

Chapter 7

COMPARISON OF CANCER INCIDENCE AND PATTERNS OF ALL POPULATION BASED CANCER REGISTRIES

This chapter compares the cancer incidence and its pattern among all the PBCRs.

All Sites (ICD-10: C00-C97)

Figure 7.1 compares the Age Adjusted Rates (AARs per 1,00,000) of all sites in males and females respectively.

Among males, seven North East registry areas occupy top seven positions. Delhi PBCR has the highest AAR (149.4) among the other PBCRs. Thus, Aizawl District (270.7) has the highest AAR and has approximately twice the AAR of Delhi PBCR. Papumpare District covered by Naharlagun PBCR in Arunachal Pradesh has the second highest AAR (230.4) followed by East Khasi Hills District of Meghalaya (218.3) and Mizoram PBCR (211.5).

Among females, four registry areas from north east remained at the top (Papumpare District: 249.0, Aizawl District: 207.7, Kamrup Urban District: 174.0 and Mizoram State:165.8) followed by Delhi PBCR (144.8).

Registries with small numbers (Less than ten cases) have been excluded from analysis.

Male-Female Ratio (M:F Ratio)

Cancer incidence rates have shown variation between the sexes, especially for certain sites of cancer.

Both Bangalore and Chennai have since inception shown, for all sites of cancer, a consistently higher AAR in women compared to men. The M:F ratio of AARs for all sites varied from 0.79 in Barshi Expanded to 1.80 in the newer registry of Meghalaya.

Figures 7.2 to 7.22 give the AAR comparison of selected leading sites of cancer.

Tongue (ICD-10: C01-C02)

Males: East Khasi Hills District from Meghalaya had the highest AAR (11.7) followed by Ahmedabad Urban PBCR (10.4).

Females: Bhopal PBCR had the highest AAR (3.7) followed by Ahmedabad Urban PBCR (3.4). The registries of Nagpur and Kamrup Urban District share the third place with an AAR of 3.2.

Mouth (ICD-10: C03-C06)

Males: Ahmedabad Urban PBCR showed the highest AAR (18.1) followed by Bhopal PBCR (14.3).

Females: East Khasi Hills District of Meghalaya had the highest AAR (9.1).

Nasopharynx (ICD-10: C11)

Males: Thirteen North Eastern registry areas had higher AAR, Nagaland PBCR being the highest (15.2). Delhi registry with an AAR of 0.7 stood at the fourteenth place.

Females: Nine North Eastern registry areas had higher AAR and Nagaland PBCR led the list (6.8).

Hypopharynx (ICD-10: C12-13)

Males: East Khasi Hills District of Meghalaya (22.2) had the highest AAR followed by Kamrup Urban District (17.5) and Aizawl District (17.2).

Females: Kamrup Urban District showed the highest AAR (3.2).

Oesophagus (ICD-10: C15)

Males: East Khasi Hills showed the highest AAR (71.2) followed by Meghalaya PBCR (51.2) and Aizawl District (49.9).

Females: East Khasi Hills showed the highest AAR (33.0) followed by Meghalaya PBCR (22.7).

Stomach (ICD-10: C16)

Males: Twelve north east registry areas occupied the top positions. Papumpare District (50.2), Aizawl District (43.9), Mizoram State (41.1) and Mizoram excluding Aizawl District (39.3) were in the lead among all the PBCRs. Among the older PBCRs, Chennai had the highest AAR (10.8).

Females: Twelve north east registry areas occupied the top positions. Papumpare District (29.2), Aizawl District (23.7), Mizoram State (20.2) and Mizoram excluding Aizawl District (17.7) were in the lead among all the PBCRs. Among the older PBCRs, Chennai had the highest AAR (5.1).

Colon (ICD-10: C18)

Males: Aizawl District had the highest AAR (6.8), followed by Mizoram PBCR (5.4) and Kamrup Urban District (5.2).

Females: Aizawl District had the highest AAR (5.4), followed by Kamrup Urban District (4.3) and Mizoram state (3.9).

Liver (ICD-10: C22)

Males: All the areas covered by Naharlagun PBCR have recorded higher AARs than any other PBCR. Papumpare District had the highest AAR (38.0) within Naharlagun PBCR as well as overall.

Gall Bladder (ICD-10: C23-C24)

Males: Kamrup Urban District showed the highest AAR (8.8) followed by Delhi (5.3) and Cachar District (5.2).

Females: Kamrup Urban District showed the highest AAR (17.1) followed by Delhi (11.8), Cachar District (10.2) and Papumpare District (10.2).

Larynx (ICD-10: C32)

Males: East Khasi Hills District (10.8) had the highest AAR followed by Papumpare District (9.2).

Lung (ICD-10: C33-C34)

Males: All the three areas of Mizoram namely, Aizawl District (37.9), Mizoram State (32.6) and Mizoram excluding Aizawl District (29.3) had higher AARs than any other PBCR.

Females: All the three areas of Mizoram namely, Aizawl District (40.8), Mizoram State (29.3) and Mizoram excluding Aizawl District (21.1) were at the top followed by Papumpare District (16.3).

Breast (ICD-10: C50)

Females: Delhi (41.0), Chennai (37.9), Bangalore (34.4) and Thiruvananthapuram District (33.7) occupied the top four places among all the PBCRs.

Cervix Uteri (ICD-10: C53)

Papumpare District (30.2), Aizawl District (28.0), Mizoram State (23.1) and Pasighat PBCR (22.5) occupied the top four place among all the PBCRs.

Corpus Uteri (ICD-10: C54)

Chennai (6.0), Delhi (5.5) and Thiruvananthapuram District (5.1) occupied the top three places among all the PBCRs.

Ovary (ICD-10: C56)

Papumpare District (15.2) had the highest AAR, followed by Delhi PBCR (10.0).

Prostate (ICD-10: C61)

Delhi (12.4) recorded the highest AAR, followed by Kamrup Urban District (12.2) and Mumbai (9.8).

Kidney (ICD-10: C64)

Males: Delhi PBCR (2.9) recorded the highest AAR, followed by Thiruvananthapuram District (2.8) and Mumbai PBCR (2.7).

Urinary Bladder (ICD-10: C67)

Males: Delhi had the highest AAR (7.4), followed by Thiruvananthapuram District (4.9).

Brain, Nervous System (ICD-10: C70-72)

Males: Bangalore PBCR lead the list of PBCRs with an AAR of 4.6. Delhi had the second highest AAR (4.3).

Females: Sikkim State (4.0) had the highest AAR followed by Bangalore PBCR (3.2).

Thyroid (ICD-10: C73)

Females: Papumpare District (20.7) topped the list of PBCRs. The two registries in Kerala namely, Thiruvananthapuram District (13.3) and Kollam District (12.0) followed next.

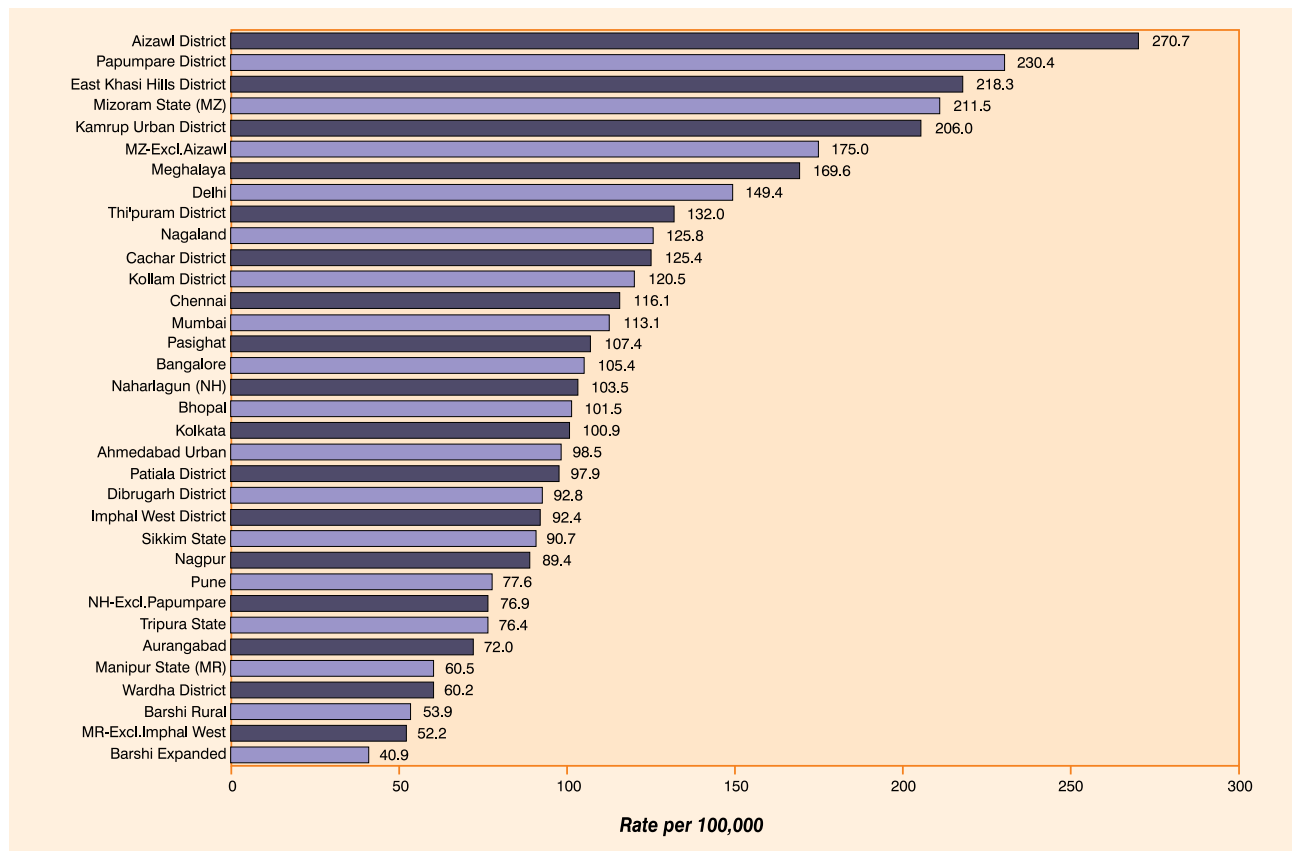
NHL (ICD-10: C82-C85)

Males: Delhi PBCR showed the highest AAR (6.2) followed by the two registries at Kerala, Kollam District (4.7) and Thiruvananthapuram District (4.6).

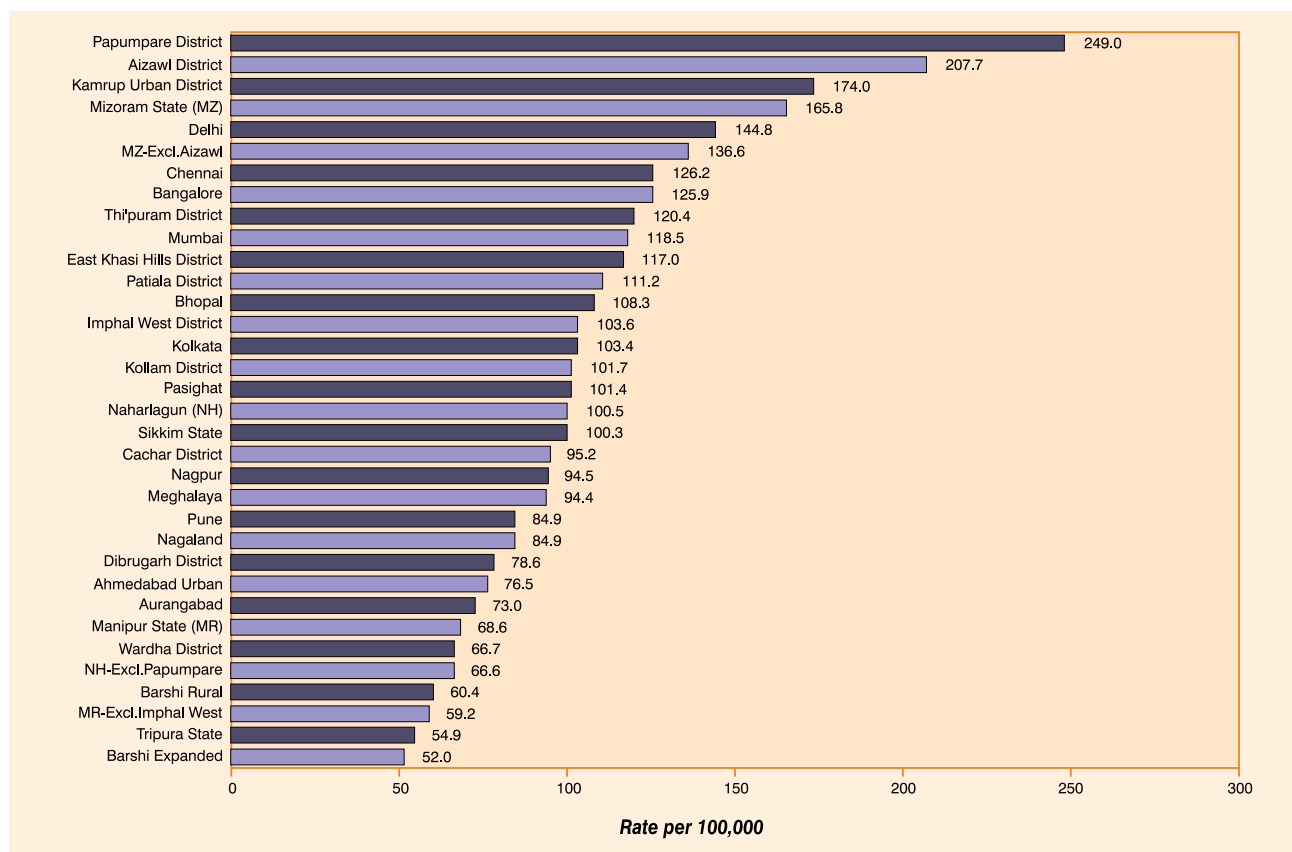
Females: Delhi PBCR showed the highest AAR (4.6).

