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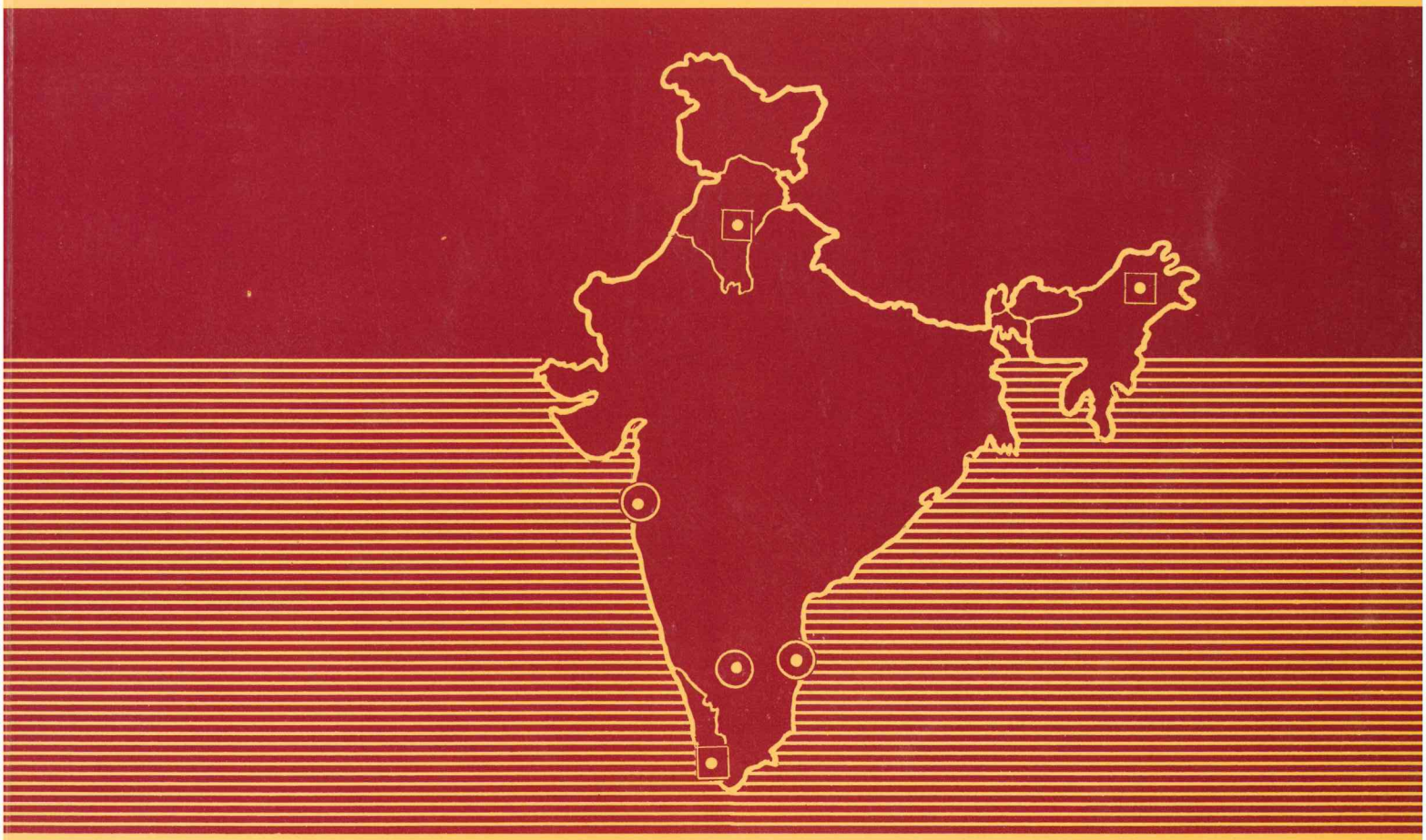

NATIONAL CANCER REGISTRY

A PROJECT OF

INDIAN COUNCIL OF MEDICAL RESEARCH

ANSARI NAGAR, NEW DELHI-110 029

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NATIONAL CANCER REGISTRY

(A PROJECT OF INDIAN COUNCIL OF MEDICAL RESEARCH)

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Consolidated Report was prepared by the Co-ordinating Unit (Technical Wing) of National Cancer Registry, at Bombay.

Cancer Registries provided their individual reports and editing was done by the Co-ordinating Unit (Technical Wing) of the National Cancer Registry, (ICMR), at Bombay.

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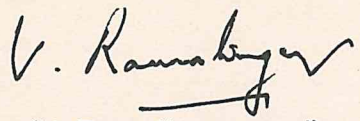
FOREWORD

I am delighted that the first Annual Report of the National Cancer Registry Project is being published and offered to all those who have the control of cancer at heart. In order to engage in effective control operations, it is necessary to have an adequate knowledge based on the predominant types of cancer in India—their evolution, natural history, the factors associated with their genesis, the age groups that are affected, their response to various modalities of treatment and several other related matters. It is only when we have reasonable knowledge of these issues that we would be able to navigate our control efforts rather than drift along.

Registries ring a bell. Traditionally, they collect a large volume of information but such an exercise will be sterile unless it is coupled with a social purpose. There is a tendency in the institution of registries to collect a wealth of information, but it is important to be highly selective in the items of information that one is collecting. Registries are valuable in providing information on time trends with reference to a particular disease entity or a group of such entities. It is well-known for example that in so far as cancer is concerned, the incidence and the types of cancer vary over a period of time, as a result of social and economic development. While some of the existing cancers may go down in their frequencies, new forms may appear and increase in incidence. Properly structured, it is obvious that Registries can be valuable adjacents to a control programme and help in mounting prudent programmes of prevention and early detection within the resource constraints.

A perusal of this report will reveal that in all regions of the country without exception a large bulk of the cancers prevalent in men and women in India are of a preventable nature. For the first time we are able to get a glimpse of the predominant forms of cancer in different parts of India, thus enabling us to move towards preparing a Cancer Atlas for the country as a whole. The material collected so far is rewarding and beyond our expectations. By locating the registries in different regions with varying life styles, much valuable information about possible causative factors has been obtained. The new information that has come to light in a very short period has already served as a substratum for control of each cancer and several expert groups are now engaged in the formulation of the Seventh Five Year Plan in the field of cancer control.

I would like to pay a tribute to Dr. L. D. Sanghvi, Dr. Usha K. Luthra and a number of scientists who are working in the ICMR Cancer Registry System. The manner in which this Project has taken off augurs well for the future.



(V. Ramalingaswami)
Director-General
Indian Council of Medical Research
New Delhi-110 029.

February 22, 1984.

PREFACE

The Indian Council of Medical Research is the apex body in India for planning, monitoring and supporting research in the field of biomedicine. The thrust areas for research are: control of communicable diseases; fertility control; nutritional and major metabolic disorders; primary health care; alternative health care system; mental health; occupational and other environmental health problems; selective studies in other fields such as drug research including traditional systems of medicine and non-communicable diseases such as cancer and cardiovascular diseases.

Amongst the non-communicable diseases, cancer research occupies an important position. The Council had concentrated during late '60s and '70s on organising multi-centred studies on epidemiology of commonly encountered cancers in the country, like cancers of the uterine cervix, oral cavity, breast, oesophagus etc. Important data on prevalence and risk factors has emerged. Bombay Cancer Registry was established by the Indian Cancer Society in 1963 with the main objective to collect data on cancer in a pre-selected, well-defined geographical area (the Bombay Metropolis) with a known population composition. The basic idea was to identify and record every cancer case arising in the population in specific periods of time in order to obtain information on trends of cancer incidence in that population. Since then the Bombay Cancer Registry has been providing useful data on the incidence and cancer pattern from Greater Bombay and recently from its satellite units at Aurangabad and Pune. However, it has been felt since long that this data was not representative of the country at large and that there was an urgent need for expanding such activities to various regions in the country. The Council's Advisory Committee on Cancer Research in 1980 had strongly recommended (a) to set criteria for selection of centres/areas for organisation of various types of cancer registries, (b) augmenting the existing registry and establishing new cancer registries in various parts of the country with the main objective to lay down guidelines for organization of hospital based and population based (urban and rural) cancer registries in the country (c) to define the modus operandi of the work plan and evaluation of such registries.

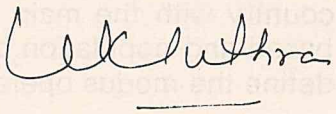
A Task Force was constituted on cancer registries based on which the Bombay Cancer Registry (hitherto supported by the Department of Science and Technology and Indian Cancer Society), was taken over by the ICMR and augmented, and additional population based cancer registries at Bangalore and Madras, and three hospital registries at Chandigarh, Dibrugarh and Trivandrum were established under the National Cancer Registry Project. A great deal of planning had gone into this activity and the recommendations of the Task Force had considerably helped in formulating a uniform methodology for functioning of the registries. The registries began collection of data on 1st January, 1982.

A co-ordinating unit was established with its operational wing under Professor Usha K. Luthra at the ICMR Headquarters and later a technical wing at the Tata Memorial Centre, Bombay, under Dr. L. D. Sanghvi who was appointed as full time project officer on this programme. An important feature of the registries is

emphasis on quality control and completeness of the information. For achieving this, I would like to place on record my sincere gratitude to the Project Chiefs of the individual registries, Dr. D. J. Jussawalla, Bombay, Dr. M. Krishna Bhargava, Bangalore, Dr. V. Shanta, Madras, Dr. B. D. Gupta, Chandigarh, Dr. B. D. Baruah initially and now Dr. N. Zaman, Dibrugarh, Dr. M. Krishnan Nair, Trivandrum and their valuable help and co-operation. The National Cancer Registry Project has been fortunate to have guidance and counselling from WHO consultants Dr. C. S. Muir, Chief, Division of Descriptive Epidemiology, International Agency for Research on Cancer, Lyon, France and Dr. T. Hirayama, Chief, Division of Epidemiology, National Cancer Institute, Tokyo, Japan. The broad objectives of the National Cancer Registry Project is to generate authentic data on magnitude of cancer in various regions of the country alongwith core information on epidemiological factors, with the ultimate goal of evolving strategies for cancer control for the commonly encountered cancers in the country.

The contents of this report are for the year 1982, i.e. the first year of operation. We are quite conscious that the data as presented is preliminary and needs to be interpreted with caution. However, it is felt that the report would go a long way in providing an assessment of the cancer situation in various parts of the country. The report has been reviewed in-depth by the staff of the participating registries, the members of the steering committee and the consultants at the recent Annual Review Meeting in December, 1983. It is hoped that the lacunae (specially in relation to completeness) in this report would be fully rectified in the succeeding reports.

Interesting leads provided by observations in 1982 regarding cancers of the stomach, oesophagus and pharynx have been taken up for indepth case control studies which would provide an insight into the epidemiology of these cancers. As such, the National Cancer Registry Project would be not only providing magnitude of the cancer problem from various regions of the country, but would also be giving valuable information on epidemiological factors as related to various cancer types which would ultimately help in drawing out preventive strategies. It is hoped that the information in the report would fill a long felt gap on cancer in a rapidly developing country like ours.



Usha K. Luthra

INTRODUCTION

India has a long tradition of research in the aetiology of cancer. Reference may be given here to three scientific papers of historical importance: (1) observation of Emslie in 1866 about the 'Kangri' cancer in the Kashmir Valley; (2) the paper of Niblock in 1902 about the role of 'betel' chewing with tobacco and lime in oral cancer in south India and his observation on the practice of circumcision for the rarity of penile cancer in the Muslims; and (3) the interesting paper of Ian Morison Orr in 1933 with a case control study to demonstrate the dose rate effect of tobacco chewing in oral cancer and suggesting a role of Vitamin A in prevention of this cancer. Khanolkar made several important contributions in the field of cancer epidemiology during the fourth and fifth decades of this century among which his initiation of experimental and laboratory work related to epidemiological observations stands out as unique.

All these observations were based on good medical records that were maintained by the hospitals in which these scientists worked. More systematic registration of all the cancer cases in a well-defined population was initiated by Jussawalla in the early sixties in Bombay City. Bombay Cancer Registry has been providing the incidence rates of different cancers for this city since 1964. The Indian Council of Medical Research has taken the next logical step of starting a network of five additional registries in the country and bringing the Bombay Cancer Registry in this network.

All the six registries have been uniformly collecting minimum data according to a pre-designed core proforma since the beginning of 1982. This report brings together the material on cancer cases registered during the first year of operation. Bangalore, Bombay and Madras have population based registries and Chandigarh, Dibrugarh and Trivandrum have hospital registries. Each registry prepared its annual report with tables incorporating the original data in a standard format. These individual reports with some editing form the bulk of this report. In addition, important topics were selected for a comparative analysis of the data from different registries. This is included at the beginning of this report. Some of the highlights of this preliminary synthesis are given below.

Information on the incidence of cancer which was available for Bombay since 1964 is now available also for Bangalore and Madras. Experience in Bombay showed that there are about 70 new cancer cases per year in men as well as in women per 100,000 individuals. Material from Bangalore and Madras indicates that comparable number of new cancer cases in men may be somewhat lower (55-60) and in women somewhat higher (75-80). These figures are still provisional and will be revised in the coming years. This gives us an estimate of about half a million new cancer cases every year in the country if the future experience, particularly in the rural areas, does not turn out to be very different.

When this material is examined in detail, it shows that cancers of the alimentary canal constitute almost half of all the cancers in men and about a quarter in women. Among them, cancers of the upper alimentary canal (mouth, pharynx and oesophagus) are relatively more common than cancers of the digestive organs (stomach, intestines, rectum, liver etc.). This is reverse of the situation in the affluent countries of the

West where cancers of the digestive organs are far more common. Even the Indians who have migrated to affluent countries, show a similar trend indicating the possible role of changing life style.

Common occurrence of cancers of the upper alimentary canal which are related to tobacco habits is not an entirely unexpected finding. What appears to be interesting and somewhat unexpected is a declining trend in mouth cancer and an increasing trend in cancers of the pharynx, larynx and lung in different registration areas. Epidemiological research has shown that tobacco chewing habit is primarily responsible for mouth cancer, and mixed habit of tobacco chewing and bidi smoking, for cancers of the pharynx and the larynx. Role of cigarette smoking as a causal factor in lung cancer is well known from the experience in the West. In India, smoking of bidi and cigarette contributes towards an increasing trend of lung cancer. These observations which are based on a comparison with earlier hospital material are consistent with changing trends of tobacco habits in the country.

In women, cancer of the uterine cervix is the most common cancer followed by cancer of the breast in different registration areas except in Bombay where cancer of the breast has taken up the first position. Cancer of the uterine cervix is common in many developing countries of the world. This cancer is, however, relatively easy to control and its incidence has gone down to very low levels in the West. In the present material, a finding of particular significance is relatively low frequency of cervical cancer in Muslim women as compared to Hindu women in all the registration areas. This finding has revived an interest in an old hypothesis of the role of penile hygiene (as a result of circumcision or otherwise) not only in the prevention of penile cancer in men but also in the prevention of cervical cancer in women. In the present series, there was no case of penile cancer in a total of 871 cancer cases in Muslim males, compared to 3.6% of penile cancer cases in Hindu males in Bangalore, 4.7% in Madras and 3.4% in Sikhs in Chandigarh. These are the populations of Hindu and Sikh women in whom the frequency of cervical cancer is relatively high.

In addition to these observations related to the dimension of the cancer problem in the country and aetiology of common cancers in India, the registries have provided useful data on the diagnostic procedures employed, clinical stage of disease when patients seek hospital admissions and treatment modalities followed by different institutions in the country. Some of this material which is related to patient care is analysed and included in the report. Many of these items will have to be followed up during the succeeding years to assess the survival rates and quality of life of the cancer patient following treatment.

The Project Officer is grateful to the Project Chiefs of different registries, who very cordially provided all the facilities for routine quality checks during his personal visits to the registries and prepared their annual reports in time to make this synthesis possible. He is thankful to Dr. P. B. Desai, Director, Tata Memorial Centre, for providing space and other facilities for the location of the Technical Wing of the National Cancer Registry in Bombay. The Technical Wing in Bombay would not have functioned as effectively as it did without the constant support of the Operational Wing in New Delhi and personal interest of the Director-General of the Indian Council of Medical Research in this Project.

L. D. Sanghvi.

L. D. Sanghvi

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1. REGISTRY SET-UP

The ICMR Advisory Committee* on Cancer Research, while formulating its policy in February, 1980 recognized an urgent need for strengthening the existing cancer registries and organization of new registries in different regions of the country. A Task Force† was constituted to work out the details of this recommendation which held its meeting at the Tata Memorial Centre in Bombay on 27th and 28th November, 1980.

The Task Force recommended establishment of several hospital and population-based cancer registries at selected places in the country taking into account the local developments. It went into details of operation of these registries including staff structure, training programme, uniform collection of data and periodical review and evaluation of the working of the registries. It also recommended that the ICMR financial support should continue for an initial period of 5 years, following which the local state government or a responsible agency should take over the project on a continuing basis.

The Governing Body of ICMR accepted these recommendations and the Council started implementing them from the financial year 1981-82. It was decided to strengthen the Bombay Cancer Registry which has been functioning since 1963 and establish two additional population-based registries in Bangalore and Madras. It was also decided to set up hospital cancer registries in Chandigarh, Dibrugarh and Trivandrum to start with.

A meeting of the Principal Investigators (subsequently designated as Project Chiefs) of this National Cancer Registry Project was held at the Tata Memorial Centre on 22nd and 23rd December, 1981. The primary objective of this meeting was to co-ordinate the activities of these registries and to have an agreement on procedures to be followed so that results are comparable with one another and are suitable for international comparisons. The Project Chiefs described their data base, the co-operation sought and achieved from various local sources and outlined their proposed methodology.

A Core Proforma was designed for uniform collection of minimum data by all the registries (Appendix 1). It was agreed that systematic collection of data will commence from 1st January, 1982.

It was further agreed that newly established population-based registries would have an advisory committee preferably headed by the Health Secretary to ensure co-operation from hospitals, nursing homes, private practitioners and municipal corporation. The necessity of having tumour boards in general hospitals to assist in the hospital registry operations was duly emphasized. It was also suggested that as far as possible, methodology should be evolved to obtain histopathology slides for review. A panel of inter-registry pathologists was constituted to enhance the quality and standardization of histological diagnosis.

***Members Advisory Committee:** Dr. B. K. Aikat, Dr. B. K. Bachhawat, Dr. Sumathi Bhide (Rapporteur), Dr. Jayasree Roy Chowdhury, Dr. M. G. Deo (Rapporteur), Dr. D. J. Jussawalla, Dr. S. K. Kashyap, Dr. Usha K. Luthra (Member Secretary), Dr. Fali S. Mehta, Dr. N. C. Nayak, Dr. V. Ramalingaswami, Dr. L. D. Sanghvi, Dr. B. Sankaran (Chairman), Dr. P. N. Wahi, Dr. M. Thangavelu (WHO Representative), Mr. A. K. Prabhakar (ICMR Staff), Dr. Kamala Rani (ICMR Staff).

†**Members Task Force:** Dr. B. D. Baruah, Dr. Krishna Bhargava, Mr. P. Gangadharan, Dr. B. D. Gupta, Dr. I. M. Gupta, Mr. D. K. Jain, Dr. D. J. Jussawalla (Chairman), Dr. Usha K. Luthra (Convener), Dr. L. D. Sanghvi, Dr. V. Shanta, Dr. A. D. Taskar.

2. STAFFING PATTERN

The country has a long tradition of research in the field of Cancer Epidemiology. It has one of the oldest population-based cancer registries in this part of the world. By providing very liberally the staff for the newly established cancer registries in this Country, it is anticipated that the work of the registry will develop on sound lines and in course of time there will be trained personnel available to sustain activities in this field and undertake serious research in the field of Cancer Epidemiology. In particular, there is a dearth of medical and para-medical personnel trained in the field of Cancer Epidemiology and it is anticipated that the National Cancer Registry Project will succeed in filling this gap.

There is a general similarity in the recommendations of the staffing pattern in the population-based and in the hospital cancer registries. Both types of registries are provided with a total of 12 staff members, 2 at the senior level, 2 at the intermediate level and 8 at the junior level. At the senior level, both types of registries have provisions for a Biostatistician and a Senior Research Officer (Medical).

It will be seen that the population-based registries have been provided with three posts for statistical work, a senior biostatistician, a junior biostatistician and a statistical assistant. Bombay Registry has the necessary quantum of statistical staff for the cancer registry work. Madras and Bangalore have not been able to recruit a suitable candidate for the senior post. The post of Junior Biostatistician was filled up in both these places but the position is vacant in Madras since October, 1982. It is imperative that these positions are filled up as early as possible. Hospital Registries have a single post of Senior Biostatistician. All the three registries had succeeded in filling up this post. The staff member in Chandigarh has resigned at the end of December, 1982 and a new staff member has been recruited.

Senior Research Officer (Medical), an important post in all the registries shows some variation in their specialization. The incumbent in Bangalore is M.D. (Pathology), the one in Trivandrum is M.D. (Radiotherapy) and the one in Madras is an M.B.B.S. with experiences in preventive medicine and public health. This post is not filled in Bombay, Chandigarh and Dibrugarh. However, the services of a part time pathologist (M.D.) in Bombay, a radiotherapist (M.D.) in Chandigarh and a pathologist (M.D.) in Dibrugarh are made available for co-ordinating the work of the registry.

Post of Senior Research Fellow has been provided in Hospital Registries to develop interest in the field of cancer epidemiology particularly among the medical people. Only Dibrugarh has a Senior Research Fellow who is medical, in the other two registries the Senior Research Fellows are statisticians. Registries should make an effort that these Fellows are not burdened with routine responsibilities and are given incentives and guidance to undertake specific research projects in consultation with the Central Co-ordination Unit, if necessary.

It will be seen from above that there is further scope for recruitment of medical personnel of the Cancer Registries staff and all efforts should be made in this direction.

There is a great deal of turnover in the staff even at the intermediate and the junior levels in some of the registries. This may involve considerable effort on the part of senior staff member in training or supervising the new recruits. The main reason for this turnover may be due to insecurity about the tenure of service. It is, therefore, desirable that the registries may make all efforts to provide assurance about the continuity of service at the end of five years, as is the case in Trivandrum Hospital Registry.

3. TRAINING PROGRAMME

First requirement for starting the data collection is to provide training to the senior personnel of the Registries. At the request of ICMR, a course was organized by Dr. D. J. Jussawalla and the staff of the Bombay Cancer Registry from 14th December to 23rd December 1981. Faculty members included several experienced teachers from local institutions in Bombay. Dr. T. Hirayama, W.H.O. Consultant also contributed in the conduct of the course. The topics included (i) maintenance of hospital records, (ii) working of cancer registry and (iii) coding and nomenclature according to International Classification of Diseases. Visits were arranged to (a) Bombay Cancer Registry, (b) Department of Medical Records (Statistics) of the Tata Memorial Hospital and (c) Medical Records Department of K.E.M., Jaslok and J. J. Hospitals, (d) Vital Statistics Division, Municipal Corporation, Greater Bombay. The Course was attended by two senior staff members from each one of the Registries at Bangalore, Madras, Chandigarh and Dibrugarh. Trivandrum Registry had not yet started functioning. The Registry Staff from Trivandrum visited Bombay, to get themselves familiar with the registry operations, sometime in December, 1982.

A fortunate co-incidence was a three-week International Course on Cancer Epidemiology conducted at the Cancer Research Institute in Bombay from 11th January to 30th January, 1982. The Course was jointly sponsored by the International Agency for Research on Cancer, W.H.O. South-East Asia Regional Organization and the Indian Council of Medical Research. The course covered various aspects of cancer epidemiology, working of cancer registries and introduction of biostatistics. Practical group exercises were an important feature of the training course. International faculty included some of the finest teachers in the field. The Course was attended by Senior Research Officers (Medical) from Bangalore and Madras Registries and Senior Biostatistician from the Bombay Registry.

This Course was followed by a three-day Course on Cancer Control sponsored by the W.H.O. Cancer Control Unit in Geneva and ICMR. It covered the topics of primary prevention, early detection by screening procedures and clinical trials. W.H.O. had just initiated this course and had picked up Bombay for its first trial. The Faculty had prepared extensive background material although time available for presentation was not adequate. The same three trainees from Bangalore, Madras and Bombay attended this course.

Different Registries have followed different strategies for training their social investigators and field staff. Madras Registry had undertaken their training before the commencement of actual work. Initially, techniques were taught in respect of informal and formal interviews. Special emphasis was placed on maintaining confidentiality of information. The formal training included fundamentals of human anatomy and brief explanations of terms in respect of clinical, radiological, pathological nomenclature used in cancer work. The investigators were introduced to the method of recording case sheets of cancer patients and practical training was given to fill in the Core Proforma from case records.

The Bangalore Registry arranges a weekly meeting-cum-teaching programme of all the Registry staff every Saturday afternoon under the supervision of Senior Research Officer (Medical). The work done during the week is reviewed and difficulties and problems faced by various personnel are discussed and resolved to the extent feasible.

4. FUNCTIONING OF THE REGISTRIES

The immediate purpose of the National Cancer Registry Project is to provide reliable data on morbidity and mortality, pattern of different types of cancer from various sub-population groups, effectiveness of different treatment modalities and survival rates following treatment. The long-term objective of the Project is, however, much wider. It is to provide research base for development and evaluation of appropriate strategies for national cancer control programme in all its important aspects.

Population-based and Hospital Cancer Registries are complementary to one another, each with its own specific focus. Hospital cancer registry has a primary concern for the cancer patient in the hospital where emphasis is on prompt and accurate diagnosis, properly selected treatment and active follow-up of the patient. This type of registry maintains careful records on length and quality of survival in relation to site, stage and treatment modalities and thus contributes primarily to clinical research. It assists in epidemiological research through short-term case-control studies.

Population-based registry has a primary concern for cancer in the community. It provides data on the cancer incidence and prevalence and their secular trends over a period of time. It provides a better base than hospital registry for epidemiological research through case-control and prospective studies. It is suitable for identification of high-risk or low-risk groups and evaluation of screening programme for early detection. Population-based registry is, however, feasible only in a place where hospital medical records are properly maintained. There will be an added advantage if there is a cancer hospital with proper medical records.

In the following summary of the operations of the six cancer registries, Bangalore, Bombay and Madras population-based registries will be described first followed by Chandigarh, Dibrugarh and Trivandrum hospital registries. Figure 4 shows the location of six registries in India.

4.1 Population-based Registries

A Population based Registry has to ensure that ultimately every incident cancer case in the defined area comes to its notice and earlier it is noticed, the better it is. This requires a comprehensive survey of all the sources where a patient suspecting cancer will go: *viz.* **(i)** the base-hospital around which the cancer registry is organized, **(ii)** other general and private hospitals, **(iii)** private nursing homes and **(iv)** consultants and private practitioners, particularly the pathologists. In addition, it also requires a scrutiny of all the death records to trace those cancer cases which may have not come to the notice of the sources mentioned above.

In trying to cover all possible sources including death certificates, many of the cancer patients come to the notice of the registries through more than one source. This requires a careful elimination of all duplications from different sources and finally registering the cancer patient only once. The death certificates provide an indirect check for cancer registration procedures in a given area.

An important item of information in the population-based registries is about the residential status of the cancer patient. All the three registries have agreed to include in the registry a cancer patient who has been resident in the defined area for at least one year. In many of the cases that come to the notice of the registries, this information about the residential status of a patient is not available. This is also true about the cases coming through the death certificates. The registries have to make considerable efforts to get this information by various methods such as by checking the voters list, telephone directory or by sending a reply paid post card as otherwise such cases will not be useful for the registering file.

4.1.1 Bangalore

The Registry is located in the Kidwai Memorial Institute of Oncology which is recognized as a Regional Centre by the Government of India. The area covered by the Registry is the Bangalore City Corporation

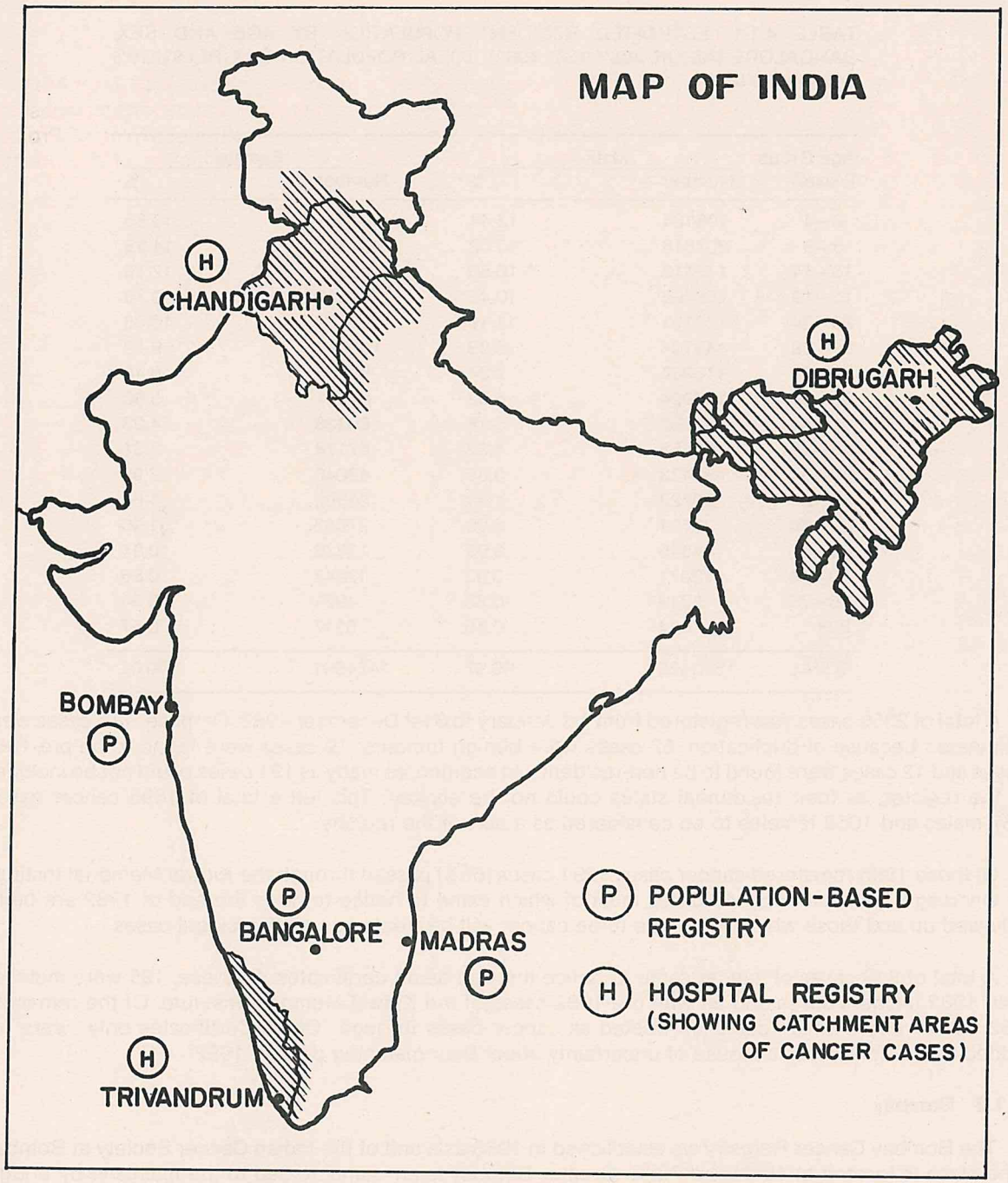

Figure 4: Location of Population-based and Hospital Cancer Registries in India.

and eight other notified areas and townships and is collectively known as Bangalore Urban Agglomeration. The place is located at 13°N and 78°E and has an altitude of 914 metres above Mean Sea Level. It has a total area of 191 sq. kms. and a population of 2.91 millions (1981 census) with 1.54 million males and 1.37 million females. Table 4.1.1 gives estimated population by age and sex in Bangalore City as on July 1st, 1982. The place had the highest growth rate (76%) of population during the last decade. 69% of the males and 56% of the females are literate.

TABLE 4.1.1: ESTIMATED RESIDENT POPULATION BY AGE AND SEX, BANGALORE (AS ON JULY 1ST, 1982). TOTAL POPULATION (ALL RELIGIOUS COMMUNITIES)

Age Group (Years)	Male		Female	
	Number	%	Number	%
0—4	198164	12.44	197311	13.85
5—9	207516	13.02	204881	14.38
10—14	172113	10.80	172381	12.10
15—19	166498	10.45	152523	10.70
20—24	177751	11.16	152127	10.68
25—29	143104	8.98	130519	9.16
30—34	116987	7.34	92303	6.48
35—39	103924	6.52	84031	5.90
40—44	82297	5.16	60338	4.23
45—49	68853	4.32	47178	3.31
50—54	53433	3.35	42046	2.95
55—59	30729	1.93	23582	1.66
60—64	31794	2.00	27053	1.90
65—69	14345	0.90	13338	0.94
70—74	13071	0.82	12242	0.86
75—79	5219	0.33	4921	0.34
80+	7624	0.45	8117	0.57
TOTAL	1593422	99.97	1424891	100.01

A total of 2355 cases was registered from 1st January to 31st December 1982. Of these, 176 cases were eliminated because of duplication, 62 cases were benign tumours, 19 cases were found to be pre-1982 cases and 12 cases were found to be non-residents. In addition, as many as 191 cases could not be included in the register, as their residential status could not be elicited. This left a total of 1895 cancer cases, 837 males and 1058 females to be considered as a part of the registry.

Of these 1895 registered cancer cases 1291 cases (68%) passed through the Kidwai Memorial Institute of Oncology. An additional 349 cases most of which came to notice towards the end of 1982 are being followed up and those which will prove to be cancer will be treated as 1982 incident cases.

A total of 312 cases of cancer came to notice through death certificates. Of these, 125 were matched with 1982 incident cases and 35 with pre-1982 cases of the Kidwai Memorial Institute. Of the remaining 152 cancer cases which could be treated as cancer cases through "Death Certificates only" were not added as incident cases because of uncertainty about their matching prior to 1982.

4.1.2 Bombay

The Bombay Cancer Registry ws established in 1963 as a unit of the Indian Cancer Society at Bombay. The place is located at 18°N and 72°E. Greater Bombay is an island, joined to the mainland by bridges and has a warm and humid climate. The Registry covers a total area of 603 sq. kms. with an estimated resident population of 8.7 million as on July 1st, 1982 (4.9 million males, 3.8 million females) (Table 4.1.2.).

The Registry covers 92 hospitals and private nursing homes in the Bombay area. In addition, staff members of the registry personally approach clinicians dealing with cancer patients. A total of 315 each specialists are thus contacted of whom 115 are Surgeons/Physicians, 125 Gynaecologists, 40 Pathologists and 35 Radiologists.

5. INCIDENCE OF CANCER IN BANGALORE, BOMBAY AND MADRAS

Bombay Cancer Registry has been providing cancer incidence rates for Bombay City since its inception in 1964 and the latest figures available for 1973-75 have been used for comparison purpose in the following presentation. Incidence rates can only be provided by population-based cancer registries and Bangalore, Bombay and Madras registries have provided data for the year 1982. For the sake of illustration, these tables on age-specific incidence rates alongwith crude and age-adjusted incidence rates are included in the individual reports of these registries. It must be emphasized that as this is the first year of operation under the project, the material for 1982 should be treated as provisional for calculation of incidence rate for the reasons mentioned below.

In the cancer cases registered during 1982, there are two factors contributing to under registration and a third factor to over registration, viz. (*i*) incomplete registration of cancer cases due to a variety of reasons including delay in diagnostic evaluation towards the end of the year, (*ii*) under registration or no registration of unmatched cancer cases from death records and (*iii*) in new registries, over registration of cancer cases which have remained unregistered during the preceding year.

In addition to these problems with the numerator in the calculation of incidence rates, there are problems in the estimation of the denominator viz. the population with age structure which are based on projections from 1971 census data on certain assumptions due to non-availability of referred census data for 1981. Some of these problems related to the numerator as well as to the denominator are likely to be rectified in due course and reliable rates will be available. In the meantime, an attempt is made here to evaluate with caution the data that have been collected to so far.

5.1 Crude, Age-adjusted and Truncated Rates

Tables 5.1(a) and (b) give the age specific, crude, age-adjusted and truncated incidence rates per 100,000 persons of either sex for the three registries under consideration. These rates are illustrated in Figure 5.1

Crude incidence rate (CR) provides an estimate of the number of new cancer cases per year per 100,000 persons of the sex under consideration. These crude incidence rates for Bangalore and Madras are individually comparable for males and for females and in both the cases are higher for females than males. The rates for Bombay are lower for both the sexes and are particularly marked for women.

When these rates are calculated taking into account the age structure of the respective populations and adjusted with the standard world population, a more interesting picture emerges. Age-Adjusted Rates (AAR) are higher for both the sexes in Bangalore than in Madras. AAR for Bombay are intermediate for men and lowest for women.

Truncated cancer incidence rates (TR) for ages 35-64 are also Age-Adjusted Rates but are restricted to a consideration of cancer cases in age groups 35-64. Registration of cancer case is relatively more complete in these age groups than in the older age-groups. It will be seen that truncated rates continue to be higher in both the sexes in Bangalore than in Madras like the AAR. This is particularly noteworthy in view of the fact that Bangalore Registry has not included any cancer case from death records in its 1982 series whereas Madras Registry has included such cancer cases. In the Truncated Rates, Bombay has the lowest rates for Women.

5.2 International Comparison

Table 5.2 provides comparative data for Indians in Singapore (1973-77) and for British Population of the Oxford region (1974-77) for international comparison, (Waterhouse et al, 1982). The data from Singapore and U.K. England have been reconstituted from the tables given in Vol. IV of Cancer Incidence in Five Continents (Waterhouse et al, 1982); reconstituted tables are given on pages 39 to 42. (Table 5.2A, 5.2B, 5.2C and 5.2D).

TABLE 5.1(a): AVERAGE ANNUAL AGE-SPECIFIC RATE, CRUDE RATE AND AGE-ADJUSTED TO WORLD POPULATION CANCER INCIDENCE RATE BY SEX AND YEAR FOR ALL SITES (ICD-9:140-208) IN GREATER BOMBAY (1973-75, 1982), MADRAS (1982) AND BANGALORE (1982). INCIDENCE RATES PER 100,000 POPULATION.

MALES

Age Group (Years)	Greater Bombay 1973-1975	Greater Bombay 1982*	Madras 1982	Bangalore 1982
0—4	10.9	6.4	12.6	6.1
5—9	7.5	5.7	10.5	8.7
10—14	9.9	6.1	7.9	3.5
15—19	10.8	6.4	5.8	5.4
20—24	12.2	9.3	13.5	6.8
25—29	15.5	10.0	17.4	11.9
30—34	25.2	21.5	22.3	23.9
35—39	44.1	29.1	36.1	35.6
40—44	85.5	54.5	83.4	76.6
45—49	146.9	92.5	128.2	119.1
50—54	262.2	171.0	214.5	179.7
55—59	394.4	273.0	264.6	312.4
60—64	516.3	362.5	313.7	399.4
65—69	708.5	434.1	382.7	669.2
70—74	734.5	283.9	407.1	535.5
75—79	966.0	436.1	467.4	747.3
80+	2371.8	2119.5	327.5	327.9
Crude Rate	69.2	46.0	54.3	52.4
AAR (World)	143.3	94.1	83.9	98.1
TR (World 35-64 yrs.)	213.6	143.7	157.2	165.6

*Provisional.

TABLE 5.1(b): AVERAGE ANNUAL AGE-SPECIFIC RATE, CRUDE RATE AND AGE-ADJUSTED TO WORLD POPULATION; CANCER INCIDENCE RATE BY SEX AND YEAR FOR ALL SITES (ICD-9TH-140-208) IN GREATER BOMBAY, (1973-75, 1982), MADRAS (1982) AND BANGALORE (1982). INCIDENCE RATES PER 100,000 POPULATION.

FEMALES

Age Group (Years)	Greater Bombay 1973-1975	Greater Bombay 1982*	Madras 1982	Bangalore 1982
0—4	5.9	3.7	5.5	5.1
5—9	3.3	3.8	3.9	2.9
10—14	5.7	4.6	6.0	4.1
15—19	8.4	4.4	3.0	5.9
20—24	9.0	8.6	9.1	9.2
25—29	23.0	20.2	25.6	29.9
30—34	45.0	35.5	59.7	55.3
35—39	83.9	49.2	135.3	119.0
40—44	147.3	100.4	195.5	164.1
45—49	253.6	154.2	303.3	315.8
50—54	318.2	232.8	307.7	359.1
55—59	369.8	258.7	351.7	407.1
60—64	441.4	267.2	392.0	524.9
65—69	543.5	288.6	356.3	569.8
70—74	484.1	240.5	287.7	506.5
75—79	575.4	332.5	410.2	447.1
80+	1328.7	598.8	198.2	295.7
Crude Rate	70.4	46.9	79.7	74.3
AAR (World)	130.2	79.8	113.9	133.9
TR (World 35-64 yrs.)	250.2	164.2	268.3	294.1

*Provisional.

specialized services. Several of these patients may present at a fairly advanced stage and the clinician may not consider it necessary to refer the case to pathologists or obtain a reliable diagnosis through pathology services. Such cases may not come to the notice of the registry, if a special provision is not made to register these cases and preferably get diagnosis based on pathology reports.

There is a major difference between the population-based registry and the hospital registry as far as the source of cancer patients are concerned. As mentioned earlier, the population-based cancer registry will include the incident cancer cases only in the resident population of the defined area. The hospital registry will, however, include all cancer cases presented to any of the departments or services of the hospital. In a country like India, the source of such cases will be very scattered; bulk of the cases will come from the local region, followed by the cases from neighbouring states or even from distant places depending on the services offered by the hospital. The hospital registry data is thus relatively more heterogenous than the population-based registry data from geographical point of view.

4.2.1 Chandigarh

The registry is located in the Post Graduate Institute of Medical Education and Research which is one of the national centres for postgraduate studies. It provides highly specialized medical services and is a referral centre in the region. It serves the Union Territory of the Chandigarh and its neighbouring states of Punjab, Haryana, Himachal Pradesh, Western part of Uttar Pradesh and a part of Jammu and Kashmir. During 1982, half of its cases came from Chandigarh and Punjab, about 30% from Haryana and Himachal Pradesh and the remaining cases from other parts of the country. More than half of these patients spoke Punjabi language and bulk of the rest spoke Hindi.

Main sources of information are Departments of Radiotherapy, Surgery and Pathology. In addition; Central Registration Department of the Institute helps in tracing cancer patients in various hospital wards. Registry Staff also visit out-patient departments of other specialized clinics where cancer patients are likely to go.

During the course of 1982, a total of 2668 cancer cases were registered with 1237 cases in males and 1438 cases in females. In addition there were 75 benign tumours, 30 borderline cases and 7 cases of carcinoma-in-situ.

4.2.2 Dibrugarh

The Registry is located in the Assam Medical College in Dibrugarh which was established in 1947 and is the oldest medical college, in this part of the country. The Medical College Hospital has a strength of 1050 beds and has a cobalt-60 source for radiotherapy of cancer. It has served the North-East region comprising of Assam and several hill states for the diagnosis and treatment of cancer. Bulk of the cancer cases come from Assam Valley which is a well demarcated unit covering an area of 58,274 sq. kms. with a population of more than 15 million people.

The Medical College has a long tradition of cancer research and has brought to the notice of the scientific community the high prevalence of pharyngo-laryngeal cancers in the region, (Sarma 1951, 1958, Baruah 1964) and their possible association with the local habit "tamol" of betel nut chewing. Chemical analysis carried out from this medical college indicated that arecoline, one of the important alkaloides of areca nut was two to three times more common in the areca nuts (tamol) used in this region compared to dried nuts used elsewhere in the country (Goswami & Ahmed, 1956).

Information on cancer patients coming to the hospital is collected through three sources, (i) Oncology O.P.D., (ii) the in-patient wards, and (iii) the Radiology Department. The Oncology O.P.D. is a novel feature of this Registry. Any patient in any of the hospital O.P.D. clinic who is clinically suspected or provisionally diagnosed as having malignancy is channelled through the Oncolocy O.P.D. for completeness of registration of all cancer cases.

Number of cancer cases registered during 1982 was 1250 of which 923 (74%) were males and 327 (26%) were females. Such a distorted sex-ratio may perhaps indicate the role of socio-economic factors in favour of males during active life seeking cancer therapy even by travelling long distances.

4.2.3 Trivandrum

The Registry is located in the Regional Cancer Centre, an extension of the cancer wing of the Medical College, Trivandrum, Kerala. Kerala is known for high prevalence of oral cancer from the beginning of this

century. Ian Marrison Orr (1933) working at the Neyyur Hospital near Trivandrum in the thirties implicated the role of chewing habit of tobacco with lime in these oral cancers.

The medical college hospitals covered by the cancer registry are (i) The Medical College Hospital (MCH), (ii) Dental College Clinics and (iii) Sree Avittom Thirunal Hospital for women and children (SAT). These are referral hospitals and the patients are examined in several speciality OP clinics which function simultaneously every morning. The Registry has established co-operation with the Department of Pathology of the Medical College and records departments of MCH and SAT.

A total of 3483 cases of cancer was registered during 1982 of which 1854 cases were in males and 1629 cases were in females. Medical records of the hospital were the source of information upto 2nd week of March, 1982 after which registry staff was appointed and more detailed and complete information was collected.

Cancer is already a major health problem in Kerala as about 13% of the deaths are due to cancer and about 1 out of 800 persons in the population suffer from this disease. Two major factors which contribute to escalation of cancer incidence are in operation in the State of Kerala. They are (i) control of communicable diseases and (ii) subsequent increases in life expectancy. The average life expectancy in Kerala is estimated to be 63.5 years for males and 63 years for females which is about 12 years longer than the average national figure. It is well recognized that as the average life expectancy goes up, the incidence of cancer also shoots up (M. Krishnan Nair).

Tata Memorial Hospital for cancer at Bombay is the main source of cases for the Registry. With the exception of this source, hospital out-patient records are not included in the Registry because of a paucity of clinical details and lack of specific information on residential status of patients attending their clinic.

A total of 4019 cancer cases with 2237 males and 1782 females were registered during 1982. Cases coming to hospitals towards the end of the year as well as other cases in which investigation will be completed during 1983 will be added to this total to provide the total number of registered cases through this source.

TABLE 4.1.2: ESTIMATED RESIDENT POPULATION BY AGE AND SEX, GREATER BOMBAY (AS ON JULY 1ST, 1982). TOTAL POPULATION (ALL RELIGIOUS COMMUNITIES)

Age Group (Years)	Male		Female	
	Number	%	Number	%
0—4	512757	10.55	480062	12.65
5—9	490945	10.10	470644	12.39
10—14	490721	10.10	453689	11.95
15—19	470278	9.68	388534	10.24
20—24	577518	11.88	381307	10.04
25—29	461130	9.49	331753	8.74
30—34	377261	7.76	284479	7.50
35—39	388683	8.00	302826	7.98
40—44	319090	6.57	204106	5.38
45—49	281086	5.78	148463	3.91
50—54	186596	3.84	103511	2.73
55—59	115387	2.37	76152	2.01
60—64	77246	1.59	68115	1.79
65—69	49994	1.03	44358	1.17
70—74	42977	0.88	36586	0.96
75—79	15363	0.32	16239	0.43
80+	2878	0.06	4843	0.13
ANS*	70	0.00	17	0.00
TOTAL	4859980	100.00	3795684	100.00

*Age not specified.

In addition, death records maintained by the vital statistics division of the Bombay Municipal Corporation provides supplementary information. Copies are made of all death certificates which mention cancer or tumour as the cause of death. These death certificates are then matched against the registered cases in Registry File. Every cancer death not traceable in the Registry file is labelled as an "unmatched death". The date of death is then taken as the date of first diagnosis and is so registered in the corresponding year's data file. In addition, copies of all death certificates tend to mention the term "Cancer" or "Tumour" as a cause of death, are individually scrutinized to confirm the statement. There is a delay of about a year between the occurrence of death and the permission given in the Municipal Corporation to examine these death records. Death records for the year 1982 will be available during 1983 for scrutiny.

4.1.3 Madras

The Registry is located in the Cancer Institute, Madras which is recognized as a Regional Centre by the Government of India. The area covered by the Registry is the Madras Corporation which has an area of 170 sq. km. It is situated at 13°N and 82°E and is at sea level. It has a population of 3.27 million people with 1.69 million males and 1.58 million females (Census 1981). Table 4.1.3 gives estimated population by age and sex in Madras City as on July 1st, 1982. The literacy rate is 76% for males and 61% for females.

The Registry covers 18 major Government Institutions and Hospitals, 143 private hospitals and nursing homes, 25 pathology laboratories, corporation dispensaries and peripheral hospitals and over 1600 consultants and general practitioners of allopathic and non-allopathic systems of medicine.

A total of 2258 cancer cases have been registered from 1st January to 31st December, 1982 of which 970 cases are males and 1288 cases are females. 29% of these cases came from the Government General

Hospital followed by 15% of cases from the Cancer Institute and 11% of cases from Government Stanley Hospital and additional 11% of cases from Government Hospital for Women and Children. The remaining cases came through 36 different sources.

A total of 429 cases of cancer came to notice in the death certificates of the Madras Corporation during 1982. Of these cases 154 cases in males and 102 cases in females could not be matched with the registered cases and were added as incident cases during 1982 for final analysis.

TABLE 4.1.3: ESTIMATED RESIDENT POPULATION BY AGE AND SEX, MADRAS (AS ON JULY 1ST, 1982). TOTAL POPULATION (ALL RELIGIOUS COMMUNITIES)

Age Group (Years)	Male		Female	
	Number	%	Number	%
0—4	206445	11.55	199350	12.34
5—9	208801	11.68	206651	12.79
10—14	190258	10.64	182095	11.27
15—19	171408	9.59	166227	10.29
20—24	200642	11.22	174803	10.82
25—29	166489	9.31	148662	9.20
30—34	138761	7.76	107268	6.64
35—39	127566	7.13	106443	6.59
40—44	98309	5.50	77244	4.78
45—49	88110	4.93	63623	3.94
50—54	64349	3.60	57515	3.56
55—59	42713	2.39	38096	2.36
60—64	38257	2.14	40050	2.48
65—69	20643	1.15	19646	1.22
70—74	14246	0.80	15294	0.95
75—79	5563	0.31	5607	0.35
80+	5191	0.29	7063	0.44
ANS*	160	0.01	69	0.00
TOTAL	1787911	100.00	1615706	100.00

*Age not specified.

It may be mentioned here that Niblock (1902) who worked in the Madras General Hospital towards the beginning of this century made an important contribution on the cancer problem in Southern India. He was impressed by the fact that more than half of all cancer admissions (972 cases) in the Madras General Hospital from 1892-1901 belonged to oral cavity. He attributed this cancer to the common habit of chewing pan with or without tobacco. In this series, Niblock found 201 cases of cancer of the penis, all in the Hindus and none in the Muslims. He ascribed this cancer to poor penile hygiene and its non-occurrence in the Muslims to the practice of circumcision.

4.2 Hospital Registries

All sources of information for a hospital registry are to be found in the hospital in-patient and out-patient departments and its laboratories. The main source is often the hospital medical record department if an efficient service of this nature is already available. Next in importance are the records of the pathology department which usually contain the most complete information on the histopathological nature of the tumour. In this case, it is necessary to establish a proper linkage between clinical records of the patient with histological diagnosis. Large number of cancer cases are treated in radiotherapy services where information may be available on type of treatment, mode of application and dosage. Such a service often forms the nucleus of a cancer centre. Other specialized services such as surgery, obstetrics and gynaecology, pediatrics etc. deal with patients with a cancer of specific anatomical region and body system. Although generally integrated administratively, such departments must be large and administratively autonomous with their own medical records; they may have their own outpatient clinics and other facilities.

In many hospitals, the medical record department collects information only from in-patients and not from out-patients. Due to high cost of in-patient care, many cancer cases are seen only as out-patient in various

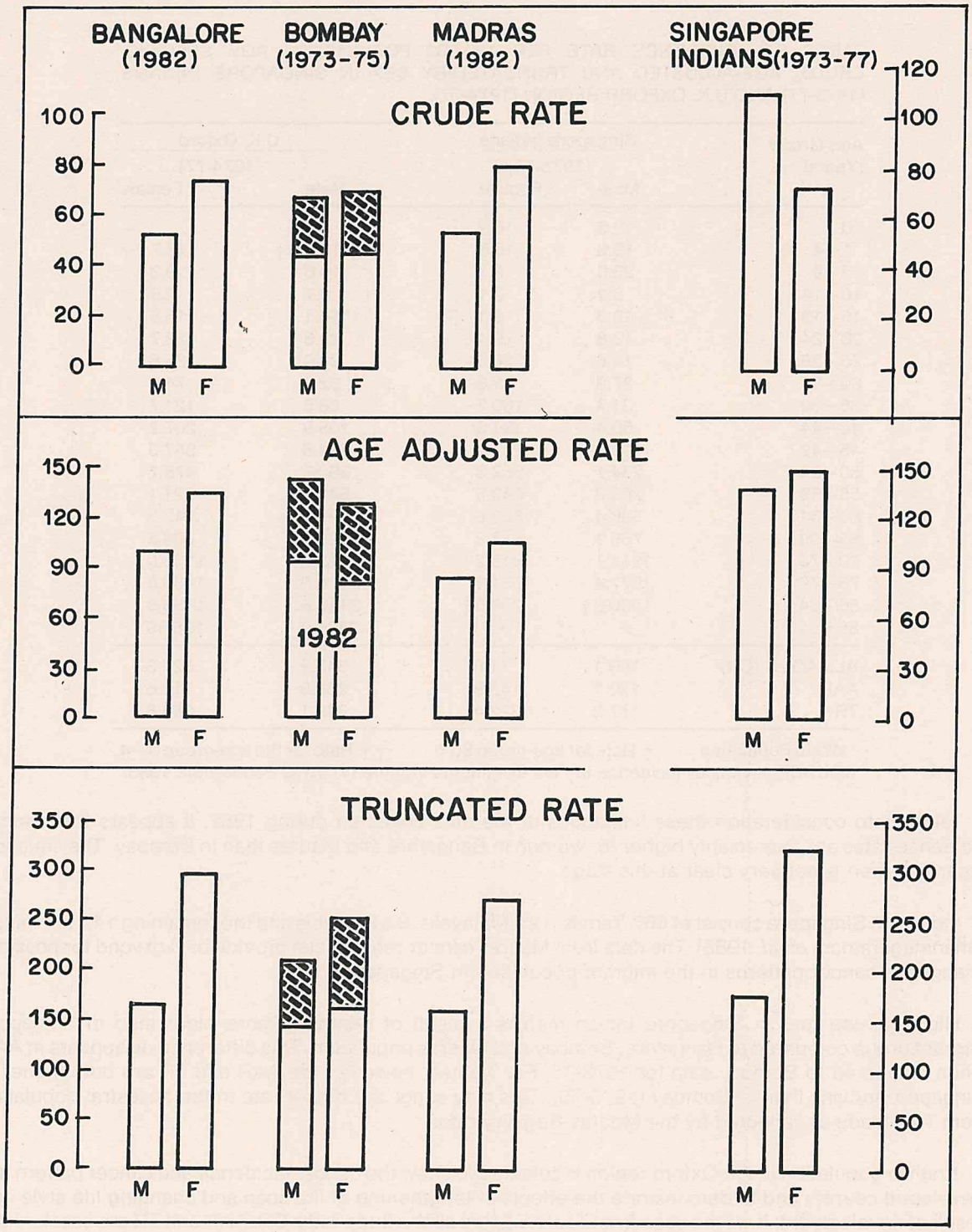

Figure 5.1: Incidence Rate per 100,000 Population-Crude, Age-Adjusted and Truncated-by Sex in Bombay, Bangalore, Madras and Singapore Indians.

Comparing the rates for Bombay for 1982 with the rates for 1973-75, it will be seen that in the crude rates the deficiency is about one-third of the total number of expected cases in both the sexes on the assumption that there is no appreciable change in these rates during this interval. The effect is even more marked in AAR for women indicating that relatively more older women may be awaiting registration. The effect of under registration is least marked for truncated rates which may be more useful for comparison of the rates at this stage (Fig. 5.1).

TABLE 5.2: INCIDENCE RATE PER 100,000 POPULATION: AGE SPECIFIC, CRUDE, AGE-ADJUSTED AND TRUNCATED-BY SEX IN SINGAPORE INDIANS (1973-77) AND U.K. OXFORD REGION (1974-77).

Age Group (Years)	Singapore Indians (1973-77)		U.K. Oxford (1974-77)	
	Male	Female	Male	Female
0	0.0	16.9	–	–
1—4	13.9	10.6	16.3††	13.7††
5—9	23.3	2.7	10.0	9.3
10—14	6.2	2.1	8.7	9.6
15—19	10.3	9.1	16.1	15.5
20—24	13.8	15.4	20.6	22.7
25—29	14.6	26.5	38.0	35.6
30—34	27.9	51.8	52.8	74.9
35—39	31.4	100.7	68.5	121.7
40—44	50.4	134.3	105.9	207.2
45—49	101.9	277.4	204.8	357.0
50—54	234.1	357.3	390.7	478.7
55—59	263.2	649.5	642.9	621.1
60—64	536.4	622.6	991.9	742.8
65—69	765.1	633.8	1496.0	908.3
70—74	1341.1	415.2	2222.5	1135.0
75—79	1077.4	1021.9	2820.2	1480.8
80—84	1230.8†	298.5†	3110.8	1653.8
85+	–	–	2831.9	1881.9
ALL AGES (CR)	109.1	71.6	343.2	327.3
AAR*	136.2	149.9	268.5	216.6
TR*	177.2	322.4	348.1	386.8

* World Population † Rate for age-group 80+ †† Rate for the age-group 0—4.
SOURCE —Cancer Incidence in Five Continents Volume IV. IARC Publication, 1983.

Taking into consideration these limitations of the data collected during 1982, it appears that cancer incidence rates are appreciably higher for women in Bangalore and Madras than in Bombay. The situation regarding men is not very clear at this stage.

Indians in Singapore consist of 66% Tamils, 12% Malayalis, 8% Punjabis and the remaining 14% are mixed (Shanmugaratnam *et. al,* 1983). The data from Madras cancer registry can provide background for possible changes in cancer patterns in the migrant population in Singapore.

Higher crude rate in Singapore Indian men is a result of relatively more older men in Singapore migrant group compared to Bangalore, Bombay and Madras population. This difference disappears in AAR when compared to Bombay data for 1973-75. For women, however, the AAR and TR are both higher in Singapore Indians than in Bombay (1973-75). This may suggest a higher rate in the ancestral population from Tamilnadu as reflected by the Madras Registry rates.

English population in the Oxford region is selected to show the cancer incidence and cancer pattern in a developed country and to demonstrate the effects of lengthening of life span and changing life style as a result of development. It will be seen from Table 5.2 that all the three rates CR, AAR and TR are substantially higher in this population compared to Indians of Bombay and Indians in Singapore. Particularly noteworthy is the load of cancer cases per 100,000 as reflected by the CR which is 4-5 times in Oxford as compared to Bombay.

6. AGE STANDARDIZED CANCER RATIO (ASCAR) OF MAJOR CANCER SITE GROUPS IN THE COUNTRY

In order to compare the relative proportion of cancer at major sites in different parts of the country based on population and hospital cancer registries, ASCAR provides a useful measure. ASCAR is defined as the relative proportion of a given site of cancer in a series of cancer cases, if the age distribution of this series of cases were that of a standard series. This measure also permits an international comparison of the data with data from other populations of the world having very different age structures (Tuyns, 1968). Tuyns developed three standard age distributions (i) "young" African, (ii) "Old" European and (iii) World standard distribution on the basis of cancer cases compiled by Doll and his colleagues in the first volume of "Cancer incidence in five continents" (1966). We decided to use World standard distribution of Tuyns for our purpose as it is nearest to Indian age distribution of cancer cases and permits international comparison as well. We intend to develop an Indian standard age distribution when adequate material is available. In the following comparison data on male and female is treated separately and major sites are selected according to their relative importance in the Indian material. Comparative data on Singapore Indians and English population of Oxford is also included.

6.1 Males

The basic data on men are presented in table 6.1 and figure 6.1. It will be seen that cancer of the alimentary canal (ICD: 140-159) constitutes almost half of all cancers in men in different parts of the country. The only exception appears to be the material provided by the Chandigarh Registry where ASCAR value is only 34. The high ASCAR value of 69 in the Dibrugarh material appears to be somewhat inflated because of the selective nature of the material.

Interesting variation appears when this data on alimentary canal is sub-divided in the upper alimentary canal (ICD: 140-150) and digestive organs (ICD: 151-159). Cancer of the upper alimentary canal are relatively more common than cancer of the digestive organs in all the registration areas and are relatively much more common in Bombay, Dibrugarh and Trivandrum than in the other three places. Higher ASCAR values of cancer of the digestive organs in Bangalore and Madras, almost double of the value in the other four registries, are primarily due to common occurrence of stomach cancer in these two places.

Cancer of the respiratory system, genito-urinary organs and lymphatic and haematopoietic tissues together form additional one-third of cancer in men in the three population-based registration areas with about equal proportion of cancer cases in each group. There is a wider variation in cancer at these sites in hospital registries. In particular, cancer of the respiratory system appears to be relatively more frequent in Chandigarh and Trivandrum areas.

International comparison shows that India differs significantly from other countries of the world in having a relatively higher proportion of cancer of upper alimentary canal (ICD: 140-150) compared to cancers of the digestive organs (ICD: 151-159). This can be seen from table 6.1 and figure 6.1 by comparing the data of Singapore Indians and English Population of Oxford with Indian material. Total cancers of the alimentary canal (ICD: 140-159) in the Indians of Singapore are more than half of all cancers in men like in the Indian material. The ASCAR value 18 of upper alimentary canal is, however, only half the value of digestive organs (36). In the English Population, the cancer of the alimentary canal are only a quarter of all cancer in men and ASCAR value (4) of upper alimentary canal is only one-fifth of the corresponding value for digestive organs (21).

6.2 Cancer Related to Tobacco Habits

Epidemiological research carried out in different parts of the country so far has demonstrated that these differences are primarily because of a wide variety of chewing and smoking habits prevalent in different parts of the country. It has been further shown that tobacco chewing habit has a high risk for mouth cancers, mixed habit of tobacco chewing and bidi smoking has a high risk for cancer of the pharynx and larynx and smoking habits of bidi and cigarette have a high risk of lung cancer. In order to see the variation in these cancer sites, data have been presented in table 6.2 and figure 6.2 for men in whom these chewing and smoking habits are widely prevalent.

TABLE 6.1: AGE STANDARDIZED CANCER RATIO OF COMMON SITE GROUPS IN INDIA AND SELECTED POPULATIONS ABROAD IN MALES

Singapore (Indians) (1973-77)	Bangalore (1982)	Bombay (1982)	Madras (1982)	Common Cancer Site	Chandigarh (1982)	Dibrugarh (1982)	Trivandrum (1982)	U.K. Oxford Region (1974-77)
18.07	26.15	34.88	28.70	Upper alimentary Canal (140-150)	21.48	61.59	41.49	3.83
36.32	22.88	14.41	24.70	Digestive Organs (151-159)	12.47	7.45	11.40	20.59
14.13	9.05	13.71	11.43	Respiratory System (161-162)	19.40	6.71	14.79	23.74
8.81	12.80	14.14	11.47	Genito-Urinary Organs (185-189)	13.06	4.85	6.68	17.07
9.82	10.98	9.63	11.49	Lymphatic & Haemato-poietic Tissues (200-208)	12.91	6.86	8.28	10.52
12.90	18.16	13.20	12.21	Others	20.62	12.57	17.36	24.28
(485)	(837)	(2237)	(970)	Total Number of Cases	(1237)	(923)	(1854)	(15030)

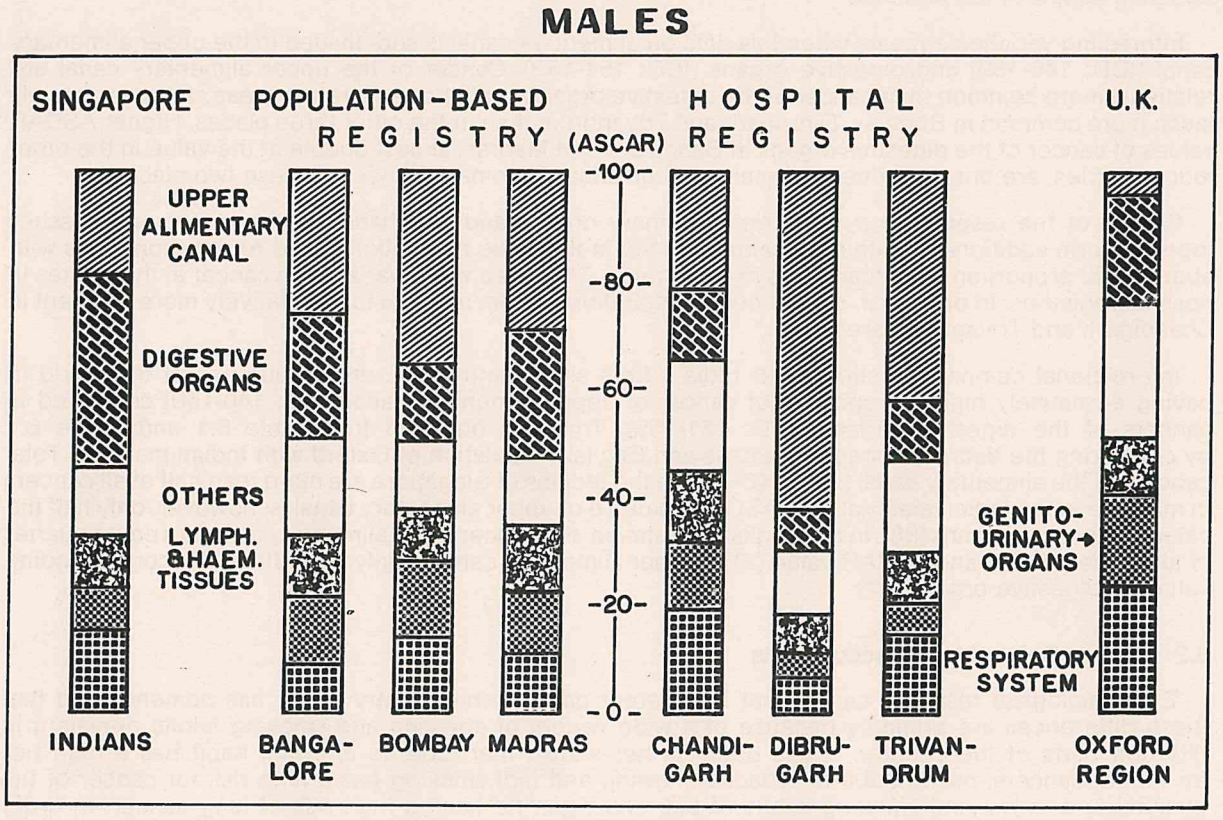

Figure 6.1: Age-Standardized Cancer Ratios (ASCAR) by Site Groups.

