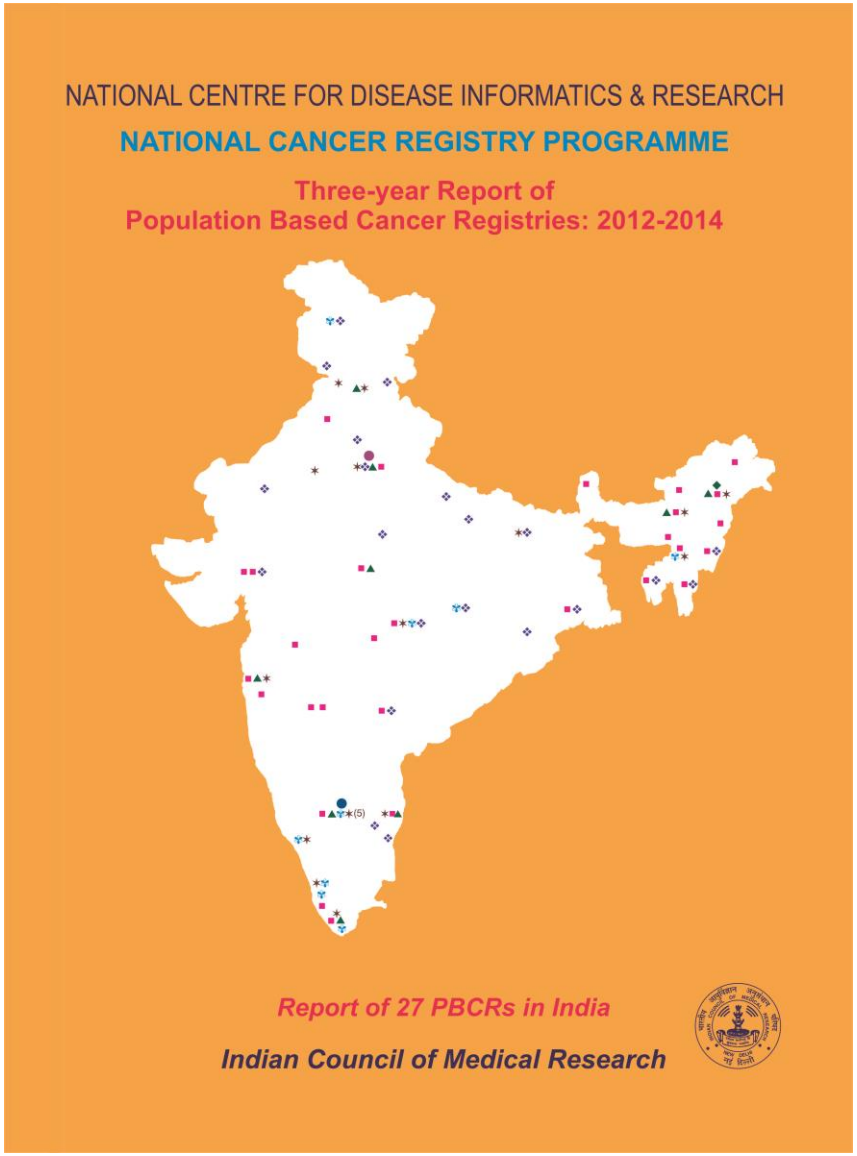
PBCR, HBCR REPORT 2012-2014



Cancer Registration and Epidemiology

Essential basis for:

-Cancer Research

-Clinical Cancer Patient Care

-Cancer Control

NCRP-NCDIR has been functioning as the Intelligence Unit in these activities

The new centre has the strength of CLINICAL NEUTRALITY and INDEPENDENCE

NCRP-NCDIR

- Means to a purpose & not a purpose in itself
- Necessary for any RATIONAL progr. in CaCo
  - NCCP based on NCRP data
  - Descr. Epid. – magnitude & patterns, trends
  - Priorities, Indicators and Evaluation of Ca Co
  - Cancer Control Research
- Set Priorities for geographic and organ site specific cancer research
- Patient Care – Defiencies, late stage, compliance
  - laid framework to develop clinical trials that are appropriate for patients in India

Impact of NCRP

FRAMEWORK FOR

DEVELOPMENT OF DISEASE – CANCER

INFORMATICS

Foundation for Electronic Data Capture, Networking and In-house (IT NOT for PROFIT) Software Modules

Information Technology and Informatics in the Medical Context

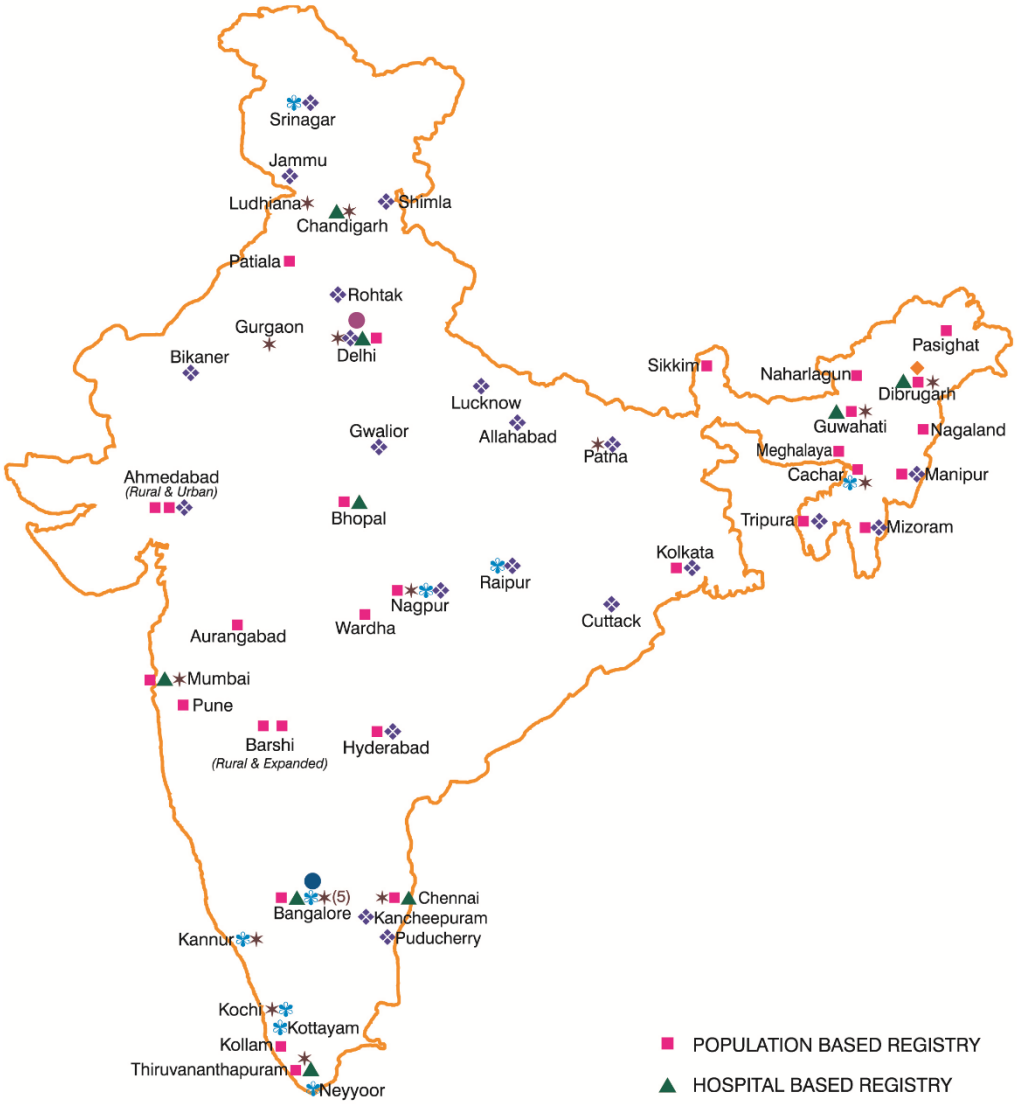
Most if not all the Software Application Programmes developed by or for hospitals are oriented towards Hospital Services whereas the Software Modules of NCDIR are geared towards:

- **Cancer Registration and related outputs**
- **Scientific Evaluation of Patient Care and**
- **Clinical/Epidemiological/Control Research and Public Health thereof.**

NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH

NATIONAL CANCER REGISTRY PROGRAMME

(Indian Council of Medical Research)

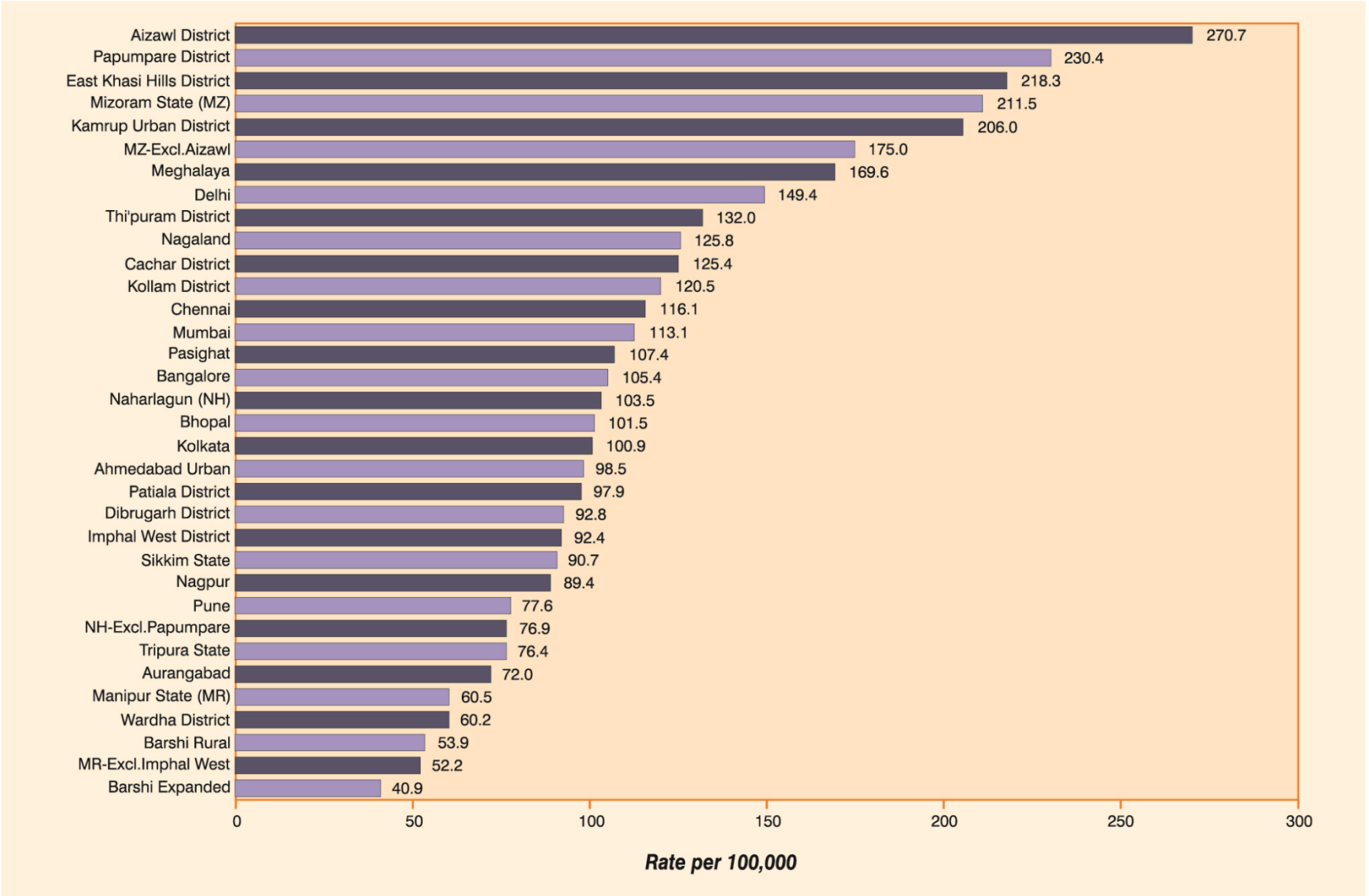


- ICMR HEADQUARTERS
- NCDIR-NCRP
- MONITORING UNIT, NORTH EAST PBCRs
- POPULATION BASED REGISTRY
- HOSPITAL BASED REGISTRY
- PATTERNS OF CARE AND SURVIVAL STUDIES
- CENTRES USING HBCRDM SOFTWARE
- HBCR IN REGIONAL CANCER CENTRES

Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

ALL SITES (ICD-10: C00-C97)

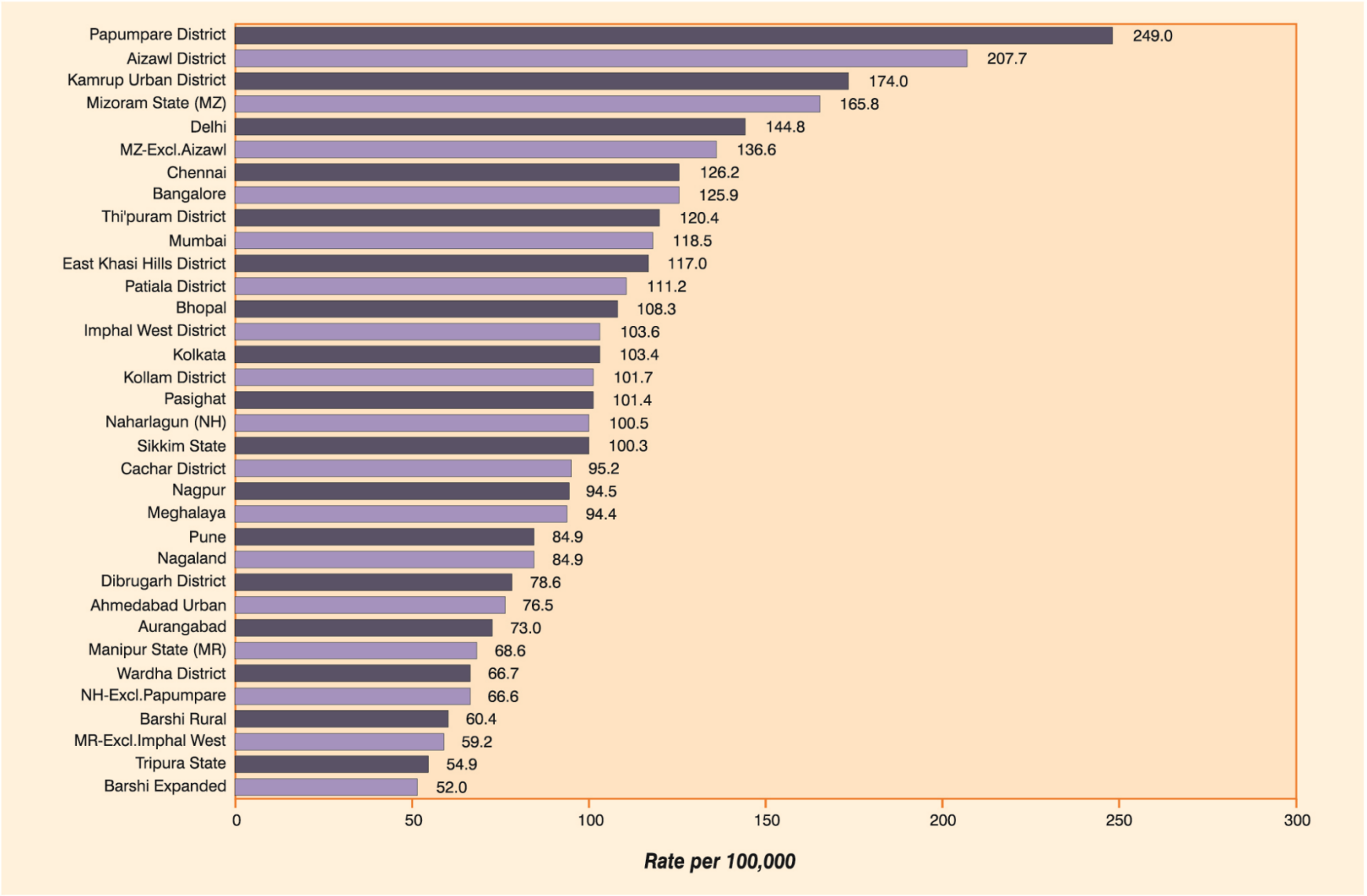
Males



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

ALL SITES (ICD-10: C00-C97)

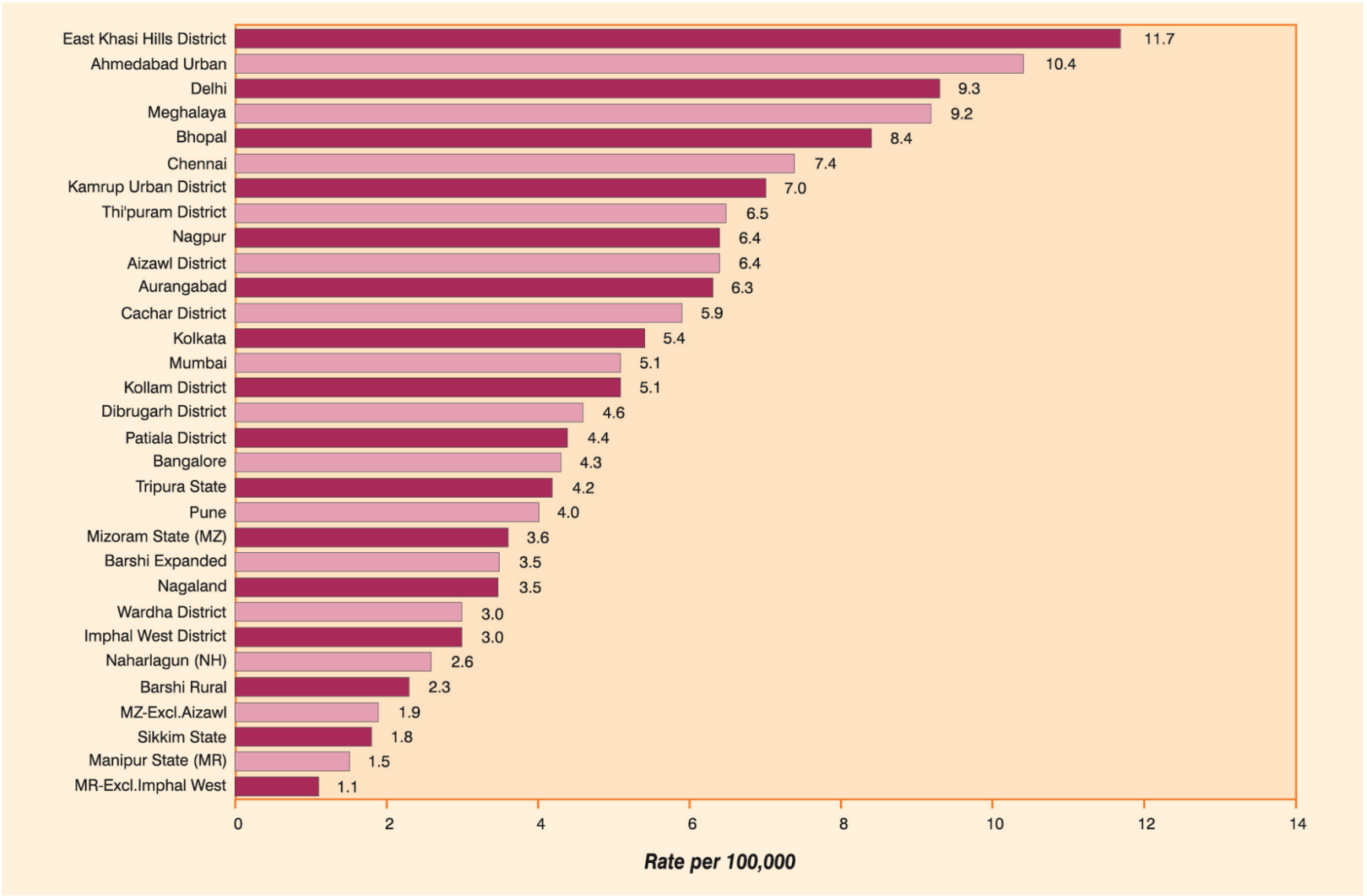
Females



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

TONGUE (ICD-10: C01-C02)

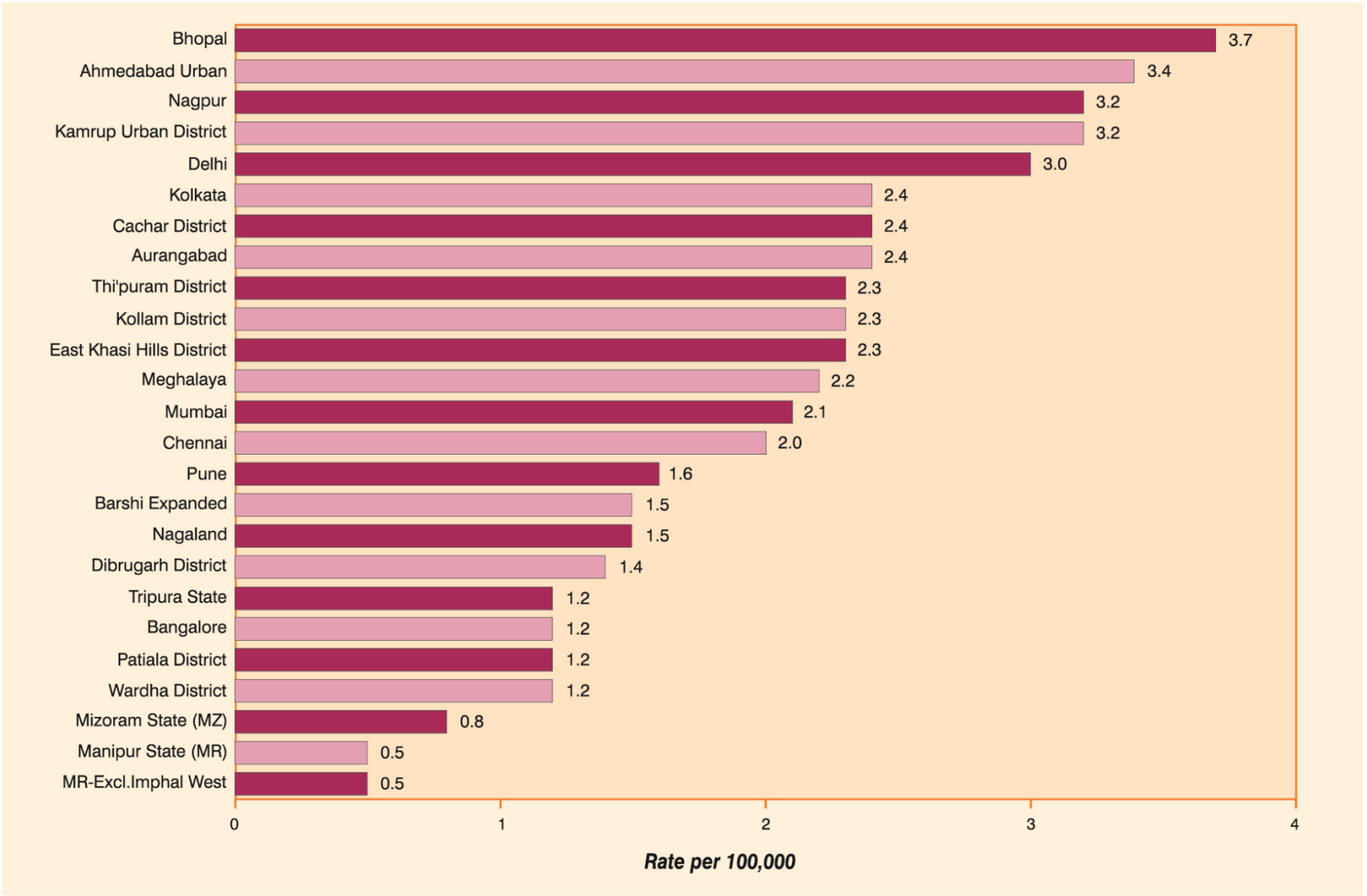
Males



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

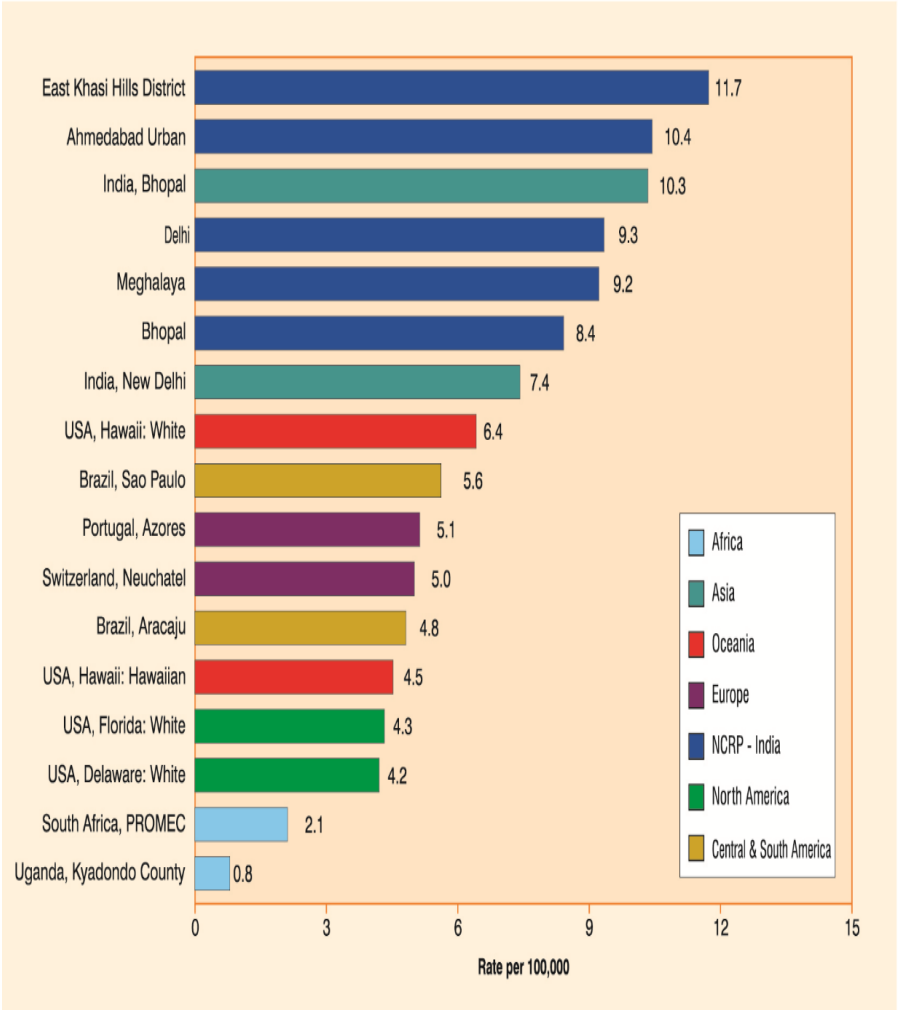
TONGUE (ICD-10: C01-C02)