Fig. 7.1: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
ALL SITES (ICD-10: C00-C97)

Males

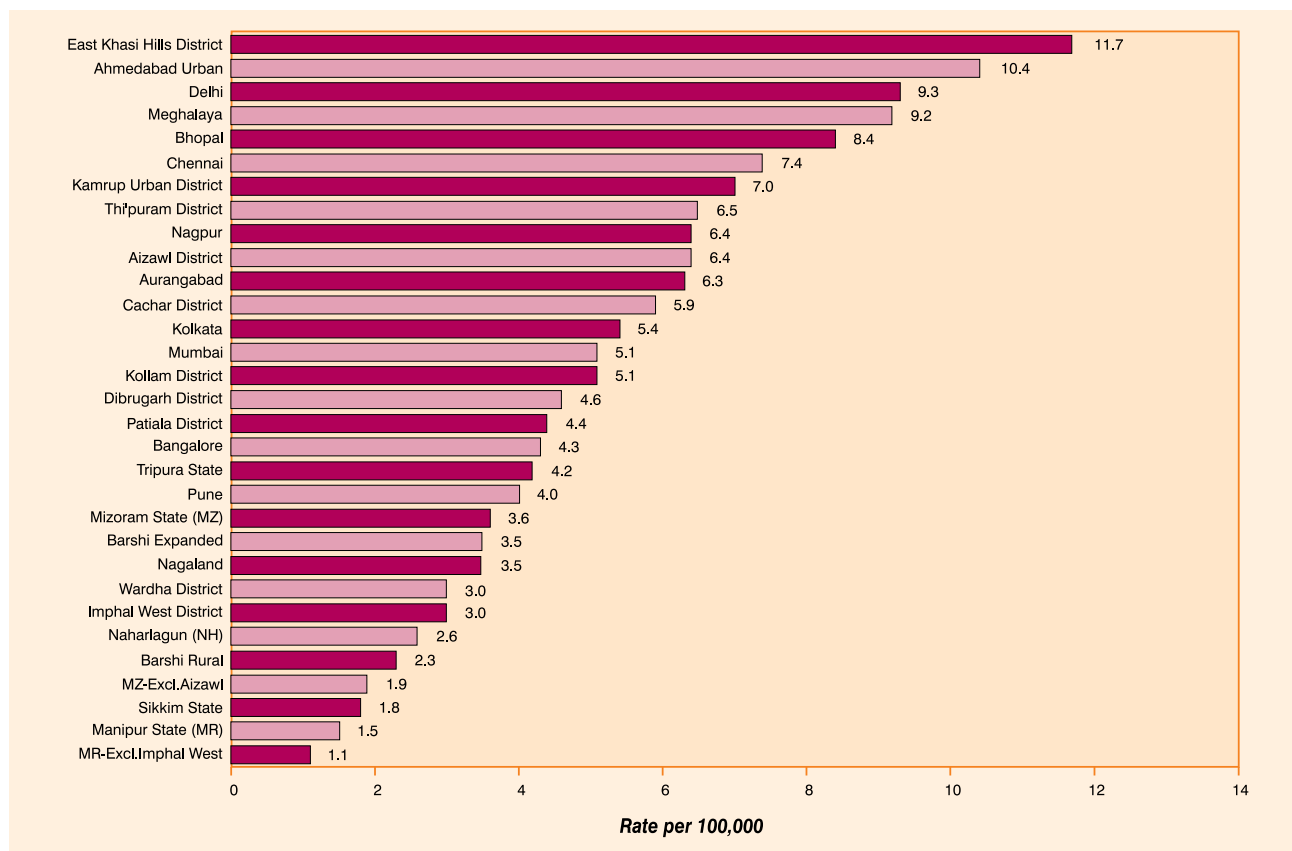


Females

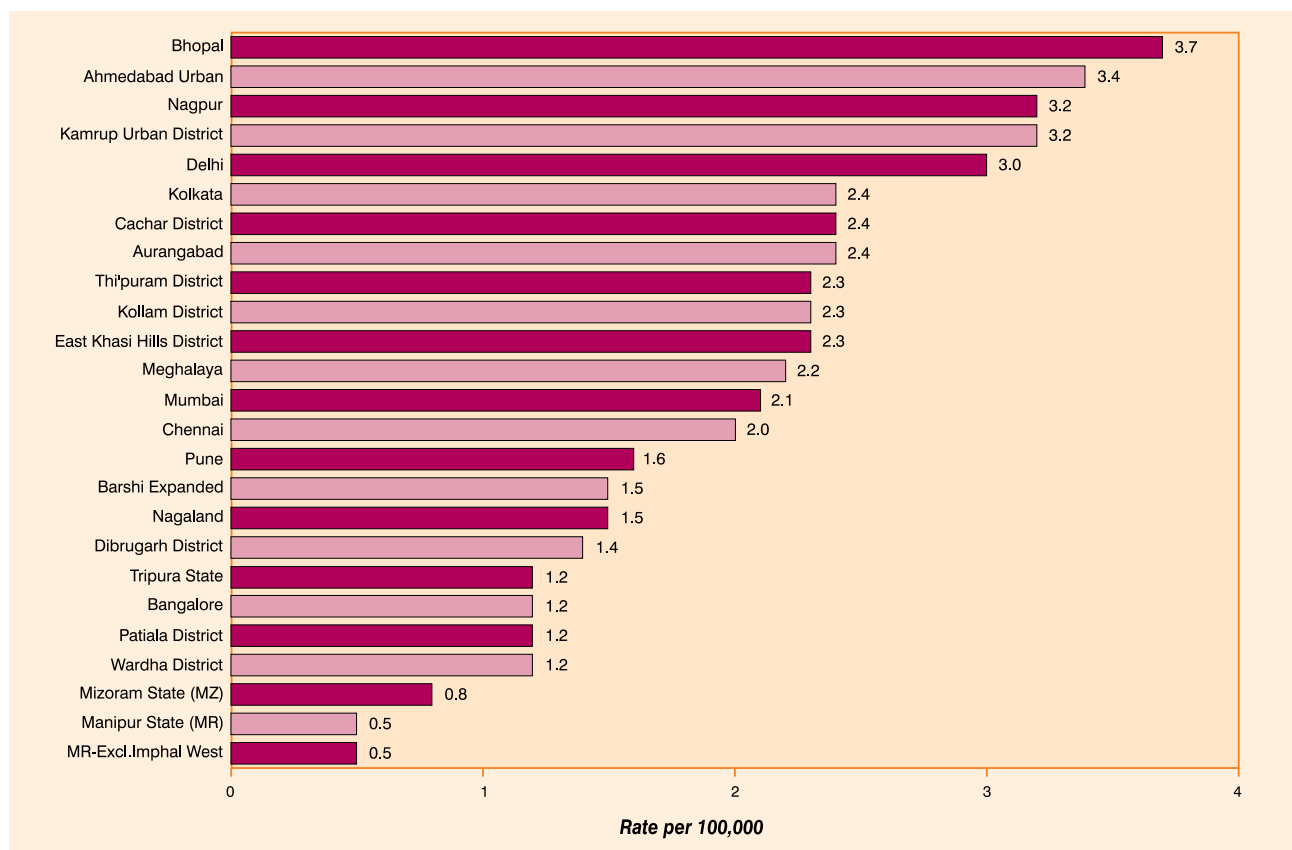


**Fig. 7.2: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
TONGUE (ICD-10: C01-C02)**

Males

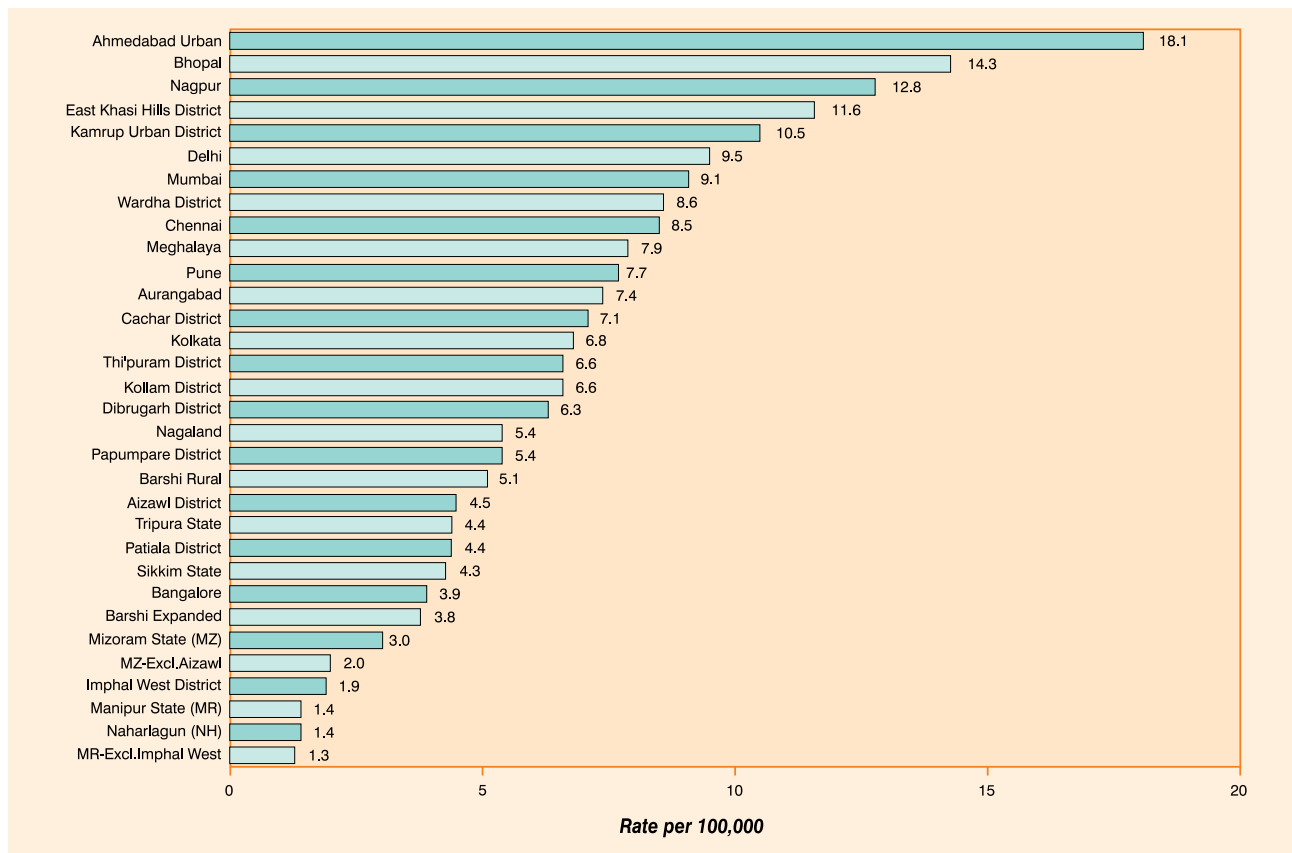


Females

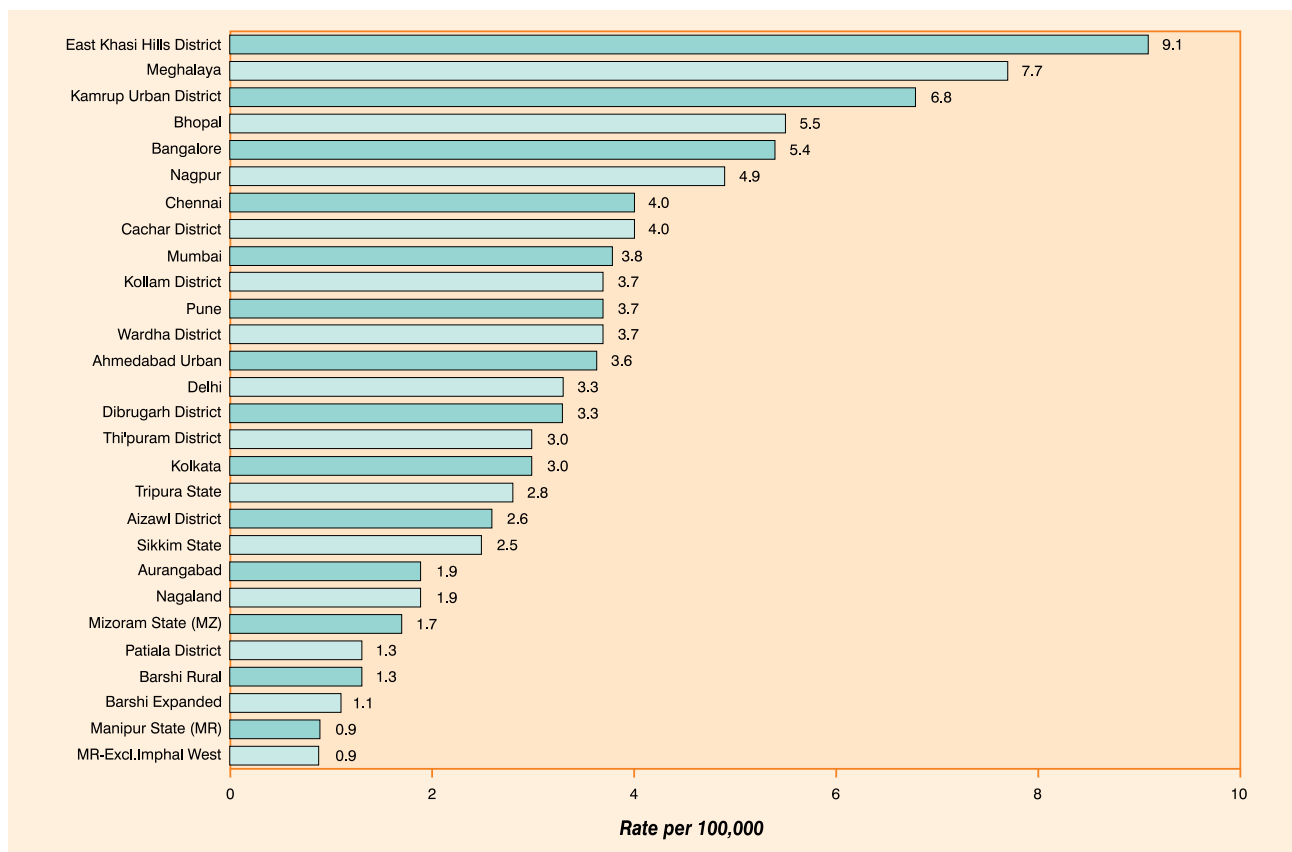


**Fig. 7.3: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
MOUTH (ICD-10: C03-C06)**