ASCAR values of mouth cancer vary from 9 to 15 in different registration areas except in Trivandrum where it has a value as high as 29. Kerala is known for a high prevalence of mouth cancer although no careful case control studies have been carried out in recent years. Singapore Indians show a value of 10, slightly lower than the value of 14 in Madras indicating their probable continuation to tobacco chewing habit after migrating to Singapore. ASCAR value in Oxford is only 2.

ASCAR values of cancer of the pharynx and the larynx together in India are around 12-13 except in Bombay where it is 20 and in Dibrugarh where it is as high as 38. These cancers are known to be common in Bombay and very common in the Assam Valley. Careful case control studies carried out in Bombay have shown that tobacco chewing and bidi smoking habit has a high risk for these cancers.

Such studies have not been carried out so far in Assam. It is important to explore the role of 'tamol' chewing habit alongwith other known factors in these cancers which are so widely prevalent in Assam. ASCAR value in Singapore Indians is 7 indicating perhaps a declining trend of these habits and only 2 in Oxford population.

ASCAR values of lung cancer also present an interesting trend. It has to be recognized that there is a scope for under-registration of this cancer in population-based registries and more so in hospital registries. Taking this into account, it appears that Bombay, Trivandrum and Chandigarh are pointing towards an increasing trend of this cancer possibly due to a similar trend in cigarette smoking habit. Singapore Indians show a similar ASCAR value of 10. ASCAR value in Oxford is much higher viz. 22.

TABLE 6.2: AGE STANDARDIZED CANCER RATIO (ASCAR) OF CERTAIN SITES RELATED TO TOBACCO HABITS IN INDIA AND SELECTED POPULATIONS ABROAD IN MALES

Singapore (1973-77)	Bangalore (1982)	Bombay (1982)	Madras (1982)	Site	Chandigarh (1982)	Dibrugarh (1982)	Trivandrum (1982)	U.K. Oxford (1974-77)
10.01	9.62	11.68	14.22	Mouth (140-155)	8.83	14.68	28.68	2.05
7.12	13.38	19.54	13.45	Pharynx & Larynx (146-149, 161)	11.62	37.57	13.14	1.93
10.72	4.78	8.39	5.64	Lung (162)	12.74	3.18	9.08	22.40

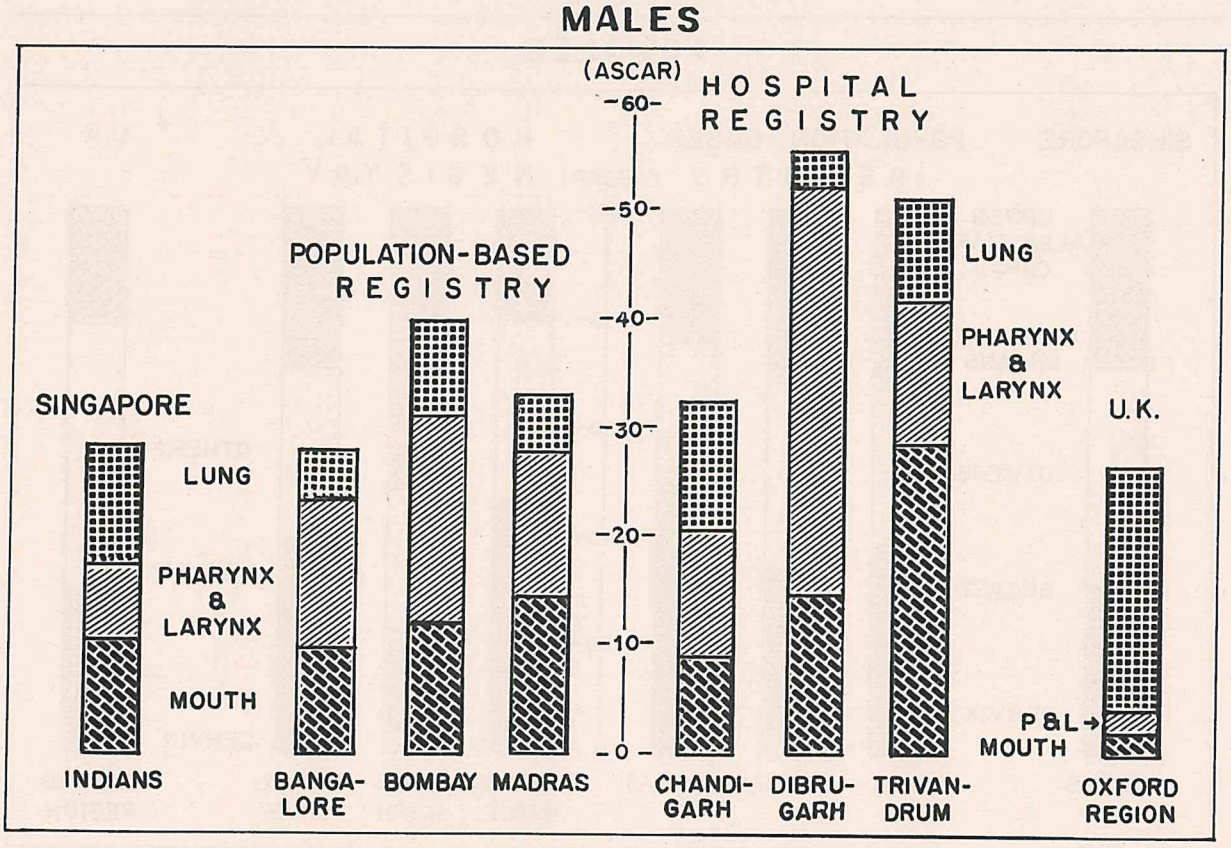

Figure 6.2: Age-Standardized Cancer Ratios (ASCAR) for Lung, Pharynx &Larynx and Mouth.

6.3 Females

The data for selected major cancer sites in women is presented in table 6.3 and figure 6.3.

Cancers of the uterine cervix and breast are the predominant sites in women. Cancer of the uterine cervix which is more common of the two shows a larger range of variation in different parts of the country. ASCAR value for this cancer in population-based registries vary from 16 in Bombay to 33 in Madras with an intermediate value of 26 in Bangalore. There is a similar variation in hospital registries with a low value of 15 in Dibrugarh to a high value of 37 in Chandigarh and an intermediate value of 25 in Trivandrum. Breast Cancer values vary from 13-19 in population-based registries and 7-15 in hospital registries. Total number of women (327) in Dibrugarh material is small and the data should be treated with caution. ASCAR values for cervical cancer are higher than the value for breast cancer in all the registration areas except Bombay.

TABLE 6.3: AGE STANDARDIZED CANCER RATIO OF COMMON CANCER SITE GROUPS IN INDIA AND SELECTED POPULATIONS ABROAD IN FEMALES

Singapore (Indians) (1973-77)	Bangalore (1982)	Bombay (1982)	Madras (1982)	Common Cancer Site Groups	Chandi-garh (1982)	Dibru-garh (1982)	Trivan-drum (1982)	U.K. Oxford (1974-77)
11.61	20.90	20.23	15.55	Upper Alimentary Canal (140-150)	11.93	44.81	23.42	2.34
16.98	11.62	11.36	8.34	Digestive Organs (151-159)	8.27	6.29	5.53	18.39
17.21	12.86	18.70	15.81	Breast (174)	9.98	7.48	14.73	24.79
14.20	25.70	15.70	33.49	Cervix (180)	36.88	15.45	25.08	4.83
8.29	3.82	7.20	4.56	Lymphatic & Haemato-poietic Tissues (200-208)	4.51	4.91	4.03	7.86
31.73	25.08	26.80	22.28	Others	28.45	21.06	27.23	41.76
(221)	(1058)	(1782)	(1288)	Total Number of Cancer Cases	(1438)	(327)	(1629)	(14463)

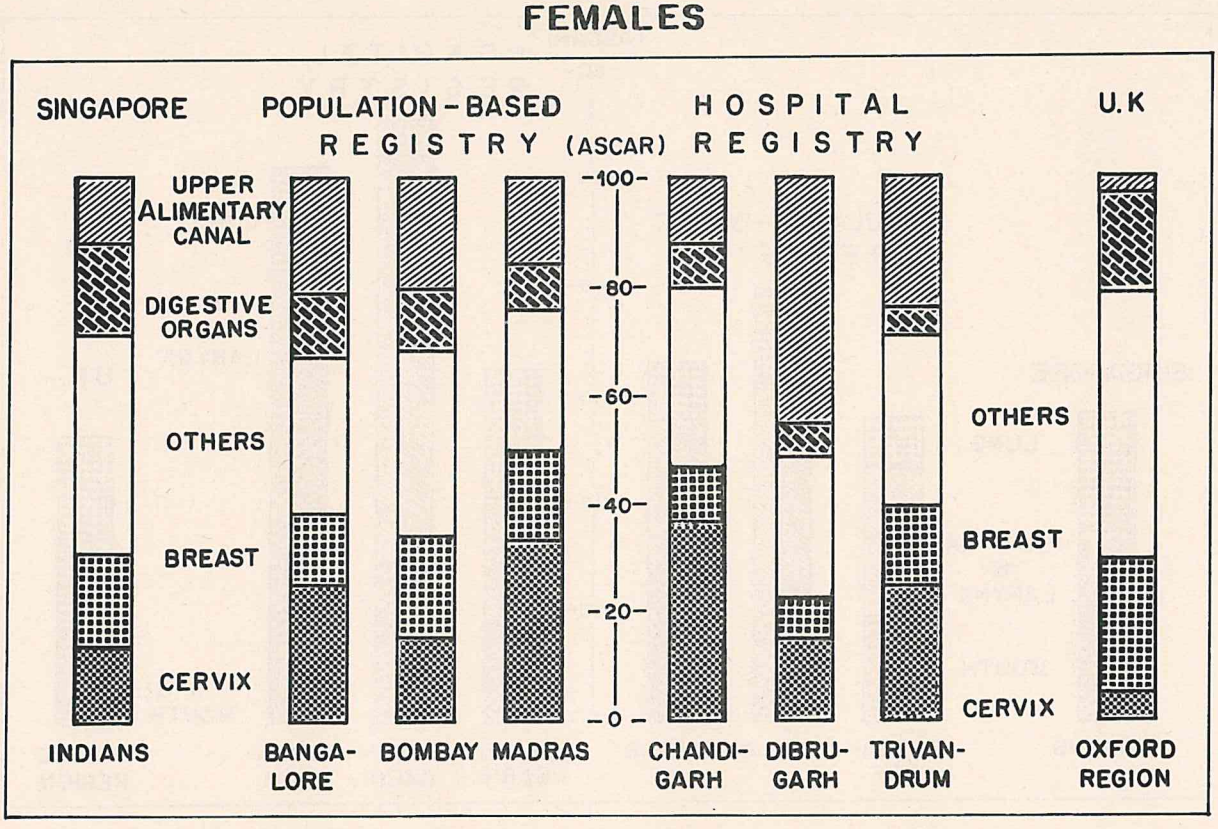

Figure 6.3: Age-Standardized Cancer Ratios (ASCAR) by Site Groups

Cancer of the alimentary canal constitute the next important group of sites in Indian women. They form about a quarter of all cancers in women with a high ASCAR value of 51 in Dibrugarh and a low value of 20 in Chandigarh, a situation similar to the one encountered in men in these two registration areas. Among them, cancers of the upper alimentary canal are far more common than cancers of the digestive organs in all the registration areas as also was the case in men.

Singapore Indian women show a different pattern of cancer of alimentary canal and cancer of the uterine cervix compared to Madras, a region from where a bulk of these women migrated. Cancers of the upper alimentary canal are less common than cancer of the digestive organs in Singapore in contrast to the reverse pattern in the Indian material. Cancer of the uterine cervix also is much less common in Singapore than in Madras. Material from Singapore provides interesting clues about the rate at which the incidence of cancer at certain sites could decline and at some other sites could go up.

Relatively affluent English women from the Oxford region show a very different pattern. Cancer of uterine cervix is far less common than cancer of the breast which is the most common cancer in most of the populations of the West. Two broad divisions of the alimentary canal also show a pattern similar to the one found in men viz. cancer of the digestive organs are many times more common than cancer of the upper alimentary canal.

7. CANCER PATTERN IN DIFFERENT AGE GROUPS

7.1 Introduction

Cancer is a disease of the old age. With the exception of the pediatric group, the incidence of cancer continues to rise at a geometric rate upto very old ages. Crude incidence of cancer is low in developing countries for two distinctly different reasons. The age adjusted cancer incidence rate is generally low in developing countries compared to the affluent countries. The other reason is demographic viz. the population of developing countries is "young" i.e. there are relatively more people in the young age groups and less people in the old age groups in the developing countries compared to the developed ones. These aspects are illustrated in table 7.1(a) and 7.1(b) by comparative data from Bombay Cancer Registry (1973-75) and from U.K. England Oxford Region (1973-77).

TABLE 7.1(a): CANCER INCIDENCE IN GREATER BOMBAY (1973-75) IN DIFFERENT AGE GROUPS

Age Group	Male			Female		
(Years)	Population (%)	Cancer cases (%)	Rate/100,000	Population (%)	Cancer cases (%)	Rate/100,000
0—14	29.55	4.03	9.43	37.54	2.63	4.93
15—34	40.79	9.18	15.56	37.55	10.60	19.88
35—64	27.73	63.63	158.66	22.50	66.45	207.81
65+	1.91	23.03	833.29	2.41	20.20	590.93
Age Unknown	0.02	0.13	—	0.00	0.12	—
Total Number	3,697,732	7,672	69.17	2,719,991	5,743	70.38

TABLE 7.1(b): CANCER INCIDENCE IN OXFORD REGION, U.K., ENGLAND (1974-77) IN DIFFERENT AGE GROUPS

Age Group	Male			Female		
(Years)	Population (%)	Cancer cases (%)	Rate/100,000	Population (%)	Cancer Cases (%)	Rate/100,000
0—14	25.61	0.84	11.23	23.71	0.78	10.69
15—34	30.53	2.79	31.27	28.76	3.21	36.43
35—64	34.19	36.37	363.68	33.44	41.42	404.71
65+	9.66	60.00	2122.87	14.09	54.38	1261.57
Age Unknown	—	—	—	—	0.21	—
Total Number	1,094,700	15,030	343.24	1,104,600	14,463	327.33

It will be seen from this table that in males, more than 70% of the people in Bombay are below 35 years of age compared with 56% in Oxford. In the age group 35-64 years there are 28% men in Bombay compared with 34% in Oxford. 64% cancer cases in Bombay are contributed by this age group compared with only 36% in Oxford. The contrast becomes real sharp in men over 65 years of age, whereas in Bombay there are 1.91% of people over the age of 65 years and over compared to 9.66% in Oxford, almost five times. They contribute 60% of the cancer cases in Oxford compared to 23% in Bombay. This can be seen more clearly in figure 7.1.

When a comparison is made of the incidence rates as given in the table between Bombay and Oxford, it will be seen that the rates which are almost equal in age group 0-14, continues to rise faster on Oxford than in Bombay, becomes almost 2½ times in the ages over 65 years.

The situation in women as revealed by the two registries is also equally striking. The only notable difference between the experience in men and women appear to be in the incidence rates which are almost twice in every age groups in Oxford as compared to Bombay.

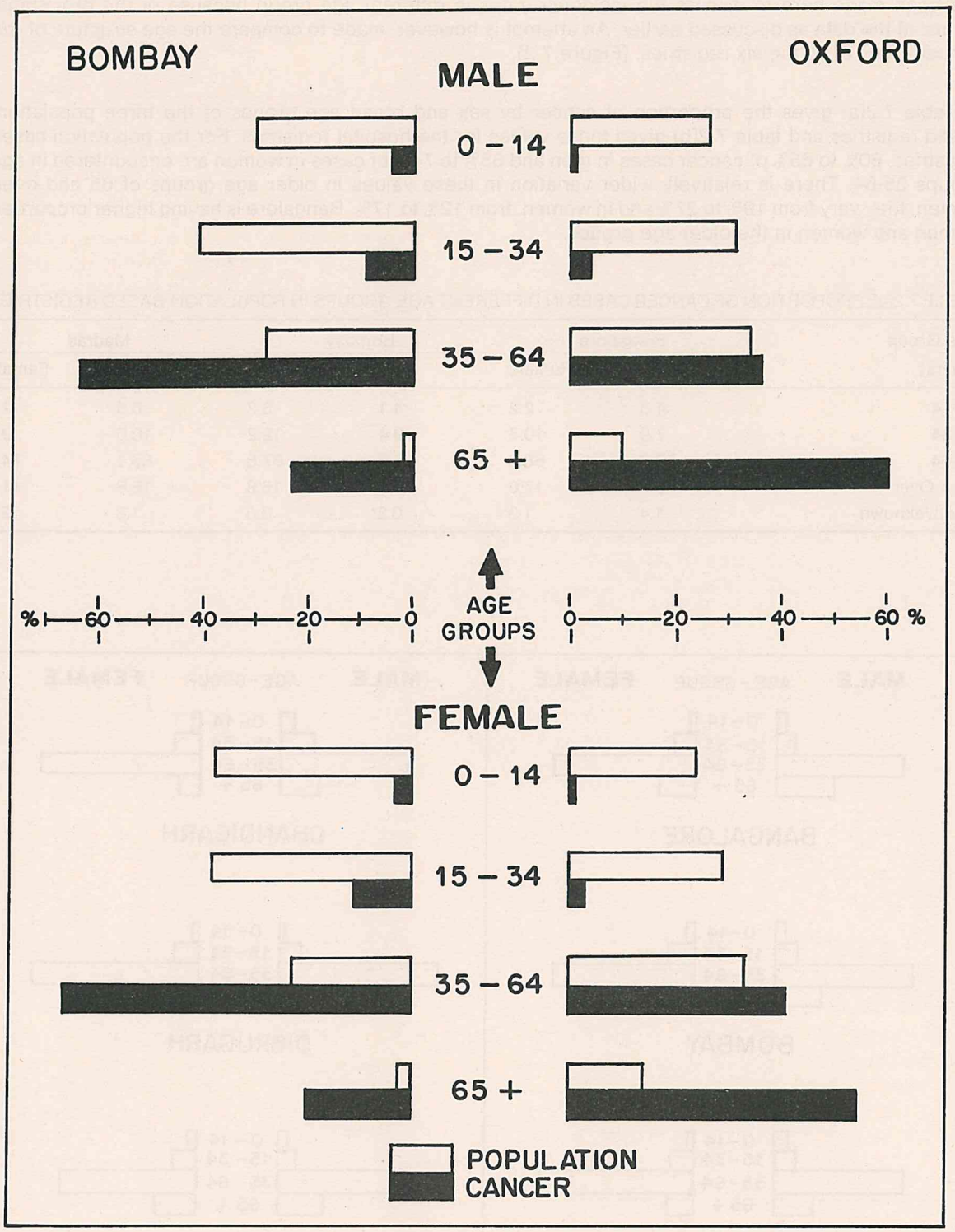

Figure 7.1: Proportion of Resident Population and Cancer Cases in Greater Bombay (1973-75) and Oxford Region (1974-77)

7.2 Age Structure of Cancer Cases

Coming to the data collected by different population-based registries under the project, no attempt has been made here to discuss the incidence rates in different age group because of the provisional nature of the data as discussed earlier. An attempt is however, made to compare the age structure of the cancer cases of all the six registries. (Figure 7.2).

Table 7.2(a) gives the proportion of cancer by sex and broad age groups of the three population-based registries and table 7.2(b) gives these values for the hospital registries. For the population-based registries, 60% to 65% of cancer cases in men and 68% to 74% of cases in women are encountered in age groups 35-64. There is relatively wider variation in these values in older age groups of 65 and over. In men, they vary from 19% to 27% and in women, from 12% to 17%. Bangalore is having higher proportion of men and women in the older age groups.

TABLE 7.2(a): PROPORTION OF CANCER CASES IN DIFFERENT AGE GROUPS IN POPULATION-BASED REGISTRIES

Age Group	Bangalore		Bombay		Madras	
(Years)	Male	Female	Male	Female	Male	Female
0-14	4.3	2.2	4.1	3.2	6.5	2.3
15-34	7.9	10.7	9.4	12.2	10.0	9.5
35-64	59.6	68.8	65.3	67.5	63.1	74.2
65 & Over	26.8	17.0	20.9	16.8	18.6	11.7
Age Unknown	1.4	1.3	0.3	0.3	1.8	2.3

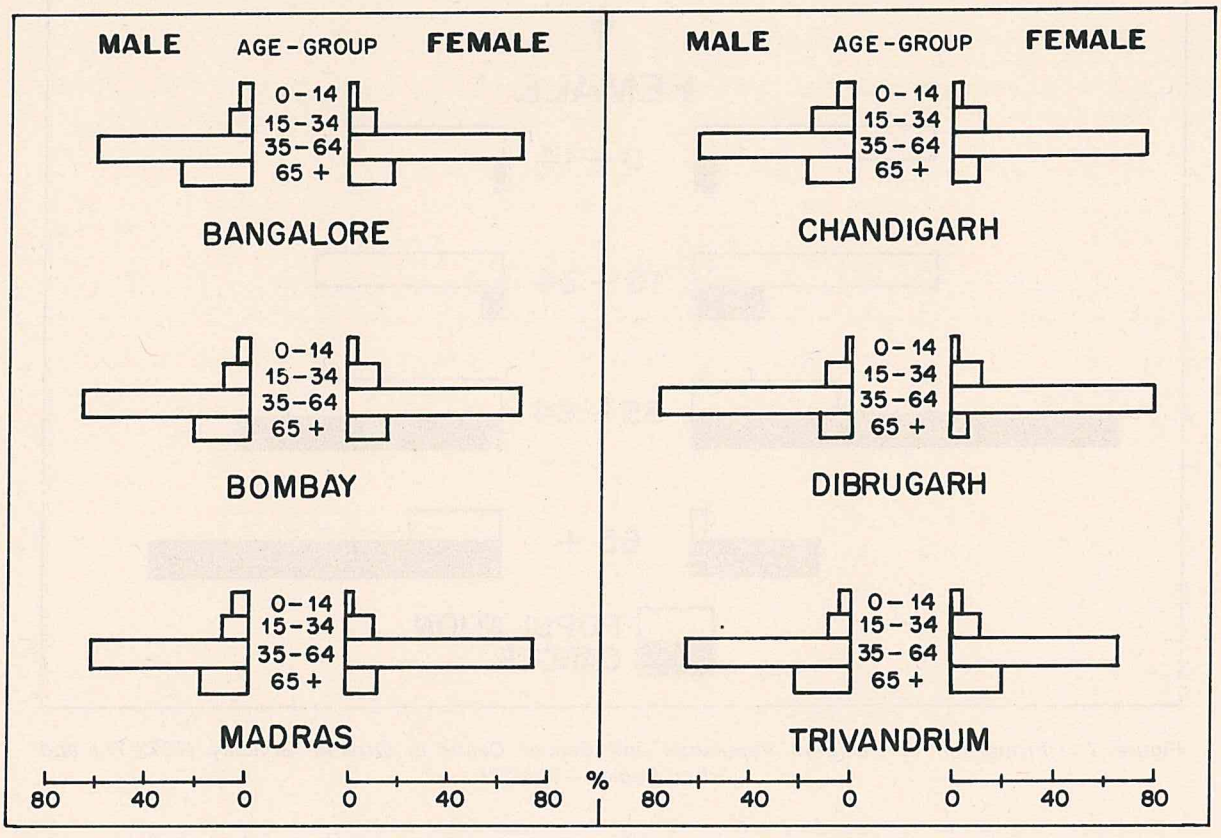

Figure 7.2: Proportion of cancer cases in different age-groups in six registries, 1982.

TABLE 7.2(b): PROPORTION OF CANCER CASES IN DIFFERENT AGE GROUPS IN HOSPITAL REGISTRIES

Age Group (Years)	Chandigarh		Dibrugarh		Trivandrum	
	Male	Female	Male	Female	Male	Female
0-14	6.1	2.7	1.7	1.8	4.9	3.6
15-34	16.4	11.6	9.5	12.5	8.2	11.2
35-64	60.2	75.6	76.1	76.8	65.4	66.4
65 & Over	17.0	9.8	12.7	5.8	21.5	18.8
Age Unknown	0.3	0.2	0.0	0.0	0.0	0.0

This trend is generally followed in hospital registries with some exceptions. In Dibrugarh, substantially higher proportion of cancer cases (76% in men and 80% in women) belong to 35—64 age group. Trivandrum has very high proportion of cancer cases in ages over 65 years viz. 21.5% in men and 18.8% in women. These are the highest proportions in all the six registries with the exception of 27% of cancer cases in men in Bangalore. This is perhaps the effect of increasing life span in Kerala compared to other parts of the country. In Chandigarh, the picture in women is somewhat similar to the one in Madras where three-fourths of the cases are in 35—64 age groups.

7.3 Common Cancers in Different Age Groups

Cancers commonly encountered in different age groups are discussed below:—

0-14 Age Group

Number of cancer cases encountered in this pediatric group is relatively small in different registration areas. Cancers commonly found are brain (ICD: 191), Hodgkin's Disease (201), non-Hodgkin's lymphomas (200, 202), lymphoid leukemia (204), kidney (189), eye (190) and bone (170). Number of cases in a single registry for a single site, being small does not permit a careful study. Collectively, however, it makes a significant sample and is suitable for a co-ordinated study.

15—34 Age Group

Striking sex difference develops in this age group. Cancers of the uterine cervix (180) and female breast (174) become relatively more common in women in most of the registries whereas the picture remains variable in men. Hodgkin's Disease is common in men in many areas, other sites commonly found in men are testes (186), bone (170), lymphosarcoma (200) and myeloid leukemia (205). In Trivandrum, lymphoid leukemia (204) in male shows the largest number of cases in age group 0-34 and thyroid cancer (193) in women has a noteworthy frequency.

35—64 Age Group

Men: Cancers of the upper alimentary canal and respiratory system which are known to be associated with tobacco chewing and smoking habits are the predominant types of cancer found in different registration areas. There is, however, considerable variation in specific sub-sites affected in different places. For instance, mouth and lung cancer are most common in Trivandrum, hypopharynx and oesophagus in Dibrugarh, lung and larynx in Chandigarh and oesophagus and lung cancer in Bombay. In this age group, cancer of the stomach is the most common affected site in Bangalore and Madras where the next affected site in rank is oesophagus.

Women: Cancer of the uterine cervix occupies the first rank in all the registries. Cancer of the breast is in the second rank in all the places except Dibrugarh where it is in the third rank. There is a great deal of differences in the relative frequency of these two sites in some places like Madras and Chandigarh and relatively small differences in places like Bombay. Other sites which are common in women in this age group are associated with tobacco chewing habits particularly mouth. Ovarian cancer also reaches a respectable proportion in some places like Bangalore and Bombay.

65 & Over

The trends encountered in this age group 35—64 are generally continued in the older age groups in both the sexes with minor variation. In males, Bangalore, Chandigarh, Dibrugarh and Trivandrum continue to show the same two common sites that were common also in the 35—64 age group, whereas in Bombay and Madras there is some change in the rank although related to tobacco habits.

In women, cancer of the uterine cervix continue to be in the first rank, in all the registries except in Bombay where breast cancer attained the first rank. Tobacco related sites attained the second rank in several places like mouth in Bangalore and Trivandrum and oesophagus in Bombay.

8. VARIATION IN RELATIVE FREQUENCY OF CANCER IN RELIGIOUS COMMUNITIES

Geographical, religious and linguistic diversity of the people of India provides several opportunities for study of cancer epidemiology. We have already discussed variation in the cancer patterns encountered in the two sexes in different registration areas. We may now superimpose classification of the people according to their religious affiliation to identify any further variation.

In all the registration areas, Hindus are the predominant religious group. Muslims and Christians are in adequate number in many of the areas for further analysis. In Chandigarh region, Christians are very few, but Sikhs are in large numbers. Number of cases of other religious communities except Parsis in Bombay is small. In this analysis, comparison is made between Hindus, Muslims and Christians in all the places except Chandigarh where Sikhs are considered in place of Christians.

Analysis given in the previous sections has revealed that cancer of the upper alimentary canal and respiratory system in men and cancer of the uterine cervix and breast in women are the predominant cancers found in different registration areas. Detailed analysis of these major sites is carried out here taking into account the religious classification.

8.1 Upper Alimentary Canal And Respiratory System In Men

Relative frequency (%) of cancer of the upper alimentary canal and respiratory system in religious communities is given in table 8.1(a) and (b) and figure 8.1.

TABLE 8.1(a): RELATIVE FREQUENCY OF CANCERS OF THE UPPER ALIMENTARY CANAL AND RESPIRATORY SYSTEM BY RELIGIOUS COMMUNITY IN POPULATION BASED REGISTRIES, 1982—MALES (%)

Site-Group	Bangalore			Bombay			Madras		
	Hindu	Muslim	Christian	Hindu	Muslim	Christian	Hindu	Muslim	Christian
Mouth (140-145)	9.16	14.77	20.94	13.66	12.50	8.40	12.96	10.53	16.44
Pharynx (146-149)	9.17	9.09	9.30	14.79	12.50	13.45	7.82	10.53	9.59
Oesophagus (150)	8.31	6.82	2.33	8.97	8.44	11.76	9.19	5.26	—
Larynx (161)	4.73	3.41	2.32	5.76	6.56	7.56	5.50	2.63	5.48
Lung (162)	5.16	4.54	2.32	8.85	9.38	10.92	6.11	3.95	9.59
Total	36.53	38.63	37.21	52.03	49.38	52.09	41.58	32.90	41.10
Total Number of Cancer Cases	(706)	(88)	(44)	(1684)	(320)	(119)	(818)	(76)	(73)

It will be seen that total relative frequency of these cancers vary from about 37% in Bangalore to 75% in Dibrugarh. The most striking feature of this table and the figure is that although there is very wide variation in relative frequency in different geographical areas, there is relatively small variation in different religious communities in the same registration area. Parsis of Bombay who are not included in this table form a solitary exception to this general observation. This would indicate that in general, different religious communities residing in a region have greater similarities in their tobacco habits and the same religious communities in different regions have a wide variation of these habits in different parts of the country.

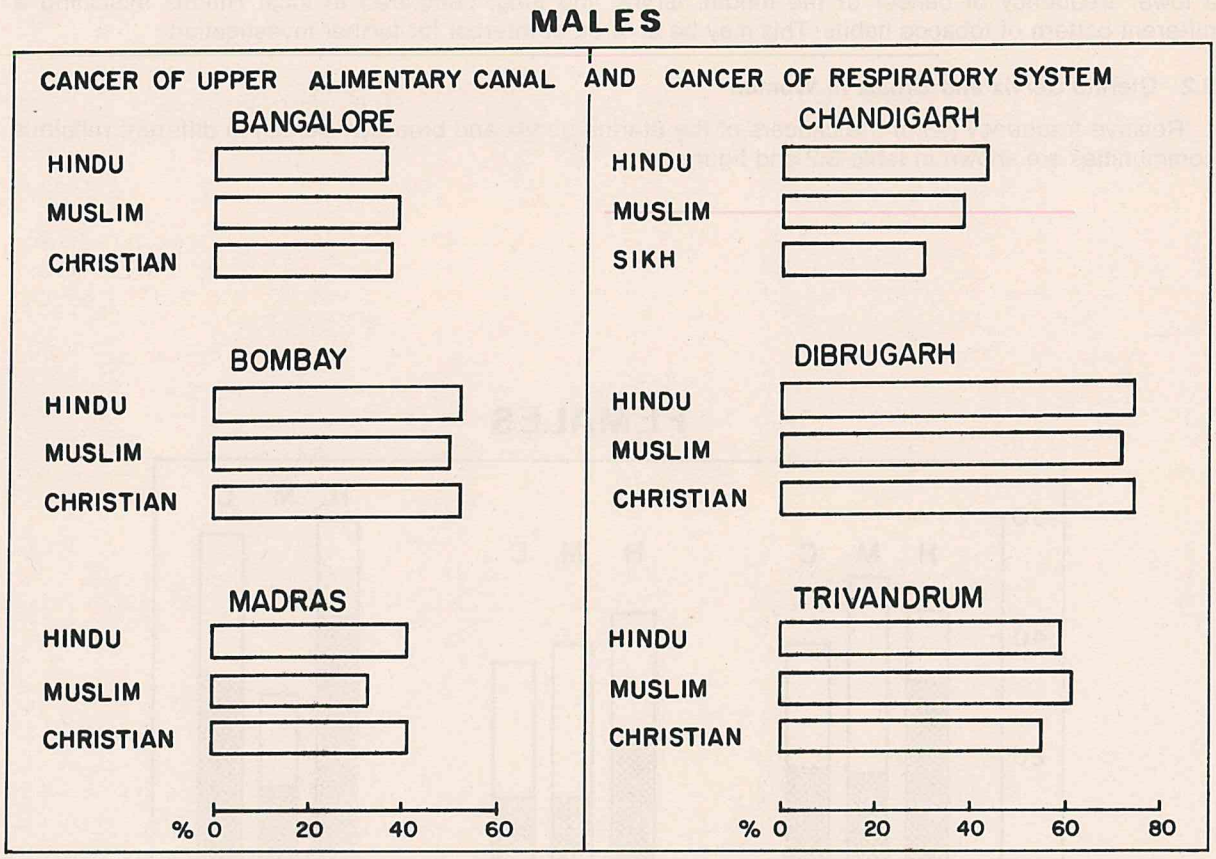

Figure 8.1: Relative frequency (%) of cancers of the upper alimentary canal and respiratory system in males according to religious communities in six registries, 1982.

TABLE 8.1(b): RELATIVE FREQUENCY OF CANCERS OF THE UPPER ALIMENTARY CANAL AND RESPIRATORY SYSTEM BY RELIGIOUS COMMUNITY IN HOSPITAL REGISTRIES, 1982—MALES (%)

Site Group	Chandigarh			Dibrugarh			Trivandrum		
	Hindu	Muslim	Sikh	Hindu	Muslim	Christian	Hindu	Muslim	Christian
Mouth (140-145)	10.45	9.23	6.90	14.40	13.89	(3)	29.00	23.36	28.24
Pharynx (146-149)	5.54	9.23	5.02	34.32	41.67	(15)*	8.43	10.28	7.53
Oesophagus (150)	6.17	6.15	7.52	17.22	13.89	(6)	5.68	6.07	5.44
Larynx (161)	7.56	4.62	4.08	5.14	2.78	—	5.34	5.61	4.82
Lung (162)	13.48	9.23	6.27	3.47	—	—	10.59	16.36	8.79
Total	43.20	38.46	29.79	74.55	72.23	75.00	59.04	61.68	54.82
Total Number of Cancer Cases	(794)	(65)	(319)	(778)	(108)	(32)	(1162)	(214)	(478)

*12 out of 15 cases: Nasopharynx

Whereas Hindus, Muslims and Christians are spread over the length and breadth of the country. Sikhs who are included in the analysis of Chandigarh region are found predominantly in that area. They seem to show a somewhat different pattern than the Hindus of that region. In particular, Sikhs have a lower frequency of cancer of the mouth, larynx and lung, compared to local Hindus indicating a different pattern of tobacco habits. This may be an area of interest for further investigation.

8.2 Uterine Cervix and Breast In Women

Relative frequency (%) of the cancers of the uterine cervix and breast in women in different religious communities are shown in table 8.2 and figure 8.2.

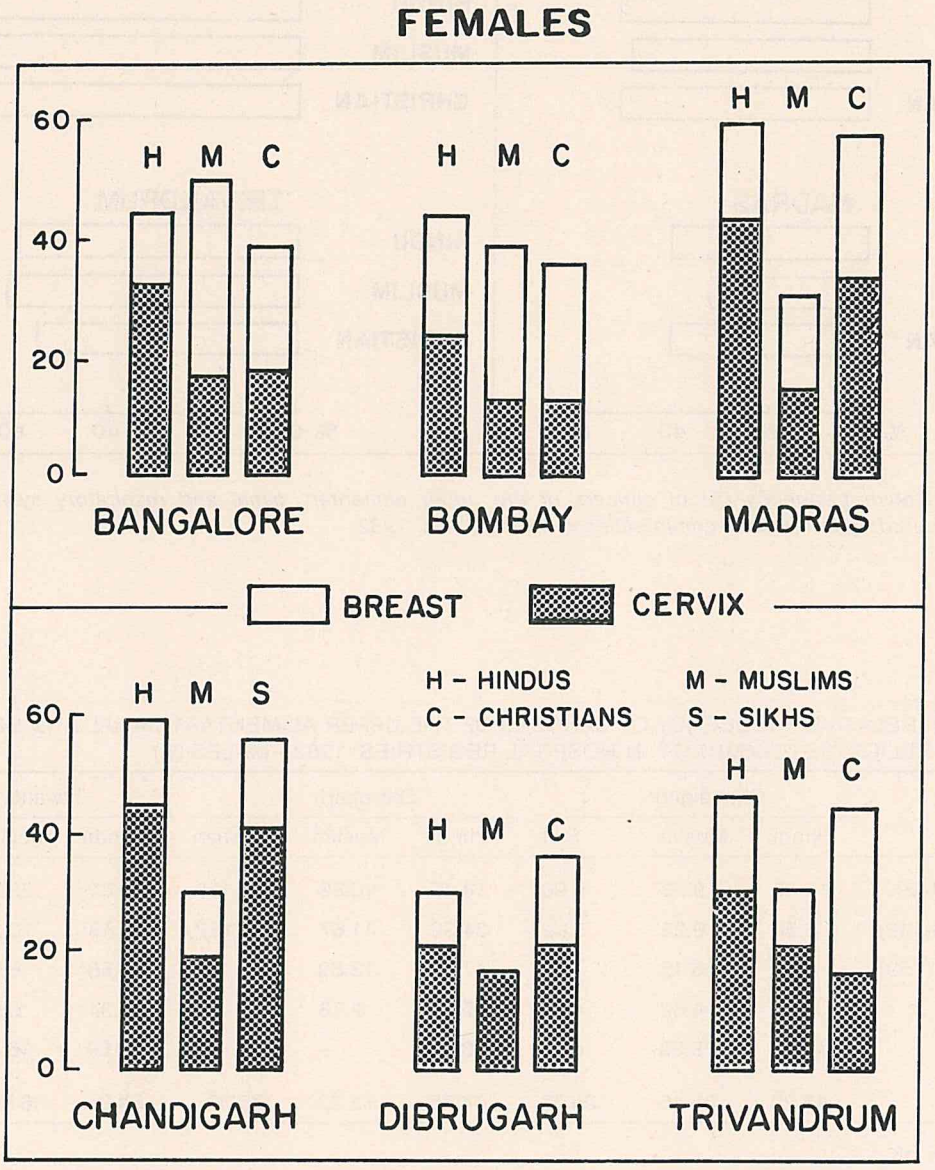

Figure 8.2: Relative frequency (%) of cancers of the uterine cervix and female breast according to religious communities in six registries, 1982.

TABLE 8.2: CANCERS OF UTERINE CERVIX AND BREAST IN DIFFERENT REGISTRATION AREAS AMONG HINDU, MUSLIM, CHRISTIAN AND SIKH WOMEN

	Bangalore	Bombay	Madras	Chandigarh	Dibrugarh	Trivandrum
Hindu						
Cervix (%)	32.20	23.94	43.51	45.53	20.71	30.10
Breast (%)	12.19	20.09	16.04	13.53	8.93	16.42
No. of Cases	(892)	(1324)	(1110)	(828)	(280)	(1133)
Muslim						
Cervix (%)	17.20	13.27	15.19	19.44	16.67	21.29
Breast (%)	32.26	25.66	16.46	11.11	—	9.03
No. of Cases	(93)	(226)	(79)	(36)	(30)	(155)
Christian/Sikh				(Sikh)		
Cervix (%)	17.31	13.27	34.41	41.33	21.43	16.42
Breast (%)	21.15	22.45	23.66	14.95	14.28	27.86
No. of Cases	(52)	(98)	(93)	(542)	(14)	(341)

Cancer of the uterine cervix is one of the two most common single sites among women in India and varies from about one-fifth to more than two-fifths of all cancers in women in different registration areas. Relative frequency is most variable among Hindus ranging from 21% in Dibrugarh and going upto 46% in Chandigarh. In all the places, the relative frequency among Hindus is much higher than in the Muslims and the Christians, among whom the range of variation is also narrow. Relative frequency among Muslims is even lower than or equal to the values in Christians in all the places except in Trivandrum.

Bombay values for cervical cancer are lowest in the series for all the three communities except for Hindus in Dibrugarh. Bombay is a prosperous city with a regular water supply for many decades ensuring better hygienic conditions than many other places. Values for Chandigarh are amongst the highest in the series with a relative frequency of 46% in Hindus, 41% in Sikhs and 19% in Muslims. Madras city also shows high values of 44% in Hindus and surprisingly a high frequency of 34% of Christians.

In general, these observations are consistent with the role of socio-economic factors and genital hygiene in these communities and role of circumcision in Muslims and penile hygiene in particular in reducing the relative frequency of this cancer.

Relative frequency of breast cancer also shows wide variation in different religious communities although the range of variation is somewhat narrower than the one for cervical cancer. Among the Hindus, Bombay has the highest frequency of 20% and Dibrugarh has the lowest frequency of 9%. Among the Muslims, the range is wider from 32% in Bangalore, 26% in Bombay to only 9% in Trivandrum. Among the Christians it has a comparatively narrow range of 21% to 28% barring the small sample from Dibrugarh and in all these places relative frequency of breast cancer among Christians is higher than among Hindus. Sikhs have a relatively low frequency of 15% of breast cancer.

Religious communities which have been shown such wide variation in the relative frequency of cancer of the uterine cervix and breast may provide further interesting clues for their occurrence through studies of life style of these communities.

9. COMMENTS ON INDIVIDUAL SITES

Cancer sites which are of particular interest in the Indian context will be considered in detail in this section. Observations made in the earlier sections as well as information on sub-sites (based on fourth digit of ICD-9) and any other relevant information will be taken into account. As most of this information is available in relative frequency and not in age standardized cancer ratio (ASCAR), all considerations in this section will be based on relative frequencies.

9.1 Mouth

Predominant sites in cancers of the mouth are buccal mucosa, gum and tongue. Cancer of the palate is not common in the registration areas. Among the tongue cancer cases, the ratio of cases of anterior 2/3rd and base of the tongue varies in different parts of the country and in different linguistic groups. Epidemiological studies have shown that tobacco chewing habit has a high risk of cancer of the anterior 2/3rd of the tongue which forms a part of the oral cavity, whereas combined habit of tobacco chewing and bidi smoking has a high risk of cancer of the base of the tongue which forms a part of oropharynx. These two sub-sites of tongue cancer have differences in risk factors and different sex-ratios. For these reasons, tongue cancer is considered here in relation to its four-digit rubric.

Relative frequency (%) of these sites and sub-sites are given in table 9.1(a) for men and table 9.1(b) for women; these values are charted in figure 9.1. As pattern of these cancers is different in the two sexes, they are treated separately in the following discussions.

TABLE 9.1(a): RELATIVE FREQUENCY (%) OF MOUTH CANCER IN MALES IN SIX REGISTRIES, 1982

Site Group	Bangalore	Bombay	Madras	Chandigarh	Dibrugarh	Trivandrum
Buccal Mucosa (145.0-145.1)	2.39	2.50	4.43	1.46	2.38	12.35
Gum (143)	0.96	1.12	0.62	0.81	0.76	3.78
Tongue (141)	4.78	6.61	4.45	4.86	8.23	8.14
Base (141.0)	2.99	4.02	2.58	3.56	7.37	2.54
Ant (141.1-141.4)	0.12	0.80	0.82	1.13	0.33	4.80
Unc (141R)	1.67	1.79	1.05	0.17	0.53	0.80
Others & Unsp	2.14	2.82	3.49	2.26	3.36	3.89
Mouth Cancers	10.27	13.05	12.99	9.39	14.73	28.16
Total No. of Cancer Cases	(837)	(2237)	(970)	(1237)	(923)	(1854)

TABLE 9.1(b): RELATIVE FREQUENCY (%) OF MOUTH CANCER IN FEMALES IN SIX REGISTRIES, 1982

Site Group	Bangalore	Bombay	Madras	Chandigarh	Dibrugarh	Trivandrum
Buccal Mucosa (142.0-145.1)	7.37	2.47	5.28	1.05	1.83	7.55
Gum (143)	1.70	1.18	1.09	0.21	2.14	3.25
Tongue (141)	1.13	2.53	1.79	1.95	7.34	3.19
Base (141.0)	0.47	1.07	0.23	0.77	5.81	0.43
Ant (141.1-141.4)	0.09	0.90	0.85	1.05	0.61	2.52
Unc (141R)	0.57	0.56	0.71	0.13	0.92	0.24
Others & Unsp	1.05	1.40	1.00	0.49	2.76	2.09
Mouth Cancers	11.25	7.58	9.16	3.70	14.07	16.08
Total No. of Cancer Cases	(1058)	(1782)	(1288)	(1438)	(327)	(1629)

Men: Detailed analysis of the data on mouth cancers from the six registries shows that data from Trivandrum differs from the rest of the series in three respects: (i) mouth cancers are relatively far more common (28%), (ii) cancer of the buccal mucosa far out weighs in proportion the tongue cancer, and (iii) cancer of the anterior 2/3rd of the tongue is more common than cancer of the base of the tongue.

Bombay and Dibrugarh have a relative frequency of 13% to 15% of mouth cancers. In both these series, tongue cancer is much more common than cancer of the buccal mucosa and cancer of the base of the tongue is more common than cancer of the anterior 2/3rd of the tongue. Bangalore and Chandigarh with a relative frequency of about 10% of mouth cancers also have a similar pattern. Madras with a relative frequency of 13% of mouth cancer reveals a somewhat different pattern. The proportions of cancer of the buccal mucosa and tongue are about equal although cancer of the base of the tonuge is relatively more common than cancer of the anterior 2/3rd of the tongue as in the other four places.

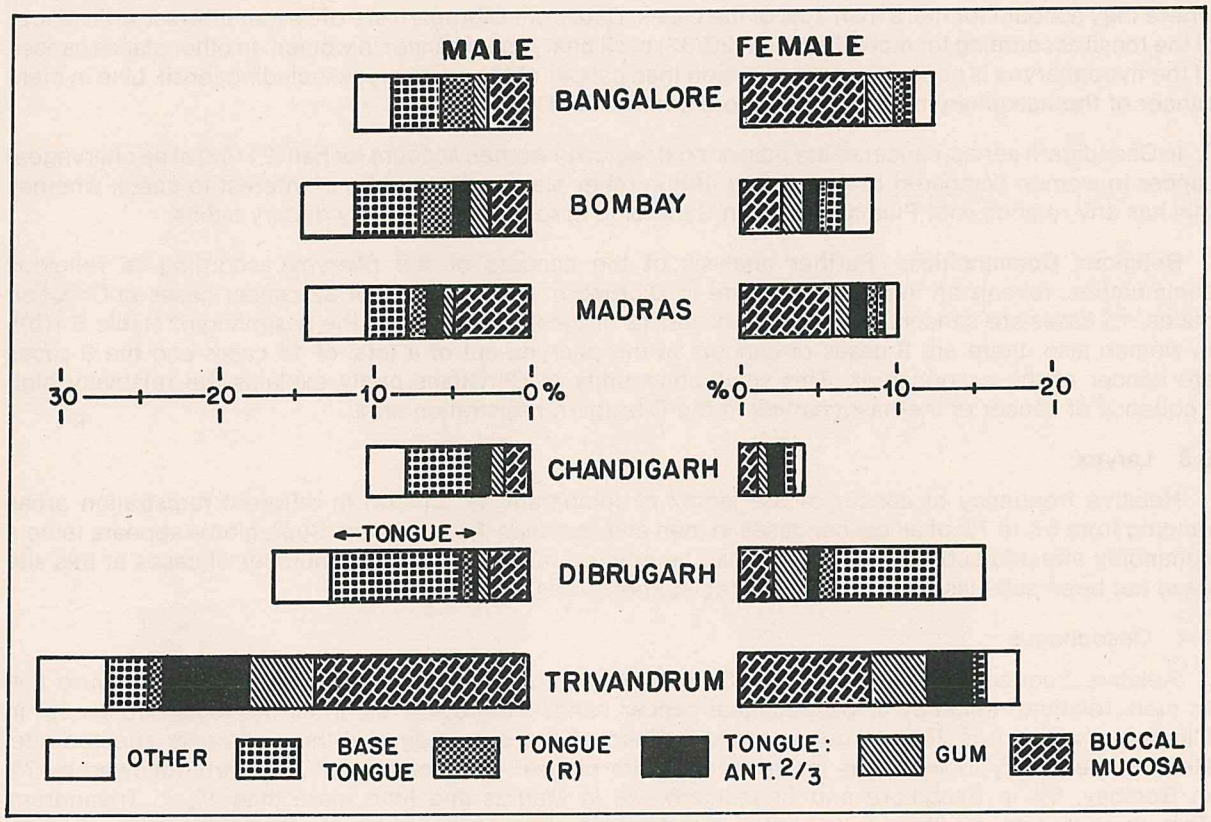

Figure 9.1: Relative frequency (%) of Mouth Cancer in Six Registries, 1982.

Women: Mouth cancers in women have the highest relative frequency of 16% in Trivandrum where cancer of the buccal mucosa is relatively more common than cancer of the tongue among which anterior 2/3rd is the predominant sub-site. Unlike men, women in many of the series show a pattern of mouth cancer which is similar to the one in Trivandrum. Bangalore and Madras with a relative frequency of 9% to 10% of mouth cancer and Chandigarh with a low frequency of 4% are such examples. Bombay series shows an equal proportion of cancers of the buccal mucosa and tongue and among tongue cancer, an equal proportion of anterior 2/3rd and base of the tongue. Women in the Dibrugarh series, with a relative frequency of 14% of mouth cancer, however, show a sharp difference in pattern from all the other series. Not only the cancer of the tongue is far more common than cancer of the buccal mucosa, but cancer of the base of the tongue is relatively far more common than cancer of the anterior 2/3rd of the tongue like all the series in men except the one in Trivandrum.

Summary: In men, the predominant types of mouth cancer in Trivandrum are cancers of the buccal mucosa and anterior 2/3rd of the tongue while in the other five series cancer of the tongue, primarily, the base of the tongue, is more common. In women, the predominant types are cancer of the buccal mucosa and anterior 2/3rd of the tongue with the exception of Dibrugarh where cancer of the base of the tongue appears to be the commonly affected site.

9.2 Pharynx

Cancers of the pharynx are relatively far more common in men than in women and are considered separately.

Men: In Dibrugarh registration area, these cancers account for almost a third of all cancers in men, compared with 8% to 12% in Bangalore, Bombay, Madras and Trivandrum areas and only 5% in Chandigarh data. Relative frequency of cancers of the hypopharynx is almost twice that for cancer of the oropharynx in all the places except in Chandigarh and Trivandrum where they are about equal. In all the places, tonsil is the predominant sub-site in cancers of the oropharynx and pyriform sinus, in cancers of the hypopharynx. Cancer of the nasopharynx is found in all the registration areas and is relatively more common in the Dibrugarh series.

Women: Cancers of the pharynx account for only 2% to 3% of all cancers in women except in Dibrugarh where they account for more than 10% of the cases. Data from Dibrugarh are of further interest with cancer of the tonsil accounting for more than half (20/37) of all pharyngeal cancer in women. In other places cancer of the hypopharynx is generally more common than cancer of the oropharynx including tonsil. Like in men, cancer of the nasopharynx is relatively more common in Dibrugarh.

In Chandigarh series, cancer of the post cricoid region in women account for half (21/42) of all pharyngeal cancer in women compared to less than a fifth in other places. It would be of interest to check whether this has any relation with Plummer-Winson Syndrome associated with faulty dietary habits.

Religious Communities: Further analysis of the cancers of the pharynx according to religious communities, reveals an interesting feature in Dibrugarh. Out of a total of 32 cancer cases in Christian males, 15 cases are cancers of the pharynx and 12 of them are cancer of the nasopharynx [table 8.1(b)]. In women also, there are 3 cases of cancers of the pharynx out of a total of 14 cases and the 3 cases are cancer of the nasopharynx. This small community of Christians partly explains the relatively high frequency of cancer of the nasopharynx in the Dibrugarh registration area.

9.3 Larynx

Relative frequency of cancer of the larynx is comparatively uniform in different registration areas ranging from 5% to 7% of all cancer cases in men and less than 1% in women. Supraglottis appears to be a commonly affected sub-site although it may be pointed out that substantial number of cases at this site have not been sub-classified in different registration areas.

9.4 Oesophagus

Relative frequency of the cancer of the oesophagus is given in table 9.4 and shown in figure 9.4. In men, relative frequency of oesophageal cancer varies from 6% to 9% in all the registries except in Dibrugarh where it is 16%. In general, middle third of the oesophagus is the commonly affected site. Relative frequency in women is more variable with highest value of 13% in Dibrugarh, followed by 7% in Bombay, 5% in Bangalore and Chandigarh, 3% in Madras and little more than 1% in Trivandrum. This gives rise to variation in sex ratio and it is not clear at this stage to what extent this variation is due to under-registration of women with this cancer in certain areas.

The relative frequency of this cancer in Singapore Indians is 5% in men as well as in women and about 1% in each sex in the English population of Oxford region.

TABLE 9.4: RELATIVE FREQUENCY (%) OF THE CANCERS OF OESOPHAGUS AND STOMACH IN SIX REGISTRIES, 1982

Registry	Oesophagus (150)		Stomach (151)		Total No. of Cancer Cases	
	Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)
Bangalore	7.89	5.29	11.71	4.73	837	1058
Bombay	8.99	6.45	5.14	2.81	2237	1782
Madras	7.32	2.87	13.81	5.12	970	1288
Chandigarh	6.56	4.95	3.40	0.84	1237	1438
Dibrugarh	16.36	12.54	4.55	2.45	923	327
Trivandrum	5.66	1.41	4.21	1.72	1854	1629

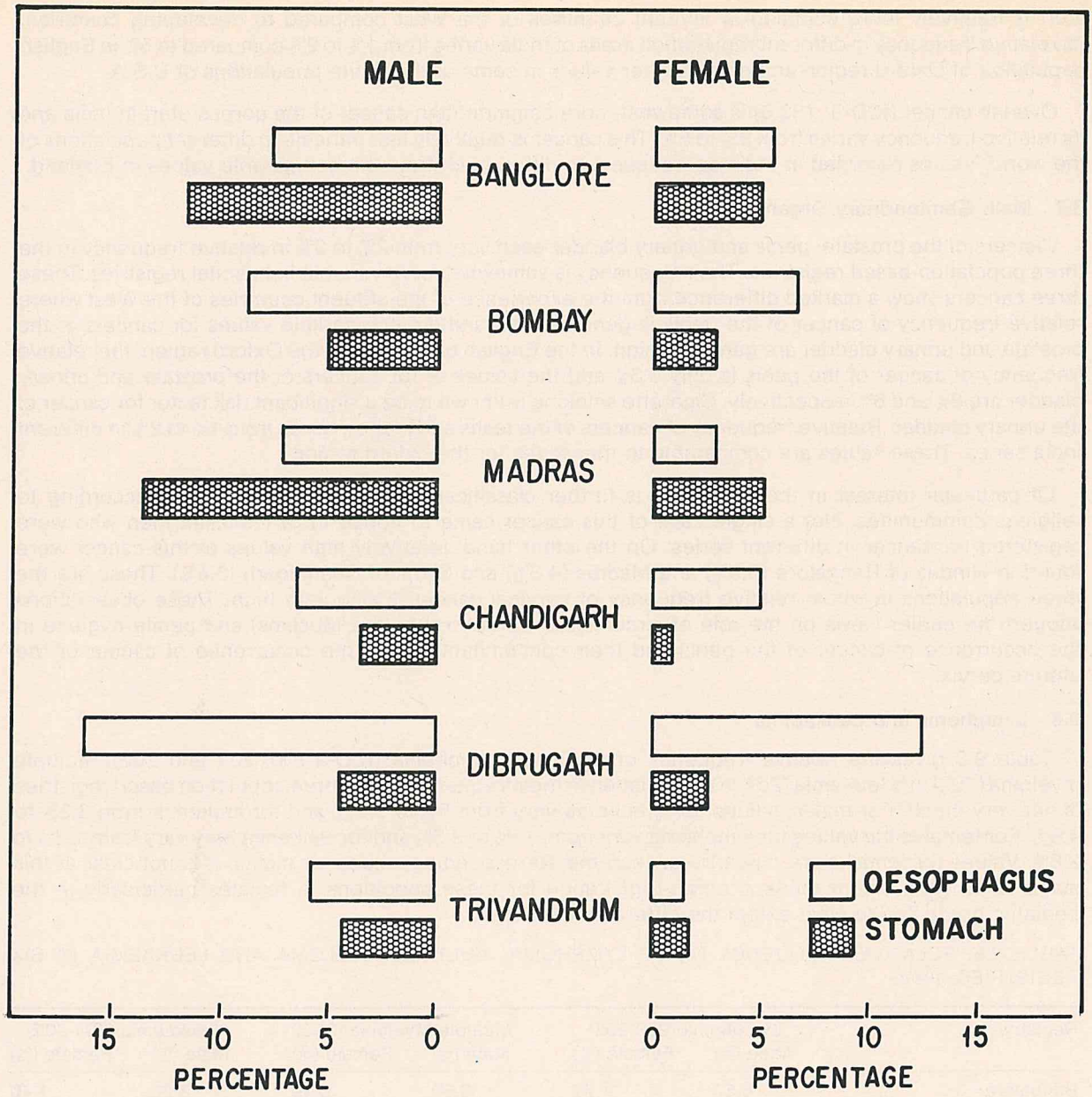

Figure 9.4: Relative Frequency (%) of the Cancers of Oesophagus and Stomach in Six Registries, 1982

9.5 Stomach

Relative frequency of stomach cancer (Table 9.4) is very high in Bangalore and Madras reaching values of 12% to 14% in men and 5% in women. In Bombay, Dibrugarh and Trivandrum series, these values vary from 4% to 5% in men and 2% to 3% in women. The lowest values of stomach cancer are found in Chandigarh region with only 3% of all cancer cases in men and less than 1% in women. These low values are particularly evident in the Sikhs in whom the relative frequency is 2% in men and only one case of stomach cancer in a total of 542 cancer cases in women.

The relative frequency of stomach cancer in Singapore Indians is 14% in men and 5% in women. These values are comparable to the ones in the Madras series. Comparable values in the English speaking population of the Oxford region are 8% in men and 5% in women.

9.6 Female Genital Organs

A detailed consideration has been given to cancer of the uterine cervix earlier. Cancer of the corpus uteri and cancer of the ovary are two other sites which need some consideration. Cancer of the corpus

uteri is relatively more common in affluent countries of the West compared to developing countries. Its relative frequency in different registration areas of India varies from 1% to 2% compared to 5% in English population of Oxford region and much higher values in some of the White populations of U.S.A.

Ovarian cancer (ICD-9: 183.0) is somewhat more common than cancer of the corpus uteri in India and its relative frequency varies from 3% to 5%. This cancer is relatively less variable in different populations of the world. Values recorded in India do not seem to differ much from the comparable values in England.

9.7 Male Genitourinary Organs

Cancers of the prostate, penis and urinary bladder each vary from 2% to 3% in relative frequency in the three population-based registries. Their frequency is somewhat more variable in hospital registries. These three cancers show a marked difference from the experience of the affluent countries of the West where relative frequency of cancer of the penis is generally low and the comparable values for cancers of the prostate and urinary bladder are generally high. In the English population of the Oxford region, the relative frequency of cancer of the penis is only 0.3% and the values of for cancers of the prostate and urinary bladder are 8% and 6% respectively. Cigarette smoking is known to be a significant risk factor for cancer of the urinary bladder. Relative frequency of cancers of the testis and kidney varies from 1% to 2% in different India series. These values are comparable to the values for the Oxford region.

Of particular interest in these cancers is further classification of cancer of the penis according to religious communities. Not a single case of this cancer came to notice in 871 Muslim men who were registered for cancer in different series. On the other hand, relatively high values of this cancer were found in Hindus of Bangalore (3.6%) and Madras (4.3%) and Sikhs of Chandigarh (3.4%). These are the three populations in whom relative frequency of cervical cancer is also very high. These observations support the earlier views on the role of circumcision (practised by the Muslims) and penile hygiene in the occurrence of cancer of the penis and their concomitant role in the occurrence of cancer of the uterine cervix.

9.8 Lymphoma and Leukaemia

Table 9.8 gives the relative frequency of malignant lymphoma (ICD-9:200, 201 and 202), multiple myeloma (203) and leukemia (204-208). Variation in their frequency in the three population based registries is not very much. For males, values for lymphoma vary from 5% to 7.5%, and for leukemia from 3.3% to 4.9%. For females the values for lymphoma vary from 1.7% to 2.5% and for leukemia they vary from 1.2% to 2.8%. Values for females are much lower than the corresponding values for males. It is not clear at this stage as to what extent there is under-registration for these conditions in females particularly in the pediatric group and to what extent the differences are real.

TABLE 9.8: RELATIVE FREQUENCY (%) OF LYMPHOMA, MULTIPLE MYELOMA AND LEUKAEMIA IN SIX REGISTRIES, 1982

Registry	Lymphoma (200-202)		Multiple Myeloma (203)		Leukaemia (204-208)	
	Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)
Bangalore	6.57	1.70	0.60	0.19	3.23	1.70
Bombay	5.05	2.53	0.49	0.45	3.31	2.81
Madras	7.53	1.79	0.21	0.08	4.85	1.24
Chandigarh	8.02	1.81	1.46	0.35	5.67	2.23
Dibrugarh	2.71	1.22	—	—	1.73	2.75
Trivandrum	3.67	1.41	1.35	1.04	2.81	1.29

Variation in the hospital registries is much wider particularly for males and this is perhaps due to heterogeneity of the material.

There is one point that needs clarification at this stage. This is about the classification of lymphomas. There seems to be uniformity in the relative frequency of Hodgkin's Disease (ICD-9:201) in different registration areas. This is however, not the case in non-Hodgkin's lymphoma (ICD-9:200 and 202). An extreme example of this difference is shown by comparison of the data in the Bangalore and Madras series. In males in Bangalore, only 1 out of 55 cases was classified as ICD-9:200 and 35 cases were classified as ICD-9:202. In Madras on the other hand, 37 out of 73 cases were classified as ICD-9:200 and none as ICD-9:202. A similar difference also was seen in females. In order to make data from different registries comparable, this type of problems of classification will have to be sorted out.

10. DIAGNOSIS AND TREATMENT

10.1 Microscopic Verification of Diagnosis

10.1.1 All Sites

In assessment of reliability of cancer registration, microscopic verification is an important criterion. The higher the proportion of microscopic verification of diagnosis for cancer of the deepseated organs, the more confident one is that a neoplasm existed and that it arose at the stated site.

Microscopic verification has been generally good in all the registries (table 10.1.1 and figure 10.1.1). It reaches a proportion of 90% in men and 92.5% in women in Chandigarh with a clinical diagnosis restricted to only 3% to 4% of cancer cases. Proportion of cancer cases based on clinical diagnosis is high in Madras and Trivandrum regions varying from 20% to 24%. Bombay and Bangalore are in the intermediate range with 8% to 10% of cases diagnosed clinically. Dibrugarh like Chandigarh has a low proportion of such cases.

TABLE 10.1.1: METHOD OF DIAGNOSIS OF CANCER IN SIX REGISTRIES, 1982

Bangalore		Bombay		Madras*		Method of	Chandigarh		Dibrugarh		Trivandrum	
Male	Female	Male	Female	Male	Female	Diagnosis	Male	Female	Male	Female	Male	Female
9.8	7.5	10.7	10.2	21.8	21.9	Clinical (%)	3.2	4.4	3.0	7.0	19.6	24.1
4.9	2.5	6.3	3.0	1.0	1.3	X-Ray (%)	2.7	0.9	7.6	5.2	4.7	1.6
85.3	90.0	81.7	84.7	75.2	75.8	Microscopic (%)	89.7	92.5	86.8	85.4	74.8	73.5
0.0	0.0	1.3	2.1	2.0	1.0	Others (%)	4.4	2.2	2.6	2.4	0.9	0.8
837	1058	2237	1782	816	1186	No. of Cases	1237	1438	923	327	1854	1629

*Excludes cases from death certificate only.

Diagnosis based on X-ray examination in males varies from 5% to 7% of cancer cases in all places except Madras (1%) and Chandigarh (3%). In females, it varies from 1% to 2% in all the registries except in Dibrugarh (5%).

Cases of cancer in the category of "Death Certificate only" of the population-based registries have not been taken into account for the above consideration.

10.1.2 Individual Sites

Substantial differences in the diagnostic procedure in Madras and Trivandrum from the other four places arises due to a higher proportion of clinical diagnosis of the common cancer in these two places viz. mouth, female breast and uterine cervix. For instance, for cancer of the uterine cervix, 34% of the cases in Trivandrum and 20% of the cases in Madras are based on clinical diagnosis. Situation is similar for the other two sites.

It may be of particular interest to examine the diagnostic procedure for three internal sites viz. oesophagus, stomach and lung for which there are reasonably large number of cases in most of the registries. For all these three sites, proportion of cases diagnosed clinically is generally very high for Madras and Trivandrum. For stomach cancer, half of the cases in men and two-thirds in women are based on clinical diagnosis in Trivandrum. Lowest proportions of clinical diagnosis for these three sites are in Chandigarh and Dibrugarh. Use of X-ray for diagnosis of these three sites varies considerably from registry to registry. It is lowest in Madras (1% to 6%) and highest in Dibrugarh (20% to 60%). Microscropic verification of diagnosis is highest in Chandigarh for all these three sites.

These preliminary results show that there is wide scope for more detailed comparison of diagnostic procedure followed by different registries and improvement in the reliability of cancer diagnosis.