Females



International Comparison of AAR with that of PBCRs in India
TONGUE (ICD-10: C01-C02)

Males



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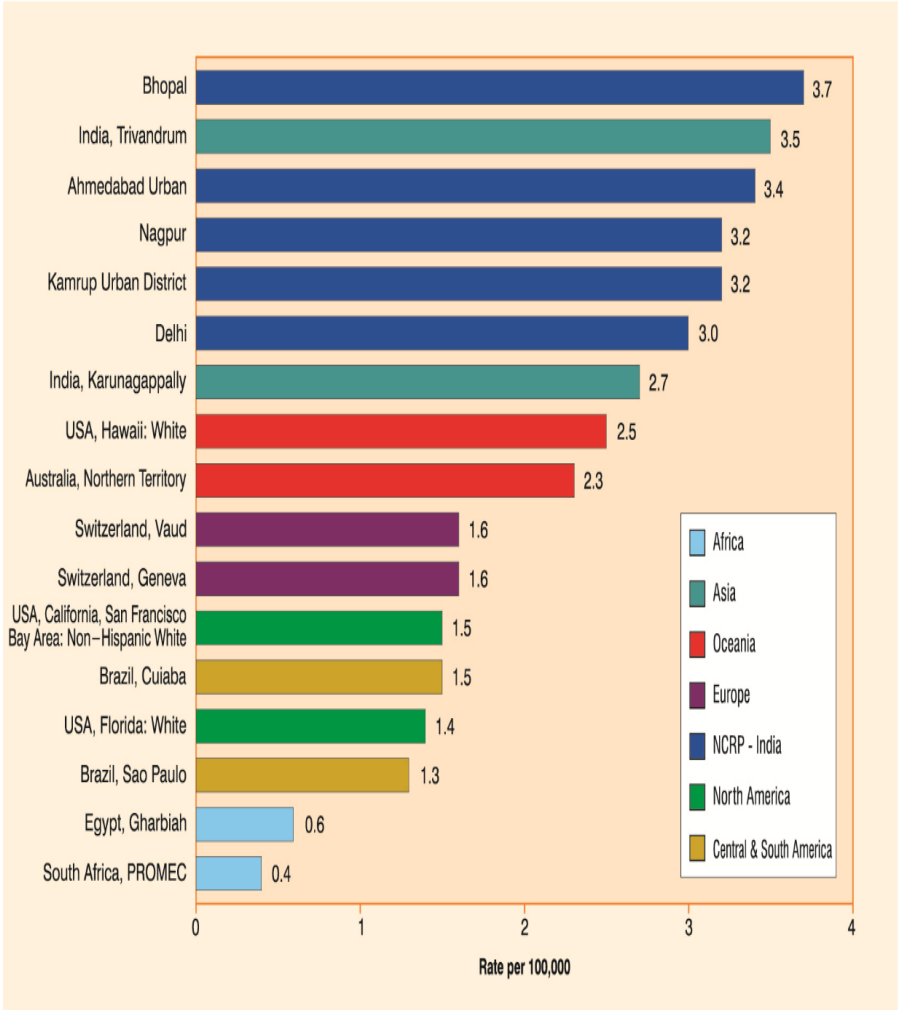
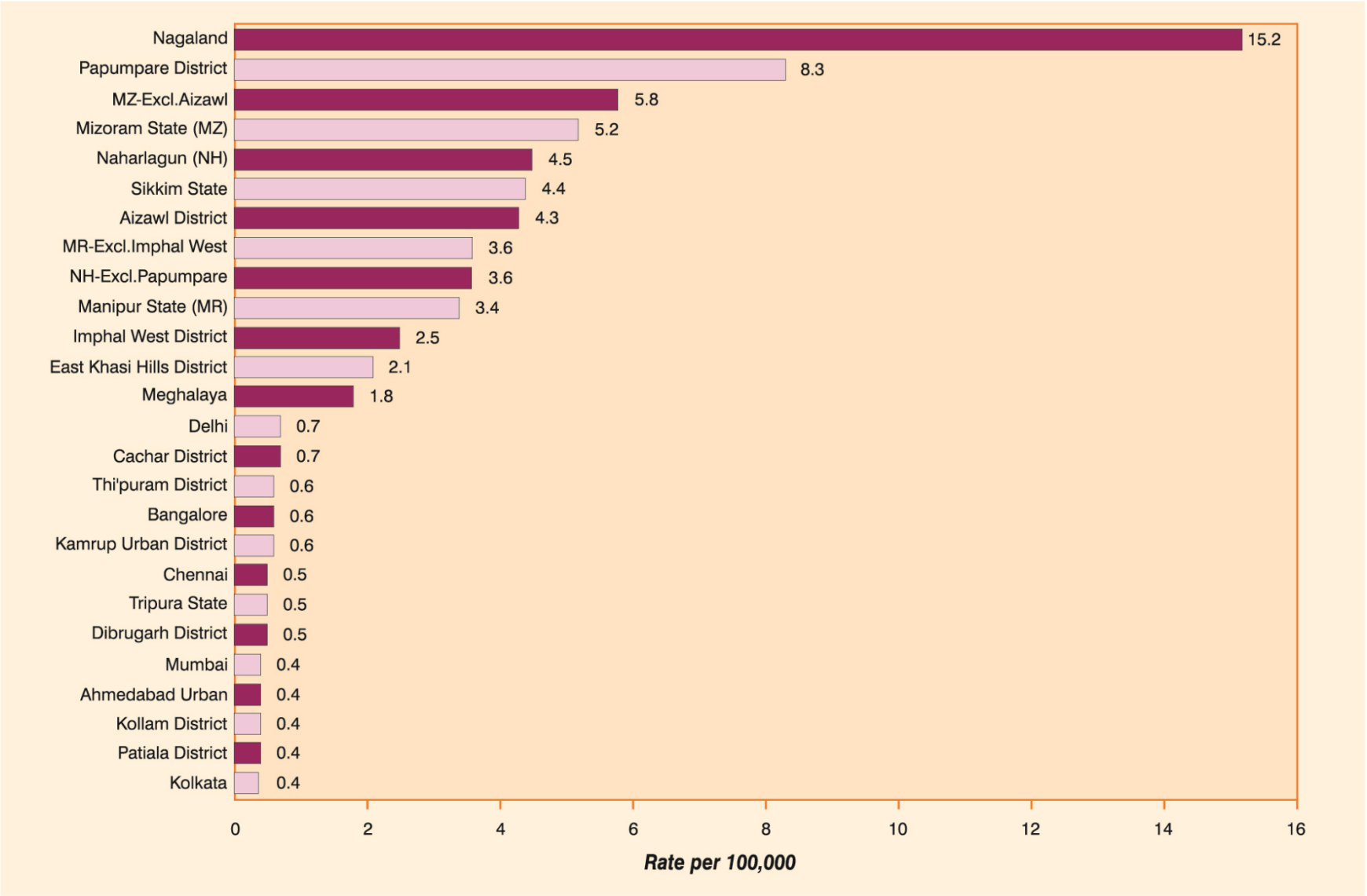


Comparison of Age Adjusted Incidence Rates (AARs) of all PBCRs

NASOPHARYNX (ICD-10: C11)

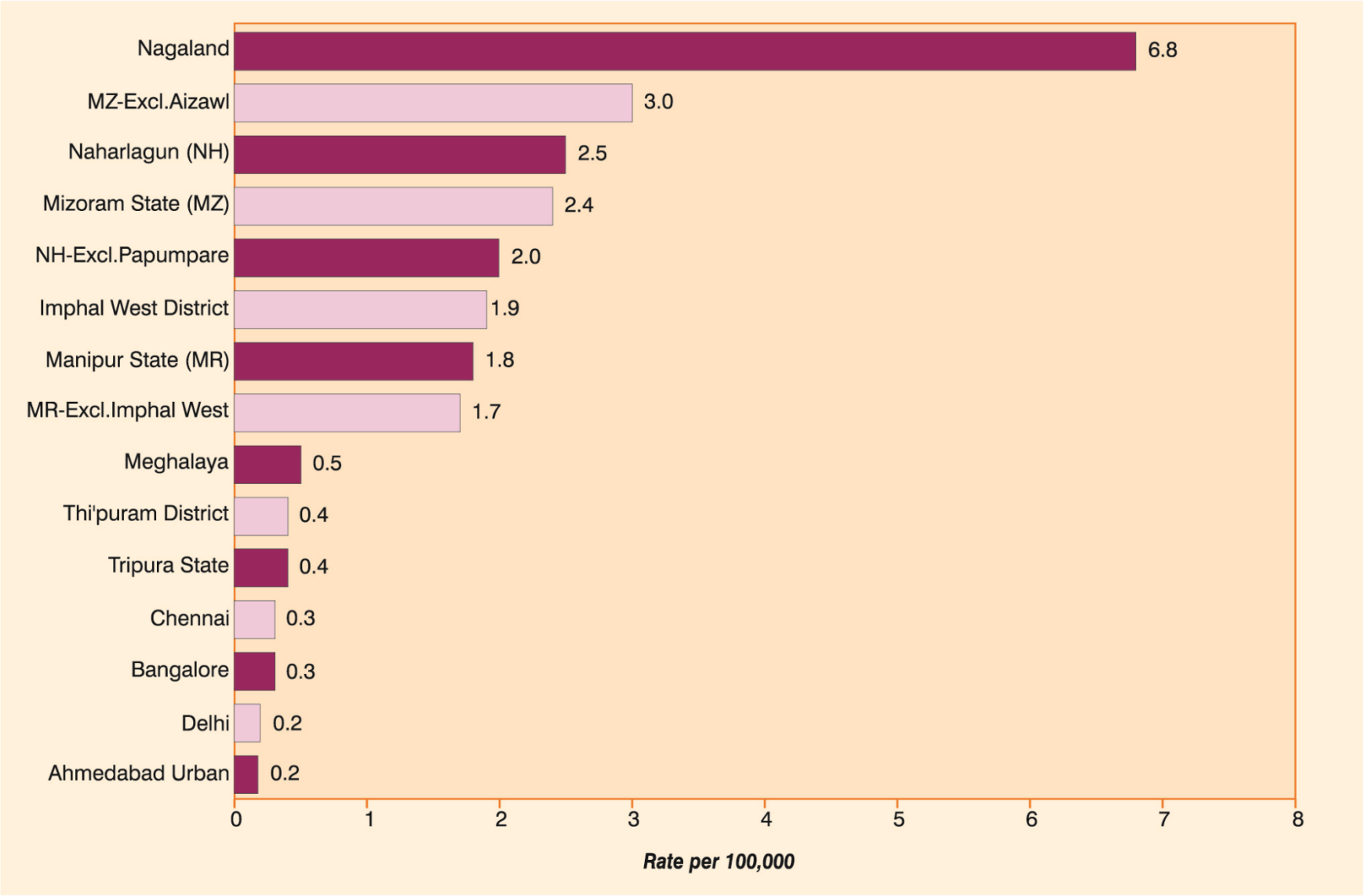
Males



Comparison of Age Adjusted Incidence Rates (AARs) of all PBCRs

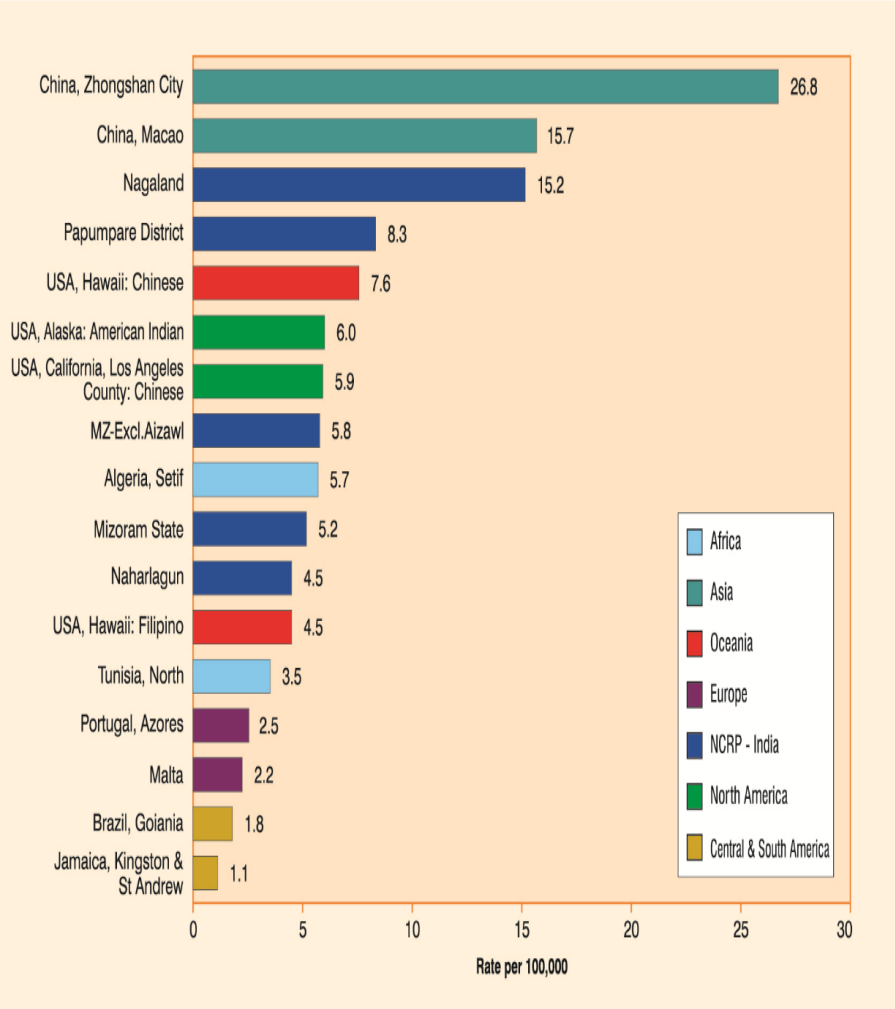
NASOPHARYNX (ICD-10: C11)

Females

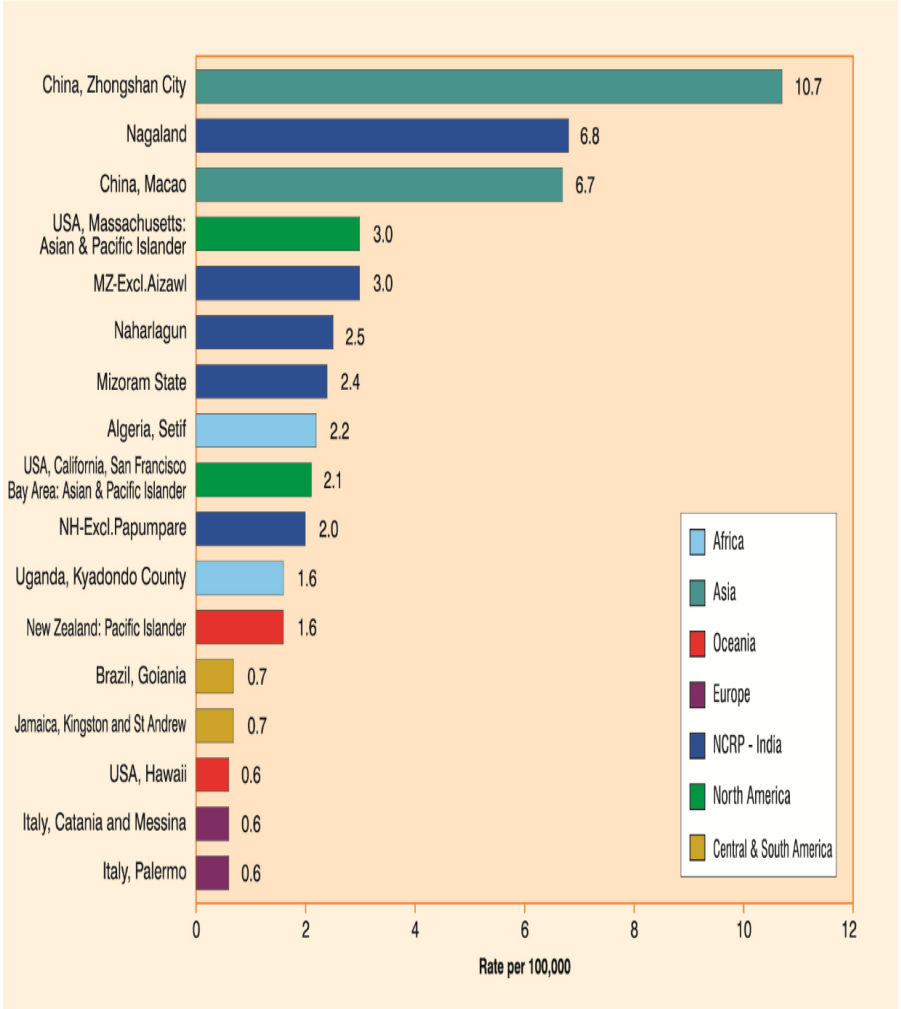


International Comparison of AAR with that of PBCRs in India
NASOPHARYNX (ICD-10: C11)

Males



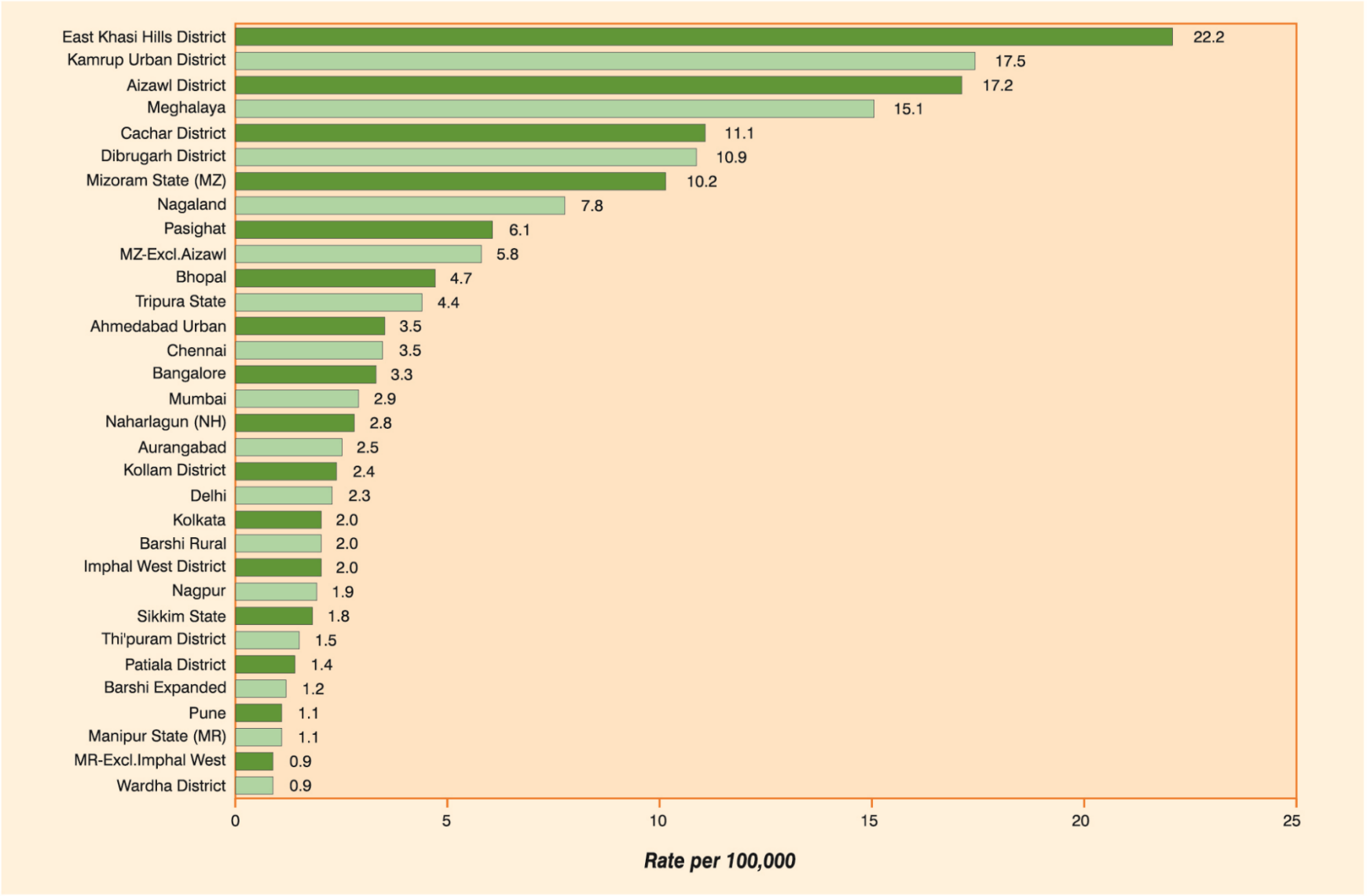
Females



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

HYPOPHARYNX (ICD-10: C12-C13)