Males

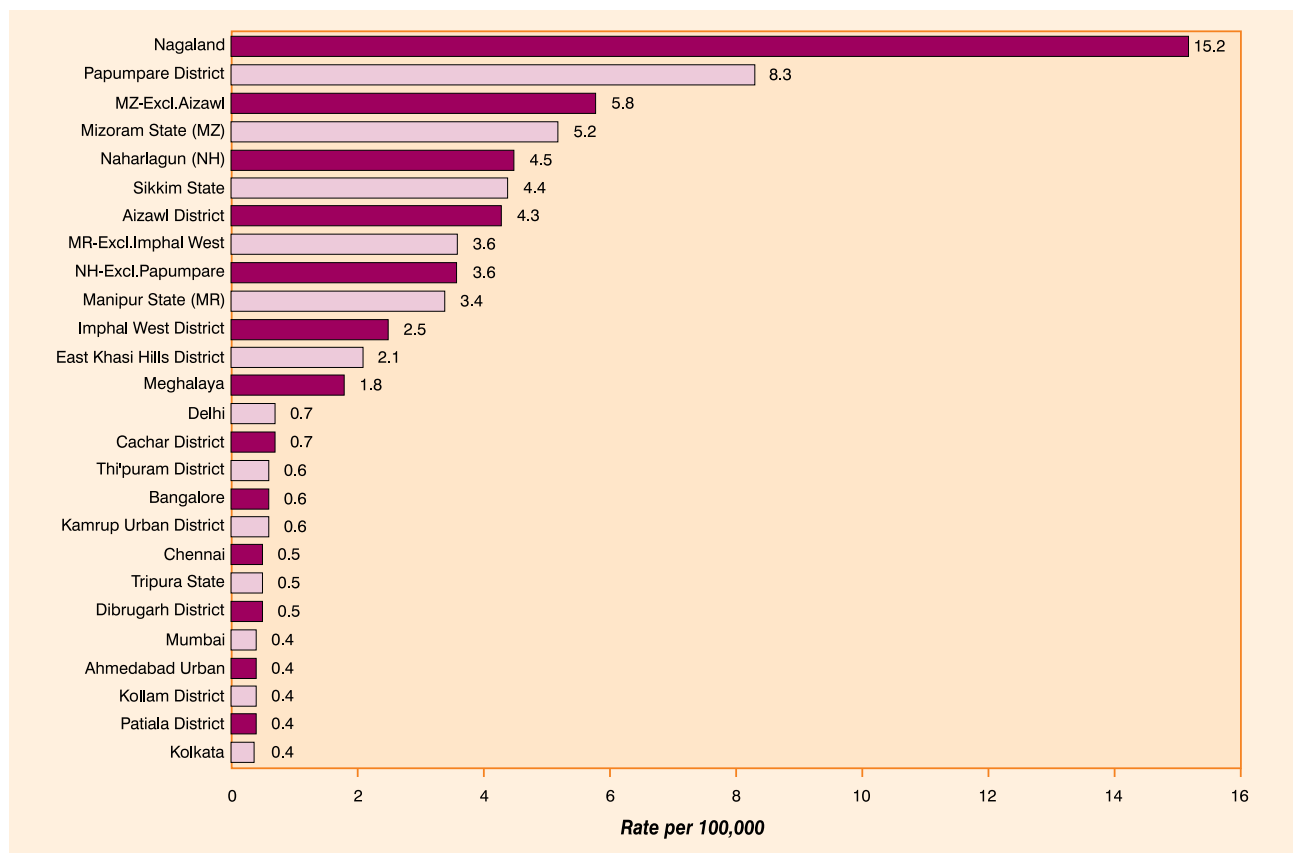


Females

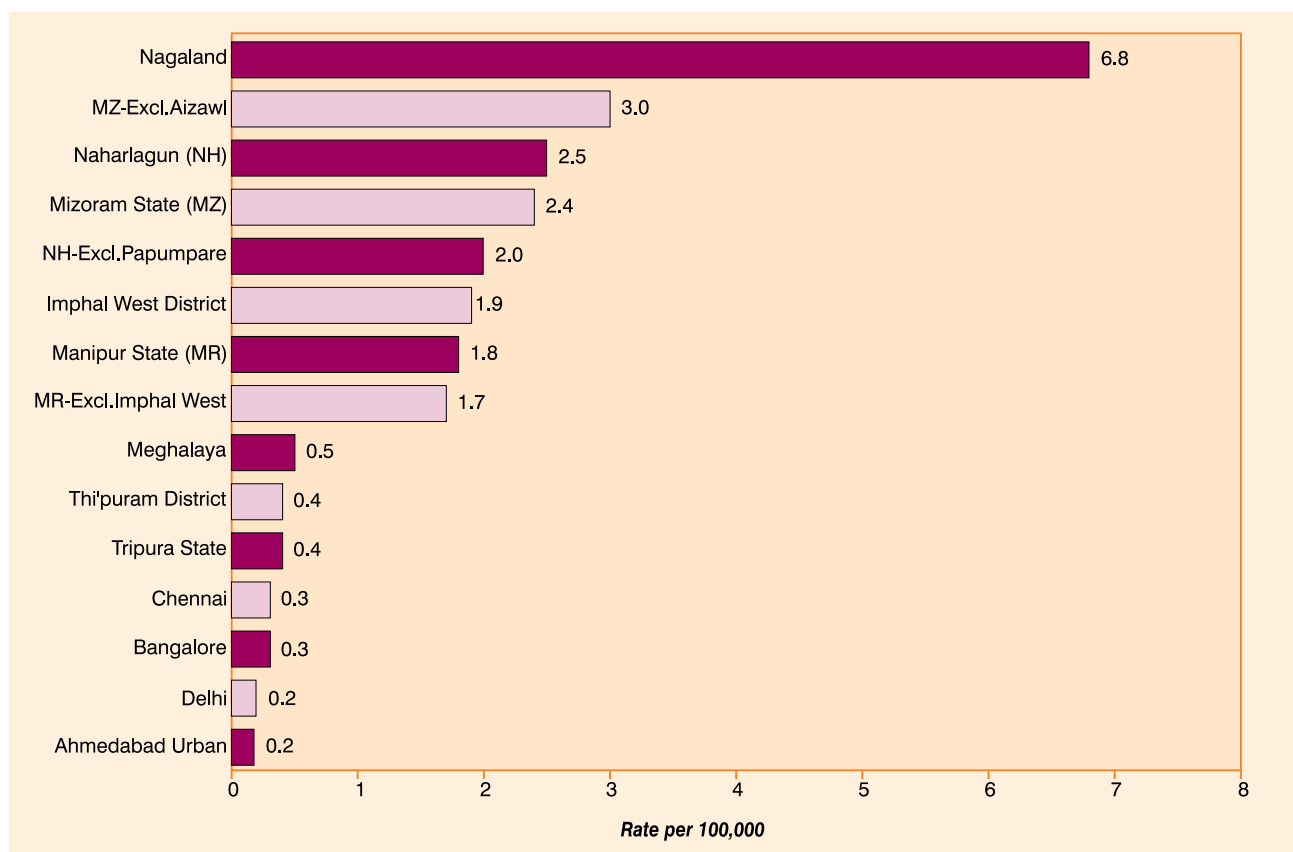


**Fig. 7.4: Comparison of Age Adjusted Incidence Rates (AARs) of all PBCRs
NASOPHARYNX (ICD-10: C11)**

Males

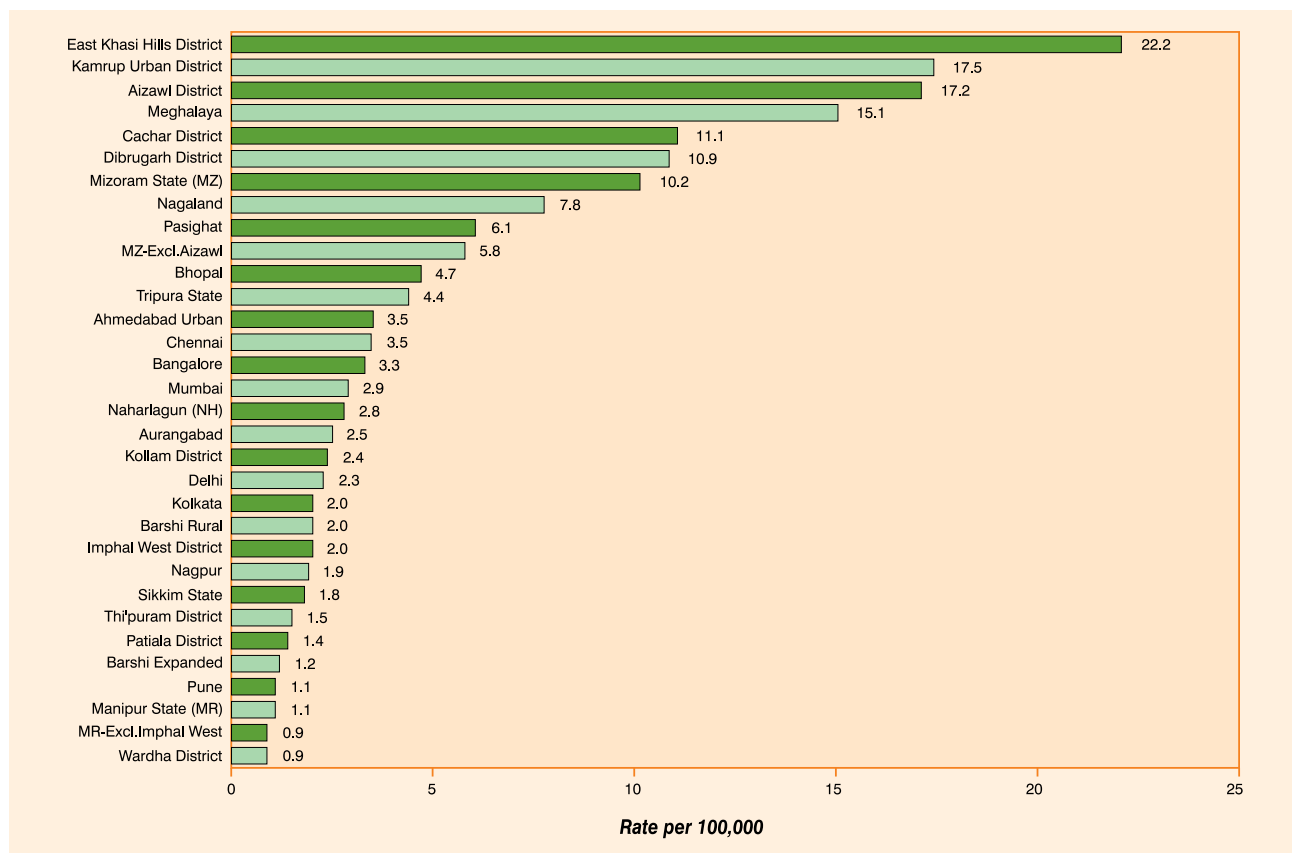


Females

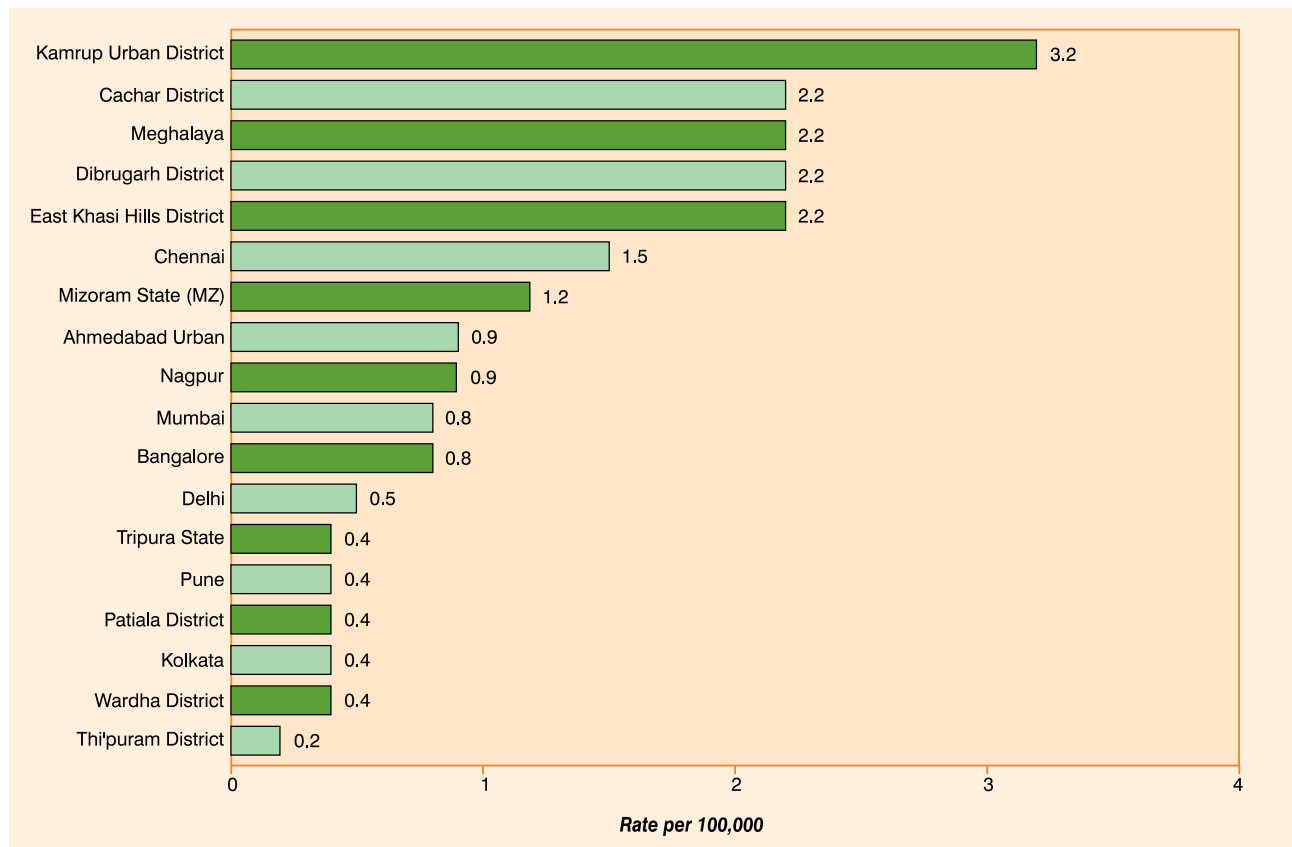


**Fig. 7.5: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
HYPOPHARYNX (ICD-10: C12-C13)**

Males

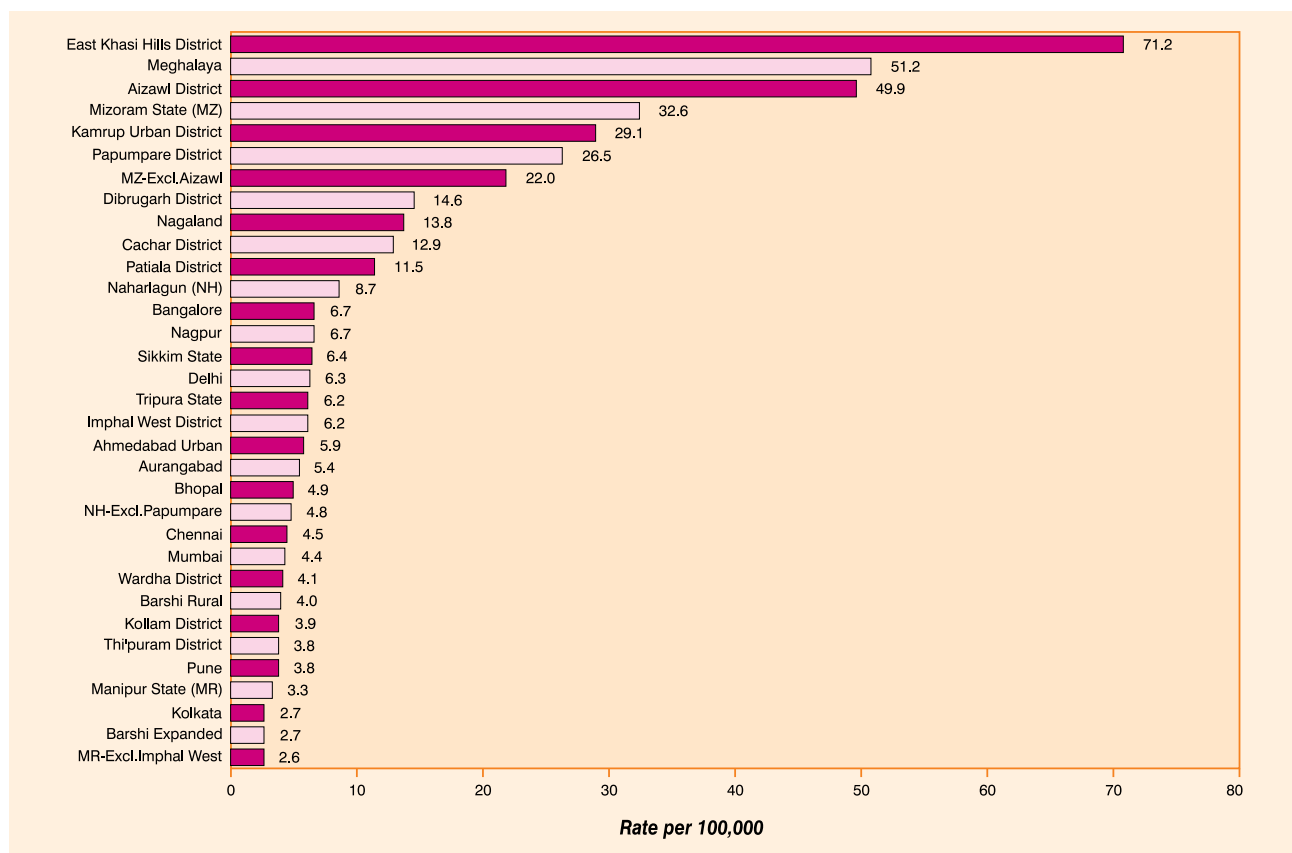


Females