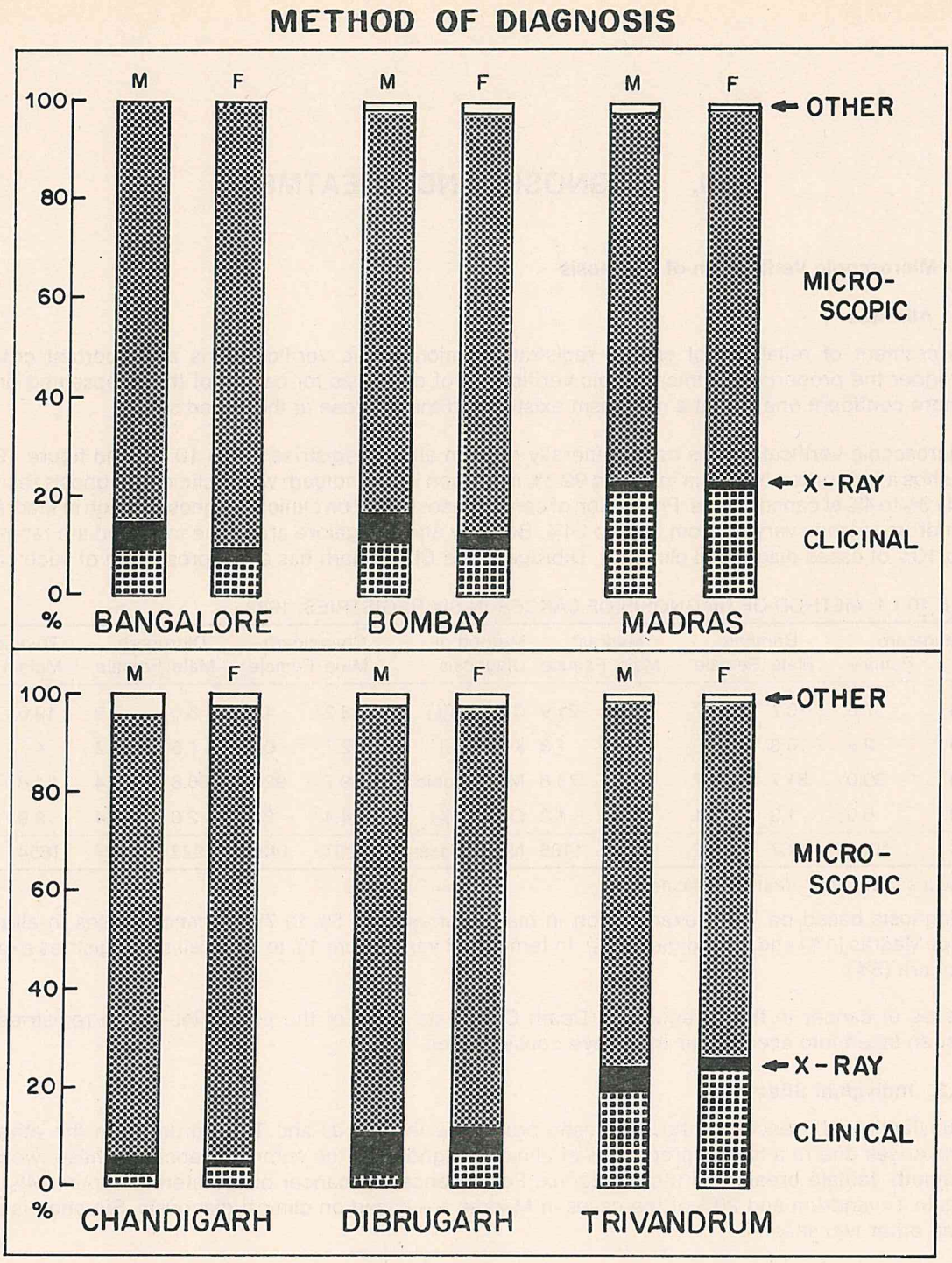

Figure 10.1.1: Method of Diagnosis of Cancer Cases in Six Registries, 1982.

10.2 Treatment Modalities

Table for treatment modalities as decided at the Trivandrum Annual Review Meeting, was mandatory for hospital registries and optional for population-based cancer registries. Madras population-based registry has provided this data in addition to Chandigarh, Dibrugarh and Trivandrum hospital registries. There are two columns in this table "None" and "Not Known" which are quite variable from registry to registry.

For instance, in males, "None" varies from a low value of 0.1% in Madras, 3% in Dibrugarh, 15% in Trivandrum to 26% in Chandigarh. In contrast "Not Known" varies from a low value of 1% in Chandigarh to 3% in Dibrugarh, 8% in Trivandrum to a very high value of 38% in Madras.

In addition, there is a difference in the total number of registered cases and total number of cases reported in the treatment table in two registries viz. Chandigarh where only 73% of the registered cases are included in the Treatment Table (table 10.2.1(a)). In order to overcome this uneven approach by different registries, the cancer cases known to have been given treatment are considered for further analysis.

TABLE 10.2.1(a): TREATMENT GIVEN TO CANCER CASES IN FOUR REGISTRIES, 1982

Treatment	Chandigarh		Dibrugarh		Trivandrum		Madras	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
MALE								
None	232	25.75	27	2.93	249	14.93	1	0.10
Given	659	73.14	866	93.82	1278	76.62	597	61.55
Not known	10	1.11	30	3.25	141	8.45	372	38.35
Cases reported in Treatment Table	901	100.00 (72.96)	923	100.00	1668	100.00 (89.97)	970	100.00
Cases Registered	1237		923		1854		970	
FEMALE								
None	282	25.18	11	3.36	171	12.69	10	0.78
Given	835	74.55	302	92.36	1098	81.52	919	71.35
Not known	3	0.27	14	4.28	78	5.79	359	27.87
Cases reported in Treatment Table	1120	100.00 (78.16)	327	100.00	1347	100.00 (82.69)	1288	100.00
Cases Registered	1438		327		1629		1288	

10.2.1 All Sites

Table 10.2.1(b) and figure 10.2.1 include the data for different treatment modalities for the registered cancer case that are known to have been given treatment. Surgery, Radiation and Chemotherapy and their combinations cover more than 92% of the treatment strategies adopted. There is variation in the treatment procedure in different places with radiotherapy having a central place in cancer treatment particularly in women. Combination of treatment modalities is another feature that stands out in this analysis.

TABLE 10.2.1(b): TYPE OF TREATMENT GIVEN TO CANCER PATIENTS IN FOUR REGISTRIES, 1982

Male				Treatment	Female			
Chandigarh %	Dibrugarh %	Trivandrum %	Madras %		Chandigarh %	Dibrugarh %	Trivandrum %	Madras %
23.52	4.85	4.62	13.40	Surgery (S)	13.29	8.28	6.19	10.66
27.62	71.48	69.25	42.71	Radiation (R)	52.81	60.60	69.67	59.09
12.44	1.39	6.03	6.37	(S)+(R)	6.59	2.98	8.20	7.07
13.66	8.20	4.85	18.76	Chemotherapy	6.71	13.58	5.19	9.14
4.70	2.08	0.63	4.69	(S)+(C)	2.75	4.97	0.55	3.70
12.14	8.43	13.93	7.87	(R)+(C)	6.71	6.95	8.29	4.13
3.19	1.04	0.70	1.34	(S)+(R)+(C)	3.23	0.99	1.82	2.50
2.73	2.54	—	4.86	Other	7.90	1.66	0.09	3.70
659	866	1278	597	No. of Cases Treated	835	302	1098	919

In men, there is considerable variation in the treatment procedures in different places. For instance, in Chandigarh, there is an even balance between surgery and radiotherapy with increasing role of chemotherapy and their combinations. Dibrugarh and Trivandrum on the other hand have about 70% of the cases being treated only by radiotherapy. Surgery plays a relatively small role (about 10% of the cases) in cancer therapy, even smaller than chemotherapy which is used in about 20% of the cases in these two places. Madras experience is intermediate between these two extremes. These differences may partly be

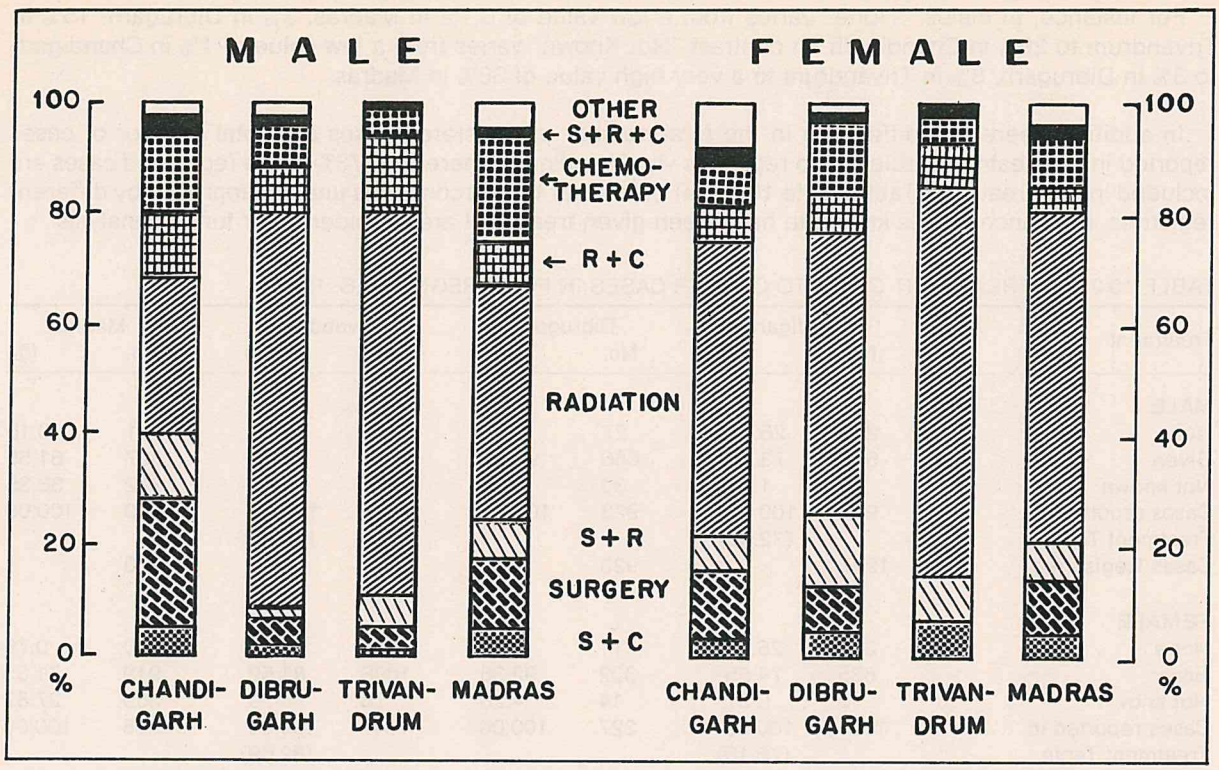

Figure 10.2.1: Type of Treatment given to Cancer Patients in four Registries, 1982.

due to prevalence of different types of cancer in Chandigarh which has relatively fewer cancers related to tobacco habits.

In women, the experiences in different places is relatively more uniform. Radiotherapy alone is common in all the places varying from 53% to 70% of the cancer cases. Surgery alone varies from 6% to 13% of the cases, similar to chemotherapy which varies from 5% to 14% of the cases. Combinations of surgery and radiotherapy, radiotherapy and chemotherapy as well as surgery and chemotherapy are common in all the places.

10.2.2 Mouth and Pharynx in Men

For further analysis of treatment modalities, these sites are selected for which there are at least 100 cancer cases treated from at least two places. Mouth and Pharynx in men and breast and cervix in women are adequate for this comparison. Treatment modalities for mouth and pharynx cancer in men in Dibrugarh and Trivandrum are given in table 10.2.2 and figure 10.2.2. For these two cancers, which are common in many parts of the country, radiotherapy is the treatment of choice and is given to 81% to 86% of the case in the two places. Next in importance is the combination of radiotherapy with chemotherapy which varies from 8% to 13% of the cases. Other treatment approaches do not seem to be common in these two places.

TABLE 10.2.2: TYPE OF TREATMENT GIVEN TO MOUTH AND PHARYNX CANCER CASES AT DIBRUGARH AND TRIVANDRUM IN MALES, 1982

Dibrugarh		Treatment	Trivandrum	
Mouth	Pharynx		Mouth	Pharynx
4.76	0.64	Surgery (S)	1.86	–
80.95	80.89	Radiation (R)	82.79	86.47
2.38	0.64	(S)+(R)	3.72	0.75
0.79	1.59	Chemotherapy (C)	–	–
–	0.32	(S)+(C)	0.23	–
7.94	11.78	(R)+(C)	11.16	12.78
1.59	1.59	(S)+(R)+(C)	0.23	–
1.59	2.54	Others	–	–
126	314	No. of cases treated	430	133

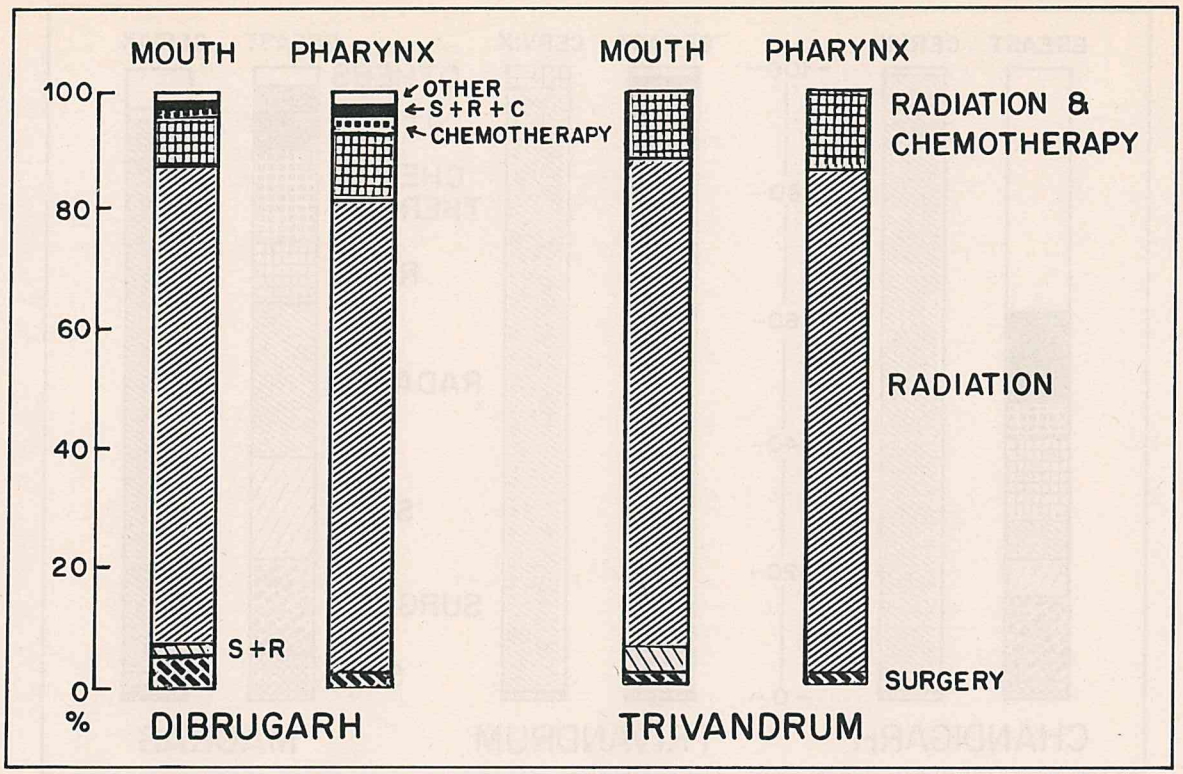

Figure 10.2.2: Type of Treatment given to Mouth and Pharynx Cancer Cases at Dibrugarh and Trivandrum in Males, 1982.

10.2.3 Breast and Cervix in Women

Treatment modalities for cancers of the female breast and uterine cervix for Chandigarh, Trivandrum and Madras are presented in table 10.2.3 and figure 10.2.3. There is a great deal of uniformity in the treatment of cervical cancer in the three places with radiotherapy being given to 88% of the cases in Madras, 96% in Trivandrum and 98% in Chandigarh. Treatment for cancer of the breast in women, however, presents a variable picture. In Trivandrum, surgery and radiation seem to play a comparable role with a relatively smaller role for chemotherapy. In Madras, however, chemotherapy also plays a significant role like surgery and radiation. In Chandigarh, the situation is complicated by a substantial proportion of cases (39%) included in "other" treatment category which may perhaps include hormonal therapy which was not included in the basic table proposed for this analysis.

TABLE 10.2.3: TREATMENT MODALITIES FOR CANCERS OF THE FEMALE BREAST AND UTERINE CERVIX AT CHANDIGARH, TRIVANDRUM AND MADRAS, 1982

Treatment	Chandigarh		Trivandrum		Madras	
	Breast	Cervix	Breast	Cervix	Breast	Cervix
Surgery (S)	12.86	0.54	21.6	—	15.0	2.93
Radiation (R)	5.71	98.37	30.4	96.49	24.375	87.78
(S)+(R)	6.43	0.27	28.8	0.81	15.625	1.22
Chemotherapy (C)	5.00	0.27	0.8	0.27	14.375	0.98
(S)+(C)	2.86	—	0.8	—	7.5	—
(R)+(C)	14.29	0.27	7.2	2.43	10.625	1.71
(S)+(R)+(C)	13.57	—	9.6	—	10.0	—
Others	39.29	0.27	0.8	—	2.5	5.38
No. of Cancer cases treated	140	369	125	370	160	409

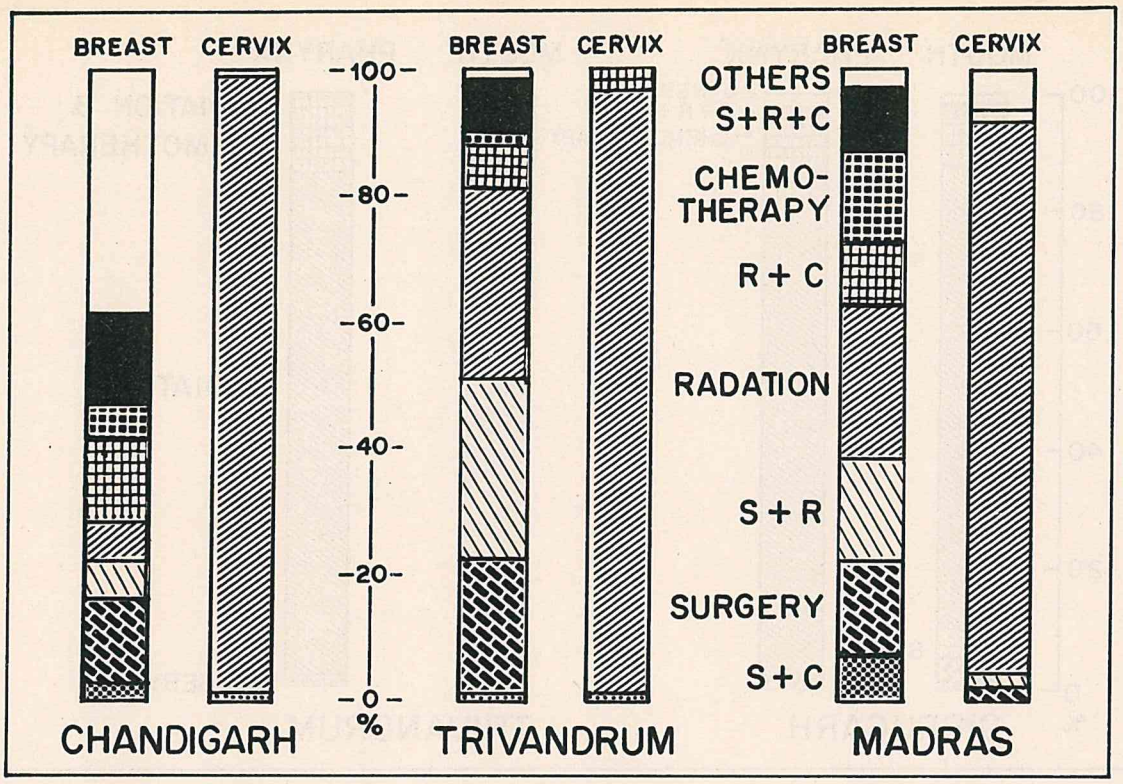

Figure 10.2.3: Treatment Modalities for Cancers of the Female Breast and Uterine Cervix at Chandigarh, Trivandrum & Madras, 1982.

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TABLE 5.2A: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) IN MALES.
CENTRE: SINGAPORE INDIAN 1973-77

ICD (9th) Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	Ascar
140 LIP VERMILION	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.21	0.12
141 TONGUE	0	0	0	0	0	0	0	0	1	0	6	3	6	4	0	0	0	0	20	4.12	3.16
142 SALIVARY GLAND	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0.62	0.66
143 MOUTH	0	0	0	1	0	0	0	0	0	1	5	2	8	4	1	3	1	0	26	5.36	6.07
146 OROPHARYNX	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	5	1.03	0.82
147 NASOPHARYNX	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	3	0.62	0.47
148 HYPOPHARYNX	0	0	0	0	0	1	0	0	0	1	3	1	2	2	0	0	1	0	11	2.27	2.42
150 OESOPHAGUS	0	0	0	0	0	0	0	0	2	0	4	5	7	1	3	1	0	0	23	4.74	4.35
151 STOMACH	0	0	0	0	0	1	0	3	4	5	5	14	13	15	6	2	0	0	68	14.02	14.06
152 SMALL INTESTINE	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0.41	0.24
153 COLON	0	0	1	0	1	0	0	1	1	1	4	3	2	2	4	0	2	0	22	4.54	5.50
154 RECTUM	0	0	0	0	0	0	1	0	1	1	5	2	7	3	4	0	0	0	24	4.95	4.34
155 LIVER	0	2	0	0	0	1	0	1	1	4	8	8	5	7	4	3	1	1	46	9.48	10.01
156 GALL BLADDER	0	0	0	0	0	0	0	0	0	1	0	0	2	2	0	0	0	0	5	1.03	0.82
157 PANCREAS	0	0	0	0	0	0	0	0	0	0	2	3	1	0	0	1	0	0	7	1.44	1.35
160 NOSE	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	0.62	0.36
161 LARYNX	0	0	0	0	0	0	0	0	0	2	5	4	5	0	1	1	1	1	20	4.12	3.41
162 LUNG	0	0	0	0	0	0	0	0	2	11	13	4	11	13	7	1	0	0	62	12.78	10.72
170 BONE	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0.41	0.62
171 CONNECTIVE TISSUE	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.41	0.81
172 SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
173 SKIN OTHER	0	0	0	0	0	0	0	0	0	1	3	4	1	1	1	0	1	0	12	2.47	2.17
175 MALE BREAST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
185 PROSTATE	0	0	0	0	1	0	0	0	0	0	2	1	6	2	3	1	1	0	17	3.51	3.98
186 TESTIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.21	0.63
187 PENIS	0	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	0	0	4	0.82	0.48
188 URI. BLADDER	0	0	0	0	0	0	0	0	0	1	3	1	3	0	1	1	0	0	10	2.06	1.82
189 KIDNEY ETC.	0	0	0	0	0	0	1	0	0	1	3	2	0	0	3	0	0	0	10	2.06	1.90
190 EYE	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.41	0.63
191 BRAIN-NERV. SYS.	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	6	1.24	1.02
193 THYROID GLAND	0	0	0	0	1	0	0	1	0	2	1	1	1	0	1	0	0	0	8	1.65	1.76
194 ENDO. GLAND	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0.41	0.44
200 LYMPHOSARCOMA	0	0	0	0	1	0	1	0	0	0	0	2	0	0	1	1	0	0	6	1.24	2.10
201 HODGKINS DIS.	1	0	0	0	1	1	2	0	1	0	0	0	0	0	0	0	0	0	6	1.24	2.75
202 LYMPHOID TISS	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.21	0.12
203 MULTIPLE MYEL.	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3	0.62	0.58
204 LEUK. LYMPHATIC	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	5	1.03	1.81
205 LEUK. MYELOID	0	1	0	1	0	0	1	0	0	2	2	1	0	0	0	0	0	0	8	1.65	1.91
206 LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.21	0.12
207 LEUK. OTHER	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0.41	0.43
208 POLYCYTHAEMIA	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0.41	0.24
209 MYELOFIBROSIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
999 OTHER & UNSPEC.	0	0	1	1	0	0	0	0	2	0	5	3	5	5	2	0	0	0	24	4.95	4.85
TOTALS	4	9	3	5	5	4	6	7	16	41	86	71	92	64	46	16	8	2	485	100.00	100.00

TABLE 5.2B: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) IN FEMALES.
CENTRE: SINGAPORE INDIAN 1973-77

ICD (9th) Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	Ascar
140 LIP VERMILION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
141 TONGUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
142 SALIVARY GLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
143 MOUTH	0	0	0	0	0	0	0	0	1	0	0	1	2	0	1	1	1	1	8	3.62	6.27
146 OROPHARYNX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
147 NASOPHARYNX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
148 HYPOPHARYNX	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	4	1.81	1.14
150 OESOPHAGUS	0	0	0	0	0	0	1	1	2	1	1	0	3	1	0	0	0	0	10	4.52	4.20
151 STOMACH	0	0	0	0	0	0	1	1	2	3	1	1	3	0	0	1	0	0	13	5.88	5.00
152 SMALL INTESTINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
153 COLON	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	0	5	2.26	2.81
154 RECTUM	0	0	0	0	1	0	0	2	0	0	1	2	1	0	0	0	0	0	7	3.17	2.29
155 LIVER	0	0	0	0	0	0	0	0	0	4	1	3	0	0	0	0	0	0	8	3.62	2.17
156 GALL BLADDER	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0.90	3.33
157 PANCREAS	0	0	0	0	0	0	0	0	1	0	2	1	1	0	0	0	0	0	5	2.26	1.38
160 NOSE	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.45	0.34
161 LARYNX	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4.45	0.24
162 LUNG	0	0	0	0	0	1	0	1	1	2	1	1	0	0	1	0	1	0	9	4.07	5.17
170 BONE	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1.36	1.67
171 CONNECTIVE TISSUE	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0.90	0.79
172 SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.45	0.23
173 SKIN OTHER	0	0	0	0	0	1	0	1	1	1	0	1	0	0	0	1	0	0	6	2.71	3.05
174 FEM. BREAST	0	0	0	0	1	0	3	3	5	9	7	6	4	2	1	1	0	0	42	19.00	17.21
180 CERVIX	0	0	0	0	0	0	1	3	4	7	8	7	4	1	2	0	0	0	37	16.74	14.20
181 CHORIO.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.45	0.33
182 UTERUS	0	0	0	0	0	1	0	2	1	1	2	4	0	1	0	0	0	0	12	5.43	4.78
183 OVARY ETC.	0	0	0	0	0	1	0	1	0	0	2	4	1	1	0	0	0	0	10	4.52	4.42
184 OTHER FEM. GENT.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
188 URI. BLADDER	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.90	0.45
189 KIDNEY ETC.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.45	0.24
190 EYE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
191 BRAIN-NERV. SYS.	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1.36	2.00
193 THYROID GLAND	0	0	0	1	1	1	0	1	0	3	0	0	1	0	0	0	0	0	8	3.62	2.71
194 ENDO. GLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
200 LYMPHOSARCOMA	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.45	0.23
201 HODGKINS DISE.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
202 LYMPH. TISSUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.45	1.67
203 MULTIPLE MYEL.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.45	0.23
204 LEUK. LYMPHATIC	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1.81	3.33
205 LEUK. MYELOID	0	0	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	4	1.81	2.79
206 LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
207 LEUK. OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208 POLYCYTHAEMIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
209 MYELOFIBROSIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
999 OTHER & UNSPEC.	0	0	0	0	0	1	0	2	2	0	0	2	0	1	0	1	0	0	9	4.07	5.31
TOTALS	4	1	1	4	5	7	8	21	21	35	31	34	24	9	6	7	2	1	221	100.00	100.00

TABLE 5.2C: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) IN MALES.
CENTRE: U.K. ENGLAND OXFORD REGION 1974-77

ICD (9th) Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	Ascar
140 LIP VERMILION	0	0	0	0	0	0	0	1	1	7	12	9	12	24	15	16	19	0	116	0.77	0.67
141 TONGUE	0	0	0	0	1	1	0	1	2	1	3	8	7	9	6	2	8	0	49	0.33	0.36
142 SALIVARY GLAND	0	0	0	0	2	6	5	5	6	4	3	10	5	7	5	2	4	0	64	0.43	0.73
143 MOUTH	0	0	0	0	0	0	0	0	0	4	7	7	8	11	7	5	2	0	51	0.34	0.31
146 OROPHARYNX	0	0	0	0	0	0	0	0	0	1	2	3	3	9	5	1	4	0	28	0.19	0.15
147 NASOPHARYNX	0	0	0	1	0	1	2	1	1	3	1	4	2	2	1	0	1	0	20	0.13	0.23
148 HYPOPHARYNX	0	0	0	0	0	0	1	0	0	0	4	4	6	8	10	2	4	0	39	0.26	0.22
150 OESOPHAGUS	0	0	0	0	0	0	0	0	3	10	15	15	32	44	42	26	29	0	216	1.44	1.21
151 STOMACH	0	0	0	0	0	2	1	8	18	37	74	100	159	208	223	159	152	1	1142	7.60	6.47
152 SMALL INTESTINE	0	0	0	0	0	0	0	0	2	1	9	10	4	8	4	5	2	0	45	0.30	0.31
153 COLON	0	0	0	1	0	6	8	11	13	35	63	78	122	181	175	153	129	0	975	6.49	5.71
154 RECTUM	0	0	0	0	0	0	2	7	18	29	46	60	109	134	129	114	126	0	774	5.15	4.48
155 LIVER	1	0	0	0	0	0	0	0	1	2	5	8	9	7	9	13	5	0	60	0.40	0.38
156 GALL BLADDER	0	0	0	0	0	0	0	1	1	5	5	11	12	18	18	9	7	0	87	0.58	0.51
157 PANCREAS	0	0	0	0	0	0	2	2	14	17	27	37	59	92	100	50	72	1	473	3.15	2.75
160 NOSE	1	1	0	0	0	1	0	1	2	1	5	8	5	5	7	2	5	0	44	0.29	0.38
161 LARYNX	0	0	0	0	0	0	1	1	3	9	22	28	35	46	35	26	15	0	221	1.47	1.32
162 LUNG	0	0	0	0	0	1	5	14	39	99	273	381	647	868	800	535	303	3	3968	26.40	22.08
170 BONE	0	2	5	7	1	3	2	0	1	0	2	2	5	1	2	0	5	0	38	0.25	0.81
171 CONNECT. TISSUE	2	0	1	2	0	3	2	6	3	9	6	8	4	6	6	9	4	0	71	0.47	0.80
172 SKIN MELANOMA	0	1	0	2	1	6	9	11	6	12	12	13	15	8	6	2	7	0	111	0.74	1.27
173 SKIN OTHER	0	0	1	1	3	13	18	30	49	91	152	213	279	286	293	211	241	23	1904	12.67	12.16
175 MALE BREAST	0	0	0	0	0	1	0	2	1	1	2	6	3	4	5	4	5	0	34	0.23	0.24
185 PROSTATE	0	1	0	0	0	0	0	2	1	5	25	48	129	193	300	243	283	0	1230	8.18	5.88
186 TESTIS	1	0	0	3	23	26	40	27	24	10	7	3	0	2	2	3	1	0	172	1.14	3.50
187 PENIS	0	0	0	0	0	0	0	2	0	3	3	4	7	7	8	4	5	0	43	0.29	0.27
188 URI. BLADDER	0	0	0	1	1	6	6	8	12	36	58	82	123	163	170	144	125	1	936	6.23	5.47
189 KIDNEY ETC.	4	1	0	0	1	2	1	2	7	16	31	30	42	50	49	22	24	0	282	1.88	2.01
190 EYE	3	0	1	1	0	2	2	1	3	0	0	2	4	0	2	0	0	0	21	0.14	0.39
191 BRAIN-NERV. SYS.	9	14	4	12	7	17	13	22	14	27	43	42	39	29	24	14	11	0	341	2.27	4.61
193 THYROID GLAND	0	0	0	0	0	0	2	3	1	3	2	0	4	5	2	1	2	0	25	0.17	0.23
194 ENDO. GLANDS	2	2	1	2	1	1	1	0	1	0	1	3	1	1	1	1	2	0	21	0.14	0.43
200 LYMPHOSARCOMA	0	3	4	1	2	6	8	10	2	6	18	18	16	32	22	17	16	0	181	1.20	1.71
201 HODGKINS DISE.	1	3	4	11	18	17	11	6	13	4	11	6	13	13	13	3	2	0	149	0.99	2.78
202 LYMPH. TISSUE	2	0	1	1	1	6	6	2	1	6	13	11	14	19	14	11	11	0	119	0.79	1.04
203 MULTIPLE MYEL.	0	0	0	0	0	0	1	0	3	4	16	22	32	19	27	20	15	0	159	1.06	0.95
204 LEUK. LYMPHATIC	27	8	5	4	2	4	1	2	0	1	1	2	9	16	21	14	21	1	139	0.92	2.36
205 LEUK. MYELOID	1	2	3	3	2	4	8	3	7	6	9	10	14	18	19	17	18	0	144	0.96	1.46
206 LEUK. MONOCYTIC	1	0	1	0	0	0	0	0	0	0	1	2	0	1	1	1	0	0	8	0.05	0.11
207 LEUK. OTHER	0	1	0	0	1	0	0	0	0	0	2	1	0	4	3	2	7	0	21	0.14	0.18
208 POLY-VERA	0	0	0	1	0	0	0	0	1	3	4	4	11	6	8	4	1	0	43	0.29	0.30
209 MYELOFIBROSIS	0	0	0	0	0	0	0	0	1	1	0	1	2	3	6	1	4	0	19	0.13	0.11
999 OTHER & UNSPEC.	1	0	0	0	0	1	3	7	8	19	29	27	69	59	81	62	81	0	447	2.97	2.68
TOTALS	56	39	31	54	67	136	161	199	283	528	1024	1341	2071	2626	2676	1930	1778	30	15030	100.00	100.00

TABLE 5.2D: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) IN: FEMALES.
CENTRE: U.K. ENGLAND OXFORD REGION 1974-77

ICD (9th) Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
140 LIP VERMILION	0	0	0	0	0	0	0	0	1	1	1	1	0	2	2	3	5	0	16	0.11	0.09
141 TONGUE	0	0	0	1	0	1	2	0	0	2	2	5	5	5	3	6	5	0	37	0.26	0.27
142 SALIVARY GLAND	1	0	1	0	1	1	4	3	4	1	6	3	3	5	0	3	5	0	41	0.28	0.44
143 MOUTH	0	0	0	0	0	0	1	1	0	1	2	3	5	8	3	3	7	0	34	0.24	0.21
146 OROPHARYNX	0	0	0	0	0	0	0	0	0	2	1	2	3	2	2	1	1	0	14	0.10	0.09
147 NASOPHARYNX	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	3	0.02	0.02
148 HYPOPHARYNX	0	0	0	0	0	0	1	2	1	0	1	1	3	8	4	3	5	0	29	0.20	0.19
150 OESOPHAGUS	0	0	0	0	0	0	0	1	2	2	5	8	18	27	28	40	67	0	198	1.37	1.01
151 STOMACH	0	0	0	0	0	1	3	9	9	10	27	36	58	97	115	127	221	0	713	4.93	3.84
152 SMALL INTESTINE	0	0	0	0	0	0	1	1	1	4	5	2	3	5	9	4	4	0	39	0.27	0.26
153 COLON	0	0	3	4	4	2	6	12	22	36	64	105	109	180	217	206	342	2	1314	9.09	7.77
154 RECTUM	0	0	0	0	1	3	0	5	8	12	51	45	74	77	78	88	130	2	574	3.97	3.31
155 LIVER	1	0	0	0	1	0	1	1	0	0	2	0	3	3	6	5	11	0	34	0.24	0.27
156 GALL BLADDER	0	0	0	0	0	0	0	1	0	5	2	8	8	21	27	28	29	0	129	0.89	0.70
157 PANCREAS	0	0	0	0	0	1	0	3	7	11	19	39	55	54	71	83	106	0	449	3.10	2.49
160 NOSE	1	0	0	0	0	0	0	0	2	5	1	5	4	2	6	5	4	0	35	0.24	0.26
161 LARYNX	0	0	0	0	0	0	0	2	2	1	6	3	5	9	2	6	6	0	42	0.29	0.27
162 LUNG	0	0	0	0	0	0	1	2	21	45	94	122	191	203	162	140	151	1	1133	7.83	6.86
170 BONE	0	2	2	2	3	1	0	1	1	0	1	0	2	3	2	9	4	0	33	0.23	0.53
171 CONNECT. TISSUE	2	0	1	3	1	1	4	1	7	5	7	3	5	6	5	4	10	0	65	0.45	0.73
172 SKIN MELANOMA	0	0	0	2	5	11	21	20	14	24	25	13	12	9	12	7	17	3	195	1.35	1.90
173 SKIN OTHER	0	1	0	3	4	11	18	35	27	62	111	162	166	176	203	185	294	17	1475	10.20	9.17
174 FEM. BREAST	0	0	0	1	0	22	70	130	240	423	388	351	441	417	396	331	395	4	3609	24.95	24.78
180 CERVIX	0	0	0	0	5	27	45	30	39	55	73	79	81	52	38	21	32	0	577	3.99	4.82
181 CHORIO CA.	0	0	0	0	2	1	0	1	0	1	1	0	0	0	0	0	1	0	7	0.05	0.13
182 UTERUS	0	0	0	0	1	1	1	15	17	41	83	106	97	105	83	70	60	1	681	4.71	4.41
183 OVARY ETC.	1	1	1	3	6	9	8	16	38	50	97	83	89	87	84	59	57	1	690	4.77	5.14
184 OTHER FEM. GENT.	0	0	0	0	0	3	1	0	2	8	6	7	10	25	21	29	42	0	154	1.06	0.86
188 URI. BLADDER	0	0	0	0	2	0	2	3	2	10	21	23	24	46	52	63	80	1	329	2.27	1.88
189 KIDNEY ETC.	8	1	0	1	1	1	2	1	4	10	8	10	14	18	18	17	22	0	136	0.94	1.26
190 EYE	3	0	0	0	2	0	0	0	0	2	2	1	2	1	1	3	1	0	18	0.12	0.29
191 BRAIN-NERV. SYS.	5	10	12	8	6	7	5	7	11	15	41	32	32	34	15	14	12	0	266	1.84	3.43
193 THYROID GLAND	0	1	1	4	2	4	3	5	1	9	5	8	8	7	9	9	9	0	85	0.59	0.89
194 ENDO. GLAND	1	0	1	0	0	1	1	0	2	0	5	4	2	2	2	1	2	0	24	0.17	0.25
200 LYMPHOSARCOMA	0	0	0	3	1	1	2	4	7	4	9	13	17	14	17	23	21	0	136	0.94	1.00
201 HODGKINS DIS.	0	1	3	8	16	7	4	2	9	5	5	7	6	5	6	6	1	0	91	0.63	1.74
202 LYMPH. TISS.	0	0	1	0	1	3	1	2	3	4	11	8	13	11	14	13	12	0	97	0.67	0.71
203 MULTIPLE MYEL.	0	0	0	0	0	0	1	1	5	8	4	5	9	22	27	18	22	0	122	0.84	0.74
204 LEUK. LYMPHATIC	18	13	6	1	1	2	0	1	0	0	2	2	5	7	14	13	26	0	111	0.77	2.12
205 LEUK. MYELOID	2	2	2	2	2	0	4	4	7	5	6	6	15	13	17	15	24	0	126	0.87	1.18
206 LEUK. MONOCYTIC	0	0	0	1	0	1	0	0	0	0	1	0	0	0	1	2	4	0	10	0.07	0.09
207 LEUK. OTHER	1	1	0	1	0	0	0	0	2	1	2	0	0	4	4	3	7	0	26	0.18	0.27
208 POLY. VERA	0	0	0	0	0	0	1	1	3	1	0	1	2	6	3	4	3	0	25	0.17	0.17
209 MYELOFIBROSIS	0	0	0	0	0	0	0	2	0	0	0	0	3	6	4	7	4	0	26	0.18	0.15
999 OTHER & UNSPEC.	0	1	0	1	1	2	6	5	9	12	25	36	49	68	79	86	135	0	515	3.56	3.02
TOTALS	44	34	34	49	69	126	220	330	530	893	1228	1349	1651	1852	1862	1764	2396	32	14463	100.00	100.00

APPENDIX 1

INDIAN COUNCIL OF MEDICAL RESEARCH
National Cancer Registry Project—CORE DATA

Name of Patient _____ (First Name) _____ (Second Name) _____ (Surname)

Name of Father _____

Name of Husband/ Wife _____

Name of Guardian _____

Name of Mother _____

Address (Local) _____

Address (Permanent) _____

Address (Near relative) _____

(1-3) ICMR Job No. | | | |

(6-7) Centre (Registry) | | |

(8-14) Registry Number | | | | | | | |

(15-17) Place of Registration _____ | | | |

(18-23) Hospital/Private/Dispensary/Death Register No. | | | | | | |

(24) Type of Registry (*Key*: Population[1]/Hospital[2]) | |

(25-26) Age _____ year | |

(27) Sex _____ (*Key:* Male[1], Female[2], Others[3]) | |

(28-29) Mother Tongue _____ | | |

(30-32) Place of Birth _____ | | | |

(33-34) Duration of stay in the city
(Actual Years) | | |

(35) Religion _____ | |
(*Key:* Hindu[1], Muslim[2], Christian[3], Sikh[4], Jain[5], Buddhist[6])

(36) Education _____ | |
(*Key:* Illiterate[1], Literate[2], Primary[3], Middle[4], Secondary[5], Technical after Matric[6], College & above[7])

(37-38) Occupation
Present _____ | |

(39-40) Immediate Past _____ | |

(41-46) Date of first Diagnosis | | | | | | |

(47) Previous tumour directed treatment
(*Key:* Yes[1], No[2]) | |

If Yes, where _____

Type of treatment _____

(48-50) Investigation relevant to the diagnosis
of Cancer | | |

_____

_____

(*Key:* Supplied in instruction manual)

(51-52) Most valid diagnosis of cancer
(*Key:* Clinical only[1], X-ray[2], Isotopes[3], Endoscopy[4], Angiography[5], Exploratory surgery or autopsy but without histology[6], | |

Specific biochemical and/or immunological test[7], Cytology or haematology[8], Histology of metastasis[9], Autopsy with concurrent or previous histology of primary[10], Unknown[11], Histology of primary[12], Death certificate only[13])

(53-55) Primary site (Topography) (ICD—0) | | | |

(56-59) Primary site (Topography) (ICD—9) | | | | |

_____

(60-64) Histological Type: Morphology (ICD—0) | | | | | |

_____

_____

(65) Clinical extent of disease before treatment at reporting institution:
(*Key:* In-situ[1], Localised[2], Direct extension[3], Regional lymph nodes involvement[4], Direct extension with regional node involvement[5], Distant metastasis[6], Not applicable[7], Unknown[8])

(66-69) TNM | | | | |

(70) Treatment within six months at reporting hospital

_____

[*Key:* No treatment[0], Surgery[1], Radiotherapy[2], 1+2[3], Chemotherapy[4], 1+4[5], 2+4[6], 1+2+4[7], Other therapy (specify————————[8]), Unknown[9]]

(71) Pathology stage (Histology)_____

(72) Pathology stage_____

(73) Autopsy_____

(74) If source is death report, type of certification

(75-76) Area/Ward Number | |

APPENDIX 2

POPULATION BASED CANCER REGISTRY AT KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY, BANGALORE

DR. M. KRISHNA BHARGAVA, Project Chief
DR. A. NANDKUMAR, Senior Research Officer (Medical)

ANNUAL REPORT

(FROM JANUARY 1, 1982 TO DECEMBER 31, 1982)

FACTS ABOUT BANGALORE

Bangalore, an urban agglomerate, is the capital city of Karnataka State in the South of India, occupying an area of 191 Sq. Km. It is situated between 13° North and 78° East. It has an altitude of 914.4 meters above sea level.

At the time of 1981 census (as on 1st March, 1981) 2.91 million persons (52.8% males, 47.2% females), in the ratio of 894 females per 1000 males, were enumerated in Bangalore.

It is conspicuous to observe that the decennial growth rate of the city between 1971 and 1981 censuses is 76.2%. The literacy rate in the general population is 62.9% (69.2% males, 55.9% females).

In Bangalore city, there are 134 hospitals and nursing homes. 1131 are the general medical practitioners.

Kidwai Memorial Institute of Oncology was established in 1973 by the Government of Karnataka. It has a bed strength of 190 for cancer patients only. Cobalt-60 teletherapy treatment is given at Kidwai Memorial Institute of Oncology and at Victoria Hospital in Bangalore.

The Bangalore population based cancer registry was established on 1st August, 1981 at the Kidwai Memorial Institute of Oncology, and the regular compilation of data could begin from 1st January, 1982.

STAFF

The recruitment of the staff was done through notification in news media and selection. The existing staff of the registry is shown at Annexure I.

The post of senior biostatistician has not been filled-up for want of a suitable candidate. However, the services of a biostatistician from hospital cancer registry, who was trained at Bombay, are being utilised. The post of senior biostatistician has since been readvertised and interview and selection is to be held shortly.

TRAINING PROGRAMME

The Senior Research Officer conducts a weekly meeting-cum-teaching programme where the working of the staff is discussed and medical nomenclature elaborated. Apart from this no specific programme of training was conducted by this registry during the course of the year. Some of the staff were sent for training to the Tata Memorial Centre between 14th and 23rd December, 1981. The senior research officer attended the cancer epidemiology course jointly conducted by the ICMR, Cancer Research Institute and IARC, at Bombay from 11th to 30th January, 1982. He also attended the W.H.O. cancer control programme in Bombay from 1st to 3rd February, 1982. A visit by some of the junior staff to the other registries is planned for the coming year.

SOURCES OF INFORMATION

The sources of cancer patient information are in general single, frequently double and at times multiple. Patients who are straightaway referred to Kidwai Memorial Institute of Oncology on the slightest clinical suspicion, usually provide information at this source. However, often patients are referred on their being proved as cancer elsewhere, with or without documented histopathological, haematological or radiological evidence of cancer. The sources of information of such patients may be at two, three or even more number of places. For example, a patient admitted

to a private nursing home without pathology services may have his/her biopsy read by a pathologist practising elsewhere, and he may have consulted a general practitioner and/or undergone a series of X-rays by a radiologist before being admitted to the nursing home. Eventually, this patient is generally referred to Kidwai Memorial Institute of Oncology for further management. Thus, the various sources of information with reference to the above patient could be:

1. General practitioner.
2. Practising radiologist.
3. Practising pathologist.
4. Nursing home/physician/surgeon in-charge.
5. Kidwai Memorial Institute of Oncology.

The above is with reference to hospitals/nursing homes without histopathology services.

'Major' hospitals, Government or private with pathology and other laboratory and treatment facilities, however, form a single comprehensive source of patient information, from the various departments under them. These include:

1. Out-patient records.
2. In-patients wards.
3. Medical records.
4. Pathology department-histopathology/haematology/cytology reports.
5. Radiology including radiotherapy and radiodiagnosis. (records/register)

Besides the above, there are ten corporation units including one main unit that provide data on mortality.

WORKING OF REGISTRY

A. Programme of work

Overall supervision and guidance is provided by the project chief. The method of daily working and technical guidance as well as assessment of work done every week is done by the senior research officer (Medical). Biostatistician looks after matters pertaining to administration and work allotment. The junior biostatistician along with the statistical assistant are responsible for tabulation of data collected, for subsequent statistical evaluation. The supervisor is in charge of ensuring proper data collection by investigators and also in compiling the final list. The collection of basic data from patients or their records and entering the same in the proforma is done by the investigators. For hospitals and nursing homes other than Kidwai Memorial Institute of Oncology an introductory letter mentioning the basic purpose and need for co-operation in collecting data regarding cancer patients was sent. The investigators were introduced to superintendents and administrative officers of these hospitals by the senior research officer (Medical), the biostatistician of the hospital cancer registry and also by the co-ordinating chief.

A weekly time table (Annexure II) has been drawn indicating the day-to-day posting of the investigators to these hospitals and nursing homes and the frequency of posting determined by the bed strength of the Hospitals as well as on the probability of cancer patients being diagnosed and treated there. Pathology reports of patients with proved cancer are also obtained from the laboratories dealing with histopathology. Based on these reports as well as confirmed radiology reports of malignancies from private X-ray clinics attempts were made to get further information of the patients from the concerned physicians or surgeons. A weekly meeting-cum-teaching programme on every saturday between 2.30 p.m. to 4.30 p.m. is being conducted by the senior research officer. This is attended by the all staff and the weeks work is assessed, and the difficulties and problems faced by the various personnel discussed.

During the second quarter of the year mopeds were provided to the investigators and a certain degree of flexibility in their weekly time table was allowed, especially with regard to their visits to private hospitals and nursing homes. This was done in order to enable them to cover more private nursing homes as well as to cross check with the physicians/ surgeons who had referred their patients or operated specimens to the radiologist or pathologist respectively. In doing so care was taken not to cut short or circumvent data of hospitals/nursing homes for which postings were already allotted.

B. Working of Registry at Kidwai Memorial Institute of Oncology

Two investigators along with the supervisor write down the names and addresses of cancer patients resident in Bangalore for a period of 1 year and more as soon as these patients are registered in this hospital as either In-patients or as Out-patients. The investigators with the help of the patients and/or their relatives immediately fill up the questionnaire/core data form. These patients are followed up regarding their clinical diagnosis and relevant

pathological/haematological/radiological investigations. The detailed reports are entered in the proforma. These patients are classified into 3 categories:

(a) proved cancer.
(b) suspected or probable cancer—to follow them for further diagnostic details.
(c) proved non-cancer.

Names and other details of patients in category (a) viz. proved cancer are listed in the registry with their site and diagnosis, register numbers are given and coding is done. The histopathology/haematology/cytology slides of these patients are examined to give uniform nomenclature and grading, in order to aid coding. Where such a diagnosis could not be made clinical/radiological diagnosis was considered. The patients with suspected or probable cancer were followed up and short listed as and when they were proved or disproved. The patients with proved non-cancer were automatically excluded.

C. **Working at other hospitals**

The frequency of posting of the investigators to other hospitals depended on the strength of patient attendance and probability of encountering cancer patients. The investigators could collect data mainly from:

(a) Medical records department.
(b) Pathology record/reports.
(c) Radiology record/reports.

All the details of patient with proved cancers based on the above reports were listed. The non-resident patients were left out of the list by checking their addresses in the medical record department. Further details of patients with proved cancer were obtained either through the concerned physician/surgeon or where possible through patients and/or relatives of patients. The core proformas were made as complete as possible. The details of patients with proved cancer were also obtained through reports of histopathology/haematology and radiology from private laboratories or clinics. The list of such cancer patients was cross checked with those of Kidwai Memorial Institute of Oncology and names of those patients who were already registered were eliminated.

The format of work at Kidwai Memorial Institute of Oncology and in other hospitals is essentially the same. However, the following modifications were adopted in order to overcome certain inherent drawbacks like improper maintenance of medical records and incomplete work-up of cases or case sheets, particularly in Government General Hospitals. The main objective in making these improvements was to obtain complete as well as authentic data thereby enhancing the quality of the registry.

1. In Government General Hospitals access to medical reports of patients proved as cancer was extremely difficult at times so that even basic data such as place of residence of the concerned patient remained unknown. Therefore as a routine, investigators were instructed to directly approach the concerned physician/surgeon/unit chief/ward doctors/nursing staff for particulars regarding:

(a) Clinically suspected or probable cancer patients admitted as in-patients in the wards for further investigations.
(b) Details of proved cancer patients as reported in pathology records.

The co-operation by the physicians/surgeons including unit heads as well as the nursing staff of the wards has been extremely good.

2. A few patients in the Government General Hospitals are biopsied or treated as out-patients. The physician/surgeons/radiotherapists concerned have been persuaded either to collect necessary information if possible or give the date of the patients next appointment with him so that the investigators can go over on that date/time and gather necessary details from the patient.

3. The co-operation by all concerned personnel in private hospitals/nursing homes as well as private pathologists/radiologists has been exemplary. Only difficulty is the addresses of patients whose biopsies/surgical specimens is not recorded and sometimes the referral physicians/surgeons name or address is also not recorded. The concerned pathologists/radiologists have been requested to record addresses of the patient or the referring doctor in such cases. This is further being strengthened in two ways:

1. Panel of pathologists, that could stimulate interest in them to record details of at least "interesting cases".
2. "Feed Back" of data collected every 3 or 6 months giving statistical and other information not only about their own cases but also as compared to others.

"Feed Back" regarding details of patient could be further enhanced by posting a feed back information form (Annexure III) to the pathologist/physician concerning the final diagnosis, treatment given and general condition of the patient, at the time of writing.

Regarding incentives—

(a) Above "Feed Back" itself is an incentive.
(b) Monetarily it would be difficult to decide as to whom to give the incentive—referring physician, surgeon, nursing home or the pathologist who reports the confirmative diagnosis. At times it may be counter productive.

Surgeons including orthopaedic surgeons and gynaecologist could be given incentives in the form of "free" pathology services for operative specimens where a diagnosis of malignancy is suspected.

ELIMINATION OF DUPLICATION

Patients proved as cancer elsewhere are subsequently referred to Kidwai Memorial Institute of Oncology for further management. Detailed information is thus readily and reliably obtained directly from the patient or attendant, in such cases. Duplication of these as well as others obtained through pathologists/radiologists is eliminated in the following ways:

(a) Entering names, age, sex, residential addresses, diagnosis and registry number of patients in index cards on immediately being proved as cancer. These index cards arranged alphabetically according to name helped in eliminating already registered cases.
(b) A hospital wise register.
(c) A register of referred slides for histopathology with basic details of patient as well as the slide namely, pathologist/laboratory reporting; referring physician/surgeon/hospital; slide number and date of reporting.

A site-wise (code-wise) indexing of cards was introduced as suggested by Dr. C. S. Muir. This, after further separation into male and female helped a long way in the elimination of duplications, with case.

QUALITY CONTROL IN REGISTRATION

Quality control is essential at every stage of registration in general, and at few crucial places in particular. The general measures in ensuring good quality registration has been outlined in the method of working of the registry. The specific places where a more critical check is required are with reference to:

1. Completeness of coverage.
2. Quality of source of information.
3. Quality of patient information recorded by investigators.
4. Decision to include cases under 'proved cancers', based on clinical and radiological evidence alone, and where microscopic confirmation of diagnosis has not been done or is not available.
5. Nomenclature and coding of neoplasms.

1. Completeness of coverage: All hospitals, nursing homes and laboratories are being covered by the registry in the registration area. In addition, in order to obtain information regarding cancer patients from general practitioners allopathic and non-allopathic, cards have been posted to all the 1131 general practitioners to give details of cancer patients even if suspected on clinical grounds, and the registry has been receiving information through these cards.

2. Quality of source of information: Information obtained from pathology/radiology laboratories does not give full details of patients including residential status as required in the core proforma. Every effort is made to trace these patients to the source namely, referring physician/surgeon/hospital/nursing home/medical records.

3. Patient information recorded by investigators is frequently checked/cross-checked when the same patient interviewed by one investigator elsewhere is once again questioned by another investigator at Kidwai Memorial Institute of Oncology. In such cases, sometimes there is slight variation in the information recorded, mainly because of the change in the respondent. Whenever, such an event occurs, the patient as respondent is taken as a more reliable indicator depending on the physical and mental status of the patient. If necessary the disparity in the recorded information is once again clarified.

4. Cases proved as cancer based on clinical and radiological evidence only: This important aspect of registration is decided by the senior research officer. Only microscopically confirmed cases are straightaway registered by the investigators. All other case-files of patients, particularly at Kidwai Memorial Institute of Oncology are seen by the senior research officer, who, in case of any further doubt in specific cases confirms the validity of a particular diagnosis in consultation with the physician/surgeon who has seen the patient. The same is not practicable in the other hospitals. In such instances only rapport between the investigators and the physicians/surgeons/heads of units of various hospitals and the awareness of the latter to give information regarding the same is important.

5. Nomenclature and coding of neoplasms as per ICD-0 and ICD-9 is done by the senior research officer in order to ensure uniformity and accuracy.

Besides, the above, relevant data to the major sources of patient information namely hospitals and pathology laboratories are sent to give the concerned authorities an idea of the cancers they are reporting. The annual data of the two major pathology laboratories in the city have already been sent with a request to the reporting pathologists to record the addresses of the patients whose report has proved to be a malignant neoplasm.

CANCER CASES REGISTERED

Details of Cancer Cases Registered in Bangalore City from all Collaborating Hospitals including Kidwai Memorial Institute of Oncology except Municipal Corporation.
(From January 1, 1982 to December 31, 1982)

Total Number of Cases Registered		2355
Number Eliminated Through Duplication		176
Number with Rubric/1 or /0 of Morphology Code in ICD-0		62
Neoplasms of Central Nervous system	17	
Neoplasms of other Sites	39	
Number Registered on Clinical Data But Later Proved Benign	6	
Number Found to be Pre/1982 Cases		19
Number Found to be Non-Residents		12
Residential Status unknown		191
Final Number taken as Incident Cases		1895

RESIDENT CANCER CASES REGISTERED AT KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY ONLY

Details of new resident cancer cases registered only at Kidwai Memorial Institute of Oncology.
(From January 1, 1982 to December 31, 1982)

Total Resident persons (proved & others cancers) registered		2063
Total Number of proved cancers		1291
Proved cancers till December 1982	1198	
Proved cancer on subsequent follow-up	93	
Total Number of proved Non-Cancers		423
Non-proved cancers till December 1982	330	
Non-proved cancers on subsequent follow-up	93	
Remaining persons for under observation or follow-up		349

Thus the total number of proved cancers in resident patients who have registered at Kidwai Memorial Institute of Oncology whether diagnosed/treated elsewhere or not is 1291 or 68.12% of 1895 i.e., sixty-eight percent of Cancer patients of Bangalore City initially or ultimately reach Kidwai Memorial Institute of Oncology and details of these patients could be obtained from the records of Kidwai Memorial Institute of Oncology. Information in 8% of these patients (68.1%) were already recorded during the visits of the investigators to the other hospitals/nursing homes/laboratories. This group of patients, generally, were those who had been investigated as In-patients, and on being proved as cancer were referred to Kidwai Memorial Institute of Oncology, with or without initiation of active treatment. Thus, Kidwai Memorial Institute of Oncology, served as source of patient information at initial registration in about 60% of cases.

CANCER MORTALITY OF RESIDENT CASES

Total Number Obtained through Death Certificates	312
Number Matched with Incident cases of 1982	125
Number Matched with Pre-1982 cases from Hospital Registry of KMIO	35
Number with Death Certificates only—unmatched with morbidity cases (Not included in age, sex and site analysis table because detailed information is not available.)	152

OBSERVATIONS ON CANCER PATTERNS

Cancer (all sites) appears to be more among females than in males. The general population figures show a higher male population though marginally. This probably makes the higher incidence of female cancer, significant.

There is, however, a point of note. Cancer of the cervix and female breast together form 44.7% of cancers of all sites in females, and the high incidence of these two neoplasms may project, the overall female cancers higher than that in males. In males, stomach was the commonest site forming 11% of all male cancers followed by oesophagus (7%).

SPECIFIC OBSERVATIONS

1. Microscopic confirmation of diagnosis was available in 85.3% of all sites in males and 90.0% of all sites in females.

2. Fifty percent of women with cancer (all sites) were illiterate compared to 22% illiteracy in men. The illiteracy among females varied from 71% in cancer of the oral cavity and 56% in cancer of the cervix, to just 22% among those with lung cancer.

3. Cancer of the cervix formed 32.2% of all cancers in hindu females, compared to 17.2% and 17.31 % in muslims and christians respectively.

4. Carcinoma of the breast formed 12.19% of all cancers in hindu females compared to 32.26% and 21.15% in muslims and christians respectively.

5. Of the total number of 26 cases of carcinoma of the penis, 25 were in hindus, one in christians, and none in muslims.

6. There were 119 cases of carcinoma of unspecified parts of mouth. Of this 84 (70.6%) were in females and only 25 (29.4%) in males.

7. Other observations include:—

   (a) In the category other parts of mouth (code-145) mentioned above the predominant was buccal mucosa, (code-145.0) being seen in 80% and 97.6% in males and females respectively.

   (b) The number of males (76.9%) with cancer of the tongue was higher than in females and majority of these (62.5%) occurred at the base.

   (c) Cancer of larynx, trachea, bronchus and lung and that of the bladder were all more common in males while thyroid cancers were more common in females.

   (d) There was a case of a six year old child with hepatocellular carcinoma.

   (e) Another three year old child had squamous cell carcinoma of the skin in the region of the eye.

COMMITTEES

There are two committees and a panel of pathologists that serve the registry. In order to oversee the working of the registry and give necessary advice, the Governing Council of the Kidwai Memorial Institute of Oncology, constituted two committees namely:

1. Core Committee.
2. Advisory Committee.

Core Committee: This committee has been formed under the chairmanship of Dr. D. J. Jussawalla, Tata Memorial Centre, Bombay. The functions of the Core Committee include reviewing the progress and work of the registry and also make specific recommendations if any like, purchase of major items for use in the registry and in the conduct of training programmes for registry personnel. The committee has met six times so far.

Advisory Committee: The objective in forming an advisory committee is to render advice on matters relating to the methodology of approach, the nature of co-operation and co-ordination required by various medical personnel as well as administrative staff, in the smooth functioning of the registry, this committee has been functioning under the chairmanship of the secretary to the Government of Karnataka, Health and Family Welfare Department. The other members include the heads of medical institutions, major hospitals, nursing homes, census department, corporation units and the bureau of economics and statistics. A total of 61 members constitute the committee. The registry is getting good co-operation from all the institutions. The committee has met on two occasions.

PANEL OF PATHOLOGISTS

In order to arrive at a more reasonable diagnosis in respect of problem oriented cases, a panel of pathologists confined to Bangalore urban agglomeration has been formed. The members constituting the panel are shown in Annexure IV. The panel members meet at frequent intervals to discuss interesting or controversial histopathology slides. These meetings have stimulated academic interest among the participants and there is a demand to have these meetings at more frequent intervals.

IMPROVEMENTS AND PLANS FOR 1983

A. Improvement in quality of registration.

1. Despite efforts the residential status of 191 patients remained unknown, though, histopathology reports confirmed the malignancy of the neoplasm. The weak point that build up this figure include:

   a) Pathology reports from Private laboratories.
   The data for the year 1982 of the major pathology laboratories has been analysed individually and sent to the respective laboratories. The number and percentage of reports of patients of unknown residential status has also been shown in the data, and a request has been made to the concerned pathologists to record the addresses of the patient. This along with the frequent meeting of the panel of pathologists should help in reducing this figure.

   b) Radiology reports from Private laboratories.
   The concerned radiologists have been already recording the residential address of the patients. House visits on the basis of these reports have been planned in order to get further confirmation of the suspected radiological diagnosis.

   c) Pathology reports of patients biopsied and treated on an out-patient basis in general hospitals.
   With the large out-patient turnover, particularly, in general hospitals recording addresses of patients by the busy physicians/surgeons has been found difficult. However, the investigators have built up personal rapport with many of the concerned medical personnel and this is bound to help during the coming year.

2. Mortality/certificates/registers do not provide either site of cancer or the name of the hospital/physician last attended by the patient, although, the cause of death is stated as cancer. The concerned medical officers in the corporation units have been requested to provide details as well as approximate date/month/year of first diagnosis.

3. Index cards: It was found convenient to separate index cards into male and female with two types of indexing name-wise in alphabetical order and site-wise. In order to aid this system of filing of index cards four different colours with the letters M and F at the background have been printed already. The same is being used by the registry for 1983. Simultaneous entry of patient information in these index cards at registration, eliminates duplication even at the time of entry into the cancer registry.

B. Participation of Medical Community: Participation of medical community is a basic essential in the smooth and continued functioning of the registry. Ways to sustain the medical community's interest and enhance their co-operation to the registry have to be evolved.

   Plans to achieve this objective are:

1. Feedback of data of individual hospitals/nursing homes in addition to individual patient information.

2. Enlighten medical community including general practitioners on the purpose and importance of registration and the role of cancer registry. This is to be achieved by giving lectures with slide demonstration on the above subject.

3. Clinical specialists particularly private practitioners should be well informed of work going on in the registry.

4. Offer certain specialised investigation free of charge and also render advance modalities of treatment. This has to be performed by the Institute where the registry actually operates.

C. Epidemiological Studies: Registration cannot be done just for the sake of registration—more specific studies have to be started.

1. Questionnaires have been designed to have in-depth studies to generate hypotheses regarding cancers of the breast, cervix, and upper gastrointestinal tract in males.

2. Further analysis of data already recorded.

3. Case control studies.

ANNEXURE I

DETAILS OF STAFF AS ON 1.1.1983, WORKING AT POPULATION BASED CANCER REGISTRY (I.C.M.R.) KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY, BANGALORE.

DR. M. KRISHNA BHARGAVA M.D., Project Chief

S. No.	Name	Qualification	Designation	Date of Joining
1.	Post vacant	—	Senior Biostatistician	—
2.	Dr. A. Nandkumar	M.D. (Pathology)	Senior Research Officer (Medical)	11.12.81
3.	Mr. K. Puttaswamy	M.Sc. (Statistics)	Junior Biostatistician	11.12.81
4.	Mr. Gangaboraiah	M.Sc. (Statistics)	Field Supervisor	11.12.81
5.	Mr. D. Jayaram	M.Sc. (Statistics)	Statistical Assistant	1.4.82
6.	Mr. M. R. Balakrishnoji Rao	M.A. (Sociology)	Social Investigator	11.12.81
7.	Mr. Rajanna	M.A. (Sociology)	Social Investigator	11.12.81
8.	Mr. N. M. Sreerama Reddy	M.A. (Sociology)	Social Investigator	11.12.81
9.	Mr. T. C. Venugopal	M.A. (Anthropology)	Social Investigator	11.12.81
10.	Miss A. T. Vinutha	M.A. (Psychology)	Social Investigator	11.12.81
11.	Mr. Srinivasa	M.S.W.	Social Investigator	14.6.82
12.	Mr. S. V. Krishnamurthy	B.Com.	Typist	30.12.82

ANNEXURE II

WEEKLY PROGRAMME OF FIELD SUPERVISOR AND THE SOCIAL INVESTIGATORS OF POPULATION BASED CANCER REGISTRY

S. No.	Name	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1.	Mr. Gangaboraiah	Corporation Units E.S.I.	Al-Amin/Gosha	Victoria	Corporation Units & KMIO.	H.M.T. & B.E.L.	K.M.I.O.
2.	Mr. M. R. Balakrishnoji Rao	K.M.I.O.	I.T.I./ Nursing Homes	K.M.I.O.	St. Philomena's Anand Diagnostic Lab.	K.M.I.O.	K.M.I.O.
3.	Mr. Rajanna	Victoria	Victoria Kalasa Pathology Lab.	K.M.I.O.	Victoria K.M.I.O.	Victoria	K.M.I.O.
4.	Mr. N. M. Sreerama Reddy	St. Martha's Nursing Home	K.M.I.O.	Victoria	Sindhi/ NIMHANS	K.M.I.O.	K.M.I.O.
5.	Mr. Srinivasa	Shenoy Medical Lab. Desai. KCG.	Victoria	Nursing homes MSRMC/KCG.	K.M.I.O.	K.M.I.O.	K.M.I.O.
6.	Mr. T. C. Venugopal	K.M.I.O.	K.M.I.O.	St. John BLC.	K.M.I.O.	BLC. Baptist.	St. John. K.M.I.O.
7.	Miss A. T. Vinutha	Victoria Jubilee X-Ray.	K.M.I.O.	K.M.I.O.	K.M.I.O.	Victoria	K.M.I.O.

ANNEXURE III

FEEDBACK FORM

NATIONAL CANCER REGISTRY PROJECT
(Indian Council of Medical Research)

POPULATION BASED
CANCER REGISTRY

KIDWAI MEMORIAL INSTITUTE
OF ONCOLOGY, HOSUR ROAD,
BANGALORE—560 029.
PHONE: 42061

NO:

DATE:

Dear Doctor,

FEEDBACK INFORMATION

Thank you very much for giving Clinical/Radiology/Histopathology details of patient: Mr./ Mrs./Miss_____ _____aged_____years_____.

A final Diagnosis of_____has been made.

Patient is further being managed by Surgery/Radiotherapy/Chemotherapy.

We look forward for your continued co-operation.

