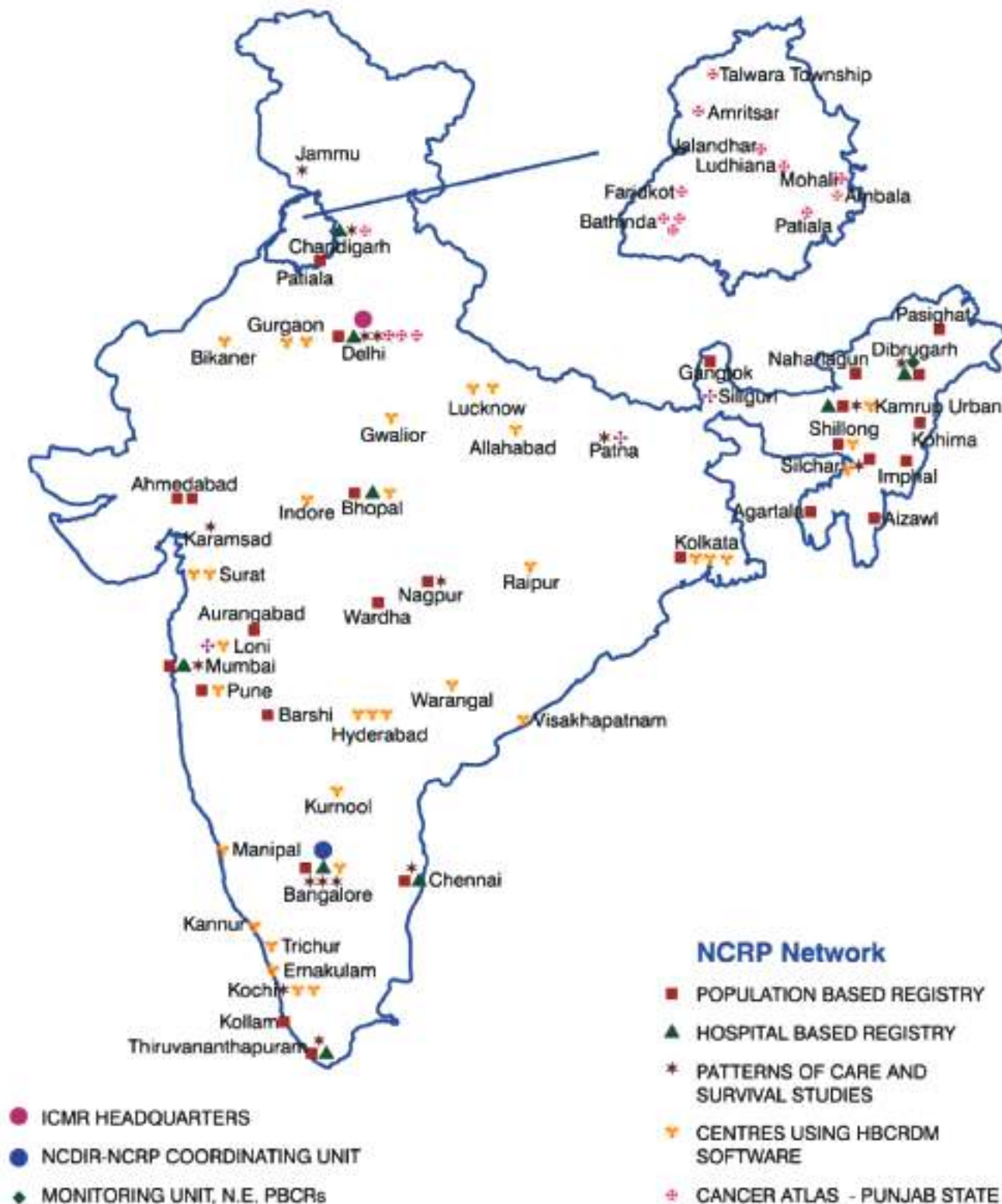


Cancer Registry ABSTRACT CRAB

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CRAB features articles on cancer registration, issues of current interest and news items on events in registries and conferences ahead.

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ALL ARE WELCOME TO SUBMIT ARTICLES, NEWS, COMMENTS, TO CRAB

NCRP-ICMR

The first cancer registry was commenced in Bombay (Mumbai) in the year 1964 under the auspices of the Indian Cancer Society, by the late Dr D.J. Jussawalla, renowned cancer surgeon and former Director of the Tata Memorial Hospital. With the control of infectious diseases and increased longevity of the growing population in a country like India the spectrum of disease pattern has changed and the burden of cancer is on the increase. Of the ten million new cases of cancer diagnosed every year over half are from the developing world. It is estimated that by the year 2020, over 10 million people worldwide would die of cancer every year and that 70 percent of these would be from the developing world. In the late 1970's and early 1980 there was widespread recognition of the need for organizing new cancer registries in different regions of the country. The ICMR constituted a task force for strengthening the existing registries and initiating a network of cancer registries in the country. Realizing the need and importance of the problem of cancer, the National Cancer Registry Programme (NCRP) was set-up in December 1981.

The NCRP was commenced with the following objectives:

1. To generate reliable data on the magnitude and patterns of cancer;
2. To undertake epidemiologic research studies in the form of case control and cohort studies based on observations of registry data;

3. Provide research base for developing appropriate strategies to aid in National Cancer Control Programme of the Government of India; this would be in the form of planning, monitoring and evaluation of activities under this programme;
4. Develop human resource in cancer registration and epidemiology.

Background :

The NCRP is a long term activity of the Division of Non-communicable diseases. Dr Usha K. Luthra who was the then (during 1970-92) Chief of the Division of NCD and Dr L.D. Sanghvi who was the first Project Officer were the founder members of the NCRP. Dr G.K. Rath, Chief of the Institute Rotary Cancer Hospital and Head Radiation Oncology, AIIMS, New Delhi is the current chairman of the Steering Committee. Dr P.C. Gupta, currently the Director, Healis-Sarkaria Institute of Public Health, Mumbai is the present chairman of the Monitoring Committee. However, Dr P.C. Gupta has been associated with the NCRP and its functioning in one capacity or the other since its inception. Likewise Mr. P. Gangadharan, Consultant, Oncology Centre, Amrita Institute of Medical Sciences, Kochi and Chairman of the Translational Research Committee of NCRP has been involved with this programme actively both as a senior faculty of the Mumbai and Trivandrum hospital based registries and the Karunagapally population based cancer registry. Other members of the Steering Committee who have



actively contributed towards the development of the NCRP include Dr P.S.S. Sundar Rao, Dr S. Radhakrishna, Dr N.C. Misra and Dr Padam Singh. The NCRP in its earlier years received guidance, encouragement and support from several WHO consultants as external evaluators. These include Dr C.S. Muir, Dr T. Hirayama, Dr J. Young and Dr M. Hakama.

Overall Functioning :

The COU of the NCRP in Bangalore provides the complete direction and guidance to all the scientific activities under the NCRP. The Steering and Monitoring Committees meet periodically to oversee and guide the functioning of the NCRP. In more recent times with ICMR's thrust on Translational Research, this committee also meets every three months to closely follow the outcome. A review meeting and workshop are held annually where the Principal Investigators and staff of the registries present data and participate in the discussions. The workshop is 'hands on' activity with discussion on the various aspects of working of the registry, problematic cases, use of coding and discussion on medical terminology, statistical and epidemiologic methods. About 2-3 senior and junior staff of all the registries participates in the workshop. The Coordinating Unit itself is poised to be converted into a new permanent ICMR "National Centre for Disease Informatics and Research" in Bangalore.