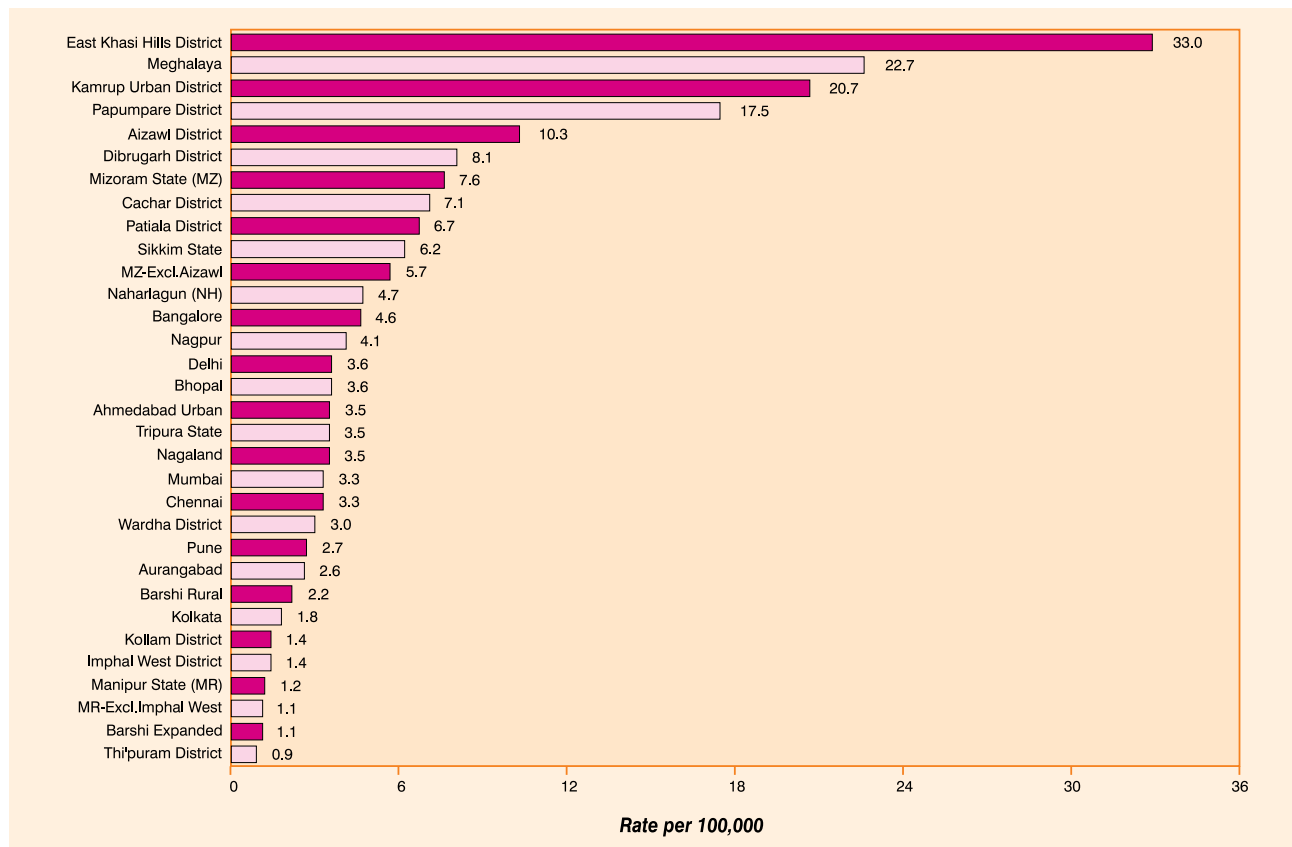


**Fig. 7.6: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
OESOPHAGUS (ICD-10: C15)**

Males

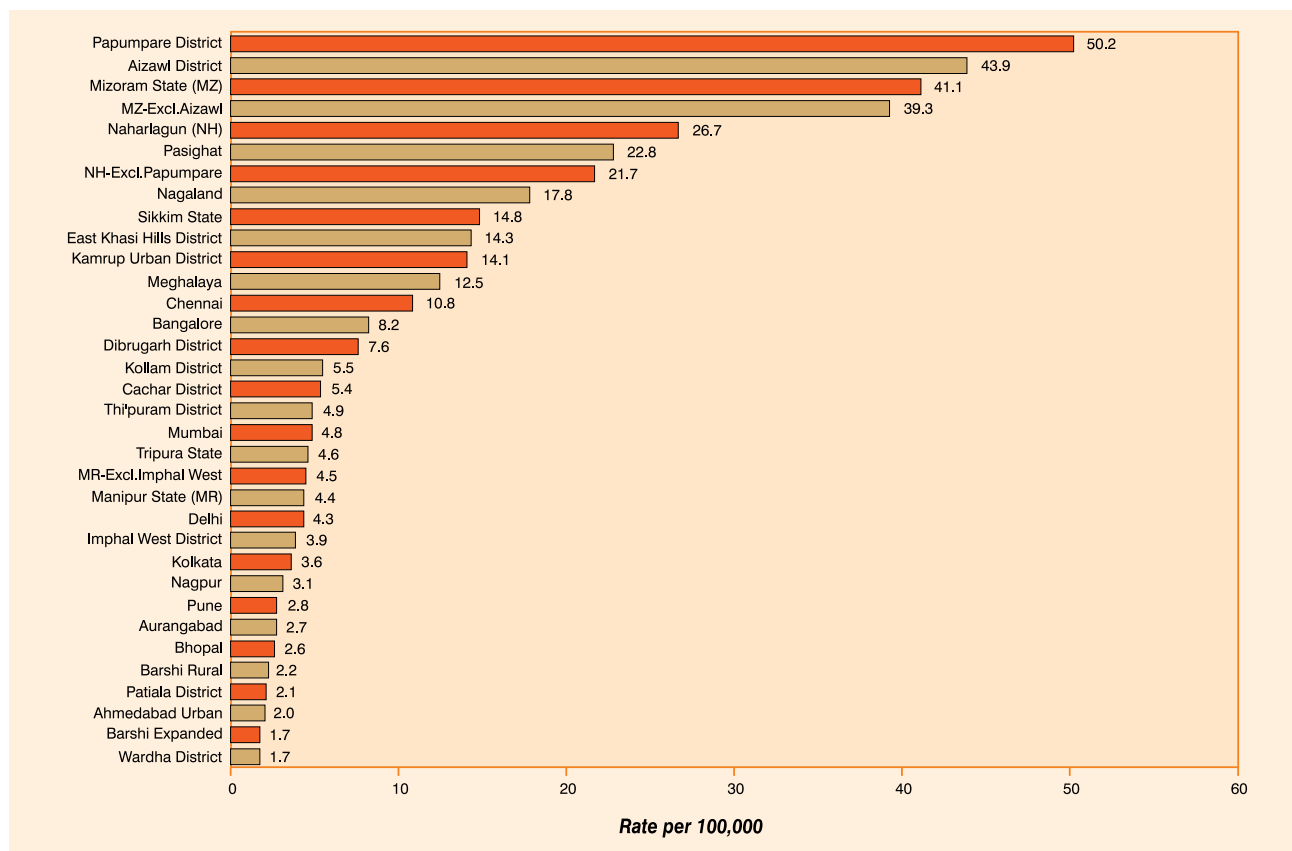


Females

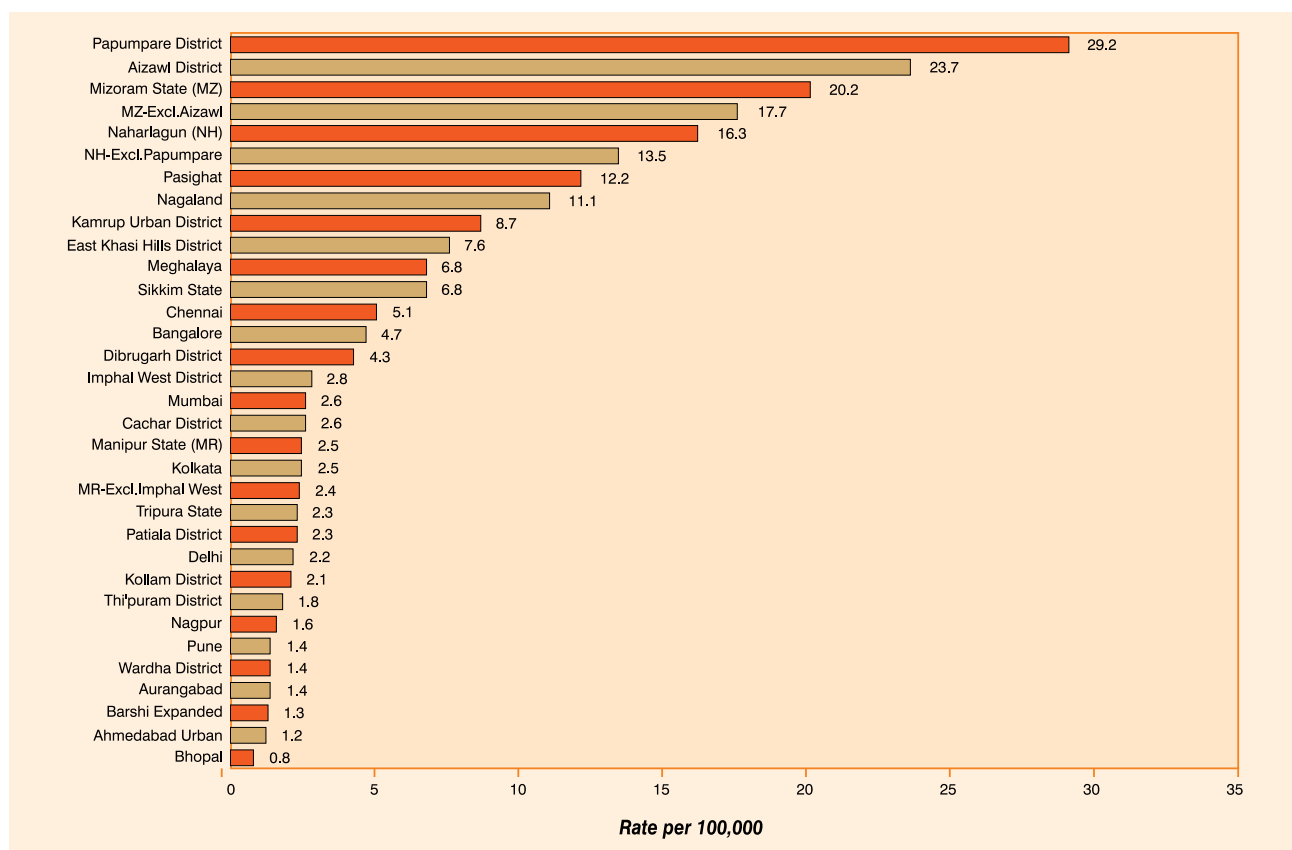


**Fig. 7.7: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
STOMACH (ICD-10: C16)**

Males

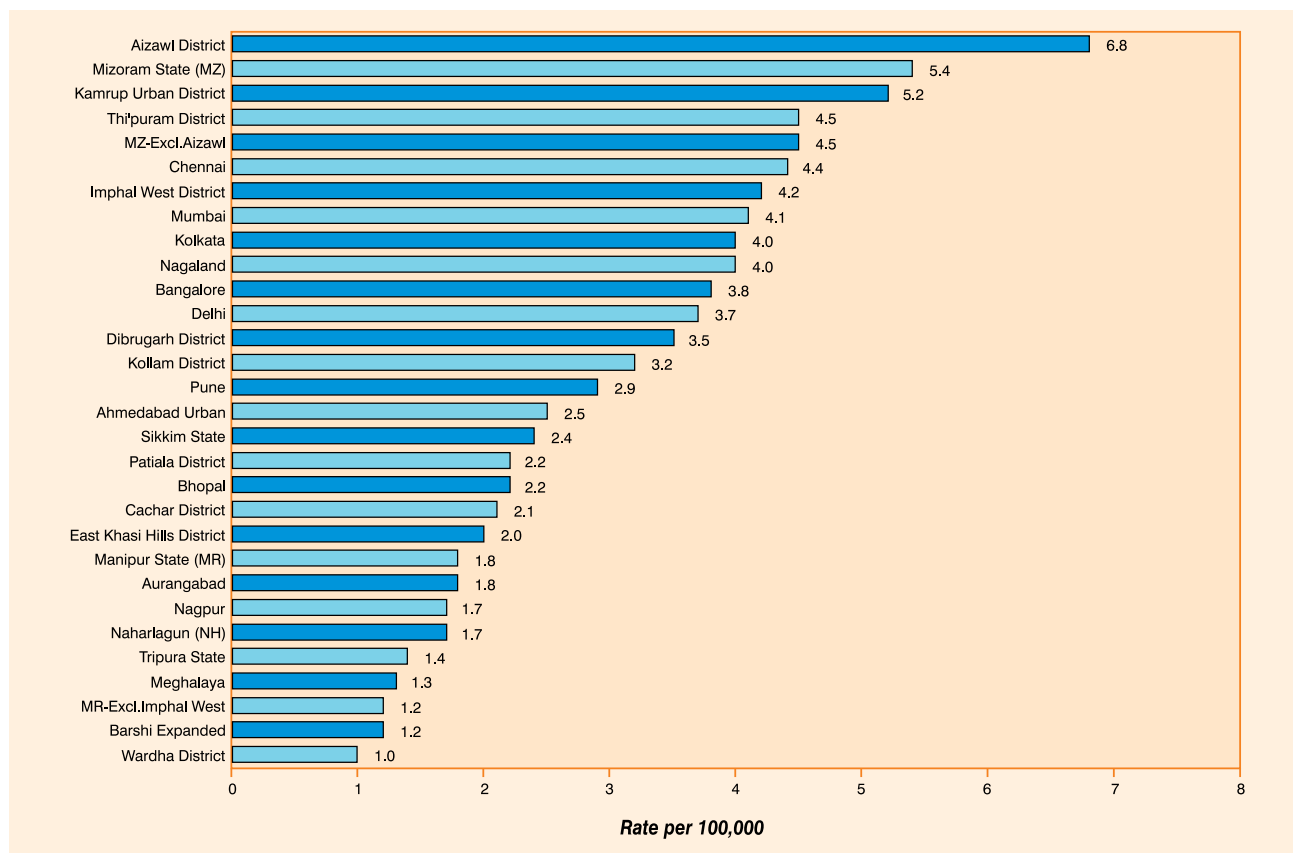


Females

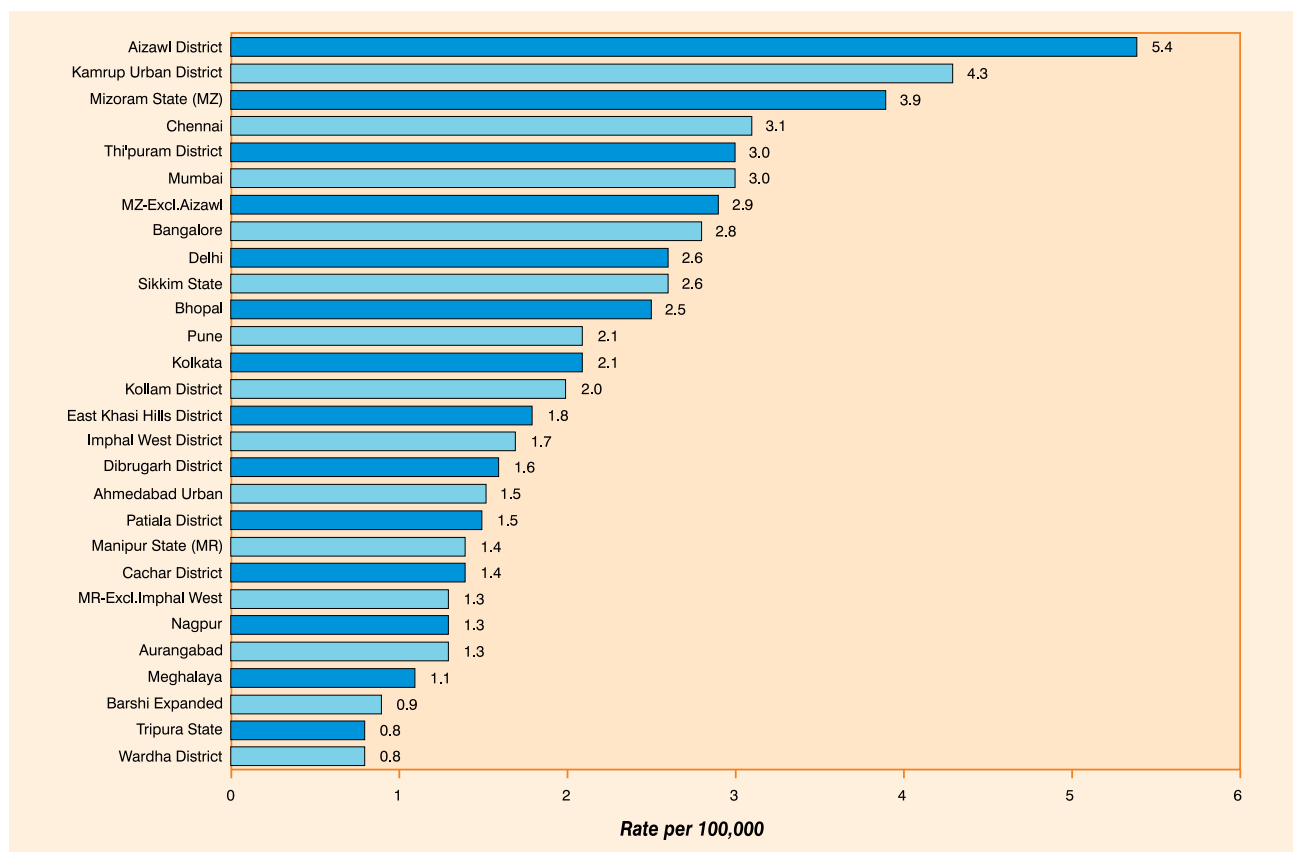


**Fig. 7.8: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
COLON (ICD-10: C18)**

