	70.6	379	85.6	229	92.7
Any C	177	59.0	180	42.8	43	31.6	197	44.5	17	6.9

Females

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total patients	**160**	**100.0**	**378**	**100.0**	**99**	**100.0**	**144**	**100.0**	**135**	**100.0**
Specific Treatments										
Surgery (S)	43	26.9	56	14.8	37	37.4	2	1.4	1	0.7
Radiotherpay (R)	43	26.9	148	39.2	37	37.4	76	52.8	122	90.4
Chemotherapy (C)	27	16.9	33	8.7	0	0.0	10	6.9	9	6.7
S+R	9	5.6	14	3.7	2	2.0	3	2.1	0	0.0
S+C	7	4.4	13	3.4	0	0.0	1	0.7	0	0.0
R+C	28	17.5	102	27.0	23	23.2	49	34.0	3	2.2
S+R+C	3	1.9	12	3.2	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	3	2.1	0	0.0
Modality of Therapy										
Single	113	70.6	237	62.7	74	74.7	88	61.1	132	97.8
Combination	47	29.4	141	37.3	25	25.3	56	38.9	3	2.2
Type of Any Treatment										
Any Surgery	62	38.8	95	25.1	39	39.4	6	4.2	1	0.7
Any R	83	51.9	276	73.0	62	62.6	128	88.9	125	92.6
Any C	65	40.6	160	42.3	23	23.2	60	41.7	12	8.9

** Only 2004-05 data*

Table 12.7 (a): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease -Oesophagus - Males (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	14	26.4	16	34.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	10	18.9	13	27.7	0	0.0	32	47.8	5	100.0
Chemotherapy (C)	7	13.2	3	6.4	0	0.0	0	0.0	0	0.0
S+R	2	3.8	2	4.3	0	0.0	1	1.5	0	0.0
S+C	4	7.5	0	0.0	0	0.0	1	1.5	0	0.0
R+C	12	22.6	12	25.5	0	0.0	29	43.3	0	0.0
S+R+C	4	7.5	1	2.1	0	0.0	2	3.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	2	3.0	0	0.0
All Treatments	**53**	**100.0**	**47**	**100.0**	**0**	**0.0**	**67**	**100.0**	**5**	**100.0**
Regional										
Surgery (S)	35	21.2	47	13.7	36	29.8	4	1.4	8	3.5
Radiotherapy (R)	26	15.8	142	41.4	39	32.2	144	51.1	203	89.4
Chemotherapy (C)	39	23.6	23	6.7	3	2.5	34	12.1	6	2.6
S+R	10	6.1	9	2.6	9	7.4	1	0.4	1	0.4
S+C	14	8.5	9	2.6	0	0.0	6	2.1	0	0.0
R+C	34	20.6	107	31.2	34	28.1	86	30.5	8	3.5
S+R+C	7	4.2	6	1.7	0	0.0	4	1.4	0	0.0
Others	0	0.0	0	0.0	0	0.0	3	1.1	1	0.4
All Treatments	**165**	**100.0**	**343**	**100.0**	**121**	**100.0**	**282**	**100.0**	**227**	**100.0**
Distant										
Surgery (S)	5	6.8	3	9.7	0	0.0	0	0.0	1	25.0
Radiotherapy (R)	16	21.9	9	29.0	8	53.3	55	58.5	2	50.0
Chemotherapy (C)	31	42.5	12	38.7	1	6.7	12	12.8	1	25.0
S+R	1	1.4	0	0.0	1	6.7	2	2.1	0	0.0
S+C	4	5.5	0	0.0	0	0.0	0	0.0	0	0.0
R+C	13	17.8	7	22.6	5	33.3	22	23.4	0	0.0
S+R+C	3	4.1	0	0.0	0	0.0	1	1.1	0	0.0
Others	0	0.0	0	0.0	0	0.0	2	2.1	0	0.0
All Treatments	**73**	**100.0**	**31**	**100.0**	**15**	**100.0**	**94**	**100.0**	**4**	**100.0**
Others										
Surgery (S)	3	30.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	2	20.0	0	0.0	0	0.0	0	0.0	7	70.0
Chemotherapy (C)	1	10.0	0	0.0	0	0.0	0	0.0	2	20.0
S+R	0	0.0	0	0.0	0	0.0	0	0.0	1	10.0
S+C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
R+C	4	40.0	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**10**	**100.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**10**	**100.0**

** Only 2004-05 data*

Table 12.7(b): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease - Oesophagus - Females (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	11	37.9	10	24.4	0	0.0	2	6.3	0	0.0
Radiotherapy (R)	9	31.0	21	51.2	0	0.0	14	43.8	0	0.0
Chemotherapy (C)	1	3.4	1	2.4	0	0.0	1	3.1	0	0.0
S+R	1	3.4	0	0.0	0	0.0	1	3.1	0	0.0
S+C	2	6.9	1	2.4	0	0.0	1	3.1	0	0.0
R+C	5	17.2	8	19.5	0	0.0	13	40.6	0	0.0
S+R+C	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
All Treatments	29	100.0	41	100.0	0	0.0	32	100.0	0	0.0
Regional										
Surgery (S)	30	31.3	45	14.0	33	38.8	0	0.0	1	0.8
Radiotherapy (R)	18	18.8	119	37.1	29	34.1	47	52.8	111	91.0
Chemotherapy (C)	17	17.7	30	9.3	0	0.0	6	6.7	7	5.7
S+R	6	6.3	14	4.4	2	2.4	2	2.2	0	0.0
S+C	4	4.2	12	3.7	0	0.0	0	0.0	0	0.0
R+C	20	20.8	89	27.7	21	24.7	32	36.0	3	2.5
S+R+C	1	1.0	12	3.7	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	2	2.2	0	0.0
All Treatments	**96**	**100.0**	**321**	**100.0**	**85**	**100.0**	**89**	**100.0**	**122**	**100.0**
Distant										
Surgery (S)	2	6.3	1	6.3	4	28.6	0	0.0	0	0.0
Radiotherapy (R)	14	43.8	8	50.0	8	57.1	15	65.2	4	100.0
Chemotherapy (C)	8	25.0	2	12.5	0	0.0	3	13.0	0	0.0
S+R	2	6.3	0	0.0	0	0.0	0	0.0	0	0.0
S+C	1	3.1	0	0.0	0	0.0	0	0.0	0	0.0
R+C	3	9.4	5	31.3	2	14.3	4	17.4	0	0.0
S+R+C	2	6.3	0	0.0	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	1	4.3	0	0.0
All Treatments	**32**	**100.0**	**16**	**100.0**	**14**	**100.0**	**23**	**100.0**	**4**	**100.0**
Others										
Surgery (S)	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	2	50.0	0	0.0	0	0.0	0	0.0	9	81.8
Chemotherapy (C)	1	25.0	0	0.0	0	0.0	0	0.0	2	18.2
S+R	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
R+C	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**4**	**100.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**11**	**100.0**

** Only 2004-05 data*

Table 12.8(a): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Oesophagus - Males (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	24	30.4	28	35.4	27	34.2	0	0.0	79
Bangalore	19	30.2	28	44.4	16	25.4	0	0.0	63
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	4	3.9	64	62.7	32	31.4	2	2.0	102
Dibrugarh	0	0.0	5	100.0	0	0.0	0	0.0	5
REGIONAL									
Mumbai*	66	27.8	77	32.5	94	39.7	0	0.0	237
Bangalore	71	14.8	264	55.0	145	30.2	0	0.0	480
Chennai	45	27.4	82	50.0	37	22.6	0	0.0	164
Thi'puram	15	3.9	236	61.6	130	33.9	2	0.5	383
Dibrugarh	9	3.8	212	89.8	14	5.9	1	0.4	236
DISTANT									
Mumbai*	13	13.4	33	34.0	51	52.6	0	0.0	97
Bangalore	3	7.9	16	42.1	19	50.0	0	0.0	38
Chennai	1	4.8	14	66.7	6	28.6	0	0.0	21
Thi'puram	3	2.5	80	66.7	35	29.2	2	1.7	120
Dibrugarh	1	25.0	2	50.0	1	25.0	0	0.0	4
OTHERS									
Mumbai*	2	15.4	6	46.2	5	38.5	0	0.0	13
Bangalore	0	0.0	0	0.0	0	0.0	0	0.0	0
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	1	7.7	10	76.9	2	15.4	0	0.0	13

** Only 2004-05 data*

Table 12.8(b): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Oesophagus Females (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	14	37.8	15	40.5	8	21.6	0	0.0	37
Bangalore	11	22.0	29	58.0	10	20.0	0	0.0	50
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	4	8.5	28	59.6	15	31.9	0	0.0	47
Dibrugarh	0	0.0	0	0.0	0	0.0	0	0.0	0
REGIONAL									
Mumbai*	41	32.0	45	35.2	42	32.8	0	0.0	128
Bangalore	83	18.0	234	50.9	143	31.1	0	0.0	460
Chennai	35	32.4	52	48.1	21	19.4	0	0.0	108
Thi'puram	2	1.6	81	65.9	38	30.9	2	1.6	123
Dibrugarh	1	0.8	114	91.2	10	8.0	0	0.0	125
DISTANT									
Mumbai*	7	16.7	21	50.0	14	33.3	0	0.0	42
Bangalore	1	4.8	13	61.9	7	33.3	0	0.0	21
Chennai	4	25.0	10	62.5	2	12.5	0	0.0	16
Thi'puram	0	0.0	19	70.4	7	25.9	1	3.7	27
Dibrugarh	0	0.0	4	100.0	0	0.0	0	0.0	4
OTHERS									
Mumbai*	0	0.0	2	66.7	1	33.3	0	0.0	3
Bangalore	0	0.0	0	0.0	0	0.0	0	0.0	0
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	7	77.8	2	22.2	0	0.0	9

** Only 2004-05 data*

Chapter 13

LUNG (ICD-10: C33-C34)

Cancer of the lung in males was the leading site of cancer in Thiruvananthapuram accounting for 14.2% of all cancers in males (Table 13.1).

Figure 13.1 gives the trends in actual numbers of lung cancers from 1984 to 2006. A rising trend was observed in registries of Mumbai and Chennai.

Table 13.2 and Figure 13.2 give the five year age distribution of lung cancers.In males, the mean age varied from 57.9 in Mumbai to 62.8 in Dibrugarh. Among Females, the mean age varied from 52.9 in Bangalore to 56.6 in Dibrugarh.

Table 13.3 gives the number and relative proportion according to the different methods of diagnosis. In the registries of Mumbai, Bangalore, Thi'puram and Dibrugarh the percentage of microscopic confirmation was more than 80% except in Chennai (66.5%) where it was relatively lower among males. Among females a similar picture was seen in Mumbai, Bangalore and Thi'puram while the proportion was lower in Chennai and Dibrugarh.

The number and relative proportion of lung cancers according to the clinical extent of disease is given in Table 13.4. In the registries of Mumbai and Thiruvananthapuram a relatively higher percentage of distant cases were found.

Table 13.5 gives the number and relative proportion according to the broad groups of treatment. The percentage of cases treated only at RI varied from 13.7% in Chennai to 67.0% in Thi'puram.

Tables 13.6 to 13.8 give the number and relative proportion according to different types of treatment.

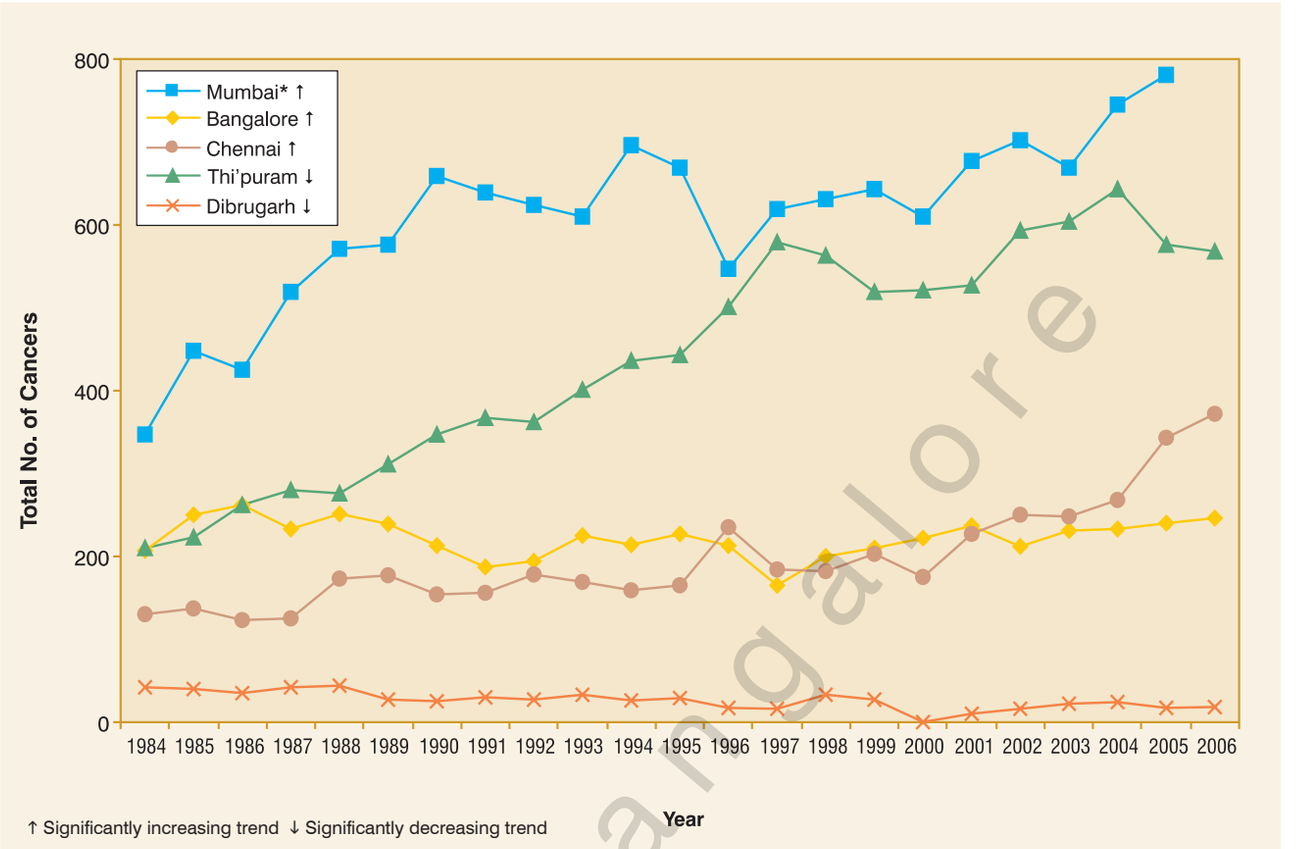
Table 13.1: Number(#), Relative Proportion(%) and Rank(R) of cancers of the Lung (2004-2006)