Milestones :

Data collection commenced from 1 January 1982 in the population based cancer registries (PBCRs) at Bangalore, Chennai and Mumbai, and also in the hospital based cancer registries (HBCRs) at Chandigarh, Dibrugarh and Thiruvananthapuram. From 1986 two more urban population based cancer registries were started in Delhi and Bhopal. For the first time a population based rural cancer registry was initiated in 1987 at Barshi in the state of Maharashtra. In order to extend the assessment of cancer patient

care, HBCRs were also started at Bangalore, Chennai and Mumbai in 1984. In the year 2001, a project on "Development of an Atlas of Cancer in India" was undertaken by the Coordinating Unit of the NCRP with the objective of obtaining an overview of patterns in different parts of the country not covered by the PBCRs and calculate estimates of cancer incidence wherever feasible. The results of the project showed an overall high incidence of cancer in the north eastern states with cancers of the stomach and lung being most pronounced. Following the publications of these results, six PBCRs were started in the North East in 2003. A rural registry covering Ahmedabad rural district and a PBCR at Kolkata were also commenced subsequently. In 2007 six functioning PBCRs that were not under the NCRP network were included in the NCRP. Three more PBCRs (covering the states of Tripura, Meghalaya and Nagaland) were commenced in the north east during 2009. During 2010 a rural PBCR was commenced at Sevagram in Maharashtra and two PBCRs were also commenced in Arunachal Pradesh. A PBCR covering districts of Patiala, Bathinda and Muktsar were commenced in 2011. Two HBCRs were commenced at Dr.B.Borooah Cancer Institute, Guwahati and Postgraduate Institute of Medical Education and Research, Chandigarh in 2010 and 2011 respectively. As of June 2011 there are 27 PBCRs, 9 HBCRs and 17 institutions that are participating in the Patterns of Care and Survival Studies (on cancer breast, cervix and Head & Neck cancers).

Besides there are 12 other centres in the North East that are participating in the project on "Development of an Atlas of Cancer in the North East", and 27 centres that are using the HBCR Data Management Software. In all there are 86 institutions sending over 100 primary data sets of each year to the COU of NCRP at Bangalore that guides, directs and reports.

CENSUS 2011 - TRIBULATIONS - R. Swaminathan

It is 2011, the census year in India. We all know that reliable cancer incidence data are possible only when both the numerator (number of incident cancer cases) and the denominator (population data) are available and correct. Cancer registries strive hard and undertake measures to get the exact count of cancer cases annually. It is common knowledge that census count happens in India every 10 years. Hence, the annual population statistics are often estimates either between two census years (inter-census) or after the latest census year (post-census) using demographic and statistical principles. The inter-census annual population estimates are often less ambiguous than post-census estimates since the population growth rates for all ages together or by sex or by age groups are known in advance. However, the veracity of such estimates depends on the time-point at which they were obtained (see table). For example, let us assume that we are in the year 2010. If one needs to know the population for the year 1996, we only need to use the census figures of 1991 and 2001, both of which are already available. Here, the decadal growth rate between 1991 and 2001 is definite and the population in 1996 can be estimated with minimal assumptions. This is an inter-census estimate and let us denote as I_{1996} . Suppose that we were in the year 2000 and needed to estimate the population in 1996. So, only census figure of 1991 would be available and not that of census 2001. Now, we have to use the known census figures of 1981 and 1991 to calculate the decadal growth rate, impose an additional assumption that this growth rate would prevail until 1996 and estimate the population. This is now a post-

census estimate and let us denote as P_{1996} . Let us also suppose that the number of incident cancer cases (C_{1996}) in 1996 remained the same in 2000 and 2010. The crude incidence rate calculated in year 2000 ($CR_{P_{1996}}$) would be based on P_{1996} and the rate calculated in the year 2010 ($CR_{I_{1996}}$) would be based on I_{1996} . Unless I_{1996} equals P_{1996} , the rates calculated will be different. It has been shown in the past that I_{1996} and P_{1996} are likely to be different. Hence, the impact on rates is directly proportional to the difference between I_{1996} and P_{1996} : the greater the difference, the greater the impact on incidence rates. The impact will be even more pronounced on age-specific rates when there is differential growth rate owing to demographic transition (see table). The same analogy would apply for 2011 census also and all incidence rates published for the year 2001 and after based on post-census population estimates are likely to undergo minimal to significant changes when inter-census population estimates based on census 2011 are used. In a few registry areas, the provisional population estimates of census 2011 seem to be lesser than the post-census estimated population for the year 2007. Hence, one should be cautious when using data on incidence rates from previously published reports.

It will be very helpful if final census 2011 population by 5-year age group and sex are released at the earliest for areas where PBCRs are functional all over India. It would require concerted efforts by NCRP personnel to make special representation to the Directorate of Census Operations. We could then publish the corrected cancer incidence rates, wherever necessary, thereby avoiding a prolonged suspense.

Chennai 1996	P_{1996}	I_{1996}	$CR_{P_{1996}}$	$CR_{I_{1996}}$	$ASR_{P_{1996}}$	$ASR_{I_{1996}}$
Men	2,162,185	2,107,458	79.87	81.95	103.51	103.91
Women	2,019,223	1,994,041	93.80	94.98	116.63	114.92

P_{1996} : Post-census estimate of population 1996; CR: Crude rate/100,000;

I_{1996} : Inter-census estimate of population 1996; ASR: Age standardized rate/100,000

NCRP : PAST, PRESENT AND FUTURE

M. KRISHNAN NAIR (FORMER DIRECTOR, RCC, TRIVANDRUM)

The National Cancer Control Programme (NCCP) of India was formulated in 1975-76. Subsequently Regional Cancer Centres were established to function as apex centres for the state-of-the-art treatment, research, rehabilitation, palliative care and community cancer control. To implement cancer control programme, an essential tool is the cancer registry. The major impediments for organizing and maintaining a cancer registry in our country are as follows:

1. Cancer is not a notifiable disease in India
2. Death registration system is only geared to meet legal requirements and research use is limited
3. Majority of deaths takes place at homes and not in hospitals or nursing homes; medical certificate is not mandatory for body disposal.
4. Medical documentation and medical record system management are inadequate in hospitals. Heavy patient load curtails all efforts to record cases.
5. Rural areas are underserved to diagnose or treat cancer patients

For initiating and formulating the objectives and methodology for registries, meetings were held in ICMR and Tata Memorial Hospital in 1980-81 and the National Cancer Registry Programme (NCRP) by ICMR was launched. Prior to this, we had four registries at Bombay, Pune, Aurangabad and Nagpur under the auspices of the Indian Cancer Society.

Initially the registries were of two types, the Population Based Cancer Registries (PBCR) at Mumbai (Bombay), Chennai (Madras) and Bengaluru (Bangalore) and Hospital Based Registries at Chandigarh, Dibrugarh and Trivandrum. Subsequently, the Hospital Based Cancer Registries (HBCR) at Bombay, Bangalore and Chennai were started. It was particularly gratifying to me because



the Regional Cancer Centre (RCC) in Trivandrum was the youngest RCC and we could organize the registry in RCC Trivandrum. In fact the RCC interest in cancer epidemiology and control had begun with the work of Dr. Jacob Zacharia in oral

cancer in 1970's and of Dr. Sreedevi Amma and our team in rural Kollam with massive Pap smear testing in 1978-79, the first of its kind in the country.

With sustained action, perseverance and adherence to committed objectives, the NCRP is now moving to complete three decades of its existence. Currently there are more than 23 population based registries. The progress has been substantial. However, the large missing areas should receive attention. This is essential because the life style variations existing in our country is considerable. Even the north eastern states present varied patterns, attempts are required to cover the currently missing areas of populations.

The inadequate progress in HBCRs warrants more efforts. The institutions themselves should come forward to organize such registries. These would serve as functional audits of the institution also. A functioning HBCR should be made mandatory for every dedicated cancer treatment centre, similar to the system followed by the Regulatory Board for Radiation. As the expertise is available with the NCRP, such HBCRs can be organized, perhaps a marginal financial support may be extended by government. It must be emphasized that the hospital based information forms the mainstay for good PBCRs.

Cancer control efforts require knowledge about the cancer incidence in the population as well as the pattern of occurrence of the disease. The PBCRs provide this information. The HBCRs provide evidence based information, how patient care is extended as well as their outcome. Various factors like stage at presentation, treatment effectiveness, outcome of preventive measures, can be evaluated constantly through a functioning cancer registry. The educational institutions should take special interest to advance the utility of such registries for teaching and training.