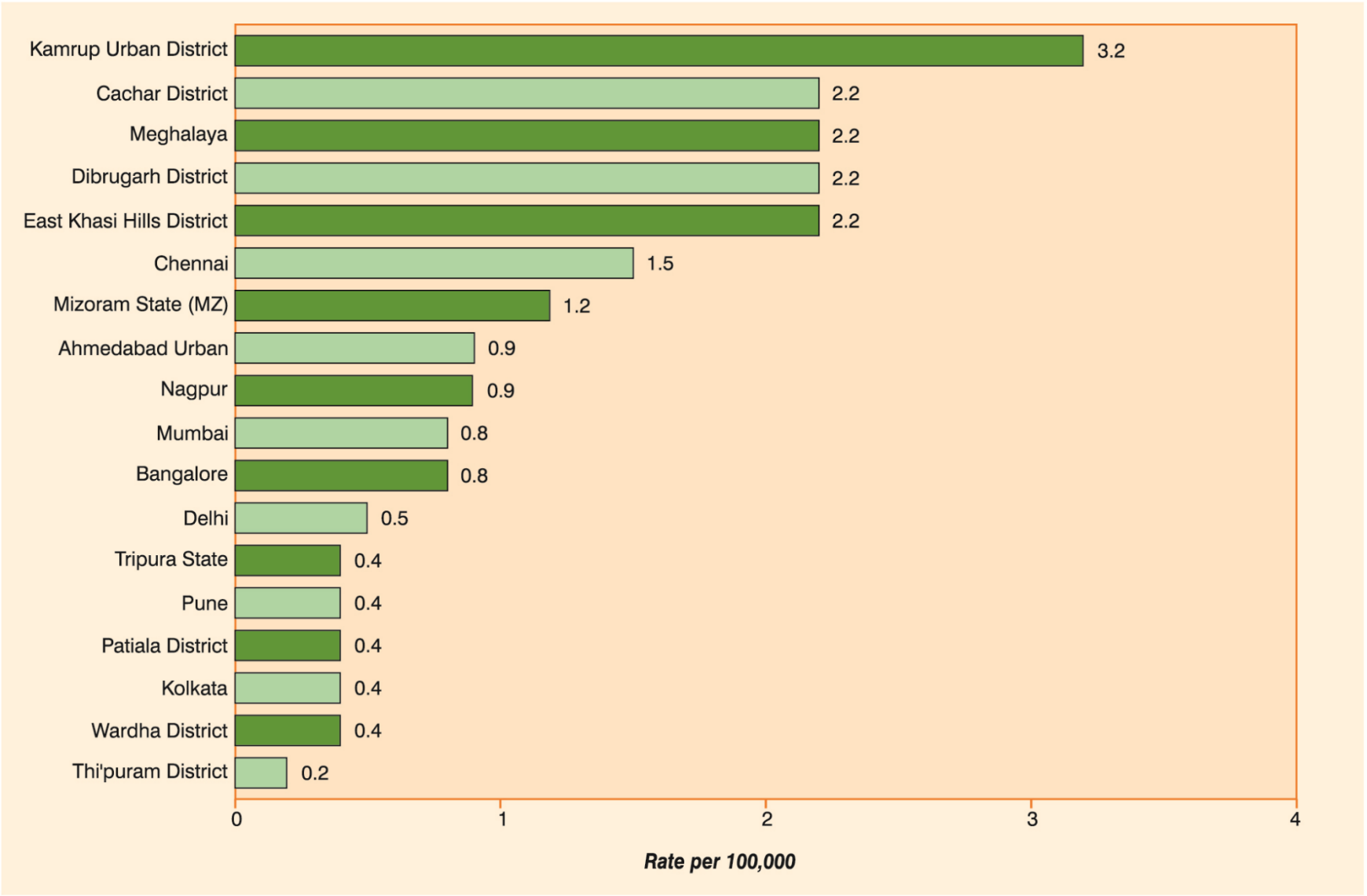
Males



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

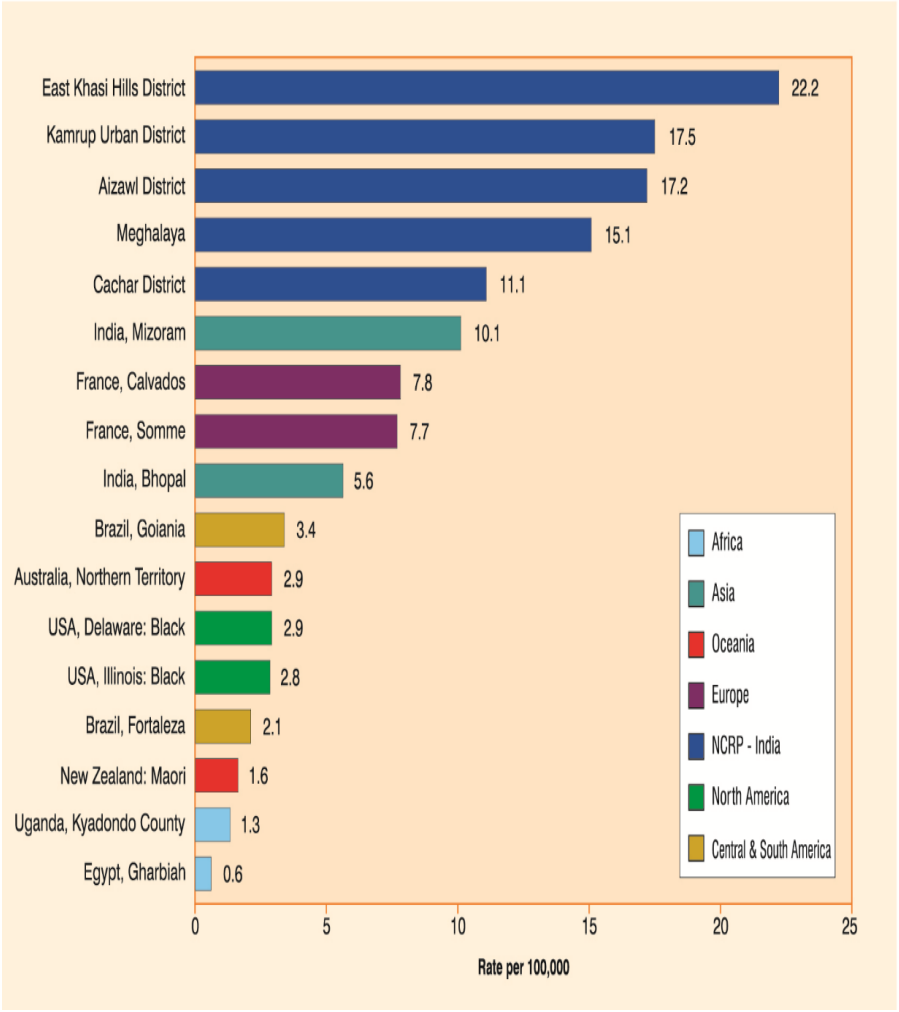
HYPOPHARYNX (ICD-10: C12-C13)

Females

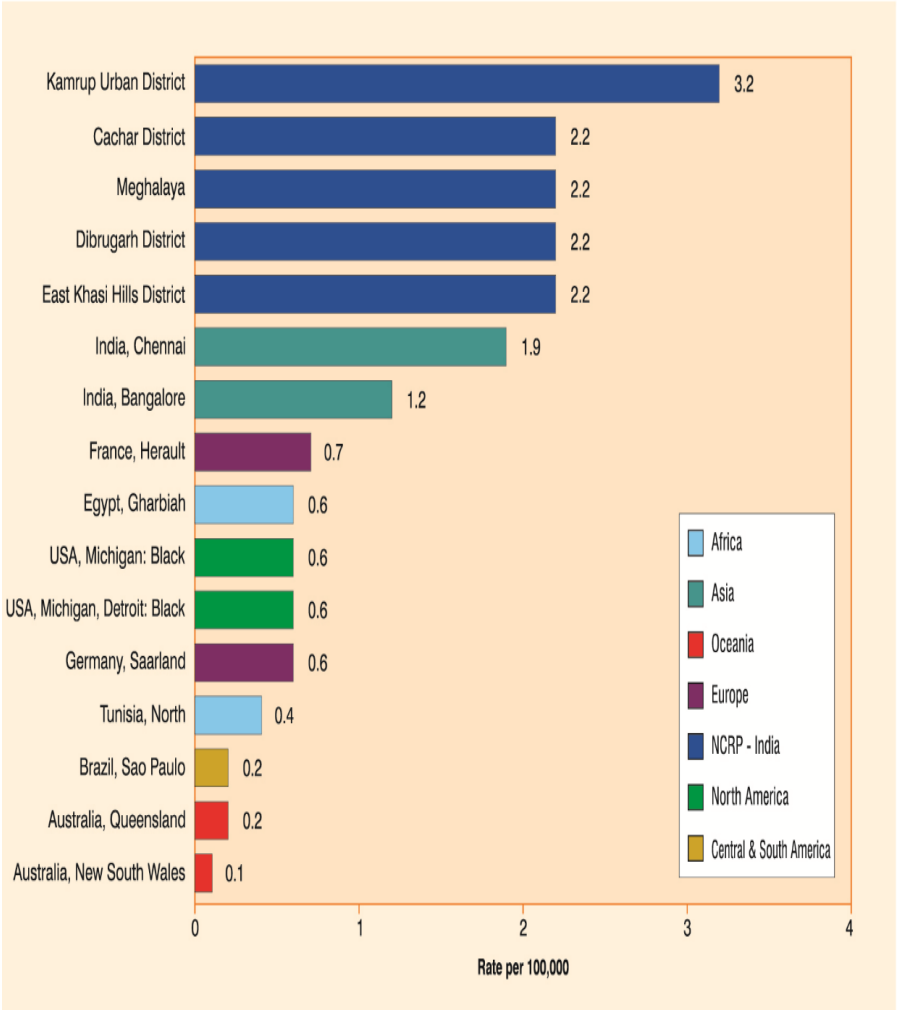


International Comparison of AAR with that of PBCRs in India
HYPOPHARYNX (ICD-10: C12-C13)

Males



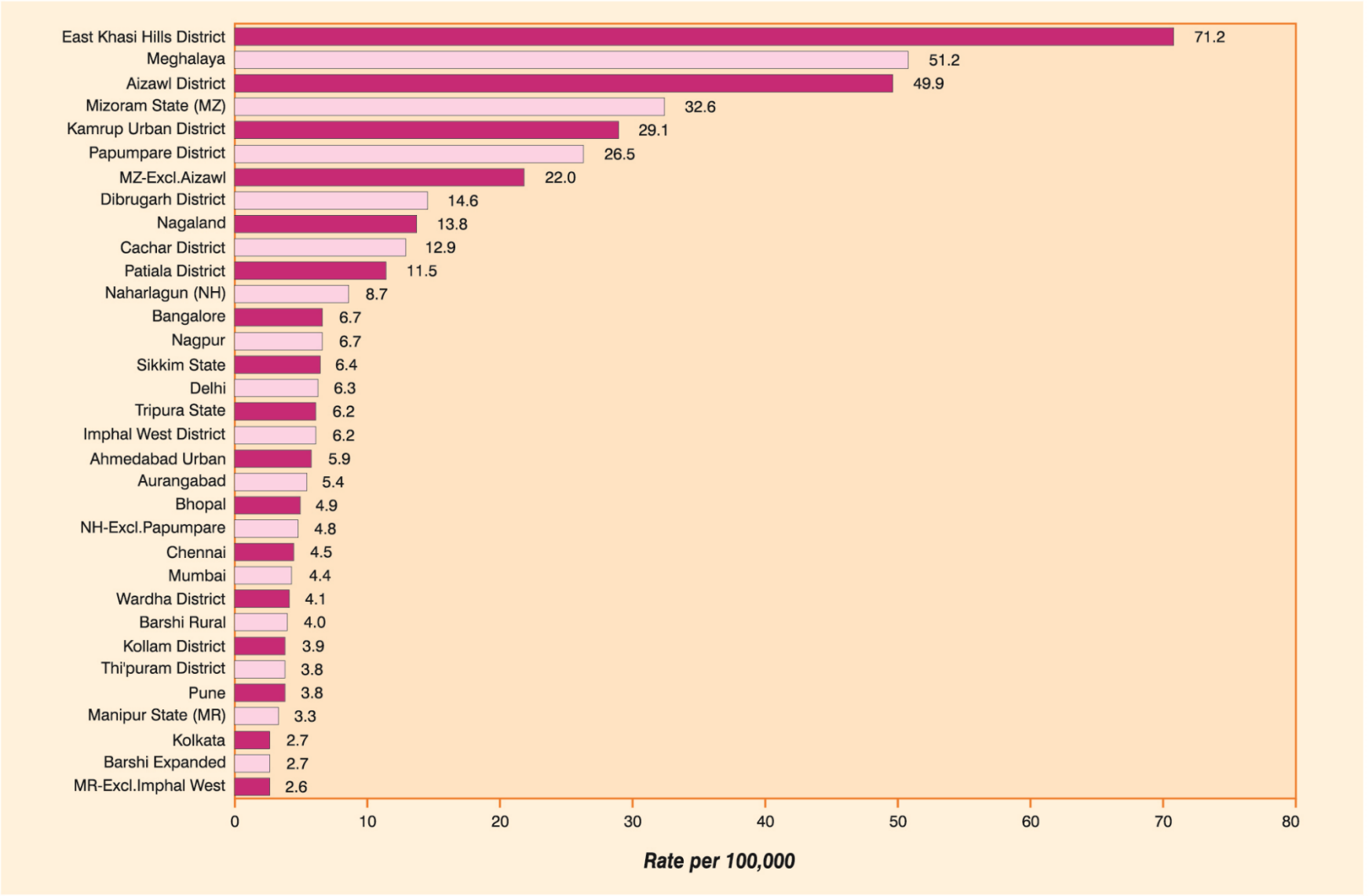
Females



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

OESOPHAGUS (ICD-10: C15)

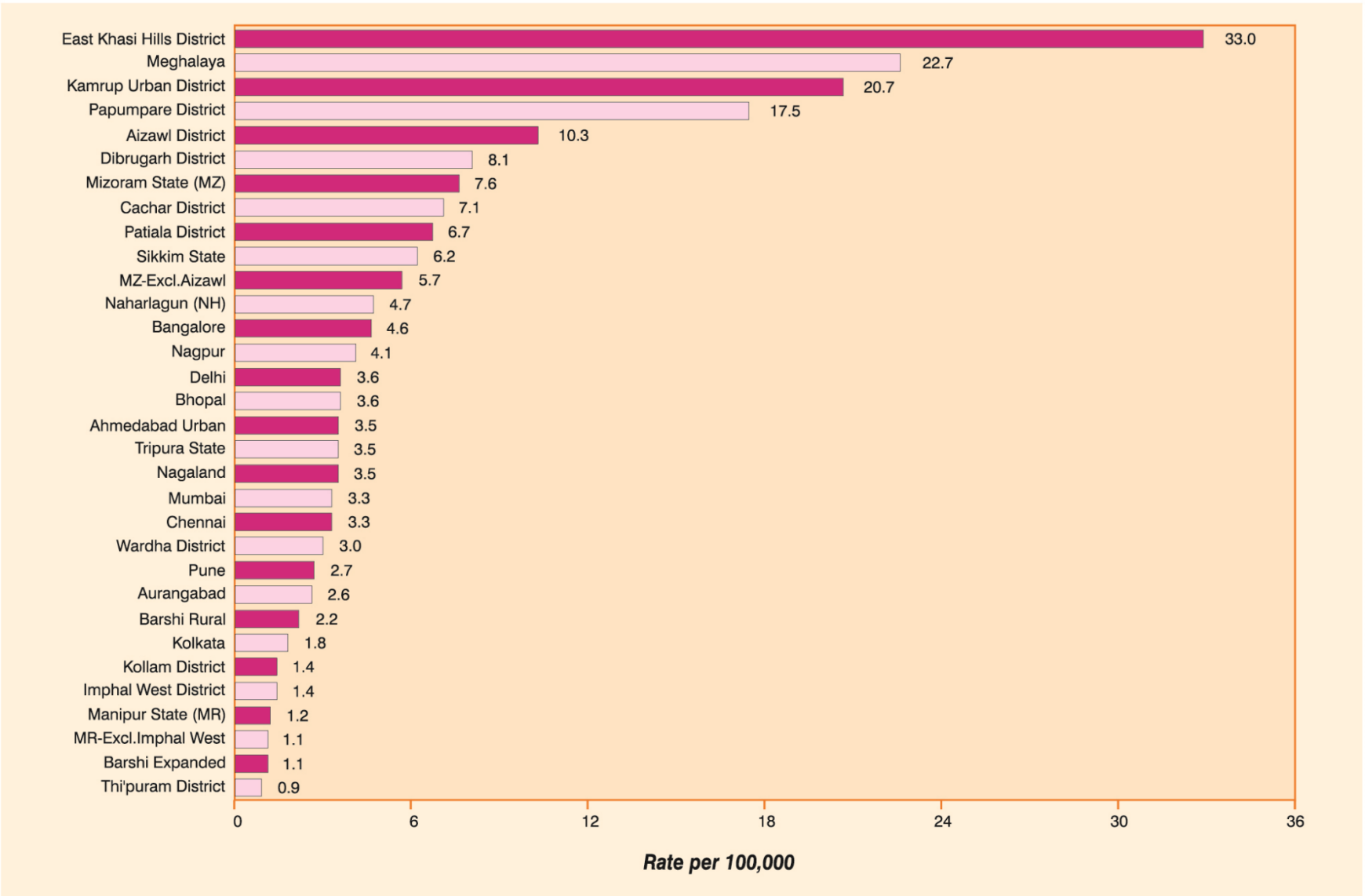
Males



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

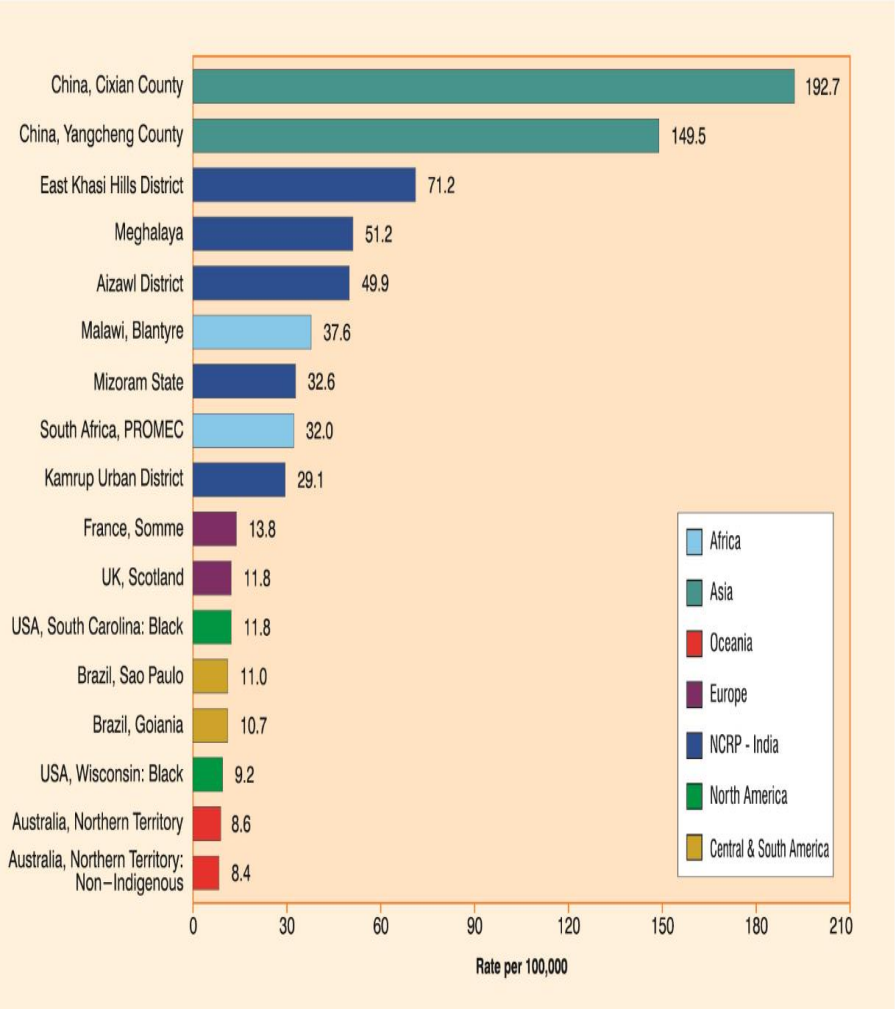
OESOPHAGUS (ICD-10: C15)

Males

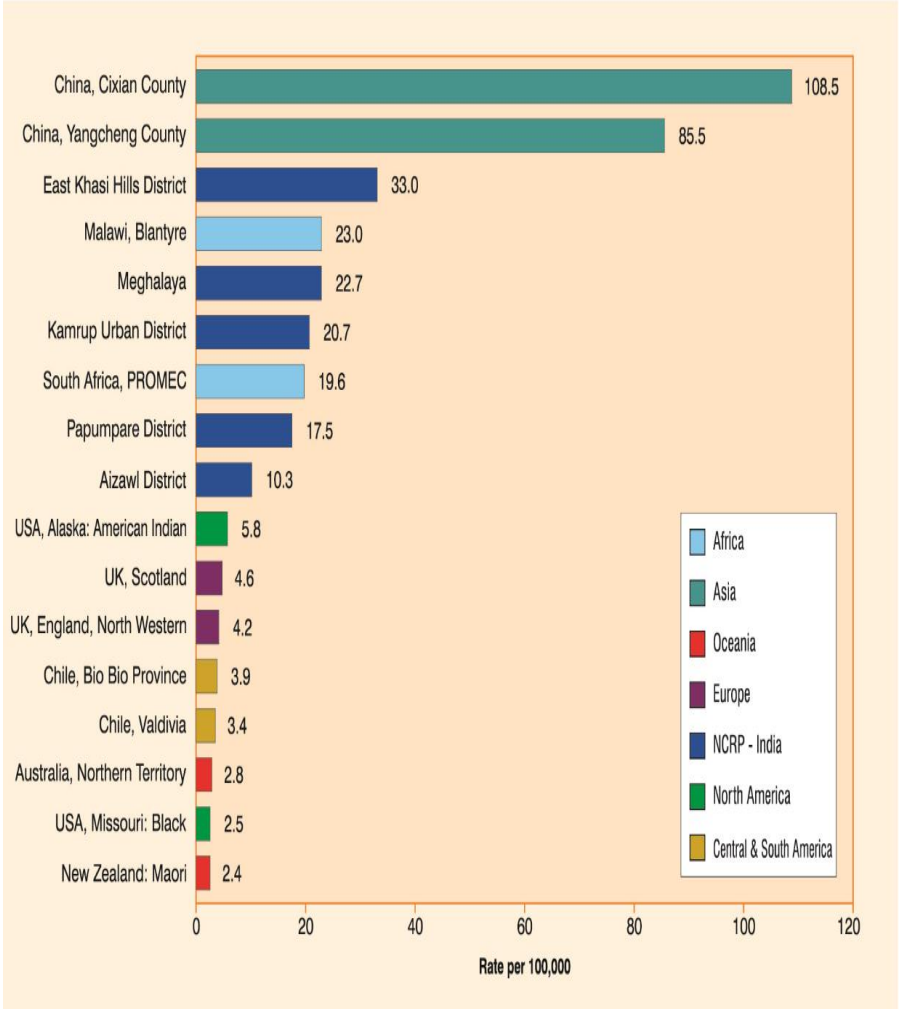


International Comparison of AAR with that of PBCRs in India
OESOPHAGUS (ICD-10: C15)