Males

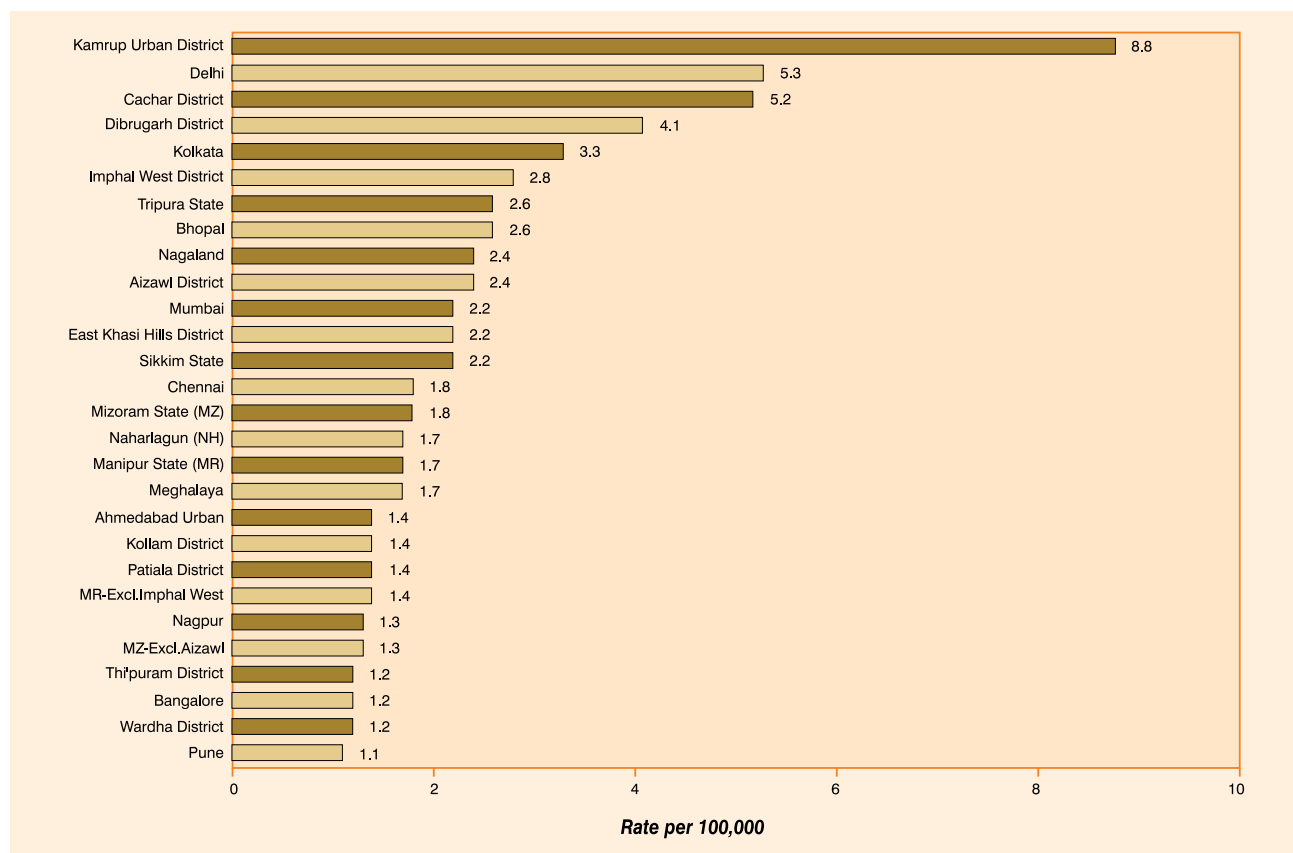


Females

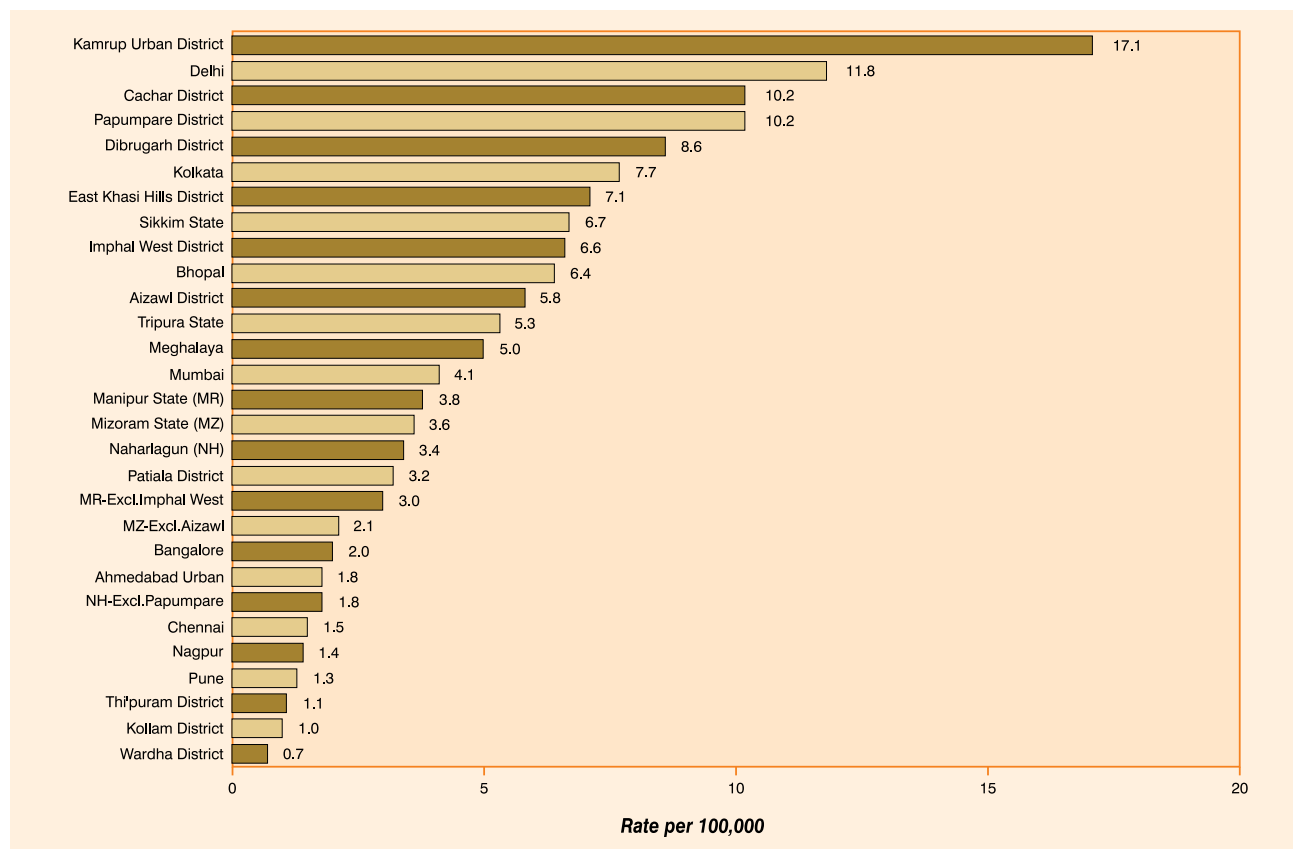


**Fig. 7.9: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
GALL BLADDER (ICD-10: C23-C24)**

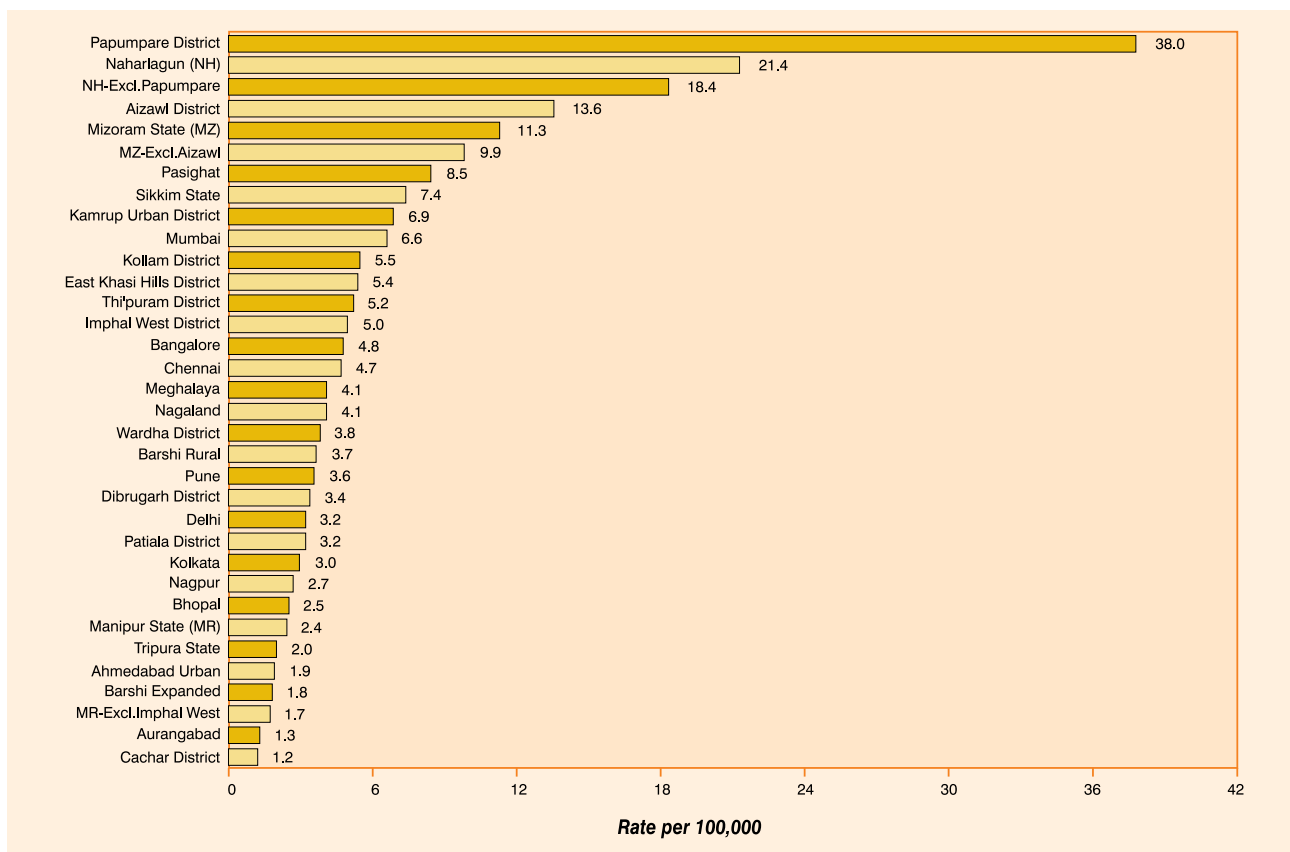
Males



Females



**Fig. 7.10: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
LIVER (ICD-10: C22) – Males**



**Fig. 7.11: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
LARYNX (ICD-10: C32) – Males**