At this time it is essential to remember the sustained efforts of the members who contributed to the formation and functions of the registries in 1982. Dr. T.Hirayama and Dr. C.Muir guided us; Dr. Usha K. Luthra, Dr. Jussawalla, Dr. K.Bhargava, Dr. N.C.Mishra, Dr. B.D.Gupta, Dr. V.Shanta, Dr. S.Krishnamurthi, Dr. L.D.Sanghvi and from ICMR: Dr. A.K.Prabhakar, Dr. K.Chaudhry, Dr. D.K.Jain, Dr. R.Rangachari contributed substantially.

We were also fortunate that unique training programmes were provided by foreign agencies like University of Tampere, Finland by Dr. M.Hakama; National Cancer Institute, USA; Universities of San Francisco, Seattle in USA; Queen Elizabeth University, Perth, Australia; International Agency for Research on Cancer, Lyon, France, etc.

It is essential that the unique opportunities presented by the achieved and ongoing efforts of NCRP should be directed towards training, research investigations in etiology and epidemiology both nationally and internationally. For example, we now know that nasopharyngeal carcinoma has a higher incidence in Nagaland; gall bladder cancer in northern states; thyroid cancer in the west coast, etc. The increases in lung cancer, prostate cancer and breast cancer reported by registries are alarming. These require planned epidemiologic and etiologic investigations. We have to use these potential leads

offered by registry data to study the disease causation. Cooperation between the registries is extremely important in this regard.

Secondly, the NCRP should have a more positive role in national cancer control efforts. Thirdly, the registry data can provide the priority areas for cancer control and research in the concerned population. Sustained developments of patient care practices are essential. The HBCRs are Evidence Based Documents to evaluate the therapy protocols.

It is extremely essential to have special purpose cancer registries to learn the role of exposure to given environment which is causative for cancer. We at RCC initiated the Natural Background Radiation Registry in Karunagappally in 1990 for evaluating the health effects on exposure to natural radiation. We would need more site-specific, occupation-specific and exposure-specific registries in different parts of the country. In short, I would like to point out that the registry organization has been very productive and should be fully exploited for various control programmes. The registry system has accomplished a tremendous progress but it should not stagnate as only a collector of cancer information. In the governmental policy making level, research and education, such information should be fully utilized for systematic development of care and control of the disease. The patient care evaluation programme of NCRP, the Patterns of Care (POC) studies, though restricted to only three cancers (Head and neck, Cervix and Breast) would be extremely informative.

Dr. Bela Shah and Dr. Nandakumar have the unique distinction of achieving steady progress for a productive system of cancer registration. This is a tremendous effort and a special one because, in our country, no other disease has been evaluated with such evidence based information nationally. The Cancer Atlas project findings have been unique in this regard. The support of the Director General, ICMR, has also been very encouraging as we experienced it

even at the time of organizing the HBCR at Trivandrum.

The periodic annual review meetings conducted in November-December of every year gives boost for continuity, introspection and activity planning. In the initial years, the registry workers training was also undertaken by RCC with the support from Dr. C.Zippin of cancer registry training system at San Francisco University. Such periodic training is essential to update and to review the methodology.

The NCRP has to plan and to implement now, a programme to undertake:

1. Training in epidemiologic methods with annual meetings like IACR (International Association of Cancer Registries)
2. To encourage newer centres to start cancer

registries.

3. Statistical-Epidemiology training and research

The existing cancer registries should take a lead in this. The HBCR at RCC, Trivandrum, was instrumental for the PBCR of Trivandrum and the NBRR at Karunagappally. Similarly the PBCR at the Cancer Institute (WIA), Chennai, initiated the Dindigul Cancer Registry. The Bombay PBCR initiated three other registries in Maharashtra; the Tata Memorial Hospital initiated the rural Barshi PBCR. These demonstrate that the registries themselves should take the initiative. Finally, I would like to mention the steady leadership and support from ICMR D.G, Dr. Bela Shah (NCD) and for the programme. This has contributed immensely to the outcome.

THE IMPACT OF CENSUS 2011 DATA ON CANCER INCIDENCE RATES IN REGISTRIES UNDER NCRP - FIRST OBSERVATIONS

R. Takiar¹, A. Shrivastava², D. Nadayil¹ ¹ NCRP-COU, Bengaluru ; ² Bhopal PBCR

The National Cancer Registry Programme (NCRP) at Bangalore, is receiving the data continuously on cancer incidence cases from more than twenty Population Based Cancer Registries in India. The data so received of incidence cases is analyzed and expressed in the form of various rates like crude rate (CR), age specific rates and the truncated rates [NCRP 2010]. All these rate calculations essentially involve the knowledge of two components namely numerator and denominator. The number of cases for given age groups and cancer sites collected by the registries, serve as numerators. The corresponding actual numbers of subjects in populations-at-risk, serve as denominators which are often not always readily available.

In India, the census is providing the population figures once in every 10 years starting from the year 1951. Thus, the calculation of various cancer



incidence rates for the years between two censuses necessitates the estimation of populations for those years. The various reports published by NCRP, recently [NCRP 2006; 2008; 2009; 2010], have used the population estimates

derived by the difference distribution method (Takiar and Shobana-2009) using exponential growth rates observed between the year 1991 and 2001 to arrive at various rates for the selected registries. Now, that the Census-2011 has reported the initial population counts for all the districts and states of India, it is interesting to assess the validity of the population estimates of selected registries and thereby of various rates reported by NCRP particularly for the years

lying between 2001 and 2011.

Objectives:

1. To assess the deviations in population figures estimated earlier for the selected registries from that reported by the census 2011.
2. To assess the deviations in population growth rates estimated earlier for the selected registries from that reported by the census-2011.
3. To compare the incidence rates (Crude and Age Adjusted Rates) of selected leading sites, arrived by using the population estimated earlier with that using revised population following census 2011.

Sources of Data:

Cancer incidence data collected by the registries of Bangalore, Bhopal, Chennai, Delhi, Mumbai, Sikkim, Manipur, Mizoram, Dibrugarh and Aizawl for the year 2006-08 and respective population estimates estimated earlier along with the population figures reported by the Census 2011 formed the sources of data for the present analysis.

Methodology:

At present, the 2011 census figures are available only for all the districts of India. As the registries of Chennai, Delhi, Mumbai, Sikkim, Manipur, Mizoram, Dibrugarh and Aizawl cover the entire districts, the population totals of these registries for the year 2011 can be used as actual population at risk. The registries at Bhopal and Bangalore cover the urban population only. Therefore, the ratio of population of urban area (registry area) to district level reported for the Census-2001 was utilized to arrive at the population of registries of Bangalore and Bhopal for the year 2011 assuming the rural to urban area remained same over the decade. Now, we can visualize two sets of populations, say 2006-2008, which are available to us for all the selected registries: first is based on the population growth rate of 1991-2001 (denoted as A) and the second based on the population growth rate of 2001-2011 (denoted as B). It is also clear that both the population sets can give

different rates for the same PBCR area. The crude rates, age adjusted rates (AAR) are obtained using both sets of populations for leading sites of cancers including all-sites together for selected registries and compared.

Results:

The population figures by sex estimated using approaches A and B for selected registries are shown in Table 1. The estimated population figures for both males and females differed by less than 10% in the registries of Bangalore, Bhopal, Chennai, Manipur, Mizoram, Aizawl district and Dibrugarh district. However, the registries of Delhi, Mumbai and Sikkim showed relatively more variation as compared to estimated population figures (Table 1). This was further confirmed by the corresponding variations seen in the growth rates (Table 2). It should be noted that the registries of Delhi, Mumbai and Sikkim registered quite low growth rates during 2001-2011 as compared to 1991-2001.