Registry	Males				Females			
	Total	#	%	R	Total	#	%	R
Mumbai*	19399	1526	7.8	2	15313	443	2.8	8
Bangalore	10293	719	7.0	3	11842	171	1.4	>10
Chennai	12523	983	7.8	3	13589	248	1.8	>10
Thi'puram	12563	1787	14.2	1	11394	261	2.2	>10
Dibrugarh	1782	59	3.3	8	1063	14	1.3	>10

** Only 2004-05 data*

Fig. 13.1: Trends in Actual Numbers - Lung Cancer (2004-2006)

Males



Females

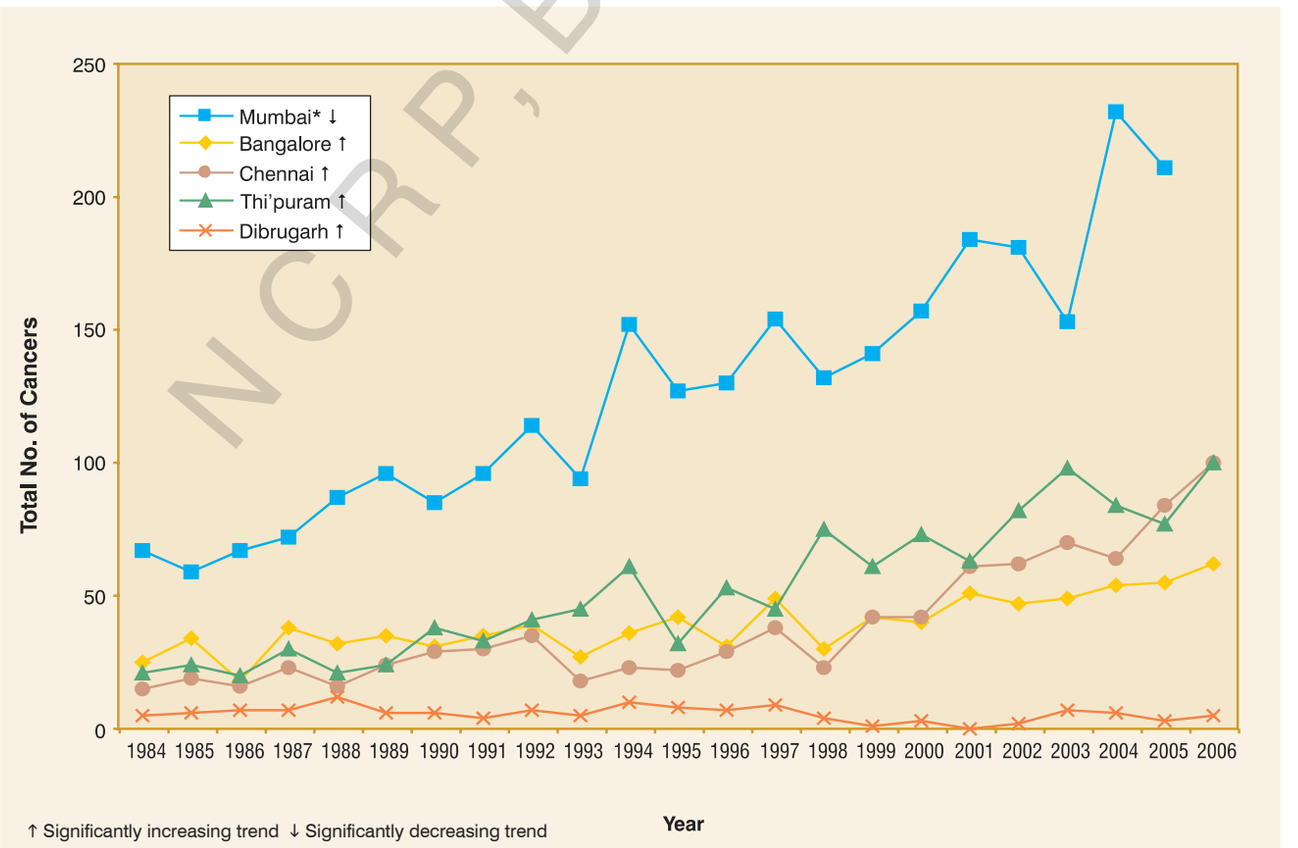


Table 13.2 : Number(#) and Relative Proportion(%) of Lung cancers according to five year age group (2004-2006)

Males

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	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	1	0.1	0	0.0
10-14	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0
15-19	2	0.1	0	0.0	0	0.0	0	0.0	0	0.0
20-24	5	0.3	2	0.3	1	0.1	3	0.2	0	0.0
25-29	10	0.7	5	0.7	3	0.3	4	0.2	1	1.7
30-34	20	1.3	10	1.4	7	0.7	12	0.7	0	0.0
35-39	59	3.9	19	2.6	32	3.3	31	1.7	2	3.4
40-44	65	4.3	39	5.4	60	6.1	80	4.5	1	1.7
45-49	162	10.6	72	10.0	92	9.4	154	8.6	3	5.1
50-54	254	16.6	104	14.5	154	15.7	250	14.0	3	5.1
55-59	247	16.2	112	15.6	150	15.3	301	16.8	7	11.9
60-64	226	14.8	112	15.6	179	18.2	310	17.3	11	18.6
65-69	250	16.4	111	15.4	152	15.5	304	17.0	16	27.1
70-74	145	9.5	71	9.9	101	10.3	196	11.0	9	15.3
75+	80	5.2	62	8.6	52	5.3	140	7.8	6	10.2
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**1526**	**100.0**	**719**	**100.0**	**983**	**100.0**	**1787**	**100.0**	**59**	**100.0**
Mean		57.9		58.8		58.5		59.9		62.8
SD		11.2		11.3		10.5		10.4		10.6

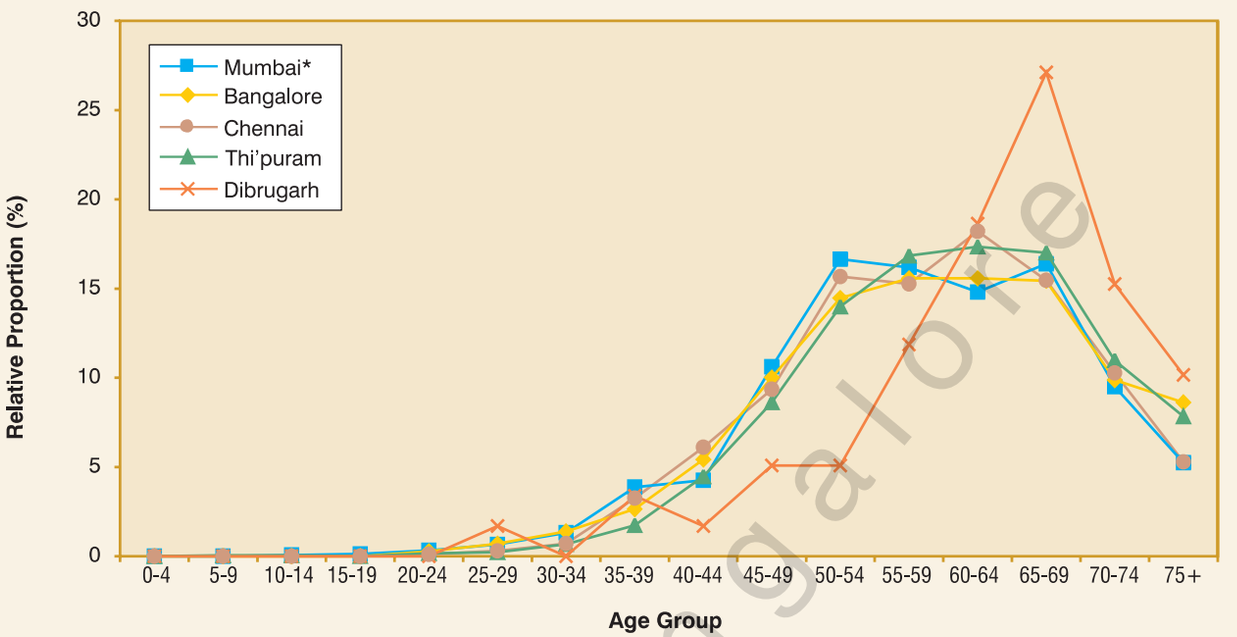
Females

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	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
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	3	0.7	1	0.6	1	0.4	0	0.0	0	0.0
20-24	1	0.2	2	1.2	1	0.4	4	1.5	0	0.0
25-29	2	0.5	5	2.9	6	2.4	1	0.4	0	0.0
30-34	14	3.2	8	4.7	3	1.2	8	3.1	1	7.1
35-39	25	5.6	12	7.0	12	4.8	8	3.1	0	0.0
40-44	57	12.9	16	9.4	18	7.3	20	7.7	0	0.0
45-49	50	11.3	26	15.2	39	15.7	42	16.1	1	7.1
50-54	68	15.3	15	8.8	33	13.3	37	14.2	3	21.4
55-59	71	16.0	29	17.0	45	18.1	39	14.9	2	14.3
60-64	66	14.9	18	10.5	40	16.1	31	11.9	5	35.7
65-69	48	10.8	24	14.0	21	8.5	41	15.7	2	14.3
70-74	25	5.6	10	5.8	23	9.3	16	6.1	0	0.0
75+	13	2.9	5	2.9	6	2.4	14	5.4	0	0.0
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**443**	**100.0**	**171**	**100.0**	**248**	**100.0**	**261**	**100.0**	**14**	**100.0**
Mean		54.3		52.9		54.9		55.7		56.6
SD		11.5		13.1		11.6		11.9		9.0

** Only 2004-05 data*

Fig 13.2 : Five Year Age Group Distribution - Lung Cancer - (2004-2006)

Males



Females

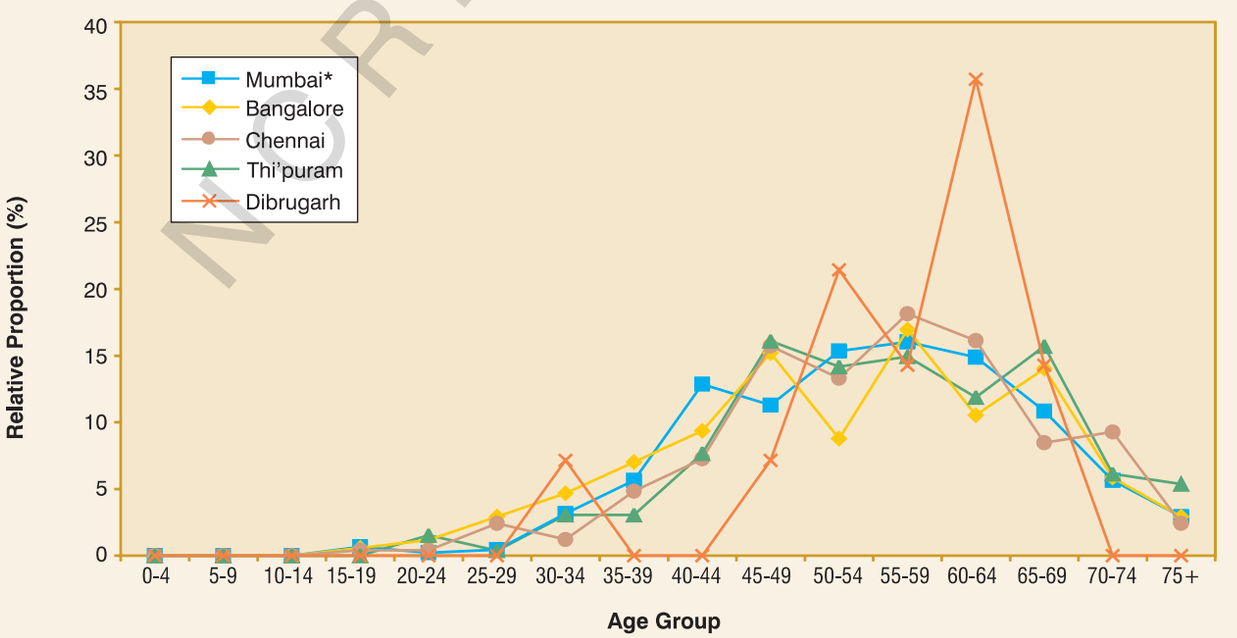


Table 13.3(a) : Number(#) and Relative Proportion(%) of Lung cancers based on different Methods of Diagnosis (2004-2006) - Males

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai*	1433	93.9	3	0.2	5	0.3	85	5.6	1526	100.0
Bangalore	650	90.4	30	4.2	28	3.9	11	1.5	719	100.0
Chennai	654	66.5	14	1.4	310	31.5	5	0.5	983	100.0
Thi'puram	1474	82.5	10	0.6	300	16.8	3	0.2	1787	100.0
Dibrugarh	56	94.9	0	0.0	3	5.1	0	0.0	59	100.0

Table 13.3(b) : Number(#) and Relative Proportion(%) of Lung cancers based on different Methods of Diagnosis (2004-2006) - Females

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai*	425	95.9	0	0.0	1	0.2	17	3.8	443	100.0
Bangalore	156	91.2	5	2.9	8	4.7	2	1.2	171	100.0
Chennai	180	72.6	3	1.2	65	26.2	0	0.0	248	100.0
Thi'puram	230	88.1	1	0.4	29	11.1	1	0.4	261	100.0
Dibrugarh	11	78.6	0	0.0	3	21.4	0	0.0	14	100.0

Table 13.4(a): Number(#) and Relative Proportion(%) of lung cancer patients according to the Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006) - Males

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai*	70	6.9	305	30.0	375	36.9	633	62.3	8	0.8	1016	100.0
Bangalore	36	5.2	376	54.0	412	59.2	281	40.4	3	0.4	696	100.0
Chennai	0	0.0	656	0.0	656	73.1	241	26.9	0	0.0	897	100.0
Thi'puram	104	6.2	621	37.3	725	43.5	942	56.5	0	0.0	1667	100.0
Dibrugarh	0	0.0	14	0.0	14	24.1	12	20.7	32	55.2	58	100.0