Males



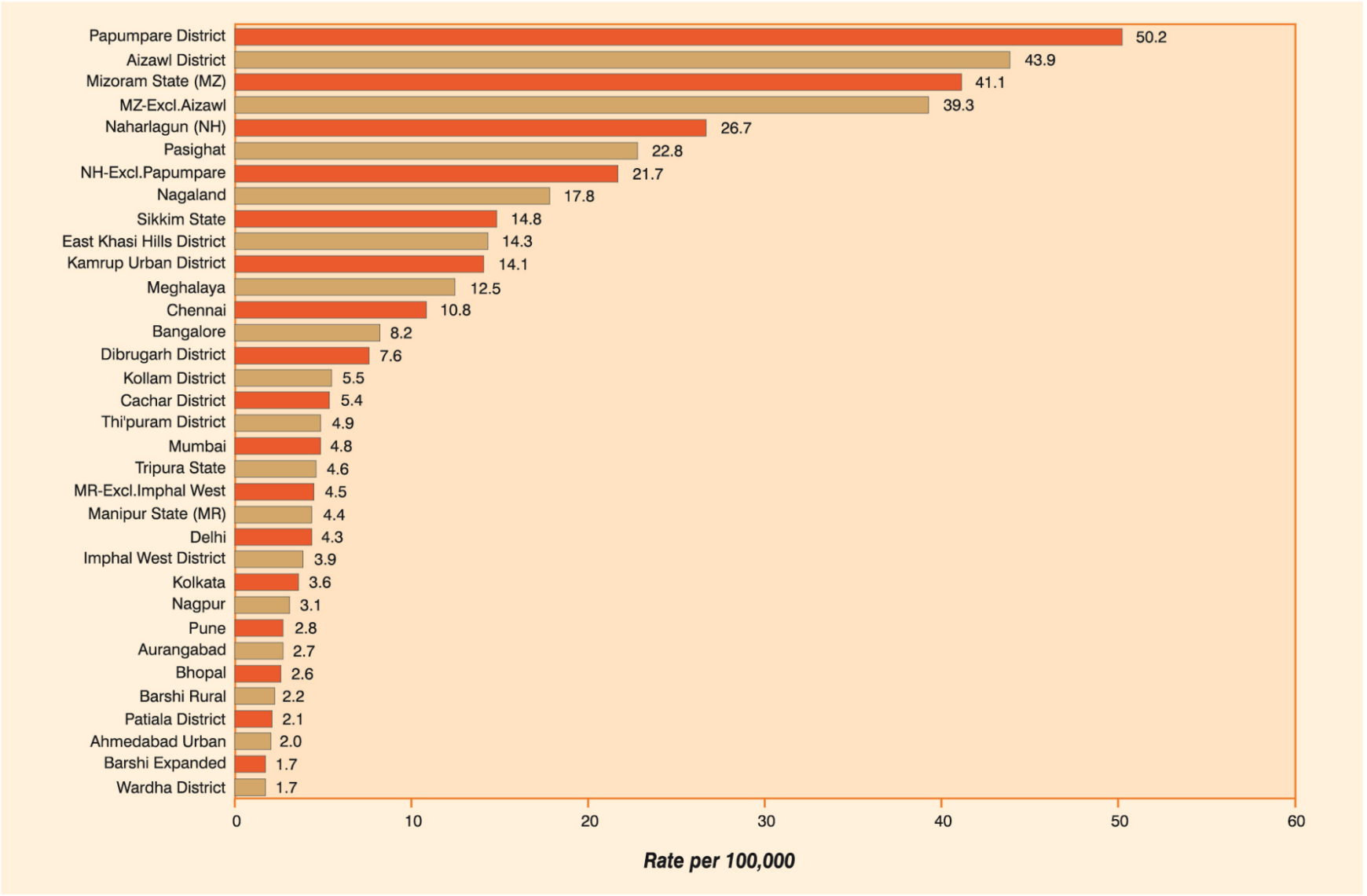
Females



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

STOMACH (ICD-10: C16)

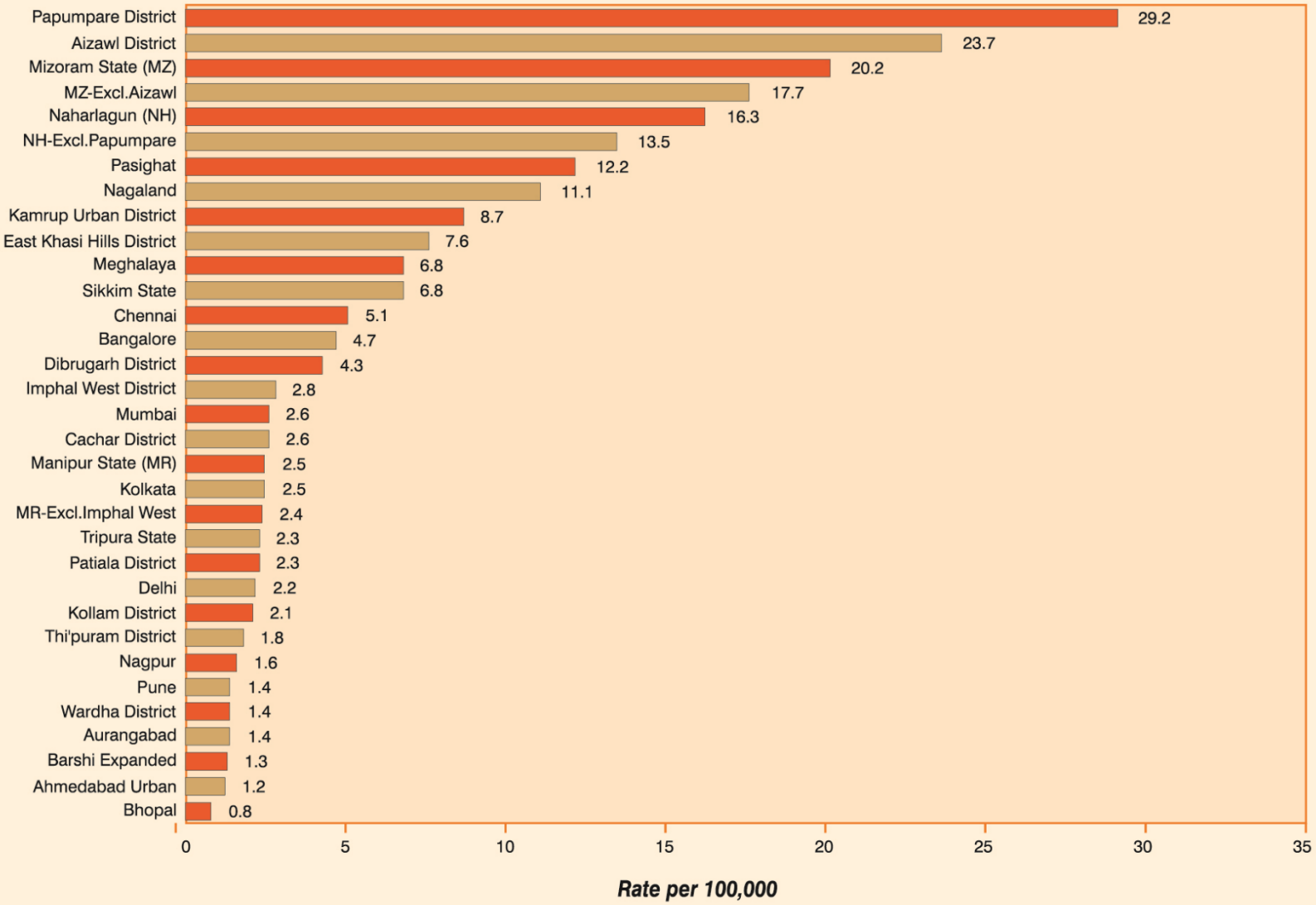
Males



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

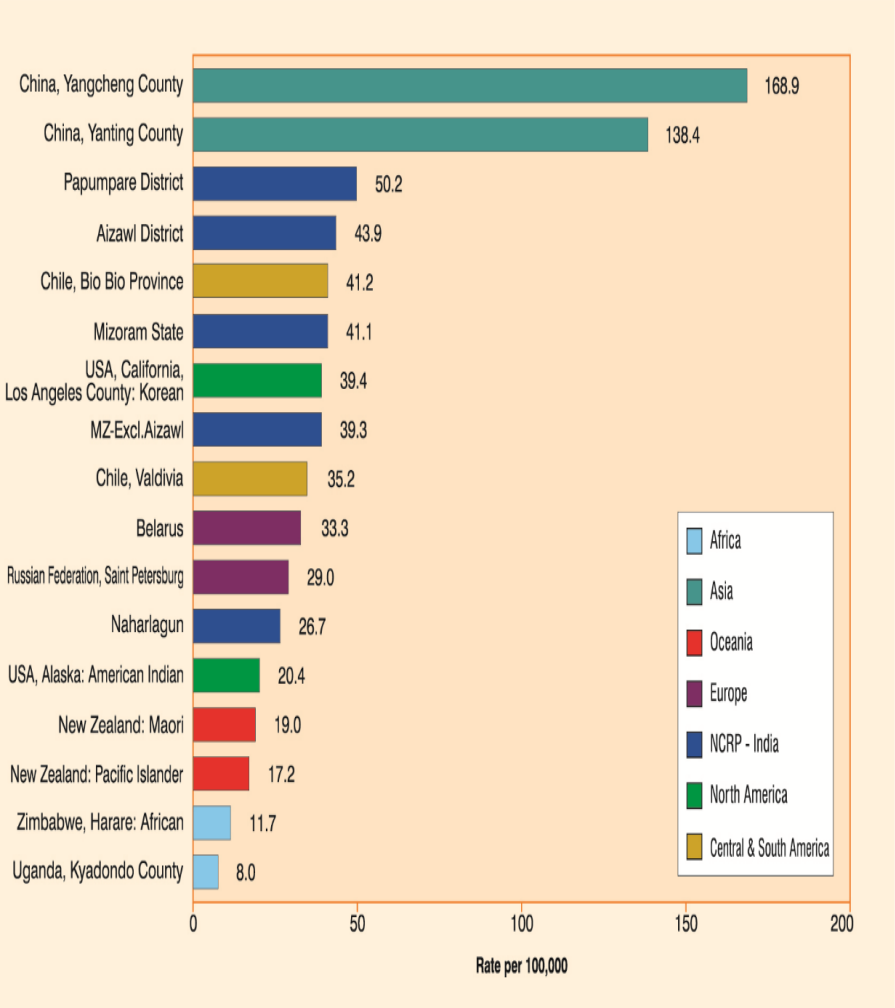
STOMACH (ICD-10: C16)

Females

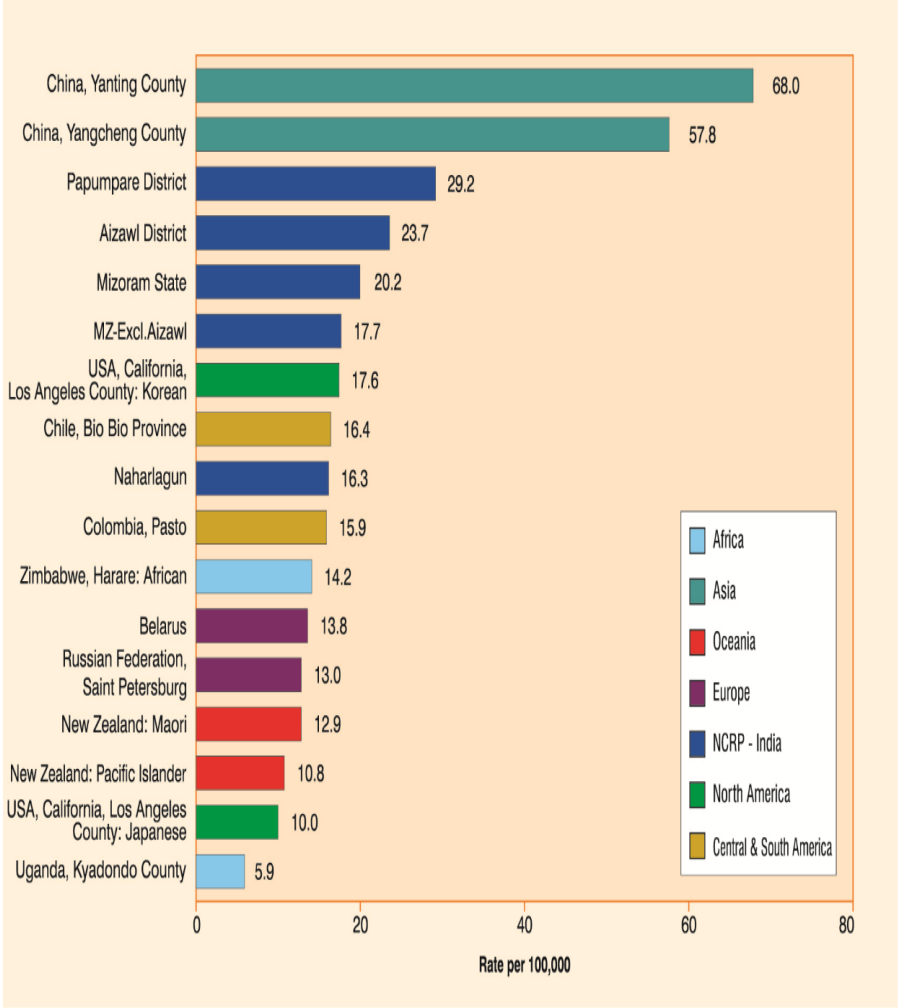


International Comparison of AAR with that of PBCRs in India
STOMACH (ICD-10: C16)

Males



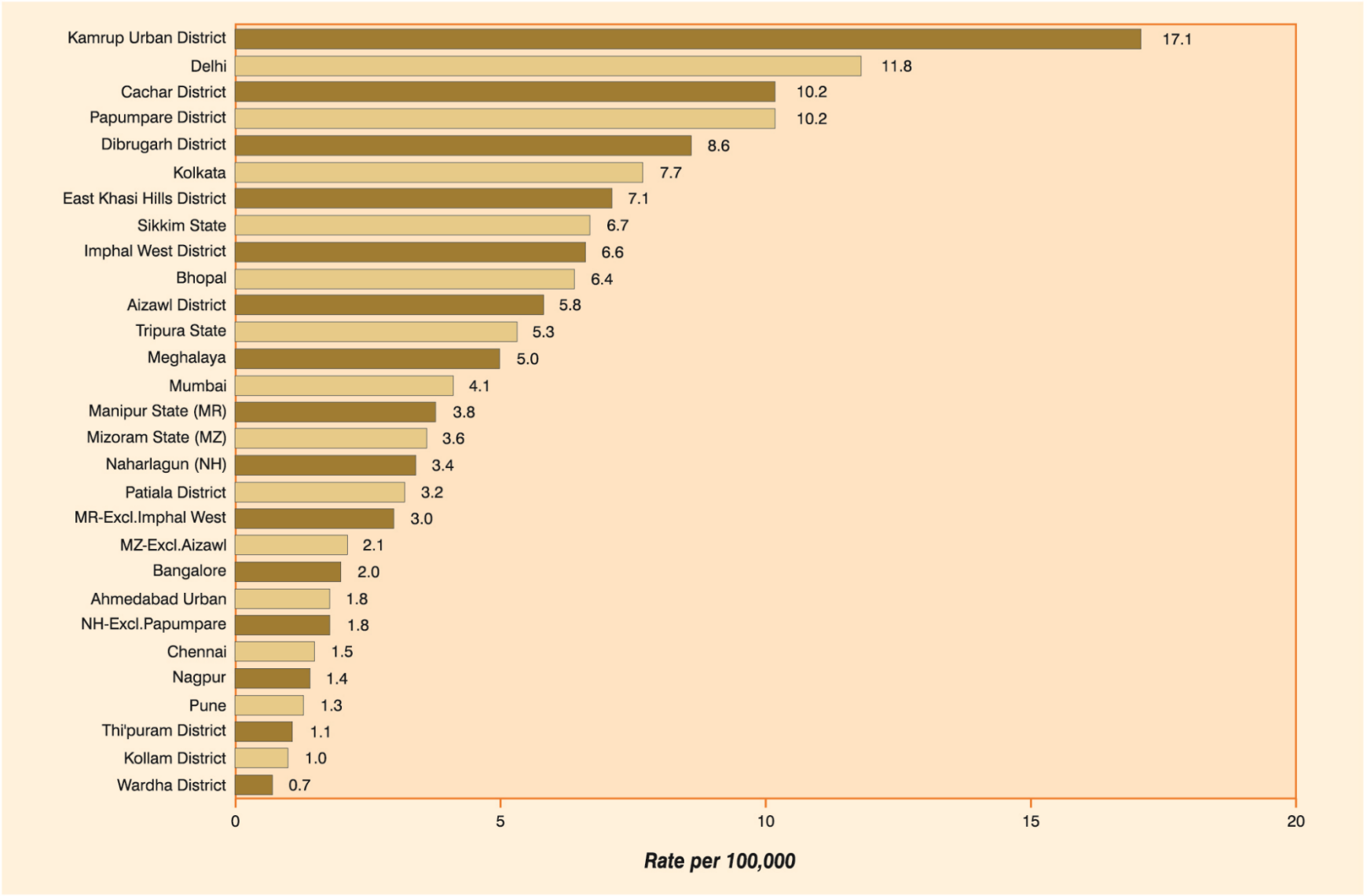
Females



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

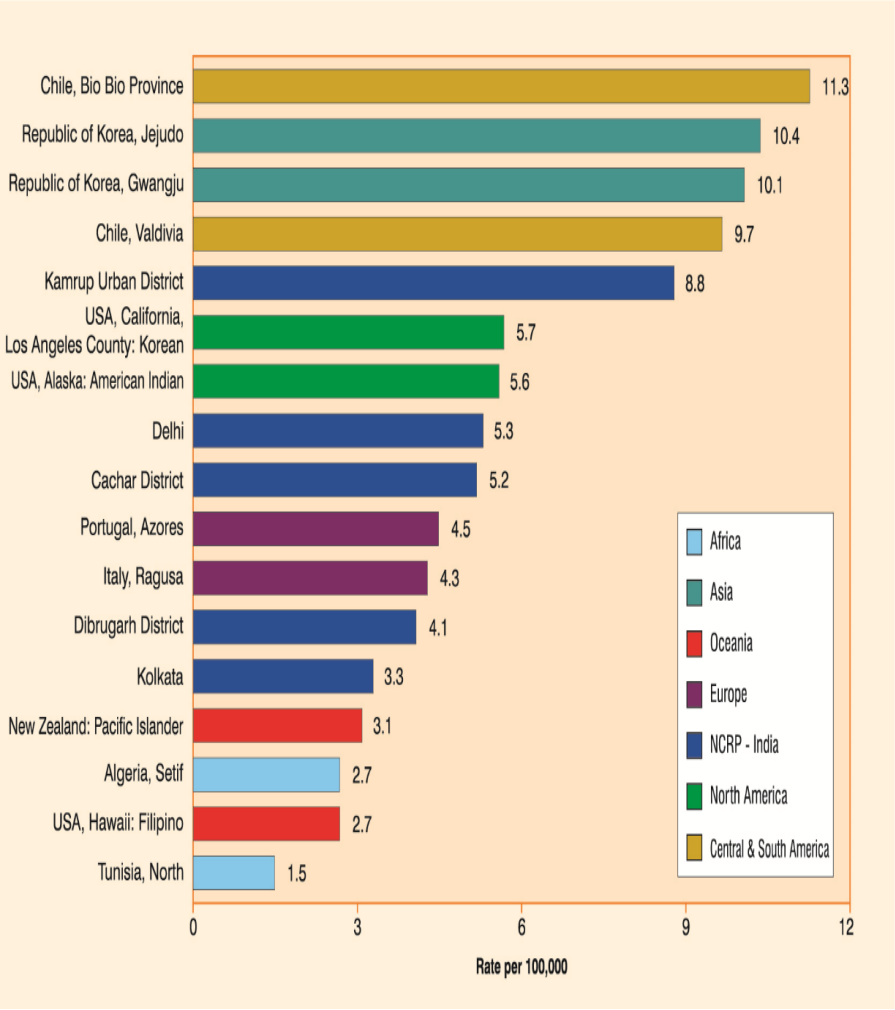
GALL BLADDER (ICD-10: C23-C24)

Females

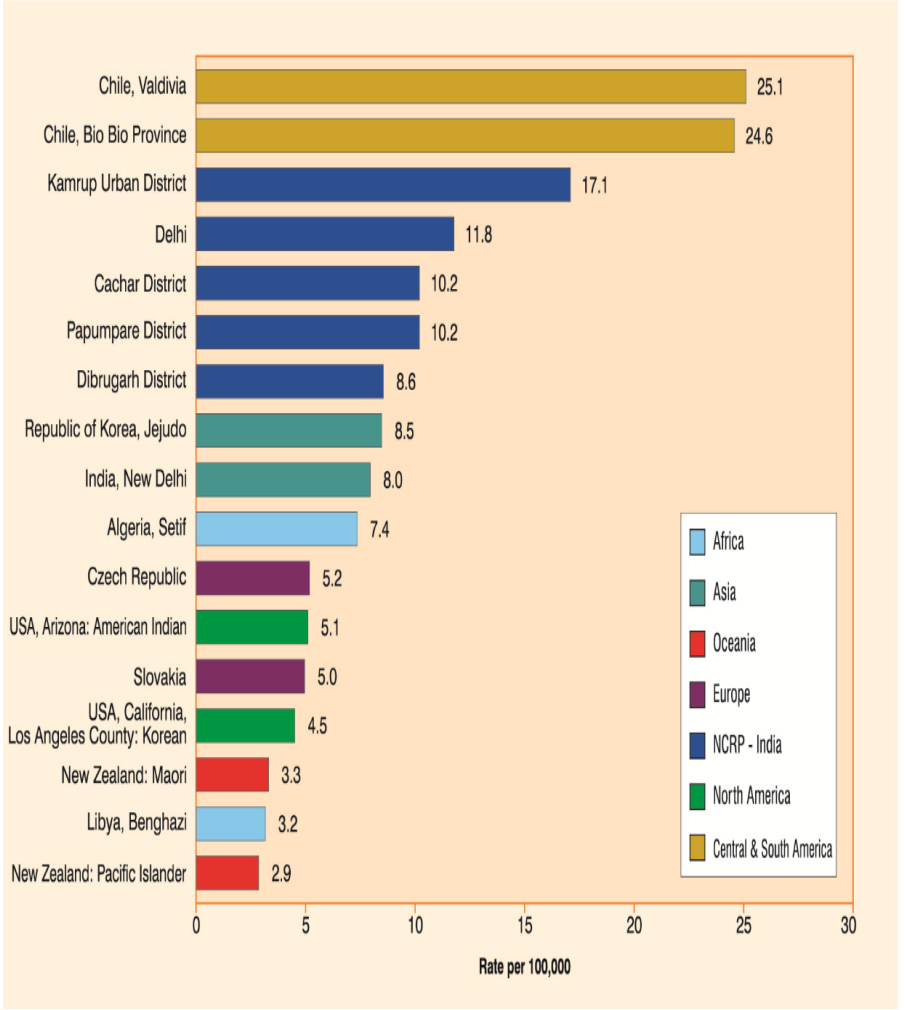


International Comparison of AAR with that of PBCRs in India
GALL BLADDER (ICD-10: C23-C24)