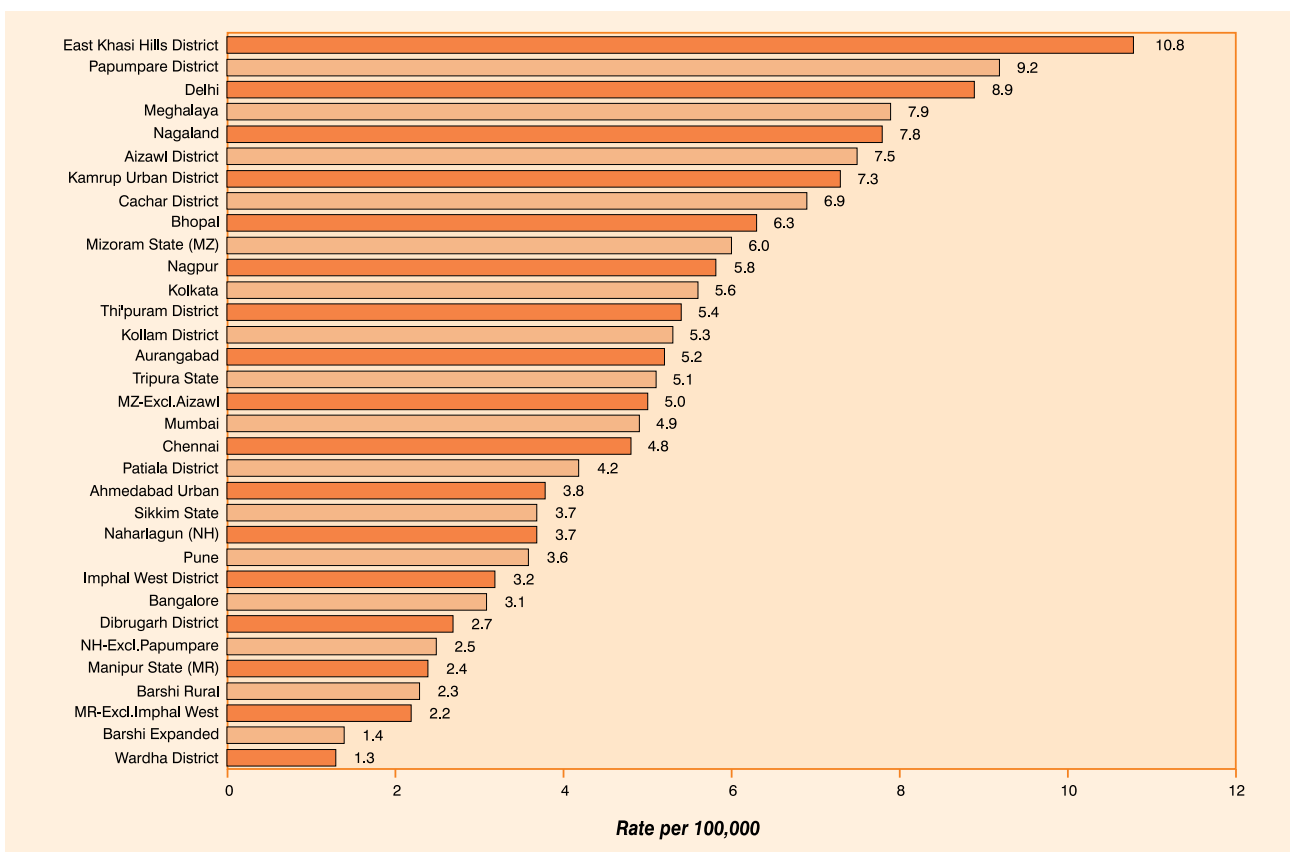
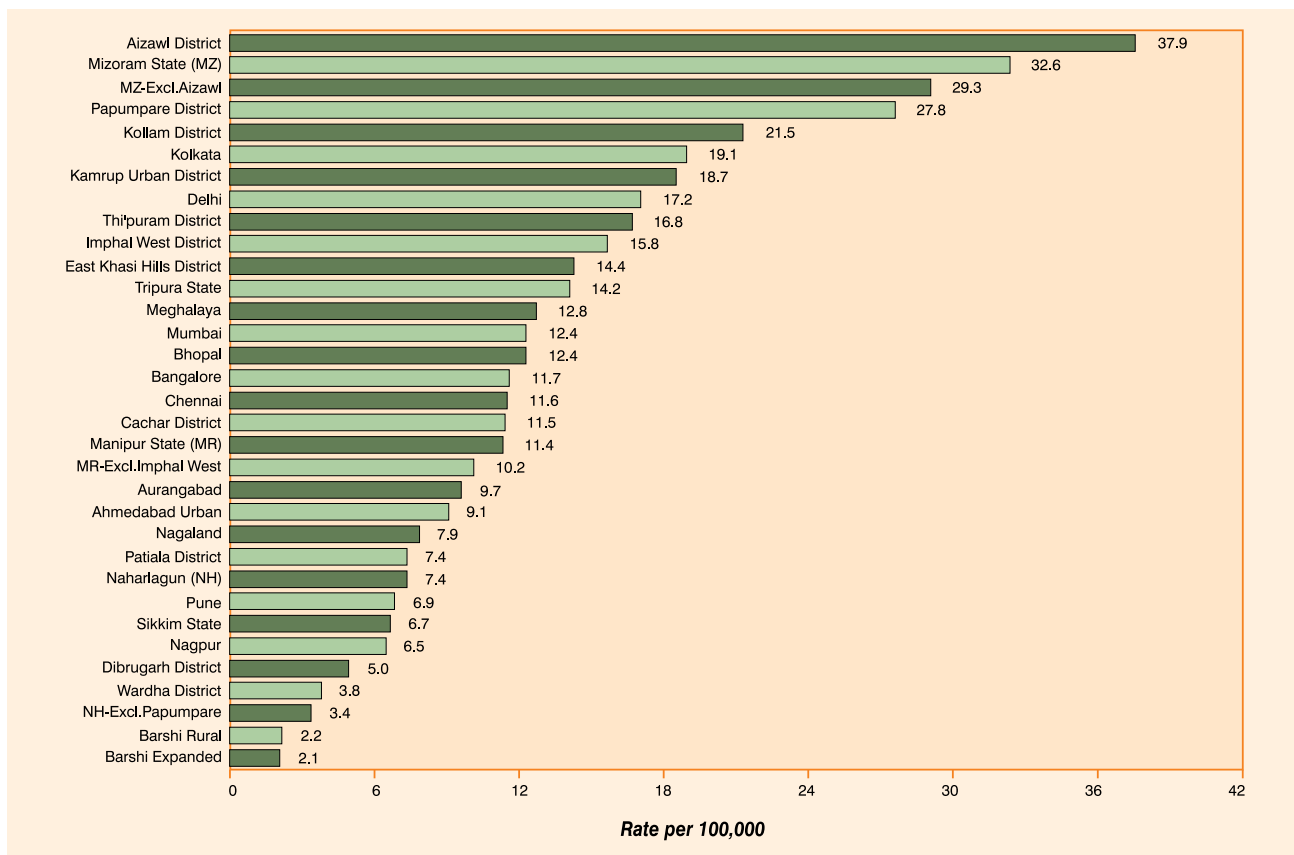
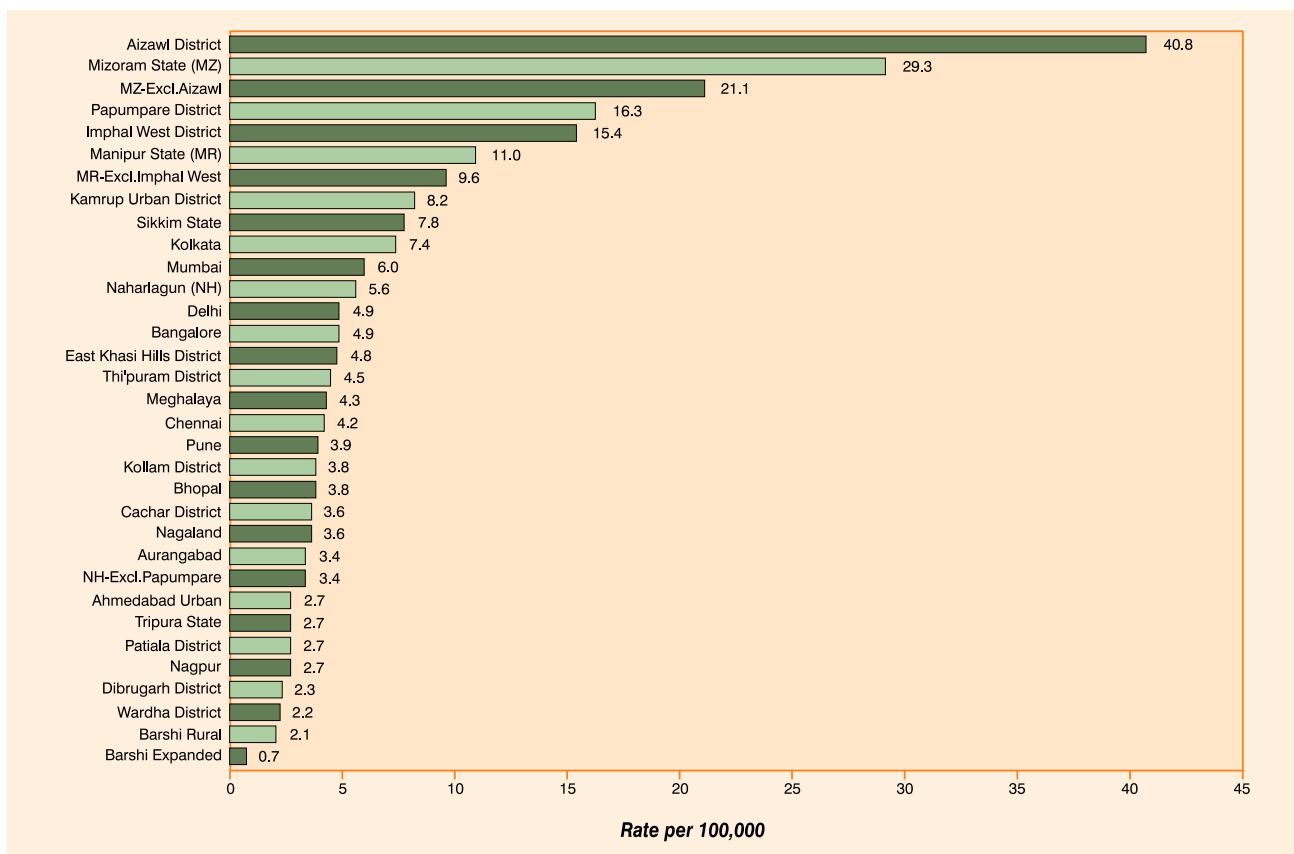


Fig. 7.12: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs LUNG (ICD-10: C33-C34)

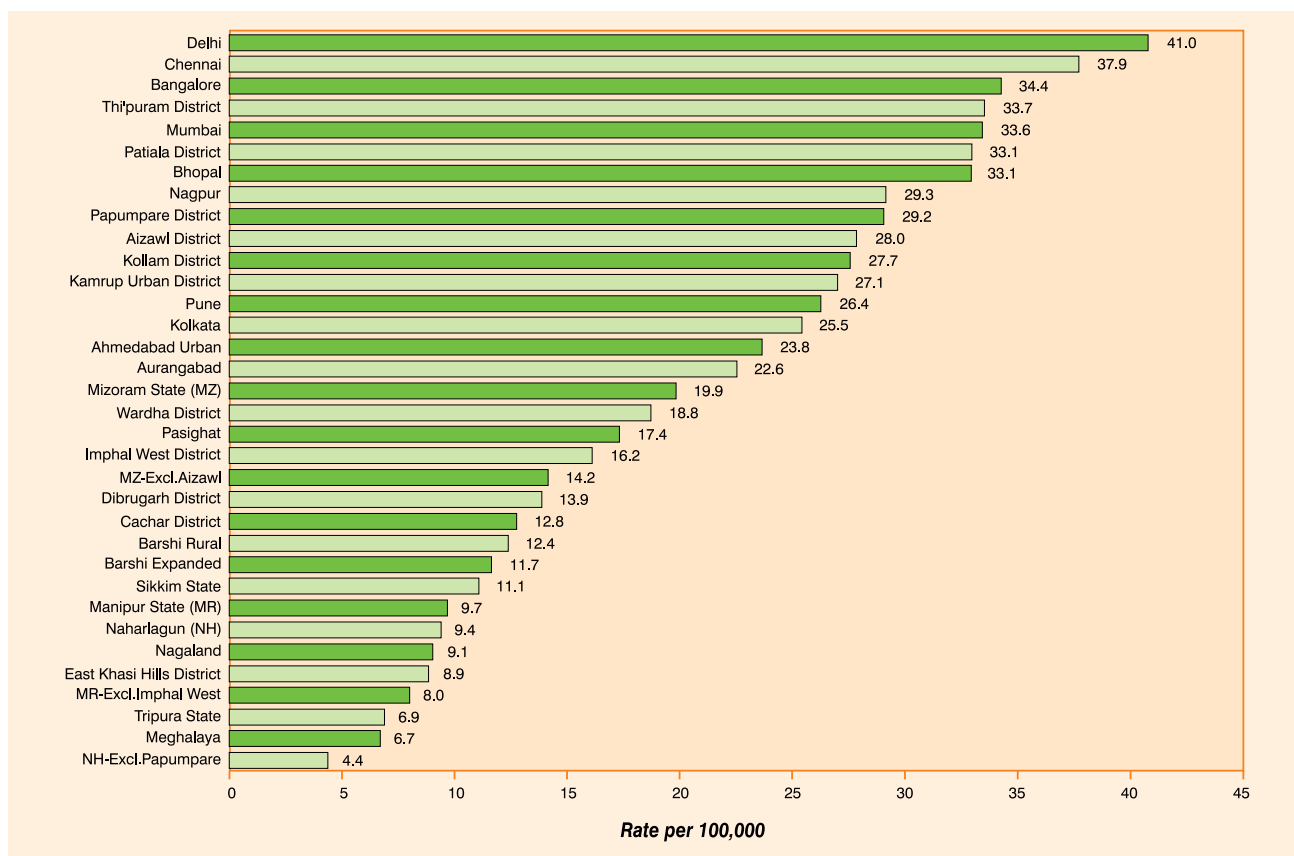
Males



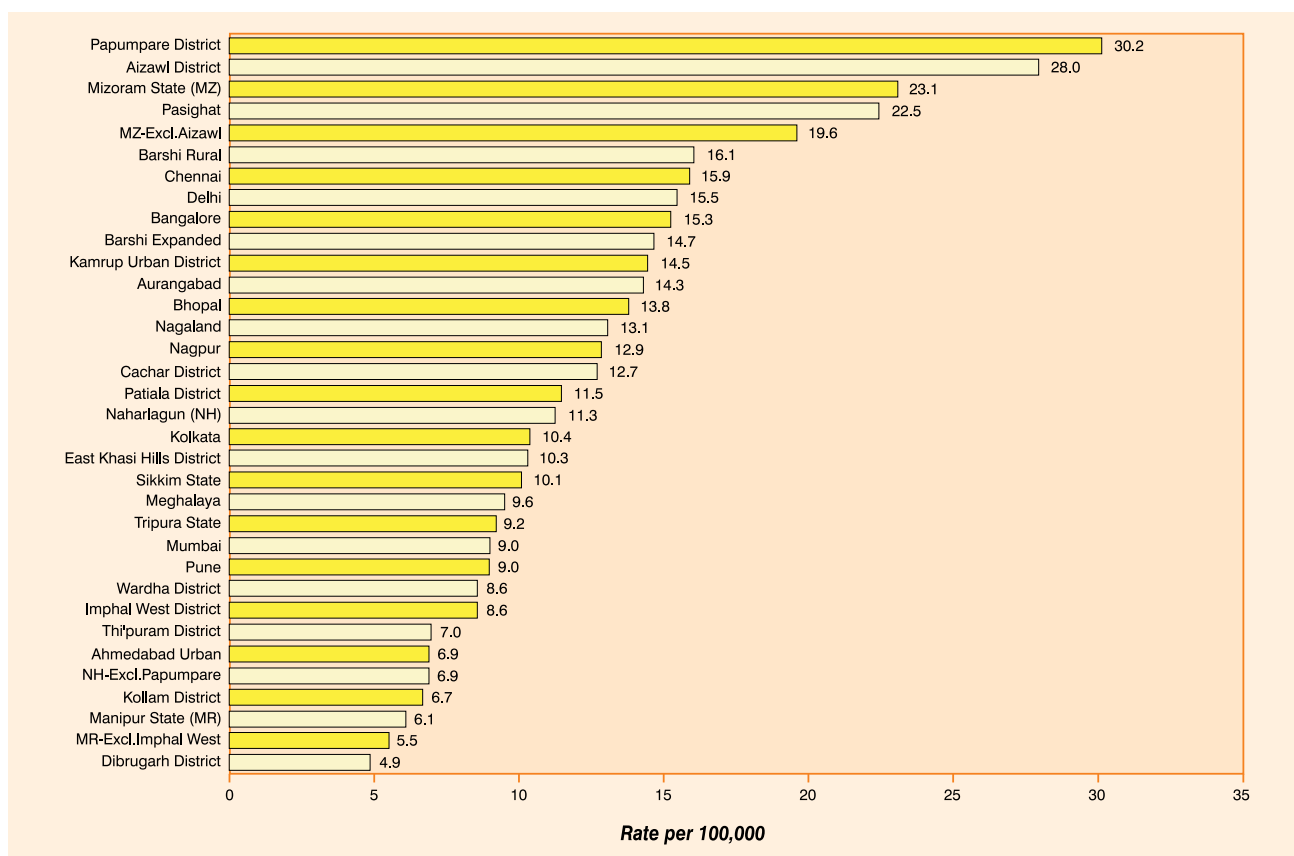
Females



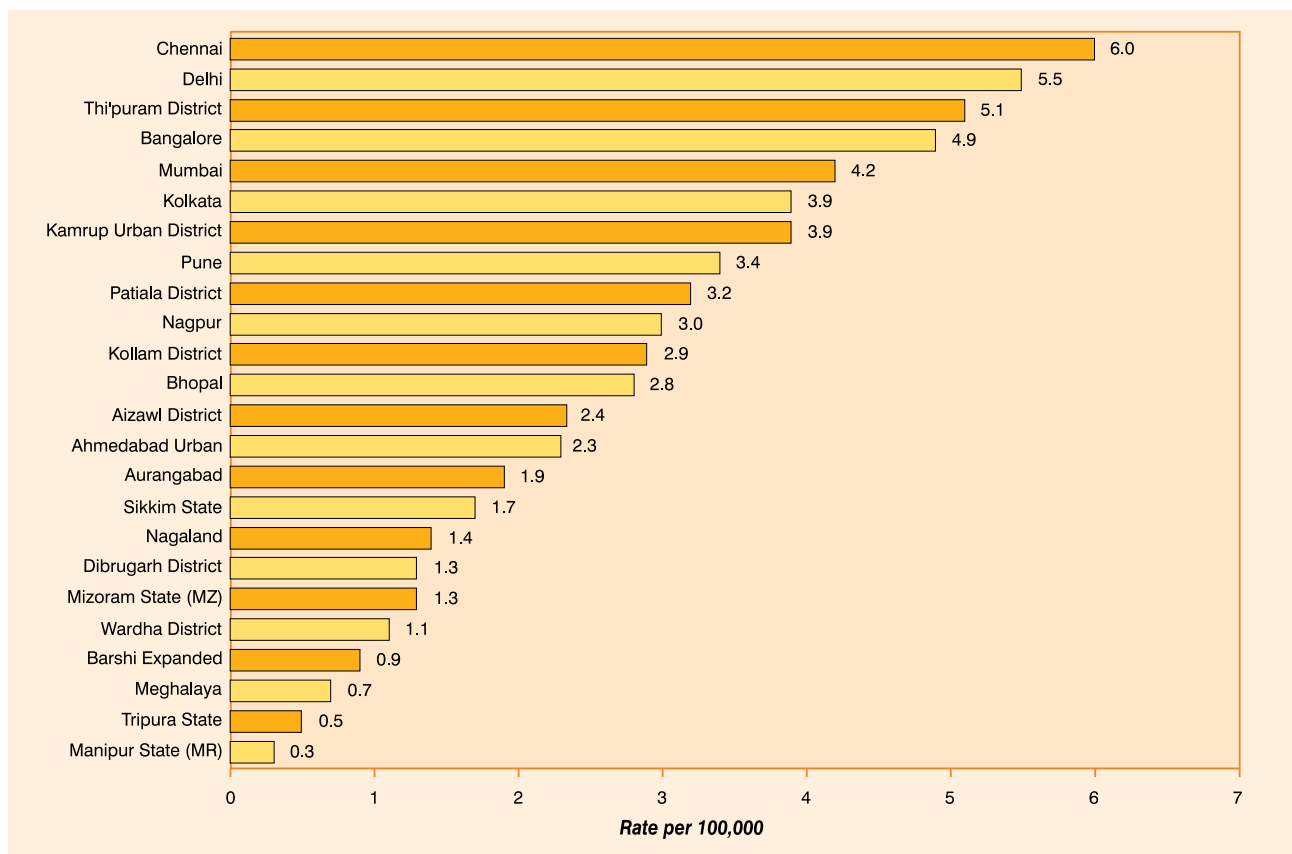
**Fig. 7.13: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
BREAST (ICD-10: C50) – Females**