** Only 2004-05 data*

Table 13.4(b): Number(#) and Relative Proportion(%) of Lung cancer patients according to the Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006) - Females

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai*	30	10.0	41	13.6	71	23.6	226	75.1	4	1.3	301	100.0
Bangalore	9	5.6	82	50.6	91	56.2	70	43.2	1	0.6	162	100.0
Chennai	0	0.0	157	72.4	157	72.4	60	27.6	0	0.0	217	100.0
Thi'puram	9	3.7	84	34.6	93	0.0	150	61.7	0	0.0	243	100.0
Dibrugarh	0	0.0	1	7.1	1	7.1	5	35.7	8	57.1	14	100.0

Table 13.5(a): Number(#) and Relative Proportion(%) of Lung cancer patients according to Broad Groups of Treatment(Tmt) (2004-2006) - Males

Treatment Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	57	3.7	12	1.7	84	8.5	59	3.3	0	0.0
Prior Tmt. at RI	47	3.1	5	0.7	2	0.2	61	3.4	1	1.7
Tmt. Only at RI	565	37.0	272	37.8	135	13.7	1197	67.0	38	64.4
No Treatment	857	56.2	430	59.8	762	77.5	470	26.3	20	33.9
Total Patients	**1526**	**100.0**	**719**	**100.0**	**983**	**100.0**	**1787**	**100.0**	**59**	**100.0**

Table 13.5(b): Number(#) and Relative Proportion(%) of Lung cancer patients according to Broad Groups of Treatment(Tmt) (2004-2006) - Females

Treatment Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	16	3.6	5	2.9	29	11.7	7	2.7	0	0.0
Prior Tmt. at RI	11	2.5	2	1.2	2	0.8	11	4.2	0	0.0
Tmt. Only at RI	159	35.9	55	32.2	41	16.5	174	66.7	12	85.7
No Treatment	257	58.0	109	63.7	176	71.0	69	26.4	2	14.3
Total Patients	**443**	**100.0**	**171**	**100.0**	**248**	**100.0**	**261**	**100.0**	**14**	**100.0**

** Only 2004-05 data*

Table 13.6(a): Number(#) and Relative Proportion(%) of Lung Cancer patients according to Type of Treatment given(Patients treated only at Reporting Institution) (2004-2006) - Males

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**565**	**100.0**	**272**	**100.0**	**135**	**100.0**	**1197**	**100.0**	**38**	**100.0**
Specific Treatments										
Surgery (S)	22	3.9	12	4.4	9	6.7	10	0.8	1	2.6
Radiotherpay (R)	92	16.3	86	31.6	17	12.6	621	51.9	20	52.6
Chemotherapy (C)	284	50.3	128	47.1	80	59.3	221	18.5	16	42.1
S+R	4	0.7	1	0.4	2	1.5	4	0.3	0	0.0
S+C	28	5.0	3	1.1	2	1.5	8	0.7	0	0.0
R+C	133	23.5	39	14.3	24	17.8	293	24.5	1	2.6
S+R+C	2	0.4	3	1.1	1	0.7	6	0.5	0	0.0
Others	0	0.0	0	0.0	0	0.0	34	2.8	0	0.0
Modality of Therapy *										
Single	398	70.4	226	83.1	106	78.5	852	71.2	37	97.4
Combination	167	29.6	46	16.9	29	21.5	311	26.0	1	2.6
Type of Any Treatment										
Any Surgery	56	9.9	19	7.0	14	10.4	28	2.3	1	2.6
Any R	231	40.9	129	47.4	44	32.6	924	77.2	21	55.3
Any C	447	79.1	173	63.6	107	79.3	528	44.1	17	44.7

Table 13.6(b): Number(#) and Relative Proportion(%) of Lung Cancer patients according to Type of Treatment given(Patients treated only at Reporting Institution) (2004-2006) - Females

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**159**	**100.0**	**55**	**100.0**	**41**	**100.0**	**174**	**100.0**	**12**	**100.0**
Specific Treatments										
Surgery (S)	8	5.0	1	1.8	2	4.9	1	0.6	0	0.0
Radiotherpay (R)	19	11.9	13	23.6	3	7.3	63	36.2	7	58.3
Chemotherapy (C)	98	61.6	27	49.1	24	58.5	70	40.2	4	33.3
S+R	0	0.0	1	1.8	0	0.0	0	0.0	0	0.0
S+C	9	5.7	1	1.8	0	0.0	3	1.7	0	0.0
R+C	23	14.5	12	21.8	12	29.3	32	18.4	1	8.3
S+R+C	2	1.3	0	0.0	0	0.0	1	0.6	0	0.0
Others	0	0.0	0	0.0	0	0.0	4	2.3	0	0.0
Modality of Therapy										
Single	125	78.6	41	74.5	29	70.7	134	77.0	11	91.7
Combination	34	21.4	14	25.5	12	29.3	36	20.7	1	8.3
Type of Any Treatment										
Any Surgery	19	11.9	3	5.5	2	4.9	5	2.9	0	0.0
Any R	44	27.7	26	47.3	15	36.6	96	55.2	8	66.7
Any C	132	83.0	40	72.7	36	87.8	106	60.9	5	41.7

** Only 2004-05 data*

Table 13.7(a): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease -Lung - Males (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	15	30.6	1	8.3	0	0.0	4	6.3	0	0.0
Radiotherapy (R)	1	2.0	2	16.7	0	0.0	28	43.8	0	0.0
Chemotherapy (C)	10	20.4	7	58.3	0	0.0	6	9.4	0	0.0
S+R	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0
S+C	14	28.6	1	8.3	0	0.0	4	6.3	0	0.0
R+C	7	14.3	1	8.3	0	0.0	22	34.4	0	0.0
S+R+C	1	2.0	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
All Treatments	**49**	**100.0**	**12**	**100.0**	**0**	**0.0**	**64**	**100.0**	**0**	**0.0**
Regional										
Surgery (S)	3	1.8	8	4.9	8	7.8	6	1.4	0	0.0
Radiotherapy (R)	19	11.2	43	26.5	14	13.7	198	45.1	7	53.8
Chemotherapy (C)	81	47.9	80	49.4	61	59.8	86	19.6	5	38.5
S+R	3	1.8	0	0.0	2	2.0	3	0.7	0	0.0
S+C	11	6.5	2	1.2	2	2.0	4	0.9	0	0.0
R+C	51	30.2	27	16.7	14	13.7	127	28.9	1	7.7
S+R+C	1	0.6	2	1.2	1	1.0	5	1.1	0	0.0
Others	0	0.0	0	0.0	0	0.0	10	2.3	0	0.0
All Treatments	**169**	**100.0**	**162**	**100.0**	**102**	**100.0**	**439**	**100.0**	**13**	**100.0**
Distant										
Surgery (S)	3	0.9	3	3.1	1	3.0	0	0.0	1	14.3
Radiotherapy (R)	72	20.9	41	42.7	3	9.1	395	56.9	3	42.9
Chemotherapy (C)	191	55.5	40	41.7	19	57.6	129	18.6	3	42.9
S+R	0	0.0	1	1.0	0	0.0	1	0.1	0	0.0
S+C	3	0.9	0	0.0	0	0.0	0	0.0	0	0.0
R+C	75	21.8	10	10.4	10	30.3	144	20.7	0	0.0
S+R+C	0	0.0	1	1.0	0	0.0	1	0.1	0	0.0
Others	0	0.0	0	0.0	0	0.0	24	3.5	0	0.0
All Treatments	**344**	**100.0**	**96**	**100.0**	**33**	**100.0**	**694**	**100.0**	**7**	**100.0**
Others										
Surgery (S)	2	50.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	0	0.0	0	0.0	0	0.0	0	0.0	10	55.6
Chemotherapy (C)	2	50.0	1	50.0	0	0.0	0	0.0	8	44.4
S+R	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
R+C	0	0.0	1	50.0	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**4**	**100.0**	**2**	**100.0**	**0**	**0.0**	**0**	**0.0**	**18**	**100.0**

** Only 2004-05 data*

Table 13.7(b): Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease -Lung - Females (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	6	33.3	0	0.0	0	0.0	1	16.7	0	0.0
Radiotherapy (R)	0	0.0	1	25.0	0	0.0	1	16.7	0	0.0
Chemotherapy (C)	4	22.2	2	50.0	0	0.0	1	16.7	0	0.0
S+R	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S+C	5	27.8	0	0.0	0	0.0	1	16.7	0	0.0
R+C	3	16.7	1	25.0	0	0.0	2	33.3	0	0.0
S+R+C	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
All Treatments	**18**	**100.0**	**4**	**100.0**	**0**	**0.0**	**6**	**100.0**	**0**	**0.0**
Regional										
Surgery (S)	0	0.0	1	3.0	2	6.7	0	0.0	0	0.0
Radiotherapy (R)	4	13.3	5	15.2	0	0.0	9	16.4	0	0.0
Chemotherapy (C)	18	60.0	18	54.5	21	70.0	33	60.0	0	0.0
S+R	0	0.0	1	3.0	0	0.0	0	0.0	0	0.0
S+C	3	10.0	1	3.0	0	0.0	1	1.8	0	0.0
R+C	5	16.7	6	18.2	7	23.3	9	16.4	0	0.0
S+R+C	0	0.0	1	3.0	0	0.0	1	1.8	0	0.0
Others	0	0.0	0	0.0	0	0.0	2	3.6	0	0.0
All Treatments	**30**	**100.0**	**33**	**100.0**	**30**	**100.0**	**55**	**100.0**	**0**	**0.0**
Distant										
Surgery (S)	2	1.9	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	14	13.1	7	38.9	3	27.3	53	46.9	3	60.0
Chemotherapy (C)	74	69.2	6	33.3	3	27.3	36	31.9	1	20.0
S+R	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S+C	1	0.9	0	0.0	0	0.0	1	0.9	0	0.0
R+C	15	14.0	5	27.8	5	45.5	21	18.6	1	20.0
S+R+C	1	0.9	0	0.0	0	0.0	0	0.0	0	0.0
Others	0	0.0	0	0.0	0	0.0	2	1.8	0	0.0
All Treatments	**107**	**100.0**	**18**	**100.0**	**11**	**100.0**	**113**	**100.0**	**5**	**100.0**
Others										
Surgery (S)	1	25.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	1	25.0	0	0.0	0	0.0	0	0.0	4	57.1
Chemotherapy (C)	2	50.0	1	100.0	0	0.0	0	0.0	3	42.9
S+R	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
R+C	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**4**	**100.0**	**1**	**100.0**	**0**	**0.0**	**0**	**0.0**	**7**	**100.0**

** Only 2004-05 data*

Table 13.8(a): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Lung - Males (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	31	42.5	10	13.7	32	43.8	0	0.0	73
Bangalore	2	14.3	3	21.4	9	64.3	0	0.0	14
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	8	8.9	50	55.6	32	35.6	0	0.0	90
Dibrugarh	0	0.0	0	0.0	0	0.0	0	0.0	0
REGIONAL									
Mumbai*	18	7.6	74	31.4	144	61.0	0	0.0	236
Bangalore	12	6.2	72	36.9	111	56.9	0	0.0	195
Chennai	13	10.7	31	25.4	78	63.9	0	0.0	122
Thi'puram	18	3.1	333	57.1	222	38.1	10	1.7	583
Dibrugarh	0	0.0	8	57.1	6	42.9	0	0.0	14
DISTANT									
Mumbai*	6	1.4	147	34.8	269	63.7	0	0.0	422
Bangalore	5	4.6	53	48.6	51	46.8	0	0.0	109
Chennai	1	2.3	13	30.2	29	67.4	0	0.0	43
Thi'puram	2	0.2	541	64.3	274	32.6	24	2.9	841
Dibrugarh	1	14.3	3	42.9	3	42.9	0	0.0	7
OTHERS									
Mumbai*	1	33.3	0	0.0	2	66.7	0	0.0	3
Bangalore	0	0.0	1	33.3	2	66.7	0	0.0	3
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	10	55.6	8	44.4	0	0.0	18

** Only 2004-05 data*

Table 13.8(b): Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Lung - Females (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	11	42.3	3	11.5	12	46.2	0	0.0	26
Bangalore	0	0.0	2	40.0	3	60.0	0	0.0	5
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	2	22.2	3	33.3	4	44.4	0	0.0	9
Dibrugarh	0	0.0	0	0.0	0	0.0	0	0.0	0
REGIONAL									
Mumbai*	4	9.8	10	24.4	27	65.9	0	0.0	41
Bangalore	3	7.5	12	30.0	25	62.5	0	0.0	40
Chennai	2	5.4	7	18.9	28	75.7	0	0.0	37
Thi'puram	2	3.0	19	28.4	44	65.7	2	3.0	67
Dibrugarh	0	0.0	0	0.0	0	0.0	0	0.0	0
DISTANT									
Mumbai*	4	3.2	30	24	91	72.8	0	0	125
Bangalore	0	0.0	12	52.2	11	47.8	0	0.0	23
Chennai	0	0.0	8	50.0	8	50.0	0	0.0	16
Thi'puram	1	0.7	74	54.8	58	43.0	2	1.5	135
Dibrugarh	0	0.0	4	66.7	2	33.3	0	0.0	6
OTHERS									
Mumbai*	0	0.0	1	33.3	2	66.7	0	0.0	3
Bangalore	0	0.0	0	0.0	1	100.0	0	0.0	1
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	4	57.1	3	42.9	0	0.0	7

** Only 2004-05 data*

Chapter 14

FEMALE BREAST (ICD-10: C50)

Cancer of the female breast was the leading site of cancer in Mumbai and Thiruvananthapuram, the second leading site in Bangalore, Chennai and Dibrugarh (Table 14.1).

Figure 14.1 gives the trends in actual numbers of breast cancer in females from 1984 to 2006 An increase in numbers was seen in Dibrugarh while there was a decrease in all other registries.

Table 14.2 and Figure 14.2 give the five year age distribution of breast cancer in females. The mean age was lower than 46 in Dibrugarh compared to over 48 in all other HBCRs.

Table 14.3 gives the number and relative proportion according to the different methods of diagnosis. The proportion of microscopic diagnosis was above 92% in all registries.

Table 14.4 gives the number and relative proportion according to the clinical extent of disease. The proportion with “Regional” spread varied from 80.4% in Chennai to 54.2% in Mumbai.