Males

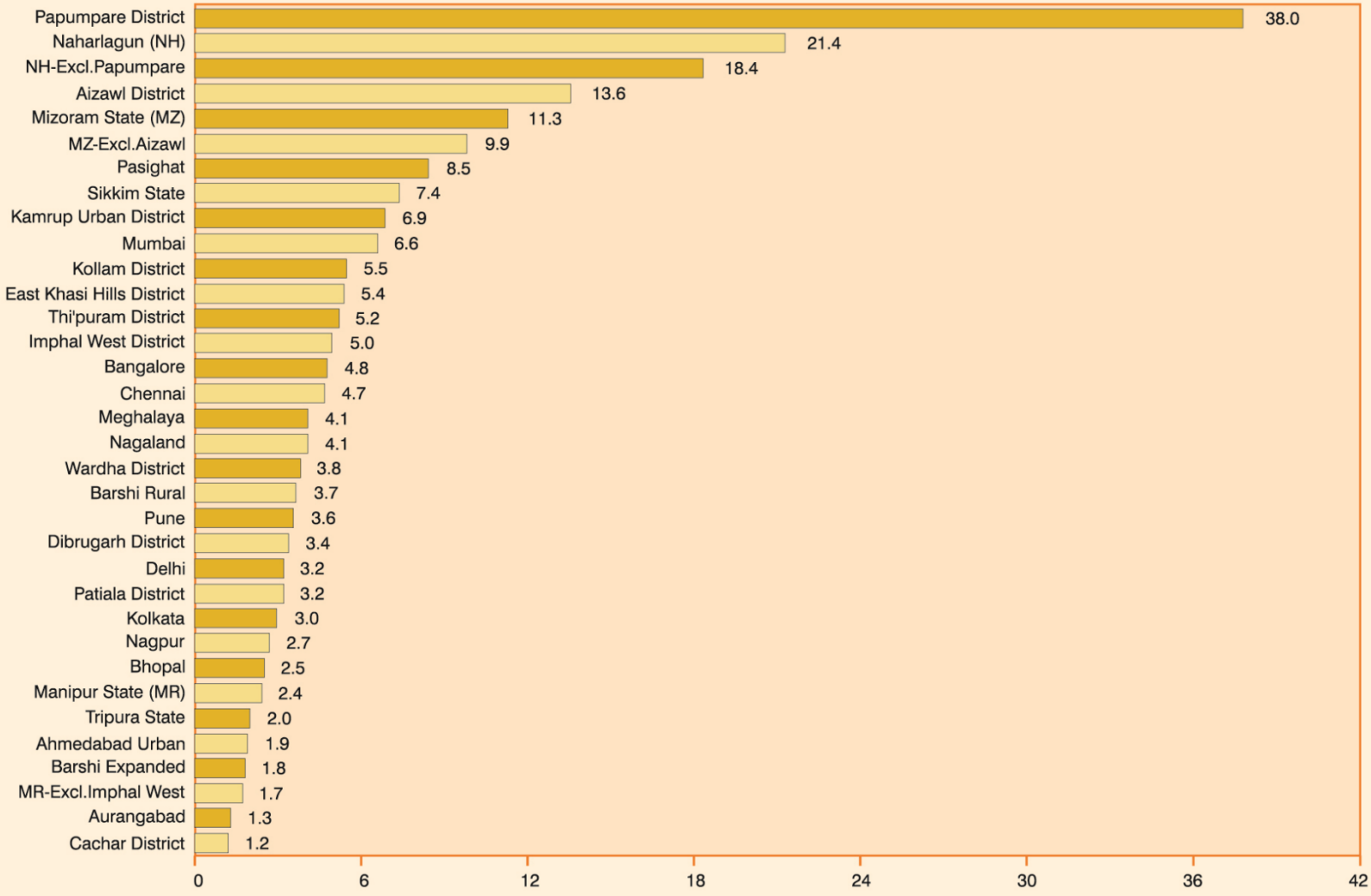


Females



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

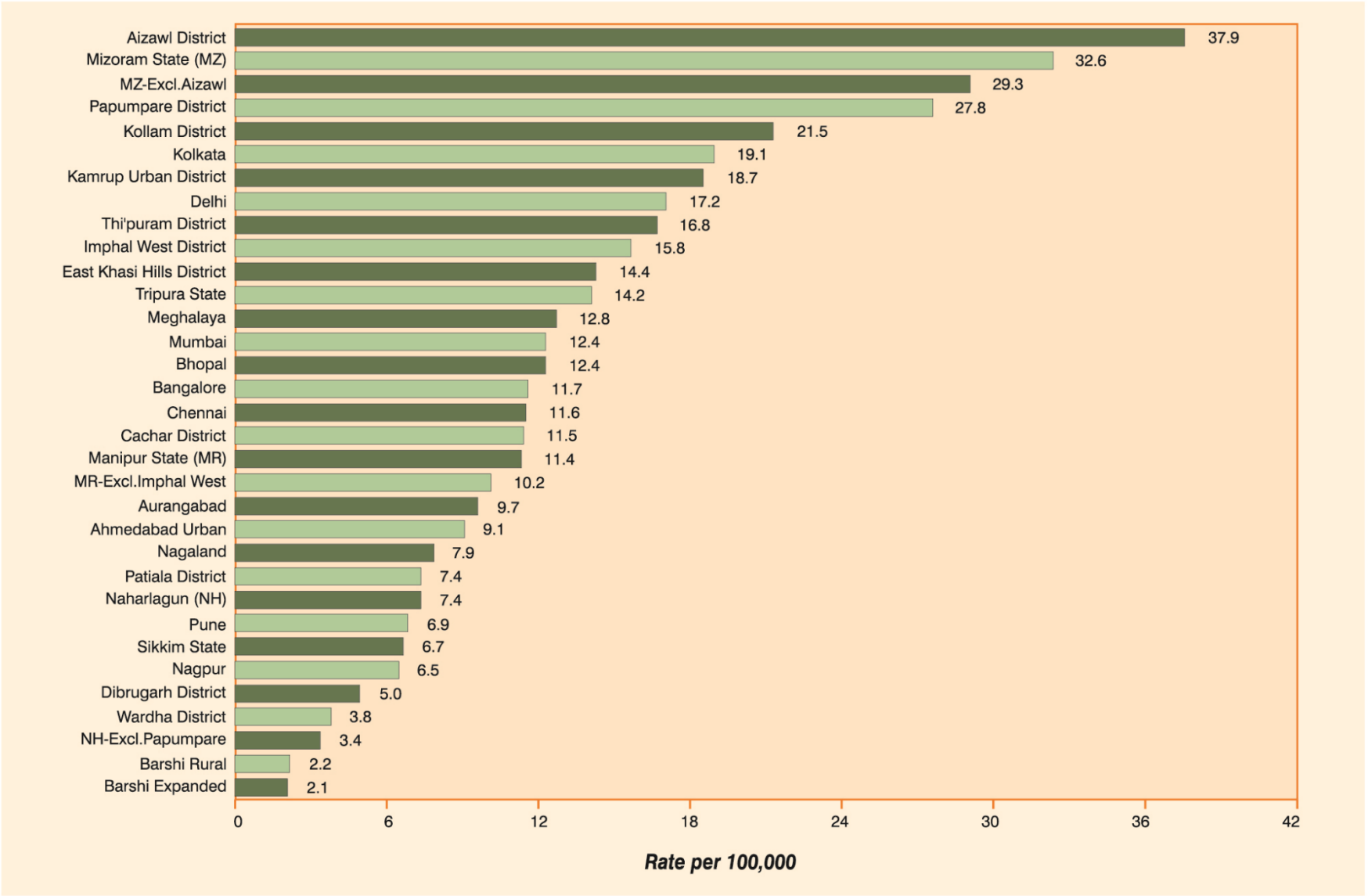
LIVER (ICD-10: C22) – Males



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

LUNG (ICD-10: C33-C34)

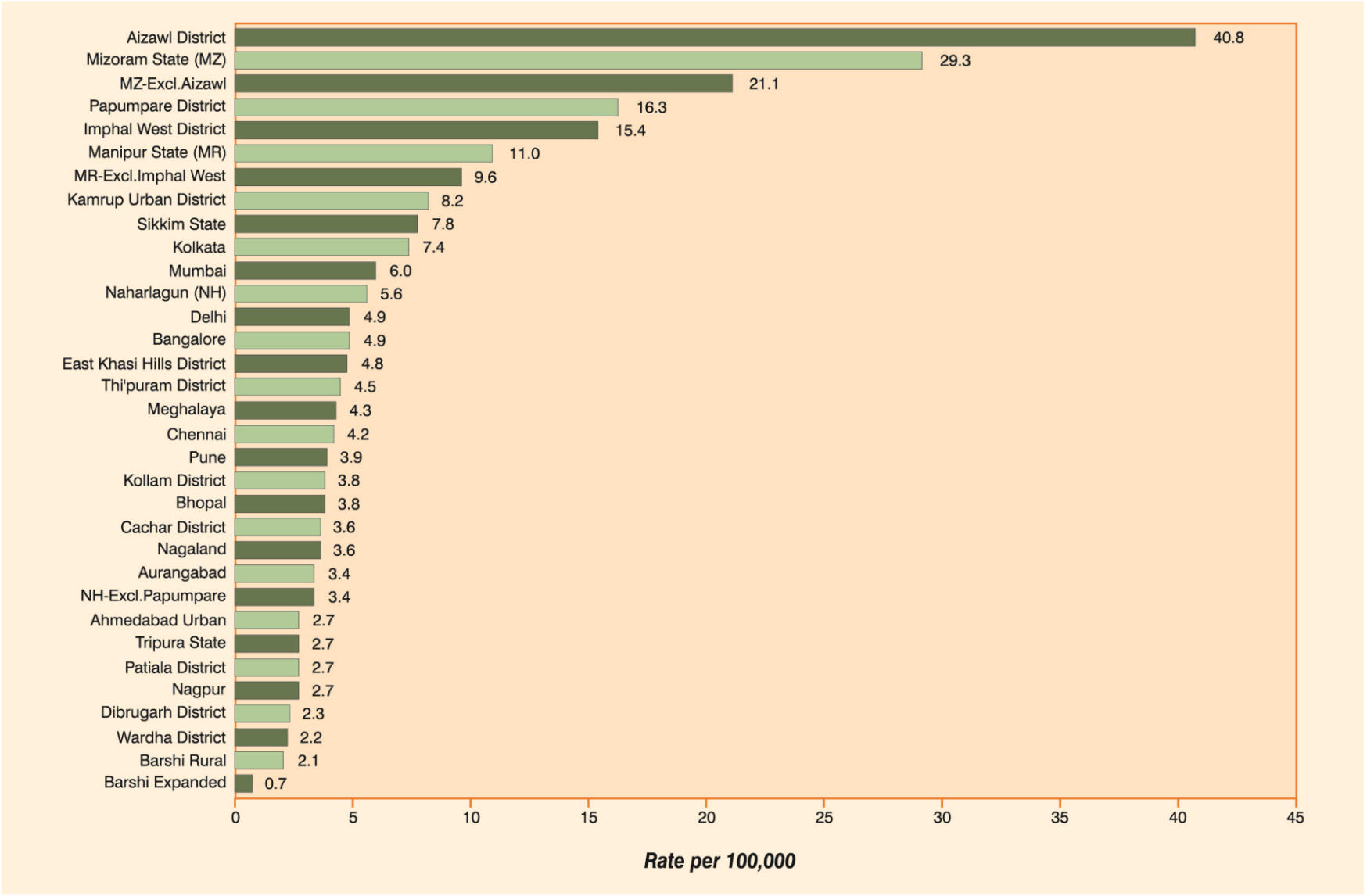
Males



Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

LUNG (ICD-10: C33-C34)

Females

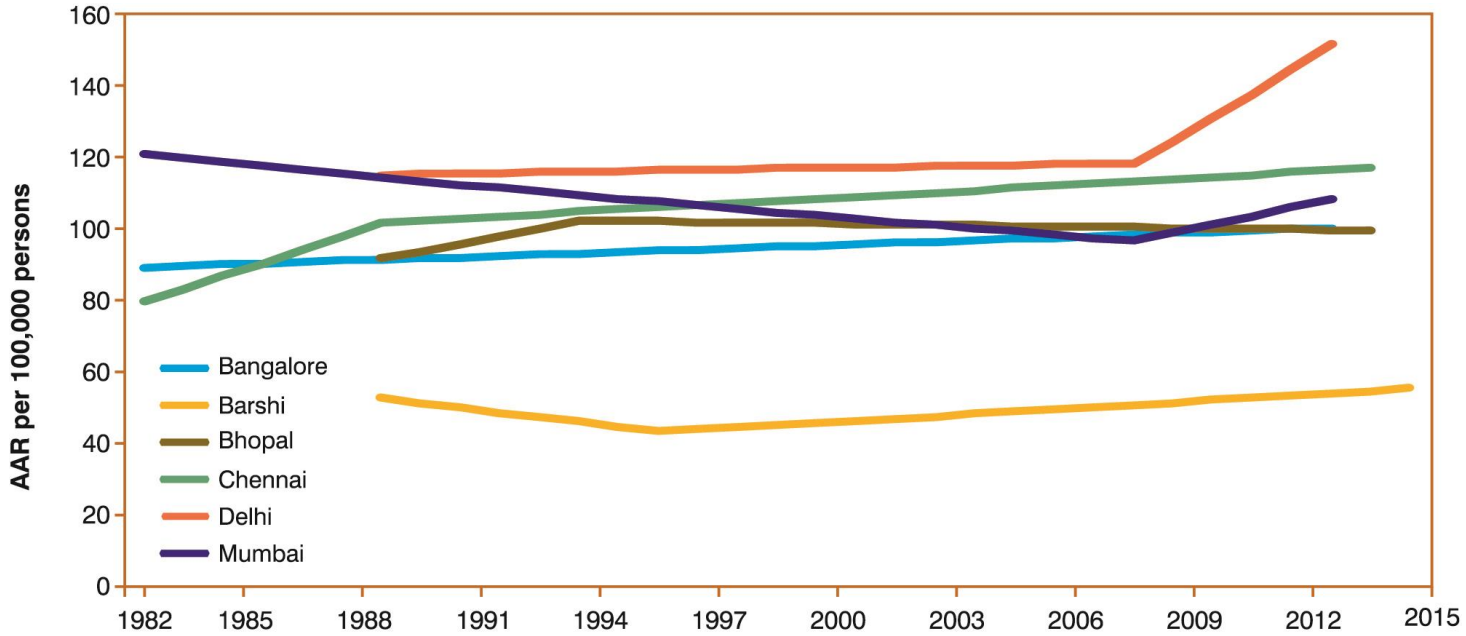


Is Cancer on the Rise?

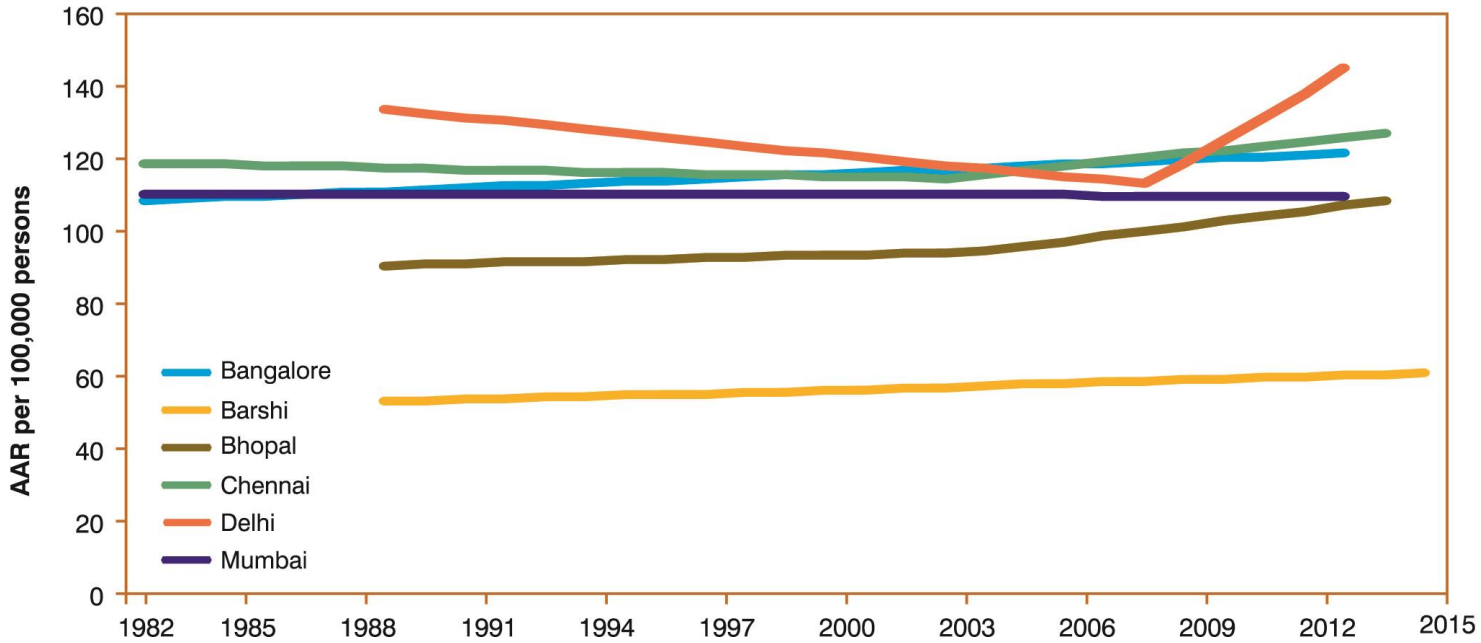
- Cancer increases in incidence with age
- Increased Life Expectancy
- Increase in population
- Improved Literacy – Health Awareness
- Improved Diagnostic Techniques

ALL SITES (ICD-10: C00-C97)

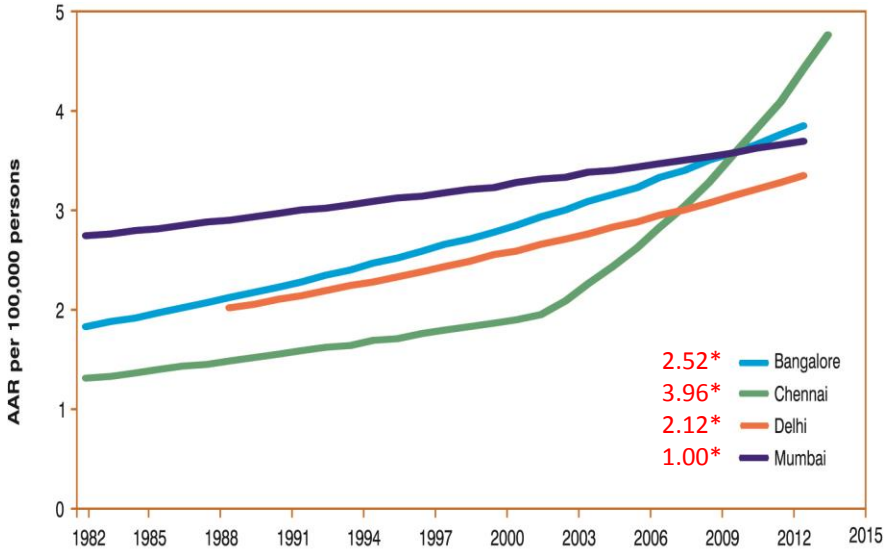
Males



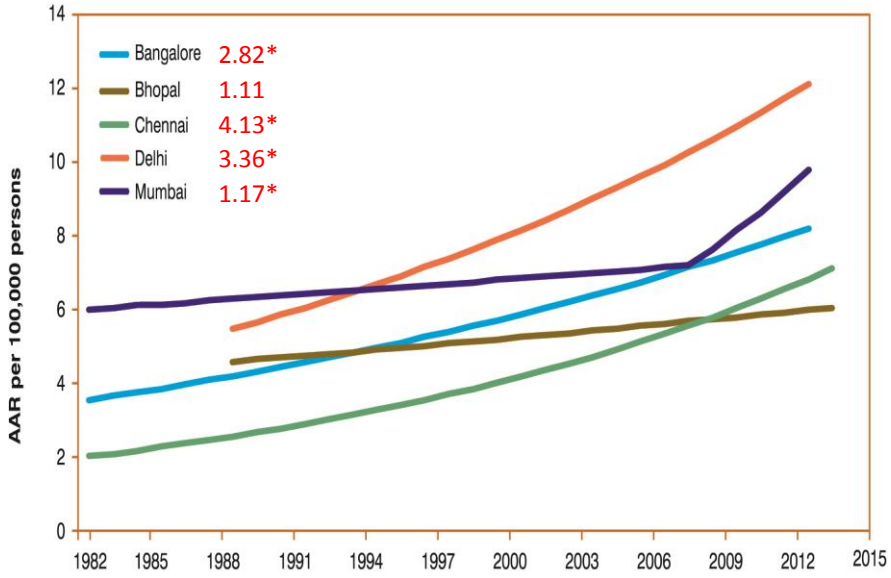
Females



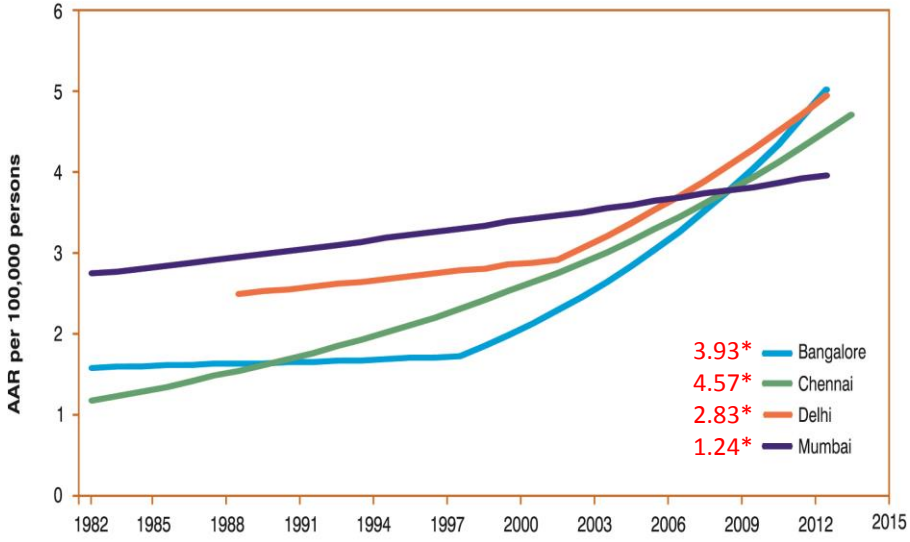
Colon (ICD-10: C18) - Males



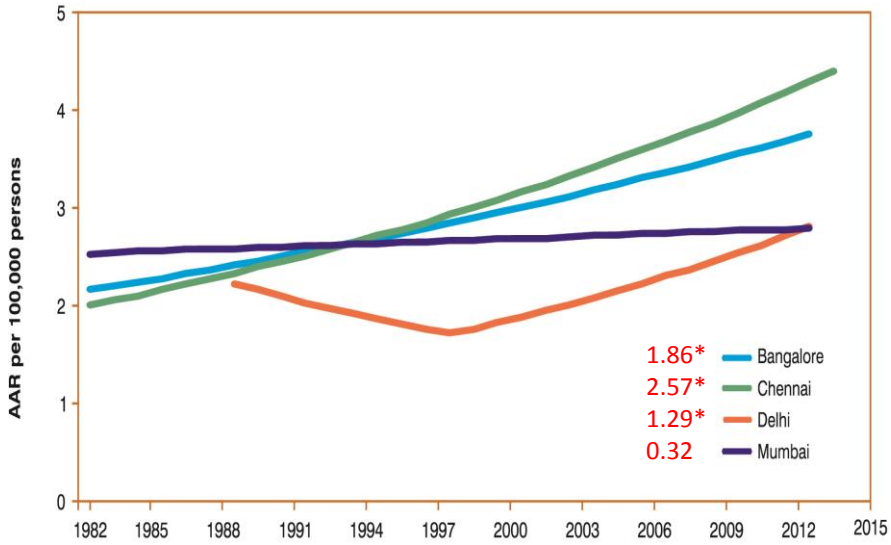
Prostate (ICD10: C61)