**Fig. 7.14: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
CERVIX UTERI (ICD-10: C53)**



**Fig. 7.15: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
CORPUS UTERI (ICD-10: C54)**



**Fig. 7.16: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
OVARY (ICD-10: C56)**

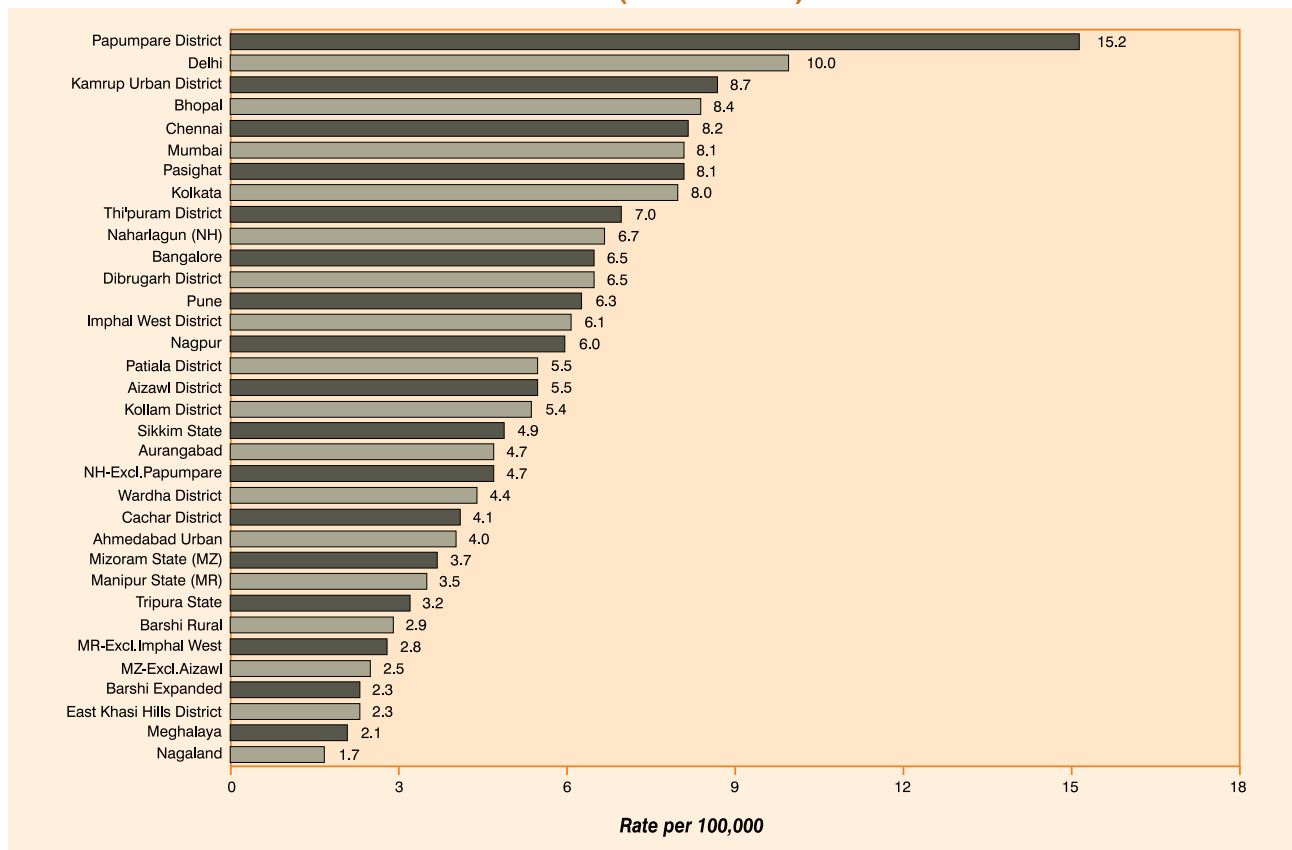


Fig. 7.17: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs PROSTATE (ICD-10: C61)

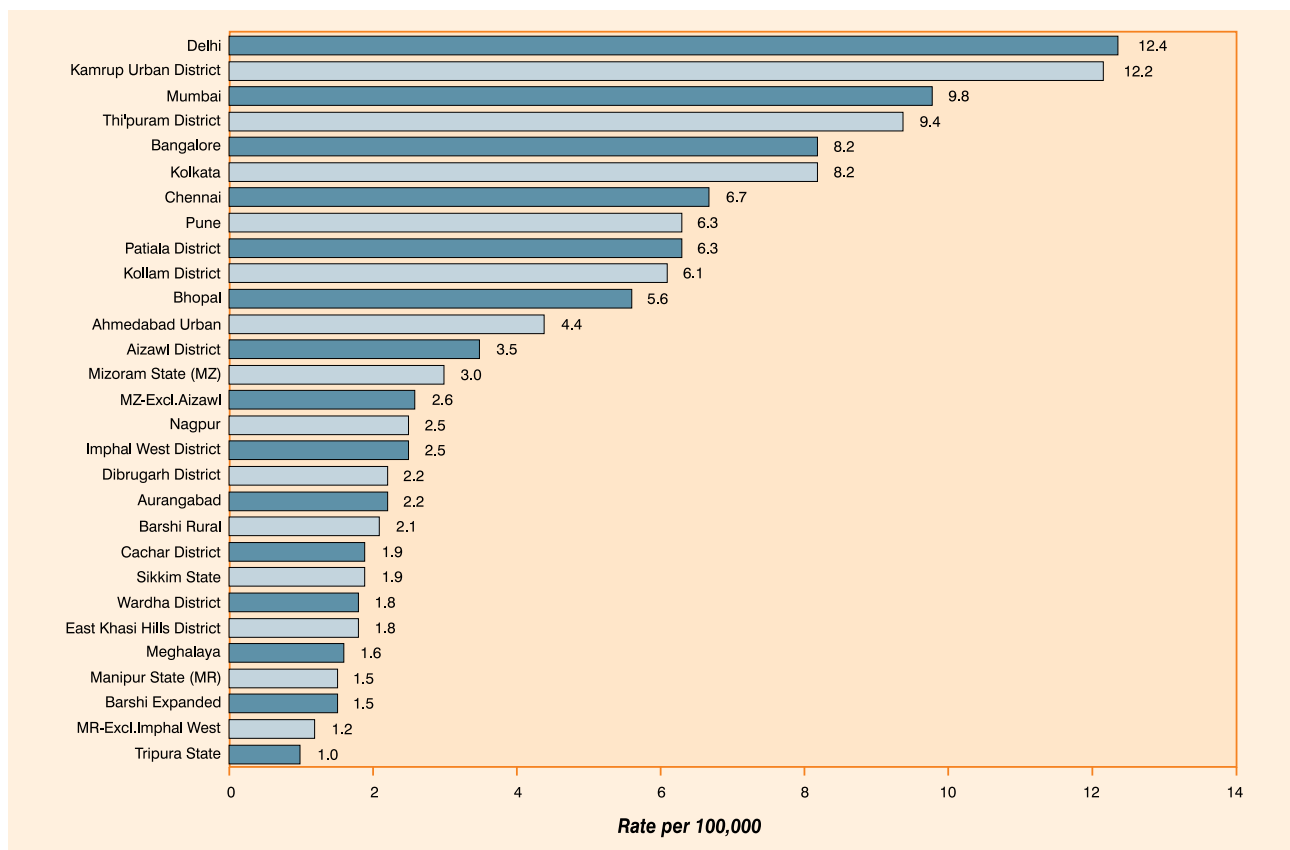


Fig. 7.18: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs KIDNEY (ICD-10: C64) – Males