Table 14.5 gives the number and relative proportion according to the broad groups of treatment. The percentage of cases treated only at RI varied from 30.0% in Mumbai to 76.3% in Dibrugarh.

Tables 14.6 to 14.8 give the number and relative proportion according to the different types of treatment.

Table 14.1: Number(#), Relative Proportion(%) and Rank(R) of cancers of the Breast - Females (2004-2006)

Registry	Total	#	%	R
Mumbai*	15313	4211	27.5	1
Bangalore	10293	1825	15.4	2
Chennai	12523	2934	21.6	2
Thi'puram	12563	3086	27.1	1
Dibrugarh	1782	152	14.3	2

** Only 2004-05 data*

Fig. 14.1 Trends in actual numbers of cancers- Female Breast

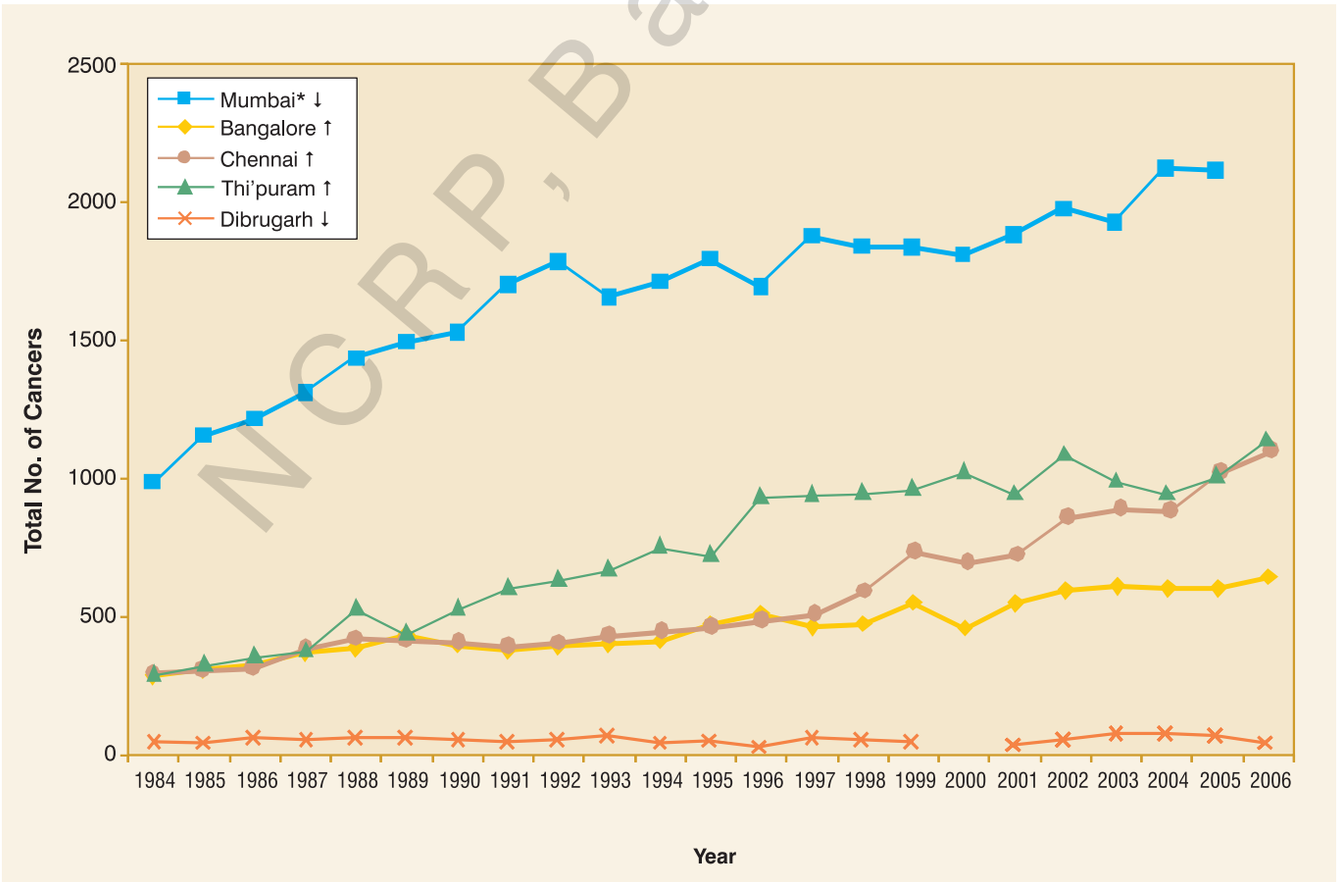


Table 14.2: Number(#) and Relative Proportion(%) of Female Breast cancers according to five year age group (2004-2006)

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	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
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	1	0.0	3	0.2	0	0.0	1	0.0	0	0.0
20-24	14	0.3	11	0.6	13	0.4	13	0.4	0	0.0
25-29	88	2.1	55	3.0	68	2.3	61	2.0	4	2.6
30-34	248	5.9	102	5.6	154	5.2	141	4.6	10	6.6
35-39	507	12.0	207	11.3	302	10.3	334	10.8	32	21.1
40-44	649	15.4	290	15.9	398	13.6	436	14.1	24	15.8
45-49	776	18.4	366	20.1	508	17.3	600	19.4	26	17.1
50-54	705	16.7	263	14.4	448	15.3	475	15.4	21	13.8
55-59	473	11.2	194	10.6	367	12.5	414	13.4	19	12.5
60-64	331	7.9	141	7.7	282	9.6	252	8.2	9	5.9
65-69	223	5.3	101	5.5	182	6.2	180	5.8	6	3.9
70-74	111	2.6	48	2.6	123	4.2	102	3.3	1	0.7
75+	85	2.0	44	2.4	89	3.0	77	2.5	0	0.0
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**4211**	**100.0**	**1825**	**100.0**	**2934**	**100.0**	**3086**	**100.0**	**152**	**100.0**
Mean		49.0		48.9		50.6		50.1		46.4
SD		11.0		11.6		11.9		11.3		10.0

** Only 2004-05 data*

Fig 14.2 : Five Year Age Group Distribution - Female Breast Cancer (2004-2006)

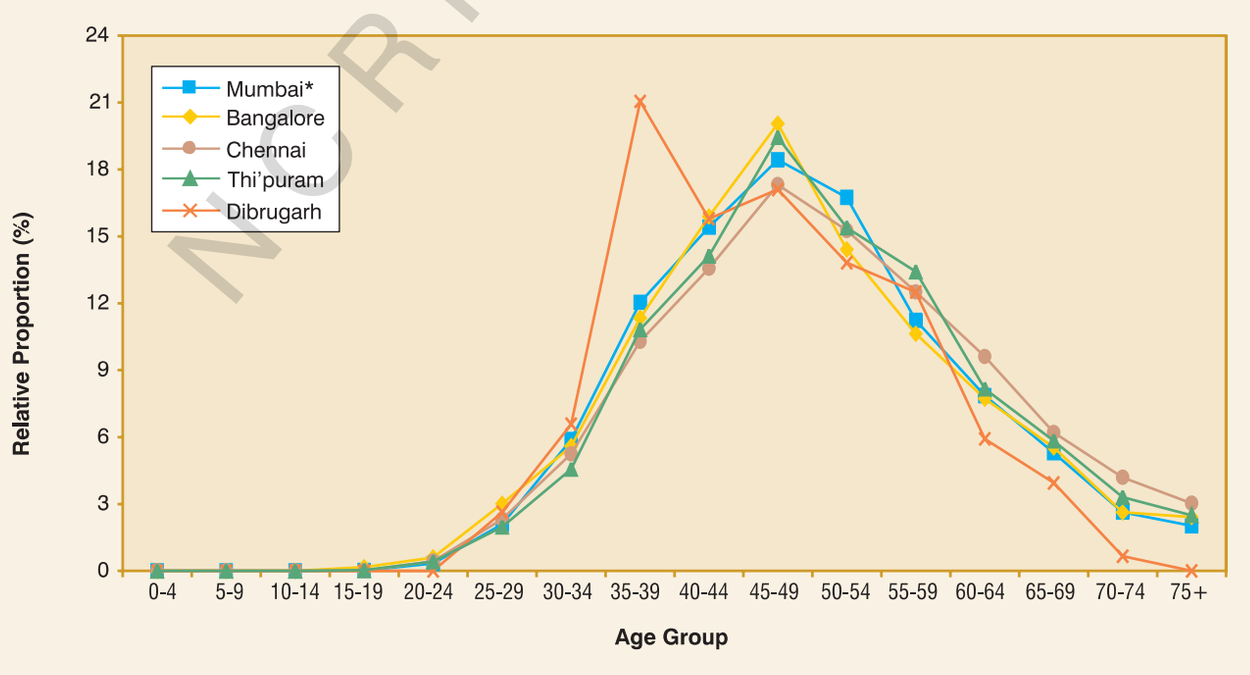


Table 14.3: Number(#) and Relative Proportion(%) of Female Breast cancers based on different Methods of Diagnosis (2004-2006)

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai*	3913	92.9	3	0.1	2	0.0	293	7.0	4211	100.0
Bangalore	1756	96.2	33	1.8	2	0.1	34	1.9	1825	100.0
Chennai	2774	94.5	131	4.5	29	1.0	0	0.0	2934	100.0
Thi'puram	3056	99.0	27	0.9	3	0.1	0	0.0	3086	100.0
Dibrugarh	146	96.1	4	2.6	2	1.3	0	0.0	152	100.0

Table 14.4: Number(#) and Relative Proportion(%) of Female Breast cancer patients according to the Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai*	385	27.0	774	54.2	1159	81.2	227	15.9	41	2.9	1427	100.0
Bangalore	139	12.7	829	75.9	968	88.6	124	11.4	0	0.0	1092	100.0
Chennai	185	7.9	1887	80.4	2072	88.3	274	11.7	0	0.0	2346	100.0
Thi'puram	230	15.8	1031	70.9	1261	86.7	193	13.3	0	0.0	1454	100.0
Dibrugarh	3	2.3	101	75.9	104	78.2	21	15.8	8	6.0	133	100.0

Table 14.5: Number(#) and Relative Proportion(%) of Female Breast cancer patients according to Broad Groups of Treatment(Tmt) (2004-2006)

Treatment Group	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	512	12.2	272	14.9	356	12.1	153	5.0	1	0.7
Prior Tmt. at RI	1058	25.1	451	24.7	232	7.9	1479	47.9	18	11.8
Tmt. Only at RI	1264	30.0	842	46.1	1558	53.1	1324	42.9	116	76.3
No Treatment	1377	32.7	260	14.2	788	26.9	130	4.2	17	11.2
Total Patients	**4211**	**100.0**	**1825**	**100.0**	**2934**	**100.0**	**3086**	**100.0**	**152**	**100.0**

** Only 2004-05 data*

Table14.6: Number(#) and Relative Proportion(%) of Female Breast Cancer patients according to Type of Treatment given(Patients treated only at Reporting Institution) (2004-2006)

Type of Treatment	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**1263**	**100.0**	**842**	**100.0**	**1558**	**100.0**	**1324**	**100.0**	**116**	**100.0**
Specific Treatments										
Surgery (S)	78	6.2	87	10.3	22	1.4	59	4.5	48	41.4
Radiotherpay (R)	9	0.7	17	2.0	17	1.1	8	0.6	21	18.1
Chemotherapy (C)	119	9.4	120	14.3	71	4.6	90	6.8	6	5.2
S+R	16	1.3	81	9.6	4	0.3	26	2.0	17	14.7
S+C	119	9.4	141	16.7	16	1.0	324	24.5	20	17.2
R+C	17	1.3	31	3.7	140	9.0	35	2.6	4	3.4
S+R+C	388	30.7	259	30.8	209	13.4	409	30.9	0	0.0
Others	517	40.9	106	12.6	1079	69.3	373	28.2	0	0.0
Modality of Therapy#										
Single	206	16.3	224	26.6	110	7.1	157	11.9	75	64.7
Combination	540	42.8	512	60.8	369	23.7	794	60.0	41	35.3
Type of Any Treatment										
Any Surgery	1081	85.6	568	67.5	251	16.1	818	61.8	85	73.3
Any R	821	65.0	388	46.1	370	23.7	478	36.1	42	36.2
Any C	1058	83.8	520	61.8	296	19.0	823	62.2	26	22.4

** Only 2004 data; # Excludes specific treatment classified as 'Others'*

Table 14.7: Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease - Female Breast (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	35	13.1	18	21.4	7	4.8	15	9.7	2	66.7
Radiotherapy (R)	0	0.0	1	1.2	1	0.7	0	0.0	0	0.0
Chemotherapy (C)	7	2.6	5	6.0	2	1.4	0	0.0	0	0.0
S+R	8	3.0	13	15.5	0	0.0	3	1.9	0	0.0
S+C	30	11.2	28	33.3	7	4.8	68	43.9	1	33.3
R+C	0	0.0	2	2.4	8	5.4	1	0.6	0	0.0
S+R+C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Others	188	70.1	17	20.2	122	83.0	68	43.9	0	0.0
All Treatments	**268**	**100.0**	**84**	**100.0**	**147**	**100.0**	**155**	**100.0**	**3**	**100.0**
Regional										
Surgery (S)	32	4.6	63	9.4	15	1.2	44	4.7	44	48.4
Radiotherapy (R)	0	0.0	12	1.8	10	0.8	6	0.6	11	12.1
Chemotherapy (C)	53	7.6	92	13.7	40	3.2	38	4.0	1	1.1
S+R	5	0.7	65	9.7	4	0.3	23	2.4	15	16.5
S+C	75	10.7	105	15.6	9	0.7	250	26.5	18	19.8
R+C	8	1.1	26	3.9	108	8.7	10	1.1	2	2.2
S+R+C	258	36.9	222	33.0	185	15.0	341	36.2	0	0.0
Others	268	38.3	87	12.9	866	70.0	230	24.4	0	0.0
All Treatments	**699**	**100.0**	**672**	**100.0**	**1237**	**100.0**	**942**	**100.0**	**91**	**100.0**
Distant										
Surgery (S)	3	1.8	6	10.3	0	0.0	0	0.0	2	11.8
Radiotherapy (R)	9	5.4	4	6.9	6	4.0	2	1.2	5	29.4
Chemotherapy (C)	59	35.3	23	39.7	29	19.3	52	31.3	5	29.4
S+R	1	0.6	3	5.2	0	0.0	0	0.0	2	11.8
S+C	9	5.4	8	13.8	0	0.0	6	3.6	1	5.9
R+C	9	5.4	3	5.2	24	16.0	24	14.5	2	11.8
S+R+C	27	16.2	9	15.5	0	0.0	7	4.2	0	0.0
Others	50	29.9	2	3.4	91	60.7	75	45.2	0	0.0
All Treatments	**167**	**100.0**	**58**	**100.0**	**150**	**100.0**	**166**	**100.0**	**17**	**100.0**
Others										
Surgery (S)	39	60.9	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	0	0.0	0	0.0	0	0.0	0	0.0	5	100.0
Chemotherapy (C)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
S+R	2	3.1	0	0.0	0	0.0	0	0.0	0	0.0
S+C	5	7.8	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
S+R+C	7	10.9	0	0.0	0	0.0	0	0.0	0	0.0
Others	11	17.2	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**64**	**100.0**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**	**5**	**100.0**