The CR and AAR obtained for all-sites together for both males and females, using growth rates A and B for different registries during 2006-2008, are shown in Table 3. The difference in CRs do not appear to vary much (<5 units) by two different approaches for both males and females for the registries of Bangalore, Bhopal, Chennai, Manipur, Mizoram, Aizawl and Dibrugarh. However, the registries of Delhi, Mumbai and Sikkim showed relatively more variations in CRs. Also, compared to CRs, AARs showed more variation by selected two approaches.

The comparison of AARs by two approaches for the leading sites of lung, tongue, mouth, oesophagus and stomach for males during 2006-2008 is shown in Table 4. In general, AARs did not differ significantly by the two approaches for all the five selected leading sites and for all the registries. The comparison of AARs by two approaches for the leading sites of breast, cervix, ovary, lung and oesophagus for females during 2006-2008 is shown in Table 5. As in the case

of males, in general, the AARs did not differ significantly by two approaches for all the five selected leading sites and for all the registries.

Discussion

In India, the census is providing the population count once in every 10 years starting from the year

1951. The latest census-2011 population counts at district and state levels are released now. The estimated population figures for 2006-08 based on growth rate of 1991-2001 for various registries, which were used to provide various important rates, are bound to be different from that using growth rate of

TABLE 1: COMPARISON OF POPULATION OF 2011 BY TWO DIFFERENT METHODS(A/B), SEX AND SELECTED REGISTRIES

Registry	Males			Females		
	A	B	A/B	A	B	A/B
Bangalore	4115347	4423780	0.93	3750986	4014601	0.93
Bhopal	1069441	995533	1.07	964663	909167	1.06
Chennai	2480193	2357633	1.05	2432096	2323454	1.05
Delhi	10841097	8364139	1.30	8820157	7246377	1.22
Mumbai	8029962	6789245	1.18	6429683	5689202	1.13
Sikkim	385088	321661	1.20	335469	286027	1.17
Manipur	1308602	1369764	0.96	1308373	1351992	0.97
Mizoram	587389	552339	1.06	557785	538675	1.04
Aizawl Dist	212817	201072	1.06	205376	202982	1.01
Dibrugarh	687786	680114	1.01	659505	647634	1.02

A: Population arrived by using the Growth rate of 1991-2001;

B: Population arrived by using the Growth rate of 2001-2011.

TABLE 2: COMPARISON OF DECADEAL GROWTH RATES BY PERIODS, SEX AND SELECTED REGISTRIES

Registry	Males		Females	
	1991-2001	2001-2011	1991-2001	2001-2011
Bangalore	36.4	38.5	37.1	39.2
Bhopal	36.9	25.3	37.5	27.5
Chennai	11.7	6.2	14.5	9.4
Delhi	53.0	18.1	51.5	24.5
Mumbai	21.2	2.6	20.0	6.2
Sikkim	33.3	11.5	32.8	13.3
Manipur	16.8	25.0	19.2	26.2
Mizoram	27.9	20.3	29.8	25.4
Aizawl Dist.	27.6	20.5	29.4	27.8
Dibrugarh Dist.	12.1	10.8	15.4	13.3

**TABLE 3: COMPARISON OF CRUDE RATE AND AGE ADJUSTED RATES (2006-08)
BY DIFFERENT METHODS IN SELECTED REGISTRIES - ALL SITES OF CANCERS**

Registry	Males				Females			
	CR		AAR		CR		AAR	
	A	B	A	B	A	B	A	B
Bangalore	78.11	77.97	113.30	113.09	106.24	106.03	139.02	138.75
Bhopal	70.411	74.47	104.57	110.60	76.17	79.92	105.46	110.65
Chennai	103.47	106.85	115.17	118.93	113.29	116.62	121.12	124.68
Delhi	75.10	87.38	123.43	143.62	84.52	94.80	120.30	135.01
Mumbai	70.19	78.05	99.11	110.21	96.77	104.58	110.20	119.13
Sikkim	58.30	65.35	88.98	99.75	60.53	67.00	99.80	110.44
Manipur	52.69	51.07	72.51	70.28	55.92	54.63	72.52	70.85
Mizoram	114.07	118.62	176.30	183.84	101.32	103.60	152.65	156.08
Aizawl Dist	156.28	162.04	249.16	258.35	138.53	139.60	209.73	211.34
Dibrugarh	74.94	75.48	109.55	110.34	55.23	55.87	78.41	79.32

A : Rates arrived using the Population estimates based on 1991-2001;

B : Rates arrived using the Population estimates based on 2001-2011.

2001-2011. The classical reasons which are often quoted for such changes are: fertility, mortality, migrations and sometime natural calamities. Whatever may be the reasons for these population changes over the decade, the important thing which needs to be considered by the cancer registries is the impact of these population changes over crude and age adjusted rates reported since year 2001. These population changes may greatly modify the estimates of cancer burden in India.

It is easy to visualize the changes that are occurring in CRs of selected cancer sites by the two approaches. The changes are often proportional to deviations in the estimated populations by approaches A and B. However, it is difficult to form an idea about the changes in AARs. Clarity would emerge only after actual population figures of census 2011 by five yearly age groups are released.

It is important to observe that metros like Delhi, Mumbai have shown a great reduction in their

decadal growth rates. The reasons could be that these metros have reached their saturation point to accommodate more growth and development activities thereby resulting in development of more number of urban agglomerations surrounding these areas. While Mumbai has shown a very low growth rate, the surrounding areas of it have shown a great development. It is also important to note that Sikkim state also has registered a negative growth rate.

One of the important responsibilities of NCRP is to provide population estimates for various registries following uniform procedure, so that, the incidence rates reported are unambiguous. The PBCR reports which have been published by NCRP for reporting incident cancer cases after the year 2001, have mainly used the exponential population growth rate during 1991-2001 (Takiar and Shobana, 2009) to arrive at appropriate annual populations at risk to derive many useful rates for all the registries working under its network. Thus, the various rates which have been

reported from time to time after the year 2001 and the estimates of cancer burden provided for the country are dependent on these population estimates. If the annual population estimates by both approaches tally

greatly for the various registry areas, then we have every reason to be relaxed. On the contrary, if they differ greatly, then we have every reason to worry and need to correct the rates accordingly.

TABLE 4: COMPARISON OF AGE ADJUSTED RATES (2006-08) BY DIFFERENT METHODS IN SELECTED REGISTRIES - MALES

	Lung		Tongue		Mouth		Stomach		Oesophagus	
	A	B	A	B	A	B	A	B	A	B
Bangalore	10.7	10.7	4.3	4.2	3.3	3.3	9.5	9.5	7.9	7.9
Bhopal	11.8	12.5	9.5	10.1	9.9	10.4	2.8	3.0	6.0	6.4
Chennai	12.9	13.3	5.7	5.9	7.1	7.3	11.8	12.1	7.7	7.9
Mumbai	9.6	10.7	4.5	5.0	7.1	7.9	4.8	5.3	4.3	4.8
Delhi	13.9	16.2	8.5	9.9	5.6	6.6	3.2	3.7	4.6	5.4
Sikkim	8.1	9.1	1.6	1.7	3.1	3.5	12.3	13.8	9.9	11.1
Manipur	17.0	16.5	1.5	1.5	1.6	1.6	7.8	7.5	3.5	3.4
Mizoram	24.4	25.4	2.7	2.8	2.3	2.4	42.8	44.5	20.6	21.4
Aizawl Dist	36.0	37.3	4.8	5.0	3.1	3.2	55.4	57.4	34.2	35.5
Dibrugarh	6.1	6.2	5.3	5.3	9.7	9.7	9.4	9.4	18.8	19.0

A : Population arrived Using the Growth rate of 1991-2001;

B : Population arrived by using the Growth rate of 2001-2011.