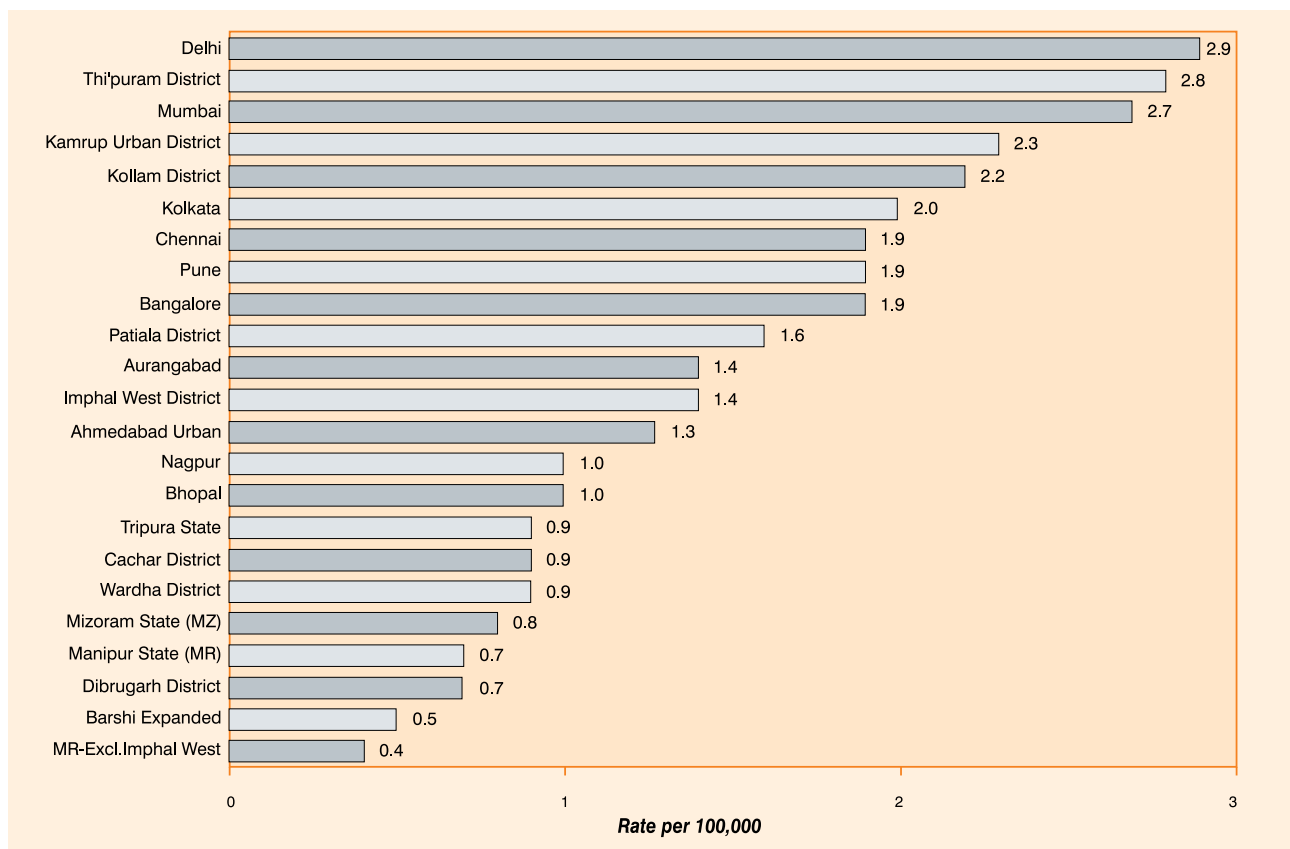


Fig. 7.19: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

URINARY BLADDER (ICD-10: C67) - Males

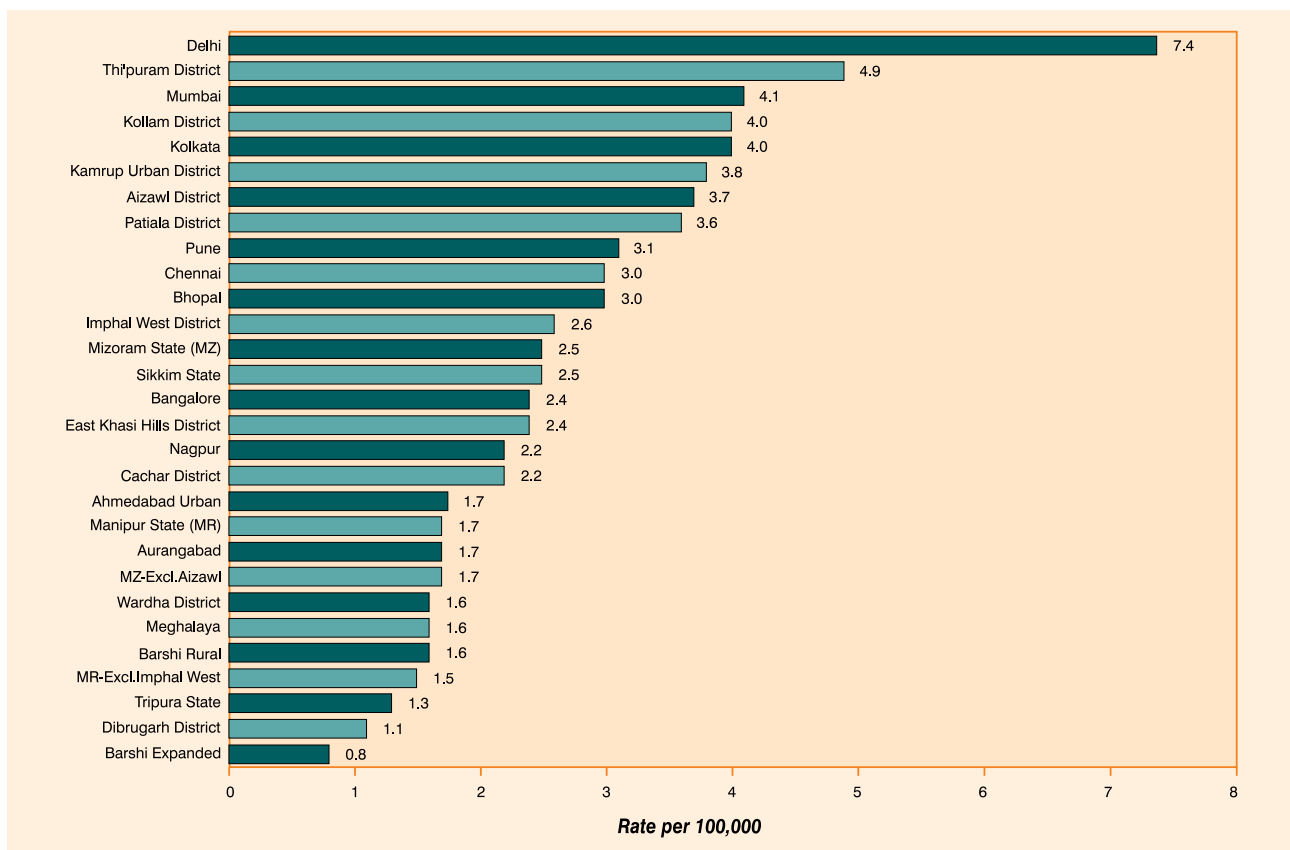
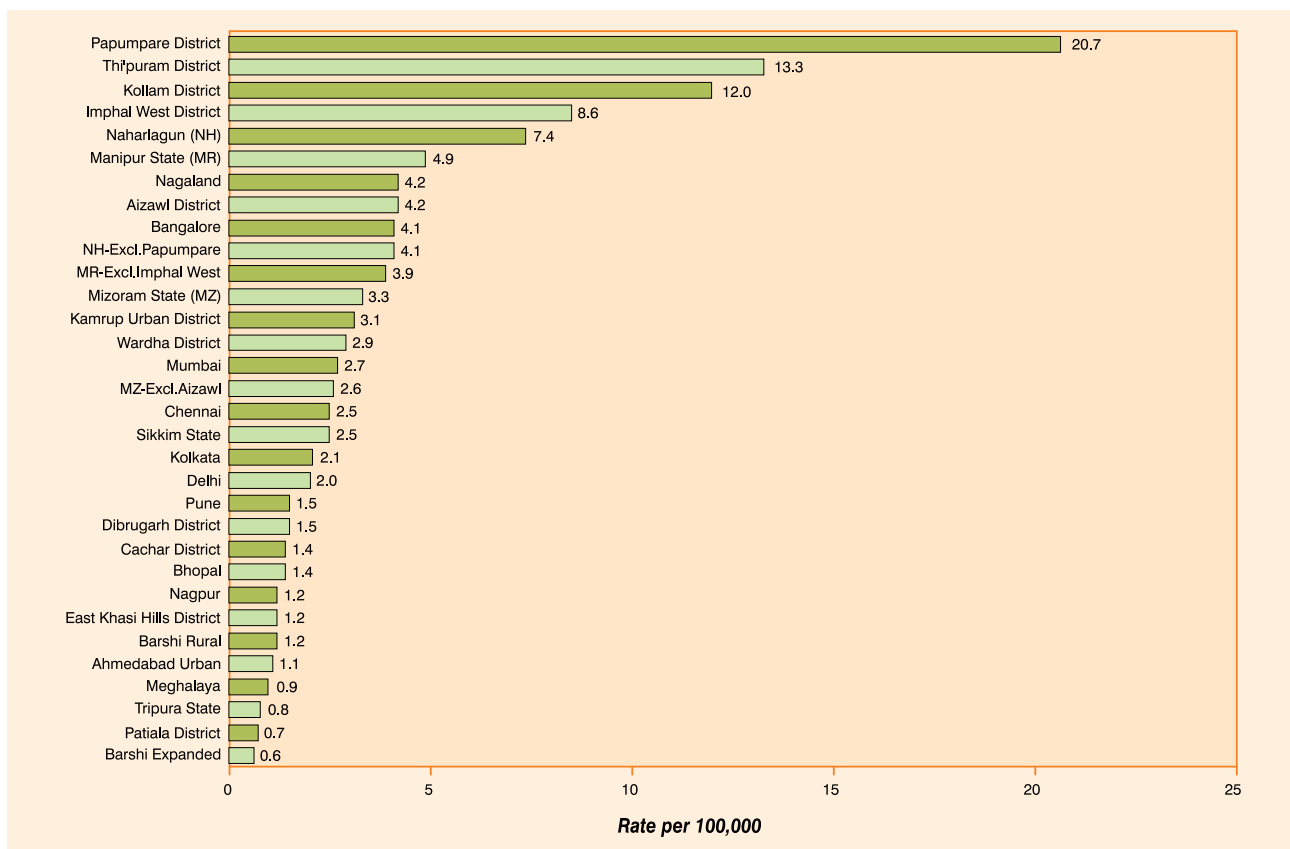


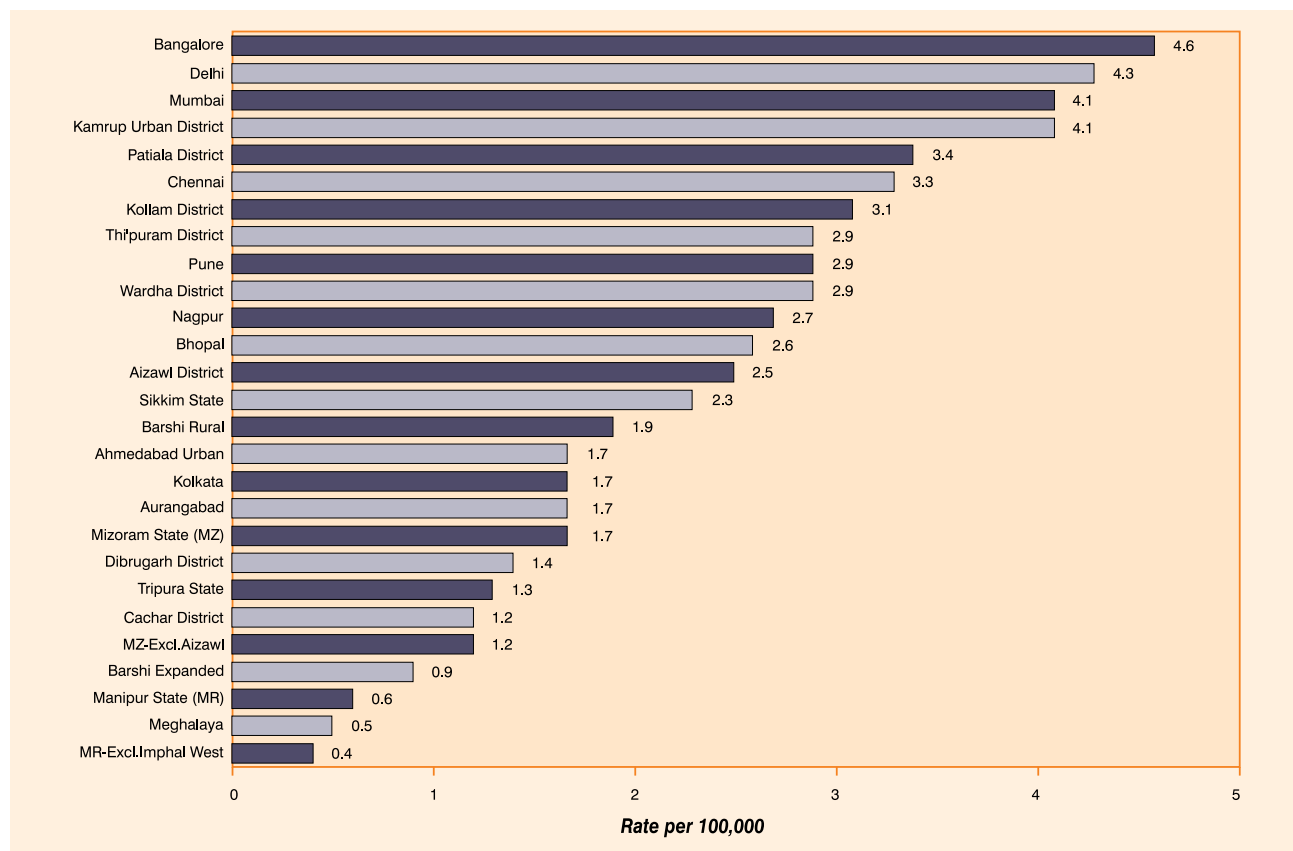
Fig. 7.20: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs

THYROID (ICD-10: C73) – Females



**Fig. 7.21: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs
BRAIN, NS (ICD-10: C70-C72)**

Males



Females

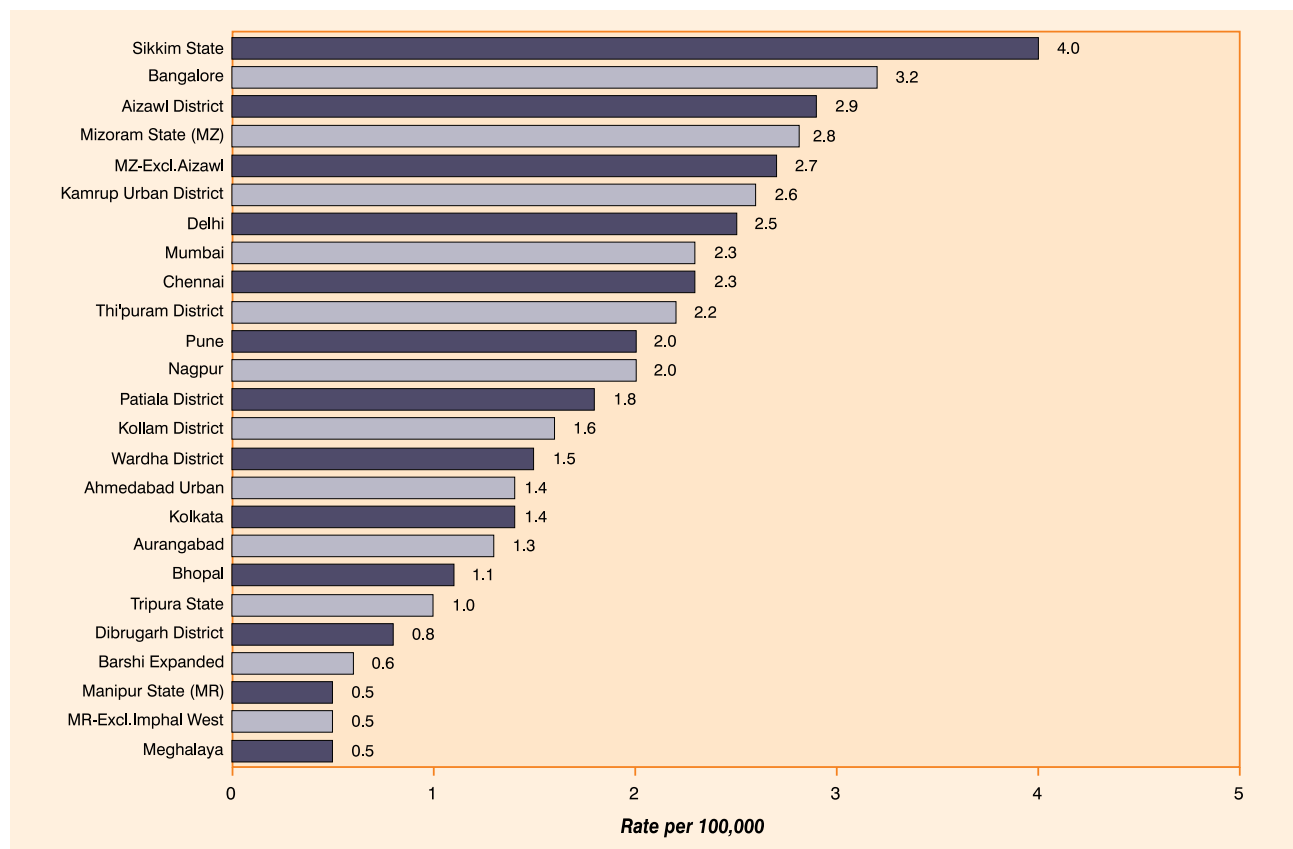
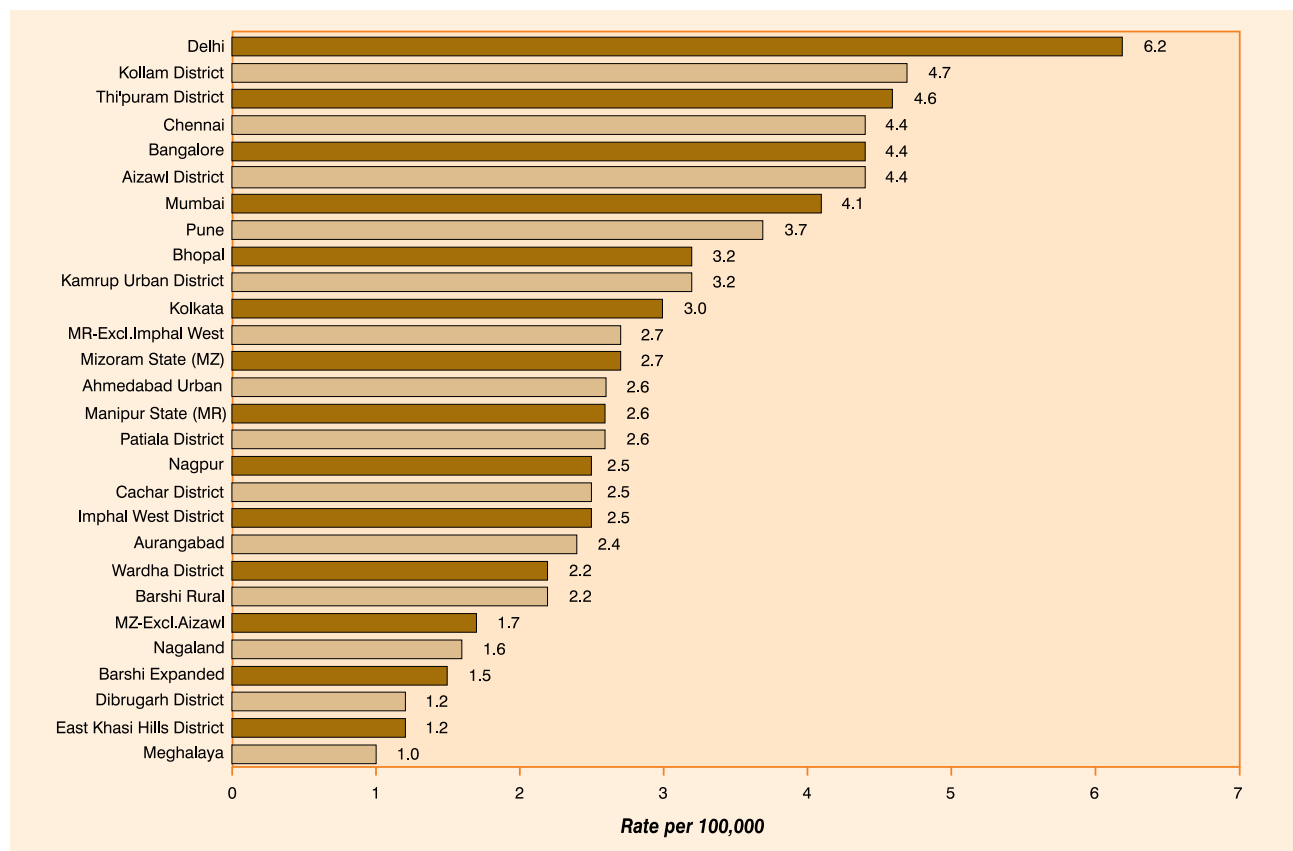


Fig. 7.22: Comparison of Age Adjusted Incidence Rates (AARs) of All PBCRs NHL (ICD-10: C82-C85)

Males



Females