Thanking you,

Yours Sincerely,

Project Chief/Senior Research Officer,
(Medical)

ANNEXURE IV

PANEL OF PATHOLOGISTS SERVING THE POPULATION BASED CANCER REGISTRY (ICMR)

1.	Dr. M. Krishna Bhargava	Chairman.
2.	Wing Commander S. K. Adaval	Member.
3.	Dr. D. H. Deshpande	,,
4.	Dr. K. Y. Ghorpade	,,
5.	Dr. D. R. Govinda Rao	,,
6.	Dr. Irene Anthikad	,,
7.	Dr. John A. Thomas	,,
8.	Dr. S. S. Kakade	,,
9.	Dr. Kanan J. Gharpure	,,
10.	Dr. A. Mohan G. Shenoy	,,
11.	Dr. A. V. Ramaprasad	,,
12.	Dr. Sarala Das	,,
13.	Lt. Col. Sarkar	,,
14.	Dr. Shakunthala Mahishi	,,
15.	Dr. S. K. Shankar	,,
16.	Dr. Sashikala D. Kini	,,
17.	Dr. K. H. Sreenivasa Gowda	,,
18.	Dr. R. N. Visweswara	,,
19.	Dr. A. Nandkumar	Member-Secretary.

TABLE 1A: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES.
CENTRE: BANGALORE

ICD 9th	Site	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80+	Ans	Total	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	0.24	0.33
141	TONGUE	0	0	0	0	0	0	0	6	0	2	7	7	8	5	2	1	2	0	40	4.79	4.53
142	SALIVARY GLAND	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	4	0.48	0.53
143	GUM	0	0	0	0	0	0	0	0	0	1	3	1	2	1	0	0	0	0	8	0.96	0.77
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	1	0	0	2	2	1	0	0	1	0	7	0.84	0.86
145	OTHER MOUTH	0	0	0	0	0	0	1	0	5	6	3	5	0	3	2	0	0	0	25	2.99	2.60
146	OROPHARYNX	0	0	0	0	0	1	0	0	2	2	4	0	7	0	1	3	0	0	20	2.40	2.33
147	NASOPHARYNX	0	0	0	1	2	0	0	1	0	2	1	0	0	2	1	0	0	0	10	1.20	1.53
148	HYPOPHARYNX	0	0	0	0	0	0	0	2	1	5	9	4	11	4	2	4	1	0	43	5.15	4.97
149	PHARYNX ETC.	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	3	0.36	0.28
150	OESOPHAGUS	0	0	0	0	1	0	0	0	5	7	9	10	16	11	5	0	2	0	66	7.90	7.42
151	STOMACH	0	0	0	1	0	1	2	3	10	5	19	13	13	13	9	4	3	2	98	11.74	11.35
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
153	COLON	0	1	1	0	0	2	1	0	5	3	3	1	1	2	0	2	0	0	22	2.63	2.59
154	RECTUM	0	0	0	0	1	0	2	1	1	2	3	2	3	5	0	1	4	0	25	2.99	3.51
155	LIVER	0	1	0	0	1	0	0	1	2	3	1	5	2	4	5	2	1	0	28	3.35	3.77
156	GALL BLADDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0.12	0.00
157	PANCREAS	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0.36	0.26
158	RETROPERITONEUM	1	1	0	0	0	0	2	1	2	1	1	1	2	1	0	0	0	0	13	1.56	1.40
159	OTHER DIGST.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3	0.36	0.27
161	LARYNX	0	0	0	0	0	0	0	0	3	4	4	9	4	5	4	3	0	1	37	4.43	4.27
162	LUNG	0	0	0	0	0	0	1	2	2	6	3	5	7	7	7	1	0	0	41	4.91	4.78
163	PLEURA	0	0	0	0	0	0	0	0	0	0	1	1	3	0	1	0	0	0	6	0.72	0.60
164	THYMUS ETC.	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	0.36	0.27
165	OTHER RESP. ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	0	0	2	2	3	0	2	0	2	2	1	1	0	1	1	0	0	0	17	2.04	2.55
171	CONNECTIVE TISS	3	0	0	0	0	1	0	2	3	1	1	1	2	0	1	0	0	0	15	1.80	1.63

TABLE 1A *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES. CENTRE: BANGALORE

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	4	0.48	0.43
173	SKIN OTHER	0	0	0	0	0	1	2	1	1	1	2	4	3	2	4	0	2	0	23	2.75	2.83
175	MALE BREAST	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0.24	0.25
185	PROSTATE	0	0	0	0	0	0	0	0	0	0	0	3	2	6	4	10	3	0	28	3.35	5.10
186	TESTIS	1	1	0	0	0	2	1	1	0	0	0	0	1	0	1	0	0	0	8	0.96	0.96
187	PENIS ETC.	0	0	0	0	0	1	3	0	0	7	2	2	2	0	2	1	2	2	24*	2.87	2.59
188	URI. BLADDER	0	1	0	0	0	0	0	1	0	1	3	2	5	5	5	0	1	2	26	3.11	3.01
189	KIDNEY ETC.	1	0	0	0	0	0	0	1	1	0	0	0	2	3	1	0	0	0	9	1.08	1.14
190	EYE	2	1	0	0	0	0	0	0	0	2	0	1	1	1	0	0	0	0	8	0.96	0.92
191	BRAIN	1	3	0	0	0	2	2	0	3	4	0	0	2	1	0	0	0	1	19	2.28	1.98
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.12	0.08
193	THYROID GLAND	0	0	0	0	0	2	1	2	0	0	1	1	2	0	0	0	0	0	9	1.08	0.89
194	ENDO. GLANDS	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.24	0.28
195	ILL DEF. SITES	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0	0	0	4	0.48	0.48
196	SEC. LYMPH NODES	0	0	0	0	0	0	2	1	2	4	0	1	4	3	1	1	0	2	21	2.51	2.18
197	SEC. RESP. ETC.	0	0	0	0	0	0	0	0	0	1	1	2	1	0	1	1	0	0	7	0.84	0.84
198	SEC. OTHER SITE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
199	PRIM. UNK.	0	0	0	0	0	0	1	1	1	1	0	1	2	1	4	0	1	0	13	1.56	1.68
200	LYMPHOSARCOMA	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.12	0.10
201	HODGKINS DIS.	1	1	1	2	1	2	2	3	2	3	0	0	1	0	0	0	0	0	19	2.28	2.42
202	OTHER LYMPH.	1	3	1	1	2	0	2	3	3	3	5	2	5	1	1	0	1	1	35	4.19	4.09
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	1	0	0	5	0.60	0.74
204	LEUK. LYMPHATIC	0	1	1	0	0	0	0	0	0	0	0	0	2	1	1	1	0	0	7	0.84	1.01
205	LEUK. MYELOID	0	1	0	0	0	1	1	1	3	0	2	1	0	0	0	0	0	0	10	1.20	1.02
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
207	LEUK. SPEC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.12	0.24
208	LEUK. UNS.	0	2	0	2	1	1	0	0	0	1	2	0	0	0	0	0	0	0	9	1.08	1.36
	TOTALS	12	18	6	9	12	17	28	37	63	82	96	94	125	93	68	38	25	12	835	100.00	100.00

*2 cases of Ca. Penis etc. (ICD: 187) are not added in this table in the Bangalore Cancer Registry Annual Report of 1982 while they are included in other tables. Total male Cancer cases are 837.

TABLE 1B: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES.
CENTRE: BANGALORE

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.09	0.05
141	TONGUE	0	0	0	0	0	1	0	1	2	2	2	0	3	1	0	0	0	0	12	1.13	0.85
142	SALIVARY GLAND	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0.19	0.11
143	GUM	0	0	0	0	0	1	0	0	1	4	0	1	7	4	0	0	0	0	18	1.70	1.73
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	0.19	0.14
145	OTHER MOUTH	0	0	0	0	0	1	0	3	5	19	9	9	15	9	8	3	3	0	84	7.94	9.08
146	OROPHARYNX	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	3	0.28	0.70
147	NASOPHARYNX	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.19	0.43
148	HYPOPHARYNX	0	0	0	1	0	0	1	1	1	1	2	0	0	0	2	0	2	0	11	1.04	1.56
149	PHARYNX ETC.	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0.19	0.11
150	OESOPHAGUS	0	0	0	0	0	0	2	1	5	10	11	3	6	5	7	2	3	1	56	5.29	6.14
151	STOMACH	0	0	0	1	1	1	0	5	5	6	5	4	6	3	4	5	2	2	50	4.73	6.04
152	SMALL INTESTINE	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.09	0.05
153	COLON	0	0	0	0	1	0	1	0	0	0	1	1	2	2	2	0	0	0	10	0.95	1.32
154	RECTUM	0	0	0	0	0	1	2	2	1	5	2	0	4	0	5	1	0	1	24	2.27	2.27
155	LIVER	0	0	0	0	0	0	0	1	2	1	3	1	0	0	0	0	0	0	8	0.76	0.44
156	GALL BLADDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
157	PANCREAS	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.09	0.05
158	RETROPERITONEUM	0	0	0	0	0	1	0	0	1	1	3	1	2	2	1	0	1	1	14	1.32	1.45
159	OTHER DIGST. ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	1	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	6	0.57	0.67
161	LARYNX	0	0	0	0	0	2	1	0	0	1	0	1	2	2	0	0	0	0	9	0.85	0.84
162	LUNG	0	0	0	0	0	0	0	1	0	2	1	0	2	3	0	0	0	0	9	0.85	0.93
163	PLEURA	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	4	0.38	0.34
164	THYMUS ETC.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.09	0.05
165	OTHER RESP. ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	0	0	1	2	1	1	2	1	0	0	2	0	2	1	0	0	0	0	13	1.23	1.54
171	CONNECTIVE TISS	1	0	0	1	0	1	1	2	0	0	1	1	0	0	0	2	1	0	11	1.04	1.78
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	1	0	4	0.38	1.05

TABLE 1B *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES. CENTRE: BANGALORE

ICD 9th	Site	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80+	Ans	Total	%	ASCAR
173	SKIN OTHER	1	0	0	0	0	0	0	3	1	1	3	1	3	1	0	0	0	1	15	1.42	1.15
174	FEMALE BREAST	0	0	0	0	3	5	11	19	16	20	22	18	19	6	8	1	4	3	155	14.65	12.86
179	UTERUS UNS.	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	3	0.28	0.16
180	CERVIX	0	0	0	0	2	9	18	37	36	45	52	33	46	17	14	4	4	1	318	30.06	25.70
181	PLACENTA	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	3	0.28	0.19
182	UTERUS SPEC.	0	0	0	0	0	0	0	1	0	3	3	2	3	2	0	0	1	0	15	1.42	1.49
183	OVARY	0	0	1	1	1	4	2	8	4	7	6	6	4	2	2	0	0	1	49	4.63	3.85
184	VAGINA ETC.	0	0	0	0	0	0	0	0	0	3	2	2	2	5	0	0	0	0	14	1.32	1.52
188	URI. BLADDER	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	1	5	0.47	0.75
189	KIDNEY ETC.	3	0	0	0	1	0	0	0	1	3	1	1	1	1	0	1	0	0	13	1.23	1.81
190	EYE	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0.28	0.62
191	BRAIN	1	2	3	1	0	4	0	1	0	4	0	1	0	0	0	0	0	0	17	1.61	2.08
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
193	THYROID GLAND	0	0	0	0	2	1	2	1	7	1	0	0	5	2	1	0	0	1	23	2.17	2.04
194	ENDO GLANDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
195	ILL DEF. SITES	1	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	0	5	0.47	0.46
196	SEC. LYMPH NODES	0	0	0	0	0	0	1	3	2	1	1	1	1	2	0	0	0	1	13	1.23	0.95
197	SEC. RESP. ETC.	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	3	0.28	0.16
198	SEC. OTHER SITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
199	PRIM. UNK.	1	0	0	0	0	0	1	2	1	0	1	1	1	0	0	0	0	0	8	0.76	0.65
200	LYMPHOSARCOMA	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.09	0.05
201	HODGKINS DISE.	0	0	0	0	2	0	1	0	0	1	1	0	0	0	0	0	0	0	5	0.47	0.59
202	LYMPHOID TIS.	0	2	0	0	0	1	0	1	0	1	3	1	1	1	1	0	0	0	12	1.13	1.28
203	MULTIPLE MYEL.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0.19	0.24
204	LEUK. LYMPHATIC	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	5	0.47	0.63
205	LEUK. MYELOID	0	0	0	1	0	0	1	1	2	2	1	1	0	0	0	0	0	0	9	0.85	0.66
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
207	LEUK. SPEC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208	LEUK. UNSP.	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	4	0.38	0.37
	TOTALS	10	6	7	9	14	39	51	100	98	146	150	93	141	75	60	21	24	14	1058	100.00	100.00

TABLE 2A: AGE SPECIFIC INCIDENCE RATES OF CANCER CASES BY SITE AND SEX PER 1,00,000 POPULATION IN BANGALORE CITY-1982
MALE

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85+	All Ages	AAR	TR
140	LIP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	30.9	0.1	0.3	–
141	TONGUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	8.7	13.1	22.8	25.2	34.9	15.3	19.2	0.0	61.8	2.5	5.1	10.4
142	SALIVARY GLANDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	3.3	0.0	0.0	0.0	19.2	0.0	0.0	0.3	0.4	–
143	GUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	5.6	3.3	6.3	7.0	0.0	0.0	0.0	0.0	0.5	1.0	2.4
144	FLOOR OF MOUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	6.5	6.3	7.0	0.0	0.0	22.8	0.0	0.4	0.9	–
145	OTHER MOUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	6.1	8.7	5.6	16.3	0.0	20.9	15.3	0.0	0.0	0.0	1.6	2.8	5.9
146	OROPHARYNX	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	2.4	2.9	7.5	0.0	22.0	0.0	7.7	57.5	0.0	0.0	1.3	2.4	5.1
147	NASOPHARYNX	0.0	0.0	0.0	0.6	1.1	0.0	0.0	1.0	0.0	2.9	1.9	0.0	0.0	13.9	7.7	0.0	0.0	0.0	0.6	1.0	–
148	HYPOPHARYNX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.2	7.3	16.8	13.0	34.6	27.9	15.3	76.6	0.0	30.9	2.7	5.4	10.9
149	PHARYNX ETC.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.2	0.3	–
150	OESOPHAGUS	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	6.1	10.2	16.8	32.5	50.3	76.7	38.3	0.0	45.6	0.0	4.1	8.5	16.5
151	STOMACH	0.0	0.0	0.0	0.6	0.0	0.7	1.7	2.9	12.2	7.3	35.6	42.3	40.9	90.6	68.9	95.8	91.2	0.0	6.2	11.9	20.8
152	SMALL INTESTINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153	COLON	0.0	0.5	0.6	0.0	0.0	1.4	0.9	0.0	6.1	4.4	5.6	3.3	3.1	13.9	0.0	38.3	0.0	0.0	1.4	2.2	–
154	RECTUM	0.0	0.0	0.0	0.0	0.6	0.0	1.7	1.0	1.2	2.9	5.6	6.5	9.4	34.9	0.0	19.2	68.4	30.9	1.6	3.1	–
155	LIVER	0.0	0.5	0.0	0.0	0.6	0.0	0.0	1.0	2.4	4.4	1.9	16.3	6.3	27.9	38.3	38.3	22.8	0.0	1.8	3.7	–
156	GALLBLADDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	–
157	PANCREAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.9	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	–
158	RETROPERITONEUM	0.5	0.5	0.0	0.0	0.0	0.0	1.7	1.0	2.4	1.5	1.9	3.3	6.3	7.0	0.0	0.0	0.0	0.0	0.8	1.2	–
159	OTHER DIGST.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	NOSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.5	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	–
161	LARYNX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	5.8	7.5	29.3	12.6	34.9	30.6	76.6	0.0	0.0	2.3	4.8	8.4
162	LUNG	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.9	2.4	8.7	5.6	16.3	22.0	48.8	53.6	19.2	0.0	0.0	2.6	5.4	8.4
163	PLEURA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.3	9.4	0.0	7.7	0.0	0.0	0.0	0.4	0.8	–
164	THYMUS ETC.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	6.3	0.0	0.0	0.0	0.0	0.0	0.2	0.4	–
165	OTHER RESP. E.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170	BONE	0.0	0.0	1.2	1.2	1.7	0.0	1.7	0.0	2.4	2.9	1.9	3.3	0.0	7.0	7.7	0.0	0.0	0.0	1.1	1.4	–
171	CONNECTIVE TISSUE	1.5	0.0	0.0	0.0	0.0	0.7	0.0	1.9	3.6	1.5	1.9	3.3	6.3	0.0	7.7	0.0	0.0	0.0	0.9	1.3	–

TABLE 2A *(Continued)*: AGE SPECIFIC INCIDENCE RATES OF CANCER CASES BY SITE AND SEX PER 1,00,000 POPULATION IN BANGALORE CITY-1982
MALE

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85+	All Ages	AAR	TR
172	SKIN—MELANOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	3.1	0.0	7.7	0.0	0.0	0.0	0.3	0.5	–
173	SKIN—OTHER	0.0	0.0	0.0	0.0	0.0	0.7	1.7	1.0	1.2	1.5	3.7	13.0	9.4	13.9	30.6	0.0	45.6	0.0	1.4	2.7	–
175	MALE BREAST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7.0	0.0	0.0	0.0	0.0	0.1	0.3	–
185	PROSTATE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	6.3	41.8	30.6	191.6	45.6	30.9	1.8	4.8	–
186	TESTIS	0.5	0.5	0.0	0.0	0.0	1.4	0.9	1.0	0.0	0.0	0.0	0.0	3.1	0.0	7.7	0.0	0.0	0.0	0.5	0.6	–
187	PENIS ETC.	0.0	0.0	0.0	0.0	0.0	0.7	2.6	0.0	0.0	10.2	3.7	6.5	9.4	0.0	15.3	19.2	45.6	0.0	1.5	2.4	–
188	URI. BLADDER	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.5	5.6	6.5	15.7	34.9	38.3	0.0	45.6	30.9	1.6	3.3	–
189	KIDNEY ETC.	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.0	0.0	0.0	6.3	20.9	7.7	0.0	0.0	0.0	0.6	1.2	–
190	EYE	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	3.3	3.1	7.0	0.0	0.0	0.0	0.0	0.5	0.8	–
191	BRAIN	0.5	1.4	0.0	0.0	0.0	1.4	1.7	0.0	3.6	5.8	0.0	0.0	9.4	7.0	0.0	0.0	0.0	0.0	1.2	1.4	–
192	NERVOUS SYSTEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
193	THYROID GLAND	0.0	0.0	0.0	0.0	0.0	1.4	0.9	1.9	0.0	0.0	1.9	3.3	6.3	0.0	0.0	0.0	0.0	0.0	0.6	0.8	–
194	ENDOCRINE GLANDS	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
195	ILLDEFINED SITES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	7.0	7.7	0.0	0.0	0.0	0.3	0.6	–
196	LYMPH NODES—SECONDARY AND UNSPECIFIED	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.0	2.4	5.8	0.0	6.5	12.6	20.9	15.3	19.2	0.0	0.0	1.3	2.3	–
197	SECONDARY—RESPIRATORY ETC.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.9	6.5	3.1	0.0	7.7	19.2	0.0	0.0	0.4	0.9	–
198	SECONDARY—OTHER SPECIFIED SITES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
199	PRIM. UNK.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0	1.2	1.5	0.0	3.3	6.3	7.0	30.6	0.0	22.8	0.0	0.8	1.6	–
200	LYMPHOSARCOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
201	HODGKIN'S DISEASE	0.5	0.5	0.6	1.2	0.6	1.4	1.7	2.9	2.4	4.4	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	1.2	1.2	–
202	OTHER LYMPHOID	0.5	1.4	0.6	0.6	1.1	0.0	1.7	2.9	3.6	4.4	9.4	6.5	15.7	7.0	7.7	0.0	0.0	61.8	2.2	3.0	–
203	MULTIPLE MYELOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	3.1	13.9	0.0	19.2	0.0	0.0	0.3	0.8	–
204	LYMPHOID LEUKAEMIA	0.0	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	7.0	7.7	19.2	0.0	0.0	0.4	0.9	–
205	MYELOID LEUKAEMIA	0.0	0.5	0.0	0.0	0.0	0.7	0.9	1.0	3.6	0.0	3.7	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	–
206	MONOCYTIC LEUKAEMIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
207	OTHER SPECIFIED LEUKAEMIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	0.0	0.0	0.1	0.2	–
208	LEUKAEMIA UNSPECIFIED	0.0	1.0	0.0	1.2	0.6	0.7	0.0	0.0	0.0	1.5	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	–
	ALL SITES	6.1	8.7	3.5	5.4	6.8	11.9	23.9	35.6	76.6	119.1	179.7	312.4	399.4	669.2	535.5	747.3	410.4	216.2	52.4	98.1	165.6

TABLE 2B: AGE SPECIFIC INCIDENCE RATES OF CANCER CASES BY SITE AND SEX PER 1,00,000 POPULATION IN BANGALORE CITY-1982
FEMALE

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85+	All Ages	AAR	TR
140	LIP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
141	TONGUE	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.2	3.3	4.2	4.8	0.0	11.1	7.5	0.0	0.0	0.0	0.0	0.8	1.5	3.9
142	SALIVARY GLANDS	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	–
143	GUM	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.7	8.5	0.0	4.2	25.9	30.0	0.0	0.0	0.0	0.0	1.3	2.8	5.9
144	FLOOR OF MOUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.1	0.2	–
145	OTHER MOUTH	0.0	0.0	0.0	0.0	0.0	0.8	0.0	3.6	8.3	40.3	21.4	38.2	55.4	67.5	65.3	61.0	22.1	55.6	5.9	12.3	25.6
146	OROPHARYNX	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	8.2	0.0	22.1	0.0	0.2	0.5	–
147	NASOPHARYNX	0.0	0.5	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
148	HYPOPHARYNX	0.0	0.0	0.0	0.7	0.0	0.0	1.1	1.2	1.7	2.1	4.8	0.0	0.0	0.0	16.3	0.0	22.1	27.8	0.8	1.2	1.7
149	PHARYNX ETC.	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	–
150	OESOPHAGUS	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.2	8.3	21.2	26.2	12.7	22.2	37.5	57.2	40.6	66.4	27.8	3.9	7.7	14.7
151	STOMACH	0.0	0.0	0.0	0.7	0.7	0.8	0.0	6.0	8.3	12.7	11.9	17.0	22.2	22.5	49.0	101.6	44.2	0.0	3.5	6.5	12.2
152	SMALL INTESTINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
153	COLON	0.0	0.0	0.0	0.0	0.7	0.0	1.1	0.0	0.0	0.0	2.4	4.2	7.4	15.0	16.3	0.0	0.0	0.0	0.7	1.5	–
154	RECTUM	0.0	0.0	0.0	0.0	0.0	0.8	2.2	2.4	1.7	10.6	4.8	0.0	14.8	0.0	40.8	40.6	0.0	0.0	1.7	3.3	–
155	LIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.3	2.1	7.1	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.9	–
156	GALLBLADDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
157	PANCREAS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
158	RETROPERITONEUM	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.7	2.1	7.1	4.2	11.1	15.0	8.2	0.0	22.1	0.0	1.0	1.8	–
159	OTHER DIGST.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
160	NOSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.1	0.0	4.2	3.7	7.5	0.0	0.0	0.0	0.0	0.4	0.8	–
161	LARYNX	0.0	0.0	0.0	0.0	0.0	1.5	1.1	0.0	0.0	2.1	0.0	4.2	7.4	15.0	0.0	0.0	0.0	0.0	0.6	1.2	1.9
162	LUNG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	4.2	2.4	0.0	7.4	22.5	0.0	0.0	0.0	0.0	0.6	1.4	2.4
163	PLEURA	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	4.8	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.3	0.5	–
164	THYMUS ETC.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
165	OTHER RESP. E.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
170	BONE	0.0	0.0	0.6	1.3	0.7	0.8	2.2	1.2	0.0	0.0	4.8	0.0	7.4	7.5	0.0	0.0	0.0.	0.0	0.9	1.2	–

TABLE 2B *(Continued)*: AGE SPECIFIC INCIDENCE RATES OF CANCER CASES BY SITE AND SEX PER 1,00,000 POPULATION IN BANGALORE CITY-1982
FEMALE

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80–	85+	All Ages	AAR	TR
171	CONNECTIVE TISSUE	0.0	0.0	0.0	0.7	0.0	0.8	1.1	2.4	0.0	0.0	2.4	4.2	0.0	0.0	0.0	40.6	22.1	0.0	0.8	1.2	–
172	SKIN–MELANOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	40.6	22.1	0.0	0.3	0.6	–
173	SKIN–OTHER	0.5	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.7	2.1	7.1	8.5	11.1	7.5	0.0	0.0	0.0	0.0	1.1	1.7	–
174	FEMALE BREAST	0.0	0.0	0.0	0.0	2.0	3.8	11.9	22.6	28.2	44.5	52.3	80.6	70.2	45.0	65.3	20.3	66.4	27.8	10.9	19.1	46.3
179	UTERUS, UNSPECIFIED	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.2	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	–
180	CERVIX	0.0	0.0	0.0	0.0	1.3	6.9	19.5	44.0	59.7	95.4	123.7	144.2	170.0	127.5	114.4	81.3	88.5	0.0	22.3	39.7	99.0
181	PLACENTA	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.2	0.3	–
182	BODY UTERUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	6.4	7.1	8.5	11.1	15.0	0.0	0.0	0.0	27.8	1.1	2.2	–
183	OVARY	0.0	0.0	0.6	0.7	0.7	3.1	2.2	9.5	6.6	14.8	14.3	25.4	14.8	22.5	16.3	0.0	0.0	0.0	3.4	6.3	–
184	VAGINA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	4.8	8.5	7.4	37.5	0.0	0.0	0.0	0.0	1.0	2.4	–
188	URI. BLADDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	7.5	8.2	0.0	22.1	0.0	0.4	0.7	–
189	KIDNEY ETC.	1.5	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.7	6.4	2.4	4.2	3.7	7.5	0.0	20.3	0.0	0.0	0.9	1.6	–
190	EYE	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.2	0.3	–
191	BRAIN	0.5	1.0	1.7	0.7	0.0	3.1	0.0	1.2	0.0	8.5	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.4	–
192	NERVOUS SYSTEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
193	THYROID GLAND	0.0	0.0	0.0	0.0	1.3	0.8	2.2	1.2	11.6	4.2	0.0	0.0	18.5	15.0	8.2	0.0	0.0	0.0	1.6	2.7	–
194	ENDOCRINE GLANDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
195	ILLDEFINED SITES	0.5	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.7	0.0	2.4	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.4	0.5	–
196	LYMPH NODES–SECONDARY	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.6	3.3	4.2	2.4	4.2	3.7	15.0	0.0	0.0	0.0	0.0	0.9	1.6	–
197	SECONDARY–RESPIRATORY ETC.	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.2	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	–
198	SECONDARY–OTHER SPECIFIED SITES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
199	PRIM. UNK.	0.5	0.0	0.0	0.0	0.0	0.0	1.1	2.4	1.7	0.0	2.4	4.2	3.7	0.0	0.0	0.0	0.0	0.0	0.6	0.8	–
200	LYMPHOSARCOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	–
201	HODGKIN'S DISEASE	0.0	0.0	0.0	0.0	1.3	0.0	1.1	0.0	0.0	2.1	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	–
202	OTHER LYMPHOID	0.0	1.0	0.0	0.0	0.0	0.8	0.0	1.2	0.0	2.1	7.1	4.2	3.7	7.5	8.2	0.0	0.0	0.0	0.8	1.4	–
203	MULTIPLE MYELOMA	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.1	0.2	–
204	LYMPHOID LEUKAEMIA	0.0	0.5	0.6	0.0	0.0	0.8	0.0	0.0	0.0	0.0	2.4	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	–
205	MYELOID LEUKAEMIA	0.0	0.0	0.0	0.7	0.0	0.0	1.1	1.2	3.3	4.2	2.4	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.9	–
206	MONOCYTIC LEUKAEMIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
207	SPECIFIED LEUKAEMIA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	–
208	LEUKAEMIA UNSPECIFIED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.7	0.0	0.0	4.2	0.0	7.5	0.0	0.0	0.0	0.0	0.3	0.6	–
	ALL SITES	5.1	2.9	4.1	5.9	9.2	29.9	55.3	119.0	164.1	315.8	359.1	407.1	524.9	569.8	506.5	447.1	398.2	166.8	74.3	133.9	294.1

TABLE 3: PROPORTION OF NEW CANCER CASES BY METHOD OF DIAGNOSIS, SITE & SEX DURING 1982; REGISTERED FROM COLLABORATING HOSPITALS IN BANGALORE CITY

ICD 9th	Site	Clinical		X-Ray		Microscopic		Total	
		Male	Female	Male	Female	Male	Female	Male	Female
140	LIP	–	100.0	–	–	100.0	–	2	1
141	TONGUE	12.5	–	–	–	87.5	100.0	40	12
142	SALIVARY GLAND	–	–	–	–	100.0	100.0	4	2
143	GUM	–	–	–	–	100.0	100.0	8	18
144	FLOOR OF MOUTH	14.3	–	–	–	85.7	100.0	7	2
145	OTHER MOUTH	–	8.3	–	–	100.0	91.7	25	84
146	OROPHARYNX	5.0	–	–	–	95.0	100.0	20	3
147	NASOPHARYNX	30.0	–	–	–	70.0	100.0	10	2
148	HYPOPHARYNX	–	9.1	–	–	100.0	90.9	43	11
149	PHARYNX ETC.	33.3	–	–	–	66.7	100.0	3	2
150	OESOPHAGUS	1.5	17.9	18.2	14.3	80.3	67.9	66	56
151	STOMACH	32.6	20.0	1.0	16.0	6.3	64.0	98	50
152	SMALL INTESTINE	–	–	–	–	–	100.0	–	1
153	COLON	13.6	10.0	–	10.0	86.4	80.0	22	10
154	RECTUM	12.0	16.7	–	–	88.0	83.3	25	24
155	LIVER	10.7	–	–	–	89.3	100.0	28	4
156	GALL BLADDER	–	–	–	–	100.0	–	1	–
157	PANCREAS	66.6	–	–	–	33.3	100.0	3	1
158	RETROPERITON	–	7.1	–	–	100.0	92.9	13	14
159	OTHER DIGST.	–	–	–	–	–	–	–	–
160	NOSE	33.3	16.7	–	–	66.6	83.3	3	6
161	LARYNX	16.2	33.3	–	–	83.8	66.7	37	9
162	LUNGS	14.6	11.1	21.9	22.2	63.4	66.7	41	9
163	PLEURA	–	–	–	–	100.0	100.0	6	4
164	THYMUS ETC.	–	–	100.0	–	–	100.0	3	1
170	BONES	5.9	–	11.8	7.7	82.3	92.3	17	13
171	CONNECTIVE TISSUE	–	9.1	–	–	100.0	90.9	15	11
172	SKIN MELANOM	25.0	–	–	–	75.0	100.0	4	4
173	SKIN OTHER	–	–	–	–	100.0	100.0	23	15
174	FEMALE BREAST	–	8.4	–	–	–	91.6	–	155

TABLE 3 *(Continued)*: PROPORTION OF NEW CANCER CASES BY METHOD OF DIAGNOSIS, SITE & SEX DURING 1982; REGISTERED FROM COLLABORATING HOSPITALS IN BANGALORE CITY

ICD 9th	Site	Clinical		X-Ray		Microscopic		Total	
		Male	Female	Male	Female	Male	Female	Male	Female
175	MALE BREAST	50.0	–	–	–	50.0	–	2	–
179	UTERUS UNS.	–	–	–	–	–	100.0	–	3
180	CERVIX	–	3.8	–	–	–	96.2	–	318
181	PLACENTA	–	–	–	–	–	100.0	–	3
182	BODY UTERUS	–	6.7	–	–	–	93.3	–	15
183	OVARY	–	18.4	–	–	–	81.6	–	49
184	VAGINA	–	–	–	–	–	100.0	–	14
185	PROSTATE	7.1	–	–	–	92.9	–	28	–
186	TESTIS	12.5	–	–	–	87.5	–	8	–
187	PENIS ETC.	15.4	–	–	–	84.6	–	26	–
188	URI. BLADDER	7.7	–	7.7	–	84.6	100.0	26	5
189	KIDNEY ETC.	–	7.7	11.1	–	88.9	92.3	9	13
190	EYE	–	–	–	–	100.0	100.0	8	3
191	BRAIN	–	–	–	–	100.0	100.0	19	17
192	NERVOUS SYS.	–	–	–	–	100.0	–	1	–
193	THYROID GLAN.	11.1	8.7	–	8.7	88.9	82.6	9	23
194	ENDO. GLANDS	–	–	–	–	100.0	–	2	–
195	ILL DEF. SITE	–	–	–	–	100.0	100.0	4	5
196	SEC. LYMPH NO	–	–	–	–	100.0	100.0	21	13
197	SEC. RESP. SITES	14.3	–	–	–	85.7	100.0	7	3
199	PRIM. UNK.	7.7	12.5	15.4	25.0	76.9	62.5	13	8
200	LYMPHOSARCOM	–	–	–	–	100.0	100.0	1	1
201	HODGKIN'S DIS.	–	–	–	–	100.0	100.0	19	5
202	OTHER LYMPH.	–	–	–	–	100.0	100.0	35	12
203	MULTIPLE MYE.	–	–	–	–	100.0	100.0	5	2
204	LEUK. LYMPHAT	–	–	–	–	100.0	100.0	7	5
205	LEUK. MYELOID	–	–	–	–	100.0	100.0	10	9
207	LEUK. SPEC.	–	–	–	–	100.0	–	1	–
208	LEUK. UNSP.	–	–	–	–	100.0	100.0	9	4
	TOTAL (NO. OF CASES)	83	80	40	25	714	953	837	1058
	%	9.9	7.6	4.8	2.4	85.3	90.0	100.0	100.0

TABLE 4: PROPORTION PROFESSING A SPECIFIC RELIGION AMONG NEW CANCER CASES IN BANGALORE CITY (FROM JANUARY 1ST, 1982 TO DECEMBER 31ST, 1982)

ICD-9th	Site	Hindu %		Muslim %		Christian %		Sikh %		Jain %		Total No.	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
140	LIP	0.14	0.11	0.00	0.00	2.33	0.00	0.00	0.00	0.00	0.00	2	1
141	TONGUE	3.87	1.21	10.22	0.00	9.30	1.93	0.00	0.00	0.00	0.00	40	12
142	SALIVARY GLANDS	0.29	0.22	1.14	0.00	2.33	0.00	0.00	0.00	0.00	0.00	4	2
143	GUM	1.00	1.98	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	18
144	FLOOR OF MOUTH	1.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7	2
145	OTHER MOUTH	2.86	8.57	2.27	4.30	6.98	3.85	0.00	0.00	0.00	0.00	25	84
146	OROPHARYNX	2.43	0.33	2.27	0.00	2.33	0.00	0.00	0.00	0.00	0.00	20	3
147	NASOPHARYNX	1.15	0.22	1.14	0.00	2.32	0.00	0.00	0.00	0.00	0.00	10	2
148	HYPOPHARYNX	5.16	1.09	5.68	1.07	4.65	0.00	0.00	0.00	0.00	0.00	43	11
149	PHARYNX ETC.	0.43	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3	2
150	OESOPHAGUS	8.31	5.71	6.82	3.23	2.33	1.92	14.29	0.00	0.00	0.00	66	56
151	STOMACH	12.18	4.39	7.95	9.68	13.95	1.92	0.00	0.00	0.00	0.00	98	50
152	SMALL INTEST.	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	1
153	COLON	2.72	0.99	2.27	1.07	2.33	0.00	0.00	0.00	0.00	0.00	22	10
154	RECTUM	2.58	2.20	4.55	2.15	2.33	3.85	14.29	0.00	100.00	0.00	25	24
155	LIVER	3.44	0.88	3.41	0.00	2.32	0.00	0.00	0.00	0.00	0.00	28	8
156	GALL BLADDER	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	0
157	PANCREAS	0.43	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3	1
158	RETROPERITON	1.43	1.43	3.41	1.07	0.00	0.00	0.00	0.00	0.00	0.00	13	14
159	OTHER DIGST.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
160	NOSE	0.29	0.66	0.00	0.00	2.33	0.00	0.00	0.00	0.00	0.00	3	6
161	LARYNX	4.73	0.99	3.41	0.00	2.32	0.00	0.00	0.00	0.00	0.00	37	9
162	LUNG	5.16	0.88	4.54	1.08	2.32	0.00	0.00	0.00	0.00	0.00	41	9
163	PLEURA	0.72	0.44	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6	4
164	THYMUS ETC.	0.29	0.11	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3	1
165	OTHER RESP. ETC.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
170	BONE	2.15	0.88	2.27	4.30	0.00	1.93	0.00	0.00	0.00	0.00	17	13
171	CONNECTIVE TISSUE	2.15	0.66	0.00	1.08	0.00	7.69	0.00	0.00	0.00	0.00	15	11
172	SKIN MELANOM	0.57	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4	4
173	SKIN OTHER	3.01	1.21	1.14	0.00	2.33	7.69	0.00	0.00	0.00	0.00	23	15
174	FEMALE BREAST	0.00	12.19	0.00	32.26	0.00	21.15	0.00	100.00	0.00	100.00	–	155
175	MALE BREAST	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	0

TABLE 4 *(Continued)*: PROPORTION PROFESSING A SPECIFIC RELIGION AMONG NEW CANCER CASES IN BANGALORE CITY (FROM JANUARY 1ST, 1982 TO DECEMBER 31ST, 1982)

ICD 9th	Site	Hindu %		Muslim %		Christian %		Sikh %		Jain %		Total No	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
179	UTERUS UNS.	0.00	0.11	0.00	1.07	0.00	1.92	0.00	0.00	0.00	0.00	0	3
180	CERVIX	0.00	32.20	0.00	17.20	0.00	17.31	0.00	0.00	0.00	0.00	0	318
181	PLACENTA	0.00	0.22	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0	3
182	BODY UTERUS	0.00	1.54	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0	15
183	OVARY	0.00	4.39	0.00	5.38	0.00	7.69	0.00	0.00	0.00	0.00	0	49
184	VAGINA	0.00	1.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	14
185	PROSTATE	3.44	0.00	1.14	0.00	2.33	0.00	28.57	0.00	0.00	0.00	28	0
186	TESTIS	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	0
187	PENIS ETC.	3.58	0.00	0.00	0.00	2.32	0.00	0.00	0.00	0.00	0.00	26	0
188	URI. BLADDER	2.87	0.22	2.27	0.00	9.30	5.77	0.00	0.00	0.00	0.00	26	5
189	KIDNEY ETC.	0.86	1.10	0.00	0.00	6.98	5.77	0.00	0.00	0.00	0.00	9	13
190	EYE	0.72	0.22	2.27	1.08	2.32	0.00	0.00	0.00	0.00	0.00	8	3
191	BRAIN	2.01	1.54	5.60	3.23	0.00	0.00	0.00	0.00	0.00	0.00	19	17
192	NERVOUS SYS.	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	0
193	THYROID GLAND	1.00	2.42	0.00	1.07	2.32	0.00	14.28	0.00	0.00	0.00	9	23
194	ENDO. GLANDS	0.14	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	0
195	ILL. DEF. SITE	0.43	0.55	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4	5
196	SEC. LYMPH NO	2.29	1.10	5.68	3.23	0.00	0.00	0.00	0.00	0.00	0.00	21	13
197	SEC. RESP. ETC.	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7	3
198	SEC. OTHER SI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
199	PRIM. UNK.	1.58	0.77	2.27	1.07	0.00	0.00	0.00	0.00	0.00	0.00	13	8
200	LYMPHOSARCOM	0.14	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	1
201	HODGKIN'S DISEASE	1.86	0.44	4.54	0.00	0.00	1.92	28.57	0.00	0.00	0.00	19	5
202	OTHER LYMPH	4.01	1.10	4.54	1.07	6.98	1.92	0.00	0.00	0.00	0.00	35	12
203	MULTIPLE MYE	0.57	0.22	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5	2
204	LEUK. LYMPHAT	0.86	0.44	1.14	0.00	0.00	1.93	0.00	0.00	0.00	0.00	7	5
205	LEUK. MYELOID	1.29	0.66	0.00	2.15	2.33	1.92	0.00	0.00	0.00	0.00	10	9
206	LEUK. MONOCYT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
207	LEUK. SPEC.	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	0
208	LEUK. UNSP.	1.00	0.33	1.14	0.00	2.32	1.92	0.00	0.00	0.00	0.00	9	4
	TOTALS (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	837	1058

TABLE 5A: PROPORTION OF EDUCATIONAL LEVEL OF NEW CANCER CASES FOR SELECTED COMMON SITES IN BANGALORE CITY (FROM JANUARY 1ST, 1982 TO DECEMBER 31ST, 1982)

MALE (%)

Educational Level	Oral Cavity (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	All Sites (140-208)
Illiterate	29.8	23.7	22.7	23.5	18.9	26.8	22.2
Literate	13.1	14.5	10.4	13.3	8.1	9.8	10.7
Primary	15.5	14.5	23.5	13.7	22.6	9.8	13.5
Secondary	15.5	13.1	16.6	17.3	8.1	12.2	15.2
Technical	1.2	2.6	4.5	0.0	2.7	4.9	2.8
College & above	2.4	5.3	0.0	5.1	2.7	0.0	8.8
Not known	22.5	26.3	22.3	27.1	36.9	36.5	26.8
Total (%) *	100.0 (86)	100.0 (76)	100.0 (66)	100.0 (98)	100.0 (37)	100.0 (41)	100.0 (837)

*Figures in parenthesis indicate the number of cancer cases.

TABLE 5B: PROPORTION OF EDUCATIONAL LEVEL OF NEW CANCER CASES FOR SELECTED COMMON SITES IN BANGALORE CITY (FROM JANUARY 1ST, 1982 TO DECEMBER 31ST, 1982)

FEMALES (%)

Educational Level	Oral Cavity (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	Breast (174)	Cervix (180)	All Sites (140-208)
Illiterate	71.4	44.4	39.3	54.0	44.4	22.2	36.5	56.1	45.5
Literate	2.5	0.0	10.4	10.0	11.1	11.4	6.5	.4.1	6.3
Primary	4.2	5.5	23.2	10.0	11.1	22.2	13.6	12.6	12.2
Secondary	0.0	5.5	7.1	6.0	0.0	11.4	17.5	7.8	9.2
Technical	0.0	0.0	1.8	0.0	0.0	0.0	0.6	0.0	0.6
College & above	0.0	0.0	0.0	0.0	0.0	0.0	3.3	1.3	1.6
Not known	21.9	44.6	18.2	20.0	33.4	32.8	22.0	18.1	24.6
Total (%) *	100.0 (119)	100.0 (18)	100.0 (56)	100.0 (50)	100.0 (9)	100.0 (9)	100.0 (155)	100.0 (318)	100.0 (1058)

*Figures in parenthesis indicate the number of Cancer Cases.

TABLE 6: NUMBER OF NEW CANCER CASES AT SELECTED SITES BY FOURTH DIGIT OF ICD:—9TH (FROM JANUARY 1ST, 1982 TO DECEMBER 31ST, 1982), IN BANGALORE CITY

ICD-9th	SITE	MALE			FEMALE		
		Total Cases	No.	%	Total Cases	No.	%
141	**TONGUE**	**40**		**100.0**	**12**		**100.0**
of which	141.0		25	62.5		5	41.7
	141.1-.4		1	2.5		1	8.3
	141 R		14	35.0		6	50.0
143	**GUM**	**8**		**100.0**	**18**		**100.0**
of which	143.0		0	0.0		0	0.0
	143.1		0	0.0		2	11.1
	143 R		8	100.0		16	88.9
145	**MOUTH**	**25**		**100.0**	**84**		**100.0**
of which	145.0-.1		20	80.0		82	97.6
	145.2-.5		5	20.0		2	2.4
	145 R		0	0.0		0	0.0
146	**OROPHARYNX**	**20**		**100.0**	**3**		**100.0**
of which	146.0		11	55.0		2	66.7
	146.1-.2		1	5.0		0	0.0
	146.3-.5		5	25.0		1	33.3
	146.6		0	0.0		0	0.0
	146.7		0	0.0		0	0.0
	146 R		3	15.0		0	0.0
148	**HYPOPHARYNX**	**43**		**100.0**	**11**		**100.0**
of which	148.0		2	4.7		3	27.3
	148.1		36	83.6		6	54.5
	148.2		2	4.7		0	0.0
	148.3		0	0.0		0	0.0
	148 R		3	7.0		2	18.2
150	**OESOPHAGUS**	**66**		**100.0**	**56**		**100.0**
of which	150.0		0	0.0		0	0.0
	150.1		0	0.0		0	0.0
	150.2		0	0.0		0	0.0
	150.3		1	1.5		1	1.8
	150.4		11	16.7		6	10.8
	150.5		11	16.7		11	19.6
	150 R		43	65.1		38	67.8

TABLE 6 *(Continued)*: NUMBER OF NEW CANCER CASES AT SELECTED SITES BY FOURTH DIGIT OF ICD: 9TH (FROM JANUARY 1ST, 1982 TO DECEMBER 31ST, 1982), IN BANGALORE CITY

ICD-9TH	SITE	MALE			FEMALE		
		Total Cases	No.	%	Total Cases	No.	%
153	**COLON**	**22**		**100.0**	**10**		**100.0**
of which	153.0		0	0.0		0	0.0
	153.1		1	4.5		0	0.0
	153.2		0	0.0		2	20.0
	153.3		1	4.5		1	10.0
	153.4		5	22.7		2	20.0
	153.5		0	0.0		0	0.0
	153.6		0	0.0		1	10.0
	153.7		0	0.0		0	0.0
	153 R		15	68.3		4	40.0
154	**RECTUM**	**25**		**100.0**	**24**		**100.0**
of which	154.0		1	4.0		2	8.3
	154.1		22	88.0		18	75.0
	154.2		2	8.0		3	12.5
	154.3		0	0.0		0	0.0
	154 R		0	0.0		1	4.2
156	**GALLBLADDER ETC.**	**1**		**100.0**	**0**		**0.0**
of which	156.0		1	100.0		0	0.0
161	**LARYNX**	**37**		**100.0**	**9**		**100.0**
of which	161.0		7	19.0		3	33.3
	161.1		4	10.8		1	11.1
	161.2		0	0.0		0	0.0
	161 R		26	70.2		5	55.6
173	**SKIN (EXCEPT MELANOMA)**	**23**		**100.0**	**15**		**100.0**
of which	173.0-.3		6	26.1		7	46.7
	173.4		4	17.4		0	0.0
	173.5		4	17.4		3	20.0
	173.6		0	0.0		0	0.0
	173.7		6	26.1		0	0.0
	173 R		3	13.0		5	33.3
183	**OVARY ETC.**		–	–	**49**		**100.0**
of which	183.0		–	–		49	100.0
189	**KIDNEY ETC.**	**9**		**100.0**	**13**		**100.0**
of which	189.0		9	100.0		13	100.0
194	**ENDOCRINE**	**2**		**100.0**	**0**		**0.0**
of which	194.0		2	100.0		0	0.0
	194.3		0	0.0		0	0.0
	194 R		0	0.0		0	0.0

TABLE 7: ESTIMATED POPULATION OF BANGALORE URBAN AGLOMERATION—1982 (AS ON JULY 1ST)

AGE GROUP (Years)	MALE	FEMALE	TOTAL
0—4	1,98,164	1,97,311	3,95,475
5—9	2,07,516	2.04,881	4,12,397
10—14	1,72,113	1,72,381	3,44,494
15—19	1,66,498	1,52,523	3,19,021
20—24	1,77,751	1,52,127	3,29,878
25—29	1,43,104	1,30,519	2,73,623
30—34	1,16,987	92,303	2,09,290
35—39	1,03,924	84,031	1,87,955
40—44	82,297	60,338	1,42,635
45—49	68,853	47,178	1,16,031
50—54	53,433	42,046	95,479
55—59	30,729	23,582	54,311
60—64	31,794	27,053	58,847
65—69	14,345	13,338	27,683
70—74	13,071	12,242	25,313
75—79	5,219	4,921	10,140
80—84	4,386	4,520	8,906
85+	3,238	3,597	6,835
All Ages	15,93,422	14,24,891	30,18,313

APPENDIX 3

POPULATION BASED CANCER REGISTRY AT BOMBAY CANCER REGISTRY, INDIAN CANCER SOCIETY, PAREL, BOMBAY

DR. D. J. JUSSAWALLA, Project Chief
MR. B. B. YEOLE, Senior Biostatistician
MR. M. V. NATEKAR, Biostatistician

ANNUAL REPORT

(FROM JANUARY 1, 1982 TO DECEMBER 31, 1982.)

INTRODUCTION

The function of the Bombay Cancer Registry is to compile and keep a continuous record of all cases of cancer occurring in Greater Bombay residents and to undertake epidemiological studies. The sole justification for the existence of a cancer registry is that the data could be utilised in a number of ways. The information collected presents a readily accessible scientific base for research, planning and organisation of the preventive and control measures to be undertaken against cancer, in the community.

Epidemiological data on cancer are also useful in examining the aetiological factors responsible for different types of cancers and for testing various hypotheses formulated on clinical and experimental basis.

The Bombay Cancer Registry was established on June 1, 1963, as a unit of the Indian Cancer Society at Bombay, and regular compilation of data was begun in 1964. Uptil then, no accurate continuous, cancer morbidity registry, based on a precisely demarcated population zone, had even been undertaken in India.

The Registry covers the whole of Greater Bombay, encompassing 603 square kilometers and collects data on all cancer cases diagnosed and treated in hospital and by consultants and specialists in private practice.

The estimated resident population of Greater Bombay, as on 1st July, 1982, is 8.7 million (4.9 million male, 3.8 million female). Table 7 presents the population among all religious communities by age, five year age-groupings, and sex.

The Registry today covers 92 hospitals and private nursing homes in the Bombay area. In addition, staff members personally approach clinicians dealing with cancer patients, to obtain their co-operation and the necessary data from their patients. According to local practice, medical specialists, who are clinicians, have complete charge of patients admitted to private hospitals and nursing homes. A total of 315 such specialists practising in Bombay are thus contacted, of whom 115 are Surgeons/Physicians, 125 Gynaecologists, 40 Pathologists and 35 Radiologists. Our staff visit their offices to check on the data they have available on cancer patients in their files.

SOURCES OF INFORMATION REGARDING COLLECTION OF DATA

Two major sources are utilised for data collection:

a) All hospitals, nursing homes and consultants (specialists) in private practice in the registry area.

b) Vital Statistics Division of the Department of Public Health of the Bombay Municipal Corporation.

CLASSIFICATION OF THE MATERIAL

All malignant tumours including those where the pathologist may have even suspected a malignant change, are registered. Cases, where the death certificate is the only source of information on a patient, are also included. Patients in whom cancer has been ruled out or has not yet been diagnosed, are however omitted from our register.

PRIMARY SITE

We utilise the coding system devised by the World Health Organisation, using code numbers 140 through 208, as published in "Manual of the International Statistical Classification of Diseases, Injuries and Causes of Death" (9th revision) of 1977 for classification of our data.

MORPHOLOGY (HISTOLOGY)

For identifying histological type of neoplasms, a comprehensive coded nomenclature, which comprises the morphology rubrics of the ICD-Oncology, is utilised and followed, in conjunction with the primary site codes.

The World Health Organisation has published an adaptation of the International classification in Diseases for Oncology (ICD-O). It contains a coded nomenclature for the morphology of Neoplasms.

The Morphology code numbers consist of five digits, the first four identify the histological type of the neoplasms and the fifty indicates its behaviour.

BASIS OF DIAGNOSIS

Only the following methods for diagnosis are accepted by the registry:

1. Microscopic confirmation.
   (a) Histological examination of operative or biopsy material.
   (b) Histological proof obtained from metastatic areas.
   (c) Autopsy material with histological confirmation of cancer.
   (d) Cytological diagnosis (including blood smear reports).
2. Evidence obtained at operations (including endoscopic and autopsy evidence even without histological proof).
3. X-Ray diagnosis.
4. Clinical diagnosis.
5. Death certification.

WORKING OF THE REGISTRY

Staff members (i.e. social investigators of the Registry) also personally visit the wards of the co-operating hospitals regularly to interview all cancer patients and suspects. The record files maintained by the various departments of these hospitals viz. those in the Departments of Pathology, Haematology and Radiology and the various specialised surgical and medical wards, are also examined.

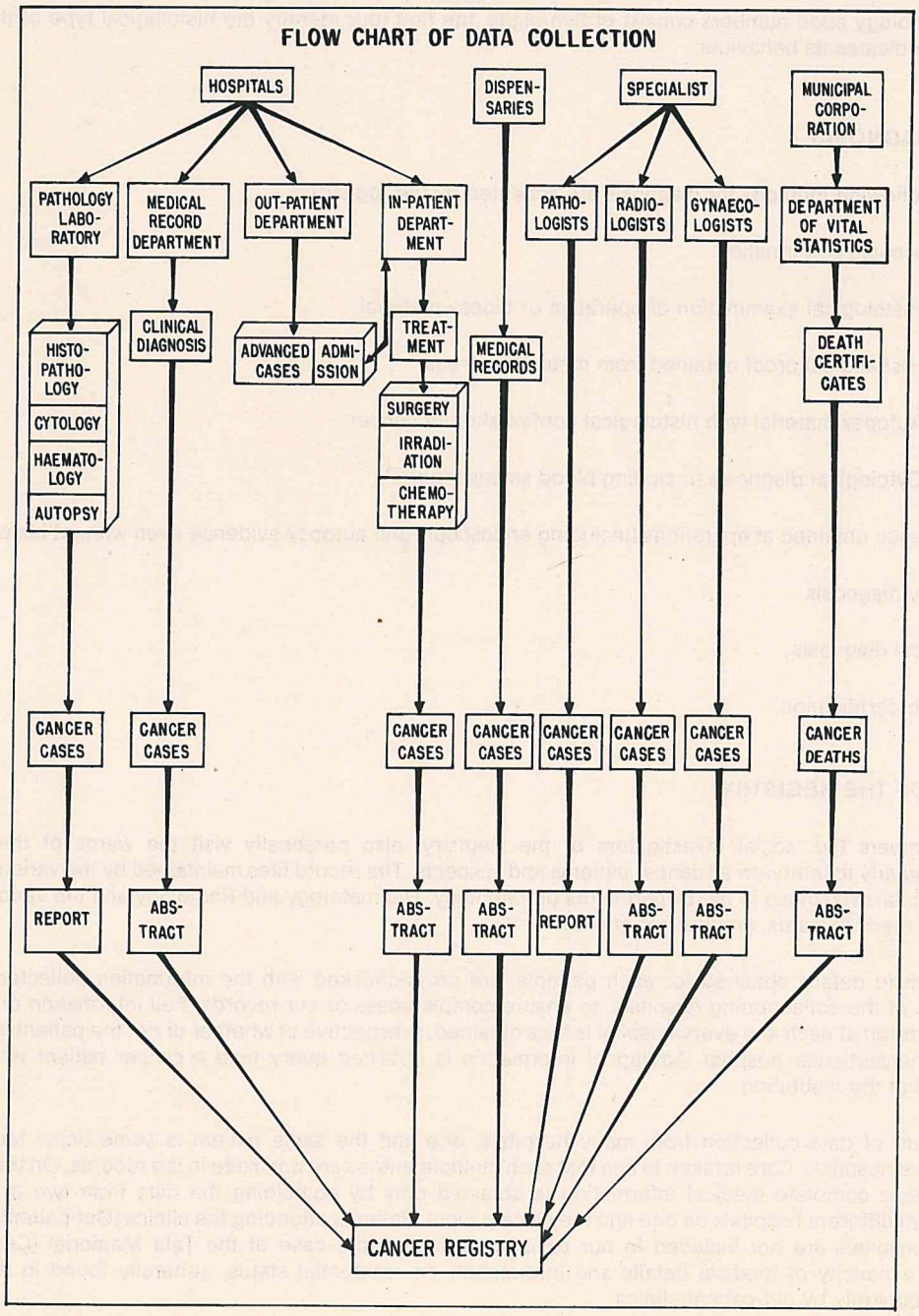
The requisite details obtained for each patients, are cross-checked with the information collected from various departments of the collaborating hospitals, to ensure completeness of our records. Full information on every cancer patient registered at each and every hospital is thus obtained, irrespective of whether or not the patient is subsequently treated at the particular hospital. Additional information is obtained every time a cancer patient is re-admitted or re-examined at the Institution.

As a result of data collection from many hospitals, one and the same patient is some times found registered at two or more hospitals. Care is taken to see that such multiple entries are not made in the records. On the other hand, in some instances complete medical information is obtained only by combining the data from two or more reports, received from different hospitals on one and the same patient. Patients attending the clinics (Out-patients departments) of various hospitals are not included in our register, except in the case of the Tata Memorial (Cancer) Hospital, because of a paucity of medical details and information on residential status, generally found in the record files maintained cursorily by out-patient clinics.

Supplementary information can often by gleaned from the death records maintained by the Vital Statistics Division of the Bombay Municipal Corporation. Copies are made of all death certificates which mention cancer or tumour as the cause of death. These death certificates are then matched against the registered cases in our files. Every cancer death not traceable to an entry in our files is labelled as an "unmatched death" and the date of death is then taken as the date of first diagnosis, and is so registered in the corresponding year's data files. In addition, copies of all death certificates found to mention the term "Cancer" or "Tumour" as a cause of death, are individually scrutinized, to confirm the statement.

General Medical Practitioners (non-specialists) who are mainly family physicians, are not contacted individually, but if any of them is found to have signed the death certificate of a patient dying of cancer, he is approached personally, in order to obtain as complete a report as possible, of these patients whether they have already been listed in the Registry or not. In many instances, the diagnosis may appear to be based on an incomplete examination especially when the patient had been seen for the first time in an advanced stage of the disease. The certifying physicians is then again approached personally, to obtain further clarification.

CHART-I



STATEMENT SHOWING THE STAFF WORKING IN THE BOMBAY CANCER REGISTRY AS ON 1ST JANUARY, 1983

S. No.	Name	Qualifications	Designation	Date of Joining	Present Grade
1.	Dr. D. J. Jussawalla	M.S., F.R.C.S., F.A.M.S., F.A.C.S., F.A. Sc.	Project Chief	From June, 1963	Honorary
2.	Dr. (Mrs.) Vatsala M. Doctor	M.D.	Pathologist	Since 1972	Honorary
3.	Mr. D. K. Jain*	M.Sc. (Statistics), M.S.P.H. (U.S.A.)	Co-ordinating Officer	27-1-1975	1200-50-1300-60-1900
4.	Mr. B. B. Yeole	M.Sc. (Statistics)	Sr. Biostatistician	20-6-1973	1200-50-1600
5.	Mr. M. V. Natekar	M.Sc. (Statistics)	Biostatistician	16-3-1965	1100-50-1600
6.	Dr. (Mrs.) Mangala R. Simha	M.D.	Assistant Surgical Pathologist	1-1-1979	Part-time (Consolidated)
7.	Mr. Chavan	B.Sc.	Technician	1-1-1972	Part-time (Consolidated)
8.	Miss V. C. Chhatrapati	M.A. (Sociology)	Sr. Medical Social Worker Gr. I	1-6-1963	700-40-1100
9.	Mrs. U. A. Desai	B.A. (Statistics)	Sr. Medical Social Worker	11-7-1966	550-20-750-30-900
10.	Mrs. C. P. Gokhale	M.A. (Sociology)	Medical Social Worker	1-9-1967	550-20-750-30-900
11.	Mrs. M. L. Lakhiani	B.A. (Philosophy)	—do—	10-7-1967	425-15-560-20-700
12.	Mrs. V. V. Paralkar	M.A. (Sociology)	—do—	18-11-1968	425-15-560-20-700
13.	Mrs. R. A. Sarkar	M.A. (Sociology)	—do—	18-8-1969	425-15-560-20-700
14.	Miss H. R. Bhagat	M.A. (Sociology)	—do—	5-3-1969	425-15-560-20-700
15.	Mrs. Lalitha Rajan	M.A. (Philosophy)	—do—	23-6-1969	425-15-560-20-700
16.	Mrs. Mohini P. Padhye	B.A. (Sociology)	Field Investigator	8-7-1977	425-15-560-20-700
17.	Mrs. Jaya P. Shah	M.A. (Sociology)	Medical Social Worker	10-12-1979	425-15-560-20-700
18.	Mrs. Indu J. Johar	M.A. (Sociology	Medical Social Worker	14-12-1979	425-15-560-20-700
19.	Miss S. D. Sabnis	M.A. (Sociology)	Senior Research Assistant	2-2-1970	425-15-560-20-700
20.	Mr. R. Ramamurthy	S.S.C.	Senior Punch Operator	9-12-1963	425-15-560-20-700
21.	Mrs. V. T. Kadam	S.S.C.	Senior Assistant	6-10-1965	425-15-560-20-700
22.	Mr. M. V. Bangera	Intermediate in Arts	Assistant	16-12-1970	380-12-500-15-600
23.	Miss Ajita S. Virkar	S.S.C.	Punch Operator	23-3-1977	320-6-326-8-390-10-400
24.	Mr. V. A. Godhale	B.A.	Typist/Clerk	23-5-1978	425-15-560-20-700
25.	Mrs. S. S. Hirve	B.A.	Graduate Assistant	10-5-1978	320-6-326-8-390-10-400
26.	Miss Anita G. Peswani	B.A.	Graduate Assistant	10-12-1979	320-6-326-8-390-10-400
27.	Miss Lucina Pereira	B.Sc.	Graduate Assistant	16-2-1981	320-6-326-8-390-10-400
28.	Mrs. Perin Lentin	Inter Arts	Research Assistant	1-9-1982	425-15-560-20-700
29.	Miss M. M. Dhende	H.S.C.	Typist/Clerk	7-10-1982	320-6-326-8-390-10-400
30.	Mr. S. G. Ghadigaonkar	Non-matric	Attendant	17-11-1968	260-6-326-8-350
31.	Mr. Vijay M. Halwai	Non-matric	Attendant	12-1-1983	260-6-326-8-350
32.	Miss Meena Bhatt	B.A. (Psychology)	Medical Social Worker	11-4-1983	425-15-560-20-700

* Till May 10, 1983

TABLE 1A: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982
IN MALES
CENTRE: BOMBAY.