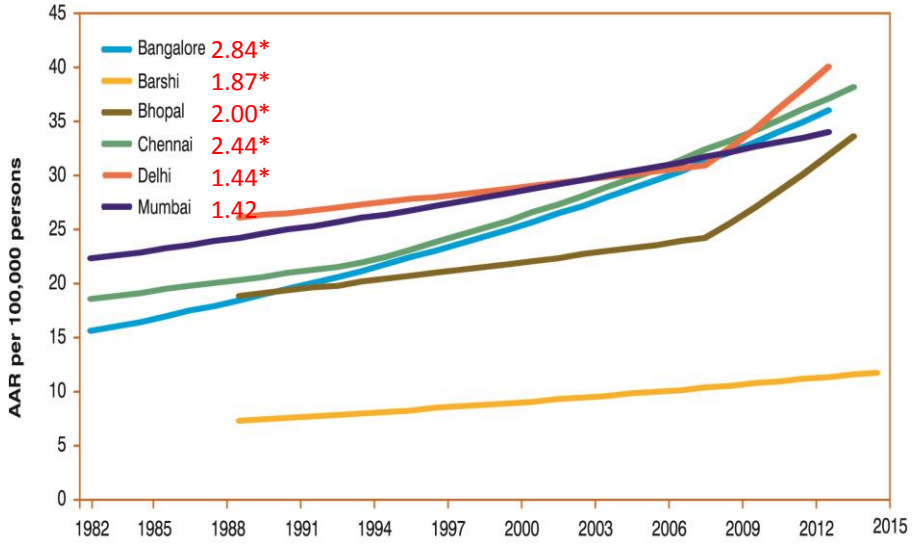
Lung (ICD-10: C33-C34) - Females



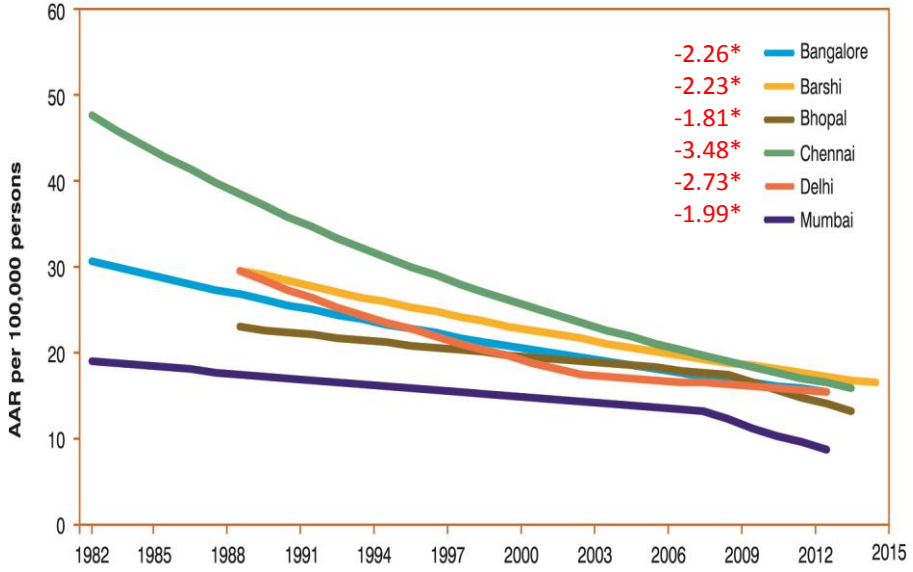
Rectum (ICD-10: C19-C20) - Males



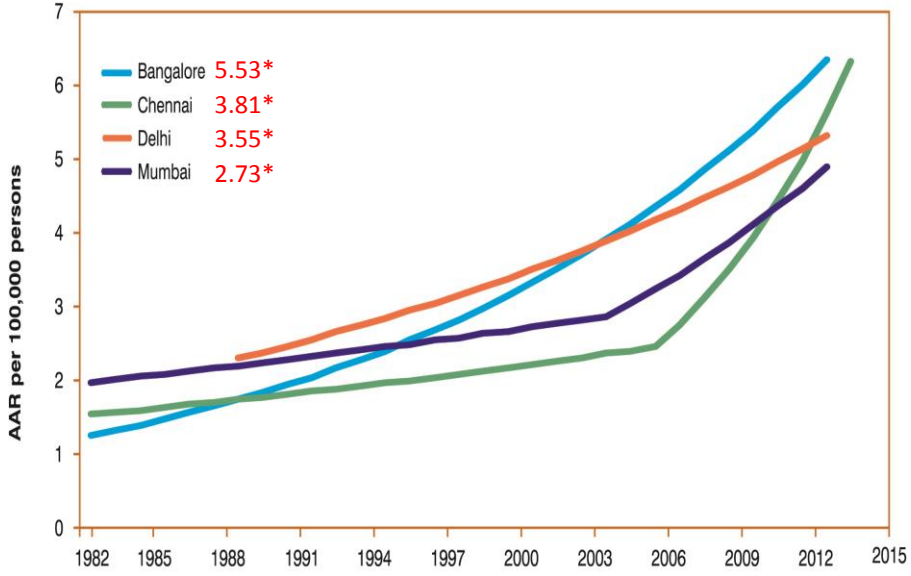
Breast (ICD-10: C50) - Females



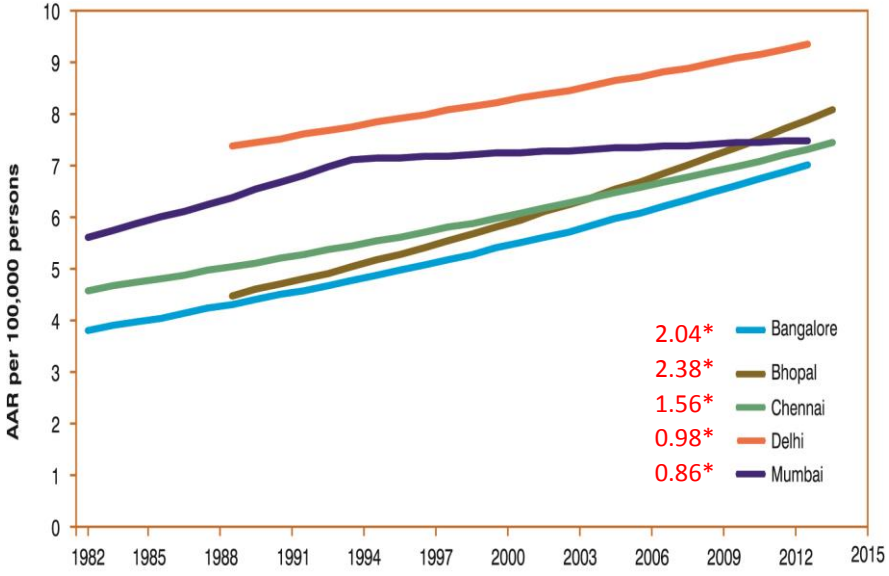
Cervix (ICD-10: C53)



Corpus Uteri (ICD-10: C54)



Ovary (ICD10: C56)



Estimated Burden Both sexes

New Cancers

	2016	2020
All Sites	14.5 lakhs	17.3 lakhs
Cancer Breast	1.5 L (10%)	1.9 L
Cancer Lung	1.14 L	1.4 L
Cancer Cervix	1.0 L	1.0 L

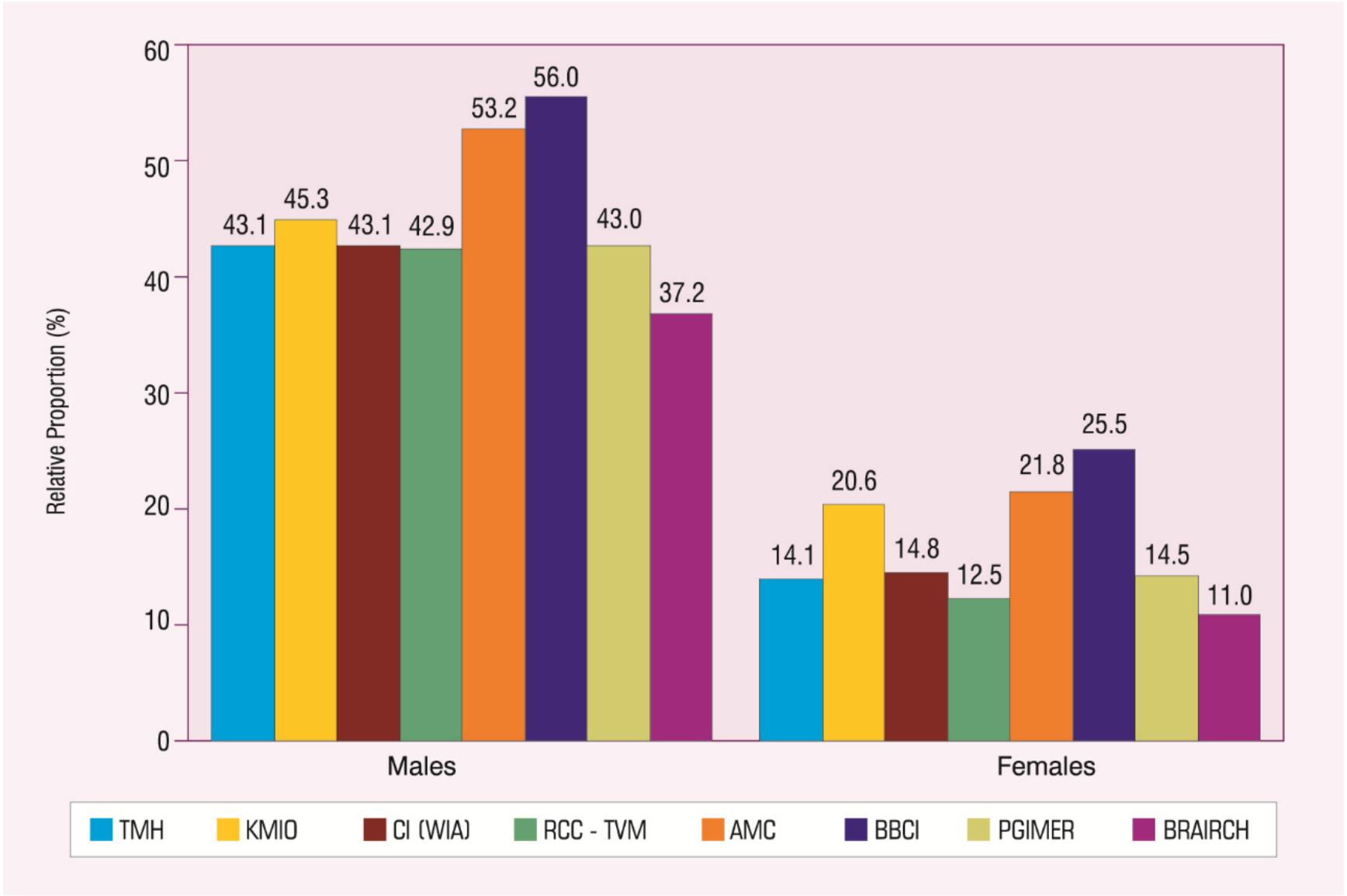
Deaths

All Sites	7.36 L	8.8 L

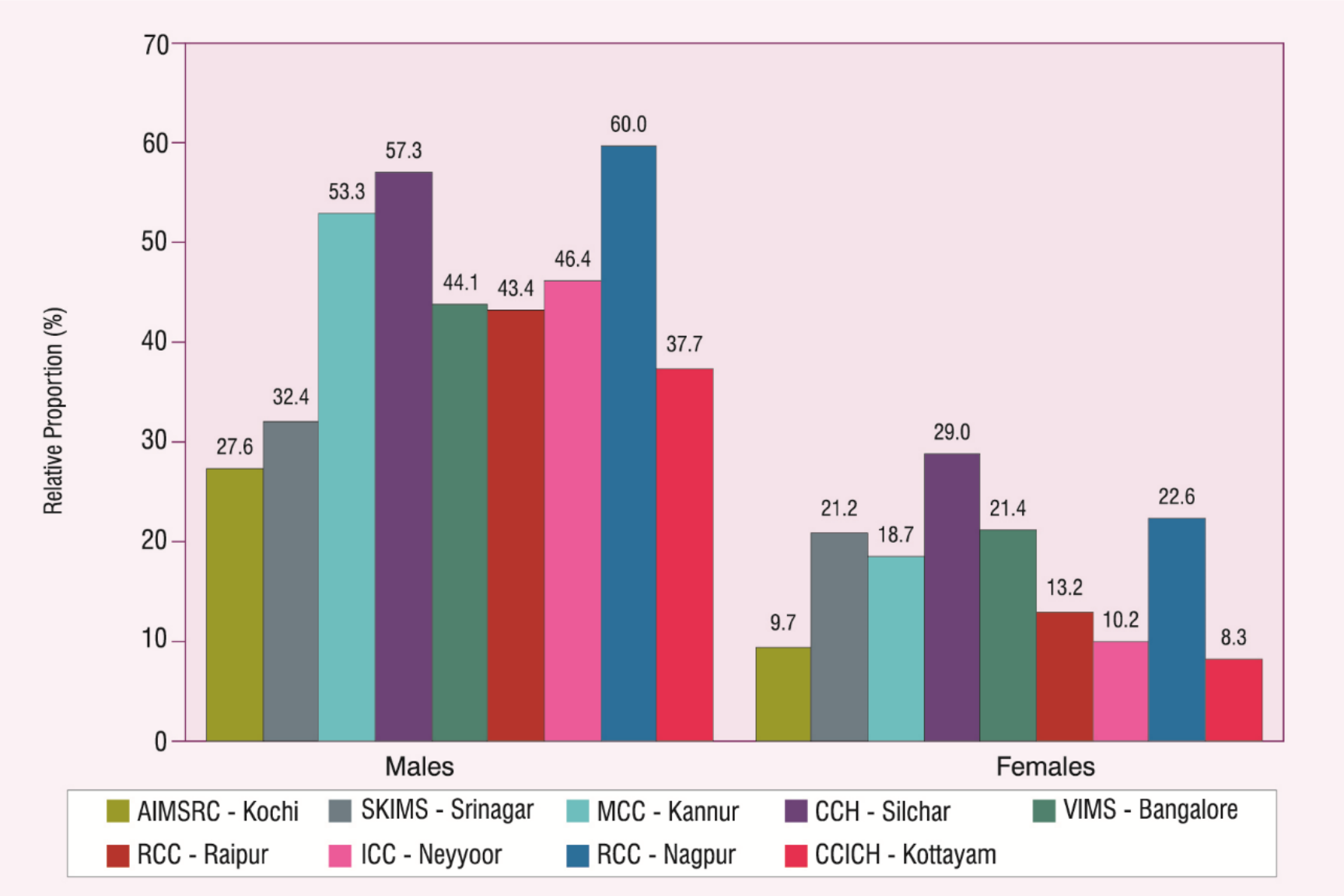
Estimated National Burden-New Cancers – Both Sexes

Anatomical Sites	2015		2020	
	No. of Cases	Approx. Relative Proportion (%)	No. of Cases	Approx. Relative Proportion (%)
Tobacco Related Cancers	402641	29	523471	30
Gastro Intestinal Tract	267822	19	341383	20
Cervix	97909	7	104060	6
Breast	134214	10	179790	10
Corpus Uteri and Ovary	70626	5	96454	6
Lymphoid & Haemopoietic Malignancies	122819	9	149845	9
Prostate	43049	3	61222	3
Central Nervous System	30629	2	32619	2
Other Sites	218688	16	246042	14
All Sites	**1388397**	**100**	**1734886**	**100**

Proportion (%) of Tobacco Related Cancers Relative to All Sites



Proportion (%) of Tobacco Related Cancers Relative to All Sites



Probability (Chances) of Developing Cancer in one's lifetime (74 years)

Expressed as one in how many persons will develop cancer as of today

Males

	All Regs	High	Low
All Sites	8	4 – Aizawl	22-Barshi
Cancer Lung	61	22-Aizawl	361-Barshi
Cancer Mouth	106	51-Ahmedabad	575-Manip
TRCs	17		

Females

All Sites	9	5-KUD,Aizawl	18-Barshi
Cancer Breast	44	21-Delhi	142-Meghal
Cancer Cervix	56	36-Aizawl	184-Dibrug
TRCs	50		

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Journal of Global Oncology

original report

Concurrent Chemoradiation for Cancer of the Cervix: Results of a Multi-Institutional Study From the Setting of a Developing Country (India)

Ambakumar Nandakumar
Goura Kishor Rath
Amal Chandra Kataki
P. Poonamalle Bapsy
Prakash C. Gupta
Paleth Gangadharan
Ramesh C. Mahajan
Manas Nath Bandyopadhyay

abstract

Purpose The primary output of hospital-based cancer registries is data on cancer stage and treatment-based survival that can be used to evaluate patient care, but because there are many challenges in obtaining follow-up details, a separate study on patterns of care and patterns of survival for patients at selected sites was initiated under the National Cancer Registry Programme of India. This article presents the results for cervical cancer.

Patients and Methods A standardized patient information form was used to record patient information, and data were entered into a central repository—the National Centre for Disease Informatics and Research. The study patients were from 12 institutions and were diagnosed between January 1, 2006, and December 31, 2008. Patterns of treatment were assessed for 7,336 patients, and patterns of survival were determined for 2,669 patients from six institutions, at least 70% of whom had data regarding follow-up as of December 31, 2012.

jgo.ascopubs.org JGO – Journal of Global Oncology
JGO published online on September 23, 2015; DOI:10.1200/JGO.2015.000877.

Figure 1: Kaplan-Meier comparative survival graph for patients who received Radiotherapy alone and those who received RT & CT

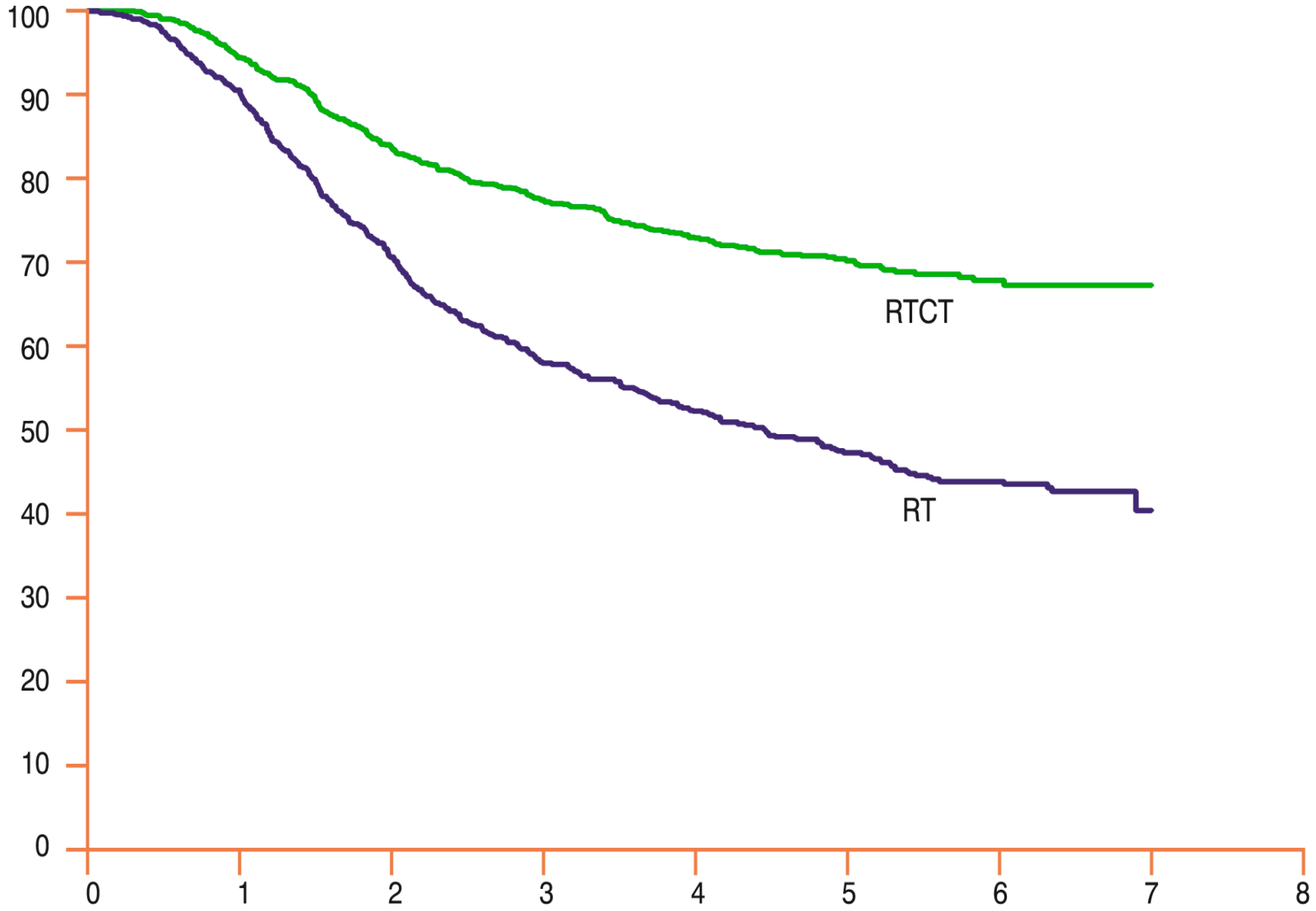
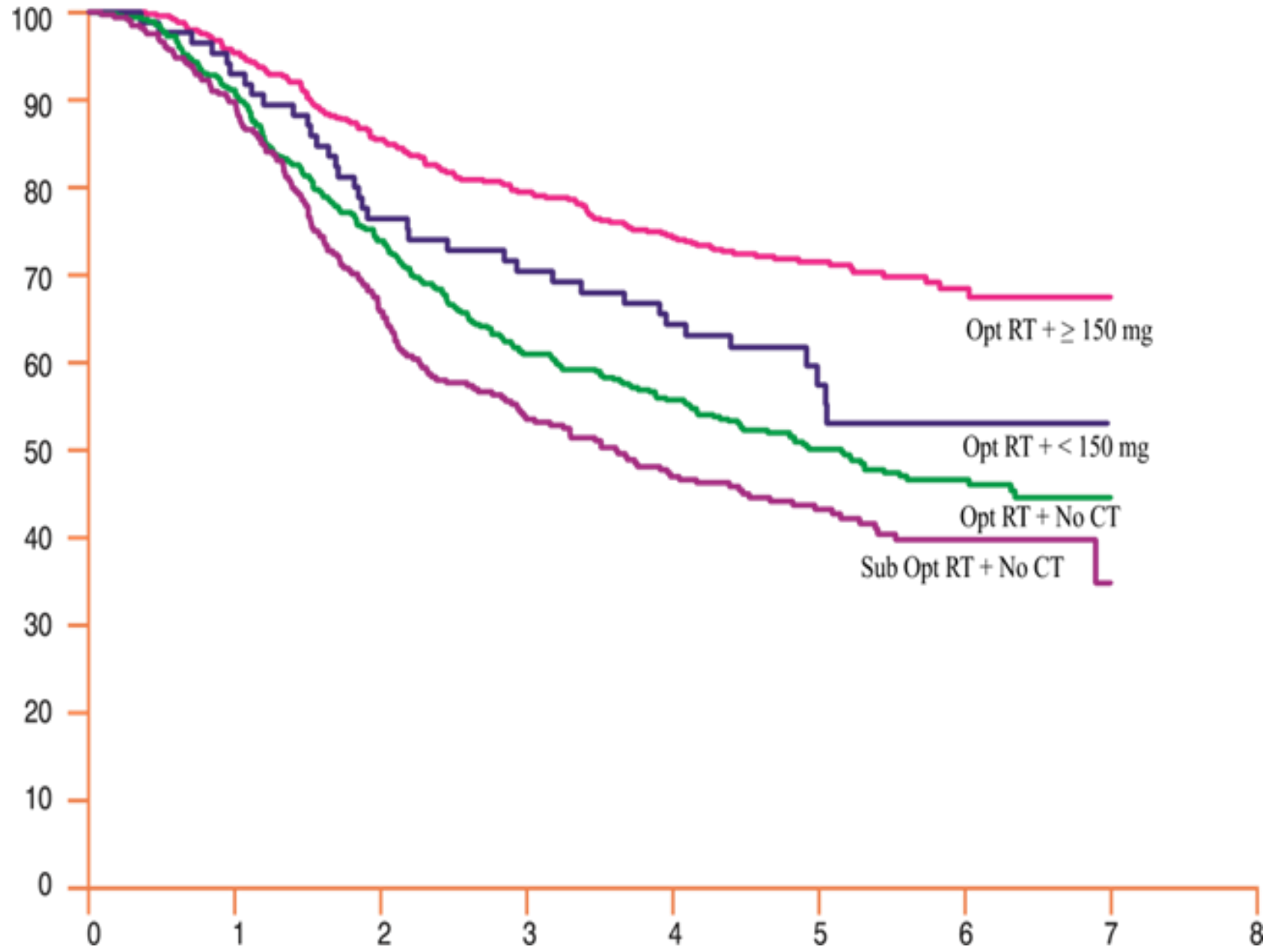


Figure 2: Kaplan-Meier comparative survival graph for combinations of optimal RT and at least 150 mg cisplatin as total dose



NCRP-Reports-Publications

- With these 2 reports there are 32 since the first report was published by Dr L.D.Sanghvi in 1984