** Only 2004-05 data*

Table 14.8: Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Female Breast (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	355	42.1	234	27.8	253	30.0	1	0.1	843
Bangalore	104	44.6	56	24.0	73	31.3	0	0.0	233
Chennai	146	35.2	128	30.8	137	33.0	4	1.0	415
Thi'puram	212	43.4	94	19.3	179	36.7	3	0.6	488
Dibrugarh	3	75.0	0	0.0	1	25.0	0	0.0	4
REGIONAL									
Mumbai*	628	35.6	498	28.2	633	35.9	5	0.3	1764
Bangalore	538	37.0	402	27.6	515	35.4	1	0.1	1456
Chennai	956	29.5	1115	34.4	1152	35.6	16	0.5	3239
Thi'puram	869	39.0	524	23.5	821	36.8	14	0.6	2228
Dibrugarh	77	61.1	28	22.2	21	16.7	0	0.0	126
DISTANT									
Mumbai*	64	22.1	73	25.3	150	51.9	2	0.7	289
Bangalore	27	29.7	19	20.9	45	49.5	0	0.0	91
Chennai	6	2.7	79	35.4	128	57.4	10	4.5	223
Thi'puram	22	9.4	55	23.4	142	60.4	16	6.8	235
Dibrugarh	5	22.7	9	40.9	8	36.4	0	0.0	22
OTHERS									
Mumbai*	33	47.8	15	21.7	21	30.4	0	0.0	69
Bangalore	0	0.0	0	0.0	0	0	0	0.0	0
Chennai	0	0.0	0	0.0	0	0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0	0	0.0	0
Dibrugarh	0	0.0	5	100.0	0	0.0	0	0.0	5

** Only 2004-05 data*

Chapter 15

CERVIX (ICD-10: C53)

Cancer of the cervix was the leading site in Bangalore, Chennai and Dibrugarh and the second leading site was Mumbai & Thiruvananthapuram (Table 15.1).

Figure 15.1 gives the trends in actual numbers of cancer cervix. A decreasing trend was seen in Trivandrum.

Table 15.2 and Figure 15.2 give the five year age distribution of cancer cervix in different registries. The mean age varied from a low of 50.0 in Dibrugarh to 56.6 in Thiruvananthapuram.

The predominant form of diagnosis of cancer cervix (>89%) was through microscopic examination (Table 15.3).

Table 15.4 gives the number and relative proportion according to the clinical extent of disease. Over 80% and above of patients had regional disease at the time of diagnosis in all registries except in Mumbai (54.2%).

Table 15.5 gives the number and relative proportion according to the broad groups of treatment. The percentage of cases treated only at RI varied from 29.8% in Mumbai to 86.3% in Dibrugarh.

Tables 15.6 to 15.8 give the number and relative proportion according to the different types of treatment.

Table 15.1: Number(#), Relative Proportion(%) and Rank(R) of cancers of the cervix (2004-2006)

Registry	Total	#	%	R
Mumbai*	15313	2366	15.5	2
Bangalore	10293	3252	27.5	1
Chennai	12523	3804	28.0	1
Thi'puram	12563	1307	11.5	2
Dibrugarh	1782	153	14.4	1

** Only 2004-05 data*

Fig. 15.1 Trends in Actual Numbers - Cancer Cervix

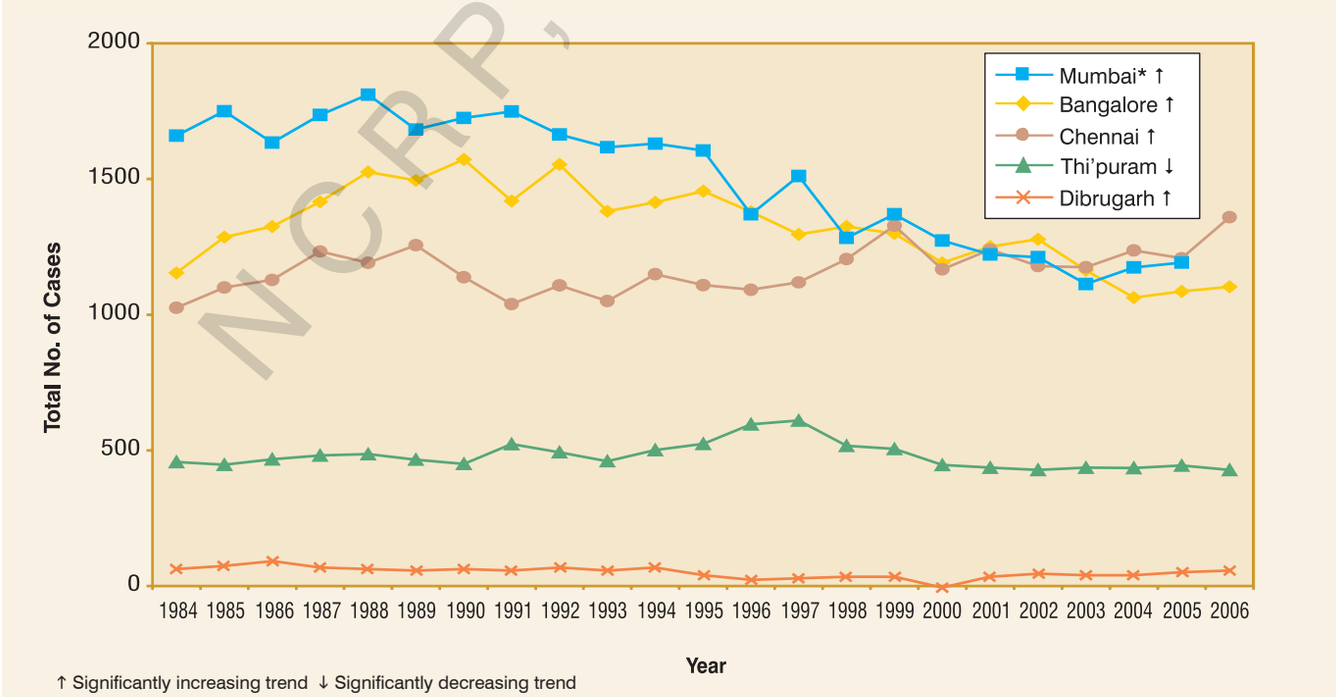


Table 15.2: Number(#) and Relative Proportion(%) of Cervical cancers according to five year age group (2004-2006)

Age Group	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
0-4	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
10-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-19	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
20-24	4	0.2	7	0.2	6	0.2	1	0.1	0	0.0
25-29	20	0.8	37	1.1	49	1.3	4	0.3	2	1.3
30-34	58	2.5	159	4.9	133	3.5	19	1.5	8	5.2
35-39	214	9.0	348	10.7	373	9.8	66	5.0	16	10.5
40-44	306	12.9	484	14.9	509	13.4	108	8.3	28	18.3
45-49	381	16.1	614	18.9	637	16.7	173	13.2	22	14.4
50-54	417	17.6	477	14.7	680	17.9	229	17.5	26	17.0
55-59	333	14.1	405	12.5	497	13.1	206	15.8	21	13.7
60-64	283	12.0	331	10.2	480	12.6	140	10.7	14	9.2
65-69	208	8.8	212	6.5	241	6.3	144	11.0	8	5.2
70-74	100	4.2	125	3.8	133	3.5	108	8.3	5	3.3
75+	42	1.8	53	1.6	66	1.7	108	8.3	3	2.0
ANS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Ages	**2366**	**100.0**	**3252**	**100.0**	**3804**	**100.0**	**1307**	**100.0**	**153**	**100.0**
Mean		52.4		50.4		51.3		56.6		50.0
SD		10.8		11.1		10.8		11.6		11.0

** Only 2004-05 data*

Fig. 15.2: Five year age group distribution - Cancer Cervix

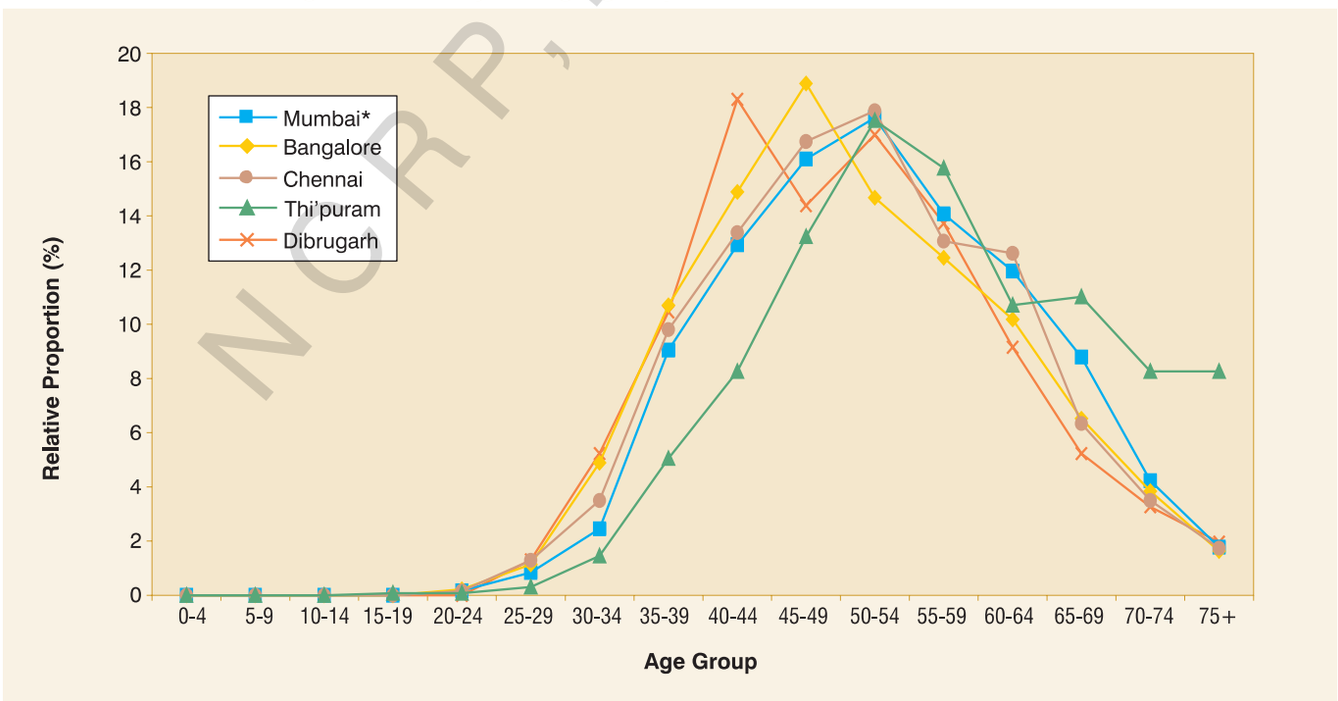


Table 15.3: Number(#) and Relative Proportion(%) of Cervical cancers based on different Methods of Diagnosis (2004-2006)

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai*	2200	93.0	4	0.2	2	0.1	160	6.8	2366	100.0
Bangalore	3106	95.7	86	2.6	2	0.1	52	1.6	3246	100.0
Chennai	3413	89.4	377	9.9	29	0.8	0	0.0	3819	100.0
Thi'puram	1248	95.7	53	4.1	3	0.2	0	0.0	1304	100.0
Dibrugarh	148	96.7	2	1.3	2	1.3	1	0.7	153	100.0

Table 15.4: Number(#) and Relative Proportion(%) of Cervical cancer patients according to the Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai*	385	27.0	774	54.2	1159	81.2	227	15.9	41	2.9	1427	100.0
Bangalore	269	9.1	2491	84.7	2760	93.8	181	6.2	1	0.0	2942	100.0
Chennai	279	8.1	3085	89.5	3364	97.6	84	2.4	0	0.0	3448	100.0
Thi'puram	119	10.4	974	84.9	1093	95.3	54	4.7	0	0.0	1147	100.0
Dibrugarh	4	2.6	137	90.1	141	92.8	10	6.6	1	0.7	152	100.0

** Only 2004-05 data*

Table 15.5: Number(#) and Relative Proportion(%) of Cervical cancer patients according to Broad Groups of Treatment(Tmt) (2004-2006)

Treatment Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Prior Tmt. Only	230	9.7	124	3.8	308	8.1	30	2.3	0	0.0
Prior Tmt. at RI	254	10.7	179	5.5	48	1.3	130	9.9	1	0.7
Tmt. Only at RI	705	29.8	2138	65.7	1585	41.7	1045	80.0	132	86.3
No Treatment	1177	49.7	811	24.9	1863	49.0	102	7.8	20	13.1
Total Patients	**2366**	**100.0**	**3252**	**100.0**	**3804**	**100.0**	**1307**	**100.0**	**153**	**100.0**

Table 15.6: Number(#) and Relative Proportion(%) of Cervical cancer patients according to Type of Treatment given(Patients treated only at Reporting Institution) (2004-2006)