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
140	LIP	0	0	0	0	0	0	0	1	0	2	1	1	1	0	0	0	0	0	6	0.27	0.18
141	TONGUE	0	0	0	0	1	2	4	9	17	12	31	25	21	15	10	2	1	0	150	6.71	6.06
142	SAL. GLANDS	0	1	1	1	0	0	0	1	0	4	1	0	2	1	1	0	0	0	13	0.58	0.55
143	GUM	0	0	0	0	0	2	0	1	2	3	3	7	4	2	0	1	0	0	25	1.12	0.97
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	1	0	3	0	1	0	2	0	2	0	9	0.40	0.53
145	OTHER MOUTH	0	0	0	0	0	0	4	6	5	17	15	20	10	7	2	2	1	0	89	3.98	3.39
146	OROPHARYNX	0	0	0	0	0	0	2	5	2	16	12	10	9	9	2	2	3	0	72	3.22	3.08
147	NASOPHARYNX	0	0	1	0	0	0	1	4	2	1	1	0	1	2	0	0	0	0	13	0.58	0.54
148	HYPOPHARYNX	0	0	0	0	0	4	5	5	13	25	32	26	28	28	11	11	4	0	192	8.58	8.91
149	PHARYNX ETC.	0	0	0	0	0	0	0	2	4	1	2	7	7	7	4	0	1	0	35	1.56	1.69
150	OESOPHAGUS	0	0	0	0	1	0	1	9	14	29	38	32	30	17	9	10	10	1	201	8.99	8.98
151	STOMACH	0	0	0	1	0	1	9	4	6	22	15	18	11	14	5	3	5	1	115	5.14	5.07
152	SMALL INTESTINE	0	0	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	4	0.18	0.18
153	COLON	0	0	0	0	0	3	2	5	1	10	9	5	7	6	3	1	1	1	54	2.41	2.20
154	RECTUM	1	0	0	1	1	2	3	4	7	2	12	11	7	8	6	3	2	0	70	3.13	3.34
155	LIVER	1	0	0	0	0	2	0	2	5	3	10	10	2	4	0	1	1	0	41	1.83	1.65
156	GALL BLADDER	0	0	0	0	0	0	0	0	3	1	1	0	5	1	1	0	0	0	12	0.54	0.47
157	PANCREAS	0	0	0	0	1	1	1	0	1	3	2	1	4	0	3	0	0	0	17	0.76	0.69
158	RETROPERITONEUM	0	0	0	0	0	1	0	0	3	1	0	0	2	0	0	0	2	0	9	0.40	0.47
159	OTHER DIGST.	0	0	0	0	0	0	0	0	1	1	1	0	3	0	2	0	0	0	8	0.36	0.34
160	NOSE	0	0	0	0	0	1	1	3	3	1	3	3	5	0	3	1	0	0	24	1.07	1.00
161	LARYNX	0	1	0	1	0	0	0	6	11	24	18	24	20	15	8	3	0	1	132	5.90	5.32
162	LUNG	0	0	0	2	2	2	2	4	12	28	33	42	30	23	14	5	1	1	201	8.99	8.39
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.04	0.07
164	THYMUS	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0.09	0.06
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.04	0.03
170	BONE	0	1	6	5	4	1	1	1	4	1	0	1	2	0	0	1	0	0	28	1.25	1.42
171	CONNECTIVE TISS	3	0	0	2	2	1	5	3	3	4	6	3	1	1	0	0	1	0	35	1.56	1.43

CHART-II

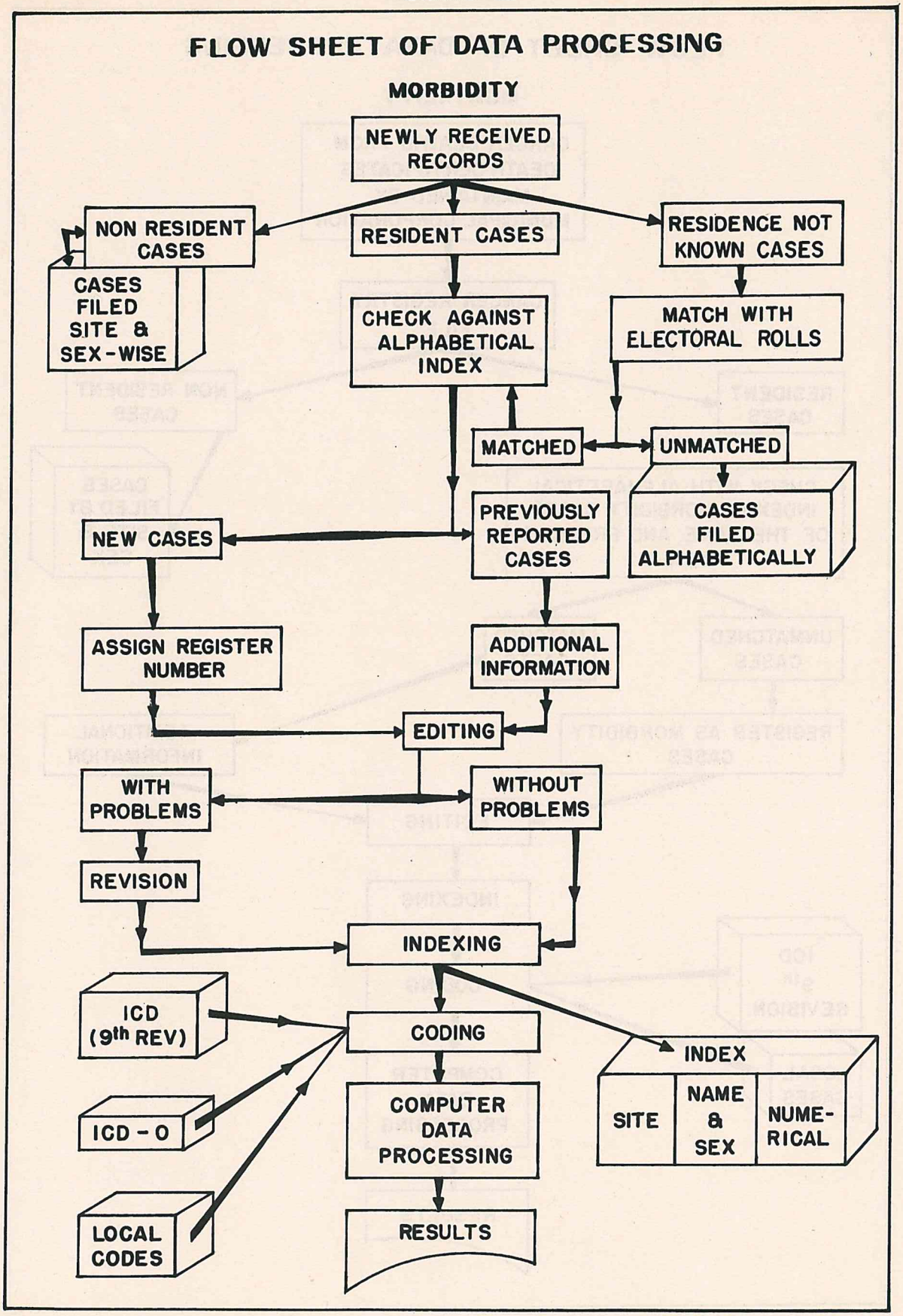

FLOW SHEET OF DATA PROCESSING
MORBIDITY
NEWLY RECEIVED RECORDS
NON RESIDENT CASES
CASES FILED SITE & SEX-WISE
RESIDENT CASES
RESIDENCE NOT KNOWN CASES
CHECK AGAINST ALPHABETICAL INDEX
MATCH WITH ELECTORAL ROLLS
MATCHED
UNMATCHED
CASES FILED ALPHABETICALLY
NEW CASES
PREVIOUSLY REPORTED CASES
ASSIGN REGISTER NUMBER
ADDITIONAL INFORMATION
EDITING
WITH PROBLEMS
WITHOUT PROBLEMS
REVISION
INDEXING
ICD (9th REV)
CODING
INDEX
SITE
NAME & SEX
NUME-RICAL
ICD - O
COMPUTER DATA PROCESSING
LOCAL CODES
RESULTS

CHART-III

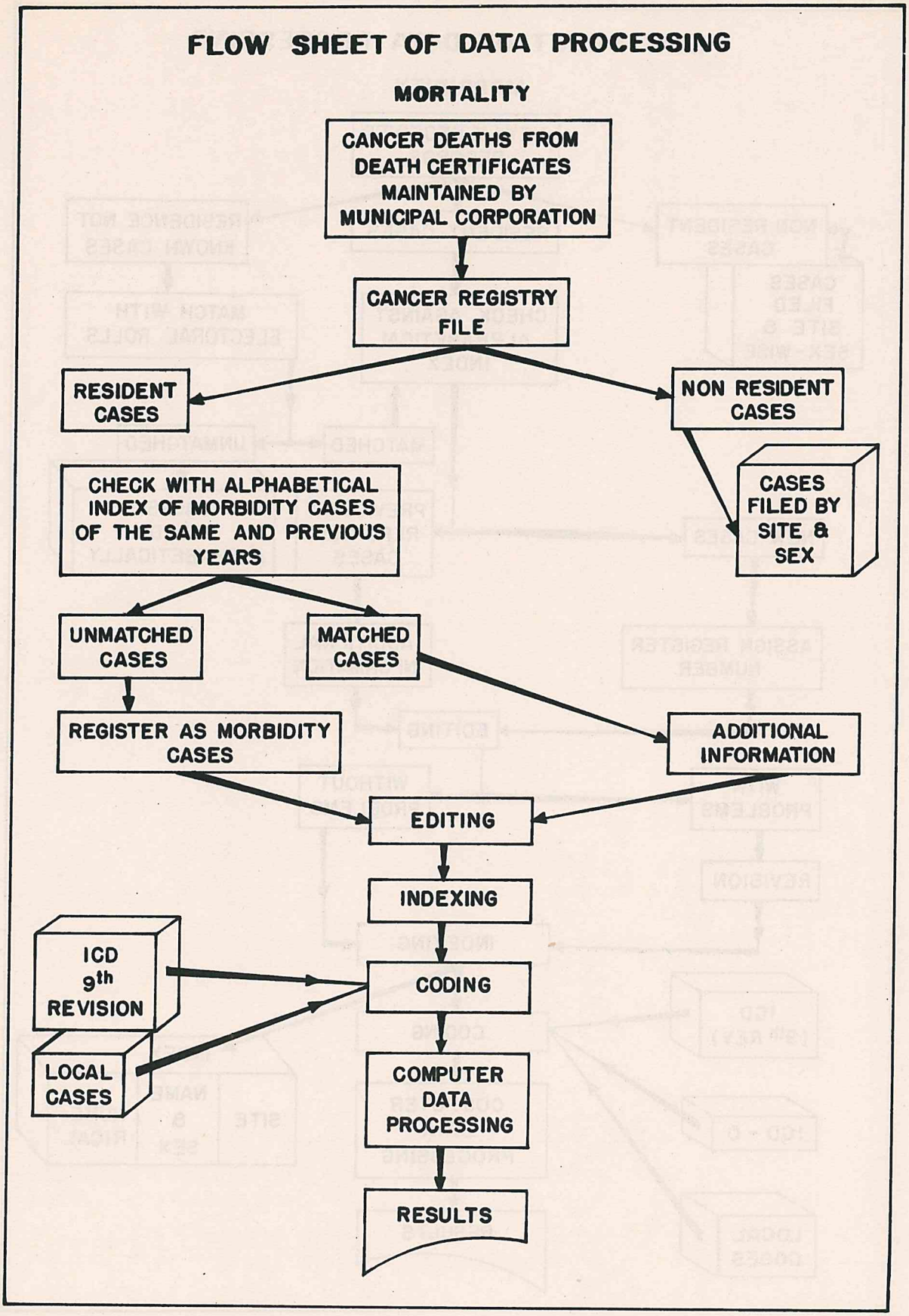

FLOW SHEET OF DATA PROCESSING
MORTALITY
CANCER DEATHS FROM DEATH CERTIFICATES MAINTAINED BY MUNICIPAL CORPORATION
CANCER REGISTRY FILE
RESIDENT CASES
NON RESIDENT CASES
CASES FILED BY SITE & SEX
CHECK WITH ALPHABETICAL INDEX OF MORBIDITY CASES OF THE SAME AND PREVIOUS YEARS
UNMATCHED CASES
MATCHED CASES
REGISTER AS MORBIDITY CASES
ADDITIONAL INFORMATION
EDITING
INDEXING
ICD 9th REVISION
CODING
LOCAL CASES
COMPUTER DATA PROCESSING
RESULTS

TABLE 1A *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982
IN MALES
CENTRE: BOMBAY.

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	0.13	0.09
173	SKIN OTHER	1	1	1	1	1	1	0	2	5	4	6	7	7	3	3	0	3	1	47	2.10	2.09
175	MALE BREAST	0	0	0	0	0	0	0	0	1	2	0	0	1	2	0	0	0	0	6	0.27	0.27
185	PROSTATE	0	0	0	0	0	0	0	0	0	3	6	5	10	13	17	7	7	0	68	3.04	4.59
186	TESTIS	2	0	0	4	11	10	8	1	2	3	0	1	0	0	0	0	0	0	42	1.88	1.92
187	PENIS ETC.	0	0	0	0	0	1	6	3	8	4	6	7	5	2	1	5	4	0	52	2.32	2.60
188	URI. BLADDER	0	0	0	0	0	0	2	5	7	3	12	7	9	10	7	3	5	0	70	3.13	3.62
189	KIDNEY	6	5	1	0	0	0	2	0	1	6	1	6	1	2	1	0	0	0	32	1.43	1.41
190	EYE	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	6	0.27	0.37
191	BRAIN	2	3	3	1	4	0	3	7	5	3	3	3	2	2	0	0	0	0	41	1.83	1.74
192	NERVOUS SYS.	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0.09	0.07
193	THYROID GLAND	0	0	0	1	2	1	2	0	1	3	2	2	1	1	0	1	0	0	17	0.76	0.75
194	ENDO. GLANDS	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0.18	0.21
195	ILL DEF. SITES	0	0	0	1	0	0	0	0	1	1	0	2	1	1	0	0	0	0	7	0.31	0.29
196	SEC. LYMPH NODE	0	0	0	0	0	1	3	1	5	1	12	6	12	4	0	2	1	1	49	2.19	1.95
197	SEC. RESP. ETC.	0	0	0	0	0	1	0	0	2	2	6	5	3	3	1	0	0	0	23	1.03	0.88
198	SEC. OTHER SITES	0	0	0	0	0	0	0	1	2	0	1	2	0	1	0	0	0	0	7	0.31	0.27
199	PRIM. UNK.	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	4	0.18	0.21
200	LYMPHOSARCOMA	0	2	4	1	3	2	2	4	2	1	2	2	4	4	0	1	2	0	36	1.61	1.86
201	HODGKINS DIS.	1	4	4	1	8	2	5	6	2	1	1	2	2	1	1	0	0	0	41	1.83	1.92
202	LYMPH TISSUE	3	5	0	3	1	1	1	2	0	5	4	3	3	2	1	1	1	0	36	1.61	1.72
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	0	1	2	1	2	2	2	1	0	0	0	11	0.49	0.47
204	LEUK. LYMPHATIC	4	4	5	2	6	1	0	0	0	0	1	0	2	3	1	0	1	0	30	1.34	1.73
205	LEUK. MYELOID	2	1	3	1	5	2	4	4	5	2	5	5	0	0	1	0	0	0	40	1.79	1.66
206	LEUK. MONOCYTIC	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.04	0.05
207	LEUK. OTHER	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.04	0.05
208	LEUK. UNSP.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0.09	0.17
	TOTALS	33	28	30	30	54	46	82	112	174	260	319	315	280	217	122	67	61	7	2237	100.00	100.00

TABLE 1B: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES
CENTRE: BOMBAY.

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
140	LIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.06	0.12
141	TONGUE	0	0	0	0	0	0	1	0	7	4	8	4	8	7	2	3	1	0	45	2.53	3.01
142	SAL. GLANDS	0	0	1	1	1	1	0	0	1	0	1	1	2	3	0	0	0	0	12	0.67	0.88
143	GUM	0	0	0	0	0	0	0	3	2	3	4	2	2	1	2	0	1	1	21	1.18	1.10
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	4	0.22	0.27
145	OTHER MOUTH	0	0	1	0	0	0	2	4	9	6	7	6	7	6	2	0	1	1	52	2.92	2.72
146	OROPHARYNX	0	0	0	0	1	0	1	0	0	0	2	2	3	1	2	0	0	0	12	0.67	0.80
147	NASOPHARYNX	0	0	2	0	1	1	1	1	1	1	0	0	1	0	0	1	0	0	10	0.56	0.66
148	HYPOPHARYNX	0	0	0	0	0	0	1	3	5	8	6	4	4	2	4	2	1	1	41	2.30	2.36
149	PHARYNX ETC.	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	3	0.17	0.11
150	OESOPHAGUS	0	0	0	0	0	1	1	5	14	14	14	11	14	18	13	8	2	0	115	6.45	8.20
151	STOMACH	0	0	0	0	0	1	3	1	5	7	3	11	5	7	3	0	4	0	50	2.81	3.33
152	SMALL INTESTINE	0	0	0	1	0	0	0	0	1	0	1	1	0	0	1	1	0	0	6	0.34	0.51
153	COLON	0	0	0	0	0	2	1	2	2	2	3	0	4	4	6	4	1	0	31	1.74	2.63
154	RECTUM	0	0	0	0	0	3	1	1	4	5	3	5	6	4	3	1	0	0	36	2.02	2.09
155	LIVER	0	0	0	0	1	0	0	0	2	1	5	2	1	0	1	0	1	0	14	0.79	0.80
156	GALL BLADDER	0	0	0	0	0	0	0	0	3	1	5	0	1	0	1	0	0	0	11	0.62	0.44
157	PANCREAS	0	0	0	0	0	0	0	0	1	0	1	0	1	2	1	3	1	0	10	0.56	1.18
158	RETROPERITONEUM	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3	0.17	0.20
159	OTHER DIGST.	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0.17	0.18
160	NOSE	0	0	1	0	0	2	2	1	0	0	2	3	1	1	0	0	1	0	14	0.79	0.81
161	LARYNX	0	0	1	0	0	0	1	0	1	1	3	3	2	0	0	1	0	0	13	0.73	0.72
162	LUNG	0	0	0	0	0	0	0	0	1	6	6	6	5	3	1	2	1	0	31	1.74	2.00
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.06	0.12
164	THYMUS ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.06	0.05
170	BONE	1	5	3	3	2	1	3	1	0	0	1	0	0	1	0	1	0	0	22	1.23	1.77
171	CONNECTIVE TISS	1	1	3	0	1	3	2	5	2	2	2	2	0	0	0	0	1	0	25	1.40	1.30

TABLE 1B *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES
CENTRE: BOMBAY.

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	1	0	3	0	0	0	1	0	0	0	5	0.28	0.24
173	SKIN OTHER	0	0	0	0	3	0	1	0	1	1	2	5	2	2	2	5	1	0	25	1.40	2.37
174	FEMALE BREAST	0	0	0	1	2	14	22	42	55	70	51	40	38	18	11	10	8	0	382	21.44	18.70
179	UTERUS UNS.	0	0	0	0	0	0	0	1	1	1	0	1	0	1	0	0	0	0	5	0.28	0.26
180	CERVIX	0	0	0	0	2	15	34	46	54	57	66	42	41	12	10	1	1	0	381	21.38	15.70
181	PLACENTA	0	0	0	0	5	5	4	0	0	0	0	0	0	0	0	0	0	0	14	0.79	0.77
182	BODY UTERUS	0	0	0	0	1	0	0	4	2	5	8	7	3	5	0	2	0	0	37	2.08	2.15
183	OVARY	0	1	0	4	3	2	5	11	14	10	15	11	9	2	8	0	0	0	95	5.33	4.71
184	VAGINA ETC.	0	0	0	0	0	1	1	2	2	4	5	3	3	3	0	3	0	0	27	1.52	1.67
188	URI. BLADDER	0	0	0	0	0	1	1	0	0	1	2	2	2	3	1	0	1	0	14	0.79	1.01
189	KIDNEY	2	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	0	6	0.34	0.53
190	EYE	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0.22	0.35
191	BRAIN	3	2	1	0	1	5	0	2	1	2	1	1	1	0	0	0	0	0	20	1.12	1.06
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
193	THYROID GLAND	0	0	0	1	3	2	3	4	3	2	1	1	4	3	2	1	0	0	30	1.68	1.87
194	ENDO. GLANDS	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0.11	0.06
195	ILL DEF. SITES	1	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	0	0	5	0.28	0.38
196	SEC. LYMPH NODES	0	0	0	0	0	0	0	1	0	1	3	5	1	2	0	2	0	0	15	0.84	1.07
197	SEC. RESP. ETC.	0	0	0	0	0	0	1	2	3	2	1	3	3	2	2	0	0	0	19	1.07	1.05
198	SEC. OTHER SITES	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	3	0.17	0.22
199	PRIM. UNK.	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	3	0.17	0.26
200	LYMPHOSARCOMA	0	1	0	0	0	2	1	0	1	0	2	0	1	2	1	0	1	1	13	0.73	0.85
201	HODGKINS DIS.	0	0	2	1	2	2	0	0	0	1	1	1	1	1	0	0	0	0	12	0.67	0.82
202	LYMPH. TISSUE	2	0	0	1	1	1	1	1	2	2	1	3	0	3	1	1	0	0	20	1.12	1.42
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	1	0	0	2	2	1	2	0	0	0	0	8	0.45	0.48
204	LEUK. LYMPHATIC	2	5	4	1	1	0	0	0	0	0	0	0	1	1	1	0	1	1	18	1.01	1.63
205	LEUK. MYELOID	2	2	1	2	2	1	4	1	2	3	0	2	0	0	2	0	0	0	24	1.35	1.50
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.06	0.03
207	LEUK. OTHER SPEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208	LEUK. UNSP.	1	1	0	0	0	0	0	3	1	0	0	0	0	0	0	1	0	0	7	0.39	0.47
	TOTALS	18	18	21	17	33	67	101	149	205	229	241	197	182	128	88	54	29	5	1782	100.00	100.00

TABLE 2A: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATE PER 100,000 POPULATION, GREATER BOMBAY, 1982—MALE

ICD 9TH	SITE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	CR	AAR
140	LIP	–	–	–	–	–	–	–	0.3	–	0.7	0.5	0.9	1.3	–	–	–	–	0.1	0.2
141	TONGUE	–	–	–	–	0.2	0.4	1.1	2.3	5.3	4.3	16.6	21.7	27.2	30.0	23.3	13.0	34.7	3.1	5.5
142	MAJOR SALIVARY GLANDS	–	0.2	0.2	0.2	–	–	–	0.3	–	1.4	0.5	–	2.6	2.0	2.3	–	–	0.3	0.4
143	GUM	–	–	–	–	–	0.4	–	0.3	0.6	1.1	1.6	6.1	5.2	4.0	–	6.5	–	0.5	0.9
144	FLOOR OF MOUTH	–	–	–	–	–	–	–	–	0.3	–	1.6	–	1.3	–	4.7	–	69.5	0.2	0.9
145	OTHER MOUTH	–	–	–	–	–	–	1.1	1.5	1.6	6.0	8.0	17.3	12.9	14.0	4.7	13.0	34.7	1.8	2.9
146	OROPHARYNX	–	–	–	–	–	–	0.5	1.3	0.6	5.7	6.4	8.7	11.7	18.0	4.7	13.0	104.2	1.5	3.4
147	NASOPHARYNX	–	–	0.2	–	–	–	0.3	1.0	0.6	0.4	0.5	–	1.3	4.0	–	–	–	0.3	0.4
148	HYPOPHARYNX	–	–	–	–	–	0.9	1.3	1.3	4.1	8.9	17.1	22.5	36.2	56.0	25.6	71.6	139.0	4.0	8.5
149	PHARYNX ETC.	–	–	–	–	–	–	–	0.5	1.3	0.4	1.1	6.1	9.1	14.0	9.3	–	34.7	0.7	1.7
150	OESOPHAGUS	–	–	–	–	0.2	–	0.3	2.3	4.4	10.3	20.4	27.7	38.8	34.0	20.9	65.1	347.5	4.1	10.3
151	STOMACH	–	–	–	0.2	–	0.2	2.4	1.0	1.9	7.8	8.0	15.6	14.2	28.0	11.6	19.5	173.7	2.4	5.4
152	SMALL INTESTINE	–	–	–	–	–	–	0.3	0.3	–	–	–	0.9	–	2.0	–	–	–	0.1	0.1
153	COLON	–	–	–	–	–	0.7	0.5	1.3	0.3	3.6	4.8	4.3	9.1	12.0	7.0	6.5	34.7	1.1	2.1
154	RECTUM	0.2	–	–	0.2	0.2	0.4	0.8	1.0	2.2	0.7	6.4	9.5	9.1	16.0	14.0	19.5	69.5	1.4	3.1
155	LIVER	0.2	–	–	–	–	0.4	–	0.5	1.6	1.1	5.4	8.7	2.6	8.0	–	6.5	34.7	0.8	1.6
156	GALL BLADDER	–	–	–	–	–	–	–	–	0.9	0.4	0.5	–	6.5	2.0	2.3	–	–	0.2	0.5
157	PANCREAS	–	–	–	–	0.2	0.2	0.3	–	0.3	1.1	1.1	0.9	5.2	–	7.0	–	–	0.3	0.6
158	RETROPERITONEUM	–	–	–	–	–	0.2	–	–	0.9	0.4	–	–	2.6	–	–	–	69.5	0.2	0.9
159	OTHER DIGESTIVE	–	–	–	–	–	–	–	–	0.3	0.4	0.5	–	3.9	–	4.7	–	–	0.2	0.3
160	NASAL CAVITIES, ETC.	–	–	–	–	–	0.2	0.3	0.8	0.9	0.4	1.6	2.6	6.5	–	7.0	6.5	–	0.5	0.8
161	LARYNX	–	2.2	–	2.2	–	–	–	1.5	3.4	8.5	9.6	20.8	25.9	30.0	18.6	19.5	–	2.7	5.5
162	LUNG	–	–	–	0.4	0.3	0.4	0.5	1.0	3.8	10.0	17.7	36.4	38.8	46.0	32.6	32.5	34.7	4.1	7.6
163	PLEURA	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.3	–	–	–	–
164	THYMUS	–	–	–	–	–	–	–	–	0.3	0.4	–	–	–	–	–	–	–	–	–
165	OTHER RESPIRATORY	–	–	–	–	–	–	–	–	–	0.4	–	–	–	–	–	–	–	–	–
170	BONE	–	0.2	1.2	1.1	0.7	0.2	0.3	0.3	1.3	0.4	–	0.9	2.6	–	–	6.5	–	0.6	0.6
171	CONNECTIVE TISSUE	0.6	–	–	0.4	0.3	0.2	1.3	0.8	0.9	1.4	3.2	2.6	1.3	2.0	–	–	34.7	0.7	1.1

TABLE 2A *(Continued)*: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATE PER 100,000 POPULATION, GREATER BOMBAY, 1982—MALE

ICD 9TH	SITE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	CR	AAR
172	SKIN-MELANOMA	—	—	—	—	—	—	—	—	0.3	—	0.5	0.9	—	—	—	—	—	0.1	0.1
173	SKIN-OTHER	0.2	0.2	0.2	0.2	0.2	0.2	—	0.5	1.6	1.4	3.2	6.1	9.1	6.0	7.0	—	104.2	1.0	2.5
175	MALE BREAST	—	—	—	—	—	—	—	—	0.3	0.7	—	—	1.3	4.0	—	—	—	0.1	0.2
185	PROSTATE	—	—	—	—	—	—	—	—	—	1.1	3.2	4.3	12.9	26.0	39.6	45.6	243.2	1.4	5.4
186	TESTIS	0.4	—	—	0.9	1.9	2.2	2.1	0.3	0.6	1.1	—	0.9	—	—	—	—	—	0.9	0.8
187	PENIS ETC.	—	—	—	—	—	0.2	1.6	0.8	2.5	1.4	3.2	6.1	6.5	4.0	2.3	32.5	139.0	1.1	2.9
188	BLADDER	—	—	—	—	—	—	0.5	1.3	2.2	1.1	6.4	6.1	11.7	20.0	16.3	19.5	173.7	1.4	4.2
189	KIDNEY	1.2	1.0	0.2	—	—	—	0.5	—	0.3	2.1	0.5	5.2	1.3	4.0	2.3	—	—	0.7	1.1
190	EYE	—	—	—	—	—	—	—	—	0.3	1.1	—	—	—	—	—	—	34.7	0.1	0.6
191	BRAIN	0.4	0.6	0.6	0.2	0.7	—	0.8	1.8	1.6	—	1.6	2.6	2.6	4.0	—	—	—	0.8	0.9
192	OTHER NERVOUS SYSTEM	—	—	—	—	—	—	0.3	—	—	—	—	—	1.3	—	—	—	—	—	0.1
193	THYROID GLAND	—	—	—	0.2	0.3	0.2	0.5	—	0.3	1.1	1.1	1.7	1.3	4.0	—	6.5	—	0.3	0.5
194	OTHER ENDOCRINE GLANDS	0.2	—	—	0.2	0.2	—	—	0.3	—	—	—	—	—	—	—	—	—	0.1	0.1
195	ILLDEFINED SITES	—	—	—	0.2	—	—	—	—	0.3	0.4	—	1.7	1.3	4.0	—	—	—	0.1	0.3
196	LYMPH NODES—SECONDARY	—	—	—	—	—	0.2	0.8	0.3	1.6	0.4	6.4	5.2	15.5	8.0	—	13.0	34.7	1.0	2.1
197	SECONDARY RESP. AND DIGST. SYS.	—	—	—	—	—	0.2	—	—	0.6	0.7	3.2	4.3	3.9	6.0	2.3	—	—	0.5	0.9
198	SECONDARY OTHER SPEC. SITES	—	—	—	—	—	—	—	0.3	0.6	—	0.5	1.7	—	2.0	—	—	—	0.1	0.2
199	SITE UNSPECIFIED	—	—	—	—	—	—	—	—	0.3	0.4	—	—	1.3	—	—	6.5	—	0.1	0.2
200	LYMPHOSARCOMA	—	0.4	0.8	0.2	0.5	0.4	0.5	1.0	0.6	0.4	1.1	1.7	5.2	8.0	—	6.5	69.5	0.7	1.7
201	HODGKIN'S DISEASE	0.2	0.8	0.8	0.2	1.4	0.4	1.3	1.5	0.6	0.4	0.5	1.7	2.6	2.0	2.3	—	—	0.8	0.9
202	OTHER LYMPHOID TISSUE	0.6	1.0	—	0.6	0.2	0.2	0.3	0.5	—	1.8	2.1	2.6	3.9	4.0	2.3	6.5	34.7	0.7	1.4
203	MULTIPLE MYELOMA	—	—	—	—	—	—	—	—	0.3	0.7	0.5	1.7	2.6	4.0	2.3	—	—	0.2	0.4
204	LYMPHOID LEUKAEMIA	0.8	0.8	1.0	0.4	1.0	0.2	—	—	—	—	0.5	—	2.6	6.0	2.3	—	34.7	0.6	1.1
205	MYELOID LEUKAEMIA	0.4	0.2	0.6	0.2	0.9	0.4	1.1	1.0	1.6	0.7	2.7	4.3	—	—	2.3	—	—	0.8	0.9
206	MONOCYTIC LEUKAEMIA	—	—	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
207	OTHER SPECIFIED LEUKAEMIA	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
208	LEUKAEMIA UNSPECIFIED	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.7	—	0.4
	ALL SITES	6.4	5.7	6.1	6.4	9.4	10.0	21.5	29.1	54.5	92.5	171.0	273.0	362.5	434.0	283.0	436.1	2119.5	46.0	94.1

TABLE 2B: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATE PER 100,000 POPULATION, GREATER BOMBAY, 1982—FEMALE

ICD 9TH	SITE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	CR	AAR
140	LIP	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.7	–	–	–	0.1
141	TONGUE	–	–	–	–	–	–	0.4	–	3.4	2.7	7.7	5.3	11.7	15.8	5.5	18.5	20.6	1.2	2.4
142	MAJOR SALIVARY GLANDS	–	–	0.2	0.3	0.3	0.3	–	–	0.5	–	1.0	1.3	2.9	6.8	–	–	–	0.3	0.5
143	GUM	–	–	–	–	–	–	–	1.0	1.0	2.0	3.9	2.6	2.9	2.3	5.5	–	20.6	0.6	1.0
144	FLOOR OF MOUTH	–	–	–	–	–	–	–	–	–	–	–	3.9	–	2.3	–	–	–	0.1	0.2
145	OTHER MOUTH	–	–	0.2	–	–	–	0.7	1.3	4.4	4.0	6.8	7.9	10.3	13.5	5.5	–	20.6	1.4	2.4
146	OROPHARYNX	–	–	–	–	0.3	–	0.4	–	–	–	1.9	2.6	4.4	2.3	5.5	–	–	0.3	0.6
147	NASOPHARYNX	–	–	0.4	–	0.3	0.3	0.4	0.3	0.5	0.7	–	–	1.5	–	–	6.2	–	0.3	0.4
148	HYPOPHARYNX	–	–	–	–	–	–	0.4	1.0	2.4	5.4	5.8	5.3	5.9	4.5	10.9	12.3	20.6	1.1	2.0
149	PHARYNX ETC.	–	–	–	–	–	–	0.4	0.3	–	–	–	–	1.5	–	–	–	–	0.1	0.1
150	OESOPHAGUS	–	–	–	–	–	0.3	0.4	1.7	6.9	9.4	13.5	14.5	20.6	40.6	35.5	49.3	41.3	3.0	6.0
151	STOMACH	–	–	–	–	–	0.3	1.1	0.3	2.4	4.7	2.9	14.5	7.3	15.8	8.2	–	82.6	1.3	3.0
152	SMALL INTESTINE	–	–	–	0.3	–	–	–	–	0.5	–	1.0	1.3	–	–	2.7	6.2	–	0.2	0.3
153	COLON	–	–	–	–	–	0.6	0.4	0.7	1.0	1.3	2.9	–	5.9	9.0	16.4	24.6	20.6	0.8	1.7
154	RECTUM	–	–	–	–	–	0.9	0.4	0.3	2.0	3.4	2.9	6.6	8.8	9.0	8.2	6.2	–	0.9	1.7
155	LIVER	–	–	–	–	0.3	–	–	–	1.0	0.7	4.8	2.6	1.5	–	2.7	–	20.6	0.4	0.8
156	GALL BLADDER	–	–	–	–	–	–	–	–	1.5	0.7	4.8	–	1.5	–	2.7	–	–	0.3	0.5
157	PANCREAS	–	–	–	–	–	–	–	–	0.5	–	1.0	–	1.5	4.5	2.7	18.5	20.6	0.3	0.7
158	RETROPERITONEUM	–	–	–	–	–	–	–	–	–	0.7	–	–	1.5	2.3	–	–	–	0.1	0.2
159	OTHER DIGESTIVE	–	–	–	0.3	–	–	–	–	–	0.7	–	–	1.5	–	–	–	–	0.1	0.1
160	NASAL CAVITIES. ETC.	–	–	0.2	–	–	0.6	0.7	0.3	–	–	1.9	3.9	1.5	2.3	–	–	20.6	0.4	0.7
161	LARYNX	–	–	0.2	–	–	–	0.4	–	0.5	0.7	2.9	3.9	2.9	–	–	6.2	–	0.3	0.6
162	LUNG	–	–	–	–	–	–	–	–	0.5	4.0	5.8	7.9	7.3	6.8	2.7	12.3	20.6	0.8	1.8
163	PLEURA	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.7	–	–	–	0.1
164	THYMUS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
165	OTHER RESPIRATORY	–	–	–	–	–	–	–	–	–	–	–	1.3	–	–	–	–	–	–	0.1
170	BONE	0.2	1.1	0.7	0.8	0.5	0.3	1.1	0.3	–	–	1.0	–	–	2.3	–	6.2	–	0.6	0.6
171	CONNECTIVE TISSUE	0.2	0.2	0.7	–	0.3	0.9	0.7	1.7	1.0	1.3	1.9	2.6	–	–	–	–	20.6	0.7	0.9

TABLE 2B: *(Continued)*: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATE PER 1000,000 POPULATION, GREATER BOMBAY, 1982—FEMALE

ICD 9TH	SITE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80+	CR	AAR
172	SKIN-MELANOMA	—	—	—	—	—	—	—	—	0.5	—	1.9	—	—	—	2.7	—	—	0.1	0.2
173	SKIN-OTHER	—	—	—	—	0.8	—	0.4	—	0.5	0.7	1.9	6.6	2.9	4.5	5.5	30.8	20.6	0.7	1.4
174	FEMALE BREAST	—	—	—	0.3	0.5	4.2	7.7	13.9	26.9	47.1	49.3	52.6	55.8	40.6	30.1	61.6	165.2	10.1	17.0
179	UTERUS, PART UNSPECIFIED	—	—	—	—	—	—	—	0.3	0.5	0.7	—	1.3	—	2.3	—	—	—	0.1	0.2
180	CERVIX UTERI	—	—	—	—	0.5	4.5	12.0	15.2	26.5	38.4	63.8	55.2	60.2	27.1	27.3	6.2	20.6	10.0	15.4
181	PLACENTA	—	—	—	—	1.3	1.5	1.4	—	—	—	—	—	—	—	—	—	—	0.4	0.3
182	BODY OF UTERUS	—	—	—	—	0.3	—	—	1.3	1.0	3.4	7.7	9.2	4.4	11.3	—	12.3	—	1.0	1.8
183	OVARY	—	0.2	—	1.0	0.8	0.6	1.8	3.6	6.9	6.7	14.5	14.5	13.2	4.5	21.9	—	—	2.5	3.8
184	VAGINA ETC.	—	—	—	—	—	0.3	0.4	0.7	1.0	2.7	4.8	3.9	4.4	6.8	—	18.5	—	0.7	1.3
188	BLADDER	—	—	—	—	—	0.3	0.4	—	—	0.7	1.9	2.6	2.9	6.8	2.9	—	20.6	0.4	0.9
189	KIDNEY	0.4	—	—	—	—	—	0.4	—	—	0.7	—	—	—	—	2.7	6.2	—	0.2	0.2
190	EYE	0.6	—	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1
191	BRAIN	0.6	0.4	0.2	—	0.3	1.5	—	0.7	0.5	1.3	1.0	1.3	1.5	—	—	—	—	0.5	0.6
192	OTHER NERVOUS SYSTEM	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
193	THYROID GLAND	—	—	—	0.3	0.8	0.6	1.1	1.3	1.5	1.3	1.0	1.3	5.9	6.8	5.5	6.2	—	0.8	1.2
194	OTHER ENDOCRINE GLANDS	—	—	—	—	—	—	0.4	—	—	0.7	—	—	—	—	—	—	—	0.1	0.1
195	ILLDEFINED SITES	0.2	—	—	—	—	0.3	—	—	0.5	—	—	—	—	2.3	2.7	—	—	0.1	0.2
196	LYMPH NODES—SECONDARY	—	—	—	—	—	—	—	0.3	—	0.7	2.9	6.6	1.5	4.5	—	12.3	—	0.4	0.8
197	SECONDARY—RESPIRATORY AND DIGESTIVE SYSTEM	—	—	—	—	—	—	0.4	0.7	1.5	1.3	1.0	3.9	4.4	4.5	5.5	—	—	0.5	0.9
198	SECONDARY—OTHER SPECIFIED SITES	—	—	—	—	—	—	—	—	—	—	—	1.3	1.5	2.3	—	—	—	0.1	0.2
199	SITE UNSPECIFIED	—	—	—	—	—	—	—	—	—	0.7	—	—	—	4.5	—	—	—	0.1	0.2
200	LYMPHOSARCOMA	—	0.2	—	—	—	0.6	0.4	—	0.5	—	1.9	—	1.5	4.5	2.7	—	20.6	0.3	0.7
201	HODGKIN'S DISEASE	—	—	0.4	0.3	0.5	0.6	—	—	—	0.7	1.0	1.3	1.5	2.3	—	—	—	0.3	0.4
202	OTHER LYMPHOID TISSUE	0.4	—	—	0.3	0.3	0.3	0.4	0.3	1.0	1.3	1.0	3.9	—	6.8	2.7	6.2	—	0.5	0.8
203	MULTIPLE MYELOMA	—	—	—	—	—	—	—	0.3	—	—	1.9	2.6	1.5	4.5	—	—	—	0.2	0.4
204	LYMPHOID LEUKAEMIA	0.4	1.1	0.9	0.3	0.3	—	—	—	—	—	—	—	1.5	2.3	2.7	—	20.6	0.5	0.7
205	MYELOID LEUKAEMIA	0.4	0.4	0.2	0.5	0.5	0.3	1.4	0.3	1.0	2.0	—	2.6	—	—	5.5	—	—	0.6	0.8
206	MONOCYTIC LEUKAEMIA	—	—	—	—	—	—	—	—	—	0.7	—	—	—	—	—	—	—	—	0.1
207	OTHER SPECIFIED LEUKAEMIA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
208	LEUKAEMIA UNSPECIFIED	0.2	0.2	—	—	—	—	—	1.0	0.5	—	—	—	—	—	—	6.2	—	0.4	0.2
	ALL SITES	3.7	3.8	4.6	4.4	8.7	20.2	35.5	49.2	100.4	154.2	232.8	258.8	267.2	288.6	240.5	332.5	598.8	46.9	79.8

TABLE 3: PROPORTION OF CASES DIAGNOSED BY SELECTED MEANS, GREATER BOMBAY FOR THE PERIOD 1-1-1982 TO 31-12-1982

ICD 9TH	SITE	CLINICAL (%)		X-RAY (%)		OTHER (%)		MICROSCOPIC (%)		TOTAL NO.	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
140	LIP	16.7	–	–	–	–	–	83.3	100.0	6	1
141	TONGUE	7.3	8.9	0.7	–	1.3	–	90.7	91.1	150	45
142	MAJOR SALIVARY GLANDS	7.7	–	–	–	–	8.3	92.3	91.7	13	12
143	GUM	4.0	–	–	–	–	–	96.0	100.0	25	21
144	FLOOR OF MOUTH	22.2	–	–	–	–	–	77.8	100.0	9	4
145	OTHER MOUTH	7.9	5.8	1.1	–	–	–	91.0	94.2	89	52
146	OROPHARYNX	6.9	8.3	–	8.3	–	–	93.1	83.3	72	12
147	NASOPHARYNX	–	10.0	–	10.0	–	–	100.0	80.0	13	10
148	HYPOPHARYNX	6.8	4.9	5.7	7.3	1.0	–	86.5	87.8	192	41
149	OTHER PHARYNX ETC.	5.7	–	–	33.3	–	–	94.3	66.7	35	3
150	OESOPHAGUS	7.0	10.4	18.9	11.3	1.0	1.7	73.1	76.5	201	115
151	STOMACH	19.1	20.0	11.3	6.0	4.3	8.0	65.2	66.0	115	50
152	SMALL INTESTINE	25.0	–	–	–	25.0	–	50.0	100.0	4	6
153	COLON	11.1	12.9	11.1	–	9.3	3.2	68.5	83.9	54	31
154	RECTUM	15.7	19.4	1.4	–	1.4	11.1	81.4	69.4	70	36
155	LIVER	17.1	28.6	–	–	–	–	82.9	71.4	41	14
156	GALL BLADDER	8.3	9.1	8.3	–	8.3	9.1	75.0	81.8	12	11
157	PANCREAS	11.8	50.0	11.8	–	11.8	–	64.7	50.0	17	10
158	RETROPERITONEUM	–	–	–	–	33.3	–	100.0	66.7	9	3
159	OTHER DIGEST. ETC.	25.0	–	–	–	–	–	75.0	100.0	8	3
160	NASAL CAVITIES	–	7.1	8.3	7.1	–	–	91.7	85.7	24	14
161	LARYNX	17.4	7.7	–	–	–	–	82.6	92.3	132	13
162	LUNGS	13.9	3.2	21.9	29.0	0.5	–	63.7	67.7	201	31
163	PLEURA	–	–	–	–	–	–	100.0	100.0	1	1
164	THYMUS ETC.	–	–	–	–	50.0	–	50.0	–	2	–
165	OTHER RESP. ETC.	–	–	–	–	–	–	100.0	100.0	1	1
170	BONES	10.7	22.7	–	–	–	–	89.3	77.3	28	22
171	CONNECTIVE TISSUE	2.9	4.0	2.9	–	–	–	94.3	96.0	35	25
172	SKIN MELANOMA	–	–	–	–	–	–	100.0	100.0	3	5
173	SKIN OTHER	–	–	–	–	–	–	100.0	100.0	47	25
174	FEMALE BREAST	–	12.0	–	4.2	–	3.7	–	80.1	–	382
175	MALE BREAST	16.7	–	–	–	–	–	83.3	–	6	–
179	UTERUS, PART UNSPECIFIED	–	40.0	–	–	–	–	–	60.0	–	5

TABLE 3 *(Continued)*: PROPORTION OF CASES DIAGNOSED BY SELECTED MEANS, GREATER BOMBAY FOR THE PERIOD 1-1-1982 TO 31-12-1982

ICD 9TH	SITE	CLINICAL (%)		X-RAY (%)		OTHER (%)		MICROSCOPIC (%)		TOTAL NO.	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
180	CERVIX UTERI	–	6.6	–	–	–	1.0	–	92.4	–	381
181	PLACENTA	–	14.3	–	21.4	–	–	–	64.3	–	14
182	BODY OF UTERUS	–	5.4	–	–	–	–	–	94.6	–	37
183	OVARY	–	8.4	–	–	–	2.1	–	89.5	–	95
184	VAGINA ETC.	–	3.7	–	–	–	3.7	–	92.6	–	27
185	PROSTATE	22.1	–	1.5	–	–	–	76.5	–	68	–
186	TESTIS	4.8	–	–	–	–	–	95.2	–	42	–
187	PENIS ETC.	–	–	–	–	–	–	100.0	–	52	–
188	BLADDER	7.1	28.6	1.4	–	1.4	7.1	90.0	64.3	70	14
189	KIDNEY	3.1	–	6.3	–	3.1	–	87.5	100.0	32	6
190	EYE	–	25.0	–	–	–	–	100.0	75.0	6	4
191	BRAIN	14.6	25.0	2.4	10.0	2.4	–	80.5	65.0	41	20
192	OTHER NERVOUS SYSTEM	–	–	–	–	50.0	–	50.0	–	2	–
193	THYROID GLAND	29.4	3.3	11.8	–	–	–	58.8	96.7	17	30
194	ENDOCRINE GLANDS	–	50.0	–	–	–	–	100.0	50.0	4	2
195	ILL DEFINED SITES	57.1	60.0	–	–	–	20.0	42.9	20.0	7	5
196	LYMPH NODES—SECONDARY AND UNSPECIFIED SITES	12.2	–	–	–	–	–	87.8	100.0	49	15
197	SEC. RESP. AND DIG. SYSTEM	17.4	21.1	21.7	–	4.3	–	56.5	78.9	23	19
198	SEC. OTHER SPECIFIED SITES	14.3	33.3	28.6	–	14.3	–	42.9	66.7	7	3
199	SITE UNSPECIFIED	–	–	–	–	–	–	100.0	100.0	4	3
200	LYMPHOSARCOMA AND RETICUL.	2.8	–	2.8	–	–	–	94.4	100.0	36	13
201	HODGKIN'S DISEASE	9.8	8.3	–	–	–	–	90.2	91.7	41	12
202	OTHER LYMPHOID TISSUE	11.1	10.0	–	–	2.8	–	86.1	90.0	36	20
203	MULTIPLE MYELOMA	9.1	12.5	27.3	12.5	–	–	63.6	75.0	11	8
204	LYMPHOID LEUKAEMIA	26.7	11.1	–	–	–	–	73.3	88.9	30	18
205	MYELOID LEUKAEMIA	17.5	8.3	–	–	–	–	82.5	91.7	40	24
206	MONOCYTIC LEUKAEMIA	–	100.0	–	–	–	–	100.0	–	1	1
207	OTHER SPECIFIED LEUKAEMIA	–	–	100.0	–	–	–	–	–	1	–
208	LEU. UNSPECIFIED CELL TYPE	–	42.9	–	–	–	–	100.0	57.1	2	7
140–208	ALL SITES	10.7	10.2	6.3	3.0	1.3	2.1	81.7	84.7	2237	1782

TABLE 4: PERCENTAGE DISTRIBUTION OF NEW CANCER CASES BY RELIGION AND SEX, GREATER BOMBAY, 1982

ICD 9TH	SITE	HINDU		MUSLIM		CHRISTIAN		PARSI		OTHERS	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
140	LIP	0.24	0.08	0.31	–	0.85	–	–	–	–	–
141	TONGUE	7.07	2.42	6.25	2.21	5.08	5.10	2.63	1.89	5.19	2.47
142	SALIVARY GLANDS	0.53	0.53	0.94	1.33	0.85	2.04	–	–	–	–
143	GUM	1.13	1.44	0.94	0.44	–	–	2.63	–	2.60	1.23
144	FLOOR OF MOUTH	0.42	0.23	0.31	–	0.85	–	–	–	–	1.23
145	OTHER PARTS OF MOUTH	4.28	2.87	3.75	3.10	0.85	2.04	–	–	5.19	6.17
146	OROPHARYNX	3.09	0.60	4.69	0.88	3.39	1.02	2.63	1.89	–	–
147	NASOPHARYNX	0.65	0.53	0.31	0.44	–	1.02	–	–	1.30	1.23
148	HYPOPHARYNX	9.44	2.42	6.25	3.10	7.63	1.02	–	–	5.19	1.23
149	OTHER SITES WITHIN 140-148	1.60	0.23	1.25	–	2.54	–	–	–	1.30	–
150	OESOPHAGUS	8.97	6.65	8.44	7.08	11.86	5.10	7.89	5.66	7.79	3.70
151	STOMACH	5.11	2.42	4.69	3.98	5.93	5.10	5.26	1.89	6.49	3.70
152	SMALL INTESTINE	0.06	0.30	0.63	0.88	–	–	–	–	1.30	–
153	COLON	2.73	1.89	1.25	0.88	1.69	1.02	2.63	3.77	1.30	1.23
154	RECTUM	3.03	1.89	2.50	3.54	5.93	1.02	5.26	1.89	2.60	1.23
155	LIVER	2.09	0.83	1.56	–	–	–	–	1.89	1.30	2.47.
156	GALL BLADDER	0.42	0.53	0.94	1.38	–	1.02	–	–	2.60	–
157	PANCREAS	0.53	0.38	1.25	–	1.69	1.02	5.26	3.77	–	2.47
158	RETROPERITONEUM AND PERITONEUM	0.30	0.08	0.94	0.88	0.85	–	–	–	–	–
159	OTHER SITES WITHIN 150-158	0.42	0.08	–	–	–	2.04	–	–	1.30	–
160	NASAL CAVITIES	1.19	0.98	0.94	0.44	–	–	2.63	–	–	–
161	LARYNX	5.76	0.53	6.56	1.33	7.63	2.04	–	–	6.49	1.23
162	LUNGS	8.85	1.96	9.38	0.88	11.02	1.02	10.53	3.77	6.49	–
163	PLEURA	0.06	–	–	0.44	–	–	–	–	–	–
164	THYMUS HEART AND MEDIAS.	0.06	–	0.31	–	–	–	–	–	–	–
165	OTHER SITES WITHIN 160-164	0.06	0.08	–	–	–	–	–	–	–	–
170	BONES	1.31	1.28	1.56	2.21	0.85	–	–	–	–	–
171	CONNECTIVE TISSUE	1.48	1.44	2.19	0.88	1.69	–	2.63	1.89	–	3.70
172	SKIN-MELANOMA	0.06	0.23	–	0.44	–	1.02	2.63	–	1.30	–
173	SKIN-OTHER	1.90	1.66	1.25	0.88	1.69	–	7.89	1.89	7.79	–
174	FEMALE BREAST	–	20.01	–	25.66	–	22.45	–	39.62	–	18.52
175	MALE BREAST	0.30	–	0.31	–	–	–	–	–	–	–
179	UTERUS	–	0.23	–	0.44	–	–	–	1.89	–	–

TABLE 4 *(Continued)*: PERCENTAGE DISTRIBUTION OF NEW CANCER CASES BY RELIGION AND SEX, GREATER BOMBAY, 1982

ICD 9TH	SITE	HINDU		MUSLIM		CHRISTIAN		PARSI		OTHERS	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
180	CERVIX UTERI	–	23.94	–	13.27	–	13.27	–	–	–	25.93
181	PALACENTA	–	0.68	–	2.21	–	–	–	–	–	–
182	BODY OF UTERUS	–	2.11	–	0.88	–	2.04	–	5.66	–	2.47
183	OVARY	–	4.83	–	7.08	–	8.16	–	7.55	–	3.70
184	OTHER FEMALE GENITAL ORGANS	–	1.51	–	0.88	–	2.04	–	–	–	3.70
185	PROSTATE	2.79	–	2.81	–	2.54	–	15.79	–	3.90	–
186	TESTIS	1.84	–	2.19	–	3.39	–	–	–	–	–
187	PENIS	2.79	–	–	–	2.54	–	–	–	2.60	–
188	BLADDER	2.85	0.68	3.44	0.44	3.39	2.04	7.89	3.77	5.19	–
189	KIDNEY	1.19	0.38	2.19	–	0.85	1.02	–	–	5.19	–
190	EYE	0.30	0.08	–	1.33	0.85	–	–	–	–	–
191	BRAIN	1.90	1.21	1.25	0.44	2.54	2.04	–	1.89	2.60	–
192	OTHER PARTS OF NERVOUS SYSTEM	0.12	–	–	–	–	–	–	–	–	–
193	THYROID GLAND	0.71	1.59	1.25	1.33	0.85	1.02	–	1.89	–	4.94
194	OTHER ENDOCRINE GLANDS	0.18	0.15	0.31	–	–	–	–	–	–	–
195	ILL DEFINED SITES	0.42	0.30	–	–	–	1.02	–	–	–	–
196	LYMPH NODES	2.26	0.83	2.19	0.88	3.39	1.02	–	–	–	1.23
197	SECONDARY RESP. AND DIGESTIVE SYSTEM	0.89	1.13	1.25	0.44	0.85	1.02	2.63	1.89	2.60	1.23
198	SECONDARY—OTHER SPECIFIED SITES	0.30	0.15	–	–	0.85	–	–	1.89	1.30	–
199	SITE UNSPECIFIED	0.24	0.23	–	–	–	–	–	–	–	–
200	LYMPHOSARCOMA AND RETICULOSARCOMA	1.31	0.60	3.13	1.33	1.69	1.02	–	–	2.60	1.23
201	HODGKIN'S DISEASE	1.78	0.68	3.13	–	–	3.06	2.63	–	–	–
202	OTHER LYMPHOID AND HISTIOCYTIC TISSUE	1.43	1.21	2.19	–	1.69	2.04	2.63	1.89	2.60	1.23
203	MULTIPLE MYELOMA	0.53	0.45	0.31	–	–	–	2.63	–	–	2.47
204	LYMPHOID LEUKAEMIA	1.07	0.98	2.50	1.77	0.85	–	2.63	1.89	2.60	–
205	MYELOID LEUKAEMIA	1.84	1.13	2.19	3.54	0.85	1.02	–	–	1.30	–
206	MONOCYTIC LEUKAEMIA	0.06	–	–	–	–	1.02	–	–	–	–
207	OTHER SPECIFIED LEUKAEMIA	0.06	–	–	–	–	–	–	–	–	–
208	LEUKAEMIA OF UNSPECIFIED CELL TYPE	0.06	0.30	–	0.44	–	2.04	2.63	–	–	–
	ALL SITES %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
140–208	NO. OF CASES	1684	1324	320	226	118	98	38	53	77	81

TABLE 5A: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, GREATER BOMBAY, 1982—MALE (%)

Educational Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	All Sites (140-208)
Illiterate	14.4	12.5	9.0	7.0	12.1	9.0	11.0
Literate	—	—	—	—	—	—	—
Primary	14.7	15.7	20.4	20.9	19.7	20.4	18.7
Secondary	2.7	2.6	2.0	5.2	3.8	3.0	3.7
Technical*	0.3	—	—	—	—	0.5	0.3
College**	0.7	0.3	0.5	2.6	0.8	2.0	1.5
Not Known	67.2	68.9	68.1	64.3	63.6	65.1	64.8
Total (%)	100.0 +(292)	100.0 (312)	100.0 (201)	100.0 (115)	100.0 (132)	100.0 (201)	100.0 (2237)

* Technical after matriculation. ** College and above. + No. of cancer cases.

TABLE 5B: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, GREATER BOMBAY, 1982—FEMALE (%)

Education Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lungs (162)	Breast (174)	Cervix (180)	All Sites (140-208)
Illiterate	19.3	15.2	20.9	34.0	—	9.7	11.0	21.8	16.4
Literate	—	—	—	—	—	—	—	—	0.1
Primary	3.0	6.1	13.0	4.0	38.5	3.2	11.0	7.9	9.1
Secondary	0.7	—	—	2.0	—	—	4.5	0.5	2.2
Technical*	—	1.5	—	—	—	—	0.8	0.8	0.5
College**	0.7	—	—	—	—	—	2.6	—	1.1
Not Known	76.3	77.2	66.1	60.0	61.8	87.1	70.1	69.0	70.6
Total (%)	100.0 +(135)	100.0 (66)	100.0 (115)	100.0 (50)	100.0 (13)	100.0 (31)	100.0 (382)	100.0 (381)	100.0 (1782)

* Technical after matriculation. ** College and above. + No. of cancer cases.

TABLE 6: FREQUENCY OF CANCER AT SELECTED SITES IN GREATER BOMBAY, 1982 (Level of the fourth digit)

ICD 9th	SITE	Males No.	Males %	Females No.	Females %
141	**TONGUE**	**150**	**100.0**	**45**	**100.0**
of which	141.0	90	60.0	19	42.2
	141.1-.4	18	12.0	16	35.6
	141 R	42	28.0	10	22.2
143	**GUM**	**25**	**100.0**	**21**	**100.0**
of which	143.0	3	12.0	6	28.6
	143.1	17	68.0	13	61.9
	143 R	5	20.0	2	9.5
145	**MOUTH**	**89**	**100.0**	**52**	**100.0**
of which	145.0-.1	56	62.9	44	84.6
	145.2-.5	21	23.6	5	9.6
	145 R	12	13.5	3	5.8
146	**OROPHARYNX**	**72**	**100.0**	**12**	**100.0**
of which	146.0	51	70.8	8	66.7
	146.1-.2	4	5.6	–	–
	146.3-.5	12	16.7	2	16.7
	146.6	1	1.3	–	–
	146.7	–	–	–	–
	146 R	4	5.6	2	16.7
148	**HYPOPHARYNX**	**192**	**100.0**	**41**	**100.0**
of which	148.0	12	6.3	13	31.7
	148.1	125	65.1	15	36.6
	148.2	23	12.0	2	4.9
	148.3	1	0.5	–	–
	148 R	31	16.1	11	26.8
150	**OESOPHAGUS**	**201**	**100.0**	**115**	**100.0**
of which	150.0	–	–	–	–
	150.1	–	–	–	–
	150.2	–	–	–	–
	150.3	24	11.9	2	1.7
	150.4	84	41.8	40	34.8
	150.5	42	20.9	36	31.3
	150 R	51	25.4	37	32.2

TABLE 6: (*Continued*): FREQUENCY OF CANCER AT SELECTED SITES IN GREATER BOMBAY, 1982
(Level of the fourth digit)

ICD 9th	SITE	Males No.	Males %	Females No.	Females %
153	**COLON**	**54**	**100.0**	**31**	**100.0**
of which	153.0	2	3.7	–	–
	153.1	5	9.3	1	3.2
	153.2	4	7.4	3	9.7
	153.3	8	14.8	5	16.1
	153.4	10	18.5	3	9.7
	153.5	–	–	–	–
	153.6	4	7.4	5	16.1
	153.7	–	–	–	–
	153 R	21	38.9	14	45.2
154	**RECTUM**	**70**	**100.0**	**36**	**100.0**
of which	154.0	1	1.4	1	2.8
	154.1	50	71.4	30	83.3
	154.2	14	20.0	3	8.3
	154.3	2	2.9	–	–
	154 R	3	4.3	2	5.6
156	**GALL BLADDER ETC.**	**12**	**100.0**	**11**	**100.0**
of which	156.0	8	66.7	9	81.8
161	**LARYNX**	**132**	**100.0**	**13**	**100.0**
of which	161.0	30	22.7	2	15.4
	161.1	54	40.9	5	38.5
	161.2	3	2.3	–	–
	161 R	45	34.1	6	46.2
173	**SKIN (EXCEPT MALANOMA)**	**47**	**100.0**	**25**	**100.0**
of which	173.0-.3	12	25.5	13	52.0
	173.4	4	8.5	4	16,0
	173.5	7	14.9	3	12.0
	173.6	2	4.3	1	4.0
	173.7	19	40.2	4	16.0
	173 R	3	6.4	–	–
183	**OVARY ETC.**	–	–	**95**	**100.0**
of which	183.0	–	–	92	96.8
189	**KIDNEY ETC.**	**32**	**100.0**	**6**	**100.0**
of which	189.0	29	90.6	6	100.0
194	**ENDOCRINE**	**4**	**100.0**	**2**	**100.0**
of which	194.0	3	75.0	–	–
	194.3	1	25.0	2	100.0
	194 R	–	–	–	–

TABLE 7: ESTIMATED RESIDENT POPULATION BY AGE AND SEX, GREATER BOMBAY (AS ON 1ST JULY, 1982). TOTAL POPULATION (ALL RELIGIOUS COMMUNITIES)

Age Group (Years)	Male	%	Female	%
0—4	5,12,757	10.55	4,80,062	12.65
5—9	4,90,945	10.10	4,70,644	12.39
10—14	4,90,721	10.10	4,53,689	11.95
15—19	4,70,278	9.68	3,88,534	10.24
20—24	5,77,518	11.88	3,81,307	10.04
25—29	4,61,130	9.49	3,31,753	8.74
30—34	3,77,261	7.76	2,84,479	7.50
35—39	3,88,683	8.00	3,02,826	7.98
40—44	3,19,090	6.57	2,04,106	5.38
45—49	2,81,086	5.78	1,48,463	3.91
50—54	1,86,596	3.84	1,03,511	2.73
55—59	1,15,387	2.37	76,152	2.01
60—64	77,246	1.59	68,115	1.79
65—69	49,994	1.03	44,358	1.17
70—74	42,977	0.88	36,586	0.96
75—79	15,363	0.32	16,239	0.43
80+	2,878	0.06	4,843	0.13
ANS	70	0.00	17	0.00
Total	48,59,980	100.00	37,95,684	100.00

APPENDIX 4

POPULATION BASED CANCER REGISTRY AT CANCER INSTITUTE, ADYAR, MADRAS

DR. V. SHANTA, Project Chief
DR. P. N. RAJAPPAN, Senior Medical Officer

ANNUAL REPORT

(FROM JANUARY 1, 1982 TO DECEMBER 31, 1982.)

INITIAL SET-UP OF REGISTRY

The official sanction of the registry was made in the latter part of July, 1981. The immediate task of the project chief, was recruitment of staff and preliminary training of field staff, on patient interrogation and collection of data for the registry and listing out of the various sources from where data have to be collected.

In addition, the co-operation of various medical institutions, Government and private had to be enlisted. Since the teaching Government hospitals would constitute a major source of data, a letter was addressed to the Commissioner and Secretary, Department of Health, Government of Tamil Nadu on 3rd August, 1981 outlining the Project and seeking co-operation of Government medical institutions, whereon the Secretary, Health, Government of Tamil Nadu called a meeting of Heads of all Government medical institutions in the city on 17th August, 1981. Full co-operation was promised. A State co-ordinating committee for Government institutions to deal with problems relating to data collection was also formed. A D.O. by the Secretary, Department of Health was circulated to various medical institutions regarding data collection and on giving full facilities for field staff to visit different departments of the various hospitals.

The Madras Metropolitan Tumor Registry started data collection from 1st January, 1982.

The Madras Metropolitan Tumor Registry is presently based in the Cancer Institute and has a floor area of 812 sq.feet.

TRAINING OF CORE STAFF

During the period 14-12-81 to 25-12-81 the senior medical officer and junior bio-statistician were deputed for the training programme at Tata Memorial Hospital, Bombay for the ICMR Registry's personnel.

The senior medical officer was again deputed to an international training course on cancer epidemiology at the Cancer Research Institute, Bombay sponsored jointly by the World Health Organisation, International Agency for Research on Cancer, Indian Council of Medical Research and Cancer Research Institute, Bombay during the period 11-1-82 to 31-1-82.

During the period 1st to 3rd February 1982 a course was conducted on cancer control programme at the Cancer Research Institute, Bombay which was also attended by the Senior Medical Officer.

TRAINING OF FIELD STAFF

A training schedule for field staff was undertaken before the commencement of actual work by the senior medical officer. Initially interview techniques were taught in respect of informal and formal interviews. Specific emphasis was laid on maintaining the confidentiality of the information sought on cancer cases by the field staff on all occasions.

Basic fundamentals of human anatomy were taught. Brief definitions of terms in respect of clinical, radiological, pathological and histological nomenclature used in cancer studies were explained to them. A short insight into the method of recording case sheets of cancer patients was given, so that, they may be able to pick up relevant information available from them and practical training was given to them to fill in proformas, from case records.

The senior medical officer personally met the heads of various collaborating institutions explaining to them in detail, the various aspects of the proposed registry work and seeking their fullest co-operation. The field staff were introduced to the various medical personnel and record officers and registrars of all the different institutions and nursing homes to ensure completion of allotted assignment.

AREA OF STUDY

The Madras Regional Cancer Registry Centre is located in the Cancer Institute, at Madras in the state of Tamil Nadu. Tamil Nadu which occupies the South-eastern region of India has 16 districts with an extent of 1,30,056 sq.km. with a population 48.41 million (50.6% male, 49.4% female), density of population 371 per sq.km. Sex ratio is 978 females per 1000 males, literacy rate is 45.8% in the total population. It occupies the second place among states in the matter of urbanisation, the first being Maharashtra.

The metropolitan area of Madras (Madras Urban agglomeration), includes Madras Corporation (Corporation limits, co-terminus with Madras District) and 48 other urban agglomeration. The final estimation of population according to 1981 census of metropolitan Madras is 42,89,347 and the area of 48 urban agglomeration is not well defined and estimate of area is not available. These agglomerations come under Chingleput district and do not come under Madras Corporation. Deaths in these areas are not reported to Corporation.

It must form a contiguous urban spread constituting a town and its adjoining urban outgrowth, or two or more physically contiguous towns, together with contiguous will recognised urban outgrowth, if any, of such towns. The urban agglomeration has shown an increase of one million from 1971-81 showing that there is a sizable growth of population in the suburbs of Madras city which also constitutes an industrial belt.

Because of the foregoing, the Madras Corporation area which is co-terminus with Madras district, having a well defined area of 170 sq.km. 150 divisions, population of 3.3 million with a good death reportable system by the Corporation of Madras has been specifically chosen as the area of study.

The population of Madras Corporation area is 3.3 million (51.7% males, 48.3% females) forming 6.8% of the total population of the state and is purely urban. The sex ratio is 934 female per 1000 males. Literacy rate being 66.34 (75.6% males, 60.7% females). Madras city is situated at latitude 82° E and longitude 13° in the state of Tamil Nadu at the South-eastern part of the subcontinent. It is at sea level with fluctuation of temperature between 60°F to 116°F at the maximum cold and hot seasons respectively, the former falling in the months of November to February and the latter between April and June.

The majority are Hindus, followed by Muslims, Christians and Jains. Tamil is the major language followed by Telugu, Urdu and Malayalam.

DEFINITION OF AN URBAN UNIT

(1) All places with a municipality, corporation or cantonment board or notified town area, (2) All other places which satisfy the following criteria: (i) Minimum population of 5000. (ii) At least 75% male working population engaged in non-agricultural and allied activity. (iii) A population of at least 400/km. or one thousand per square mile (Census of India 1981 Series 20: Tamil Nadu: Paper I of 1981 and supplement provisional population totals).

PATTERN OF PARTICIPATING UNITS

There are 18 major Government institutions and hospitals, 143 private hospitals and nursing homes, 25 pathology laboratories and Corporation dispensaries and peripheral hospitals and over 1600 consultants and general practitioners of allopathic and non-allopathic systems as colloborating agencies. Figure 1 shows the location of major hospitals in the registration area.

METHODOLOGY: INITIAL PROCEDURE

The data collection was started from 1-1-82. In the first month, all the Government hospitals were contacted to collect data on proforma prepared by the Project Chief on the model of the World Health Organisation format.

The data collection from Women and Children Hospital and Institute of Child Health could be started only in the month of March, as the government order missed the name of these two hospitals from the list and hence a special letter from the Dean, Government General Hospital had to be taken, to get the co-operation from these two hospitals.

To start with, an alphabet name register was maintained. It contained the information about the patient's name, name of the hospital where he or she is getting treatment and the tumor registry number. The tumor registry number was serially given as the proformas came in.

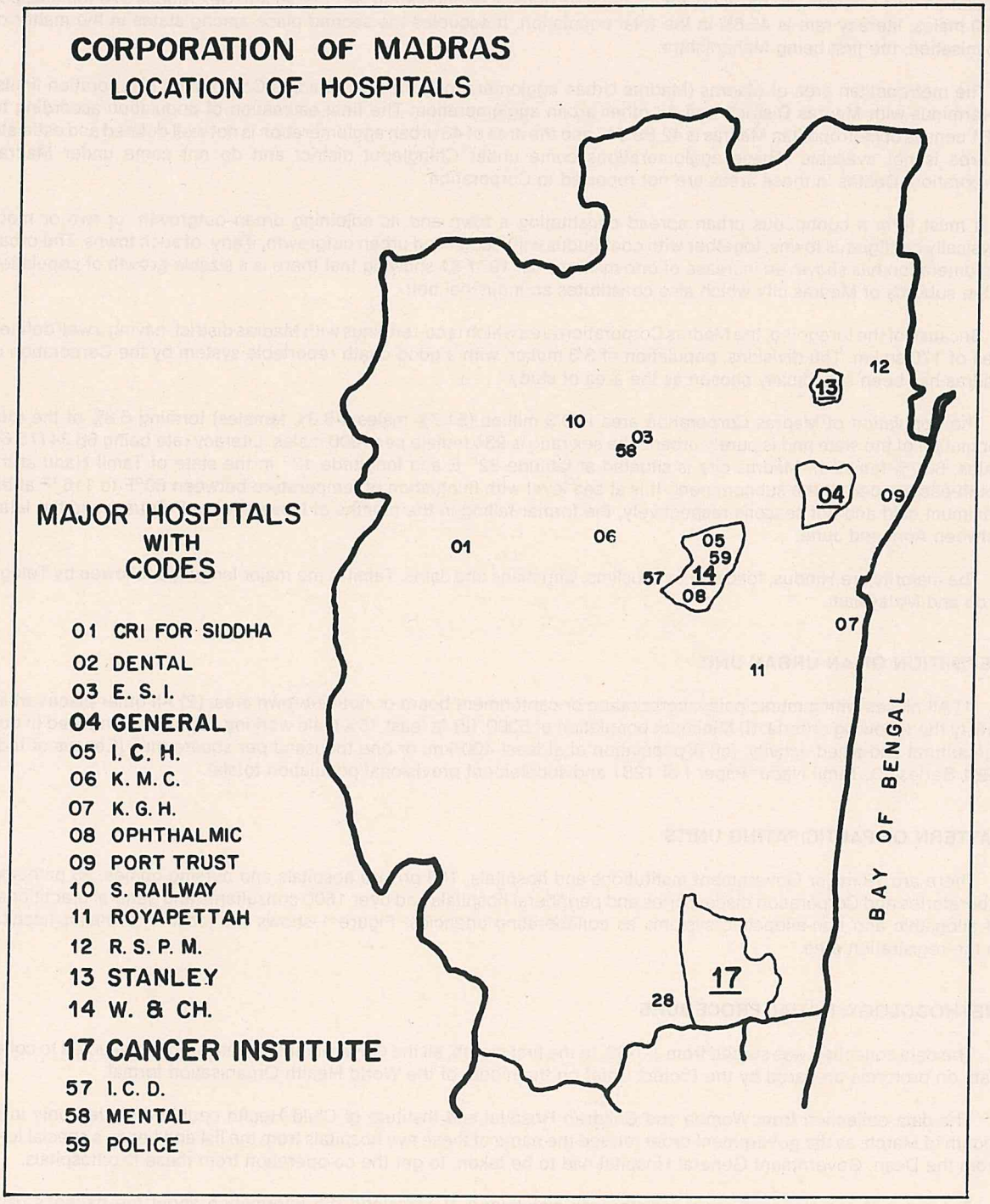


Figure 1: Area covered by the Madras Population-based Cancer Registry.