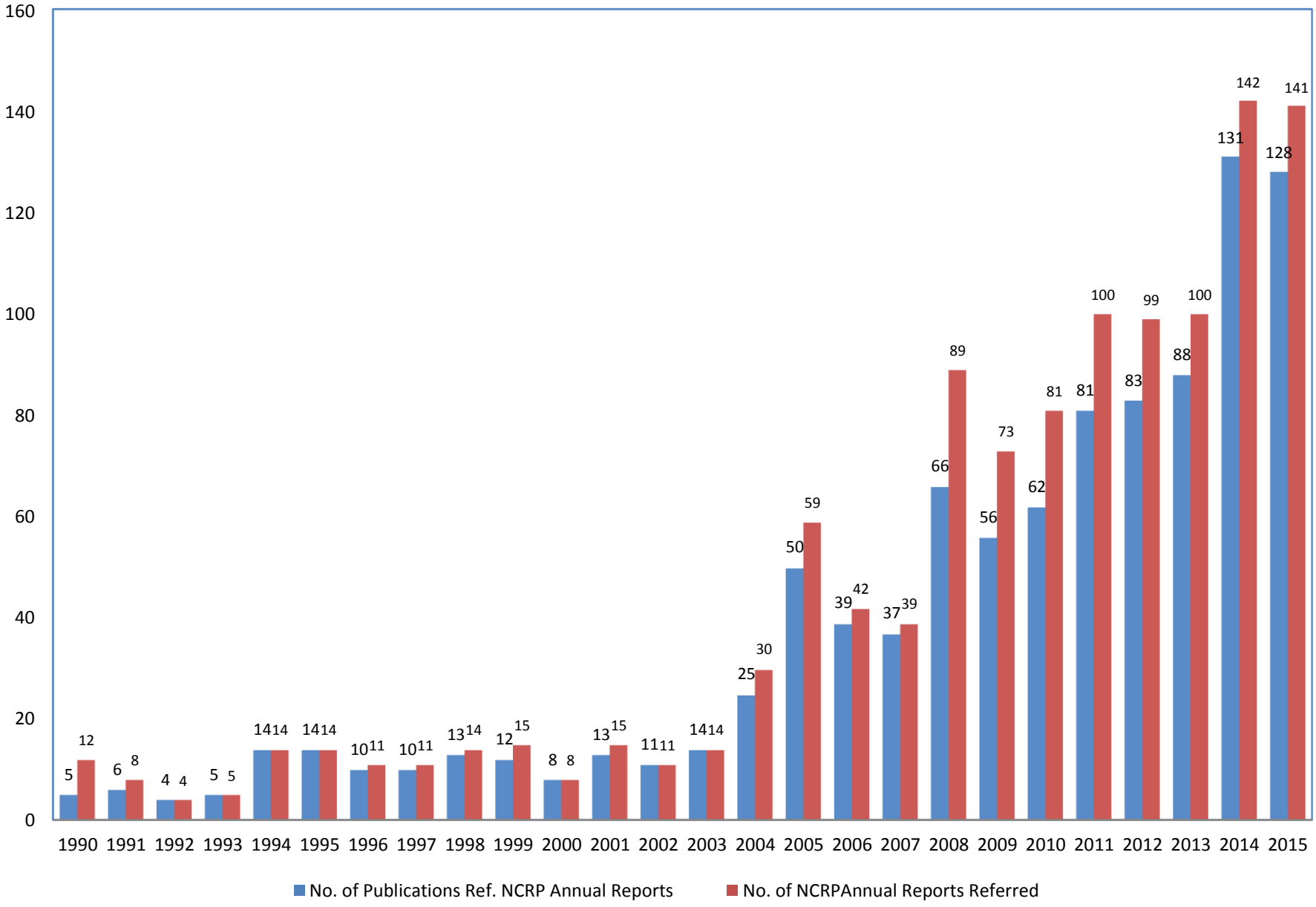
- As of May 2016 the citations of these NCRP reports are 1151

- A number of technical and teaching manuals (both spiral bound hard copies and on-line) are brought out (at least 2-3 /year)

- 543 indexed publications based on NCRP data with 14,180 citations

YEAR	**No. of Publications where NCRP Reports are cited**	**Total No. of citations of NCRP Reports**
1990	5	12
1991	6	8
1992	4	4
1993	5	5
1994	14	14
1995	14	14
1996	10	11
1997	10	11
1998	13	14
1999	12	15
2000	8	8
2001	13	15
2002	11	11
2003	14	14
2004	25	30
2005	50	59
2006	39	42
2007	37	39
2008	66	89
2009	56	73
2010	62	81
2011	81	100
2012	83	99
2013	88	100
2014	131	142
2015	128	141
TOTAL	**985**	**1151**

NCRP publication Reference 1990-2015



List of Regional Cancer Centres in India

1. M.N.J. Institute of Oncology & Regional Cancer Centre, Hyderabad
2. Dr. B. Borooah Cancer Institute, Guwahati
3. Indira Gandhi Institute of Medical Sciences, Patna
4. Post Graduate Institute Medical Education & Research, Chandigarh
5. Pt. J.N.M. Medical College & Dr. Bhim Rao Ambedkar Memorial Hospital, Raipur
6. Dr. B.R. Ambedkar Institute Rotary Cancer Hospital, All India Institute of Medical Sciences, New Delhi
7. The Gujarat Cancer & Research Institute, Ahmedabad
8. Pt. B.D. Sharma Post Graduate Institute of Medical Sciences, Rohtak
9. Indira Gandhi Medical College, Shimla
10. Sher-I-Kashmir Institute of Medical Sciences, Srinagar
11. Government Medical College, Jammu
12. Kidwai Memorial Institute of Oncology, Bangalore
13. Regional Cancer Centre, Thiruvananthapuram
14. Cancer Hospital & Research Institute, Gwalior
15. Rashtrasant Tukdoji Regional Cancer Hospital & Research Centre, Nagpur
16. Tata Memorial Hospital, Mumbai
17. Regional Institute of Medical Sciences, Imphal
18. Mizoram State Cancer Institute (Civil Hospital), Aizawl
19. Acharya Harihar Regional Cancer Centre, Cuttack
20. Jawaharlal Institute of Postgraduate Medical Education & Research, Puducherry
21. Acharya Tulsi Regional Cancer Treatment & Research Institute, Bikaner
22. Govt. Arignar Anna Memorial Cancer Hospital & Research Institute, Kanchipuram
23. Cancer Institute (WIA), Adyar Chennai
24. Regional Cancer Centre, Agartala
25. Sanjay Gandhi Post Graduate, Institute of Medical Sciences, Lucknow
26. Kamala Nehru Memorial Hospital, Allahabad
27. Chittaranjan National Cancer Institute, Kolkata

On-going-Future Plans/Proposals

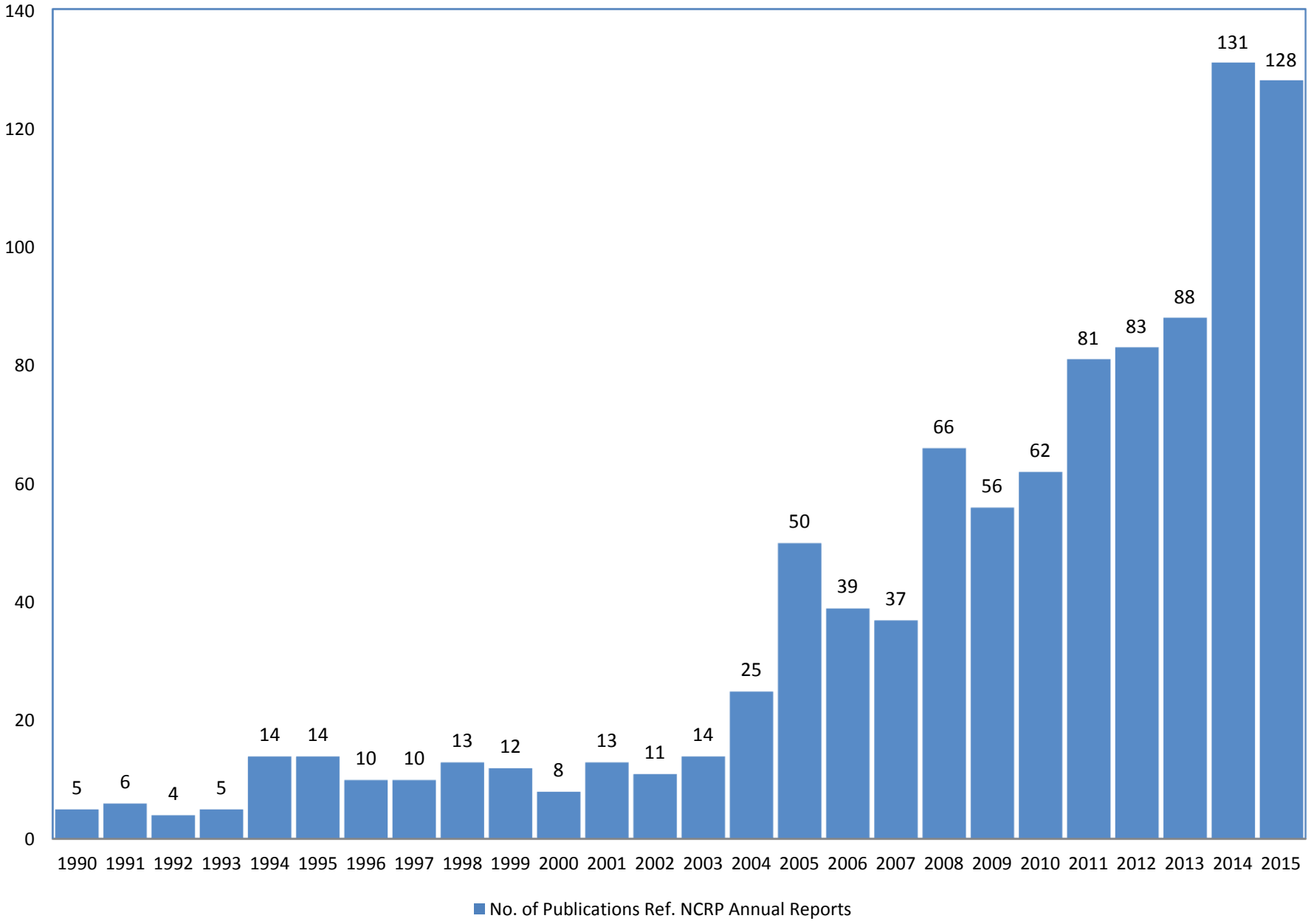
- **Haryana Cancer Atlas – sequel to the PCA**

- **Workshop on cancer in general and particularly gall bladder cancer along the Gangetic belt: Varanasi, Allahabad, Patna**

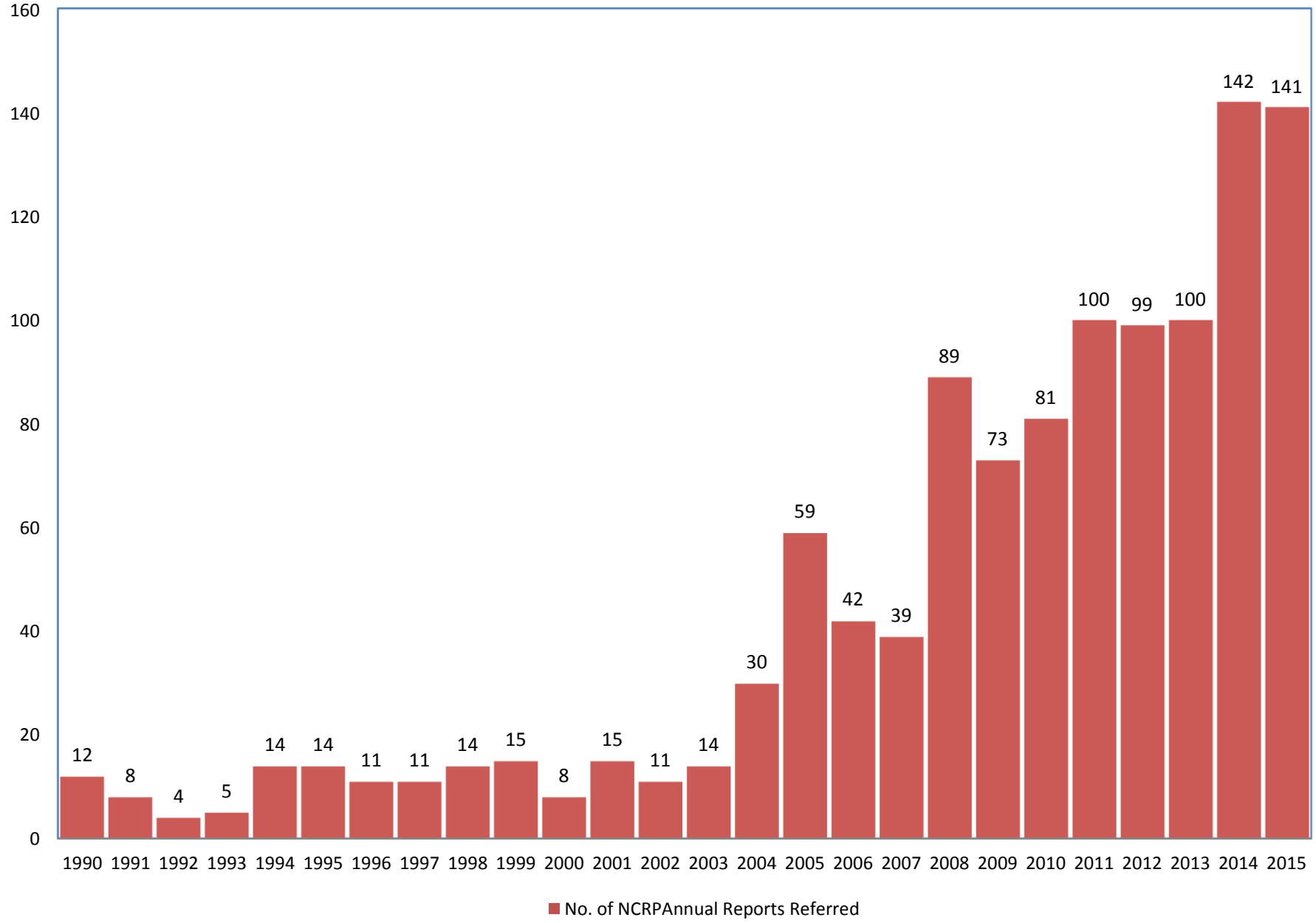
- **Software Modules – Promotion – Consolidation etc**

Thank You

No. of Publications Referred NCRP Annual Reports 1990-2015



No. of NCRP Annual Reports Referred 1990-2015



Estimated National Burden-New Cancers - Males

Site Name	2015	2020
All Sites	692704	871756
Lung	78252	102300
Mouth	66097	99495
Tongue	44791	60669
Prostate	43049	61222
Oesophagus	31083	34667
Larynx	30316	36079
Stomach	29530	35306
Liver	25984	35761
NHL etc	25234	29976
Colon	21728	30075
Rectum	21688	27655
Urinary Bladder	21509	27006
Brain	19300	20506
Hypopharynx	15666	16636
Myeloid Leuk	14303	16522
Gall Bladder	13654	19095
Lymphoid Leuk	13467	17930
Kidney	12660	16804
Pancreas	10969	11655

Estimated National Burden-New Cancers - Females

Site Name	2015	2020
All Sites	695693	863130
Breast	134214	179790
Cervix	97909	104060
Ovary	45231	59276
Lung	28542	42051
Thyroid	27603	33506
Corpus Uteri	25395	37178
Gall Bladder	23907	36046
Mouth	23548	28956
Oesophagus	17976	19231
NHL etc	17039	21927
Colon	15707	21831
Tongue	15542	20531
Stomach	15468	18802
Rectum	14602	18772
Brain	11329	12113
Liver	10271	14083
Myeloid Leuk	9984	10679
Lymphoid Leuk	7295	9779
Urinary Bladder	5377	6602
Hypopharynx	4034	4312
Larynx	3326	3557

Estimated National Burden-New Cancers – Both Sexes

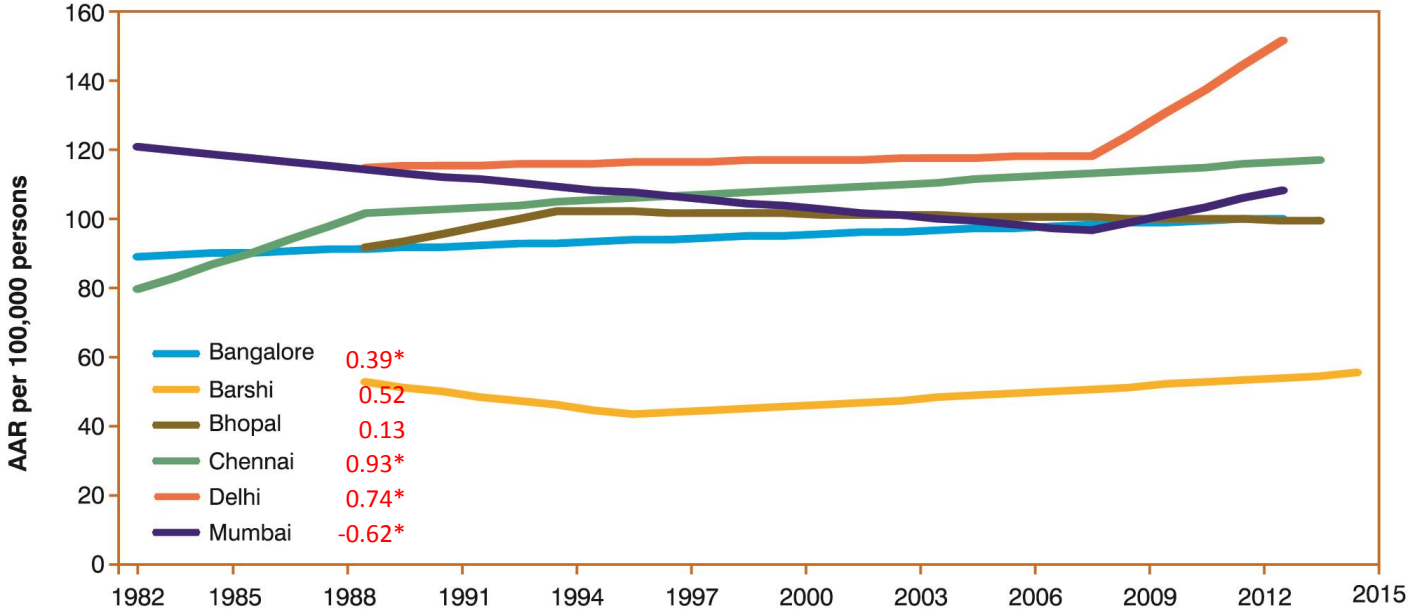
Site Name	2015	2020
All Sites	1388397	1734886
Breast	141013	191392
Lung	106794	144351
Cervix	97909	104060
Mouth	89645	128451
Tongue	60333	81200
Oesophagus	49059	53898
Ovary	45231	59276
Stomach	44998	54108
Prostate	43049	61222
NHL etc	42273	51931
Gall Bladder	37561	55141
Colon	37435	51906
Thyroid	36783	45511
Rectum	36290	46427
Liver	36255	49844
Larynx	33642	39636
Brain	30629	32619
Urinary Bladder	26886	33608
Corpus Uteri	25395	37178
Myeloid Leuk	24287	27201
Lymphoid Leuk	20762	27709
Hypopharynx	19700	20948

Table 4 : Projected Mortality Cancer Cases at India – Both Sexes

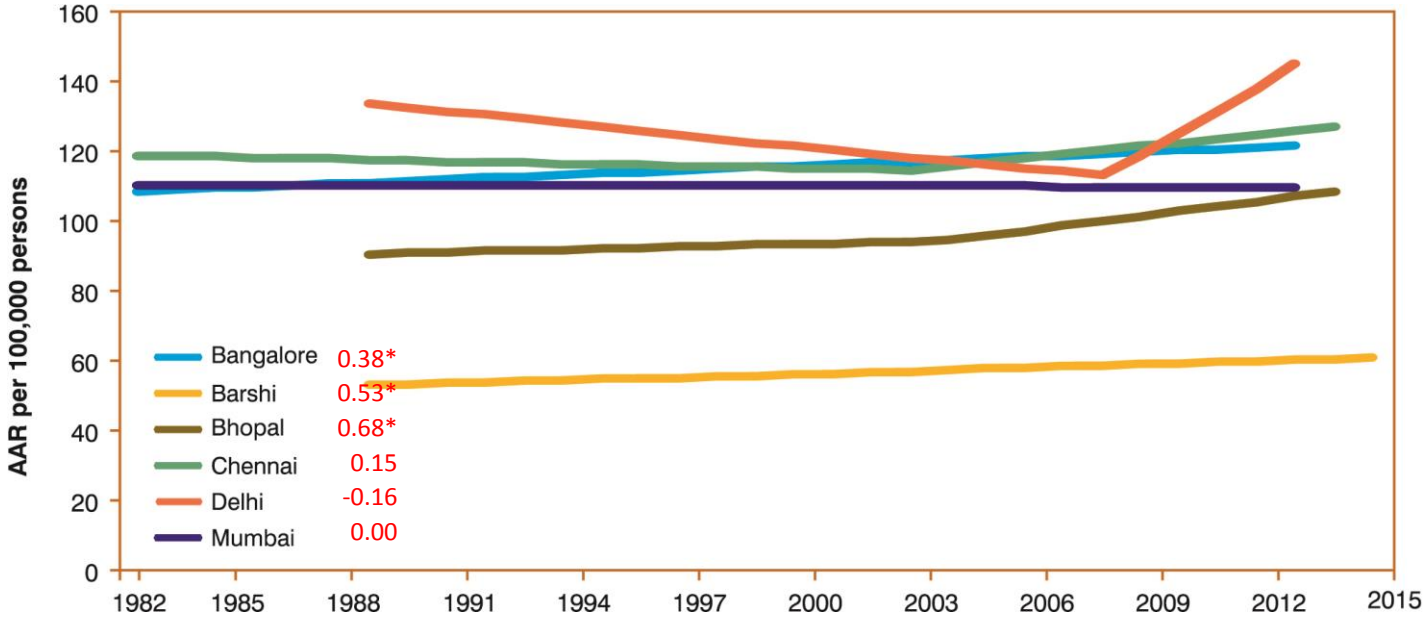
Site Name	2015	2020
All Sites	**701006**	**876506**
Lung	81164	109707
Cervix	65890	69291
Breast	58085	78292
Oesophagus	36877	40540
Mouth	32318	46116
Liver	30406	41804
Stomach	29572	35569
Tongue	27424	36932
Gall Bladder	25166	36945
NHL etc	22146	27151

ALL SITES (ICD-10: C00-C97)