TABLE 5: COMPARISON OF AGE ADJUSTED RATES (2006-08) BY DIFFERENT METHODS IN SELECTED REGISTRIES - FEMALES

	Breast		Cervix		Ovary		Lung		Oesophagus	
	A	B	A	B	A	B	A	B	A	B
Bangalore	36.1	36.0	21.1	21.1	7.8	7.8	3.9	3.8	6.4	6.4
Bhopal	25.4	26.6	18.9	19.9	7.7	8.1	2.7	2.8	5.4	5.7
Chennai	31.5	32.4	18.5	19.1	7.4	7.6	4.1	4.2	4.3	4.4
Delhi	32.3	36.2	17.9	20.0	8.9	10.0	3.6	4.0	2.8	3.1
Mumbai	32.3	34.9	14.0	15.2	7.1	7.7	3.8	4.1	2.9	3.2
Sikkim	7.2	7.9	10.9	12.0	4.2	4.7	7.7	8.5	7.4	8.1
Manipur	8.4	8.2	9.4	9.2	4.0	3.9	12.4	12.1	1.9	1.9
Mizoram	15.1	15.5	17.6	18.0	3.0	3.1	26.3	26.9	3.0	3.1
Aizawl Dist	23.3	23.5	22.4	22.6	4.1	4.1	38.7	39.0	4.9	4.9
Dibrugarh	12.1	12.2	6.1	6.2	5.6	5.6	1.7	1.7	11.4	11.6

A : Rates Arrived Using The Population Estimates Based On 1991-2001;

B : Rates Arrived Using The Population Estimates Based On 2001-2011.

The CRs provided in Table 3 show that the impact of population change is not much on crude rates as they differ marginally by 10% or less. Comparison of AARs should be attempted with caution as these rates are hypothetical and are functions of assumed age group distributions. However, the great change in AARs as compared to that reported warrant that there is a need to look afresh on ranking of the registries based on their AARs. However, a comparison of AAR of selected five sites each for males and females, suggest that the rates have not changed much. To one, it may look surprising and unbelievable but the fact is that sites with low incidence rates tend to show least perceivable changes in their rates. The reason for this is that effect of census figures would be maximum around 2011 and least in the beginning years of the census. Let us also consider the case of breast cancer. It is the most common cancer in most registries. It showed a change of 3.9 units (36.2-32.3) for Delhi and 2.6 units (34.9-32.3) for Mumbai registries. As far as individual sites are concerned, we need not panic, as even the registries with maximum changes in the population at risk, have not shown a great change in their rates. But this might impact the reporting the burden of cancer for the country.

Census 2011 has only reported the population counts for the districts and states. The five-year age-group distribution is yet to be provided. Until then, it is difficult to measure the impact on AARs in various registries. However, till then we can use the already published age specific and AARs. These are our preliminary observations on the census 2011 figures reported. However, more in-depth analysis can be attempted in the near future.

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**Population Based Cancer Registration
is sine-qua-non for Cancer Control**

Rural Cancer Registries Under Tata Memorial Centre, Mumbai

Primarily concern of a population based cancer registry is to study cancer incidence, prevalence, time-trends and overall survival in the community. To know the cancer burden from rural Konkan area and to help in evaluating the impact of screening activities ongoing in this region, establishment of a rural cancer registry was essential in these areas.

BKL Walawalkar (BKLW) hospital at Dervan, Ratnagiri district, is a fully equipped general hospital having diagnostic and treatment facilities for cancer care also. Formal inauguration of Rural Population Based Cancer Registry at Dervan, covering entire Ratnagiri district population with BKLW as a base hospital was done on February 7, 2009 by Dr. Anil Kakodkar, Chairman of the Department of Atomic Energy.

Ratnagiri District has total population of about 18 lakhs divided into 9 Talukas. Six social investigators (SI) & one data entry operator have been appointed. Training in all aspects of cancer registration was provided by the Mumbai HCR staff. Besides TMH and the base hospital, the various sources for case finding are pathology labs, medical practitioners, health workers, PHCs, death records from gram-panchayats etc. Other hospitals which serve the registry population, although situated well outside the registry area are also included as data sources. The SI also visits households from allotted area to confirm residential status and collect relevant information from medical papers if available and/or by interviewing the patient/relative regarding date and hospital attended to get reliable information directly from the specified hospitals to obtain completeness of data. Data are processed periodically at registry office. Exchange of information among SIs for cancer/suspicious cases from different sources

to eliminate duplicate registration/authenticate or cross-check the data and for achieving completeness of relevant information is done once in a fortnight. The registry core proforma has been field-tested and finalized for data collection. Data entry software has been designed and developed by TMH registry staff. A close monitoring and continuing training are being provided by TMH registry staff by periodical visits and constant communication. The data so collected is being checked for precision and completeness by registry staff. Data entry has been initiated for the confirmed cancer cases. Dervan PBCR registers invasive cancer cases/deaths from 1st January 2009 onwards. In Ratnagiri district, 700 cancer cases have been registered till date. Data collection for the year 2010 and 2011 are in progress in this district.

Another registry has been started in Sindhudurg district in the Konkan area, in April 2011. This district has data collection ongoing after recruitment of additional staff with adequate training.

Dr. B. Ganesh
Professor and Head
E-mail: bganeshbala07@yahoo.com

Hospital Based Cancer Registry, Bhopal

Principal Investigator: Dr. Neelkamal Kapoor
Co-Investigator: Mr. Atul Shrivastava

Since the year 1986, a PBCR is functioning at Bhopal under the network of NCRP. The registry is placed in the Department of Pathology, Gandhi Medical College, Bhopal. Gandhi Medical College, along with its 1000 bedded associated hospital, is the premier medical teaching institute of the state of Madhya Pradesh. The institute is a tertiary health care center of the State, and is also involved in providing comprehensive cancer care to its patients. The institute is also one of the leading sources of registration of PBCR.

Under the umbrella of NCRP, a Hospital Based Cancer Registry (HBCR) is now established at

Gandhi Medical College, Bhopal. The registry started working from 1st of January 2011. Since 1st of January 2011, the HBCR has registered a total of 726 cases out of which 381 are males and 345 females. Cancers of the oral cavity were more frequent among

males whereas cancer of cervix was the leading site of cancer among females followed by cancers of the breast and ovary. This appears to be in direct contrast to cancer pattern in PBCR wherein breast was the leading site among women followed by cervix.

Cancer Registry In Manipal, Udupi District, Karnataka

Systematic cancer registration commenced in 2010 at the Manipal University. The Hospital Based Cancer Registry is undertaken by the Department of Oncology, Kasturba Medical College, Manipal. Data capture is from Shiridi Sai Baba Cancer Hospital and Research Centre, a 280 bed hospital exclusively for cancer, providing services to patients from Udupi, Shimoga, Karwar, Chikamagalur districts in Karnataka and also near states of Goa and Kerala. NCRP guidelines and proforma are utilized for data collection and NCRP software is used for data entry and transmission to NCRP-COU.

A Population Based Cancer Registry is based in the Department of Public Health, covering the entire Udupi district with a population of 1,177,908 in 2011 and registering cancer cases from 52 health facilities comprising hospitals, pathology laboratories, nursing homes and imaging centres in government/private sectors. In-house developed software is used for data entry and data processing is done following standard

norms. Since July 2010, the Department of Public Health is conducting cancer screening camps periodically in Udupi district. A cancer registry workshop was conducted on August 16, 2011 in Manipal and the participants were faculty members from medical colleges and hospitals in Udupi and Mangalore. The objectives of the workshop were to build capacity in both institutions and for personnel to participate and contribute to the registry program.

A total of 700 (M: 328; F: 372) invasive cancer cases of year 2010 for all sites together were registered. The crude rate (CR) was higher among women (63.0) than men (55.6). Breast cancer was the highest (CR: 20.5) among women and cancer of the oesophagus (CR: 5.7) among men.

A total of 184 deaths were registered from vital statistics division. Expansion of the registry is being planned to include the neighbouring districts with involvement of other institutions/hospitals in the region. The Department of Public Health is also planning more workshops and screening camps which will strengthen the Cancer Registry in Manipal.



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IN MEMORIUM



A Few Words On Dr. Yeole

Dr. B.B. Yeole, born on 26th August 1939, completed his Masters degree in Statistics from University of Pune. He worked with IIPS at initial stage of his career and later joined Indian Cancer Society - Cancer Registry Division in 1974 as a Statistician. On 18th Jan 2011 Dr. Yeole left for heavenly abode.