As the number of cases increased, a hospital-wise register was prepared. This register records the name of the patient with age and sex, site of cancer along with the tumor registry number, entered separately according to the hospitals and other institutions which are given specific code numbers. A third register incorporates site-wise data with residential status of the patient along with the hospital code, age, sex, religion, occupation, mother tongue, date of death as well as availability of histology report or otherwise and whether the case was diagnosed in 1982 or earlier, after verifying the residential status of the patients by letter or otherwise.

From the last week of February, many private hospitals, nursing homes, consultants and pathology laboratories as well, were contacted and the list is being expanded. Initially all the participating hospitals, Government and private, were registered alphabetically and the codes given. The code numbers are being serially continued as and when data is collected from new institutions (code number is given only to hospital/institutions/laboratories) from where positive data were available.

CODING PATTERN

A pattern of coding was adopted to conform to a definitive procedure.

(i) If a diagnosis of carcinoma is made by the referring institution itself and referred to other places for treatment or otherwise, the prior institution is coded.

(ii) If an individual agency refers a suspected cancer case to other hospitals etc. where a firm diagnosis is established, and treatment given, both are coded, for, the former is also a potential source.

(iii) Where a positive histopathology of cancer case is received directly from a pathology laboratory, the laboratory source is coded.

(iv) Where a nursing home or a practitioner reports to the registry direct, a positive case of cancer after confirmation of biopsy from a pathology laboratory, both the laboratory and the medical practitioner or the clinic as the case may be, are coded.

(v) All others, reporting confirmed cancer cases to registry direct, are coded.

(vi) Corporation of Madras is coded as a separate entity for death reports.

DEFINITION OF 'RESIDENT'

A patient is taken as 'resident' if he or she has stayed for a minimum of one year inside Madras City Corporation limits with at least one local address, as on first date of visit at the reporting institution.

Upto the end of May, all cases were being registered irrespective of residential status and then divided into resident and non-resident cases. It was decided to register only resident cases after 1st June, 1982 as advised.

DEATH REGISTRATION

Corporation of Madras was contacted in the month of February and they have been returning to us the proformas with all necessary details entered, that are available in the records of all divisions on the cases of deaths due to cancer (Madras Corporation comprising 150 divisions).

A separate register is maintained to enter all the cases of death reported from various institutions. The death report obtained from the Corporation is matched with the reports from other institutions, duplications eliminated, non-residents weeded out and residents that are not reported by any other institutions other than Corporation of Madras, are given tumor registry numbers and entered separately in files. This register contains information on tumor registry number, corporation Division number, Corporation Death Registration Number, name of patient, hospital from which report has gone to the Corporation, age, sex, site of cancer, date of death and date of receipt from Corporation. Each proforma completed on cases of death by cancer, is verified with the original records in the office of Corporation of Madras, by the senior medical officer and the statistical assistants. Each corporation divisional office is also visited by the social investigators to collect information direct.

The medical records department of different institutions were contacted to give particulars of death due to cancer and these are followed to the respective divisions of the Corporation of Madras for checking, duplication and reporting.

PATHOLOGY REPORTS AND REPORTS FROM PATHOLOGY LABORATORY

The pathology reports from various laboratories are sorted out and those of Madras address, confirming residential status are given tumor registry number after elimination of duplication.

Various participating institutions have been requested to provide pathology slides (of Madras Metropolitan Tumor Registered cases) for our records. Towards that end, a separate register is maintained showing the information on out-patient/inpatient number with ward number of hospital reported, tumor registry number, name of patient, age, sex, biopsy report number, biopsy report of the hospital and site.

This is with reference to all the hospitals and institutions. The collection of slides was started from first July onwards. Stained and unstained slides received from the hospitals/institutions are sent to the pathology department of Cancer Institute for staining. No special stress is laid on collecting pathology slides. This is not considered mandatory for population based registry.

Apart from inpatient in all the hospitals, outpatients of Government Stanley Hospital, Government Women & Children Hospital and Institute of Child Health are also covered.

CODE FILES

A code file containing the codes of participating institutions etc. codes pertaining to languages, areas, occupations, postal zones, Corporation division, topography, morphology and histology codes is maintained for ready reference in the daily work of the registry. The divisional number of the Corporation of Madras along with the address of the Overseer offices are also filed for future contacts, if necessary. Corporation units outside Madras city also are listed and kept for reference.

ROUTINE METHODOLOGY OF WORK

The social investigators contact the different sources and bring the completed proformas to the registry. The investigators hand over the completed proformas to the statistical assistant, who, after scrutiny weeds out the non-resident cases. The incomplete proformas are filed separately with special reference to residential status.

After receipt of proforma from the social investigators, held in holding file, they are checked for duplication. Duplication is eliminated by matching the proforma with alphabetical register and hospital wise register and sitewise register and a first set of index cards prepared including all alphabets. This formed the basis of all future reference for elimination of duplication. The duplicate proformas are filed separately.

After elimination of duplication the proformas are given serial tumor registry number and presented to medical officer for checking completeness and correctness of information. After scrutiny of the relevant completed information by the medical officer, the resident cases are given serial green numbers. Site code, hospital code, morphology code are entered in the proforma. After that, each proforma is entered in the alphabet register, hospital-wise register, sitewise register and ledger which incorporates all core data (viz. T.R. No. period of residence, hospital code, name of patient, age, sex, religion, occupation, education, date of diagnosis, site, histology, treatment, date of discharge/death). These are then typed in the index card which contains information of MMTR No. name and address of the patient, age, sex, religion, residential status, site, histology report, date of death etc. These index cards are arranged alphabetically and filed in the index cabinet. The index cards are further checked and finalised without any duplicate card existing.

After the entry in all the registers, the proformas are sorted out into the completed proformas, incomplete with no complete identification particulars and residential status and incomplete medically (no histology report etc.). The complete proformas are once again scrutinised by the medical officer and if necessary the proformas are recopied and sent to Director for scrutiny. After scrutiny by the Director, the proformas are filed in final resident files after ensuring that corrections advised by the Director are made. The information required in the medically incomplete proformas are noted hospital-wise with name of the patient, age, sex and site and the details required in duplicates and the copy is given to the respective investigators to get complete information. After ensuring the completeness of the proforma (medical part) it is checked if the residential status and other identification particulars are complete. In this connection, the request by the Director for naming a Liaison Officer in each institution has proved very useful.

For the proformas with incomplete identification particulars and 'no-residential' status, letters are written to the patient's permanent address. After receiving the reply from patient or patient's relatives the information is entered in the proforma and once the proforma is completed in all respects it is scrutinised by the medical officer and then by Director and finally filed in final resident files.

If there is no response to a letter, a second letter is sent or home visits are undertaken and information is directly elicited. Finally these proformas are copied in the coded ICMR proformas to be sent to Headquarters, when called for.

The period of residence within Madras city limits is not recorded by the majority of institutions (government & private). This factor had been a great handicap in the registry's routine, in the context of the definition of a 'resident'. In order

to overcome this obvious difficulty, recourse to writing letters, initial and follow-up as well as house-visits had to be undertaken, with the knowledge and consent of the authorities and attending physicians. Where there was an express opinion of chiefs or other authority, not to contact the patients either by letter or otherwise, by us, the matter was dropped then and there. Even with these limited recourse, we were able to get informations of period of residence of patients in the city and then narrow the gap as much as possible. This was discussed with the participating institutions who have agreed to entering the period of residence of patients in their case records. It is therefore expected that this may not pose much difficulty in 1983.

Whatever the number of subsequent informations received from different sources on the first proforma, only the first proforma of the original source is retained, and all subsequent informations are updated in the original proforma.

COMPILATION AND ANALYSIS OF DATA

1. All the analysis of 1982 are recorded in the proforma suggested by the Indian Council of Medical Research format sent to us in 1983.

2. Age 'O' is not recorded because, population for that age group is not available and therefore, is grouped with age group 1—4 and taken as 0—4.

3. Analysis are in accordance wih projected population based on 1971 census (age and sex and total population structure) and 1981 census (total population structure).

The standard population is taken as the world population, for calculation of male, female and total age-adjusted rates.

The population projection from 1971 census figures of the Madras population (MC) (all details) and of 1981 census population (total population) only, to mid year population of 1982 is used for calculation using geometric growth function:

$$Pt = Po(1+r)^t.$$

Disease coding system is utilised using code numbers 140-208 as published by ICD 9 and its extension of chapter 2 (Neoplasm represented in ICD Oncology).

PROPOSED IMPROVEMENTS IN 1983

A master register is proposed to be maintained to simplify procedures of entry and to avoid keeping of many index registers from 1.1.83. Card indexing, by alphabetical order, hospital-wise and site-wise in separate cabinets is also contemplated.

PROBLEM OF RESIDENTIAL STATUS

The Registry has recorded 2666 cases of Cancer for the year January to December, 1982. Though all are residents of Madras, it includes those whose period of residence is known and those whose period of residence has not been elicited. We are strictly following the definition of 'resident' cases as per the criterias laid down by I.C.M.R. i.e. minimum period of 1 year. To start with we could not get the period of stay in about 900 cases since many government hospitals and private clinics do not record this detail. For these cases, contacts were made, both by letters and home visits. By this method out of 900 cases, we could narrow the gap to 492. Still there are 408 cases, whose period of stay has not been defined though they are residents of Madras. We are at present enlisting the co-operation of postmen for eliciting information and expect to complete the collection of data in about 3 months time. We will submit a supplementary report when the entire information is ready.

Meanwhile, we have also ensured that the period of stay is entered in all hospital records by a special order from the Government. We therefore do not expect this problem in the current year.

STAFF AS ON 1.1.1983

DR. V. SHANTA, MD, DGO, DIRECTOR & SCIENTIFIC DIRECTOR, CANCER INSTITUTE, MADRAS, PROJECT CHIEF

S. No.	Name	Qualifications	Designation	Date of appointment
1.	Dr. P. N. Rajappan	B.Sc., MBBS, FCGP, FRSTM & H	Senior Medical Officer	10-12-1981
2.	Vacant	...	Senior Bio-Statistician	...
3.	Vacant	...	Junior Bio-Statistician	...
4.	Mrs. Lakshmi Sarathi	M.A. (Social Work)	Social Investigator	1.8.1981
5.	Miss R. Mahalakshmi	B.A. (Social Science)	Social Investigator	1.8.1981
6.	Mr. K. Ganesan	M.Sc., (Statistics)	Social Investigator	12.10.1981
7.	Miss A. Ranuga Devi	M.A. (Sociology)	Social Investigator	12.10.1981
8.	Mrs. Mohanambal	H.S.L.C.	Social Investigator	12.1.1982
9.	Mr. S. Ganesh	B.A. (Public Relations)	Social Investigator	25.2.1982
10.	Mrs. Lyla Nash	B.A. (Literature)	Social Investigator	1.8.1981
11.	Mrs. C. Poovaneswari	B.A.	Steno-Typist	1.8.1981
12.	Mr. Ramakrishnan	M.Sc. (Statistics)	Statistical Assistant	12.4.1982
13.	Mr. K. Rangarajan	B.A. (Economics)	Social Investigator	30.8.1982
14.	Miss Mary George	M.A. (Social Work)	Social Investigator	1.9.1982
15.	Mr. V. Sambasivam	M.A. (Sociology)	Social Investigator	1.9.1982
16.	Mr. Y. Yesudoss	M.A. (Philosophy)	Social Investigator	6.12.1982
17.	Mr. S. Ravi	B.Sc. (Zoology)	Social Investigator	6.12.1982
18.	Mr. M. Sivakumar	P.U.C.	Assistant	6.12.1982

TABLE 1A: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982
IN MALES

CENTRE: MADRAS

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	3	0.31	0.32
141	TONGUE	0	0	0	0	0	0	0	2	8	4	9	9	3	3	3	2	0	3	46	4.74	4.38
142	SALIVARY GLAND	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	3	0.31	0.33
143	GUM	0	0	0	0	1	0	0	0	0	1	0	1	0	2	0	0	1	0	6	0.62	0.99
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0	6	0.62	0.40
145	OTHER MOUTH	0	0	0	0	0	2	1	4	2	11	6	8	11	7	2	4	4	0	62	6.39	7.80
146	OROPHARYNX	0	0	0	0	0	0	1	2	0	0	6	4	0	2	2	1	1	2	21	2.16	2.37
147	NASOPHARYNX	0	0	0	2	2	0	0	0	2	3	1	0	1	0	0	0	0	0	11	1.13	1.02
148	HYPOPHARYNX	0	0	1	0	2	1	1	1	4	2	12	5	6	1	5	0	0	1	42	4.33	3.78
149	PHARYNX ETC.	0	0	0	0	0	0	0	0	0	1	0	2	3	0	0	0	0	0	6	0.62	0.49
150	OESOPHAGUS	0	0	0	0	0	1	0	2	5	9	22	10	9	7	4	0	2	0	71	7.32	6.82
151	STOMACH	0	0	0	0	1	1	4	4	8	22	21	16	24	14	7	6	2	4	134	13.81	14.12
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0.21	0.15
153	COLON	0	0	0	0	0	0	1	0	4	3	0	1	1	2	3	1	1	1	18	1.86	2.36
154	RECTUM	0	0	0	0	0	2	3	2	2	2	5	1	6	5	1	1	1	0	31	3.20	3.54
155	LIVER	0	0	0	0	0	0	2	1	0	1	3	5	1	1	5	1	0	0	20	2.06	2.44
156	GALL BLADDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.10	0.18
157	PANCREAS	0	0	0	1	0	0	0	1	1	3	0	2	4	0	2	0	0	0	14	1.44	1.35
158	RETROPERITONEUM	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	5	0.52	0.56
159	OHTER DIGS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	0	0	0	0	0	0	0	1	1	1	2	1	0	0	0	0	6	0.62	0.56
161	LARYNX	0	0	0	0	1	0	1	2	4	6	8	5	7	10	2	3	0	2	51	5.26	5.79
162	LUNG	0	0	0	1	0	3	1	1	10	9	7	10	8	6	2	1	0	1	60	6.19	5.64
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
164	THYMUS ETC.	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0.21	0.14
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	1	1	1	0	3	0	0	1	0	1	3	1	0	0	1	1	0	0	14	1.44	1.58
171	CONNECTIVE TISS	1	0	0	1	1	1	1	1	1	0	0	0	1	0	1	0	0	1	10	1.03	0.94

TABLE 1A (*Continued*): NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982
IN MALES
CENTRE: MADRAS

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
173	SKIN OTHER	0	0	1	0	1	1	0	0	0	1	3	0	3	0	0	0	0	2	12	1.24	0.79
175	MALE BREAST	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	3	0.31	0.23
185	PROSTATE	0	0	0	0	0	0	1	0	2	2	3	0	3	5	1	2	1	0	20	2.06	2.94
186	TESTIS	0	0	0	0	1	0	1	2	4	1	0	0	2	0	0	0	0	0	11	1.13	0.92
187	PENIS ETC.	0	0	0	0	0	0	3	3	1	7	6	3	3	4	1	0	3	0	34	3.51	3.81
188	URI. BLADDER	0	0	0	0	0	0	1	5	1	0	4	3	3	0	5	0	0	0	22	2.27	2.22
189	KIDNEY ETC.	4	0	0	0	0	1	0	0	1	1	4	2	1	2	1	0	0	0	17	1.75	1.58
190	EYE	5	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	7	0.72	0.57
191	BRAIN	1	1	2	0	1	6	2	2	0	0	1	3	2	0	0	0	0	1	22	2.27	1.76
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
193	THYROID GLAND	0	1	0	0	1	0	0	0	2	1	2	3	1	0	0	0	0	0	11	1.13	0.89
194	ENDO. GLANDS	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.10	0.09
195	ILL DEF. SITES	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	3	0.31	0.24
196	SEC. LYMPH NODES	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	3	0.31	0.30
197	SEC. RESP. ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
198	SEC. OTHER SITES	0	0	0	0	0	0	1	0	2	1	3	5	0	1	3	0	0	0	16	1.65	1.64
199	PRIM. UNK.	0	1	0	0	1	2	1	2	1	2	0	4	3	0	2	2	0	0	21	2.16	2.48
200	LYMPHOSARCOMA	4	3	3	2	6	2	0	3	2	4	1	2	2	1	1	1	0	0	37	3.81	3.79
201	HODGKINS DIS.	2	5	1	0	4	2	2	1	5	3	2	3	4	1	0	0	1	0	36	3.71	3.41
202	LYMPHOID TISSUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0.21	0.26
204	LEUK. LYMPHATIC	5	6	4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	17	1.75	1.39
205	LEUK. MYELOID	2	4	2	1	0	2	0	3	2	1	0	1	0	1	0	0	0	0	19	1.96	1.66
206	LEUK. MONOCYTIC	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0.31	0.25
207	LEUK. SPECIFIED	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0.21	0.16
208	LEUK. UNS.	0	0	0	0	0	2	0	0	1	1	0	0	1	0	1	0	0	0	6	0.62	0.57
	TOTALS	26	22	15	10	27	29	31	46	82	113	138	113	120	79	58	26	17	18	970	100.00	100.00

TABLE 1B: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES
CENTRE: MADRAS

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
140	LIP	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	4	0.31	0.42
141	TONGUE	0	0	0	0	0	0	0	2	4	3	2	0	9	2	1	0	0	0	23	1.79	1.68
142	SALIVARY GLAND	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	3	0.23	0.14
143	GUM	0	0	0	0	0	0	0	1	0	2	4	4	2	0	1	0	0	0	14	1.09	0.91
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08	0.04
145	OTHER MOUTH	0	0	0	0	0	0	0	3	9	8	13	5	16	8	6	3	0	2	73	5.67	6.99
146	OROPHARYNX	0	0	0	0	0	0	0	0	0	1	2	1	2	1	1	0	0	0	8	0.62	0.77
147	NASOPHARYNX	0	0	1	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0.31	0.49
148	HYPOPHARYNX	0	0	0	0	0	2	2	2	3	2	4	0	0	0	0	0	0	0	15	1.16	0.61
149	PHARYNX ETC.	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0.16	0.07
150	OESOPHAGUS	0	0	0	0	0	0	0	2	4	3	5	5	10	2	1	3	0	2	37	2.87	3.43
151	STOMACH	0	0	0	0	1	4	4	6	8	11	5	7	12	3	1	3	0	1	66	5.12	5.15
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.08	0.03
153	COLON	0	0	0	1	1	0	0	0	2	1	1	0	1	0	0	0	0	1	8	0.62	0.69
154	RECTUM	0	0	0	0	0	1	1	0	0	2	1	0	3	0	3	1	0	0	12	0.93	1.49
155	LIVER	0	0	0	0	1	1	1	0	1	0	0	2	0	1	0	0	0	0	7	0.54	0.73
156	GALL BLADDER	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	0.16	0.10
157	PANCREAS	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3	0.23	0.15
158	RETROPERITONEUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
159	OTHER DIGS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0.23	0.25
161	LARYNX	0	0	0	0	0	0	0	1	1	1	0	0	2	0	1	0	0	1	7	0.54	0.47
162	LUNG	0	0	0	0	0	0	0	0	1	1	2	2	2	1	0	0	0	1	10	0.78	0.65
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
164	THYMUS ETC.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.08	0.07
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	0	0	0	1	0	0	1	0	0	1	0	1	1	0	0	0	0	0	5	0.39	0.47
171	CONNECTIVE TISS	1	0	0	0	0	0	2	1	2	1	0	0	1	1	1	0	0	1	11	0.85	0.91

TABLE 1B *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982
IN FEMALES
CENTRE: MADRAS

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
173	SKIN OTHER	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	1	1	7	0.54	1.12
174	FEM. BREAST	0	0	2	0	2	8	9	30	29	38	25	18	19	14	9	1	4	6	214	16.61	15.81
179	UTERUS UNS.	0	0	0	0	0	0	0	0	2	1	0	2	0	1	0	0	0	0	6	0.47	0.47
180	CERVIX	0	0	0	0	2	7	26	81	67	95	79	68	59	21	7	7	4	8	531	41.23	33.49
181	PLACENTA	0	0	0	1	1	4	0	1	1	0	0	0	0	0	0	0	0	0	8	0.62	0.74
182	BODY UTERUS	0	0	0	0	0	0	0	1	1	0	4	1	4	4	0	0	2	1	18	1.40	2.26
183	OVARY	0	0	1	0	1	3	3	3	5	3	6	5	3	4	5	2	0	1	45	3.49	4.67
184	VAGINA ETC.	1	0	0	0	0	0	2	1	2	3	6	1	2	1	0	0	1	0	20	1.55	1.56
188	URI. BLADDER	0	0	0	0	0	0	0	0	1	0	0	2	1	2	1	1	1	0	9	0.70	1.71
189	KIDNEY	0	0	0	0	0	0	1	0	0	3	0	0	2	1	0	0	0	0	7	0.54	0.53
190	EYE	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0.39	0.71
191	BRAIN	1	0	1	0	2	1	0	0	0	0	0	2	0	0	0	0	0	1	8	0.62	1.00
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
193	THYROID GLAND	0	0	0	0	1	1	3	2	2	0	5	1	1	1	2	1	0	1	21	1.63	1.97
194	ENDO. GLANDS	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0.16	0.08
195	ILL DEF. SITES	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	3	0.23	0.51
196	SEC. LYMPH NODES	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08	0.04
197	SEC. RESP. ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
198	SEC. OTHER SITES	1	0	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	5	0.39	0.73
199	PRIM. UNK.	0	0	0	0	0	1	0	1	4	5	1	3	1	0	1	0	1	0	18	1.40	1.36
200	LYMPHOSARCOMA	1	2	2	0	0	0	3	0	0	3	3	0	0	0	0	1	0	0	15	1.16	1.63
201	HODGKINS DIS.	1	0	2	1	0	1	2	0	0	0	1	0	0	0	0	0	0	0	8	0.62	0.93
202	OTHER LYMP. TISS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.08	0.22
204	LEUK. LYMPHATIC	1	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0.54	1.05
205	LEUK. MYELOID	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0.23	0.13
206	LEUK. MONOCYTIC	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0.23	0.25
207	LEUK. SPEC.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.08	0.24
208	LEUK. UNSP.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0.16	0.11
	TOTALS	11	8	11	5	16	38	64	144	150	194	177	134	157	70	44	23	14	28	1288	100.00	100.00

TABLE 2A: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATE BY SITE PER 1,00,000 POPULATION IN MADRAS DURING THE YEAR 1982—MALE

ICD 9TH	SITE	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80+	TOTAL (CR)	AAR	TR
140	LIP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.2	0.3	—
141	TONGUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	8.1	4.5	14.0	21.1	7.8	14.5	21.1	36.0	0.0	2.6	3.9	8.7
142	SALIVARY GLANDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	2.6	0.0	7.0	0.0	0.0	0.2	0.3	—
143	GUM	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.1	0.0	2.3	0.0	9.7	0.0	0.0	19.3	0.3	0.7	0.5
144	FLOOR OF MOUTH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	—
145	OTHER MOUTH	0.0	0.0	0.0	0.0	0.0	1.2	0.7	3.1	2.0	12.5	9.3	18.7	28.8	33.9	14.0	71.9	77.1	3.5	6.4	11.0
146	OROPHARYNX	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.6	0.0	0.0	9.3	9.3	0.0	9.7	14.0	18.0	19.3	1.2	1.9	3.0
147	NASOPHARYNX	0.0	0.0	0.0	1.2	1.0	0.0	0.0	0.0	2.0	3.4	1.6	0.0	2.6	0.0	0.0	0.0	0.0	0.6	0.7	—
148	HYPOPHARYNX	0.0	0.0	0.5	0.0	1.0	0.6	0.7	0.8	4.1	2.3	18.6	11.7	15.7	4.8	35.1	0.0	0.0	2.3	3.5	7.9
149	PHARYNX ETC.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.7	7.8	0.0	0.0	0.0	0.0	0.3	0.6	—
150	OESOPHAGUS	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.6	5.1	10.2	34.2	23.4	23.5	33.9	28.1	0.0	38.5	4.0	6.6	14.8
151	STOMACH	0.0	0.0	0.0	0.0	0.5	0.6	2.9	3.1	8.1	25.0	32.6	37.5	62.7	67.8	49.1	107.9	38.5	7.5	12.6	25.2
152	SMALL INTESTINE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	—
153	COLON	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	4.1	3.4	0.0	2.3	2.6	9.7	21.1	18.0	19.3	1.0	1.8	—
154	RECTUM	0.0	0.0	0.0	0.0	0.0	1.2	2.2	1.6	2.0	2.3	7.8	2.3	15.7	24.2	7.0	18.0	19.3	1.7	2.9	—
155	LIVER	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.8	0.0	1.1	4.7	11.7	2.6	4.8	35.1	18.0	0.0	1.1	1.6	—
156	GALL BLADDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	—
157	PANCREAS	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.8	1.0	3.4	0.0	4.7	10.5	0.0	14.0	0.0	0.0	0.8	1.3	—
158	RETROPERITONEUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.6	0.0	0.0	4.8	7.0	0.0	0.0	0.3	0.5	—
159	OTHER DIGST.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
160	NOSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.6	2.3	5.2	4.8	0.0	0.0	0.0	0.3	0.6	—
161	LARYNX	0.0	0.0	0.0	0.0	0.5	0.0	0.7	1.6	4.1	6.8	12.4	11.7	18.3	48.4	14.0	53.9	0.0	2.9	4.9	8.3
162	LUNG	0.0	0.0	0.0	0.6	0.0	1.8	0.7	0.8	10.2	10.2	10.9	23.4	20.9	29.1	14.0	18.0	0.0	3.4	5.2	11.6
163	PLEURA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
164	THYMUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	—
165	OTHER RESP.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
170	BONE	0.5	0.5	0.5	0.0	1.5	0.0	0.0	0.8	0.0	1.1	4.7	2.3	0.0	0.0	7.0	18.0	0.0	0.8	1.0	—
171	CONNECTIVE TISSUE	0.5	0.0	0.0	0.6	0.5	0.6	0.7	0.8	1.0	0.0	0.0	0.0	2.6	0.0	7.0	0.0	0.0	0.6	0.6	—

TABLE 2A *(Continued)*: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATE BY SITE PER 1,00,000 POPULATION IN MADRAS DURING THE YEAR 1982—MALE

ICD 9TH	SITE	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80+	TOTAL (CR)	AAR	TR
172	SKIN-MELANOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
173	SKIN-OTHER	0.0	0.0	0.5	0.0	0.5	0.6	0.0	0.0	0.0	1.1	4.7	0.0	7.8	0.0	0.0	0.0	0.0	0.7	0.8	—
175	MALE BREAST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	2.3	2.6	0.0	0.0	0.0	0.0	0.2	0.3	—
185	PROSTATE	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.0	2.3	4.7	0.0	7.8	24.2	7.0	36.0	19.3	1.1	2.3	—
186	TESTIS	0.0	0.0	0.0	0.0	0.5	0.0	0.7	1.6	4.1	1.1	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.6	0.7	—
187	PENIS ETC.	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.4	1.0	7.9	9.3	7.0	7.8	19.4	7.0	0.0	57.8	1.9	2.6	—
188	URINARY BLADDER	0.0	0.0	0.0	0.0	0.0	0.0	0.7	3.9	1.0	0.0	6.2	7.0	7.8	0.0	35.1	0.0	0.0	1.2	1.9	—
189	KIDNEY	1.9	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.0	1.1	6.2	4.7	2.6	9.7	7.0	0.0	0.0	1.0	1.4	—
190	EYE	2.4	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.4	0.7	—
191	BRAIN	0.5	0.5	1.0	0.0	0.5	3.6	1.4	1.6	0.0	0.0	1.6	7.0	5.2	0.0	0.0	0.0	0.0	1.2	1.3	—
192	NERVOUS SYSTEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
193	THYROID GLAND	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	2.0	1.1	3.1	7.0	2.6	0.0	0.0	0.0	0.0	0.6	0.8	—
194	ENDOCRINE GLANDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.1	0.1	—
195	ILLDEFINED SITES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.2	0.2	—
196	LYMPH NODES—SEC. AND UNSPEC.	0.0	0.0	0.0	0.0	0.5	0.0	0.7	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.2	0.2	—
197	SECONDARY—RESPIRATORY ETC.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
198	SECONDARY—OTHER SPECIFIED SITES	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.0	1.1	4.7	11.7	0.0	4.8	21.6	0.0	0.0	0.9	1.5	—
199	SITE UNSPECIFIED	0.0	0.5	0.0	0.0	0.5	1.2	0.7	1.6	1.0	2.3	0.0	9.4	7.8	0.0	14.0	36.0	0.0	1.2	1.8	—
200	LYMPHOSARCOMA	1.9	1.4	1.6	1.2	3.0	1.2	0.0	2.4	2.0	4.6	1.6	4.7	5.2	4.8	7.0	18.0	0.0	2.1	2.4	—
201	HODGKIN'S DISEASE	1.0	2.4	0.5	0.0	2.0	1.2	1.4	0.8	5.1	3.4	3.1	7.0	10.5	4.8	0.0	19.3	0.0	2.0	2.5	—
202	LYMPHOID TISSUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—
203	MULTIPLE MYELOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.1	0.2	—
204	LYMPHOID LEUKAEMIA	2.4	2.9	2.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	—
205	MYELOID LEUKAEMIA	1.0	1.9	1.1	0.6	0.0	1.2	0.0	2.4	2.0	1.1	0.0	2.3	0.0	4.8	0.0	0.0	0.0	1.1	1.1	—
206	MONOCYTIC LEUKAEMIA	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	—
207	SPECIFIED LEUKAEMIA	0.5	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	—
208	LEUKAEMIA OF UNSPECIFIED CELL TYPE	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.0	1.1	0.0	0.0	2.0	0.0	7.0	0.0	0.0	0.3	0.5	—
	ALL SITES	12.6	10.5	7.9	5.8	13.5	17.4	22.3	36.1	83.4	128.2	214.5	264.6	313.7	382.7	407.1	467.4	327.5	54.3	83.9	157.2

TABLE 2B: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATES BY SITE PER 100,000 POPULATION IN MADRAS DURING THE YEAR 1982—FEMALE

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	TOTAL (CR)	AAR	TR
140	LIP	–	–	–	–	0.6	–	–	–	–	–	1.7	2.6	2.5	–	–	–	–	0.2	0.3	–
141	TONGUE	–	–	–	–	–	–	–	1.9	5.2	4.7	3.5	–	22.5	10.2	6.5	–	–	1.4	2.2	5.7
142	MAJOR SALIVARY GLANDS	–	–	–	–	–	0.7	0.9	1.2	–	–	–	–	–	–	–	–	–	0.2	0.2	–
143	GUM	–	–	–	–	–	–	–	0.9	–	3.1	7.0	10.5	5.0	–	6.5	–	–	0.9	1.3	3.9
144	FLOOR OF MOUTH	–	–	–	–	–	–	–	–	–	–	1.7	–	–	–	–	–	–	0.1	0.1	–
145	OTHER MOUTH	–	–	–	–	–	–	–	2.8	11.7	12.6	22.6	13.1	40.0	40.7	39.2	53.5	–	4.5	7.4	15.7
146	OROPHARYNX	–	–	–	–	–	–	–	–	–	1.6	3.5	2.6	5.0	5.1	6.5	–	–	0.5	0.9	1.9
147	NASOPHARYNX	–	–	0.5	–	0.6	–	–	–	–	3.1	–	–	–	–	–	–	–	0.2	0.3	–
148	HYPOPHARYNX	–	–	–	–	–	1.3	1.9	1.9	3.9	3.1	7.0	–	–	–	–	–	–	0.9	1.1	2.9
149	PHARYNX ETC.	–	–	–	–	–	–	–	1.9	–	–	–	–	–	–	–	–	–	0.1	0.1	–
150	OESOPHAGUS	–	–	–	–	–	–	–	1.9	5.2	4.7	8.7	13.1	25.0	10.2	6.5	53.5	–	2.3	3.6	8.6
151	STOMACH	–	–	–	–	0.6	2.7	3.7	5.6	10.4	17.3	8.7	18.4	30.0	15.3	6.5	53.5	–	4.1	6.0	14.1
152	SMALL INTESTINE	–	–	–	–	–	–	–	–	1.3	–	–	–	–	–	–	–	–	0.1	0.1	–
153	COLON	–	–	–	0.6	0.6	–	–	–	2.6	1.6	1.7	–	2.5	–	–	–	–	0.5	0.5	–
154	RECTUM	–	–	–	–	–	0.7	0.9	–	–	3.1	1.7	–	7.5	–	19.6	17.8	–	0.7	1.3	–
155	LIVER	–	–	–	–	0.6	0.7	0.9	–	1.3	–	–	5.3	–	5.1	–	–	–	0.4	0.6	–
156	GALL BLADDER	–	–	–	–	–	–	–	0.9	–	–	–	–	2.5	–	–	–	–	0.1	0.2	–
157	PANCREAS	–	–	–	–	–	–	–	–	–	3.1	–	2.6	–	–	–	–	–	0.2	0.3	–
158	RETROPERITONEUM	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
159	OTHER DIGESTIVE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
160	NASAL CAVITIES ETC.	–	–	0.5	–	–	–	–	–	–	–	3.5	–	–	–	–	–	–	0.2	0.2	–
161	LARYNX	–	–	–	–	–	–	–	0.9	1.3	1.6	–	–	5.0	–	6.5	–	–	0.4	0.6	1.4
162	LUNG	–	–	–	–	–	–	–	–	1.3	1.6	3.5	5.3	5.0	5.1	–	–	–	0.6	0.9	2.5
163	PLEURA	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
164	THYMUS	–	–	–	–	–	–	–	–	–	–	–	–	2.5	–	–	–	–	0.1	0.1	–
165	OTHER RESPIRATORY	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
170	BONE	–	–	–	0.6	–	–	0.9	–	–	1.6	–	2.6	2.5	–	–	–	–	0.3	0.4	–
171	CONNECTIVE TISSUE	0.5	–	–	–	–	–	1.9	0.9	2.6	1.6	–	–	2.5	5.1	6.5	–	–	0.7	0.9	–

TABLE 2B *(Continued)*: AGE SPECIFIC, CRUDE AND AGE ADJUSTED INCIDENCE RATES BY SITE PER 100,000 POPULATION IN MADRAS DURING THE YEAR 1982—FEMALE

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	TOTAL (CR)	AAR	TR
172	SKIN-MELANOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173	SKIN-OTHER	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	2.5	5.1	6.5	0.0	14.2	0.4	0.7	0.0
174	FEMALE BREAST	0.0	0.0	1.1	0.0	1.1	5.4	8.4	28.2	37.5	59.7	43.5	47.2	47.4	71.3	58.8	17.8	56.6	13.2	18.7	43.5
179	UTERUS, PART UNSPECIFIED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	1.6	0.0	5.2	0.0	5.1	0.0	0.0	0.0	0.4	0.6	0.0
180	CERVIX UTERI	0.0	0.0	0.0	0.0	1.1	4.7	24.2	76.1	86.7	149.3	137.4	178.5	147.3	106.9	45.8	124.8	56.6	32.9	46.5	124.6
181	PLACENTA	0.0	0.0	0.0	0.6	0.6	2.7	0.0	0.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.0
182	BODY OF UTERUS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.3	0.0	7.0	2.6	10.0	20.4	0.0	0.0	28.3	1.1	1.9	0.0
183	OVARY	0.0	0.0	0.5	0.0	0.6	2.0	2.8	2.8	6.5	4.7	10.4	13.1	7.5	20.4	32.7	35.7	0.0	2.8	4.2	0.0
184	VAGINA ETC.	0.5	0.0	0.0	0.0	0.0	0.0	1.9	0.9	2.6	4.7	10.4	2.6	5.0	5.1	0.0	0.0	14.2	1.2	1.6	0.0
188	BLADDER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	5.3	2.5	10.2	6.5	17.8	14.2	0.6	1.1	0.0
189	KIDNEY	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	4.7	0.0	0.0	5.0	5.1	0.0	0.0	0.0	0.4	0.7	0.0
190	EYE	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0
191	BRAIN	0.5	0.0	0.5	0.0	1.1	0.7	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0
192	OTHER NERVOUS SYSTEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
193	THYROID GLAND	0.0	0.0	0.0	0.0	0.6	0.7	2.8	1.9	2.6	0.0	8.7	2.6	2.5	5.1	13.1	17.8	0.0	1.3	1.8	0.0
194	OTHER ENDOCRINE GLANDS	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
195	ILLDEFINED SITES	0.0	0.0	0.0	0.6	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.2	0.3	0.0
196	LYMPH NODES—SECONDARY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
197	SECONDARY—RESP. AND DIGEST. SYS.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
198	SECONDARY—OTHER SPECIFIED SITES	0.5	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.7	2.6	0.0	0.0	6.5	0.0	0.0	0.3	0.4	0.0
199	SITE UNSPECIFIED	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.9	5.2	7.9	1.7	7.9	2.5	0.0	6.5	0.0	14.2	1.1	1.7	0.0
200	LYMPHOSARCOMA	0.5	1.0	1.1	0.0	0.0	0.0	2.8	0.0	0.0	4.7	5.2	0.0	0.0	0.0	0.0	17.8	0.0	0.9	1.1	0.0
201	HODGKIN'S DISEASE	0.5	0.0	1.1	0.6	0.0	0.7	1.9	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0
202	OTHER LYMPHOID TISSUE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
203	MULTIPLE MYELOMA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	0.1	0.1	0.0
204	LYMPHOID LEUKAEMIA	0.5	2.4	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0
205	MYELOID LEUKAEMIA	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0
206	MONOCYTIC LEUKAEMIA	0.0	0.0	0.5	0.0	0.0	0.7	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0
207	OTHER SPECIFIED LEUKAEMIA	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
208	LEUKAEMIA UNSPECIFIED	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
	ALL SITES	5.5	3.9	6.0	3.0	9.1	25.6	59.7	135.3	195.5	303.3	307.7	351.7	392.0	356.3	287.7	410.2	198.2	79.7	113.9	268.3

TABLE 3: PROPORTION OF CASES DIAGNOSED BY SELECTED MEANS IN MADRAS DURING 1982

ICD 9TH	SITE	CLINICAL %		X-RAY %		OTHERS %		MICROSCOPIC %		D.C.O. %		TOTAL CANCER CASES	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
140	LIP	33.3	25.0	–	–	–	–	66.7	75.0	–	–	3	4
141	TONGUE	17.4	21.7	2.2	–	–	–	69.6	69.6	10.9	8.7	46	23
142	SALIVARY GLANDS	33.3	66.7	–	–	–	–	33.3	33.3	33.3	–	3	3
143	GUM	50.0	28.6	–	–	–	–	50.0	71.4	–	–	6	14
144	FLOOR OF MOUTH	–	100.0	–	–	–	–	100.00	–	–	–	6	1
145	OTHER MOUTH	25.8	24.7	–	–	–	1.4	69.3	74.0	4.8	–	62	73
146	OROPHARYNX	14.3	37.5	–	–	–	–	80.9	62.5	4.8	–	21	8
147	NASOPHARYNX	–	–	–	–	–	–	63.6	100.0	36.4	–	11	4
148	HYPOPHARYNX	11.9	13.3	–	–	–	–	85.7	80.0	2.4	6.7	42	15
149	PHARYNX ETC.	16.7	50.0	–	–	–	–	83.3	50.0	–	–	6	2
150	OESOPHAGUS	23.9	18.9	–	5.4	1.4	2.7	56.3	64.9	18.3	8.1	71	37
151	STOMACH	27.6	–	0.7	–	5.2	–	46.3	–	20.1	–	134	66
152	SMALL INTESTINE	50.0	100.0	–	–	–	–	50.0	–	–	–	2	1
153	COLON	27.8	–	5.5	–	–	–	16.7	87.5	50.0	12.5	18	8
154	RECTUM	22.6	16.7	–	–	–	–	51.6	66.7	25.8	16.7	31	12
155	LIVER	25.0	42.8	–	–	–	–	45.0	28.6	30.0	–	20	7
156	GALL BLADDER	–	–	–	–	–	–	100.0	50.0	–	50.0	1	2
157	PANCREAS	7.1	–	7.1	–	14.3	–	28.6	66.7	42.9	33.3	14	3
158	RETROPERITONEUM	20.0	–	–	–	–	–	80.0	–	–	–	5	–
160	NASAL CAVITIES	–	33.3	–	–	–	–	100.00	66.7	–	–	6	3
161	LARYNX	13.7	14.3	3.0	–	–	–	68.6	85.7	15.7	–	51	6
162	LUNG	33.3	10.0	1.7	–	–	–	50.0	50.0	15.0	40.0	60	10
164	THYMUS	50.0	–	–	–	–	–	50.0	100.0	–	–	2	1
170	BONES	14.3	20.0	–	–	–	–	85.7	60.0	–	20.0	14	5
171	CONNECTIVE TISSUES	10.0	9.1	–	9.9	–	–	80.0	72.7	10.0	9.9	10	11

TABLE 3 *(Continued)*: PROPORTION OF CASES DIAGNOSED BY SELECTED MEANS IN MADRAS DURING 1982

ICD 9TH	SITE	CLINICAL %		X-RAY %		OTHERS %		MICROSCOPIC %		D.C.O. %		TOTAL CANCER CASES	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
173	SKIN	8.3	14.3	–	–	–	–	91.7	85.7	–	–	12	7
174	FEMALE BREAST	–	21.4	–	3.7	–	0.5	–	66.3	–	7.9	–	214
175	MALE BREAST	66.7	–	–	–	–	–	33.3	–	–	–	3	–
179	UTERUS	–	16.7	–	–	–	–	–	83.3	–	–	–	6
180	CERVIX	–	19.4	–	–	–	3.8	–	76.5	–	3.8	–	531
181	PLACENTA	–	12.5	–	–	–	–	–	87.5	–	–	–	8
183	OVARY	33.3	33.3	–	–	–	–	–	57.8	–	8.9	–	45
184	VAGINA ETC.	–	15.0	–	–	–	–	–	80.0	–	5.0	–	20
185	PROSTATE	35.0	–	5.0	–	–	–	45.0	–	15.0	–	20	–
186	TESTIS	–	–	–	–	–	–	100.0	–	–	–	11	–
187	PENIS ETC.	14.7	–	–	–	2.9	–	76.5	–	5.9	–	34	–
188	URINARY BLADDER	4.5	11.1	–	–	–	–	59.1	66.7	36.4	22.2	22	9
189	KIDNEY	11.8	14.3	–	–	5.9	–	64.7	71.4	17.6	–	17	7
190	EYE	28.6	–	14.3	–	–	–	57.1	100.0	–	–	7	5
191	BRAIN	4.5	12.5	–	–	–	–	90.9	75.0	4.5	12.5	22	8
193	THYROID GLAND	–	33.3	–	–	–	4.8	90.9	52.4	9.1	9.5	11	21
194	ENDO. GLANDS	–	50.0	–	–	100.0	50.0	–	–	–	–	1	2
195	ILL DEFINED SITES	33.3	66.7	–	–	66.7	33.3	–	–	–	–	3	3
196	SECONDARY LYMPH NODES	–	–	–	–	–	–	100.0	100.0	–	–	16	5
198	SECONDARY SPECIFIED SITES	50.0	40.0	–	–	–	20.0	50.0	40.0	–	–	16	5
199	PRIMARY UNK.	4.8	–	–	–	–	5.5	33.3	33.3	61.9	61.1	21	18
200	LYMPHOMA	8.1	–	–	6.3	–	–	70.3	80.0	21.6	13.3	37	15
201	HODGKIN'S DISEASE	2.8	–	–	–	–	–	83.3	100.0	13.9	–	36	8
203	MULTIPLE MYELOMA	–	–	–	–	–	–	50.0	100.0	50.0	–	2	1
204	LYMPHATIC LEUKAEMIA	–	–	–	–	11.8	–	76.5	85.7	11.8	14.3	17	7
205	MYELOID LEUKAEMIA	–	–	–	–	–	–	89.5	100.0	10.5	–	19	3
206	MONOCYTIC LEUKAEMIA	–	–	–	–	–	–	100.0	100.0	–	–	3	3
207	OTHER SPECIFIED LEUKAEMIA	–	–	–	–	–	–	50.0	100.0	50.0	–	2	1
208	UNSPECIFIED LEUKAEMIA	–	–	–	–	–	–	33.3	50.0	66.7	50.0	6	2
140 – 208	ALL SITES (%)	18.3	20.2	0.8	1.2	1.6	0.9	63.3	69.8	15.9	7.9	970	1288

TABLE 4: PROPORTION OF CASES PROFESSING A SPECIFIC RELIGION IN MADRAS DURING 1982

ICD 9TH	SITE	HINDU %		MUSLIM %		CHRISTIAN %		OTHERS %		TOTAL NUMBERS	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
140	LIP	0.4	0.4	–	–	–	–	–	–	3	4
141	TONGUE	4.6	1.6	3.9	6.3	6.8	–	–	–	46	23
142	SALIVARY GLANDS	0.4	0.2	–	1.3	–	–	–	–	3	3
143	GUM	0.6	1.0	–	1.3	1.4	2.1	–	–	6	14
144	FLOOR OF MOUTH	0.4	0.1	2.6	–	1.4	–	–	–	6	1
145	OTHER MOUTH	6.6	5.7	3.9	3.8	6.8	7.5	–	–	62	73
146	OROPHARYNX	2.1	0.4	3.9	5.1	1.4	–	–	–	21	8
147	NASOPHARYNX	1.0	0.3	1.3	–	2.7	–	–	16.7	11	4
148	HYPOPHARYNX	4.2	1.2	5.3	2.5	5.5	–	–	–	42	15
149	PHARYNX ETC.	0.6	0.2	–	–	1.4	–	–	–	6	2
150	ESOPHAGUS	8.2	2.3	5.3	7.6	–	5.4	–	–	71	37
151	STOMACH	14.4	5.0	11.8	7.9	9.6	4.3	–	–	134	66
152	SMALL INTESTINE	0.2	0.1	–	–	–	–	–	–	2	1
153	COLON	1.7	0.7	2.6	–	1.4	–	50.0	–	18	8
154	RECTUM	3.3	0.9	–	1.3	5.5	1.1	–	–	31	12
155	LIVER	1.8	0.5	2.6	1.3	4.1	–	–	–	20	7
156	GALL BLADDER	0.1	0.2	–	–	–	–	–	–	1	2
157	PANCREAS	1.6	0.3	1.3	–	–	–	–	–	14	3
158	RETROPERITONEUM	0.6	–	–	–	–	–	–	–	5	–
160	NASAL CAVITIES	0.6	0.3	–	–	1.4	–	–	–	6	3
161	LARYNX	5.5	0.4	2.6	1.3	5.5	1.1	–	–	51	7
162	LUNG	6.1	0.6	3.9	2.5	9.6	1.1	–	–	60	10
164	THYMUS	0.1	0.1	–	–	1.4	–	–	–	2	1
170	BONES	1.3	0.4	2.6	–	1.4	–	–	–	14	5
171	CONNECTIVE TISSUES	1.0	0.8	2.6	–	–	–	–	–	10	11
173	SKIN	1.2	0.6	–	2.5	2.7	–	–	–	12	7
174	FEMALE BREAST	–	16.3	–	16.4	–	23.7	–	16.7	–	214

TABLE 4 *(Continued)*: PROPORTION OF CASE PROFESSING A SPECIFIC RELIGION IN MADRAS DURING 1982

ICD 9TH	SITE	HINDU %		MUSLIM %		CHRISTIAN %		OTHERS %		TOTAL NUMBERS	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
175	MALE BREAST	0.4	–	–	–	–	–	–	–	3	–
179	UTERUS NOS	–	0.4	–	1.3	–	1.1	–	–	–	6
180	CERVIX	–	43.5	–	15.2	–	34.4	–	66.7	–	531
181	PLACENTA	–	0.6	–	1.3	–	–	–	–	–	8
182	BODY OF UTERUS	–	1.5	–	1.3	–	–	–	–	–	18
183	OVARY	–	3.9	–	1.3	–	1.1	–	–	–	45
184	VAGINA ETC.	–	1.7	–	1.3	–	–	–	–	–	20
185	PROSTATE	2.0	–	3.9	–	1.4	–	–	–	20	–
186	TESTIS	1.3	–	–	–	–	–	–	–	111	–
187	PENIS ETC.	4.2	–	–	–	–	–	–	–	34	–
188	URINARY BLADDER	2.3	0.8	–	–	2.7	–	–	–	22	9
189	KIDNEY	1.6	0.3	3.9	5.1	1.4	–	–	–	17	7
190	EYE	0.5	0.3	1.3	1.3	2.7	1.1	–	–	7	5
191	BRAIN	2.6	0.6	1.3	1.3	–	–	–	–	21	8
193	THYROID GLAND	1.1	1.4	2.6	2.5	–	3.2	–	–	11	21
194	OTHER GLAND	0.1	0.1	–	–	–	–	–	–	1	2
195	ILL DEFINED SITES	0.4	0.2	–	1.3	–	1.1	–	–	3	3
196	SECONDARY LIMPH NODES	0.2	0.1	1.3	–	–	–	–	–	3	1
198	SECONDARY SPECIFIED	1.7	0.4	1.3	–	1.4	–	–	–	16	5
199	PRIMARY UNKNOWN	2.0	1.0	2.6	2.5	4.1	5.4	–	–	21	18
200	LYMPHOMA	3.2	1.1	11.8	1.3	2.7	2.1	–	–	37	15
201	HODGKIN'S DISEASE	3.2	0.5	6.5	–	6.8	2.1	–	–	36	8
203	MULTIPLE MYELOMA	0.2	0.1	–	–	–	–	–	–	2	1
204	LYMPHATIC LEUKAEMIA	1.3	0.5	2.6	–	4.1	1.1	–	–	17	7
205	MYELOID LEUKAEMIA	2.1	0.2	1.3	–	–	1.1	–	–	19	3
206	MONOCYTIC LEUKAEMIA	0.1	0.1	1.3	2.5	1.4	–	–	–	3	3
207	OTHER SPECIFIED LEUKAEMIA	0.2	0.1	–	–	1.4	–	–	–	2	1
208	UNSPECIFIED LEUKAEMIA	0.6	0.2	1.3	–	–	–	–	–	6	2
140 – 208	ALL SITES (NO. OF CANCER CASES)	818	1110	76	79	73	93	2	6	970	1288
	%	84.3	86.2	7.8	6.1	7.5	7.2	0.2	0.5	99.8	100.0
	POPULATION PROPORTION	83.6	84.6	9.0	8.0	6.6	6.7	0.8	0.7	1787911	1615706

TABLE 5A: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES IN MADRAS DURING 1982—MALE (%)

Educational Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	All sites (140-208)
Illiterate	30.9	25.0	16.9	22.4	13.7	13.3	21.4
Literate	—	—	1.4	—	—	—	0.3
Primary	22.2	12.5	19.7	14.2	17.6	21.7	18.7
Middle	15.1	12.5	18.3	11.2	15.7	18.3	12.5
Secondary	12.7	11.2	15.5	6.7	23.5	8.3	11.9
Technical*	0.8	1.2	—	0.7	—	1.7	1.4
Graduate**	1.6	2.5	4.2	1.5	2.0	10.0	4.9
Not Known	16.7	35.1	24.0	43.3	27.5	26.7	28.9
Total (%)	100.0 †(126)	100.0 (80)	100.0 (71)	100.0 (134)	100.0 (51)	100.0 (60)	100.0 (970)

TABLE 5B: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES IN MADRAS DURING 1982—FEMALE (%)

Educational Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	Breast (174)	Cervix (180)	All sites (140-208)
Illiterate	65.2	44.8	45.9	40.9	42.9	—	37.4	62.5	51.5
Literate	—	—	—	—	—	—	—	0.4	0.3
Primary	20.3	6.9	16.2	9.1	42.9	40.0	10.7	16.6	16.2
Middle	5.9	13.8	13.5	6.1	—	20.0	14.5	10.0	9.9
Secondary	—	17.2	2.7	3.0	—	—	11.2	3.6	6.1
Technical*	1.7	—	—	—	—	—	—	—	—
Graduate**	—	—	—	—	—	—	2.8	0.2	0.7
Not Known	7.2	17.3	21.7	59.1	14.2	40.0	23.4	6.7	15.3
Total (%)	100.0 †(148)	100.0 (29)	100.0 (37)	100.0 (66)	100.0 (7)	100.0 (10)	100.0 (214)	100.0 (531)	100.0 (1288)

* After matriculation.

** College and above.

† Number of Cancer cases.

TABLE 6: NUMBER OF CANCER CASES AT SELECTED SITES BY FOURTH DIGIT OF ICD-9 IN MADRAS DURING 1982

ICD 9th	SITE	MALES No. of cases*	%	FEMALES No. of cases	%
141	**TONGUE**	**46**	**100.0**	**23**	**100.0**
of which	141.0	25	54.3	3	13.0
	141.1-.4	8	17.4	11	47.8
	141 R	13	28.3	9	39.1
143	**GUM**	**6**	**100.0**	**14**	**100.0**
of which	143.0	1	16.7	6	42.9
	143.1	1	16.7	5	35.7
	143 R	4	66.7	3	21.4
145	**MOUTH**	**62**	**100.0**	**73**	**100.0**
of which	145.0-.1	43	69.3	68	93.1
	145.2-.5	10	16.1	5	6.8
	145 R	9	14.5	–	–
146	**OROPHARYNX**	**21**	**100.0**	**8**	**100.0**
of which	146.0	9	42.9	4	50.0
	146.1-.2	5	23.8	–	–
	146.3-.5	3	14.3	2	25.0
	146.6	–	–	–	–
	146.7	–	–	–	–
	146 R	4	19.0	2	25.0
148	**HYPOPHARYNX**	**42**	**100.0**	**15**	**100.0**
of which	148.0	4	9.5	4	26.7
	148.1	17	40.5	3	20.0
	148.2	3	7.1	1	6.7
	148.3	0	–	0	–
	148 R	18	42.9	7	46.7
150	**OESOPHAGUS**	**71**	**100.0**	**37**	**100.0**
of which	150.0	–	–	–	–
	150.1	1	1.4	–	–
	150.2	–	–	–	–
	150.3	4	5.6	3	8.1
	150.4	17	23.9	8	21.6
	150.5	21	29.6	11	29.7
	150 R	28	39.4	15	40.5
151	**STOMACH**	**134**	**100.0**	**66**	**100.0**
of which	151.0	1	0.7	–	–
	151.1	8	6.0	4	6.1
	151.2-.3	2	1.5	4	6.1
	151 R	123	91.8	58	87.9

TABLE 6: (*Continued*) NUMBER OF CANCER CASES AT SELECTED SITES BY FOURTH DIGIT OF ICD-9 IN MADRAS DURING 1982

ICD 9th	SITE	MALES No. of cases*	MALES %No. of cases	FEMALES No. of cases	FEMALES %
153	**COLON**	**18**	**100.0**	**8**	**100.0**
of which	153.0	1	5.5	–	–
	153.1	2	1.1	–	–
	153.2	–	–	–	–
	153.3	–	–	2	25.0
	153.4	5	27.8	3	37.5
	153.5	–	–	–	–
	153.6	1	5.5	–	–
	153.7	–	–	–	–
	153 9	9	50.0	3	37.5
154	**RECTUM**	**31**	**100.0**	**12**	**100.0**
of which	154.0	1	3.2	–	–
	154.1	25	80.6	9	75.0
	154.2	1	3.2	1	8.3
	154.3	3	9.7	–	–
	154 R	1	3.2	2	16.7
156	**GALL BLADDER**	**1**	**100.0**	**2**	**100.0**
of which	156.0	–	–	–	–
	156. R	1	100.0	2	100.0
161	**LARYNX**	**51**	**100.0**	**7**	**100.0**
of which	161.0	7	13.7	1	14.3
	161.1	9	17.6	3	42.9
	161.2	–	–	–	–
	161 R	35	68.6	3	42.9
173	**SKIN**	**12**	**100.0**	**7**	**100.0**
of which	173.0-.3	1	8.3	3	42.6
	173.4	1	8.3	1	14.3
	173.5	4	33.3	2	28.6
	173.6	–	–	–	–
	173.7	5	41.7	1	14.8
	173 R	1	8.3	–	–
183	**OVARY**	**–**	**–**	**45**	**100.0**
of which	183.0	–	–	45	100.0
	183 R	–	–	–	–
189	**KIDNEY**	**17**	**100.0**	**7**	**100.0**
of which	189.0	15	88.2	7	100.0
	189 R	2	11.7	–	–
194	**ENDOCRINE**	**1**	**100.0**	**2**	**100.0**
of which	194.0	1	100.0	–	–
	194.3	–	–	2	100.0
	194 R	–	–	–	–

R means the remainder of the rubric.

* No. of cases in each main rubric includes "Age not stated" cases.

TABLE 6: ESTIMATED POPULATION FOR MADRAS (MC) ON 1ST JULY, 1982 BASED ON 1971 CENSUS AND 1981 CENSUS

Age Group (years)	Male	Female	Total
0—4	206445	199350	405795
5—9	208801	206651	415452
10—14	190258	182095	372353
15—19	171408	166227	337635
20—24	200642	174803	375445
25—29	166489	148662	315151
30—34	138761	107268	246029
35—39	127566	106443	234009
40—44	98309	77244	175553
45—49	88110	63623	151733
50—54	64349	57515	121864
55—59	42713	38096	80809
60—64	38257	40050	78307
65—69	20643	19646	40289
70—74	14246	15294	29540
75—79	5563	5607	11170
80—84	3535	4739	8274
85—89	1055	1429	2484
90—94	448	713	1161
95†	153	182	335
ANS*	160	69	229
Total	1787911	1615706	3403617

*Age Not Specified

TABLE 8A: TREATMENT GIVEN FOR CANCER AT SELECTED SITES IN MADRAS CITY DURING 1982—MALE (%)

Treatment Given	Mouth (140-145)	Pharynx (140-149)	Oesophagus (150)	Stomach (151)	All sites (140-208)
Surgery	2.4	—	—	25.4	8.2
Radiation	49.2	55.0	42.2	1.5	26.3
Chemotherapy	4.0	7.2	4.2	16.4	11.5
Surgery + Radiation	1.6	1.3	1.4	0.7	3.9
Surgery + Chemotherapy	—	—	2.8	7.5	2.9
Radiation + Chemotherapy	7.1	3.7	—	0.7	4.8
Surgery + Radiation + Chemotherapy	0.8	—	1.4	0.7	0.8
Other	3.2	1.3	1.4	2.2	3.0
None	0.8	—	—	—	0.1
Not Known	30.9	31.5	46.5	44.8	38.4
Total	100.0 *(126)	100.0 (80)	99.9 (71)	99.9 (134)	99.9 (970)

*Number of Cancer cases.

TABLE 8B: TREATMENT GIVEN FOR CANCER AT SELECTED SITES IN MADRAS CITY DURING 1982—FEMALE (%)

Treatment Given	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Breast. (174)	Cervix. (180)	All sites (140-208)
Surgery	7.6	—	5.4	24.2	11.2	2.3	7.6
Radiation	52.5	31.0	43.2	3.0	18.2	67.6	42.2
Chemotherapy	1.7	6.9	2.7	16.7	10.7	0.7	6.5
Surgery + Radiation	0.8	—	—	—	11.7	0.9	5.0
Surgery + Chemotherapy	—	—	—	10.6	5.6	—	2.6
Radiation + Chemotherapy	2.5	6.9	—	—	7.9	1.3	3.0
Surgery + Radiation + Chemotherapy	—	—	2.7	—	7.5	0.1	1.8
Others	—	10.3	—	1.5	1.9	4.0	2.6
None	1.7	—	—	—	1.9	1.5	0.8
Not Known	33.1	44.8	45.9	43.9	23.4	21.5	27.9
Total	99.9 *(118)	99.9 (29)	99.9 (37)	99.9 (66)	100.0 (214)	99.9 (531)	100.0 (1288)

*Number of Cancer cases.

TABLE 9A: NUMBER OF DEATHS DUE TO CANCER IN MADRAS DURING 1982—MALES

ICD 9th	SITE	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80—	85—	TOTAL
141	TONGUE	—	—	—	—	—	—	—	—	—	2	3	1	1	—	—	1	—	—	8
142	SALIVARY GLANDS	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
143	GUM	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
145	OTHER MOUTH	—	—	—	—	—	—	—	—	—	2	—	—	1	1	—	—	—	—	4
146	OROPHARYNX	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	1	3
147	NASOPHARYNX	—	—	—	1	2	—	—	—	—	1	—	—	—	—	—	—	—	—	4
148	HYPOPHARYNX	—	—	—	—	—	—	—	—	—	—	1	1	2	—	1	—	—	—	5
150	OESOPHAGUS	—	—	—	—	—	1	—	—	2	4	10	2	1	—	1	—	—	—	22
151	STOMACH	—	—	—	—	1	1	2	1	3	8	8	6	10	6	5	4	2	—	57
153	COLON	—	—	—	—	—	—	—	—	1	2	—	1	1	2	3	—	1	—	11
154	RECTUM	—	—	—	—	—	1	1	—	1	—	1	1	3	3	—	—	—	—	11
155	LEVER	—	—	—	—	—	—	1	—	—	—	—	3	—	1	—	1	—	—	6
157	PANCREAS	—	—	—	—	—	—	—	1	—	1	—	1	3	—	2	—	—	—	8
158	NASALCAVITIES	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
161	LARYNX	—	—	—	—	1	—	—	1	1	—	2	6	2	—	—	2	—	—	15
162	LUNG	—	—	—	1	—	—	—	—	3	2	1	2	5	2	1	2	—	—	19
171	CONNECTIVE TISSUES	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
175	MALE BREAST	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
185	PROSTATE	—	—	—	—	—	—	—	—	1	—	1	—	—	1	1	—	—	—	4
187	PENIS ETC.	—	—	—	—	—	—	—	—	—	1	2	—	—	—	—	—	—	—	3
188	URINARY BLADDER	—	—	—	—	—	—	—	3	—	—	2	2	1	—	—	—	—	—	8
189	KIDNEY	1	—	—	—	—	—	1	—	—	1	1	—	1	3	—	—	—	—	8
193	THYROID GLAND	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
198	SECONDARY SPECIFIED	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	2
199	PRIMARY UNKNOWN	—	—	—	—	—	1	1	1	—	1	—	3	2	—	2	2	—	—	13
200	LYMPHOMA	3	1	—	—	2	3	—	2	—	—	1	2	3	—	1	—	—	—	18
201	HODGKINS DISEASE	—	1	—	—	—	—	—	1	1	—	—	1	—	—	-	—	—	—	4
203	MULTIPLE MYELOMA	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
204	LYMPHATIC LEUKAEMIA	1	4	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
205	MYELOID LEUKAEMIA	1	—	—	2	1	—	—	—	1	—	1	—	—	—	—	—	—	—	6
206	MONOCYTIC LEUKAEMIA	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
207	OTHER SPECIFIED LEUKAEMIA	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	2
208	UNSPECIFIED LEUKAEMIA	—	—	—	—	—	1	—	—	—	1	—	—	1	—	1	—	—	—	4
140-208	ALL SITES	6	6	—	6	7	8	7	10	18	28	35	33	39	21	18	12	4	1	259

TABLE 9B: NUMBER OF DEATHS DUE TO CANCER IN MADRAS DURING 1982—FEMALE

ICD-9th	SITE	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80—	85—	TOTAL
141	TONGUE	—	—	—	—	—	—	—	1	—	—	1	—	1	—	—	—	—	—	3
142	SALIVARY GLANDS	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
145	OTHER MOUTH	—	—	—	—	—	1	—	—	1	2	1	—	2	—	1	—	—	—	8
146	OROPHARYNX	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
148	HYPOPHARYNX	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	2
149	PHARYNX ETC.	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
150	OESOPHAGUS	—	—	—	—	—	—	—	3	1	—	2	—	1	1	—	—	—	—	8
151	STOMACH	—	—	—	—	—	1	1	4	1	2	2	3	3	3	—	2	—	—	22
153	COLON	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
154	RECTUM	—	—	—	—	—	—	—	—	—	2	1	—	—	—	—	—	—	—	3
155	LEVER	—	—	—	—	—	—	1	—	—	—	1	2	—	1	—	—	—	—	5
156	GALL BLADDER	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1
157	PANCREAS	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
161	LARYNX	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
162	LUNG	—	—	—	—	—	—	—	—	—	—	2	1	1	—	—	—	—	—	4
170	BONES	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
171	CONNECTIVE TISSUES	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
174	FEMALE BREAST	—	—	1	—	—	1	2	2	1	7	2	—	4	—	2	—	—	—	22
180	CERVIX	—	—	—	—	—	—	1	3	4	9	7	6	5	1	1	1	—	—	38
183	OVARY	—	—	—	—	—	—	—	1	1	2	2	1	—	1	—	—	—	—	8
184	VAGINA ETC.	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
188	URINARY BLADDER	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	1	—	—	3
189	KIDNEY	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	2
191	BRAIN	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1
193	THYROID GLAND	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	2
198	SECONDARY SPECIFIED	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
199	PRIMARY UNKNOWN	—	—	—	—	—	—	1	—	2	5	1	3	—	—	1	—	—	—	13
200	LYMPHOMA	1	1	1	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	4
201	HODGKINS DISEASE	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
204	LYMPHATIC LEUKAEMIA	2	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	4
205	MYELOID LEUKAEMIA	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
206	MONOCYTIC LEUKAEMIA	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
208	UNSPECIFIED LEUKAEMIA	—	—	—	1	—	1	—	1	—	1	—	—	—	—	—	—	—	—	4
140-208	ALL SITES	3	3	3	2	1	6	7	17	13	32	23	21	21	8	6	4	—	—	170

TABLE 10: NUMBER OF NEW RESIDENT CANCER CASES-INSTITUTION-WISE IN MADRAS DURING 1982

S. No.	Name of the Institution	Institution Code No.	Number of Cases
1.	Central Research Institute for Siddha	01	20
2.	Government Dental Hospital	02	17
3.	Government E.S.I. Hospital	03	22
4.	Government General Hospital	04	662
5.	Government Institute of Child Health	05	46
6.	Government Kilpauk Medical College Hospital	06	42
7.	Government Kasturba Gandhi Hospital	07	67
8.	Government Opthalmic Hospital	08	4
9.	Madras Port Trust Hospital	09	14
10.	Southern Railway Hospital	10	22
11.	Government Royapettah Hospital	11	78
12	Government R.S.R.M. Hospital	12	59
13.	Government Stanley Hospital	13	244
14	Government Women & Children Hospital	14	258
15.	A. J. Hospital	16	2
16.	Cancer Institute (W.I.A.)	17	326
17.	C.S.I. Rainy Hospital	18	8
18.	Devaki Hospital	19	3
19.	Kalyani General Hospital	20	6
20.	K. J. Hospital	21	1
21.	Sankara Nethralaya & Unit of Medical Research Foundation	23	1
22.	Raju Nursing Home	24	5
23.	Selvarangam Nursing Home	25	1
24.	Voluntary Health Services Hospital	28	4
25.	Lady Willington Nursing Home	29	7
26.	Halstead Surgical Clinic	30	2
27.	Zubside Polyclinic	31	1
28.	Vijaya Hospital	32	11
29.	Corporation of Madras	33	260
30.	Nagamany Nursing Home	36	3
31.	Dr. Chandrakanthan	37	1
32.	Gunasagaram Nursing Home	40	1
33.	Specialists Hospital	41	4
34.	Sree Ramana Surgical Clinic	42	1
35.	Rama Rao Polyclinic	43	3
36.	Ranga Nursing Home	44	1
37.	Dr. Sakthimohan	46	1
38.	National Hospital	48	7
39.	The Guest Hospital	49	1
40.	Dr. U. Mohan Rao's Surgical Clinic	54	6
41.	Premier Radiological Institute & Cancer Hospital, Madras—4.	60	33
	Total		2255*

*3 Cases are multisites (2 from Government General Hospital and 1 from Government Stanley Hospital).