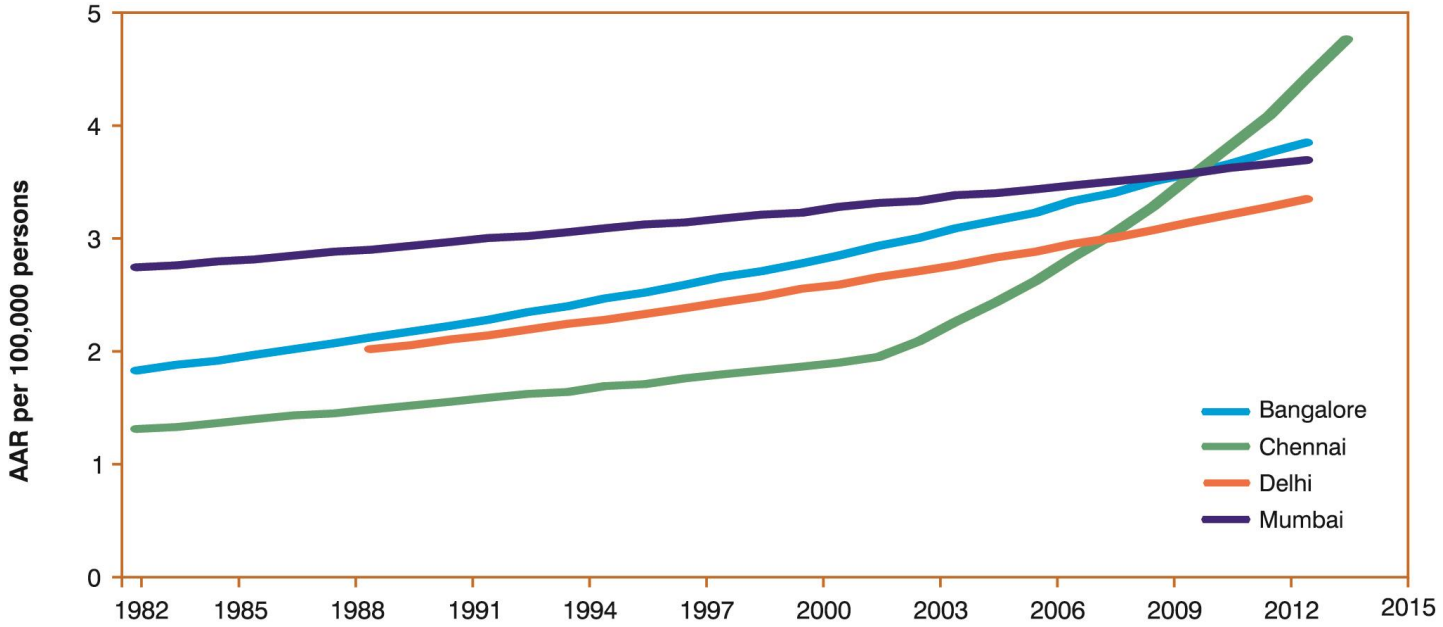
Males



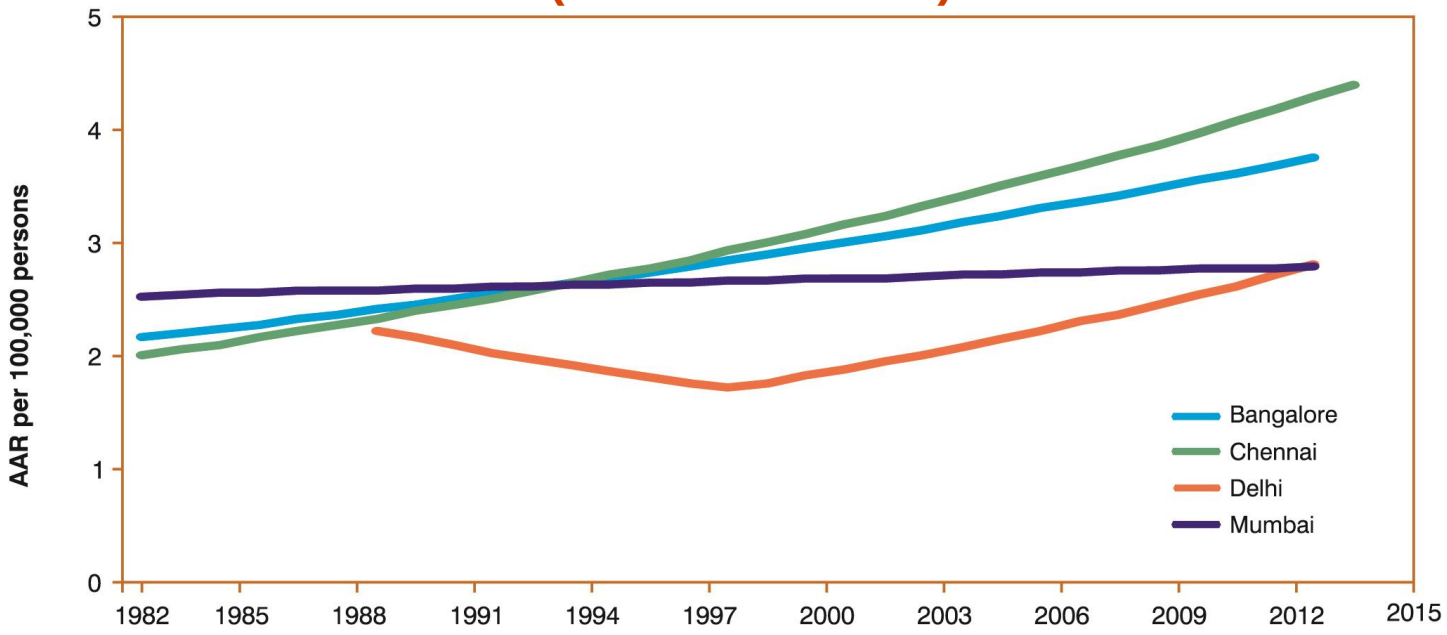
Females



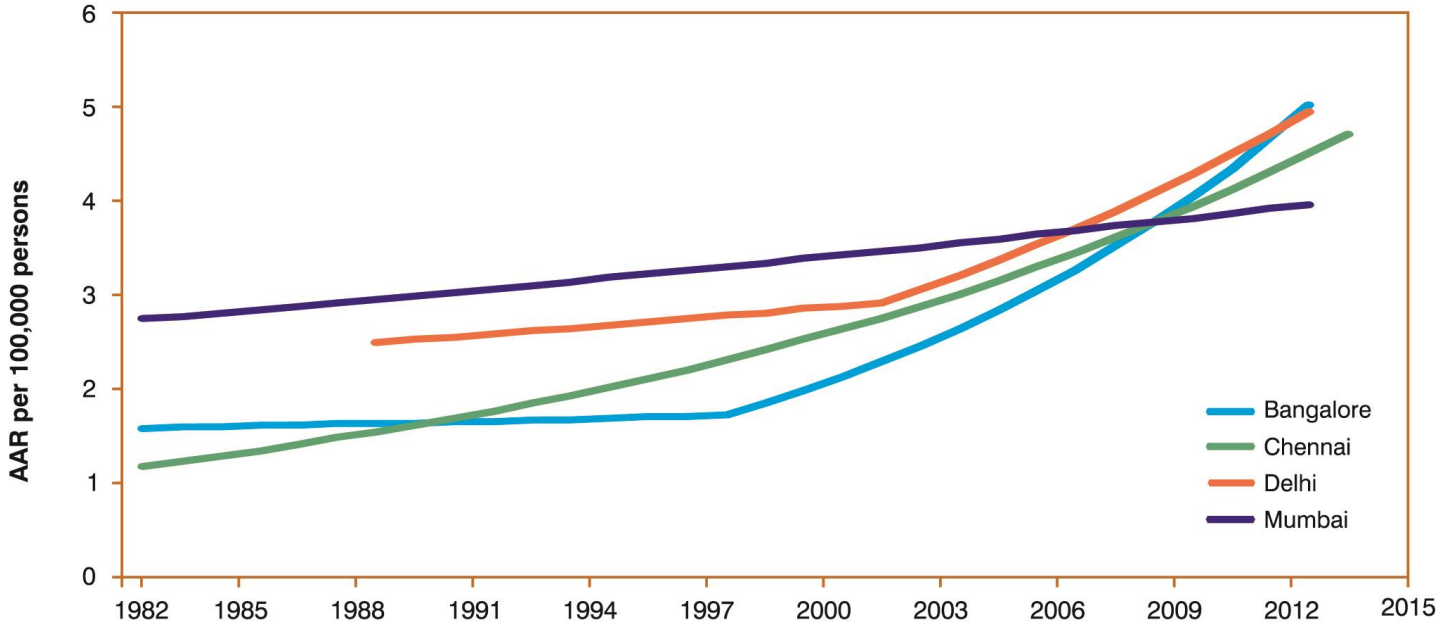
Colon (ICD-10: C18) - Males



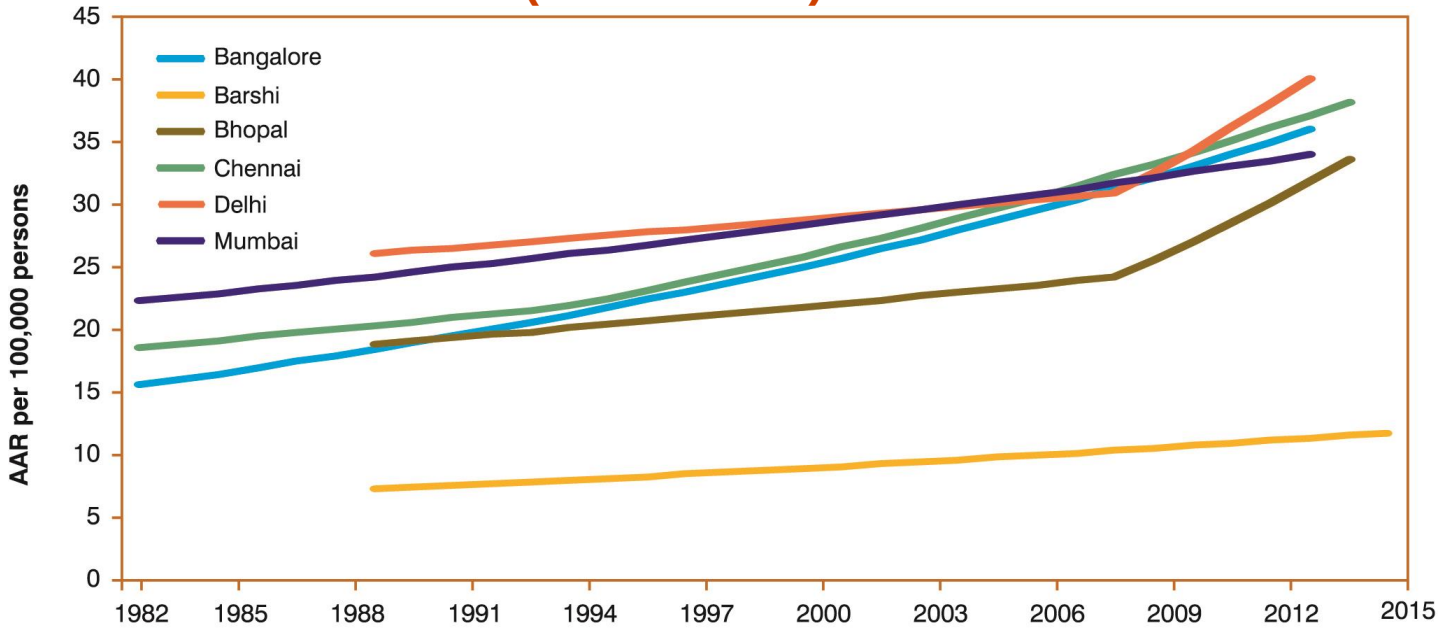
Rectum (ICD-10: C19-C20) - Males



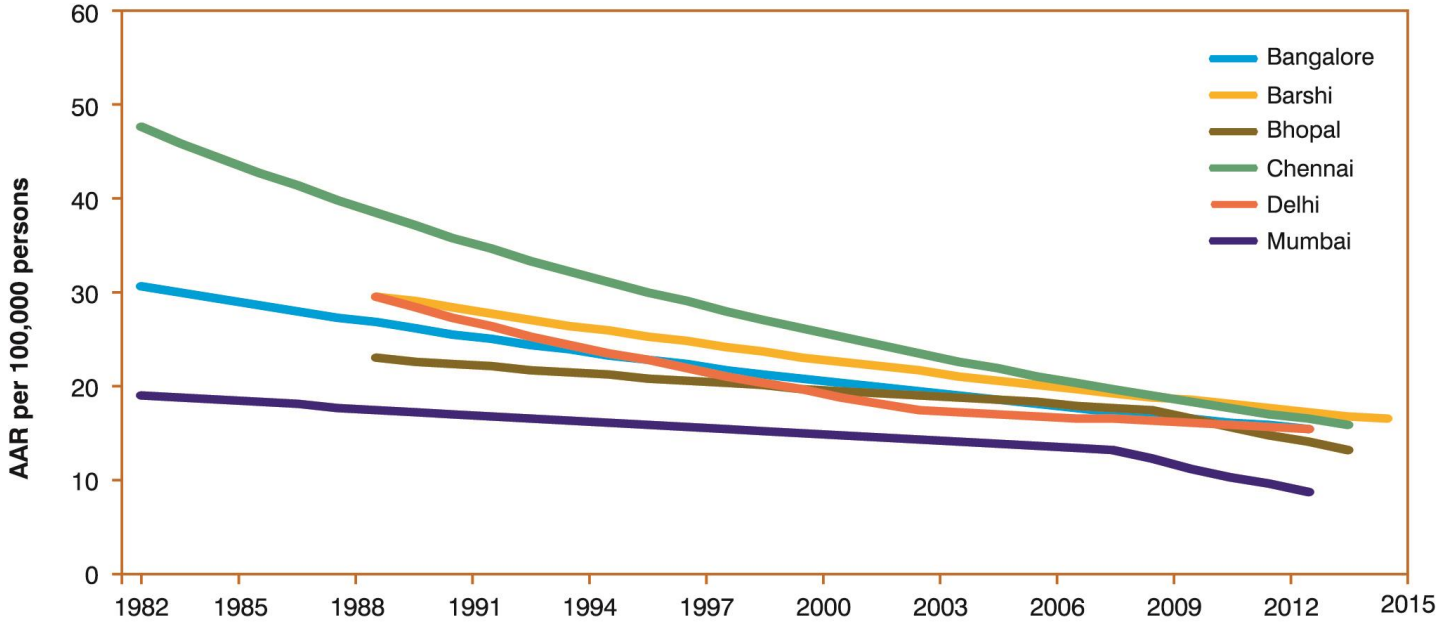
Lung (ICD-10: C33-C34) - Females



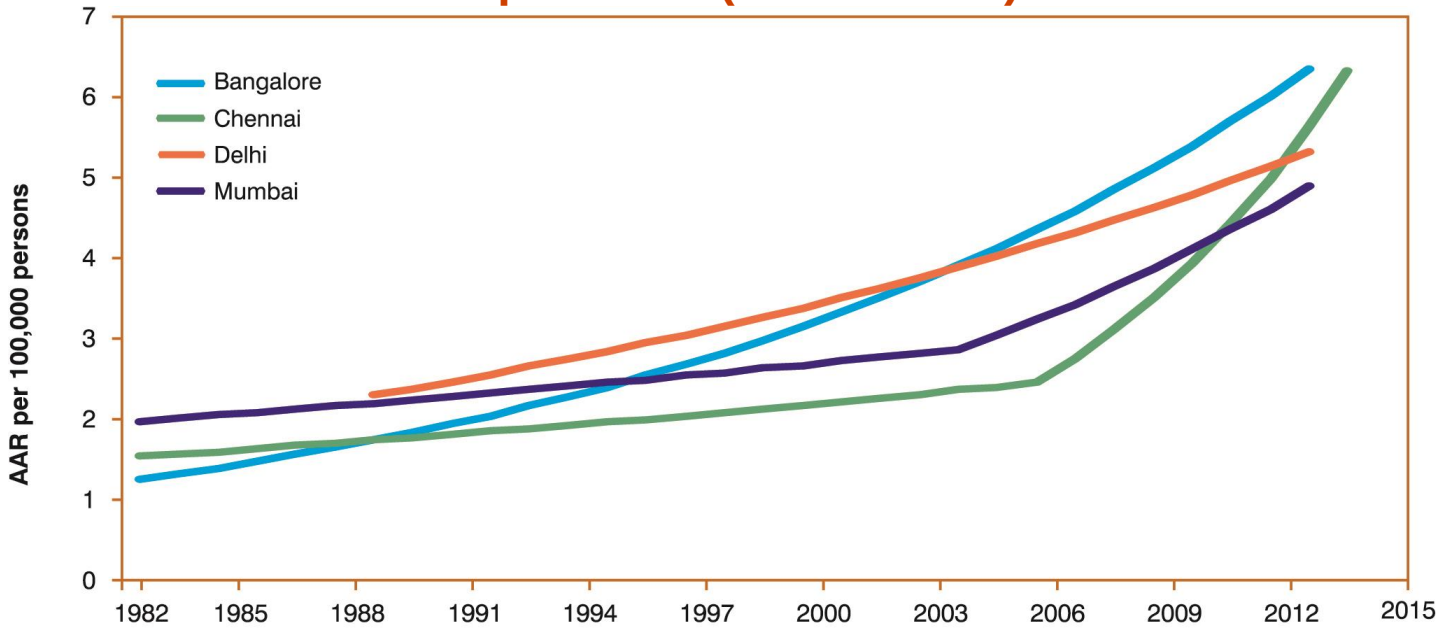
Breast (ICD-10: C50) - Females



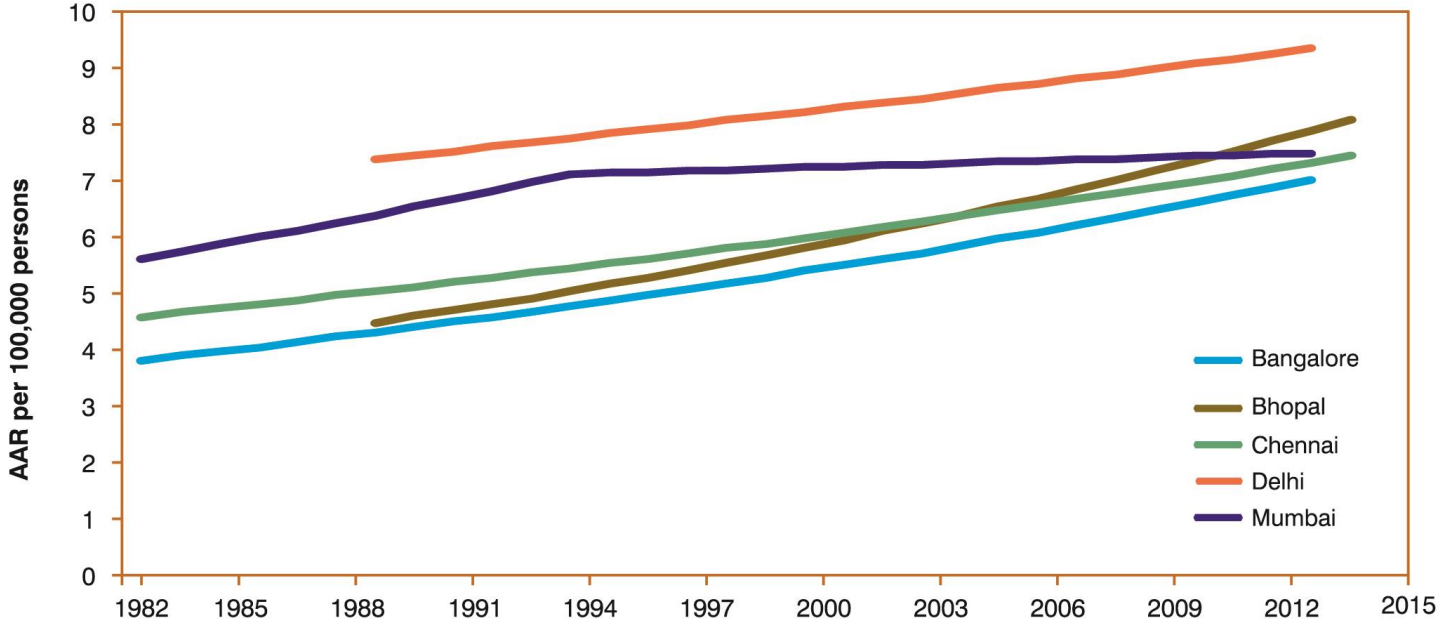
Cervix (ICD-10: C53)



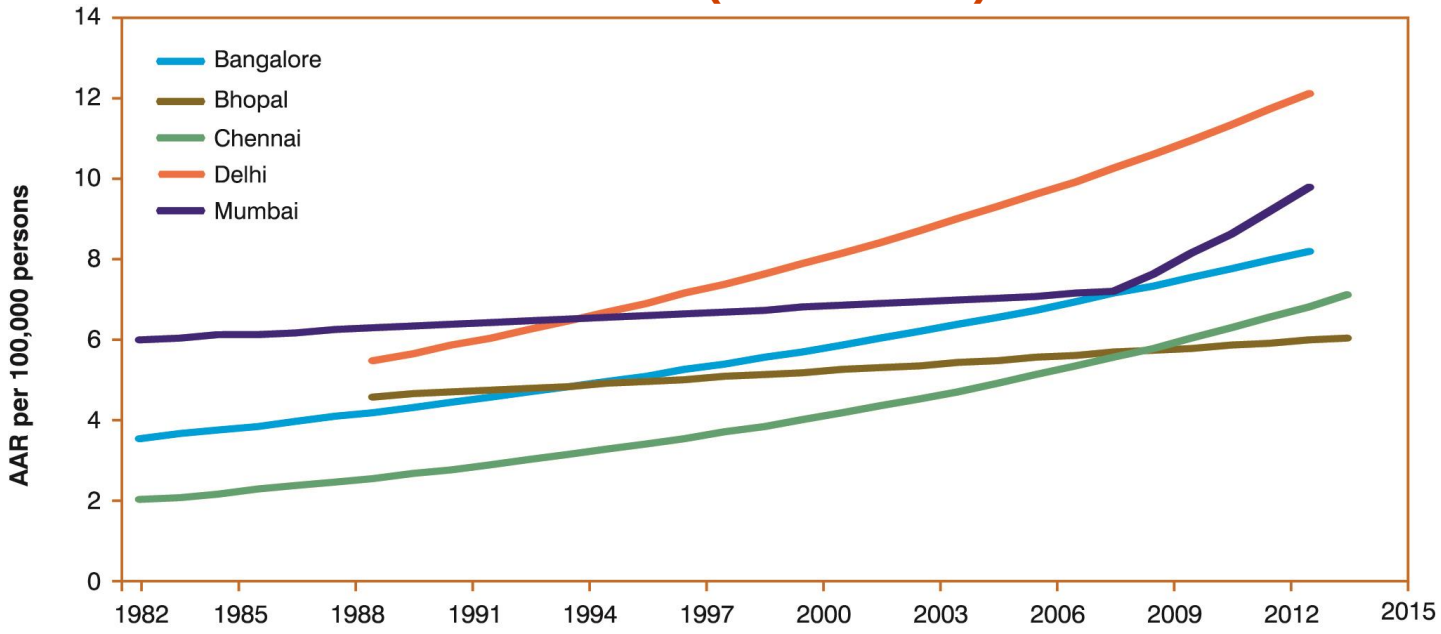
Corpus Uteri (ICD-10: C54)



Ovary (ICD10: C56)

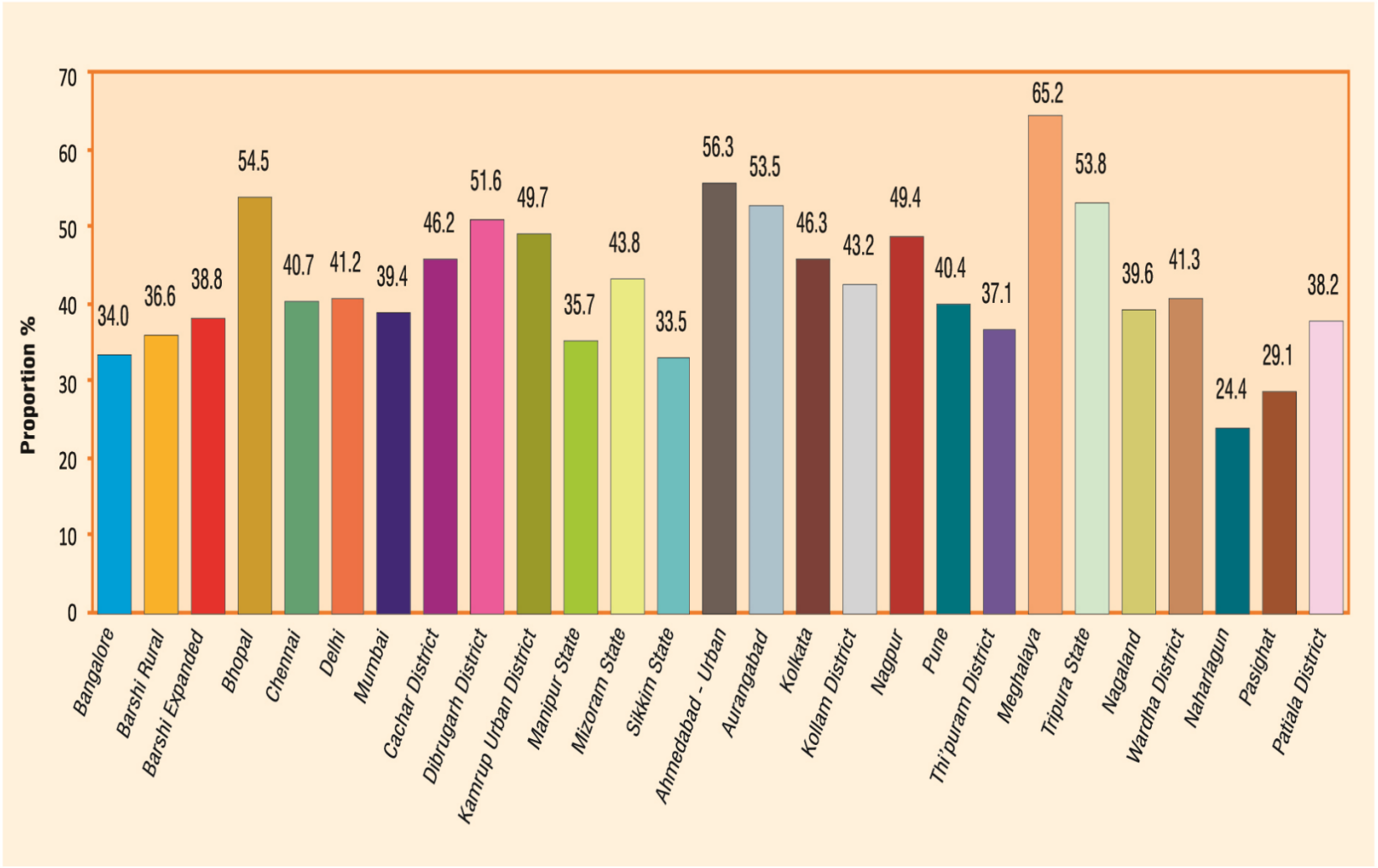


Prostate (ICD10: C61)



Proportion (%) of Tobacco Related Cancers (TRCs) Relative to All Sites of Cancers

Males



Proportion (%) of Tobacco Related Cancers (TRCs) Relative to All Sites of Cancers

Females