Type of Treatment	Mumbai *		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**705**	**100.0**	**2138**	**100.0**	**1585**	**100.0**	**1045**	**100.0**	**132**	**100.0**
Specific Treatments										
Surgery (S)	68	9.6	79	3.7	11	0.7	8	0.8	23	17.4
Radiotherpay (R)	282	40.0	1178	55.1	1319	83.2	472	45.2	97	73.5
Chemotherapy (C)	28	4.0	43	2.0	4	0.3	9	0.9	0	0.0
S+R	22	3.1	118	5.5	68	4.3	26	2.5	8	6.1
S+C	6	0.9	28	1.3	0	0.0	1	0.1	4	3.0
R+C	264	37.4	626	29.3	177	11.2	506	48.4	0	0.0
S+R+C	35	5.0	64	3.0	5	0.3	22	2.1	0	0.0
Others	0	0.0	2	0.1	1	0.1	1	0.1	0	0.0
Modality of Therapy#										
Single	378	53.6	1300	60.8	1334	62.4	489	46.8	120	90.9
Combination	327	46.4	836	39.1	250	11.7	555	53.1	12	9.1
Type of Any Treatment										
Any Surgery	131	18.6	289	13.5	84	3.9	57	5.5	35	26.5
Any R	603	85.5	1986	92.9	1569	73.4	1026	98.2	105	79.5
Any C	333	47.2	761	35.6	186	8.7	538	51.5	4	3.0

** Only 2004 data; # Excludes specific treatment classified as 'Others'*

Table 15.7: Number(#) & Relative proportion (%) of types of treatment according to Clinical Extent of Disease - Cervix (2004-2006)

Clinical Extent	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Localised										
Surgery (S)	57	33.5	18	9.2	7	3.1	2	1.9	3	75.0
Radiotherapy (R)	23	13.5	62	31.6	159	69.4	46	43.4	0	0.0
Chemotherapy (C)	3	1.8	4	2.0	0	0.0	1	0.9	0	0.0
S+R	19	11.2	27	13.8	41	17.9	11	10.4	0	0.0
S+C	5	2.9	8	4.1	0	0.0	0	0.0	1	25.0
R+C	35	20.6	68	34.7	20	8.7	44	41.5	0	0.0
S+R+C	28	16.5	8	4.1	2	0.9	2	1.9	0	0.0
Others	0	0.0	1	0.5	0	0.0	0	0.0	0	0.0
All Treatments	**170**	**100.0**	**196**	**100.0**	**229**	**100.0**	**106**	**100.0**	**4**	**100.0**
Regional										
Surgery (S)	9	2.0	60	3.2	4	0.3	6	0.7	20	16.8
Radiotherapy (R)	213	46.2	1063	56.9	1144	85.5	400	44.7	88	73.9
Chemotherapy (C)	15	3.3	33	1.8	3	0.2	5	0.6	0	0.0
S+R	3	0.7	90	4.8	27	2.0	15	1.7	8	6.7
S+C	1	0.2	19	1.0	0	0.0	1	0.1	3	2.5
R+C	213	46.2	548	29.3	156	11.7	447	49.9	0	0.0
S+R+C	7	1.5	54	2.9	3	0.2	20	2.2	0	0.0
Others	0	0.0	1	0.1	1	0.1	1	0.1	0	0.0
All Treatments	**461**	**100.0**	**1868**	**100.0**	**1338**	**100.0**	**895**	**100.0**	**119**	**100.0**
Distant										
Surgery (S)	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	45	64.3	53	73.6	16	88.9	26	59.1	8	100.0
Chemotherapy (C)	10	14.3	6	8.3	1	5.6	3	6.8	0	0.0
S+R	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0
S+C	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0
R+C	15	21.4	8	11.1	1	5.6	15	34.1	0	0.0
S+R+C	0	0.0	2	2.8	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
All Treatments	**70**	**100.0**	**72**	**100.0**	**18**	**100.0**	**44**	**100.0**	**8**	**100.0**
Others										
Surgery (S)	2	50.0	0	0.0	0	0.0	0	0.0	0	0.0
Radiotherapy (R)	1	25.0	0	0.0	0	0.0	0	0.0	1	100.0
Chemotherapy (C)	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
S+C	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
R+C	1	25.0	2	100.0	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
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
All Treatments	**4**	**100.0**	**2**	**100.0**	**0**	**0.0**	**0**	**0.0**	**1**	**100.0**

** Only 2004-05 data.*

Table 15.8: Number(#) & proportion (%) of any specific treatment relative to all treated patients according to Clinical Extent of Disease - Cervix (2004-2006)

	Any Surgery		Any Radiotherapy		Any Chemotherapy		Any Others		Total
	#	%	#	%	#	%	#	%	Patients
LOCALISED									
Mumbai*	109	38.2	105	36.8	71	24.9	0	0.0	285
Bangalore	62	19.6	166	52.5	88	27.8	0	0.0	316
Chennai	50	17.0	222	75.5	22	7.5	0	0.0	294
Thi'puram	15	9.1	103	62.4	47	28.5	0	0.0	165
Dibrugarh	4	80.0	0	0.0	1	20.0	0	0.0	5
REGIONAL									
Mumbai*	20	2.9	436	63.0	236	34.1	0	0.0	692
Bangalore	223	8.5	1755	66.7	654	24.8	1	0.0	2633
Chennai	35	2.3	1331	87.1	163	10.7	0	0.0	1529
Thi'puram	42	3.0	882	63.1	473	33.8	1	0.1	1398
Dibrugarh	31	23.8	96	73.8	3	2.3	0	0.0	130
DISTANT									
Mumbai*	0	0.0	60	70.6	25	29.4	0	0.0	85
Bangalore	5	5.8	64	74.4	17	19.8	0	0.0	86
Chennai	0	0.0	17	89.5	2	10.5	0	0.0	19
Thi'puram	0	0.0	41	69.5	18	30.5	0	0.0	59
Dibrugarh	0	0.0	8	100.0	0	0.0	0	0.0	8
OTHERS									
Mumbai*	2	40.0	2	40.0	1	20.0	0	0.0	5
Bangalore	0	0.0	2	50.0	2	50.0	0	0.0	4
Chennai	0	0.0	0	0.0	0	0.0	0	0.0	0
Thi'puram	0	0.0	0	0.0	0	0.0	0	0.0	0
Dibrugarh	0	0.0	1	100.0	0	0.0	0	0.0	1

** Only 2004-05 data.*

Chapter 16

HEAD AND NECK CANCERS (ICD-10: C00-14, C30-31, C32, C33)

Chapter 16 gives the comprehensive picture of head and neck cancers. These include cancer of lip, Tongue, Mouth, Salivary glands, Oropharynx, Nasopharynx, Hypopharynx, Pharynx, Nose and Sinus, Larynx and Trachea.

Table 16.1 gives the number and relative proportion of Head and Neck cancers relative to all sites of cancers. Overall, Head and Neck cancers accounted for around 30% of all cancers in all registries in males except Dibrugarh (49.6%). In females head and neck cancers ranged from 11-16% of all sites of cancers in all registries.

Table 16.2 and Figure 16.2 depicts the relative proportion of specific sites that constitute Head & Neck cancer. Table 16.3 gives the number and relative proportion of specific sites of Head and Neck cancers relative to all Head and Neck cancers. In males tongue and mouth contributed to more than one third of the total cases except in Dibrugarh where hypopharynx (34.5%) was the major contributor. Among females mouth cancer was the leading contributor to head and neck cancers in all registries. Table 16.4 and Figure 16.4 give the five year age distribution of this group of cancers.

Table 16.5 gives the number and relative proportion based on different methods of diagnosis.

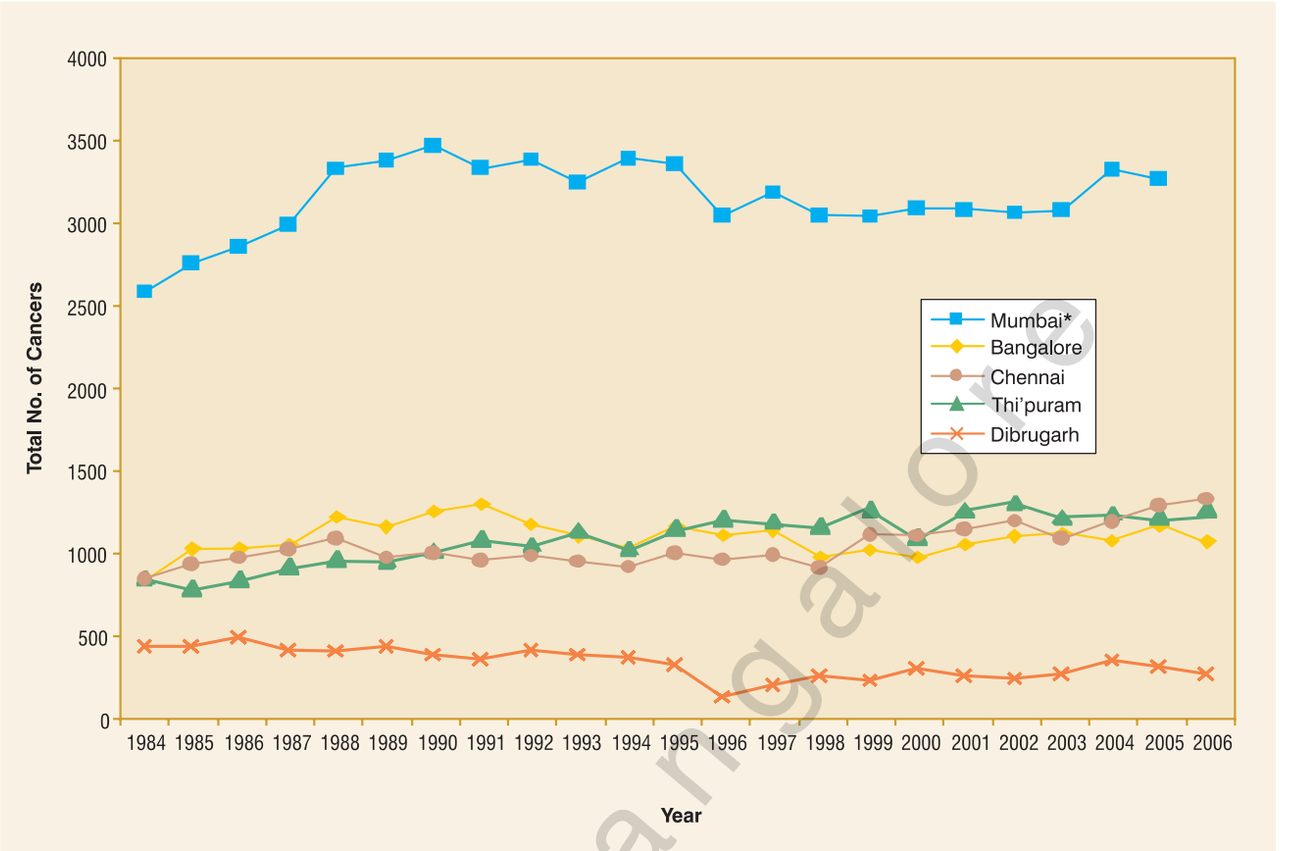
Table 16.1 : Number(#) & Proportion(%) of Head and Neck Cancers relative to all sites of cancer (2004-2006)

Registry	Males			Females		
	All sites	#	%	All sites	#	%
Mumbai*	19399	6576	33.9	15313	1726	11.3
Bangalore	10293	3286	31.9	11842	1807	15.3
Chennai	12523	3767	30.1	13589	1533	11.3
Thi'puram	12563	3692	29.4	11394	1331	11.7
Dibrugarh	1782	884	49.6	1063	173	16.3
Total	**56560**	**18205**	**32.2**	**53201**	**6570**	**12.3**

** Only 2004-05 data.*

Fig. 16.1 : Trends in Actual Numbers - Head and Neck Cancers (2004-2006)

Males



Females

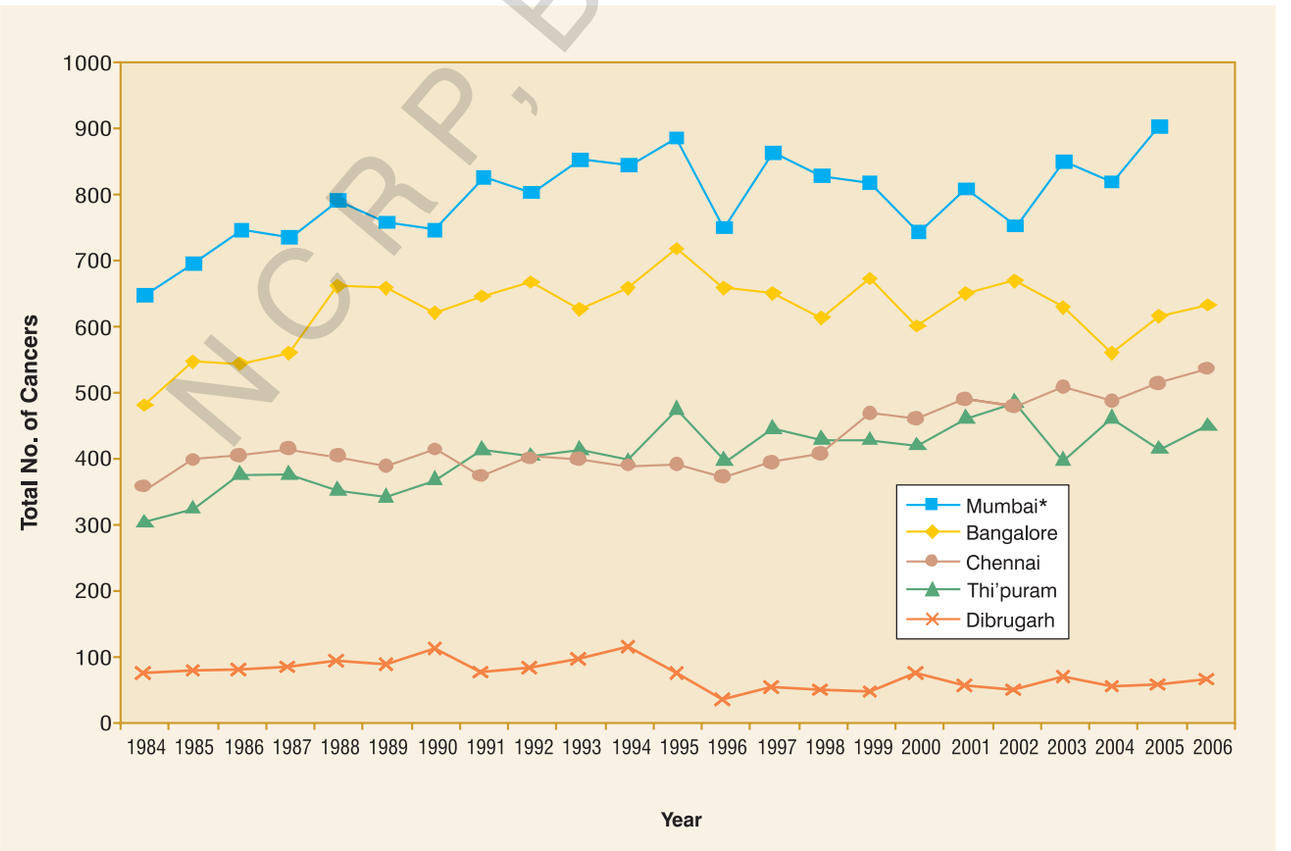


Table 16.2: Number(#) and Relative Proportion(%) of specific Head and Neck sites relative to all sites of cancer (2004-2006)