26th Aug 1939 - 18th Jan 2011

Dr. Yeole - Director - Cancer Registry Division has taken a lot of efforts to setup the network of cancer registries in India. With his hard work and under his guidance, many registries were founded. He is one of the national experts, who contributed to the success of the cancer registry operations in the country from inception. He made several presentations in scientific forums both in India and abroad. Being part of ICMR, he shared his expertise in guiding research projects funded by ICMR and its affiliated institutions.

His contribution for research projects in almost all areas of non-communicable diseases is very significant and evident from many scientific publications, both in national and international journals. He was involved in various capacities in the preparation of monographs, technical reports, task force project reports and reports based on cancer funded by ICMR.

In 1997, he was awarded Ph.D. in Epidemiology from the University of Tampere, Finland for his work

on "Cancer in India in the year 2001". He has significant contributions for various research projects in collaboration with ICMR and IARC. He presented 66 scientific papers in conferences both at national and international levels. He authored 41 monographs, 38 research articles in Indian journals and 67 in international journals. His research work and contributions have been recognized and fetched him several awards.

B.B. Yeole A Friend And Guide To Everyone P. Gangadharan

It is awfully distressing and painful for me to write an obituary for my dear friend Dr. Balakrishna B. Yeole. We knew each other well for the past 4 decades, from the day he joined the Bombay Cancer Registry of Indian Cancer Society as an assistant to the statistician Mr. V.A. Deshpande. I was in the interview committee for selecting the candidate. Apart from MSc degree in Statistics, he had completed his training in Demography in the International Institute for Population Studies, Bombay. Thus, he was well equipped to do statistical work as well as demography for the registry.

As the in-charge of the cancer registry at Bombay, he extended the population-based cancer registration to Pune, Aurangabad and Nagpur. He looked after all the 4 population based cancer registries for many years before the National Cancer Registry Programme of Indian Council of Medical Research took shape in 1982. He was undoubtedly one of the leading architects of cancer registration in India under the National Cancer Registry Program (NCRP) and outside.

His unwavering contribution to scientific knowledge on the subject was enormous. His

penchant for writing research articles on cancer registration was unmatched. He had authored more than 150 statistical - epidemiological publications on cancer. Several other registries and statisticians have collaborated in his effort on joint studies. He was such an affable person unmindful of his vast experience and seniority that even junior members from registries shared quality time with him on subject matters. Further, many registry staff were benefited by taking training in the Bombay Cancer Registry.

He traveled widely to visit several cancer registries all over the world and presented research papers in most of the scientific meetings of International Association of Cancer Registries. It was always a pleasure and a privilege to have him in the Annual Review Meetings of the National Cancer Registry Programme of Indian registries. His well thought out comments and suggestions were

appreciated by all and offended none. He was a lovable friend, both in the meetings and outside of it without rancor or remorse towards anyone. Everyone remembers that during the last annual review meeting of NCRP in Bangalore in December 2010, when the session came to a close, he stood up, raised his hands and the statement, "Well friends, I will meet you all in the next review meeting if I am alive !!!" Was it a premonition?

He was a friend, guide and a critic loved by all colleagues. We used to communicate at least twice a month for the past several years wherever we were located. He has left us some work to be completed, which now has turned out to be a mission for me. We offer our condolences to his dear wife and children. My prayers for this departed friend. View this obituary in <http://www.iacr.com.fr/Dr%20yeole.pdf>.

Dr. B. B. Yeole: Bhishma Pitamah of Cancer Registry - C. Ramesh

I knew Dr. B.B. Yeole since 1986, when I joined the hospital based cancer registry at Kidwai Memorial Institute of Oncology. He was always encouraging, instilling lot of confidence among juniors and colleagues. His vast experience (probably the most experienced) helped almost all the registry staff of NCRP family to learn from him and gain confidence in the working of registry. Age never bothered him and his energy level was so high that he could publish paper after paper and attend almost all conferences/workshops/training concerning cancer registry activities. I found him to be immensely emotional, very affectionate and a wonderful human being. I can never forget his preparation of "tomato rasam" which was enjoyed by 50-60 people (mostly Finnish) who attended my PhD public viva-voce in Tampere, Finland. I still remember the emotional tears that rolled down his eyes when he came to

congratulate me at the award ceremony. The NCRP workshops/ARMS will miss his emotionally charged comments/advice. Among our registry friends, he was fondly addressed as "Bhishma Pitamah" of cancer registry and thus he needs no tribute than this. Ironically he had his date with the inevitable while working. May his soul rest in peace and may his family gain the strength to bear the loss.



BB.Yeole, K.Ramachandra Reddy, B. Ganesh, P. Gangadharan and C.Ramesh

**Yeole - A Cancer Epidemiologist,
Statistician and Demographer In One**

B. Ganesh

Dr. BB. Yeole, was a very warm, kind-hearted person and the driving force for the Indian cancer registries. He was a very sincere and dedicated worker in his profession, and by nature, a very adorable person. He was the symbol of happiness and no-string-attached personality, because, he was always easily approachable by all the people, from highest to the lowest category. He lived a well deserved cherished life.

I personally knew him for the last 27 years and each time we met, our interaction was always interesting. He was a very able Cancer epidemiologist, Statistician and a Demographer by qualification. It was a pleasure to hear him saying about his conversations with Dr DJ Jussawalla, the founder of Mumbai Cancer Registry. He was always the man the NCRP headquarters/technical wing would look forward for advice regarding the registry programme. His insight into the data was his hallmark ability to scrutinize and offer solutions for any problematic situation in abstracting data. Under his leadership, the Mumbai registry prospered and he strengthened the satellite registries of Indian Cancer Society like Pune, Nagpur and Aurangabad, which are currently part of NCRP. He used to churn out at least 3 publications of good quality in a year, on an average. He was a friend of Tata Memorial Centre for several years and many clinicians knew him personally. He was honoured with the Docent title by the University of Tampere, Finland, that granted him the license to be a teacher in their universities. The Finnish Doctoral students of India fondly remember him and pay our rich tributes to this great soul, who believed in only one thing, "Hard work never fails and will never go unrecognized". The younger researchers in the cancer registries should take a leaf out of his life and progress.

**AWARDS RECEIVED
BY DR.B.B. YEOLE**

- ❖ **SANDOZ ORATION AWARD**
- ❖ **RASHTRIYA GOURAV AWARD**
- ❖ **B.G.PRASAD AWARD**
- ❖ **ADVANI BRAGANZA ORATION AWARD**
- ❖ **FRIENDSHIP FORUM AWARD**

Yeole - A Stalwart in Cancer Registration

A. Nandakumar

In the demise of Dr. B.B. Yeole, the National Cancer Registry Programme has lost a veteran and stalwart vis-a-vis cancer registration in India. His contribution to the NCRP in general and the Bombay Cancer registry in particular will be long remembered.



B.B. Yeole, A. Nandakumar, Ex-DG, ICMR, Ahmedabad



R.Sankaranarayanan, D.K. Jain, B.B. Yeole, P. Gangadharan



Yeole in NCRP workshop, Dibrugarh



Yeole with Registry Team



Yeole with Dr. Bela Shah in NCRP Workshop, Bhopal



Yeole With M.P.Curado, Foreign Delegates In IACR Meeting,



Dear Yeole Saab, Good Bye



*Excerpts from The Times of India,
Mumbai, August 28, 2011*

Doctor Who Shaped Tata Hospital Dies

Dr. Ketayun Ardeshir Dinshaw, a leading radiation oncologist and an institution builder, passed away on Friday (August 26). Born in Kolkata, she had her medical training at the Christian Medical College, Vellore, and specialization in Radiotherapy and Oncology at Cambridge. At the Tata Memorial Hospital she worked for over 35 years and retired in November 2008 after serving as its director for 13 years.