APPENDIX 5

HOSPITAL CANCER REGISTRY AT POST-GRADUATE INSTITUTE OF MEDICAL EDUCATION AND RESEARCH, CHANDIGARH

DR. B. D. GUPTA, Project Chief
DR. R. K. GROVER, Senior Resident in Radiotherapy

ANNUAL REPORT

(FROM JANUARY 1, 1982 TO DECEMBER 31, 1982)

INTRODUCTION

The hospital cancer registry is an important step at Post-graduate Institute of Medical Education and Research, Chandigarh for collection, recording and analysis of data on cancer patients. It is essential that complete record for cancer patients should be available for national and international studies and development of co-operative and control programme in cancer. The main purposes of a hospital based cancer registry can be summarised as follows:

1. Centralising records of the cancer patients.
2. Systematic collection of clinical data.
3. Assessment of present and future needs for cancer control programme.
4. Assessment of incidence of cancer in a particular community and region.
5. To collect useful data for assessing the possible causes of cancer and providing geographical distribution.

The Post-graduate Institute of Medical Education and Research is highly specialisation oriented and referral centre in this region and a national centre for post-graduate studies in all branches of medicine. The Institute serves a wide population in this region. It serves patients from the Union Territory of Chandigarh and its neighbouring states of Punjab, Haryana, Himachal Pradesh, Western part of Uttar Pradesh and the part of Jammu and Kashmir. The population of neighbouring states as per census report of 1981, are as follows: Chandigarh 450,061; Punjab 16,669,755; Haryana 12,850,902 and Himachal Pradesh 4,237,569.

From the registry record it was found that reporting of the patients from different places can be summarised as follows:—

Region	Male	Female	Total	*Reporting Rate
U.T. Chandigarh	88	115	203	45.11
Punjab	482	668	1150	6.90
Haryana	195	177	372	2.89
Himachal Pradesh	170	245	415	9.79
Others (Western U.P., J & K and other States)	300	228	528	—
Total†	1235	1433	2668	—

*This reporting rate is calculated per 100,000 of population of the patients attended P.G.I., Chandigarh.

†Information on 2 male cases and 5 female cases are not added in this table in the Chandigarh Cancer Registry Annual Report of 1982 while they are included in other tables. (Male 1237; Female 1438; Total 2676).

SOURCE OF INFORMATION

1. Two independent cells have been established—one in the department of Radiotherapy and the other in the Out-patient department of Surgery. Each new case of suspected or proved cancer is recorded in the core data form. These cells also record the treatment and follow up notes. A separate file with tumour registry number and central registration number is also made where the detailed records of the history of patient is attached. This file is the permanent record of the patient with complete information about his identification and address etc.

2. A team consisting of medical record officer and investigators visits every day to the central registration department of the Institute and record on the index cards the cancer patients admitted into various wards. The cards are studied, matched and recorded in the core proforma. The cases which were registered in radiotherapy or surgical O.P.D. earlier are excluded by matching. Another team with investigators and senior research fellow visits various wards and out-patient departments other than surgery and Radiotherapy and specialised clinics like Leukaemia, E.N.T. tumour clinic and Pathology tumour clinic for registration of cases which are new and not registered earlier. There is a permanent posting of a junior investigator in the department of pathology for registering of patients diagnosed as cancer in an index card and these cards are brought to the cancer registry office for matching and cross matching and if the case is not registered the core proforma is filled up and the complete informations are obtained from the available sources in the Institute.

THREE MAIN SOURCES OF CANCER PATIENTS

1. Radiotherapy Department

This department treats cancer patients almost exclusively. Almost all cases except a few receive radiotherapy on an out-patient basis and admissions are given only to patients undergoing investigation and/or treatment by intra-cavitary brachytherapy or aggressive chemotherapy. The records of the patients are kept in the department of radiotherapy with a separate file and all details of the patients, their treatment methods and follow up are recorded in the file. This department also deals with systemic cancer chemotherapy and most of the patients receive drug treatment as an out-door patient in a day care ward.

The records of the patients, the treatment schedule and follow up are also kept separately in the department. There are two investigators who record the details of the patients and complete the core data proforma. The new files of each patient is also made here.

2. Surgery Department

This is the second largest source of cancer patients. The patient with diagnosis of cancer are recorded with completion of core data proforma. A separate and special surgical oncology file is made for each patient. All the information available from time to time including treatment and follow up are recorded in this file which is a permanent record for each patient. There are three surgical units in this Institute and their days are fixed for out-patient services.

3. Pathology Department

This is another important source of information for cancer registry at this Institute. All information available for cancer patients are recorded on index card and brought to the central cancer registry office where matching and cross matching are done. The cases which are not recorded earlier and missed are completed by the records available in the pathology proforma. The original file of the patients available in various O.P.D., clinics, wards and central registration department of P.G.I. are traced and available data filled up in our core proforma.

TRAINING PROGRAMME

Senior Research Officer (Medical), Biostatistician and Medical Records Officer attended 3 weeks training programme jointly conducted by the Indian Cancer Society and Tata Memorial Hospital, Bombay. The main emphasis was given for recording of the details of the patients data on the core proforma. The project chief of the Cancer Registry also attended the training programme for last three days where the details of the core proforma were discussed and accepted for Cancer Registry at various centres.

The staff appointed for Cancer Registry at P.G.I., were trained by the Project Chief and other staff with special reference to completion of core data forms, index cards and matching and cross matching of the cancer cases. The staff were also trained for recording and filling of the important information in the main register of cancer registry.

ANNEXURE – I

EXISTING CANCER REGISTRY STAFF (AS ON 1-1-1983)

DR. B. D. GUPTA, M. D., Project Chief

S.No.	Name	Qualification	Designation
1.	Post vacant	—	Senior Research Officer (Medical)
2.	Dr. R. K. Grover	M.D. (Radiotherapy)	Senior Resident in Radiotherapy (Posted in Cancer Registry for co-ordination work)
3.	Mr. Tarsem Chand Goyal	M.A. (Statistics)	Biostatistician
4.	Dr. Geeta Varma*	M.Sc., Ph.D.	Research Associate (on Special Duty)
5.	Dr. K. A. Dilip*	M.B.B.S.	Senior Research Fellow (Officer In-charge Surgical Oncology Cell)
6.	Mr. Sita Ram Sroa	M.Sc.	Medical Record Officer
7.	Mr. V. K. Khurana	M.A.	Social Investigator
8.	Miss Neeta Jhingan	M.A.	Social Investigator
9.	Miss Swaran Lata	M.Sc.	Senior Research Fellow
10.	Miss Indu Dhir	—	Coding Clerk-cum-Investigator
11.	Mr. Gurinder Singh	B.A.	Investigator-cum-Clerk
12.	Mr. C. Sasindran	—	Clerk-cum-Typist
13.	Miss Usha Chighal	B.A.	Investigator-cum-Clerk
14.	Mr. B. S. Thind	B.A.	Clerk

*Working against the post of Senior Research Officer (Medical).

ANNEXURE – II

ADVISORY BOARD

1. Prof. B. N. Dutta, Head, Dept. of Pathology	Principal Advisor and Chairman Selection Committee
2. Prof. I. S. Jain, Head, Dept. of Opthalmology	Advisor and Member Co-ordination Committee
3. Dr. H. D. Gupta, Head, Dept. of Biostatistics.	Member Selection Committee
4. Dr. S. Ayyagari, Assistant Professor, Dept. of Radiotherapy.	Member Selection Committee
5. Dr. B. D. Gupta, Prof. & Head, Dept. of Radiotherapy.	Member Secretary

ANNEXURE—II *(Contd.)*

CO-ORDINATION COMMITTEE

1.	Prof. I. C. Pathak, Director	Chairman
2.	Dr. C. Prakash, Prof. of Medicine and Medical Superintendent.	Vice-Chairman
3.	Prof. B. C. Sapna, Head, Dept. of Urology.	Member
4.	Prof. Kuldip Singh, Head, Dept. of Surgery.	Member
5.	Prof. M. M. L. Arora, Head, Dept. of ENT	Member
6.	Prof. C. P. Sahni, Head, Dept. of Plastic Surgery	Member
7.	Prof. G. I. Dhall, Head, Dept. of Gynae. & Obst.	Member
8.	Prof. S. K. Khanna, Dept. of Surgery	Member
9.	Dr. V. K. Kak, Assoc. Prof. Neurosurgery.	Member
10.	Dr. A. Banerjee, Assoc. Prof. Pathology.	Member
11.	Dr. Jaswant Rai, Asst. Professor Dept. of Orthopaedics.	Member
12.	Dr. S. C. Sharma, Asst. Professor Dept. of Radiotherapy.	Member
13.	Dr. F. D. Patel, Lecturer, Dept. of Radiotherapy	Member
14.	Dr. R. K. Grover, Registrar & Sr. Resident, Radiotherapy.	Member and Officer In-charge Co-ordination

ANNEXURE—III

Posting Schedule of Cancer Registry Staff at P.G.I., Chandigarh

CENTRAL REGISTRY OFFICE

1.	Mr. Tarsem Chand Goyal	Biostatistician
2.	Dr. Geeta Varma	Research Associate
3.	Mr. Sita Ram Sroa	Medical Record Officer
4.	Mr. V. K. Khurana	Social Investigator
5.	Mr. C. Sasindran	Clerk-cum-Typist

OUT-PATIENT DEPARTMENT AND CLINICS

a)	Radiotherapy O.P.D.: All days	1. Miss Neeta Jhingan 2. Miss Indu Dhir
b)	Surgical O.P.D.: All days	1. Miss Swaran Lata 2. Miss Usha Chighal
c)	Central Registration Dept.: All days	1. Mr. Sita Ram Sroa 2. Mr. B. S. Thind
d)	Pathology Dept.: All days	1. Mr. Gurinder Singh
e)	Leukaemia clinic every Monday (Morning hours)	1. Mr. Sita Ram Sroa
f)	E.N.T. Clinic every Friday (Evening hours)	1. Mr. Sita Ram Sroa
g)	Radiotherapy and Plastic Clinic: Every Monday (2.00 p.m.)	1. Mr. Sita Ram Sroa

INDOOR WARDS

1.	Block A—	1. Dr. Geeta Varma 2. Mr. V. K. Khurana
2.	Block B—	1. Miss Swaran Lata 2. Miss Usha Chighal
3.	Blocks C & D—	1. Miss Neeta Jhingan 2. Miss Indu Dhir

TABLE 1A: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES
CENTRE: CHANDIGARH

ICD 9th	Site	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80+	Ans	Total	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	0	1	1	2	1	0	0	1	0	0	0	6	0.49	0.43
141	TONGUE	0	0	0	0	0	1	4	1	8	7	12	8	8	6	2	1	2	0	60	4.85	5.10
142	SALIVARY GLAND	0	0	0	3	1	0	0	2	0	1	0	3	2	1	0	0	0	1	14	1.13	0.92
143	GUM	0	0	0	0	0	0	0	0	1	6	1	0	0	1	1	0	0	0	10	0.81	0.71
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08	0.05
145	OTHER MOUTH	0	0	0	0	0	2	0	1	2	4	4	4	7	0	1	0	0	0	25	2.02	1.62
146	OROPHARYNX	0	0	0	1	0	1	3	0	5	5	4	2	1	1	2	0	0	0	25	2.02	1.65
147	NASOPHARYNX	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	5	0.40	0.30
148	HYPOPHARYNX	0	0	0	2	4	0	0	1	1	2	5	4	5	4	1	0	1	0	30	2.43	2.57
149	PHARYNX ETC.	0	0	0	0	0	1	0	0	0	0	2	0	4	0	0	0	0	0	7	0.57	0.44
150	OESOPHAGUS	0	0	0	0	0	0	4	2	5	9	17	12	14	4	6	2	5	0	80	6.47	7.69
151	STOMACH	0	0	0	0	0	2	3	0	4	3	7	5	5	3	6	0	0	1	39	3.15	3.04
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	3	0.24	0.21
153	COLON	0	0	0	0	0	3	2	6	6	2	2	3	1	4	1	0	1	0	31	2.51	2.51
154	RECTUM	1	0	0	0	1	4	2	4	3	3	6	4	8	3	2	1	0	0	42	3.40	3.22
155	LIVER	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	3	0.24	0.24
156	GALL BLADDER	0	0	0	0	0	0	1	1	2	1	2	2	3	1	0	0	0	0	13	1.05	0.89
157	PANCREAS	0	0	0	1	1	0	3	0	1	1	2	3	5	2	3	1	0	0	23	1.86	2.14
158	RETROPERITONEUM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.08	0.15
159	OTHER SINUSES DIST. ORG.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.08	0.07
160	NOSE	0	0	1	4	0	0	1	1	1	1	4	1	3	1	3	1	0	0	22	1.78	1.95
161	LARYNX	0	0	0	0	0	2	2	3	7	13	22	7	13	7	4	1	2	0	83	6.71	6.66
162	LUNG	1	0	0	0	2	0	1	5	15	11	30	13	26	16	13	5	1	0	139	11.24	12.74
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
164	THYMUS	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0.16	0.12
165	OTHER RESP. SYS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	0	0	3	4	5	1	2	1	0	2	0	0	0	0	0	0	0	0	18	1.46	1.00
171	CONNECTIVE TISS	1	1	1	2	4	2	1	2	5	1	3	9	1	2	1	0	1	0	37	2.99	2.81
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00

TABLE 1A *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES CENTRE: CHANDIGARH

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
173	SKIN OTHER	0	0	0	0	0	1	2	2	6	4	7	1	8	5	2	2	0	2	42	3.40	3.55
175	MALE BREAST	0	0	0	0	0	0	0	0	0	1	2	0	1	0	1	0	0	0	5	0.40	0.37
185	PROSTATE	0	0	0	0	0	0	0	0	1	0	0	5	6	5	5	1	2	0	25	2.02	3.40
186	TESTIS	1	0	0	1	3	4	6	6	0	2	1	0	2	2	2	0	0	0	30	2.43	1.98
187	PENIS ETC.	0	0	0	0	0	0	0	0	1	4	4	3	2	1	3	1	2	0	21	1.70	2.45
188	URI. BLADDER	0	0	0	0	0	1	0	0	2	8	5	9	5	6	5	2	0	0	43	3.48	4.18
189	KIDNEY ETC.	2	2	0	1	0	0	1	0	2	2	2	0	1	0	2	0	0	1	16	1.29	1.05
190	EYE	10	3	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	16	1.29	1.08
191	BRAIN	6	6	5	1	11	13	3	3	4	3	3	7	1	1	0	0	0	0	67	5.42	3.93
192	OTHER NERV. SYS.	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0.32	0.33
193	THYROID GLANDS	0	0	0	0	1	0	2	0	2	1	0	2	1	0	0	0	0	0	9	0.73	0.53
194	OTHER ENDO. GLAN	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0.24	0.17
195	ILL-DEFI. SITES	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	3	0.24	0.34
196	SEC. LYMPH NODE	0	0	0	1	0	2	0	0	3	2	4	0	1	1	2	0	1	0	17	1.37	1.49
197	SEC. RES. DIG.	0	0	0	1	0	0	0	0	2	1	1	3	1	0	1	1	1	0	12	0.97	1.40
198	SEC. OTHER. SITES	0	0	0	0	1	1	3	1	0	2	3	0	0	1	0	0	1	0	13	1.05	1.03
199	PRIM. UNK	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	4	0.32	0.52
200	LYMPHOSARCOMA	3	2	4	4	1	4	2	1	3	4	4	2	1	2	2	0	1	0	40	3.23	2.93
201	HODGKINS DISEASE	2	1	3	2	4	3	3	3	3	3	4	4	1	2	0	0	1	0	39	3.15	2.71
202	OTHER LYMPH	0	1	1	2	0	1	1	3	4	1	2	1	1	1	0	1	0	0	20	1.62	1.53
203	MULTIPLE MYELOMA	0	0	0	0	0	1	0	1	2	2	4	4	2	0	1	1	0	0	18	1.46	1.45
204	LEUK. LYMPHOID	2	5	3	5	2	0	1	0	0	1	0	0	0	1	2	0	0	0	22	1.78	1.59
205	LEUK. MYELOID	2	0	2	4	3	3	5	10	4	3	4	3	0	1	0	0	0	1	45	3.64	2.56
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.08	0.05
207	LEUK. OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208	LEUK. UNSP	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0.16	0.09
	TOTALS	32	22	24	40	46	55	61	61	108	119	182	129	142	87	79	22	22	6	1237	100.00	100.00

TABLE 1B: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES
CENTRE: CHANDIGARH

ICD 9th	Site	0—	5—	10—	15—	20—	25—	30—	35—	40—	45—	50—	55—	60—	65—	70—	75—	80+	Ans	Total	%	ASCAR
140	LIP	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0.14	0.06
141	TONGUE	0	0	0	0	0	0	0	1	4	3	9	3	3	3	2	0	1	0	29	2.02	2.68
142	SALIVARY GLANDS	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	5	0.35	0.52
143	GUM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	3	0.21	0.11
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
145	OTHER MOUTH	0	0	0	0	1	0	0	0	1	1	3	4	2	1	1	0	1	0	15	1.04	1.79
146	OROPHARYNX	0	0	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0	0	5	0.35	0.42
147	NASOPHARYNX	0	0	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	4	0.28	0.26
148	OROPHARYNX	0	0	0	0	1	2	3	6	5	6	7	2	1	0	0	0	0	0	33	2.29	1.27
149	PHARYNX ETC.	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4	0.28	0.12
150	OESOPHAGUS	0	0	0	0	2	2	3	5	9	6	16	10	10	4	4	0	0	0	71	4.94	4.70
151	STOMACH	0	0	0	0	0	0	1	0	4	0	4	0	0	1	0	0	1	0	11	0.76	1.15
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0.14	0.06
153	COLON	0	0	0	0	0	0	0	0	0	3	3	0	3	1	0	0	1	0	11	0.76	1.27
154	RECTUM	0	0	0	0	0	2	2	5	1	3	3	0	3	1	1	0	0	1	22	1.53	1.17
155	LIVER	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0.14	0.07
156	GALL BLADDER	0	0	0	0	0	0	0	0	4	3	9	2	3	1	1	1	0	0	24	1.67	1.94
157	PANCREAS	0	0	0	0	0	0	1	0	0	2	0	2	1	0	3	2	0	0	11	0.76	2.27
158	RETROPERITONEUM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	3	0.21	0.13
159	OTHER DIGST.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0.07	0.21
160	NOSE	0	0	0	0	1	0	0	1	0	3	4	2	5	2	2	0	0	0	20	1.39	1.73
161	LARYNX	0	0	0	0	0	0	1	5	2	4	1	1	1	2	1	0	2	0	20	1.39	2.50
162	LUNG	0	0	0	0	0	0	0	3	3	6	3	3	2	2	1	0	1	0	24	1.67	2.12
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
164	THYMUS ETC.	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	4	0.28	0.48
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	1	0	1	4	1	1	0	1	0	0	1	0	2	0	0	0	0	0	12	0.83	1.08
171	CONNECTIVE TISS	3	0	1	3	2	0	1	2	1	2	0	0	1	1	0	0	0	0	17	1.18	1.56
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
173	SKIN OTHER	0	0	0	1	1	0	0	0	2	0	2	2	4	2	2	0	1	1	18	1.25	2.30
174	FEM. BREAST	0	0	0	0	0	12	17	27	41	36	27	15	13	3	10	0	0	0	201	13.98	9.98

TABLE 1B *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES CENTRE: CHANDIGARH

ICD	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	TOTAL	%	ASCAR
179	UTERUS UNS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
180	CERVIX	0	0	0	0	0	10	35	68	89	109	118	63	68	28	18	5	1	1	613	42.63	36.88
181	PLACENTA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
182	BODY UTERUS	0	0	0	0	0	0	0	3	5	6	2	5	2	1	1	0	0	0	25	1.74	1.43
183	OVARY	0	0	0	1	1	2	3	4	3	7	16	1	3	0	2	0	0	0	43	2.99	2.08
184	VAGINA ETC.	0	0	0	0	0	0	1	0	0	4	4	1	1	2	1	1	0	0	15	1.04	1.73
188	URI. BLADDER	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0.21	0.22
189	KIDNEY	0	0	0	0	0	0	1	0	1	0	4	1	2	0	1	0	0	0	10	0.70	0.63
190	EYE	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0.97	1.75
191	BRAIN	3	2	4	2	1	3	1	4	2	1	2	0	0	0	0	0	0	0	25	1.74	1.91
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07	0.03
193	THYROID GLAND	0	0	0	2	1	0	0	0	1	1	3	2	0	0	0	1	0	0	11	0.76	1.30
194	ENDO. GLANDS	0	0	1	1	0	2	0	0	0	0	1	0	0	0	0	0	0	0	5	0.35	0.35
195	ILL-DEF. SITES	0	0	0	1	0	1	0	0	2	1	0	3	1	0	0	0	0	0	9	0.63	0.54
196	SEC. LYMPH NODES	0	0	0	0	2	0	1	1	3	0	1	0	1	2	0	2	0	0	13	0.90	2.23
197	SEC. RESP. ETC.	0	0	0	0	0	0	0	0	0	0	2	2	3	1	0	1	0	0	9	0.63	1.29
198	SEC. OTHER SITE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0.14	0.87
199	PRIM. UNK.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	3	0.21	0.32
200	LYMPHOSARCOMA	0	0	0	2	0	0	0	0	0	2	3	2	0	0	0	0	0	0	9	0.63	0.54
201	HODGKINS DISEASE	0	0	0	1	0	4	1	1	0	0	1	1	0	0	0	0	0	0	9	0.63	0.45
202	OTHER LPMH. TISS	0	0	1	2	0	0	2	1	0	0	0	0	2	0	0	0	0	0	8	0.56	0.61
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	1	0	0	2	1	0	0	1	0	0	0	5	0.35	0.38
204	LEUK. LYMPHATIC	2	3	2	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	10	0.70	1.18
205	LEUK. MYELOID	0	0	0	2	2	2	5	2	2	2	0	1	1	1	0	0	0	0	20	1.39	1.28
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
207	LEUK. OTHER SPC.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.07	0.04
208	LEUK. UNSP.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.07	0.03
	TOTALS	21	8	11	24	19	43	83	145	191	216	258	134	142	62	55	14	9	3	1438	100.00	100.00

TABLE 2: PERCENTAGE OF CASES DIAGNOSED BY SELECTED MEANS, CHANDIGARH 1982

ICD 9th	Site	Clinical %		X-Ray %		Others %		Microscopic %		Total Cases	
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
140	LIP	–	–	–	–	–	–	100.0	100.0	6	2
141	TONGUE	5.0	10.3	–	–	–	–	95.0	89.7	60	29
142	SALIVARY GLANDS	14.3	–	–	–	–	–	85.7	100.0	14	5
143	GUM	–	–	–	–	–	–	100.0	100.0	10	3
144	FLOOR OF MOUTH	–	–	–	–	–	–	100.0	–	1	0
145	OTHER MOUTH	8.0	–	–	–	–	–	92.0	100.0	25	15
146	OROPHARYNX	4.0	–	–	–	–	–	96.0	100.0	25	5
147	NASOPHARYNX	–	–	–	–	–	–	100.0	100.0	5	4
148	HYPOPHARYNX	3.3	3.0	–	–	6.7	3.0	90.0	93.9	30	33
149	PHARYNX ETC.	–	–	–	–	–	–	100.0	100.0	7	4
150	OESOPHAGUS	–	1.4	6.2	5.6	2.5	5.6	91.2	87.3	80	71
151	STOMACH	–	–	–	–	2.6	27.3	97.4	72.7	39	11
152	SMALL INTESTINE	–	–	–	–	33.3	–	66.7	100.0	3	2
153	COLON	–	–	–	–	12.9	18.2	87.1	81.8	31	11
154	RECTUM	2.4	–	2.4	–	2.4	–	92.9	100.0	42	22
155	LIVER	–	–	–	–	–	–	100.0	100.0	3	2
156	GALL BLADDER	–	8.3	7.7	4.2	15.4	8.3	76.9	79.2	13	24
157	PANCREAS	8.7	–	8.7	–	47.8	72.7	34.8	27.3	23	11
158	RECTOPERITONEUM	–	–	–	–	–	–	100.0	100.0	1	3
159	OTHER DIGESTIVE ORGANS	100.0	100.0	–	–	–	–	–	–	1	1
160	NASAL CAVITY	–	–	–	–	–	–	100.0	95.0	22	20
161	LARYNX	2.4	–	–	–	4.82	–	92.8	100.0	83	20
162	LUNG	4.3	–	9.4	–	14.4	20.8	71.9	79.3	139	24
164	THYMUS	–	25.0	50.0	25.0	–	–	50.0	50.0	2	4
170	BONES	11.1	–	–	8.3	–	–	88.9	91.7	18	12
171	CONNECTIVE TISSUE	–	–	–	–	5.41	–	94.6	100.0	37	17
173	SKIN	7.1	5.6	–	–	–	5.6	92.9	88.9	42	18
174	FEMALE BREAST	–	5.0	–	–	–	–	–	95.0	0	201
175	MALE BREAST	20.0	–	20.0	–	–	–	60.0	–	5	0
180	CERVIX UTERI	–	4.9	–	–	–	0.2	–	94.9	0	613

TABLE 2 *(Continued)*: PERCENTAGE OF CASES DIAGNOSED BY SELECTED MEANS, CHANDIGARH 1982

ICD 9th	Site	Clinical %		X-Ray %		Others %		Microscopic %		Total Cases	
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
182	BODY OF UTERIS	–	–	–	–	–	–	–	100.0	0	25
183	OVARY	–	–	–	–	–	2.3	–	97.7	0	43
184	VAGINA ETC.	–	–	–	–	–	–	–	100.0	0	15
185	PROSTATE	–	–	–	–	–	–	100.0	–	25	0
186	TESTIS	3.3	–	–	–	–	–	96.7	–	30	0
187	PENIS	4.8	–	–	–	–	–	95.2	–	21	0
188	BLADDER	2.3	–	4.65	–	2.3	–	90.7	100.0	43	3
189	KIDNEY	–	–	–	–	–	–	100.0	100.0	16	10
190	EYE	6.2	21.4	–	–	6.3	–	87.5	78.6	16	14
191	BRAIN	1.5	12.0	5.9	12.0	2.9	12.0	89.5	64.0	67	25
192	OTHER NERVOUS SYSTEM	–	–	–	–	–	–	100.0	100.0	4	1
193	THYROID GLAND	–	–	–	–	–	–	100.0	100.0	9	11
194	OTHER ENDOCRINE GLANDS	–	20.0	–	20.0	–	20.0	100.0	40.0	3	5
195	ILL. DEFINED SITES	–	33.3	–	–	–	–	100.0	66.6	3	9
196	LYMPH NODES	–	–	–	–	–	–	100.0	100.0	17	13
197	SECONDARY RESPIRATORY ETC.	–	–	–	–	–	–	100.0	100.0	12	9
198	SECONDARY OTHER SPECIFIED SITES	–	–	–	–	–	–	100.0	100.0	13	2
199	PRIMARY UNKNOWN	25.0	66.7	50.0	33.3	25.0	–	–	–	4	3
200	LYMPHOSARCOMA & RECTI.	–	–	–	–	–	–	100.0	100.0	40	9
201	HODGKIN'S DISEASE	–	–	–	–	–	–	100.0	100.0	39	9
202	OTHER LYMPHOID TISSUE	30.0	12.5	–	–	–	–	70.0	87.5	20	8
203	MULTIPLE MYELOMA	–	–	5.6	–	–	–	94.4	100.0	18	5
204	LEUKAEMIA LYMPHOID	–	–	–	–	–	–	100.0	100.0	22	10
205	LEUKAEMIA MYELOID	–	–	–	–	–	–	100.0	100.0	45	20
206	LEUKAEMIA MONOCYTIC	–	–	–	–	–	–	100.0	–	1	0
207	LEUKAEMIA SPECIFIED	–	–	–	–	–	–	–	100.0	0	1
208	LEUKAEMIA UNSPECIFIED	–	–	–	–	–	–	100.0	100.0	2	1
	TOTAL (%)	3.16	4.38	2.67	0.90	4.45	2.23	89.72	92.48	1237	1438

TABLE 3: PROPORTION OF CANCER CASES PROFESSING A SPECIFIC RELIGION BY SEX AND SITE, CHANDIGARH, 1982

ICD 9th	Site	Male (%)				Female (%)				Total Cancer Cases	
		Hindu	Muslim	Sikh	*Others	Hindu	Muslim	Sikh	*Others	Male	Female
140	LIP	0.5	–	0.3	1.75	0.2	–	–	–	6	2
141	TONGUE	5.8	3.0	2.8	5.30	1.8	7.9	1.7	7.1	60	29
142	SALIVARY GLANDS	1.1	1.5	1.3	–	0.4	–	0.4	–	14	5
143	GUM	0.8	1.5	0.9	–	0.1	–	0.4	–	10	3
144	FLOOR OF MOUTH	0.1	–	–	–	–	–	–	–	1	–
145	OTHER MOUTH	2.1	3.0	1.6	1.75	1.1	7.9	0.6	–	25	15
146	OROPHARYNX	2.3	4.5	0.9	1.75	0.5	2.6	–	–	25	5
147	NASOPHARYNX	0.4	1.5	0.3	–	0.2	–	0.2	3.6	5	4
148	HYPOPHARYNX	2.3	3.0	3.1	–	1.0	–	4.3	7.1	30	33
149	PHARYNX ETC.	0.5	–	0.6	1.75	0.2	–	0.2	3.6	7	4
150	OESOPHAGUS	6.2	6.0	7.5	5.30	3.7	5.3	6.7	7.1	80	71
151	STOMACH	3.5	4.5	2.2	1.75	1.0	2.6	–	7.1	39	11
152	SMALL INTESTINE	0.2	–	0.3	–	0.1	–	0.2	–	3	2
153	COLON	2.5	1.5	2.5	3.50	0.7	–	0.9	–	31	11
154	RECTUM	2.8	9.0	3.8	3.50	1.6	7.9	1.1	–	42	22
155	LIVER	0.3	–	0.3	–	0.2	–	–	–	3	2
156	GALL BLADDER	1.3	–	0.9	–	1.8	5.3	1.3	–	13	24
157	PANCREAS	1.8	–	2.2	3.50	1.1	5.3	–	–	23	11
158	RECTOPERITONEUM	–	–	0.3	–	0.1	–	0.4	–	1	3
159	OTHER DIGESTIVE ORGANS	0.1	–	–	–	–	–	0.2	–	1	1
160	NASAL CAVITY	1.6	1.5	1.9	3.50	1.8	–	0.7	3.6	22	20
161	LARYNX	7.5	4.5	4.1	12.30	1.1	2.6	1.7	3.6	83	20
162	LUNGS	13.6	9.0	6.0	10.50	1.7	2.6	1.7	–	139	24
163	PLEURA	–	–	–	–	–	–	–	–	–	–
164	THYMUS	0.3	–	–	–	0.4	–	0.2	–	2	4
165	OTHER RESP. E.	–	–	–	–	–	–	–	–	–	–
170	BONES	1.5	1.5	1.6	–	1.1	–	0.4	3.6	18	12
171	CONNECTIVE TISSUE	2.6	4.5	3.5	3.50	1.4	–	0.7	3.6	37	17
172	SKIN MELANOMA	–	–	–	–	–	–	–	–	–	–
173	SKIN	2.9	1.5	5.3	1.75	1.0	2.6	1.5	3.6	42	18
174	FEMALE BREAST	–	–	–	–	13.5	10.5	15.0	10.7	–	201
175	MALE BREAST	0.1	1.5	0.6	1.75	–	–	–	–	5	–
179	UTERIS UNS.	–	–	–	–	–	–	–	–	–	–
180	CERVIX UTERI	–	–	–	–	45.2	18.4	41.6	17.9	–	613
181	PLACENTA	–	–	–	–	–	–	–	–	–	–

TABLE 3 *(Continued)*: PROPORTION OF CANCER CASES PROFESSING A SPECIFIC RELIGION BY SEX AND SITE, CHANDIGARH, 1982

ICD 9th	Site	Male (%)				Female (%)				Total Cancer Cases	
		Hindu	Muslim	Sikh	*Others	Hindu	Muslim	Sikh	*Others	Male	Female
182	BODY OF UTERIS	–	–	–	–	1.3	2.6	2.4	–	–	25
183	OVARY	–	–	–	–	3.1	–	2.8	3.6	–	43
184	VAGINA ETC.	–	–	–	–	0.7	2.6	1.5	3.6	–	15
185	PROSTATE	1.8	–	2.8	3.50	–	–	–	–	25	–
186	TESTIS	2.5	3.0	2.5	–	–	–	–	–	30	–
187	PENIS	1.3	–	3.5	–	–	–	–	–	21	–
188	BLADDER	3.5	6.0	2.8	3.50	0.4	–	–	–	43	3
189	KIDNEY	1.0	1.5	1.9	1.75	1.1	–	0.2	–	16	10
190	EYE	1.0	3.0	1.9	–	0.8	2.6	1.1	–	16	14
191	BRAIN	5.0	6.0	6.3	5.30	1.8	5.3	1.5	–	67	25
192	OTHER NERVOUS SYSTEM	0.2	–	0.3	1.75	0.1	–	–	–	4	1
193	THYROID GLAND	0.8	1.5	0.3	1.75	0.6	–	0.9	3.6	9	11
194	OTHER ENDOCRINE GLANDS	0.1	1.5	–	1.75	0.4	–	0.4	–	3	5
195	ILL. DEFINED SITES	0.1	–	0.6	–	0.4	2.6	0.7	3.6	3	9
196	LYMPH NODES	1.3	1.5	1.6	1.75	1.0	–	0.9	–	17	13
197	SECONDARY RESPIRATORY ETC.	0.9	–	1.3	1.75	0.7	–	0.6	–	12	9
198	SECONDARY OTHER SPC. SITES	0.8	1.5	1.6	1.75	0.2	–	–	–	13	2
199	PRIMARY UNKNOWN	0.5	–	–	–	0.1	–	0.4	–	4	3
200	LYMPHOSARCOMA & RECTI.	3.0	–	4.1	5.30	0.6	–	0.7	–	40	9
201	HODGKIN'S DISEASE	3.4	–	3.5	1.75	0.2	–	1.1	3.6	39	9
202	OTHER LYMPHOID TISSUE	1.6	3.0	1.6	–	0.4	–	0.9	–	20	8
203	MULTIPLE MYELOMA	1.5	1.5	1.3	1.75	0.5	–	0.2	–	18	5
204	LEUKAEMIA LYMPHOID	1.5	1.5	2.8	–	0.7	2.6	0.6	–	22	10
205	LEUKAEMIA MYELOID	3.4	6.0	3.8	3.50	1.7	–	1.1	–	45	20
206	LEUKAEMIA MONOCYTIC	–	–	0.3	–	–	–	–	–	1	–
207	LEUKAEMIA SPECIFIED	–	–	–	–	0.1	–	–	–	–	1
208	LEUKAEMIA UNSPECIFIED	0.1	–	0.3	–	0.1	–	–	–	2	1
	Total (%)	100.0	100.0	99.9	100.0	100.0	99.8	100.1	100.2	–	–
	ALL SITES NUMBER	795	67	318	57	834	38	538	28	1237	1438
	%	64.3	5.4	25.7	4.5	58.0	2.6	37.4	1.9	99.9	99.9

*Others include Christian, Jain, Buddhist and religion not known.

TABLE 4A: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, CHANDIGARH, 1982
MALE (%)

Educational Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lungs (162)	All Sites (140-208)
Illiterate	44.0	46.3	38.7	46.1	37.3	39.6	35.8
Literate	13.8	14.8	11.2	15.4	27.7	17.3	14.4
Primary	8.6	7.5	8.7	5.1	6.0	14.4	9.1
Secondary	23.3	22.4	30.0	20.5	16.9	18.0	24.2
Technical*	0.9	1.5	2.5	—	—	0.7	0.8
College**	3.4	1.5	3.7	5.1	3.6	7.2	6.8
Not applicable	0.8	—	1.5	—	—	—	2.5
Not Known	5.2	6.0	3.7	7.7	8.4	2.8	6.3
Total (%)	100.0	100.0	100.0	99.9	99.9	100.0	99.9
	+(116)	(67)	(80)	(39)	(83)	(139)	(1237)

* Technical after matriculation.
** College and above.
+ Number of cancer cases.

TABLE 4B: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, CHANDIGARH, 1982
FEMALE (%)

Educational Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lungs (162)	Breast (174)	Cervix (180)	All Sites (140-208)
Illiterate	75.9	67.4	73.2	63.6	75.0	70.7	58.2	81.9	70.8
Literate	9.3	6.5	2.8	18.2	15.0	4.2	7.5	6.2	6.5
Primary	1.8	6.5	5.6	—	—	4.2	6.0	4.6	5.9
Secondary	7.4	6.5	15.5	—	—	12.5	18.8	4.9	9.6
Technical*	—	—	1.4	—	—	—	0.5	0.6	0.7
College**	1.8	2.2	—	—	—	4.2	8.0	1.3	2.9
Not applicable	—	—	—	—	—	—	—	0.2	1.2
Not Known	3.7	10.9	1.4	18.2	10.0	4.2	1.0	0.3	2.3
Total (%)	99.9	100.0	99.9	100.0	100.0	100.0	100.0	100.0	99.9
	+(54)	(46)	(71)	(11)	(20)	(24)	(201)	(613)	(1438)

* Technical after matriculation.
** College and above.
+ Number of cancer cases.

TABLE 5A: TREATMENT MODALITIES GIVEN FOR CANCER AT SELECTED SITES, CHANDIGARH, 1982

MALES (%)

Treatment Given	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	All Sites (140-208)
Surgery	7.5	11.8	29.8	19.4	17.2
Radiation	58.7	33.3	26.3	3.2	20.2
Chemotherapy	1.3	–	1.8	16.1	10.0
Surgery + Radiation	7.5	9.8	7.0	3.2	9.1
Surgery + Chemotherapy	–	–	–	19.4	3.4
Radiation + Chemotherapy	5.0	9.8	3.5	–	8.9
S + R + C	–	–	–	–	2.3
Others	–	–	–	–	2.0
None	17.5	33.3	31.6	38.7	25.7
Not Known	2.5	2.0	–	–	1.1
Total (%)	100.0	100.0	100.0	100.0	99.9
*Information available (Number of cases)	(80)	(51)	(57)	(31)	(901)
Total Number of cases registered	116	67	80	39	1237

*Proportions are computed from this number of cases only.

TABLE 5B: TREATMENT MODALITIES GIVEN FOR CANCER AT SELECTED SITES, CHANDIGARH, 1982

FEMALE (%)

Treatment Given	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Breast (174)	Cervix (180)	All Sites (140-208)
Surgery	2.3	22.6	25.5	37.5	11.3	0.4	9.9
Radiation	53.5	25.8	20.0	–	5.0	72.6	39.4
Chemotherapy	–	3.2	3.6	12.5	4.4	0.2	5.0
Surgery + Radiation	9.3	3.2	5.5	–	5.7	0.2	4.8
Surgery + Chemotherapy	–	–	1.8	–	2.5	0.2	2.1
Radiation + Chemotherapy	4.6	3.2	3.6	–	12.6	0.2	5.0
S + R + C	2.3	–	–	–	11.9	–	2.4
Others	–	–	–	–	34.6	–	5.9
None	27.9	41.9	38.2	50.0	11.9	26.2	25.2
Not Known	–	–	1.8	–	–	–	0.3
Total (%)	99.9	99.9	100.0	100.0	99.9	100.0	100.0
*Information available (Number of cases)	(43)	(31)	(55)	(8)	(159)	(500)	(1120)
Total Number of cases Registered	54	46	71	11	201	613	1438

*Proportions are computed from this number of cases only.

TABLE 6: FREQUENCY OF SELECTED CANCER SITES, CHANDIGARH, 1982. (Level of the Fourth Digit)

ICD 9th	Site	Male No.	Male %	Female No.	Female %
141	**TONGUE**	**60**	**100.00**	**29**	**100.00**
of which	141.0	44	73.33	11	37.93
	141.1-141.4	14	23.33	16	55.17
	141 R	2	3.33	2	6.90
143	**GUM**	**10**	**100.00**	**3**	**100.0**
of which	143.0	2	20.00	0	—
	143.1	8	80.00	3	100.00
145	**MOUTH**	**25**	**100.00**	**15**	**100.00**
of which	145.0	18	72.00	15	100.00
	145.2-145.4	6	24.00	—	—
	145.9	1	4.00	—	—
146	**OROPHARYNX**	**25**	**100.00**	**5**	**100.00**
of which	146.0	20	80.00	1	20.00
	146.1	1	4.00	1	20.00
	146.3	3	12.00	—	—
	146.9	1	4.00	3	60.00
148	**HYPOPHARYNX**	**30**	**100.00**	**33**	**100.00**
of which	148.0	8	26.67	21	63.64
	148.1	11	36.67	5	15.15
	148.2	0	—	1	3.03
	148.8	2	6.67	1	3.03
	148 9	9	30.00	5	15.15
150	**OESOPHAGUS**	**80**	**100.00**	**71**	**100.00**
of which	150.3	10	12.50	7	9.86
	150.4	31	38.75	33	46.48
	150.5	26	32.50	23	32.39
	150.8	10	12.50	7	9.86
	150.9	3	3.75	1	1.41
153	**COLON**	**31**	**100.00**	**11**	**100.00**
of which	153.0	3	9.68	3	27.27
	153.1	2	6.45	2	18.18
	153.2	—	—	1	9.09
	153.3	6	19.35	1	9.09
	153.4	6	19.35	2	18.18
	153.6	9	29.03	1	9.09
	153.7	2	6.45	—	—
	153.9	3	9.68	1	9.09

TABLE 6 (*Continued*): FREQUENCY OF SELECTED CANCER SITES, CHANDIGARH, 1982. (Level of the Fourth Digit)

ICD 9th	Site	Male No.	Male %	Female No.	Female %
154	**RECTUM**	**42**	**100.00**	**22**	**100.00**
of which	154.0	6	14.28	2	9.09
	154.1	22	52.38	11	50.00
	154.2	7	16.67	5	22.73
	154.8	7	16.67	4	18.18
156	**GALL BLADDER ETC.**	**13**	**100.00**	**24**	**100.00**
of which	156.0	10	76.92	19	79.17
	156.1	—	—	4	16.67
	156.2	2	15.39	1	4.17
	156.9	1	7.69	—	—
161	**LARYNX**	**83**	**100.00**	**20**	**100.00**
of which	161.0	11	13.25	4	20.00
	161.1	42	50.60	10	50.00
	161.2	2	2.41	2	10.00
	161.3	1	1.20	—	—
	161.8	16	19.28	1	5.00
	161.9	11	13.25	3	15.00
173	**SKIN (EXCEPT MALANOMA)**	**42**	**100.00**	**18**	**100.00**
of which	173.1	9	21.43	3	16.67
	173.2	—	—	1	5.56
	173.3	11	26.19	10	55.56
	173.4	4	9.52	1	5.56
	173.5	6	14.28	1	5.56
	173.6	2	4.76	1	5.56
	173.7	9	21.43	1	5.56
	173.8	1	2.38	—	—
183	**OVARY ETC.**	**—**	**—**	**43**	**100.00**
of which	183.0	—	—	43	100.0
189	**KIDNEY ETC.**	**16**	**100.00**	**10**	**100.00**
of which	189.0	15	93.75	9	90.00
	189.1	1	6.25	1	10.00
194	**ENDOCRINE**	**3**	**100.00**	**5**	**100.00**
of which	194.0	1	33.33	1	20.00
	194.3	1	33.33	3	60.00
	194.4	1	33.33	1	20.00

TABLE 7: PERCENTAGE DISTRIBUTION OF CANCER CASES ACCORDING TO PRESENT OCCUPATION, CHANDIGARH, 1982.

Code	Occupation	Male		Female	
		No.	%	No.	%
1	Civil Engineer	1	0.08	–	–
9	Architects, Engineer—n.e.c., Surveyors	3	0.24	1	0.07
10	Chemists	1	0.08	–	–
21	Veterinarians	1	0.08	–	–
30	Physicians Allopathic & Surgeons	2	0.16	–	–
31	Physicians Ayurvedic	1	0.08	–	–
33	Physicians—Others	2	0.16	–	–
39	Dentists—n.e.c., Surgeons—nec.	2	0.16	–	–
40	Nurses	–	–	1	0.07
41	Health Visitors, Midwife	1	0.08	2	0.14
42	Nursing attendants and related workers	1	0.08	–	–
43	Pharmacists, Technicians	1	0.08	–	–
44	Vaccinators	–	–	1	0.07
49	Health Technicians—n.e.c., Medical Technicians—nec.	1	0.08	–	–
50	Teachers—University	2	0.16	–	–
51	Teachers—Secondary School	7	0.57	8	0.56
52	Teachers—Primary & Middle	1	0.08	6	0.42
53	Teachers—Nursery	1	0.08	–	–
59	Teachers—n.e.c.	1	0.08	–	–
61	Legal Advisers, Practitioners	2	0.16	–	–
71	Accountants, Auditors	9	0.73	–	–
76	Labour Welfare Workers	2	0.16	1	0.07
77	Anthropologists, Sociologists	–	–	1	0.07
80	Authors	–	–	1	0.07
83	Commercial Artists, Decorators	1	0.08	–	–
90	Draughtsman	1	0.08	–	–
94	Astrologers and related workers	1	0.08	–	–
97	Technical Assistant & related workers	3	0.24	–	–
100	Administrators, Central Govt.	2	0.16	–	–
101	Administrators, State Govt.	4	0.32	–	–
103	Administrators, Quasi Govt.	1	0.08	–	–
109	Administrators, n.e.c.	2	0.16	1	0.07
110	Directors—Wholesale Traders	4	0.32	–	–
120	Directors—Banks	1	0.08	–	–
133	Directors—Manufacturing	1	0.08	–	–
139	Directors n.e.c.	1	0.08	–	–
200	Book Keeper, Book Keeping Clerks	4	0.32	–	–
201	Cashier	5	0.40	–	–
280	Clerks	14	1.13	4	0.28
290	Peon and Daftaris	11	0.89	4	0.28
301	Retail Traders	70	5.7	–	–
311	Agents—Real Estate, Brokers real estate	2	0.16	–	–

TABLE 7: PERCENTAGE DISTRIBUTION OF CANCER CASES ACCORDING TO PRESENT OCCUPATION, CHANDIGARH, 1982.

Code	Occupation	Male		Female	
		No.	%	No.	%
313	Auctioners	3	0.24	–	–
330	Shop Assistant—Wholesale and Retail	11	0.89	1	0.07
331	Hawkers	12	0.97	–	–
339	Salesman & Related workers n.e.c.	4	0.32	1	0.07
400	Cultivators (Owners)	95	7.69	9	0.63
401	Cultivators (Tenants)	7	0.57	1	0.07
402	Farm Inspectors, Managers	1	0.08	–	–
404	Farmers	138	11.17	11	0.77
414	Agricultural Labourers	131	10.61	12	0.84
449	Forestry Workers, n.e.c.	2	0.16	–	–
555	Not Applicable (Children)	42	3.40	31	2.16
600	Deck Officers, Ships	1	0.08	–	–
630	Drivers—Railways	3	0.24	–	–
649	Drivers—Road Transport, Doli Bearer	15	1.21	–	–
660	Inspectors—Railways, Station Masters	2	0.16	–	–
670	Telephone Operators	1	0.08	1	0.07
691	Bus Conductors	2	0.16	–	–
693	Inspectors—Traffic Control	1	0.08	–	–
704	Drawers	–	–	1	0.07
710	Dress Makers, Garment Makers	8	0.65	2	0.14
720	Shoe Makers & Repairers	4	0.32	–	–
730	Furnaceman—Metal, Metal Making & Related Workers	1	0.08	–	–
739	Furnaceman, n.e.c.	–	–	1	0.07
740	Precision Instrument Maker	1	0.08	–	–
741	Goldsmith, Jewellers & Silversmith	4	0.32	–	–
750	Fitters—Mechanists	4	0.32	1	0.07
751	Machine Tool Operators	1	0.08	–	–
753	Mechanic—Repairmen except electrical	15	1.21	–	–
756	Flame Cutters	2	0.16	–	–
760	Electricians, Repairman & Related Workers	5	0.40	–	–
764	Cable Jointers, Lineman	2	0.16	–	–
770	Carpenters (Wood), Joiners (Wood)	6	0.49	–	–
777	Priest, Pujari and Granthi	13	1.05	2	0.14
780	Paper Hangers	2	0.16	–	–
790	Stone cutters, Stone covers & Dressers	1	0.08	–	–
791	Brick layers & Mason	4	0.32	2	0.14
799	Brick layers n.e.c.	6	0.49	1	0.07
809	Book Binders & Related workers	1	0.08	1	0.07
822	Dairy Workers (Non-Farm)	4	0.32	–	–
824	Bakers, Candy Makers, Sweatmeat Makers	3	0.24	1	0.07
826	Food Canners and Related workers	1	0.08	–	–
828	Coffee Blenders and Related workers	3	0.24	–	–

TABLE 7 *(Continued)*: PERCENTAGE DISTRIBUTION OF CANCER CASES ACCORDING TO PRESENT OCCUPATION, CHANDIGARH, 1982.

Code	Occupation	Male		Female	
		No.	%	No.	%
829	Bakers & Related workers	1	0.08	—	—
830	Batch and continuous still operators	1	0.08	—	—
843	Snuff Makers, Tanners and Related workers	1	0.08	—	—
849	Tobacco preparers and product makers n.e.c.	1	0.08	—	—
860	Checkers	1	0.08	—	—
872	Crane Operators	1	0.08	—	—
890	Loaders	1	0.08	—	—
899	Labourers n.e.c.	181	14.65	33	2.30
901	Police Constables & Related workers	5	0.40	—	—
903	Chowkidars	6	0.49	—	—
909	Fire Fighters & Related workers, Guards & Policemen	5	0.40	—	—
911	Cooks and Cook Bearers	1	0.08	—	—
912	Bearers (Domestic), Domestic Servant and Maids	3	0.24	3	0.21
913	Ayas and Nurse Maids	—	—	1	0.07
919	Cooks and Related workers n.e.c., House Keepers	4	0.32	—	—
920	Bartenders & Related workers	1	0.08	—	—
931	Sweepers & Cleaners	6	0.49	3	0.21
940	Barbers and Related workers Beauticians & Hair dress	6	0.49	1	0.07
951	Dry Cleaners & Pressers	1	0.08	—	—
980	Workers without occupation	47	3.80	7	0.49
981	Workers without occupation Matriculation and above	—	—	1	0.07
982	Workers without occupation—literate	44	3.56	3	0.21
983	Workers without occupation—others	6	0.49	1	0.07
986	Students	63	5.10	28	1.95
987	Housewife	7	0.57	1213	84.64
999	Service, Sports Workers, n.e.c. and Recreation workers	51	4.13	6	0.42
—	Not Known	59	4.78	23	1.60
	Total	1235	100.00	1433	100.00

NOTE: 119 Males and 18 Females have changed their previous occupation.

TABLE 8: DISTRIBUTION OF CANCER CASES ACCORDING TO THE BROAD SITE GROUPS TOTAL CASES REGISTERED 2780, CHANDIGARH, 1982.

ICD 9TH	Broad Site Groups	Males		Females		Total	
		No.	%	No.	%	No.	%
140-195	Malignant neoplasms, stated or presumed to be primary, of specified sites, except of lymphatic and haematopoietic tissue.	1004	77.9	1348	90.4	2352	84.6
196-198	Malignant neoplasms, stated or presumed to be secondary, of specified sites.	42	3.3	24	1.6	66	2.4
199	Malignant neoplasm without specification on site	4	0.3	3	0.2	7	0.2
200-208	Malignant neoplasms, stated or presumed to be primary, of lymphatic and haematopoietic tissue	187	14.5	63	4.2	250	9.0
	Sub-Total: 140-208	1237	96.0	1438	96.4	2675	96.2
210-229	Benign neoplasms	38	2.9	34	2.3	72	2.6
230-234	Carcinoma-in-situ	—	—	4	0.3	4	0.1
235-238	Neoplasms of uncertain behaviour	13	1.00	15	1.0	28	1.0
239	Neoplasms of unspecified nature	1	0.1	—	—	1	0.0
	Sub-Total: 210-239	52	4.0	53	3.6	105	3.7
	Total (% of Grand Total)	1289 (46.4)	100.0	1491 (53.6)	100.0	2780	100.0

APPENDIX 6

HOSPITAL BASED CANCER REGISTRY AT ASSAM MEDICAL COLLEGE, DIBRUGARH, ASSAM

DR. N. ZAMAN, Project Chief
DR. L. P. DUTTA, Co-Investigator
MR. M. S. ALI, Biostatistician

ANNUAL REPORT

(FROM JANUARY 1, 1982 TO DECEMBER 31, 1982)

1. INTRODUCTION

The hospital based cancer registry has been functioning since 1st February, 1982. The Assam Medical College Hospital, having a strength of 1050 beds, is the only cancer therapy centre in the entire North-East Region comprising the states—Assam, Meghalaya, Nagaland, Manipur, Tripura and Union Territories—Mizoram and Arunachal Pradesh, and has adequate facilities for better treatment and diagnosis.

The cancer registry is located near the medical record office of the hospital within the hospital complex. The registry has all facilities including safe storage of records. Effort is being undertaken to bring the registry in all respects to the level recommended by the ICMR Task Force. The actual data collection activities of the registry began from 16th of February, 1982, the first fortnight has, in fact, been used up in developing and organising the working pattern and in printing the various proformas and schedules.

The geographical and demographic picture of the region is worth mentioning in order to support the justifiability of locating a cancer registry centre in this region for epidemiological studies.

Dibrugarh is located between lattitude 29° and 22° N and longitude 89° 46' and 97° 5' E and literally boxed by China, Burma and Bangladesh. The region is situated in a corner of the Indian Union with natural frontiers on three sides. Her northern frontier from Sonkosh river on the west to the entrance point of the mighty Brahmaputra into Assam in the east is guarded by the Assam Himalayas. The Macmohon Line separates North-East India from Tibet. She is bounded by Bhutan in the west, Tibet and China in the north and east, Burma in the south-east and Bangladesh in the south.

Around 23 million people, drawn from diverse stocks, speaking hundreds of different dialects and living at varied stages of development inhabit the region covering about 25 million square kms. of uneven surface. The geography, history and traditions often transcend the political boundaries of the states and the union territories of the region and bring the whole region into a single conception.

Significantly, not even one of the region's seven political units is bounded by a common language of the original fold. Arunachal, for instance, speaks in no less than 50 different dialects. The Ao Nagas cannot follow the language of their next-door neighbour, the Angami Nagas. The people of the region are mostly of mongoloid origin having close ethnic and cultural connections with their cousins in China, Tibet and Burma. Barring the Khasis and the Jaintias of Meghalaya, almost all the hill tribes belong to the Tibeto-Chinese linguistic fold and more often to its Tibeto-Burmese sub-family.

The Assam Valley or the Brahmaputra Valley (25°-27°N and 89°-96°E) is a well demarcated physical unit within North-East covering an area of about 58,274 square kms. with about 720 kms. in length and 80 kms. in breadth. According to 1971 census, its population is 149,52,108 with density 15 per square kms. and 29 percent literacy. The valley includes the administrative districts of Dibrugarh, Lakhimpur, Sibsagar, Nowgong, Darrang, Kamrup, Goalpara, Cachar, Karbi Anglong and Mikir Hills.

The Assam Medical College Hospital is the only cancer therapy centre in the region with all facilities of valid basis of diagnosis and effective treatment. The Department of Pathology has facilities for histological and cytological diagnosis and the Radiology Department is well equipped with modern diagnostic and therapeutic (having only functioning Cobalt 60 source) facilities. The Pathology Department receives specimens of biopsy material from different district, industrial, missionary, and railway hospitals and Nursing Homes in addition to its own outpatients and in-patients load of various wards.

The risk of certain types of cancer in this region is very high and is significantly different from the rest of India. Factors responsible for the high proportion of oral, pharyngeal, hypopharyngeal and oesophageal cancers in Assam is not known. However, an analytical study of the traditions, mode of life, habits, customs, diets and usages which vary considerably from the rest of the country perhaps could throw significant and invaluable light on the aetiology of cancer.

2. TRAINING PROGRAMME

Senior Research Officer (Medical) and Medical Record Officer attended the training course organised jointly by the Bombay Cancer Registry and Tata Memorial Hospital, Bombay in December, 1981 and followed by the IARC/TMC course in cancer epidemiology in January, 1982. Biostatistician and Senior Research Fellow were later sent for training to Bombay on special arrangement with Bombay Cancer Registry and Tata Memorial Centre. There they had gone in depth from cancer diagnosis through therapy to data collection, compilation and record keeping. They had long and fruitful discussions on working pattern of the registry operations with the senior staff of the Bombay Registry. They also visited the ICMR Head Quarter at New Delhi on the way back, where they were apprised of the principle, purpose and the activities of the cancer registry programme.

A number of classes on human anatomy, cancer diagnosis and treatment and on the purpose and activities of the cancer registry programmes had been locally conducted to impart the junior staff of the registry a thorough idea of what and how to go about the registry operations.

3. WORKING OF THE REGISTRY

The data on cancer patients seen at the hospital are collected from three sources—the Oncology O.P.D., the in-patient wards and from the Radiology Department. The Oncology O.P.D. is being established around the same time the registry started functioning with a view to catch hold of all the cancer cases coming for care and at the same time to detect any duplication. The Senior Research Fellow of the registry attends the Oncology OPD during the out-door time in the morning. A clerk assists him in recording the information. After recording the preliminary information (mostly non-clinical) of the patient, an identity slip of the registry is attached to the patient's out-door card to help trace the patient subsequently and to prevent duplication. The OPD of all faculties have been formally advised to refer all the patients clinically suspected or provisionally diagnosed as having malignancy to the Oncology O.P.D.

Irradiation at the Radiology Department starts from 7 a.m. and continues for 12 hours till 7 p.m. The period has been divided into three 4 hourly shifts, each being taken care of by one of the registry staff according to the rotating time-table schedule. In addition to this, the social investigators or the clerks have to take care of the respective assigned wards from 2 p.m. everyday and maintain a list of patients interviewed.

The social investigators and the clerks collect the required data and complete the forms as far as practicable and present them to the Medical Officer, who in turn scrutinizes every proforma and checks for consistency, correctness and completeness. These are then handed over to the Biostatistician, who re-checks for quality control and codes the information. Advice is being sought from the Medical Officer in case of any difficult and controvercial coding. The proformas are finally passed on to the Record Officer, who with the assistance of the clerks prepare the indexes and file the records in their proper places. The incomplete proformas are returned to the social investigators concerned for completion.

The registry maintains alphabetical name index, site and histology index where all relevant and available informations are entered. To ensure complete coverage, OPD files and in-patient files maintained by the Medical Record Department of the hospital are regularly screened. The cancer cases already recorded in our registry are again checked with the records of the Pathology Department and identified for procuring and preserving the histopathological slides in the registry's separately maintained slide cabinet. The slides from the other private laboratories and private pathologists are fortnightly collected, indexed and kept for future review. The registry supplies the slide box and cover slips to the private laboratories and private pathologists for their full co-operation. This is being done to ensure total collection of histopathological slides which, otherwise, may not be available.

4. GENERAL OBSERVATIONS

The number of cancer cases interviewed, recorded and being followed through their stay time or treatment period at the hospital during the period from 16th February, 1982 to 31st December, 1982 is 1250, of which 74% accounted for male and 26% female. The ratio is very high compared to the sex-ratio pattern of general regional population. Lack of proper health education programme and detection centre at the rural level and the prevalent social prejudices particularly among females in the rural community are perhaps some of the factors responsible for this unusual disparity in sex-ratio. Of all the patients, 84% are Hindus, 11.5% Muslims and 4.5% belong to other religions (Christian, Buddhist, Sikh) which again differ from general population ratio by religion. 63% of patients speak Assamese, 15% Bengali, 6% Hindi and the 17% speak other languages (Oriya, Nepali and different dialects of Hill Tribes etc.).

In all the language groups the sex-ratio for males is very high (3:1), with the exception of latter two groups with sex-ratio (2:1) in favour of males. The sister Hill States and the Union Territories of the North-East Region constitute 7% of all recorded patients and are mostly affected by carcinoma of nasopharynx and cervix uteri.

The occurrence of cancer varies considerably with age. The most common findings throughout the world that cancer is a very rare event in childhood and adolescence, rare in young adults, and it frequency increases almost exponentially with age coincide with the findings of our registry. It is observed in our data that 4% of total number of cases registered are under 20 years of age. 77% of patients fall within the age-group 35-64 and remaining 19% of the patient are 65 years and above.

The percentage of patients microscopically confirmed as having malignancy is 86%. It is found that microscopic confirmation is available with greater consistency and frequency for those lesions in the buccal cavity, pharynx and the female genital tract, than for growths at inaccessible sites, such as the digestive and respiratory systems. A small percentage (2.5%) of patients are being diagnosed on the basis of gross examination at operation. The percentage of patients with radiological confirmation of diagnosis is found to be 7% and this number is higher for digestive and respiratory systems. About 4% of all cancer cases are diagnosed on clinical grounds are found in the site-groups inaccessible for immediate biopsy or because the patient refuses to undergo special investigations. It is observed that the majority of patients diagnosed purely on clinical grounds, are those who sought help in the advanced stage of the disease, where biopsy was unfortunately not even considered essential by the attending physician.

Among the common sites of cancer, the oesophagus and hypopharynx appear to be the organs most vulnerable to cancer accounting for 16.4% and 19% respectively of all male cancer cases followed by oropharynx (tonsil—11.3% and tongue 8.3%). Among females cancer of the cervix (20.5%) is the leading site of cancer. Male preponderance is noticed in the four sites viz. oesophagus, hypopharynx, orogharynx (tonsil) and tongue.

Pan chewing in association with smoking seems to be strongly associated in oesophageal cancer in the two sexes. When the regional distribution of cancer over the whole length of the oesophagus was analysed, upper two-thirds of the thoracic oesophagus has found to be responsible for 73% of all oesophageal cancers, indicates the strong association of smoking and pan chewing. The ratio of the incidence of stomach to oesophageal cancer in the digestive organs favours the former site in most countries, but in this region it is just reverse with only 4% in stomach cancer.

Oral cavity and pharyngeal region excluding lip (ICD-141:149) are the commonest site-groups involved by cancer accounted for 43% of total cancer cases. The higher incidence in these site-group is probably associated with the habit of chewing the betel quid with tobacco and lime and retaining the cud in the buccal sulcus for long hours.

The high incidence of cervical cancer, which is more prominent among the Hindu and Tribal females, as compared to that of the breast is probably due to the social status of the population. Cancer of the cervix is predominantly a disease of married women, and it occurs in those who marry at an early age, bear a large number of children and have poor sexual hygiene and this strata of women comes from poorer socio-economic group.

The ratio of larynx to lung cancer is greater in favour of the former, which is again a reverse picture experienced elsewhere. Skin cancer is more prominent in males than in females, whereas gallbladder depicts an opposite prominence. Nasopharynx which accounts for 2.5% of all cancer cases is particularly a disease among Nagas and Manipuries. About 5% of patients come with secondary neck gland involvement which is perhaps suggestive of inadequate health education in rural community.

5. DIFFERENT COMMITTEES

A Tumour Board was constituted with Principal N. Zaman as the Chairman, all the Heads of the Department as members and Prof. & Head, Department of Pathology as the member secretary.

The first meeting of the Board was organised on 3-2-82, attended by all Professor, Associate Professor and Assistant Professor of all the departments. Prof. B. D. Barua, the then Project Chief of the registry, explained the purpose of the Tumour Registry.

The subsequent meetings of the Tumour Board were held on 19th July, 1982 and on 2nd December, 1982 to review the progress of the work.

A local Panel of Pathologist was formed on 17-7-82 with Dr. L. P. Dutta, Ph.D., Professor of Pathology as the Chairman and Dr. K. C. Barua, M.D., Associate Professor, Dr. B. C. Gogoi, M.D., Assistant Professor of Pathology, Dr. (Mrs.) A. Dutta, M.D., Assistant Professor of Pathology as members and Dr. T. C. Mohan, M.D. as member secretary.

Meeting takes place on last Friday of every month when difficult slides/problems regarding the pathology part of the Tumour Registry is discussed.

6. STAFF OF THE REGISTRY

Dr. N. Zaman, F.R.C.S., Principal, Assam Medical College, Dibrugarh has replaced Dr. B. D. Barua, who retired on 28-2-1982, as the Project Chief of the Hospital Tumour Registry with retrospective effect from the 1st March, 1982. The project since then functioning smoothly under the able leadership of Dr. Zaman, Dr. L. P. Dutta, Ph.D. (Sheffield), Prof. and Head of the Deptt. of Pathology, AMC, who is also an active member of the panel of pathologists, NCRP, is being nominated to act as Co-Investigator/Project Coordinator of the project.

Barring three senior posts, all the sanctioned posts were filled up in January, 1982. Dr. M. S. Ali and Dr. S. K. Debnath were appointed as Biostatistician and Senior Research Fellow respectively in February, 1982. Dr. T. C. Mohon, M.D., a demonstrator in the Department of Pathology, who has been provisionally selected for the post of Senior Research Officer (Medical), is still awaiting Government release order to this effect. However, he is being relieved by the authority concerned from his scheduled duties in his parent department for enabling him to look after the activities of the registry. He is looking into the histological aspects of the registry as precisely as would have been taken care of by a full-time medical officer.