Males

Sites of cancer	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Lip	103	1.1	16	0.2	29	0.2	38	0.3	31	1.7
Tongue	1347	14.0	585	5.7	868	6.9	865	6.9	96	5.4
Mouth	2488	25.9	578	5.6	1031	8.2	1182	9.4	136	7.6
SalivaryGland	87	0.9	53	0.5	74	0.6	69	0.5	13	0.7
Oropharynx	476	5.0	413	4.0	369	2.9	374	3.0	123	6.9
Nasopharynx	148	1.5	63	0.6	98	0.8	76	0.6	22	1.2
Hypopharynx	988	10.3	953	9.3	685	5.5	387	3.1	305	17.1
Pharynx uns	21	0.2	135	1.3	25	0.2	18	0.1	48	2.7
Nose, Sinuses	169	1.8	75	0.7	98	0.8	84	0.7	19	1.1
Larynx	742	7.7	415	4.0	488	3.9	597	4.8	91	5.1
Trachea	7	0.1	0	0.0	2	0.0	2	0.0	0	0.0
Head & Neck	6576	33.9	3286	31.9	3767	30.1	3692	29.4	884	49.6
All Sites	**19399**	**100.0**	**10293**	**100.0**	**12523**	**100.0**	**12563**	**100.0**	**1782**	**100.0**

Females

Sites of cancer	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Lip	35	0.5	28	0.2	34	0.3	51	0.4	4	0.4
Tongue	374	5.0	165	1.4	220	1.6	347	3.0	27	2.5
Mouth	759	10.1	1200	10.1	703	5.2	658	5.8	56	5.3
SalivaryGland	66	0.9	54	0.5	38	0.3	61	0.5	5	0.5
Oropharynx	61	0.8	38	0.3	54	0.4	28	0.2	17	1.6
Nasopharynx	42	0.6	24	0.2	44	0.3	36	0.3	4	0.4
Hypopharynx	210	2.8	169	1.4	311	2.3	65	0.6	49	4.6
Pharynx uns	7	0.1	44	0.4	13	0.1	4	0.0	2	0.2
Nose, Sinuses	79	1.0	48	0.4	57	0.4	55	0.5	6	0.6
Larynx	91	1.2	35	0.3	58	0.4	25	0.2	3	0.3
Trachea	2	0.0	2	0.0	1	0.0	1	0.0	0	0.0
Head & Neck	1726	11.3	1807	15.3	1533	11.3	1331	11.7	173	16.3
All Sites	**15313**	**100.0**	**11842**	**100.0**	**13589**	**100.0**	**11394**	**100.0**	**1063**	**100.0**

** Only 2004-05 data.*

Fig 16.2 : Proportion (%) of Head and Neck Cancers Relative to All Sites (2004-2006)

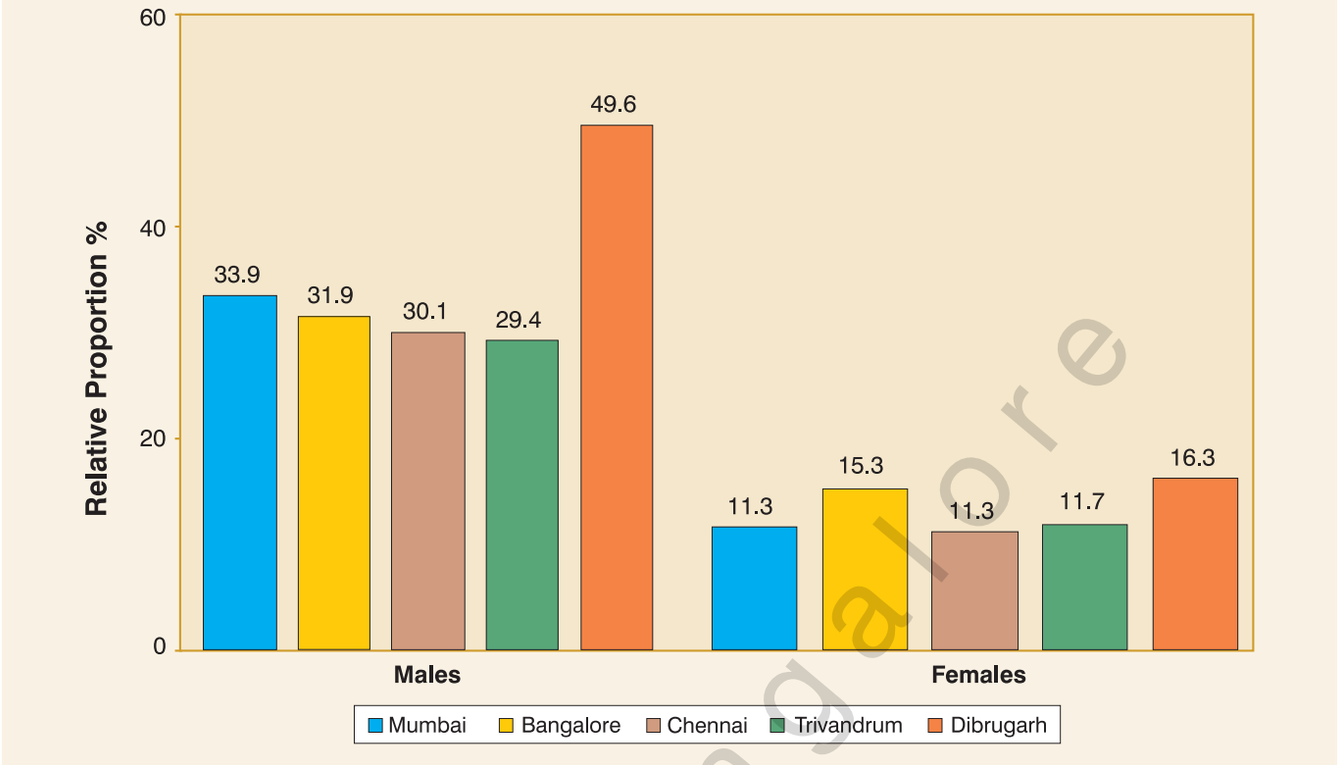


Fig.14.3 : Stack (100%) diagram showing Proportion of Specific Head and Neck Cancer Sites Relative to All Head and Neck Cancers (2004-2006)

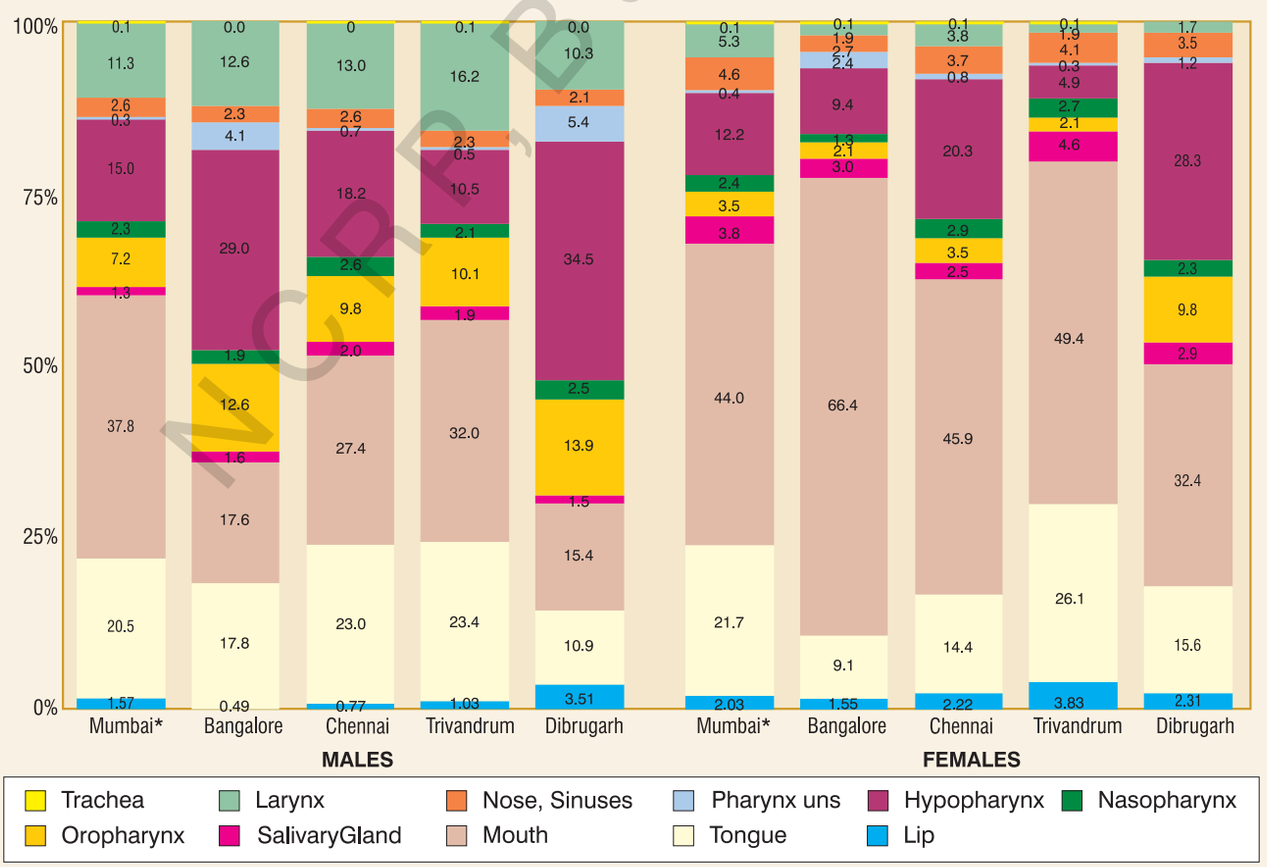


Table 16.3: Number(#) and Relative Proportion(%) of specific Head and Neck sites relative to all Head & Neck cancers (2004-2006)

Males

Sites of cancer	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Lip	103	1.6	16	0.5	29	0.8	38	1.0	31	3.5
Tongue	1347	20.5	585	17.8	868	23.0	865	23.4	96	10.9
Mouth	2488	37.8	578	17.6	1031	27.4	1182	32.0	136	15.4
SalivaryGland	87	1.3	53	1.6	74	2.0	69	1.9	13	1.5
Oropharynx	476	7.2	413	12.6	369	9.8	374	10.1	123	13.9
Nasopharynx	148	2.3	63	1.9	98	2.6	76	2.1	22	2.5
Hypopharynx	988	15.0	953	29.0	685	18.2	387	10.5	305	34.5
Pharynx uns	21	0.3	135	4.1	25	0.7	18	0.5	48	5.4
Nose, Sinuses	169	2.6	75	2.3	98	2.6	84	2.3	19	2.1
Larynx	742	11.3	415	12.6	488	13.0	597	16.2	91	10.3
Trachea	7	0.1	0	0.0	2	0.1	2	0.1	0	0.0
Head & Neck	**6576**	**100.0**	**3286**	**100.0**	**3767**	**100.0**	**3692**	**100.0**	**884**	**100.0**

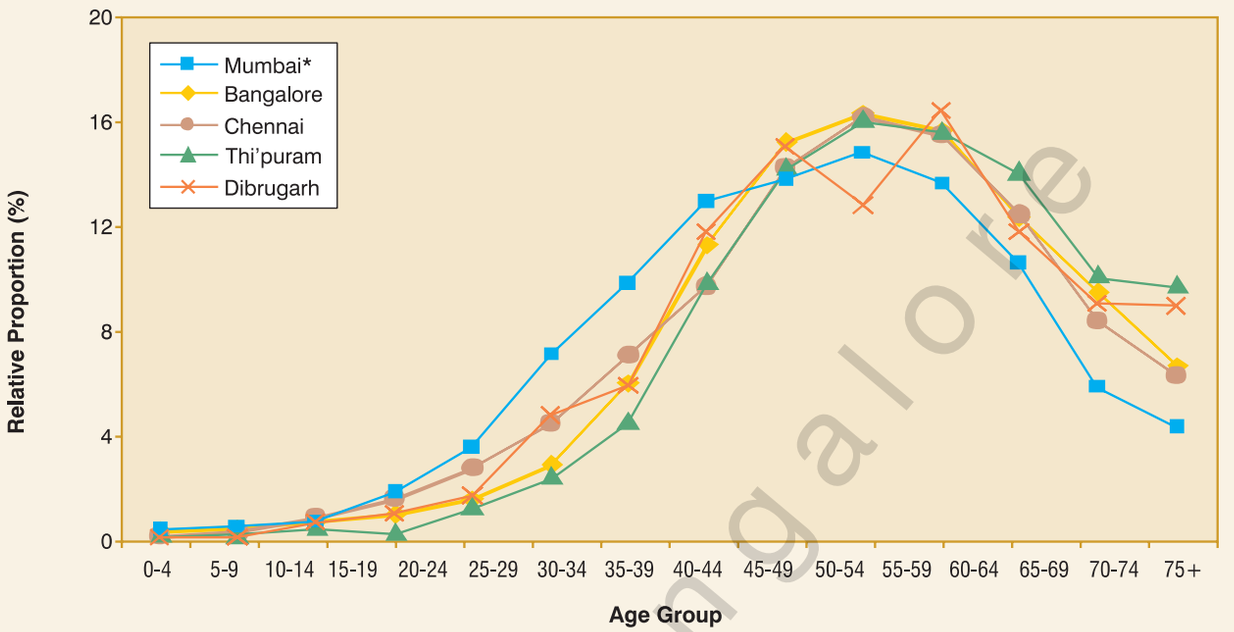
Females

Sites of cancer	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Lip	35	2.0	28	1.5	34	2.2	51	3.8	4	2.3
Tongue	374	21.7	165	9.1	220	14.4	347	26.1	27	15.6
Mouth	759	44.0	1200	66.4	703	45.9	658	49.4	56	32.4
SalivaryGland	66	3.8	54	3.0	38	2.5	61	4.6	5	2.9
Oropharynx	61	3.5	38	2.1	54	3.5	28	2.1	17	9.8
Nasopharynx	42	2.4	24	1.3	44	2.9	36	2.7	4	2.3
Hypopharynx	210	12.2	169	9.4	311	20.3	65	4.9	49	28.3
Pharynx uns	7	0.4	44	2.4	13	0.8	4	0.3	2	1.2
Nose, Sinuses	79	4.6	48	2.7	57	3.7	55	4.1	6	3.5
Larynx	91	5.3	35	1.9	58	3.8	25	1.9	3	1.7
Trachea	2	0.1	2	0.1	1	0.1	1	0.1	0	0.0
Head & Neck	**1726**	**100.0**	**1807**	**100.0**	**1533**	**100.0**	**1331**	**100.0**	**173**	**100.0**