Apart from her outstanding expertise in cancer treatment, she invigorated the spirit of cancer prevention, cancer research and international collaborations with the WHO, IAEA, UICC and several other organizations. The hospital's research wing, ACTREC, based in Kharghar, is the fruit of her vision. She pushed for the development of indigenous

radiotherapy machine and christened it Bhabhatron; it's being used and installed in over 20 centres in India and has been donated to some developing countries as well. Dr. Dinshaw served as the President of the International Society for Radiation Oncology, was a board member of the Atomic Energy Regulatory Board, was awarded the lifetime achievement award by the Indian Nuclear Society and was conferred 'Padmashree' by the President of India.

Her guiding principle is aptly summed up in the motto of the Tata Medical Centre inaugurated recently by Ratan Tata in Kolkata, namely, "state of the art and straight from the heart too", according to Ronen Sen, former ambassador to the US.

16th Nov 1943 - 26th Aug 2011

Dr. K. Ramachandra Reddy: Superannuation from service on September 30, 2011
Registry team in KIMIO

Dr. K. Ramachandra Reddy, joined Kidwai Memorial Institute of Oncology (on deputation from state service) in 1981 as Biostatistician and was subsequently absorbed into the institute. He was instrumental in the establishment of PBCR in Bangalore along with Dr. A. Nandakumar. He retired on September 30, 2011, as Professor and Head, department of Epidemiology and Biostatistics, which included both PBCR and HBCR. In addition to his job, he served the institute in various capacities as the Head of Medical Records, Officer in-charge, Hospital Maintenance, Officer in-charge, Dharmashala, to name a few.

It is indeed laudable achievement that he had served the institution and the cancer registry programme for almost three decades. A farewell from the staff of department of Epidemiology and Biostatistics was held on September 30, 2011 and on the same day, he was given a warm farewell from the Institute. We appreciate his well deserved freedom and wish him a very happy, healthy and peaceful retirement life.



**Dr. K. Ramachandra Reddy
 with Bangalore
 Registry Colleagues**

FAREWELL

Dr. Kishore Chaudhry, Ex Scientist 'G', Non-Communicable Division in ICMR, had obtained voluntary retirement from service on July 31, 2011. He had been instrumental in many an interesting discussions and decisions during the annual review meetings. NCRP registry personnel acknowledge his active role and appreciate his contributions to registry programme.

**Cancer Incidence In 5 Continents (CI5)
 Volume 10 Call For Data**



Dr. R. Swaminathan, as one of the editors of CI5 Volume 10, participated in the first meeting held in International Agency for Research on Cancer (IARC), Lyon, France, during March 28-29, 2011. On September 1st 2011, in collaboration with the International Association of Cancer Registries (IACR), the IARC launched a call for datasets to be included in CI5 Volume 10. PBCRs in India have also been individually contacted to contribute to this flagship publication, as part of compilation of cancer incidence statistics and serve as an invaluable resource for cancer researchers and those involved in cancer control worldwide. Volume 10 will provide results for cancers incident in the period 2003-2007. The deadline for receipt of data is December 1st 2011.

For more details, the registries can contact ci5@iarc.fr or visit <http://www.iacr.com.fr>

Efforts on Making Cancer as a Notifiable Disease

Cancer Declared As Notifiable Disease In the state of West Bengal

06 Jan 2011 - <http://www.d-sector.org/article-det.asp?id=1485>

Cancer has been declared as a notifiable disease by West Bengal government. The administration has, made it compulsory for the hospitals and even doctors to report to every case that comes to their notice.

A notifiable disease is supposed to be reported to the government authorities, to monitor the disease and give an early warning of public outbreaks. Also the direction is aimed at maintaining a proper database and better surveillance of the ailment. The order issued by the state health department has made it mandatory for all medical establishments to report the number of cancer patients at their hospitals or centers to the Chittaranjan National Cancer Institute (CNCI). The declaration is supposed to help in checking the spread, cause and treatment of the disease.

Bid To Make Pvt Hospitals Keep Cancer Patients' Count - Sep 18, 2011

New Delhi: Every hospital in India - private or public - may soon be bound to inform government on the number of cancer cases they treat.

At present, highly infectious diseases like plague, polio, H5N1 bird flu or the H1N1 swine flu figure in the list.

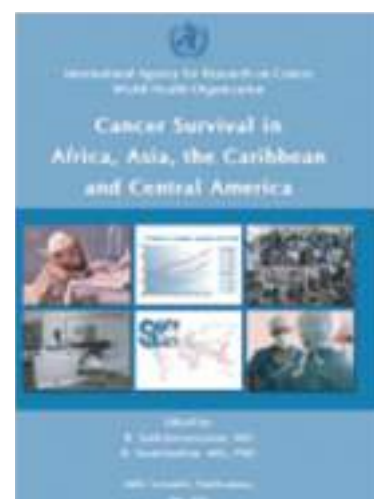
Cancer will become the first non-communicable disease (NCD) to be bracketed under the same category. About 50 top scientists, who are part of the Scientific Advisory Body of the National Centre for Disease Informatics and Research (Bangalore), took the decision on Thursday.

Translational Research

Cancer Survival In Africa, Asia, the Caribbean And Central America - Survcan

Editors: R.Sankaranarayanan, R.Swaminathan,

SURVCAN provides survival estimates of 564,606 cancer patients registered between 1990 and 2001 in 27 PBCRs across 14 countries reflecting the general efficiency of cancer health



services and giving a key indicator of progress in cancer control in those regions. Survival statistics on characteristics like age, sex and clinical extent of disease were portrayed for PBCRs in Barshi (Jayant et. al), Bhopal (Dikshit et. al), Chennai (Swaminathan et al), Karunagappally (Jayalekshmi et al) and Mumbai (Yeole et al). B.Ganesh, K.Jayant and A.Mathew from NCRP network made valuable contributions as authors of the introductory, methodological and overview chapters. SURVCAN can be accessed at <http://survcan.iarc.fr/> and the whole book can be downloaded as a pdf file from the same site. The website has dynamic features that facilitate generation of comparative statistics by registry or by cancer site on data quality indices, follow up and survival. NCRP, as part of translational research, is striving to bring out such a compilation of survival statistics for India.

All PBCRs under NCRP are urged to take concerted efforts for the success.

AHMEDABAD

Dr. Parimal Jivarajani delivered the Dr.V.G.Patel Memorial Oration on Screening for Cancer organized by the Indian Medical Association, Vadodara Branch, Baroda, on January 30, 2011.

BHOPAL PBCR

PBCRDM software developed by NCRP was tested at Bhopal and is now being used for complete data management. With the use of this software, a considerable reduction in time of submission of better quality data was made possible. The registry submitted the data for the years 2009 and 2010 on 30th of September 2011. In order to improve cancer mortality data, information on all cause mortality is being collected by the registry, which is matched with the incidence data. The process has shown an improvement in the Mortality/Incidence ratios. Digital transfer of data from sources of registration to the registry data base is being tested from two sources of registration. The quality and completion of data transferred digitally is compared with that of the data collected manually. Initial comparison has shown no significant difference in the two data sets. Thus, a considerable reduction in manpower can be done with the digital transfer of data, but the process requires a lot of training for the staff handling the data at these sources and monitoring in the beginning.

THIRUVANANTHAPURAM

A. Mathew won the best paper award by Alumni Association of Department of Statistics, University of Kerala, in 2011, for her publication: Physical activity level among urban and rural women in south India and the risk of breast cancer: a case-control study. *Eur J Cancer Prev* 2009;18: 368-376

A. Mathew (as invited speaker/chair-person), M.C. Kalavathy (as delegate) and P.S. George (as speaker) participated in national level conferences.

BANGALORE**Workshop/Training programmes**

The department conducted a workshop on "Cancer Registration System" on 27th of August 2011 in collaboration with NCRP-COU. Heads of all major Hospitals/Nursing Homes/Laboratories in Bangalore providing data to Bangalore PBCR participated in the meeting and their co-operation was sought to provide data on resident cases seen at their Institution(s). Dr. K. Ramachandra Reddy delivered a talk on "Cancer Registration System in India". The NCRP-COU team gave a demonstration on the software developed to capture data from the sources. Dr. A. Nandakumar spoke on importance and utility of cancer registry data and emphasized on the importance and efforts to make cancer as a notifiable disease. He assured of all possible support to the sources from NCRP through KMIO. The feedback obtained from the participants was encouraging.