ANNEXURE I

Existing Cancer Registry Staff (As on 1-1-1983)

	POST	NAME	QUALIFICATION	DATE OF JOINING
1.	Biostatistician	Dr. M. S. Ali	M.Sc. (Gold Medalist) Ph.D. (U.K.)	1-2-82
2.	Senior Research Officer (Medical)	—	Post vacant	
3.	Senior Research Fellow	Dr. S. K. Debnath	M.B.B.S.	5-2-82
4.	Medical Record Officer	Mr. B. Bhattacharya	B.A. (vastly experienced)	8-12-81
5.	Social Investigator	Mr. M. C. Bora	M.A. (Sociology)	Jan '82
6.	-do-	Miss S. Ahmed	M.Sc. (Anthropology)	Jan '82
7.	Clerk	Mr. N. Rajkhowa (left the job for better prospect)	B.A. (Hons.)	Jan '82
8.	Clerk	Mr. P. Hazarika	B.Com.	Jan '82
9.	Clerk	Mr. B. Kagyung	P.D.C.	Jan '82
10.	Clerk	Mr. K. Saikia	P.D.C.	Jan '82
11.	Clerk	Mr. D. Phukan (replaced Mr. Rajkhowa)	P.D.C.	1-10-82
12.	Typist	Miss R. Begum (replaced Mr. Phukan)	P.D.C. Hindi Kobid	6-10-82
13.	Coding Clerk	Mr. S. Nath	P.D.C.	6-10-82

TABLE 1A: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES
CENTRE: DIBRUGARH (ASSAM)

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	0	0	1	2	1	2	2	1	0	0	0	9	0.98	1.15
141	TONGUE	0	0	0	0	1	2	3	6	7	11	9	17	14	3	2	1	0	0	76	8.23	7.30
142	SALIVARY GLAND	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	4	0.43	0.43
143	GUM	0	0	0	0	0	0	0	0	0	1	1	1	1	2	1	0	0	0	7	0.76	1.01
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	3	0.33	0.19
145	OTHER MOUTH	0	0	0	0	0	1	3	1	5	9	3	5	2	4	3	1	0	0	37	4.01	4.60
146	OROPHARYNX	0	0	0	0	0	1	3	8	18	20	21	16	9	5	2	1	0	0	104	11.27	8.78
147	NASOPHARYNX	0	0	0	2	1	1	7	4	4	1	1	2	1	1	0	0	0	0	25	2.71	2.29
148	HYPOPHARYNX	0	0	0	0	2	1	6	15	24	38	24	17	22	16	5	1	4	0	175	18.96	19.87
149	PHARYNX ETC.	0	0	0	0	0	0	2	0	2	6	7	3	2	2	1	0	1	0	26	2.82	3.10
150	OESOPHAGUS	0	0	0	0	0	1	1	8	13	33	34	32	16	7	5	0	1	0	151	16.36	12.87
151	STOMACH	0	0	0	0	0	1	4	3	3	7	6	5	5	4	3	1	0	0	42	4.55	4.99
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.11	0.05
153	COLON	0	0	0	0	0	2	0	1	0	0	1	1	1	1	0	0	0	0	7	0.76	0.69
154	RECTUM	0	0	0	0	1	0	1	0	2	1	2	0	0	1	0	0	0	0	8	0.87	0.78
155	LIVER	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	3	0.33	0.58
156	GALL BLADDER	0	0	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	0	4	0.43	0.25
157	PANCREAS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
158	RETROPERITONEUM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	0.22	0.11
159	OTHER DIGST.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	4	0.43	0.43
161	LARYNX	0	0	0	0	0	3	0	6	6	9	4	7	4	2	2	0	0	0	43	4.66	3.53
162	LUNG	0	0	0	0	0	0	0	1	3	2	5	7	3	5	2	0	0	0	28	3.03	3.18
163	PLEURA	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	0.33	0.34
164	THYMUS ETC.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.11	0.05
165	OTHER RESP. ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	1	0	0	0	0	1	0	0	0	5	0	0	0	0	1	0	0	0	8	0.87	0.89
171	CONNECTIVE TISS	0	0	1	0	2	2	0	1	0	1	2	0	0	1	1	0	0	0	11	1.19	1.56
172	SKIN MELANOMA	0	0	0	0	0	1	0	1	0	2	1	0	0	0	0	0	0	0	5	0.54	0.29

TABLE 1A: (*Continued*) NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES
CENTRE: DIBRUGARH (ASSAM)

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
173	SKIN OTHER	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	4	0.43	0.48
175	MALE BREAST	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	0	0	0	4	0.43	0.43
185	PROSTATE	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	0	4	0.43	1.39
186	TESTIS	0	0	0	0	1	0	2	1	0	0	0	2	0	0	0	0	0	0	6	0.65	0.59
187	PENIS ETC.	0	0	0	0	0	1	0	0	0	0	0	1	1	3	0	0	1	0	7	0.76	1.99
188	URI. BLADDER	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	4	0.43	0.31
189	KIDNEY ETC.	1	0	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	5	0.54	0.57
190	EYE	3	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	5	0.54	1.08
191	BRAIN	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.11	0.05
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
193	THYROID GLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
194	ENDO. GLANDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
195	ILL DEF. SITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
196	SEC. LYMPH NODE	0	0	0	0	0	2	0	7	9	6	6	10	4	5	3	1	1	0	54	5.85	6.88
197	SEC. RESP. ETC.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.11	0.09
198	SEC. OTHER SITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
199	PRIM. UNK.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
200	LYMPHOSARCOMA	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	3	0.33	0.33
201	HODGKINS DIS.	2	2	2	2	3	1	3	1	2	0	0	1	0	0	0	0	0	0	19	2.06	3.42
202	OTHER LYMPH. TIS	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0.33	0.56
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
204	LEUK. LYMPHATIC	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0.43	0.90
205	LEUK. MYELOID	0	1	0	1	4	0	2	2	0	2	0	0	0	0	0	0	0	0	12	1.30	1.65
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
207	LEUK. SPEC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208	LEUK. UNSP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
	TOTALS	7	4	5	7	19	25	37	73	100	161	141	136	91	67	35	7	8	0	923	100.00	100.00

TABLE 1B: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES
CENTRE: DIBRUGARH (ASSAM)

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0.61	0.25
141	TONGUE	0	0	0	0	0	1	2	2	6	0	7	1	4	0	1	0	0	0	24	7.34	5.50
142	SALIVARY GLAND	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0.61	0.42
143	GUM	0	0	1	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	7	2.14	9.70
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.31	0.14
145	OTHER MOUTH	0	0	0	0	0	1	0	0	1	2	2	1	3	1	0	0	0	0	11	3.36	3.61
146	OROPHARYNX	0	0	0	0	0	0	1	1	3	4	3	3	3	2	0	0	0	0	20	6.12	6.54
147	NASOPHARYNX	0	0	0	1	0	0	0	1	2	1	0	1	0	0	0	0	0	0	6	1.83	1.21
148	HYPOPHARYNX	0	0	0	0	0	0	0	0	4	2	1	0	0	2	5	0	0	0	9	2.75	4.00
149	PHARYNX ETC.	0	0	0	0	0	0	1	0	2	0	2	1	0	0	0	0	0	0	6	1.83	0.99
150	OESOPHAGUS	0	0	0	0	0	0	0	3	5	9	10	5	8	0	0	1	0	0	41	12.54	12.45
151	STOMACH	0	0	0	0	1	0	0	0	1	4	1	1	0	0	0	0	0	0	8	2.45	1.51
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
153	COLON	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0.61	0.55
154	RECTUM	0	0	0	0	1	0	0	0	2	2	0	0	0	1	0	0	0	0	6	1.83	2.48
155	LIVER	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.31	0.14
156	GALL BLADDER	0	0	0	0	0	0	1	0	1	0	3	1	0	0	0	0	0	0	6	1.83	1.00
157	PANCREAS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0.31	0.30
158	RETROPERITONEUM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0.61	0.31
159	OTHER DIGST.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0.31	0.12
161	LARYNX	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3	0.92	0.74
162	LUNG	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	0.92	0.85
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
164	THYMUS ETC.	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	3	0.92	0.56
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	1	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	5	1.53	1.34
171	CONNECTIVE TISS	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0.92	0.71
172	SKIN MELANOMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
173	SKIN OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
174	FEM. BREAST	0	0	0	0	0	1	3	3	7	6	1	3	2	2	0	0	0	0	28	8.56	7.48

TABLE 1B: (*Continued*) NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES
CENTRE: DIBRUGARH (ASSAM)

ICD 9TH	SITE	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	ANS	TOTAL	%	ASCAR
179	UTERUS UNS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
180	CERVIX	0	0	0	0	1	2	3	11	12	18	5	6	6	1	2	0	0	0	67	20.49	15.45
181	PLACENTA	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.31	0.18
182	UTERUS SPEC.	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3	0.92	0.39
183	OVARY	0	0	0	2	0	1	4	4	0	1	1	2	0	0	1	0	0	0	16	4.89	4.64
184	VAGINA ETC.	0	0	0	0	0	0	0	0	0	2	1	1	0	1	0	0	1	0	6	1.83	7.27
188	URI. BLADDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
189	KIDNEY ETC.	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	3	0.92	1.31
190	EYE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
191	BRAIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
192	NERVOUS SYS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
193	THYROID GLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
194	ENDO. GLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
195	ILL DEF. SITES	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.31	0.14
196	SEC LYMPH. NODE	0	0	0	0	0	0	0	1	1	2	3	2	1	0	0	0	0	0	10	3.06	1.82
197	SEC. RESP. SITES	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	5	1.53	0.99
198	SEC. OTHER SITES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
199	PRIM. UNK.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
200	LYMPHOSARCOMA	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0.61	0.53
201	HODGKINS DIS.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.31	0.14
202	OTHER LYMPH. TIS	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0.61	0.53
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
204	LEUK. LYMPHATIC	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.61	1.67
205	LEUK. MYELOID	0	0	1	1	0	1	2	0	1	1	0	0	0	0	0	0	0	0	7	2.14	2.04
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
207	LEUK. SPEC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208	LEUK. UNS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
	TOTALS	4	0	2	6	6	10	18	32	53	65	46	37	29	11	5	2	1	0	327	100.00	100.00

TABLE 2: PROPORTION OF CANCER CASES DIAGNOSED BY SELECTED MEANS, DIBRUGARH, ASSAM, 1982

ICD 9TH	SITE	CLINICAL		X-RAY		OTHERS		MICROSCOPIC		TOTAL	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
140	LIP VERMILION	11.1	–	–	–	–	–	88.9	100.0	9	2
141	TONGUE	3.9	4.2	–	–	–	–	96.1	95.8	76	24
142	SALIVARY GLAND	–	–	–	–	–	–	100.0	100.0	4	2
143	GUM	–	–	–	–	–	–	100.0	100.0	7	7
144	FLOOR OF MOUTH	–	–	–	–	–	–	100.0	100.0	3	1
145	OTHER MOUTH	2.7	–	–	–	–	–	97.3	100.0	37	11
146	OROPHARYNX	1.0	–	–	–	–	–	99.0	100.0	104	20
147	NASOPHARYNX	–	–	–	–	–	–	100.0	100.0	25	6
148	HYPOPHARYNX	2.3	–	–	–	–	–	97.7	100.0	175	9
149	PHARYNX ETC.	3.8	–	–	–	–	–	96.2	100.0	26	6
150	OESOPHAGUS	0.7	–	25.2	26.8	–	–	74.1	73.2	151	41
151	STOMACH	4.8	–	19.0	37.5	26.2	37.5	50.0	25.0	42	8
152	SMALL INTESTINE	–	–	–	–	–	–	–	–	–	–
153	COLON	14.3	100.0	14.3	–	28.6	–	42.9	–	7	2
154	RECTUM	–	–	12.5	–	37.5	16.7	50.0	83.3	8	6
155	LIVER	–	–	–	–	–	–	100.0	100.0	3	1
156	GALL BLADDER	–	–	–	–	25.0	–	75.0	100.0	4	6
158	RETROPERITONEUM	–	–	–	–	50.0	50.0	50.0	50.0	2	2
160	NOSE	–	–	–	–	–	–	100.0	100.0	4	1
161	LARYNX	–	–	–	–	–	–	100.0	100.0	43	3
162	LUNGS	–	–	57.1	66.7	–	–	42.9	33.3	28	3
164	THYMUS ETC.	–	–	100.0	–	–	–	–	100.0	1	3
170	BONES	–	–	25.0	–	–	20.0	75.0	80.0	8	5
171	CONNECTIVE TISSUE	9.1	–	9.1	–	–	–	81.8	100.0	11	3
172	SKIN MELANOMA	20.0	–	–	–	–	–	80.0	–	5	–
173	SKIN OTHER	–	–	–	–	–	–	100.0	–	4	–
174	FEMALE BREAST	–	7.1	–	–	–	–	–	92.9	–	28
175	MALE BREAST	–	–	25.0	–	25.0	–	50.0	–	4	–
180	CERVIX	–	14.9	–	–	–	–	–	85.1	–	67
183	OVARY	–	25.0	–	–	–	12.5	–	62.5	–	16
184	VAGINA ETC.	–	–	–	–	–	16.7	–	83.3	–	6
185	PROSTATE	–	–	–	–	50.0	–	50.0	–	4	–
186	TESTIS	–	–	–	–	16.7	–	83.3	–	6	–
187	PENIS ETC.	14.3	–	–	–	14.3	–	71.4	–	7	–
188	URI. BLADDER	–	–	–	–	–	–	100.0	–	4	–
189	KIDNEY ETC.	20.0	33.3	–	–	–	–	80.0	66.7	5	3
190	EYE	40.0	–	–	–	–	–	60.0	–	5	–
196	SEC. LYMPH. NODES	5.6	–	–	–	–	–	94.4	100.0	54	10
197	SEC. RESP. ETC.	100.0	40.0	–	–	–	–	–	60.0	1	5
200	LYMPHOSARCOMA	33.3	–	–	–	–	–	66.7	100.0	3	2
201	HODGKIN'S DIS.	10.5	–	–	–	–	–	89.5	100.0	19	1
202	OTHER LYMPH. TISSUE	–	–	–	–	–	–	100.0	100.0	3	2
204	LEUK. LYMPHATIC	–	–	–	–	–	–	100.0	100.0	4	2
205	LEUK. MYELOID	–	–	–	–	–	–	100.0	100.0	12	7
	OTHERS	–	16.7	20.0	16.7	20.0	–	60.0	66.6	5	6
	ALL SITES: NO. OF CASES	28	23	70	17	24	9	801	278	923	327
	%	3.0	7.0	7.6	5.2	2.6	2.8	86.8	85.0	100.0	100.0

TABLE 3: PROPORTION OF CANCER CASES PROFESSING A SPECIFIC RELIGION BY SITE & SEX, DIBRUGARH, ASSAM, 1982.

ICD 9TH	SITE	HINDU (%)		MUSLIM (%)		CHRISTIAN (%)		OTHERS (%)		TOTAL (%)	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
140	LIP	1.0	0.7	–	–	–	–	20.0	–	9	2
141	TONGUE	8.0	7.5	13.0	3.3	–	7.1	–	33.3	76	24
142	SALIVARY GLAND	0.4	0.7	0.9	–	–	–	–	–	4	2
143	GUM	0.8	2.5	–	–	3.1	–	–	–	7	7
144	FLOOR OF MOUTH	0.3	0.4	–	–	3.1	–	–	–	3	1
145	OTHER MOUTH	4.0	3.6	4.6	3.3	3.1	–	–	–	37	11
146	OROPHARYNX	11.6	7.1	11.1	–	3.1	–	20.0	–	104	20
147	NASOPHARYNX	1.5	1.1	–	–	37.5	21.4	20.0	–	25	6
148	HYPOPHARYNX	18.5	3.2	25.9	–	6.2	–	20.0	–	175	9
149	PHARYNX ETC.	2.7	1.8	4.6	3.3	–	–	–	–	26	6
150	OESOPHAGUS	17.2	12.1	13.9	23.3	3.1	–	20.0	–	151	41
151	STOMACH	2.7	2.9	6.5	–	18.7	–	–	–	42	8
153	COLON	0.8	–	0.9	–	–	14.3	–	–	7	2
154	RECTUM	0.9	1.8	0.9	3.3	–	–	–	–	8	6
155	LIVER	0.4	0.4	–	–	–	–	–	–	3	1
156	GALL BLADDER	0.4	1.8	0.9	3.3	–	–	–	–	4	6
158	RETROPERITONEUM	0.3	0.7	–	–	–	–	–	–	2	2
160	NOSE	0.5	0.4	–	–	–	–	–	–	4	1
161	LARYNX	5.1	0.7	2.8	3.3	–	–	–	–	43	3
162	LUNGS	3.5	1.1	–	–	3.1	–	–	–	28	3
164	THYMUS ETC.	–	1.1	0.9	–	–	–	–	–	1	3
170	BONES	0.6	1.4	1.8	3.3	3.1	–	–	–	8	5
171	CONNECTIVE TISSUE	1.2	1.1	1.8	–	–	–	–	–	11	3
172	SKIN MELANOMA	0.5	–	0.9	–	–	–	–	–	5	–
173	SKIN OTHER	0.5	–	–	–	–	–	–	–	4	–
174	FEMALE BREAST	–	8.9	–	–	–	14.3	–	33.3	–	28
180	CERVIX	–	20.7	–	16.7	–	21.4	–	33.3	–	67
183	OVARY	–	5.0	–	3.3	–	7.1	–	–	–	16
184	VAGINA ETC.	–	1.4	–	6.7	–	–	–	–	–	6
185	PROSTATE	0.4	–	0.9	–	–	–	–	–	4	–
186	TESTIS	0.8	–	–	–	–	–	–	–	6	–
187	PENIS ETC.	0.9	–	–	–	–	–	–	–	7	–
188	URI. BLADDER	0.4	–	–	–	3.1	–	–	–	4	–
189	KIDNEY ETC.	0.5	0.7	0.9	3.3	–	–	–	–	5	3
190	EYE	0.5	0.4	–	–	–	–	–	–	4	1
196	SEC.LYMPH NODES	6.0	3.2	5.5	–	3.1	7.1	–	–	54	10
197	SEC. RESP. ETC.	0.1	1.1	–	6.7	–	–	–	–	1	5
200	LYMPHOSARCOMA	0.4	0.7	–	–	–	–	–	–	3	2
201	HODGKIN'S DIS.	2.4	–	–	3.3	–	–	–	–	19	1
202	OTHER LYMPH DIS.	0.4	0.7	–	–	–	–	–	–	3	2
204	LEUK. LYMPHATIC	0.4	–	–	6.7	3.1	–	–	–	4	2
205	LEUK. MYELOID	1.4	2.1	–	3.3	3.1	–	–	–	12	7
	OTHERS	0.4	1.4	0.9	3.3	3.1	7.1	–	–	5	6
	ALL SITES (NO. OF CASES)	778	200	108	30	32	14	5	3	923	327
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 4A: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, DIBRUGARH, ASSAM, 1982
MALES (%)

EDUCATIONAL LEVEL	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	All Sites (140-208)
Illiterate	44.1	39.7	29.8	40.5	37.2	28.6	36.8
Literate	22.1	30.3	25.8	21.4	32.6	32.1	27.0
Primary	5.9	6.1	6.0	2.4	4.6	–	5.4
Secondary	22.1	18.8	29.8	28.6	20.9	32.1	24.2
Technical*	1.5	0.6	0.7	2.4	–	3.6	0.9
College**	4.4	4.5	7.9	4.8	4.7	3.6	5.6
Total (%)	100.1 †(136)	100.0 (330)	100.0 (151)	100.0 (42)	100.0 (43)	100.0 (28)	99.9 (923)

* Technical after matriculation.

** College and above.

† Number of cancer cases.

TABLE 4B: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, DIBRUGARH, ASSAM, 1982
FEMALES (%)

EDUCATIONAL LEVEL	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	Breast (174)	Cervix (180)	All Sites (140-208)
Illiterate	78.7	73.2	63.4	37.5	33.3	33.3	75.0	73.1	70.6
Literate	14.9	9.7	24.4	12.5	33.3	33.3	10.7	16.4	16.8
Primary	2.1	4.9	4.9	37.5	33.3	–	–	4.5	4.6
Secondary	4.9	7.3	7.3	12.5	–	33.3	3.6	6.0	6.1
Technical*	–	–	–	–	–	–	–	–	–
College**	–	4.9	–	–	–	–	10.7	–	1.8
Total (%)	100.0 †(47)	100.0 (41)	100.0 (41)	100.0 (8)	99.9 (3)	99.9 (3)	100.0 (28)	100.0 (67)	99.9 (327)

* Technical after matriculation.

** College and above.

† Number of cancer cases.

TABLE 5A: TREATMENT MODALITIES GIVEN FOR CANCER AT SELECTED SITES, DIBRUGARH, ASSAM, 1982
MALES (%)

Treatment	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	All sites (140-208)
Surgery	4.4	0.6	–	26.2	4.6
Radiation	75.0	77.0	84.8	2.4	67.1
Chemotherapy	0.7	1.5	3.3	38.1	7.7
Surgery + Radiation	2.2	0.6	–	–	1.3
Surgery + Chemotherapy	–	0.3	–	19.0	1.9
Radiation + Chemotherapy	7.4	11.2	6.6	–	7.9
Surgery + Radiation + Chemotherapy	0.7	1.5	–	–	1.0
Others	2.2	2.4	1.3	4.7	2.4
None	3.7	1.8	1.3	4.8	2.9
Not Known	3.7	3.0	2.6	4.7	3.2
Total (%)	100.0	99.9	99.9	99.9	100.0
Cases available for treatment	*(136)	(330)	(151)	(42)	(923)
Total number of cases registered	*(136)	(330)	(151)	(42)	(923)

*Proportions are computed from this number of cases only.

TABLE 5B: TREATMENT MODALITIES GIVEN FOR CANCER AT SELECTED SITES, DIBRUGARH, ASSAM, 1982.
FEMALES (%)

Treatment	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Breast (174)	Cervix (180)	All sites (140-208)
Surgery	2.1	–	–	50.0	27.4	9.0	7.6
Radiation	85.1	73.2	80.5	–	39.3	71.6	56.0
Chemotherapy	–	–	7.3	37.5	17.9	4.5	12.5
Surgery + Radiation	–	2.4	–	–	7.1	–	2.7
Surgery + Chemotherapy	2.1	–	–	–	7.1	–	4.6
Radiation + Chemotherapy	4.3	7.3	4.9	–	–	6.0	6.4
Surgery + Radiation + Chemotherapy	–	–	–	–	–	2.9	0.9
Others	–	2.4	–	–	–	2.9	1.5
None	2.1	4.9	2.4	12.5	7.1	3.0	3.3
Not Known	4.3	9.7	4.9	–	–	–	4.3
Total (%)	100.0	99.9	100.0	100.0	99.9	99.9	99.8
Cases available for treatment	(47)	(41)	(41)	(8)	(28)	(67)	(327)
Total number of cases registered	47	41	41	8	28	67	327

*Proportions are computed from this number of cases only.

TABLE 6: FREQUENCY OF SELECTED CANCER SITES, DIBRUGARH, ASSAM, 1982. (Level of the Fourth Digit.)

ICD 9TH	SITE	MALE No.	MALE %	FEMALE No.	FEMALE %
141	**TONGUE**	**76**	**100.0**	**24**	**100.0**
of which 141.0		68	89.5	19	79.2
141.1-4		3	3.9	2	8.3
141 R		5	6.6	3	12.5
143	**GUM**	**7**	**100.0**	**7**	**100.0**
of which 143.0		2	28.6	2	28.6
143.1		2	28.6	–	–
143 R		3	42.9	5	71.4
145	**MOUTH**	**37**	**100.0**	**11**	**100.0**
of which 145.0-.1		22	59.5	6	54.5
145.2-5		14	37.8	4	36.4
145 R		1	2.7	1	9.1
146	**OROPHARYNX**	**104**	**100.0**	**20**	**100.0**
of which 146.0		75	72.1	17	85.0
146.1-.2		3	2.9	–	–
146.3-.5		15	14.4	3	15.0
146.6		4	3.8	–	–
146.7		2	1.9	–	–
146 R		5	4.8	–	–
148	**HYPOPHARYNX**	**175**	**100.0**	**9**	**100.0**
of which 148.0		–	–	–	–
148.1		126	72.0	6	66.7
148.2		36	20.6	3	33.3
148.3		5	2.9	–	–
148 R		8	4.6	–	–
150	**OESOPHAGUS**	**151**	**100.0**	**41**	**100.0**
of which 150.0		–	–	–	–
150.1		–	–	–	–
150.2		–	–	–	–
150.3		29	19.2	11	26.8
150.4		78	51.7	22	53.7
150.5		28	18.5	7	17.1
150 R		16	10.6	1	2.4
153	**COLON**	**7**	**100.0**	**2**	**100.0**
of which 153.0		1	14.3	–	–
153.2		–	–	1	50.0
153.3		–	–	1	50.0
153.6		2	28.6	–	–
153 R		4	57.1	–	–
156	**GALL BLADDER**	**4**	**100.0**	**6**	**100.0**
of which 156.0		3	75.0	6	100.0
161	**LARYNX**	**43**	**100.0**	**3**	**100.0**
of which 161.0		2	4.6	–	–
161.1		25	58.1	3	100.0
161.2		2	4.6	–	–
161 R		14	32.6	–	–
173	**SKIN**	**4**	**100.0**	–	–
of which 173.0-.3		2	50.0	–	–
173.5		2	50.0	–	–
173 R		–	–	–	–
183	**OVARY**	–	–	**16**	**100.0**
of which 183.0		–	–	14	87.5
189	**KIDNEY**	**5**	**100.0**	**3**	**100.0**
of which 189.0		4	80.0	3	100.0
194	**ENDOCRINE**	–	–	–	–
of which 194.0		–	–	–	–
194 R		–	–	–	–

APPENDIX—7

HOSPITAL CANCER REGISTRY
REGIONAL CANCER CENTRE, TRIVANDRUM

DR. M. KRISHNAN NAIR, Project Chief
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MR. P. GANGADHARAN, Biostatistician

ANNUAL REPORT

(FROM JANUARY 1, 1982 to DECEMBER 31, 1982)

INTRODUCTION

The hospital cancer registry at Trivandrum, (Kerala) covers the cancer patients seen in the Medical College Hospitals in Trivandrum. The hospital is a referral hospital and the patients referred to the hospital are examined in the several speciality outpatient clinics which function simultaneously every morning. The patients are issued an outpatient number upon registration. However, no records are kept of the outpatients except a register at the registration desk. Patients admitted to the wards are issued a separate number and the medical records of all inpatients are maintained. The Medical College Hospitals covered by the cancer registry are (1) The Medical College Hospital (MCH), (2) Dental College Clinics (DCC) and (3) Sree Avittom Thirunal Hospital for women and children (SAT).

The annual Hospital statistics of patients covered by the Registry during the year 1982 are as follows:—

Registration/Admission	MCH	SAT	DCC
OP Registrations	1,61,661	1,03,186	36,552
IP Admissions	32,262	30,940	Nil

The Sree Chitra Thirunal Institute for Medical Sciences and Technology (SCTINST) is also situated in the medical college campus, but is not administratively under the Principal, Medical College, hence the registry operations of 1982 have not been extended to this institute. However, we are hopeful of achieving this during the current year. Patients from this centre needing radiotherapy are referred to the Regional Cancer Centre.

The cancer registry is housed in the Regional Cancer Centre. Active cancer registration was started since March 10, 1982, when the registry staff started joining for duty. Except the biostatistician, other staff did not have any training in cancer registry operations. The medical record officer had, however, more than 5 years experience in maintaining medical records.

The staff positions available for the registry operations as on January 1, 1983 are shown in Annexure I.

The social investigators visit the clinics every morning and all suspected cancer cases are identified with the co-operation of the attending doctors. During this first patient contact, patient identity and socio-demographic information are collected as also as much clinical information as are available then. Regular visits are paid to the inpatient wards and efforts are made to identify cancer patients and collect relevant data from them. This is also done with the co-operation of the attending doctors and the nursing staff. The inpatient case papers are scrutinised while in the wards and necessary information transferred to the registry records. The daily returns are checked for completeness and the social investigators are instructed to revisit the patients when incompleteness is observed. Every patient's case history brought to the cancer registry is checked with the patient name index and duplications are eliminated. The total number of patients initially registered from the clinics (other than cancer centre clinic) during the year was 891 of which only 308 cases were included in the current listing as the rest were either duplications or non-cancer patient name index (with addresses) cards are routinely prepared and maintained in order. An accession register

TABLE 1B *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982
IN FEMALES
CENTRE: TRIVANDRUM

ICD 9th	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
174	FEM. BREAST	0	0	0	0	1	6	24	41	44	48	36	36	26	20	9	4	0	0	295	18.11	14.73
179	UTERUS UNSP.	0	0	1	0	0	0	3	0	2	2	1	0	2	1	2	1	0	0	15	0.92	1.06
180	CERVIX	0	0	0	0	1	4	10	20	40	68	55	80	65	48	27	9	3	0	430	26.40	25.08
181	PLACENTA	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0.18	0.20
182	BODY UTERUS	0	0	0	0	1	1	3	0	0	1	1	0	5	1	1	0	0	0	14	0.86	0.75
183	OVARY ETC.	0	1	2	7	0	5	4	9	3	10	13	5	8	8	3	0	1	0	79	4.85	4.49
184	OTHER FEM. GEN.	1	0	0	0	0	1	0	1	0	0	2	6	4	2	1	1	1	0	20	1.23	1.54
188	URI. BLADDER	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0	0	0	4	0.25	0.34
189	KIDNEY ETC.	6	1	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	12	0.74	0.86
190	EYE	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0.31	0.43
191	BRAIN	1	8	3	4	2	4	3	2	2	1	2	0	2	0	0	0	0	0	34	2.09	2.17
192	NERVOUS SYS.	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.12	0.17
193	THYROID GLAND	0	0	2	4	4	6	7	2	7	7	3	2	8	8	1	0	0	0	61	3.74	3.45
194	ENDO. GLANDS	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0.12	0.12
195	ILL DEF. SITES	0	0	0	1	0	0	0	2	0	2	1	0	1	3	2	0	0	0	12	0.74	0.82
196	SEC. LYMPH NODES	0	0	0	0	0	0	0	2	2	0	0	2	2	4	0	0	1	0	13	0.80	1.01
197	SEC. RESP. ETC.	0	0	0	1	0	0	1	0	0	0	3	9	2	1	0	0	0	0	17	1.04	0.85
198	SEC. OTHER SITES	0	0	0	1	0	0	3	1	0	2	1	2	1	2	0	0	0	0	13	0.80	0.70
199	PRIMARY UNK.	1	0	0	0	1	0	0	2	2	1	1	1	1	1	0	0	0	0	11	0.68	0.60
200	LYMPHOSARCOMA	0	0	1	0	1	0	0	1	0	0	1	0	1	1	0	0	1	0	7	0.43	0.65
201	HODGKINS DIS.	0	0	0	0	0	2	0	0	1	1	1	0	0	0	1	0	0	0	6	0.37	0.30
202	OTHER LYMPHOID	0	0	0	1	0	1	0	1	1	0	1	2	1	2	0	0	0	0	10	0.61	0.58
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	1	0	4	3	5	1	1	0	1	1	0	17	1.04	1.21
204	LEUK. LYMPHATIC	4	1	1	1	0	2	1	0	1	0	0	0	1	2	0	0	0	0	14	0.86	1.01
205	LEUK. MYELOID	0	0	0	0	0	2	0	1	0	3	0	1	0	0	0	0	0	0	7	0.43	0.28
206	LEUK. MONOCYTIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
207	LEUK. SPECIFIED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208	LEUK. UNS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
	TOTALS	23	15	20	35	28	49	71	110	136	225	184	231	195	166	84	34	23	0	1629	100.00	100.00

TABLE 1B: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN FEMALES
CENTRE: TRIVANDRUM

ICD 9TH	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	1	0	0	1	3	3	1	4	1	3	0	17	1.04	1.91
141	TONGUE	0	0	0	0	2	2	2	3	4	7	4	7	6	8	2	2	3	0	52	3.19	3.94
142	SALIVARY GLAND	0	0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	4	0.25	0.20
143	GUM	0	0	0	0	0	0	0	0	1	6	7	7	10	13	5	4	0	0	53	3.25	4.17
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.12	0.14
145	OTHER MOUTH	0	0	0	0	1	0	2	2	8	15	17	26	20	18	16	5	4	0	134	8.23	9.67
146	OROPHARYNX	0	0	0	0	0	1	0	1	1	2	0	4	2	3	1	0	0	0	15	0.92	0.88
147	NASOPHARYNX	0	0	1	3	0	0	1	0	1	3	0	0	0	0	0	0	0	0	9	0.55	0.52
148	HYPOPHARYNX	0	0	0	0	0	0	0	2	0	7	3	3	1	1	0	0	0	0	17	1.04	0.74
149	PHARYNX ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
150	OESOPHAGUS	0	0	0	0	0	0	0	1	3	4	3	8	2	1	0	1	0	0	23	1.41	1.25
151	STOMACH	0	0	0	0	1	1	0	1	3	1	6	6	6	3	0	0	0	0	28	1.72	1.40
152	SMALL INTESTINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
153	COLON	0	0	0	0	0	0	0	1	1	1	2	0	0	0	1	0	0	0	6	0.37	0.29
154	RECTUM	0	0	0	0	2	0	1	4	1	5	1	5	3	1	2	1	1	0	27	1.66	1.83
155	LIVER	2	0	0	1	1	0	1	1	0	3	4	2	1	1	1	0	0	0	18	1.10	1.01
156	GALL BLADDER ETC.	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0.12	0.07
157	PANCREAS	0	0	0	0	0	0	1	0	2	3	0	1	1	1	0	0	0	0	9	0.55	0.43
158	RETROPERITONEUM	0	0	0	1	2	0	0	0	0	1	2	1	0	1	0	0	0	0	8	0.49	0.50
159	OTHER DIGS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	0	0	0	1	0	0	1	4	1	3	2	2	0	1	1	0	16	0.98	1.23
161	LARYNX	0	0	0	0	0	0	0	1	0	3	1	0	0	1	0	1	1	0	8	0.49	0.81
162	LUNG	0	0	0	0	1	0	0	1	2	2	2	2	5	1	1	1	1	0	19	1.17	1.40
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
164	THYMUS ETC.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	C	1	0.06	0.04
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	0	3	5	5	1	2	1	0	1	0	0	0	0	0	1	0	0	0	19	1.17	1.43
171	CONNECTIVE TISS	2	1	2	3	3	4	1	1	0	3	2	1	1	0	0	0	0	0	24	1.47	1.43
172	SKIN MELANOMA	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	0	0	0	4	0.25	0.28
173	SKIN OTHER	1	0	0	0	0	0	1	0	1	1	2	1	0	1	1	1	1	0	11	0.68	1.05

TABLE 1A *(Continued)*: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES
CENTRE: TRIVANDRUM

ICD 9TH	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
175	MALE BREAST	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	3	0.16	0.16
185	PROSTATE	0	0	0	0	0	0	0	0	0	1	1	5	1	2	7	4	0	0	21	1.13	1.69
186	TESTIS	1	0	0	0	1	2	0	0	1	0	1	1	1	1	0	0	0	0	9	0.49	0.48
187	PENIS ETC.	0	0	0	0	1	1	4	2	3	5	4	5	5	1	1	0	1	0	33	1.78	1.59
188	URI. BLADDER	0	0	0	0	1	0	0	1	0	4	8	5	8	5	4	0	2	0	38	2.05	2.07
189	KIDNEY	4	1	0	0	0	0	0	0	1	0	1	5	2	3	0	0	0	0	17	0.92	0.85
190	EYE	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0.43	0.44
191	BRAIN	2	6	5	3	1	4	4	6	6	4	8	4	3	2	0	0	0	0	58	3.13	2.87
192	NERVOUS SYS.	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	4	0.22	0.22
193	THYROID GLAND	0	0	0	1	0	1	0	0	1	3	2	5	2	0	2	4	1	0	22	1.19	1.62
194	ENDO. GLANDS	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.05	0.03
195	ILL DEF. SITES	0	0	2	0	2	0	1	1	0	0	2	0	1	0	0	0	1	0	10	0.54	0.65
196	SEC. LYMPH NODES	0	0	0	0	0	1	0	1	1	3	1	6	7	4	1	1	1	0	27	1.46	1.50
197	SEC. RESP. SITES	0	1	0	0	0	0	0	1	3	1	2	3	1	2	0	0	0	0	14	0.76	0.65
198	SEC. OTHER SITES	0	0	0	1	0	0	1	0	1	4	6	2	1	3	0	0	0	0	19	1.02	0.87
199	PRIM. UNK.	0	1	1	0	1	0	2	1	4	1	4	4	4	2	1	0	0	0	26	1.40	1.24
200	LYMPHOSARCOMA	1	0	4	2	2	3	1	1	1	2	3	3	7	0	1	1	1	0	33	1.78	1.87
201	HODGKINS DIS.	1	2	2	2	0	2	1	2	2	1	2	0	1	1	0	0	0	0	19	1.02	1.01
202	LYMPHOID TISSUE	1	1	0	1	0	1	1	0	0	2	2	2	2	3	0	0	0	0	16	0.86	0.82
203	MULTIPLE MYEL.	0	0	0	0	0	0	0	1	6	1	1	4	4	5	1	2	0	0	25	1.35	1.51
204	LEUK. LYMPHATIC	5	10	3	4	5	2	1	1	4	0	1	0	0	0	0	0	0	0	36	1.94	2.18
205	LEUK. MYELOID	1	1	3	0	1	1	2	3	0	2	0	0	0	1	0	0	0	0	15	0.81	0.81
206	LEUK. MONOCYTIC	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.05	0.08
207	LEUK. SPECIFIED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
208	LEUK. UNSP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
	TOTALS	31	30	29	27	33	41	51	69	142	203	247	273	279	193	118	51	37	0	1854	100.00	100.00

TABLE 1A: NUMBER OF NEW CANCER CASES BY AGE AND SITE (ICD: 9TH) PERCENTAGE AND AGE STANDARDIZED CANCER RATIO (ASCAR) DURING 1982 IN MALES
CENTRE: TRIVANDRUM

ICD 9TH	Site	0–	5–	10–	15–	20–	25–	30–	35–	40–	45–	50–	55–	60–	65–	70–	75–	80+	Ans	Total	%	ASCAR
140	LIP VERMILION	0	0	0	0	0	0	0	1	1	1	2	0	5	1	1	0	2	0	14	0.76	0.88
141	TONGUE	0	0	0	0	0	1	3	7	11	13	30	22	29	13	10	8	4	0	151	8.14	8.25
142	SALIVARY GLANDS	0	1	1	0	1	1	0	0	1	5	1	1	1	1	1	0	0	0	15	0.81	0.73
143	GUM	0	0	0	0	0	0	0	1	6	7	14	5	8	14	8	3	4	0	70	3.78	4.46
144	FLOOR OF MOUTH	0	0	0	0	0	0	0	2	0	4	2	2	3	2	0	0	1	0	16	0.86	0.81
145	OTHER MOUTH	0	1	0	0	0	0	2	10	26	35	28	52	42	30	15	8	7	0	256	13.81	13.55
146	OROPHARYNX	0	0	0	0	1	0	0	2	2	7	14	12	14	4	2	1	0	0	59	3.18	2.57
147	NASOPHARYNX	1	0	1	2	4	4	2	0	1	2	1	3	2	1	1	0	0	0	25	1.35	1.43
148	HYPOPHARYNX	0	0	0	0	0	1	2	0	7	12	11	9	15	6	8	1	0	0	72	3.88	3.43
149	PHARYNX ETC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
150	OESOPHAGUS	0	0	0	0	0	2	2	1	6	9	20	16	19	19	9	2	0	0	105	5.66	5.38
151	STOMACH	0	0	0	0	0	0	0	1	4	9	8	17	12	16	4	6	1	0	78	4.21	4.66
152	SMALL INTESTINE	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0.11	0.10
153	COLON	0	0	0	0	1	0	2	1	1	4	0	5	2	3	2	0	0	0	21	1.13	1.08
154	RECTUM	0	0	0	0	1	2	1	0	3	4	0	6	6	6	3	1	2	0	35	1.89	2.19
155	LIVER	1	0	1	0	2	0	6	4	3	7	5	4	6	5	2	1	1	0	48	2.59	2.60
156	GALL BLADDER	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	3	0.16	0.10
157	PANCREAS	0	0	0	0	0	0	0	2	1	2	0	1	1	1	1	0	0	0	9	0.49	0.44
158	RETROPERITONEUM	0	0	0	0	0	1	1	0	1	0	0	1	1	0	0	0	0	0	5	0.27	0.23
159	OTHER DIGS.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
160	NOSE	0	0	0	1	2	4	2	0	3	1	4	1	0	5	0	0	1	0	24	1.29	1.49
161	LARYNX	0	0	0	0	0	1	2	0	6	7	15	14	20	16	8	6	2	0	97	5.23	5.71
162	LUNG	0	0	0	0	0	1	4	10	16	33	31	38	36	13	15	0	3	0	200	10.79	9.08
163	PLEURA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
164	THYMUS ETC.	0	0	0	2	1	1	2	0	0	0	1	3	0	0	0	0	0	0	10	0.54	0.56
165	OTHER RESP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
170	BONE	2	3	5	8	2	3	1	4	0	0	1	1	1	0	1	0	0	0	32	1.73	1.98
171	CONNECTIVE TISS	3	1	0	0	2	0	0	0	2	2	4	2	2	0	2	0	2	0	22	1.19	1.33
172	SKIN MELANOMA	0	0	0	0	0	1	1	1	1	2	1	1	1	0	1	0	0	0	10	0.54	0.46
173	SKIN OTHER	0	0	0	0	0	0	0	0	4	1	3	3	1	2	4	2	0	0	20	1.08	1.29

ANNEXURE—I

1.	DR. M. KRISHNAN NAIR, M.D., F.R.C.S. DIRECTOR, REGIONAL CANCER CENTRE	PROJECT CHIEF
2.	DR. SARA VARGHESE, M.D. DIRECTOR & PROFESSOR OF PATHOLOGY.	CHAIRMAN PANEL OF PATHOLOGISTS
3.	DR. T. K. PADMANABHAN, M.D. PROFESSOR OF RADIOTHERAPY	INVESTIGATOR
4.	DR. C. K. SUGATHAN, M.D. PROFESSOR OF PATHOLOGY (ORAL)	INVESTIGATOR
5.	DR. M. A. ALEY KUTTY, M.D. PROFESSOR OF PATHOLOGY	INVESTIGATOR
6.	DR. N. SREE DEVI AMMA, M.D. ASSOC. PROF. OF CYTOPATHOLOGY.	INVESTIGATOR

EXISTING CANCER REGISTRY (AS ON 1-1-1983)

Sanctioned Staff	No. of Posts	Current Registry Staff	Qualification	Date of Joining
Biostatistician	1	Mr. P. Gangadharan	M.Sc., M.S. (Pittsburgh)	7- 6-82
Senior Research Officer	1	Dr. R. Sankara Narayanan	M.D. (Radiotherapy)	1- 3-82
Senior Research Fellow	1	Miss G. Padmakumary Amma	M.Sc.	8- 3-82
Medical Record Officer	1	Mr. R. Raveendran Nair	SSLC, Cert. MRT	10- 3-82
Social Investigator	2	Mrs. P. T. Latha Miss Anitha Nayar	M.A. M.A.	8- 3-82 10- 3-82
Clerical Staff	4	Mr. C. P. Balachandaran Mr. R. Rajasekharan Nair Mr. L. C. Amaldas Mrs. Jalaja Kumari	B.A. B.A. B.A. B.Sc.	20- 3-82 6- 5-82 24- 3-82 19- 3-82
Coding Clerk	1	Miss Kumari Jaya	B.Sc.	10- 5-82
Typist	1	Mrs. Sreedevi Kutty	SSLC, TP.E. (H)	20- 3-82
Peon	1	Mr. Rajayyan	SSLC	21-10-82

MEDICAL COLLEGE STAFF WORKING WITH CANCER REGISTRY AT PRESENT

Medical Statistician	1	Mr. S. Muraleedharan Nair	M.Sc.	23- 3-82
Clerk Typist	1	Mrs. Mable Franco	BA, TY. E(H)M(L)	8- 2-83
Receptionist	1	Miss Ponnammal		

and diagnostic index are maintained. The Regional Cancer Centre registers majority of cancer cases seen in the campus. Of the 3483 cases currently reported only 308 patients (8.7% of the total) are registered only in clinics other than cancer centre outpatient.

As the majority of cancer patients are seen in the cancer centre outpatient, we put special staff and emphasis on making an efficient registration system and the registry staff now is in overall charge of the entire registration machinery which has also helped the clinics in a number of areas. Thus the follow-up of patients, which is an important function of the hospital registry is already streamlined and the system is functioning efficiently. The medical case paper of the Regional Cancer Centre has been restructured in order to suit registry operations. The records and registration system is now totally geared to the registry operations. This has been achieved with no inconvenience to the clinicians, clinic operations and to patients. The pathology department of the medical college has deputed one pathologist to identify all cancer cases diagnosed by the department and transfer information to the registry and an excellent co-operation has been extended to the registry operations. At present every month the pathologist has two to three sessions spent for supplying such information from their records.

The cytology division of the Regional Cancer Centre receives all material from Medical College Hospital clinics for cytology examination and this information has helped us to complete the records.

The record departments of the Medical College Hospital and the Sree Avittom Thirunal Hospital extends their wholehearted co-operation for the registry operations. The MCH records are listed according to the WHO rubrics and all the case records of patients diagnosed and admitted for cancer treatment are made available to us. Information is abstracted from these records after the patient name index is checked and duplications eliminated. As the inpatient records reach the record department and proper filing racks after a lapse of few weeks after discharge we use the list prepared by the department to identify cases. There has been a special advantage of this late scanning of records. Completeness of information is ensured. This is because while the patient is in the ward, the diagnosis was not definite till the last few days and the diagnosis of cancer was arrived at after repeated examinations and the social investigator inadvertantly had missed the case. All the medical records of the Sree Avittom Thirunal Hospital is scanned with the hearty co-operation of the staff there.

Many patients visit the Regional Cancer Centre after a diagnosis was made at another centre. Efforts have been made to collect histologic slides of tissues removed from such patients. Such slides are numbered and arranged for ready reference.

A special tumour board with representatives from each speciality clinic has been constituted and the combined meeting will be held to discuss the findings of the annual report. Separate discussions have been held when necessary and the assistance of the member doctors have been sought when difficulties arose in arriving at final diagnosis or on treatment.

Some Observations on the Present Cancer Data

1. Carcinoma-in-situ (ICD:230-234) (less than 12 cases) have been included in the list currently submitted. They have been treated also.

2. The major forms of cancer are the oral (buccal mucosa) tongue and lung in males and cervix, oral and breast in females.

3. The registry operations started by the 2nd week of March, 1982. The present report covers the period January to December, 1982 identifying the cancer cases seen during January to March, 1982. We had only the Medical record as the source for these cases. This has been scrutinised and included in the current report for completeness.

The present report is being prepared by manual tabulations. It is planned to use the university computer for processing the registry data of 1983.

TABLE 6 *(Contd.)*: FREQUENCY OF SELECTED SITES OF CANCER WITH FOURTH DIGIT RUBRIC ICD-9
TRIVANDRUM, 1982

ICD 9th	Site	Male No.	%	Female No.	%
153	**COLON**	**21**	**100.00**	**6**	**100.00**
of which	153.0	1	4.76	–	–
	153.1	2	9.52	1	16.67
	153.2	1	4.76	–	–
	153.3	–	–	1	16.67
	153.4	7	33.33	1	16.67
	153.5	–	–	–	–
	153.6	4	19.05	1	16.67
	153.7	–	–	1	16.67
	153 R	6	28.57	1	16.67
154	**RECTUM ETC.**	**35**	**100.00**	**27**	**100.00**
of which	154.0	–	–	–	–
	154.1	34	97.14	23	85.19
	154.2	1	2.86	4	14.81
	154.3	–	–	–	–
	154 R	–	–	–	–
156	**GALL BLADDER**	**3**	**100.00**	**2**	**100.00**
of which	156.0	3	100.00	2	100.00
161	**LARYNX**	**97**	**100.00**	**8**	**100.00**
of which	161.0	31	31.96	2	25.00
	161.1	62	63.92	6	75.00
	161.2	1	1.03	–	–
	161 R	3	3.09	–	–
173	**SKIN–OTHER**	**20**	**100.00**	**11**	**100.00**
of which	173.0-.3	8	40.0	4	36.36
	173.4	–	–	2	18.18
	173.5	1	5.00	2	18.18
	173.6	–	–	–	–
	173.7	11	55.00	3	27.27
	173 R	–	–	–	–
183	**OVARY ETC.**	**–**	**–**	**79**	**100.00**
of which	183.0	–	–	78	98.73
189	**KIDNEY ETC.**	**17**	**100.00**	**12**	**100.00**
of which	189.0	16	94.12	12	100.0
194	**ENDOCRINE**	**1**	**100.00**	**2**	**100.00**
of which	194.0	–	–	–	–
	194.3	1	100.00	2	100.00
	194 R	–	–	–	–

TABLE 6: FREQUENCY OF SELECTED SITES OF CANCER WITH FOURTH DIGIT RUBRIC ICD-9, TRIVANDRUM, 1982

ICD 9th	Site	Male No.	Male %	Female No.	Female %
141	**TONGUE**	**151**	**100.00**	**52**	**100.00**
of which	141.0	47	31.13	7	13.46
	141.1-.4	89	58.94	41	78.85
	141 R	15	9.93	4	7.69
143	**GUM**	**70**	**100.00**	**53**	**100.00**
of which	143.0	20	28.57	6	11.32
	143.1	49	70.00	47	88.68
	143 R	1	1.43	–	–
145	**MOUTH**	**256**	**100.00**	**134**	**100.00**
of which	145.0-.1	229	89.45	123	91.79
	145.2-.5	19	7.42	10	7.46
	145 R	8	3.13	1	0.75
146	**OROPHARYNX**	**59**	**100.00**	**15**	**100.00**
of which	146.0	42	71.19	14	93.33
	146.1-.2	–	–	–	–
	146.3-.5	5	8.47	–	–
	146.6	1	1.69	–	–
	146.7	–	–	–	–
	146 R	11	18.64	1	6.67
148	**HYPOPHARYNX**	**72**	**100.00**	**17**	**100.00**
of which	148.0	22	30.56	6	35.29
	148.1	31	43.06	9	52.94
	148.2	2	2.78	–	–
	148.3	–	–	–	–
	148 R	17	23.61	2	11.76
150	**OESOPHAGUS**	**105**	**100.00**	**23**	**100.00**
of which	150.3	9	8.57	2	8.70
	150.4	39	37.14	12	52.17
	150.5	32	30.48	7	30.43
	150 R	25	23.81	2	8.70

TABLE 5A: TREATMENT MODALITIES GIVEN FOR CANCER AT SELECTED SITES, TRIVANDRUM, 1982

MALES (%)

Treatment given	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	All Sites (140-208)
Surgery	1.6	–	1.0	5.8	3.5
Radiation	71.5	78.8	51.5	10.1	53.1
Chemotherapy	–	–	1.0	21.7	3.7
Surgery + Rad.	3.2	0.7	1.0	2.9	4.6
Surgery + Chemo.	0.2	–	1.0	1.4	0.5
Radiation + Chemo.	9.6	11.6	11.9	2.9	10.7
Surgery + Rad. + Chem.	0.2	–	1.0	1.4	0.5
Others	–	–	–	–	–
None	11.2	6.8	15.8	23.2	14.9
Not Known	2.4	2.0	15.8	30.4	8.4
Total (%)	99.9	99.9	100.0	99.8	99.9
*Information Available (Number of cases)	(498)	(146)	(101)	(69)	(1668)
Total number of cases registered.	522	156	105	78	1854

*Proportions are computed from this number of cases only.

TABLE 5B: TREATMENT MODALITIES GIVEN FOR CANCER AT SELECTED SITES, TRIVANDRUM, 1982.

FEMALES (%)

Treatment given	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Breast (174)	Cervix (180)	All Sites (140-208)
Surgery	2.7	–	–	4.0	19.4	–	5.0
Radiation	70.6	75.0	54.5	4.0	27.3	84.8	56.8
Chemotherapy	0.4	–	–	8.0	0.7	0.2	4.2
Surgery + Rad.	2.7	–	–	–	25.9	0.7	6.7
Surgery + Chem	–	–	–	–	0.7	–	0.4
Rad. + Chem.	8.2	10.0	22.7	15.0	6.5	2.1	6.8
S. + R. + C.	–	2.5	–	–	8.6	–	1.5
Others	–	–	–	–	0.7	–	0.1
None	13.3	10.0	13.6	40.0	8.6	9.5	12.7
Not Known	2.0	2.5	9.1	29.0	1.4	2.6	5.8
Total (%)	99.9	100.0	99.9	100.0	99.8	99.9	100.0
*Information available (Number of cases)	(255)	(40)	(22)	(25)	(139)	(421)	(1347)
Total number of cases Registered.	262	41	23	28	295	430	1629

*Proportions are computed from this number of cases only.

TABLE 4A: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, TRIVANDRUM, 1982.

MALE (%)

Educational Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	All Sites (140-208)
Illiterate	22.0	10.9	11.4	15.4	7.2	12.5	13.2
Literate	5.2	1.3	5.7	2.6	2.1	3.0	3.6
Primary	26.6	28.8	26.7	28.2	37.1	24.5	25.0
Secondary	25.3	28.2	19.0	21.8	20.6	25.0	25.0
Technical*	–	0.6	–	1.3	1.0	1.0	0.5
College**	3.1	8.3	12.4	6.4	7.2	5.5	8.5
Not Known	17.8	21.9	24.8	24.3	24.8	28.5	24.2
Total (%)	100.0 +(522)	100.0 (156)	100.0 (105)	100.0 (78)	100.0 (97)	100.0 (200)	100.0 (1854)

*Technical after matriculation.

**College and above.

+Number of Cancer Cases.

TABLE 4B: EDUCATIONAL LEVEL ATTAINED FOR SELECTED CANCER SITES, TRIVANDRUM, 1982.

FEMALE (%)

Educational Level	Mouth (140-145)	Pharynx (146-149)	Oesophagus (150)	Stomach (151)	Larynx (161)	Lung (162)	Breast (174)	Cervix (180)	All Sites (140-208)
Illiterate	39.3	17.1	26.1	21.4	50.0	26.3	12.9	28.4	23.1
Literate	1.9	4.9	8.7	3.6	–	–	1.7	3.3	2.9
Primary	19.5	9.8	17.4	21.4	–	21.0	18.3	27.0	19.0
Secondary	13.7	31.7	4.3	14.3	25.0	21.0	28.5	20.5	23.7
Technical*	–	–	–	–	–	–	0.3	0.2	0.2
College**	0.8	2.4	21.7	10.7	–	–	19.0	2.6	7.9
Not Known	24.8	34.1	21.8	(28.6)	25.0	31.7	19.3	12.7	23.2
Total (%)	100.0 +(262)	100.0 (41)	100.0 (23)	100.0 (28)	100.0 (8)	100.0 (19)	100.0 (295)	100.0 (430)	100.0 (1629)

*Technical after matriculation.

**College and above.

+Number of Cancer Cases.

TABLE 3 *(Continued)*: PERCENTAGE DISTRIBUTION OF PATIENTS PROFESSING A SPECIFIED RELIGION, TRIVANDRUM, 1982.

ICD 9TH	Site	Hindu		Muslim		Christian		Total Number of Cancer Cases	
		Males	Females	Males	Females	Males	Females	Males	Females
176	UTERUS UNSP.	–	0.88	–	0.65	–	1.17	–	15
180	CERVIX	–	30.10	–	21.29	–	16.42	–	430
181	PLACENTA	–	0.18	–	0.65	–	–	–	3
182	BODY UTERUS	–	0.88	–	0.65	–	0.88	–	14
183	OVARY	–	4.94	–	3.87	–	4.99	–	79
184	VAGINA ETC.	–	1.32	–	0.65	–	1.17	–	20
185	PROSTATE	1.20	–	–	–	1.46	–	21	–
186	TESTIS	0.52	–	0.93	–	0.21	–	9	–
187	PENIS	2.32	–	–	–	1.26	–	33	–
188	URINARY BLADDER	1.64	0.26	3.27	0.65	2.51	–	38	4
189	KIDNEY	0.86	0.62	0.47	0.65	1.26	1.17	17	12
190	EYE	0.34	0.18	0.47	1.94	0.63	–	8	8
191	BRAIN	2.84	2.12	3.27	1.94	3.77	2.05	58	34
192	OTHER NERVOUS SYSTEM	0.26	0.09	–	–	0.21	0.29	4	2
193	THYROID GLAND	1.12	3.27	1.40	2.58	1.26	5.87	22	61
194	OTHER ENDOCRINE GLAND	–	0.18	–	–	0.21	–	1	2
195	ILLDEFINED SITES	0.34	0.88	0.93	0.65	0.84	0.29	10	12
196	SECONDARY LIMPH NODES	1.81	0.62	0.93	0.65	0.84	1.47	27	13
197	SEC. RESPIRATORY SYS.	0.60	1.06	0.93	1.29	1.05	0.88	14	17
198	SEC. OTHER SPC. SITES	1.12	1.15	1.40	–	0.63	–	19	13
199	PRIMARY UNKNOWN	1.55	0.62	0.93	0.65	1.26	0.88	26	11
200	LYMPHOSARCOMA	1.81	0.09	2.34	1.29	1.46	1.17	33	7
201	HODGKIN'S DISEASE	1.03	0.35	0.93	–	1.05	0.59	19	6
202	OTHER LYMPHOID TISSUE	0.95	0.62	0.93	0.65	0.63	0.59	16	10
203	MULTIPLE MYELOMA	1.55	0.88	1.40	1.94	0.84	1.17	25	17
204	LYMPHOID LEUKAEMIA	1.72	0.97	2.34	–	2.30	0.88	36	14
205	MYELOID LEUKAEMIA	0.86	0.35	0.93	0.65	0.42	0.59	15	7
206	MONOCYTIC LEUKAEMIA	–	–	–	–	0.21	–	1	–
	TOTAL (%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)	–	–
140-208	ALL SITES: TOTAL NUMBER	1162	1133	214	155	478	341	1854	1629
	%	62.7	69.6	11.5	9.5	25.8	20.9	100.0	100.0

TABLE 3: PERCENTAGE DISTRIBUTION OF PATIENTS PROFESSING A SPECIFIED RELIGION, TRIVANDRUM, 1982.

ICD 9TH	Site	Hindu		Muslim		Christian		Total Number of Cancer Cases	
		Males	Females	Males	Females	Males	Females	Males	Females
140	LIP	0.69	1.24	0.93	0.65	0.84	0.59	14	17
141	TONGUE	7.83	3.00	7.01	6.45	9.41	2.35	151	52
142	SAL. GLANDS	0.60	0.35	0.47	–	1.46	–	15	4
143	GUM	3.27	3.44	3.74	3.23	5.02	2.64	70	53
144	FLOOR OF MOUTH	0.86	0.18	0.93	–	0.84	–	16	2
145	MOUTH	15.75	7.77	10.28	15.48	10.67	5.45	256	134
146	OROPHARYNX	3.61	0.97	2.80	–	2.30	1.17	59	15
147	NASOPHARYNX	1.03	0.53	2.34	1.29	1.67	0.29	25	9
148	HYPOPHARYNX	3.79	0.79	5.14	2.58	3.56	1.17	72	17
149	PHARYNX ETC.	–	–	–	–	–	–	–	–
150	OESOPHAGUS	5.68	1.24	6.07	1.29	5.44	2.05	105	23
151	STOMACH	4.13	1.50	1.87	1.94	5.44	2.35	78	28
152	SMALL INTESTINES	0.17	–	–	–	–	–	2	–
153	COLON	0.95	0.53	0.47	–	1.89	–	21	6
154	RECTUM	1.89	1.41	0.93	4.52	2.30	1.17	35	27
155	LIVER	2.24	1.15	3.27	2.58	3.13	0.29	48	18
156	GALL BLADDER	0.17	0.09	0.47	–	–	0.29	3	2
157	PANCREAS	0.52	0.71	–	–	0.63	0.29	9	9
158	RETROPERITONEUM	0.26	0.44	–	–	0.42	0.88	5	8
159	OTHER DIGEST. ORGANS	–	–	–	–	–	–	–	–
160	NASAL CAVITIES	1.46	0.97	1.40	1.29	0.84	0.88	24	16
161	LARYNX	5.34	0.44	5.61	1.29	4.82	0.29	97	8
162	LUNG	10.59	1.15	16.36	1.29	8.79	1.17	200	19
163	PLEURA	–	–	–	–	–	–	–	–
164	THYMUS	0.60	0.09	0.47	–	0.42	–	10	1
165	OTHER RESPIRATORY	–	–	–	–	–	–	–	–
170	BONE	1.81	0.79	0.93	1.94	1.89	2.05	32	19
171	CONNECTIVE TISSUE	0.60	1.24	2.80	1.29	1.89	2.35	22	24
172	SKIN–MELANOMA	0.43	0.09	–	0.65	1.05	0.59	10	4
173	SKIN–OTHER	1.20	0.09	0.93	–	0.84	0.29	20	11
174	BREAST–FEMALE	–	16.42	–	9.03	–	27.86	–	295
175	BREAST–MALE	0.09	–	0.47	–	0.21	–	3	–

TABLE 2 *(Continued)*: PERCENTAGE DISTRIBUTION OF CASES DIAGNOSED BY SELECTED MEANS FOR THE PERIOD FROM 1ST JANUARY, 1982 TO 31ST DECEMBER, 1982

ICD 9TH	Site	Clinical %		X-Ray %		Microscopic %		Others %		Total Cases	
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
179	UTERUS NOS	–	20.00	–	–	–	80.00	–	–	–	15
180	CERVIX	–	33.95	–	–	–	65.81	–	0.24	–	430
181	PLACENTA	–	–	–	–	–	100.00	–	–	–	3
182	BODY UTERUS	–	21.43	–	–	–	78.57	–	–	–	14
183	OVARY	–	8.86	–	–	–	87.34	–	3.80	–	79
184	VAGINA ETC.	–	35.00	–	–	–	65.00	–	–	–	20
185	PROSTATE	33.33	–	–	–	66.67	–	–	–	21	–
186	TESTIS	–	–	–	–	100.00	–	–	–	9	–
187	PENIS	36.36	–	–	–	63.64	–	–	–	33	–
188	URINARY BLADDER	26.32	75.00	–	–	71.05	25.00	2.63	–	38	4
189	KIDNEY	29.41	–	5.88	8.33	64.71	91.67	–	–	17	12
190	EYE	25.00	–	–	–	62.50	100.00	12.50	–	8	5
191	BRAIN	6.90	11.76	1.72	8.82	86.21	73.53	5.17	5.88	58	34
192	OTHER NERVOUS SYSTEM	–	–	–	–	100.00	100.00	–	–	4	2
193	THYROID GLAND	4.55	14.75	–	–	95.45	85.25	–	–	22	61
194	OTHER ENDOCRINE GLAND	100.00	–	–	–	–	100.00	–	–	1	2
195	ILLDEFINED SITES	40.00	41.67	–	–	50.00	58.33	10.00	–	10	12
196	LYMPH NODES SECONDARY	18.52	7.69	–	–	81.48	92.31	–	–	27	13
197	SECONDARY RESP. + DIGES. SYS.	35.71	11.76	7.14	11.76	50.00	76.47	7.14	–	14	17
198	SECONDARY: OTHER SPE. SITES	10.53	38.46	10.53	15.38	78.95	46.15	–	–	19	13
199	PRIMARY UNKNOWN	11.54	18.18	3.85	18.18	84.61	63.64	–	–	26	11
200	LYMPHO SARCOMA	6.06	–	–	–	93.94	100.00	–	–	33	7
201	HODGKIN'S DISEASE	–	–	–	–	100.00	100.00	–	–	19	6
202	LYMPHOID TISSUE	6.25	10.00	–	–	93.75	90.00	–	–	16	10
203	MULTIPLE MYELOMA	–	–	–	–	100.00	100.00	–	–	25	17
204	LYMPHOID LEUKAEMIA	2.78	–	–	–	97.22	100.00	–	–	36	14
205	MYELOID LEUKAEMIA	–	–	–	–	100.00	100.00	–	–	15	7
206	MONOCYTIC LEUKAEMIA	–	–	–	–	100.00	–	–	–	1	–
140-208	ALL SITES	19.63	24.06	4.64	1.60	74.81	73.54	0.92	0.80	1854	1629

TABLE 2: PERCENTAGE DISTRIBUTION OF CASES DIAGNOSED BY SELECTED MEANS FOR THE PERIOD FROM 1ST JANUARY, 1982 TO 31ST DECEMBER, 1982

ICD 9TH	Site	Clinical %		X-Ray %		Microscopic %		Others %		Total Cases	
		Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
140	LIP	21.43	17.65	–	–	78.57	82.35	–	–	14	17
141	TONGUE	21.19	21.15	–	–	78.81	78.85	–	–	151	52
142	SALIVARY GLANDS	–	25.00	–	–	100.00	75.00	–	–	15	4
143	GUM	27.14	16.98	1.43	1.89	71.43	81.13	–	–	70	53
144	FLOOR OF MOUTH	12.50	–	–	–	87.50	100.00	–	–	16	2
145	MOUTH	26.95	33.58	–	0.75	73.05	65.67	–	–	256	134
146	OROPHARYNX	10.17	6.67	–	–	89.83	93.33	–	–	59	15
147	NASOPHARYNX	12.00	11.11	–	–	88.00	88.89	–	–	25	9
148	HYPOPHARYNX	13.89	29.41	4.17	–	80.56	70.59	1.39	–	72	17
149	PHARYNX	–	–	–	–	–	–	–	–	–	–
150	OESOPHAGUS	29.52	26.09	11.43	21.74	58.10	52.17	0.95	–	105	23
151	STOMACH	50.00	64.29	7.69	7.14	38.46	21.43	3.85	7.14	78	28
152	SMALL INTESTINES	–	–	–	–	100.00	–	–	–	2	–
153	COLON	42.86	16.67	4.77	16.67	52.38	66.66	–	–	21	6
154	RECTUM	22.86	51.85	–	–	71.43	44.44	5.71	3.70	35	27
155	LIVER	27.08	50.00	–	–	72.92	44.44	–	5.56	48	18
156	GALL BLADDER	33.33	–	–	50.00	66.67	–	–	50.00	3	2
157	PANCREAS	66.67	33.33	–	–	22.22	55.56	11.11	11.11	9	9
158	RETROPERITONEUM	20.00	25.00	–	–	80.00	75.00	–	–	5	8
159	OTHER DIGEST. ORGANS	–	–	–	–	–	–	–	–	–	–
160	NASAL CAVITIES	8.33	6.25	–	12.50	91.67	81.25	–	–	24	16
161	LARYNX	10.31	12.50	–	–	89.69	87.50	–	–	97	8
162	LUNG	11.50	10.53	25.00	15.79	63.00	73.68	0.50	–	200	19
163	PLEURA	–	–	–	–	–	–	–	–	–	–
164	THYMUS	100.00	100.00	80.00	–	55.00	–	–	–	10	1
165	OTHER RESPIRATORY	–	–	–	–	–	–	–	–	–	–
170	BONES	3.13	–	9.38	–	87.50	100.00	–	–	32	19
171	CONNECTIVE TISSUE	9.09	4.17	–	–	99.91	95.83	–	–	22	24
172	SKIN–MELANOMA	–	–	–	–	100.00	100.00	–	–	10	4
173	SKIN–OTHER	30.00	9.09	–	–	65.0	90.91	5.00	–	20	11
174	BREAST–FEMALE	–	19.66	–	–	–	80.00	–	0.34	–	295
175	BREAST–MALE	66.67	–	–	–	33.33	–	–	–	3	–

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