** Only 2004-05 data.*

Fig. 16.4: Relative Proportion(%) of Head and Neck Cancers by Five Year Age Group (2004-2006)

Males



Females

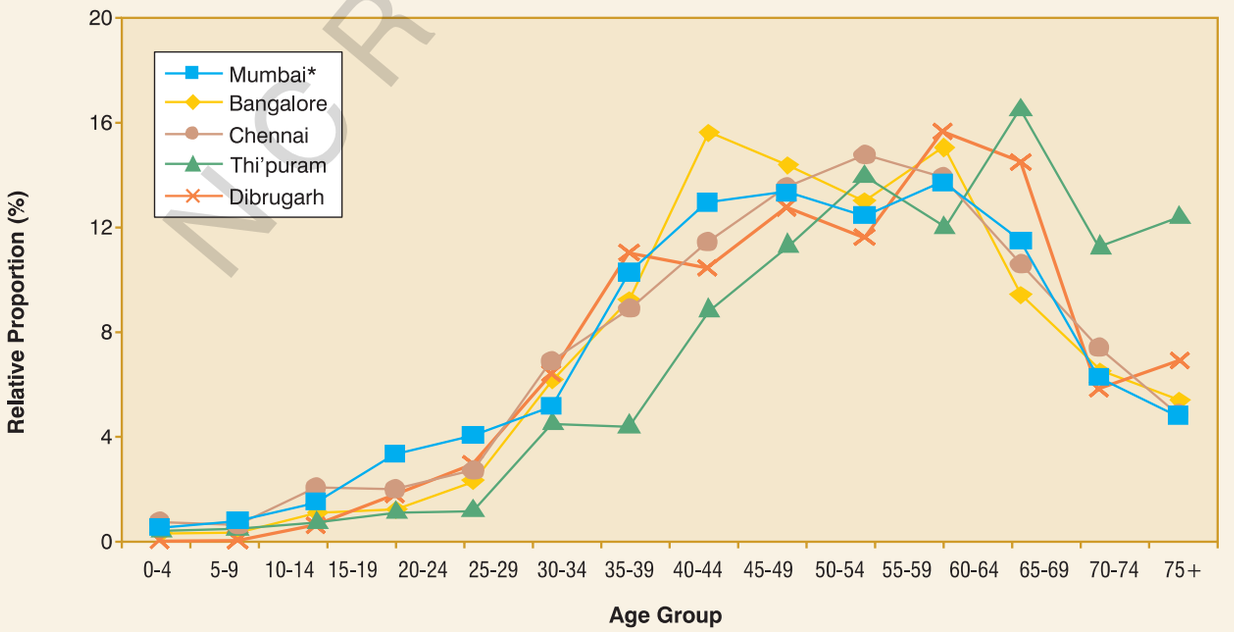


Table 16.4: Number(#) and Relative Proportion(%) of Head and Neck Cancers by Five-Year Age Group (2004-2006)

Males

Age Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
00-14	21	0.4	11	0.3	6	0.2	10	0.3	1	0.1
15-19	35	0.6	16	0.5	12	0.3	8	0.2	1	0.1
20-24	43	0.8	24	0.7	33	0.9	19	0.5	6	0.7
25-29	122	1.8	32	1.0	60	1.6	14	0.4	9	1.0
30-34	243	3.5	53	1.6	104	2.8	49	1.3	15	1.7
35-39	468	7.1	94	2.9	169	4.5	93	2.5	42	4.8
40-44	645	9.8	198	6.0	266	7.1	170	4.6	52	5.9
45-49	868	12.9	371	11.3	366	9.7	367	9.9	104	11.8
50-54	953	13.8	499	15.2	537	14.3	528	14.3	133	15.0
55-59	935	14.8	537	16.3	609	16.2	595	16.1	113	12.8
60-64	871	13.7	515	15.7	583	15.5	579	15.7	145	16.4
65-69	692	10.6	406	12.4	469	12.5	520	14.1	104	11.8
70-74	395	5.9	311	9.5	316	8.4	377	10.2	80	9.0
75+	285	4.3	219	6.7	237	6.3	363	9.8	79	8.9
All Ages	**6576**	**100.0**	**3286**	**100.0**	**3767**	**100.0**	**3692**	**100.0**	**884**	**100.0**
Mean		53.4		57.0		56.2		58.9		57.3
SD		12.7		12.1		12.5		11.7		12.3

Females

Age Group	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
00-14	13	0.5	5	0.3	11	0.7	6	0.5	0	0.0
15-19	16	0.7	9	0.5	9	0.6	7	0.5	0	0.0
20-24	23	1.5	19	1.1	31	2.0	11	0.8	1	0.6
25-29	45	3.3	22	1.2	30	2.0	16	1.2	3	1.7
30-34	71	4.0	42	2.3	41	2.7	17	1.3	5	2.9
35-39	97	5.1	111	6.1	105	6.8	61	4.6	11	6.4
40-44	169	10.2	167	9.2	136	8.9	59	4.4	19	11.0
45-49	240	12.9	282	15.6	175	11.4	118	8.9	18	10.4
50-54	210	13.3	260	14.4	207	13.5	151	11.3	22	12.7
55-59	210	12.4	235	13.0	226	14.7	187	14.0	20	11.6
60-64	240	13.6	271	15.0	213	13.9	161	12.1	27	15.6
65-69	209	11.4	170	9.4	162	10.6	221	16.6	25	14.5
70-74	108	6.2	117	6.5	113	7.4	150	11.3	10	5.8
75+	75	4.8	97	5.4	74	4.8	166	12.5	12	6.9
All Ages	**1726**	**100.0**	**1807**	**100.0**	**1533**	**100.0**	**1331**	**100.0**	**173**	**100.0**
Mean		53.1		54.1		53.7		59.0		55.4
SD		13.8		12.6		13.6		13.3		12.6

** Only 2004-05 data*

Table 16.5(a): Number(#) and Relative Proportion(%) of Head and Neck Cancers based on different Methods of Diagnosis (2004-2006) - Males

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai*	6294	95.7	6	0.1	4	0.1	272	4.1	6576	100.0
Bangalore	3128	95.2	111	3.4	7	0.2	40	1.2	3286	100.0
Chennai	3084	81.9	633	16.8	19	0.5	31	0.8	3767	100.0
Thi'puram	3536	95.8	138	3.7	13	0.4	5	0.1	3692	100.0
Dibrugarh	876	99.1	6	0.7	1	0.1	1	0.1	884	100.0

Table 16.5(b): Number(#) and Relative Proportion(%) of Head and Neck Cancers based on different Methods of Diagnosis (2004-2006) - Females

Registry	Microscopic		Clinical		All imaging techniques		Others		Total	
	#	%	#	%	#	%	#	%	#	%
Mumbai*	1663	96.0	0	0.0	2	0.1	61	3.9	1726	100.0
Bangalore	1741	96.3	46	2.5	2	0.1	18	1.0	1807	100.0
Chennai	1248	81.4	278	18.1	4	0.3	3	0.2	1533	100.0
Thi'puram	1271	95.5	57	4.3	1	0.1	2	0.2	1331	100.0
Dibrugarh	169	97.7	3	1.7	1	0.6	0	0.0	173	100.0

Table. 16.6: Number (#) and Relative Proportion (%) of Head and Neck cancers based on Broad Groups of Treatment (2004-2006)

	Mumbai		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
MALES										
Prior Tmt. Only	582	8.9	141	4.3	429	11.4	129	3.5	0	0.0
Prior & Tmt. at RI	350	5.3	50	1.5	31	0.8	253	6.9	21	2.4
Tmt. Only at RI	2386	36.3	1607	48.9	1386	36.8	2833	76.7	827	93.6
No CDT	3258	49.6	1488	45.3	1921	51.0	477	12.9	36	4.1
Total Patients#	**6576**	**100.0**	**3286**	**100.0**	**3767**	**100.0**	**3692**	**100.0**	**884**	**100.0**
FEMALES										
Prior Tmt. Only	143	8.3	75	4.2	173	11.3	54	4.1		0.0
Prior & Tmt. at RI	79	4.6	43	2.4	19	1.2	109	8.2	1	0.6
Tmt. Only at RI	611	35.4	941	52.1	609	39.7	995	74.8	153	88.4
No CDT	893	51.7	748	41.4	732	47.7	173	13.0	19	11.0
Total Patients#	**1726**	**100.0**	**1807**	**100.0**	**1533**	**100.0**	**1331**	**100.0**	**173**	**100.0**

**Only 2004-05 data; #Total Number of patients excluding Trachea cancer.*

Table.16.7 (a) : Number (#) and Relative Proportion (%) of Head and Neck cancer patients according to Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Males

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai*	665	17.1	3020	77.8	1823	47.0	143	3.7	54	1.4	3882	100.0
Bangalore	225	7.3	2618	84.9	2843	92.2	240	7.8	0	0.0	3083	100.0
Chennai	542	16.4	2731	82.6	3273	99.0	34	1.0	0	0.0	3307	100.0
Thi'puram	402	12.1	2878	86.9	3280	99.0	30	0.9	2	0.1	3312	100.0
Dibrugarh	16	1.9	813	94.2	829	96.1	8	0.9	26	3.0	863	100.0

Table.16.7 (b): Number (#) and Relative Proportion (%) of Head and Neck cancer patients according to Clinical Extent of Disease (Excludes Patients Previously Treated) (2004-2006)

Females

Registry	Localised (L)		Regional (R)		L + R		Distant		Others		All Stages	
	#	%	#	%	#	%	#	%	#	%	#	%
Mumbai*	216	20.4	768	72.4	984	92.7	63	5.9	14	1.3	1061	100.0
Bangalore	147	8.7	1391	82.7	1538	91.4	144	8.6	0	0.0	1682	100.0
Chennai	191	14.2	1143	85.2	1334	99.5	7	0.5	0	0.0	1341	100.0
Thi'puram	172	14.7	979	83.8	1151	98.5	17	1.5	0	0.0	1168	100.0
Dibrugarh	4	2.3	158	91.9	162	94.2	2	1.2	8	4.7	172	100.0

** Only 2004-05 data*

Table 16.6 gives the idea of the broad treatment groups. Among males "treatment only at RI" ranged from 36.3% in Mumbai to 93.6% in Dibrugarh and in females it ranged from 35.4% in Mumbai to 88.4% in Dibrugarh. Over 80% of cancers in males and females had regional spread of the disease at the time of diagnosis except Mumbai where 77.8 % and 72.4% in males and females respectivelyhad regional spread (Table 16.7).

Table 16.8 gives the number and relative proportion according to the type of treatment.

Table 16.8(a): Number(#) & Relative proportion (%) of Head and Neck cancer patients according to Type of Treatment given (2004-2006) - Males

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**1232**	**100.0**	**1607**	**100.0**	**1386**	**100.0**	**2831**	**100.0**	**827**	**100.0**
Specific Treatments										
Surgery (S)	472	19.7	176	11.0	58	4.2	204	7.2	27	3.3
Radiotherapy (R)	462	18.8	880	54.8	619	44.7	1263	44.6	710	85.9
Chemotherapy (C)	159	6.1	84	5.2	16	1.2	154	5.4	19	2.3
S+R	807	36.9	257	16.0	248	17.9	281	9.9	36	4.4
S+C	14	0.8	13	0.8	0	0.0	23	0.8	2	0.2
R+C	368	15.5	170	10.6	391	28.2	743	26.2	28	3.4
S+R+C	104	2.2	24	1.5	54	3.9	155	5.5	5	0.6
Others	0	0.0	3	0.2	0	0.0	10	0.3	0	0.0
Modality of Therapy										
Single	549	44.6	1140	70.9	693	50.0	1621	57.3	756	91.4
Combination	683	55.4	464	28.9	693	50.0	1202	42.5	71	8.6
Type of Treatment										
Any S	735	59.7	470	29.2	360	26.0	663	23.4	70	8.5
Any R	904	73.4	1331	82.8	1312	94.7	2442	86.3	779	94.2
Any C	303	24.6	291	18.1	461	33.3	1075	38.0	54	6.5

Table 16.8(b): Number(#) & Relative proportion (%) of Head and Neck cancer patients according to Type of Treatment given (2004-2006) - Females

Type of Treatment	Mumbai*		Bangalore		Chennai		Thi'puram		Dibrugarh	
	#	%	#	%	#	%	#	%	#	%
Total Patients	**611**	**100.0**	**941**	**100.0**	**609**	**100.0**	**995**	**100.0**	**153**	**100.0**
Specific Treatments										
Surgery (S)	181	29.6	150	15.9	29	4.8	107	10.8	3	2.0
Radiotherapy (R)	105	17.2	355	37.7	265	43.5	430	43.2	139	90.8
Chemotherapy (C)	26	4.3	158	16.8	5	0.8	47	4.7	2	1.3
S+R	228	37.3	157	16.7	110	18.1	163	16.4	9	5.9
S+C	1	0.2	16	1.7	1	0.2	8	0.8	0	0.0
R+C	49	8.0	70	7.4	174	28.6	171	17.2	0	0.0
S+R+C	20	3.3	33	3.5	23	3.8	66	6.6	0	0.0
Others	1	0.2	2	0.2	2	0.3	3	0.3	0	0.0
Modality of Therapy										
Single	312	51.1	663	70.5	299	49.1	584	58.7	144	94.1
Combination	298	48.8	276	29.3	308	50.6	408	41.0	9	5.9
Type of Treatment										
Any S	430	70.4	356	37.8	163	26.8	344	34.6	12	7.8
Any R	402	65.8	615	65.4	572	93.9	830	83.4	148	96.7
Any C	96	15.7	277	29.4	203	33.3	292	29.3	2	1.3

**Only 2004-05 data*

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