One day training programme was conducted on 27th July 2011 for the registry staff of Arunachal Pradesh, Nagaland, Chandigarh and other places about cancer registry operations and practical exercises about abstraction of data from case files and ICD coding were carried out. Dr. Ramachandra Reddy highlighted on the topic of cancer registration system in India.

International visit

Mr. D.J. Jayaram, Senior Investigator, DEB, visited Tampere School of Public Health to finalise his Ph.D. work in May 2011.

Projects

Dr. C. Ramesh is one of the co-investigators of a variety of projects in different disciplines of research in KIMIO: "INDOX Case-control study on Colorectal Cancer"; "Oral Cancer A life course approach", study, University of Adelaide, Australia; "Promoter methylation of DNA repair Genes in Ovarian Carcinoma correlation with disease characteristics and prognosis" An ICMR project.

Presentations

Dr. C. Ramesh actively participated as a panelist (1), invited speaker (8) and delegate (1) in a variety of cancer research programmes.

CHENNAI

Mrs. R. Rama was awarded PhD in Statistics by Madras University on August 11, 2011 for her work on "Estimating and modelling cancer survival in registry based censored data". Congratulations to Dr. Rama on this feat.



Dr. R. Rama is conferred with Prof. P.V. Sukhatme award by the ISMS for her publication, "Cure models for estimating hospital-based breast cancer survival" in Asian Pac J Cancer Prev 2010.

Mr. S. Balasubramanian got the best poster award in 33rd IACR Annual Meeting in Mauritius on October 13, 2011 for his presentation titled, "Tobacco related cancer pattern in urban and rural areas in Tamil Nadu, South India".

HOSPITAL CANCER REGISTRY, TMH, MUMBAI

B. Ganesh from HCR is one of the co-investigators in the ongoing oesophageal cancer screening programme in Ratnagiri district, Maharashtra.

B. Ganesh was the principal author of the paper titled, "Risk Factors for Lung Cancer : A Case-Control Study from Mumbai, India", which was accepted for oral presentation in Asia Pacific Conference on Tobacco of Health (APACT 2010), Sydney, Australia held in October 6-9, 2010.

MUMBAI PBCR

Mumbai Cancer Registry, Indian Cancer Society was short-listed for the Spirit of Humanity Awards of Americares in the category of Oncology Services for the year 2011 for the continuous research work and function organized on 2nd April 2011 at Mumbai.

Mrs. Shravani Koyande, Mrs. Anupama Phadke, Miss Vaishali Thorat, Mr. Omkar Gaikar, had participated in a variety of training programs in 2011.

SIKKIM PBCR

Mr. Saroj Deep Sapkota, Programmer in the PBCR attended a course on "Principles and Practices on Cancer Prevention" from July 11 to August 5th 2011 at the National Cancer Institute, Rockville, Maryland, USA.

A comprehensive presentation on "Cancer scenario in Sikkim", was made by Dr. Y. Verma, to the state ministry of Health Care Human Services and Family Welfare, in the presence of the minister, Mr. D.N. Takarpa.

The registry had provided valuable inputs in the evaluation of the National Cancer Control Programme (NCCP) in June 2011 conducted by the National Institute of Health and Family Welfare, New Delhi.



UICC/IARC Course On Cancer Registration and Descriptive Epidemiology Principles and Methods:

28 Feb to 4 March 2011 Tata Memorial Centre, Mumbai

This course was held to build up cancer registration capacity in Asia and to train participants in Canreg-5 software. The faculty included D.Forman, F.Bray, M.Ervik from IARC and R.Dikshit, R.Swaminathan, P.Dhillon, A.Budukh, K.M.Mohandas from India. Fourteen international (from Indonesia, Srilanka, Mongolia, Philippines, Nepal, Thailand, Oman, Pakistan) and fifteen national delegates comprising statistician, epidemiologist, data manager and senior cancer registry staff were benefited.



Institute (WIA), Chennai, were the delegates from India, who attended this course.

This course is conducted every year at IARC, Lyon, France, during June-July and invites applications from interested candidates working in cancer registries from low or medium resource countries. Financial support is available for a limited number of participants. For application form and more details, contact cor@iarc.fr or visit www.iarc.fr



IACR Annual Meeting, Mauritius, 2011

The 33rd Annual Meeting of the International Association of Cancer Registries (IACR) was held in Mauritius during October 10-13, 2011. The delegation from India included S. Balasubramanian from Chennai PBCR, M. Dhar from Mysore, R. Dikshit from TMH, Mumbai, S. Koyande from Mumbai PBCR, N. Panse from Barshi PBCR besides R. Swaminathan from Chennai as IACR representative. Oral/poster presentations on a variety of registry related data were made. The next IACR Meeting is scheduled to be held in Cork, Ireland, during September 17-19, 2012. Financial support is available for a limited number of participants to attend the meeting. For further announcements, visit <http://www.iacr.com.fr/> or contact iacr@iarc.fr for more details.

Summer School 2011 at IARC

The summer school on Cancer Registration and Epidemiology was held at the International Agency for Research on Cancer, Lyon, France, during June 20 -July 8, 2011. Dr.Alok Mathur from DGHS, New Delhi, Dr.Nitin Gangane from Mahatma Gandhi Institute of Medical Sciences, Wardha, Dr.Jayesh Solanki from GCRI, Ahmedabad, Dr.Gigi Thomas from RCC Trivandrum and Dr. J.S. Malliga from Cancer

Recent Publications On Or Using NCRP Cancer Registry Data

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Dikshit RP, Mathur G, Mhatre S, Yeole BB. Epidemiological review of gastric cancer in India. *Indian J Med Paediatr Oncol*. 2011;32(1):3-11. PMID: 21731209.

Dikshit R, Kanhere S, Surange S. Cancer survival in Bhopal, India, 1991-1995. *IARC Sci Publ*. 2011;(162):107-13. (<http://survcan.iarc.fr/survivalchap13.php?Id=13>) PMID: 21675412.

Ganesh B, Sushama S, Monika S, Suvarna P. A case-control study of risk factors for lung cancer in Mumbai, India. *Asian Pac J Cancer Prev*. 2011;12(2):357-62. PMID: 21545194.

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Ganesh B, Swaminathan R, Mathew A, Sankaranarayanan R, Hakama M. Loss-adjusted hospital and population-based survival of cancer patients. *IARC Sci Publ*. 2011;(162):15-21. PMID: 21675402.

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Jayant K, Nene BM, Dinshaw KA, Badwe RA, Panse NS, Thorat RV. Cancer survival in Barshi, India, 1993-2000. *IARC Sci Publ*. 2011;(162):101-6.

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Khetan V, Sengupta S. Twenty-year trends of retinoblastoma under five hospital-based cancer registries: Few observations. *Indian J Cancer*. 2011;48(3):371-2. PMID: 21921344.

Ramnath T, Nandakumar A. Estimating the burden of cancer. *Natl Med J India*. 2011;24(2):69-71. PMID: 21668046.

Murthy NS, Shalini S, Sastry NB, Suman G, Sreekantaiah P, Mathew A. Increase in incidence of cancer of corpus uteri: estimation of time trends an Indian scenario. *Eur J Cancer Prev*. 2011;20(1):25-32. PMID: 21048502.

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Sankaranarayanan R, Swaminathan R, Jayanth K, Brenner H. An overview of cancer survival in Africa, Asia, Caribbean and Central America: the case for investments in cancer health services. *IARC Sci Publ*. 2011;(162):257-91 (<http://survcan.iarc.fr/survivalchap32.php>) PMID: 21675431.

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OTHER PUBLICATIONS BY NCRP REGISTRY STAFF

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