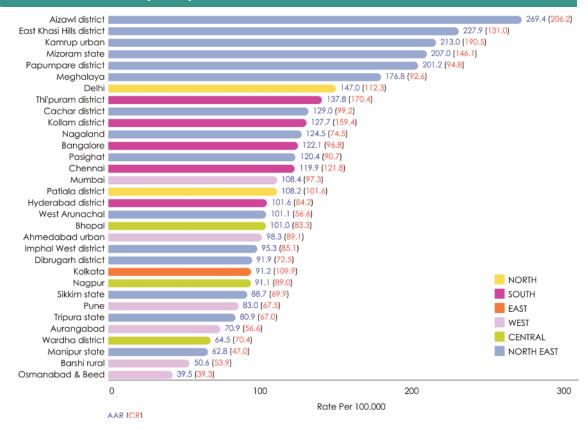
Comparison of cancer incidence and patterns of all Population Based Cancer Registries

This chapter compares the cancer incidence and its pattern among all the PBCRs. Figure 5.1 depicts the AARs for all sites of cancer (ICD-10: C00-C97) across 28 PBCRs. Figures 5.2 to 5.25 gives the comparison of AARs of selected leading sites of cancer.

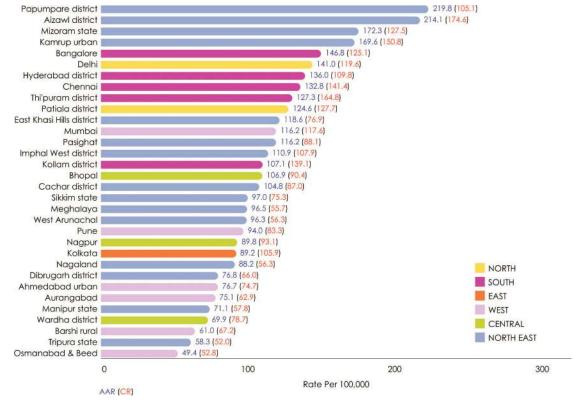
Registries with small numbers (Less than ten cases) for individual sites of cancer have been excluded from this analysis.

Fig. 5.1 ALL SITES (ICD-10: C00-C97) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



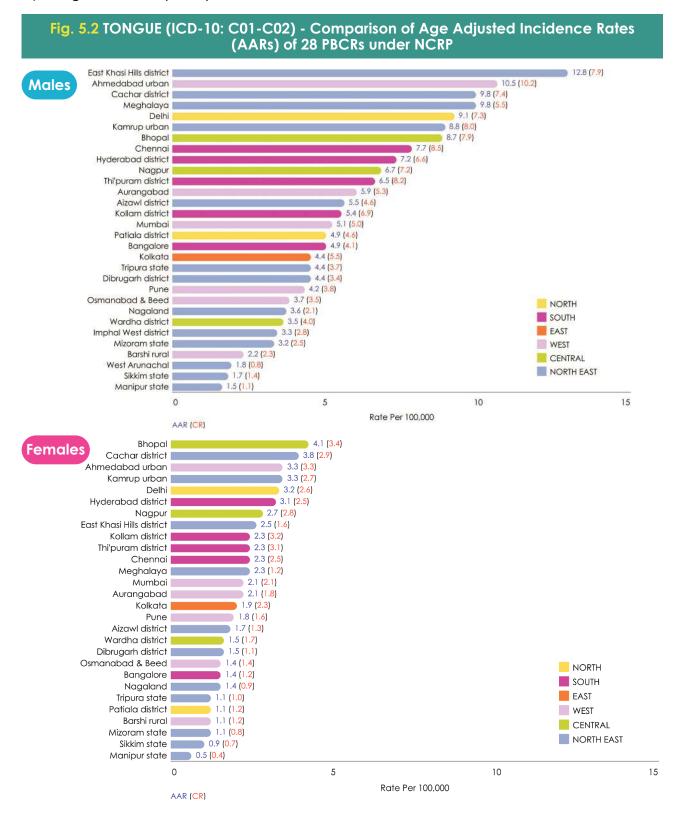


Females



Males: Six north east registry areas occupied top six positions. Delhi PBCR had the highest AAR (147.0) among the other PBCRs. Thus, Aizawl district (269.4) had the highest AAR and was approximately twice the AAR of Delhi PBCR. East Khasi Hills district of Meghalaya (227.9) had the second highest AAR followed by Kamrup urban (213.0) and Mizoram PBCR (207.0).

Females: Four registry areas from the north east remained at the top (Papumpare district: 219.8, Aizawl district: 214.1, Mizoram state: 172.3 and Kamrup urban (169.6) followed by Bangalore PBCR (146.8).

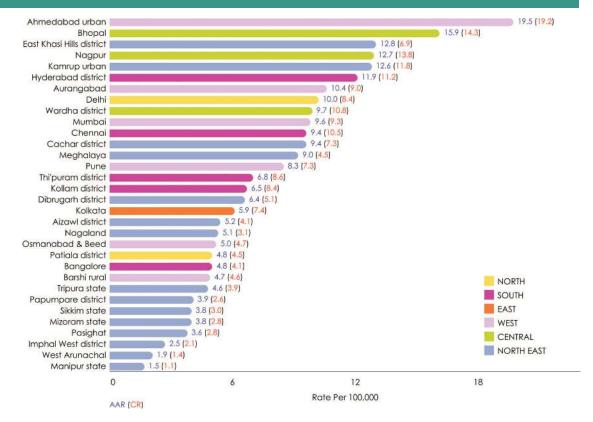


Males: East Khasi Hills district from Meghalaya had the highest AAR (12.8) followed by Ahmedabad urban PBCR (10.5).

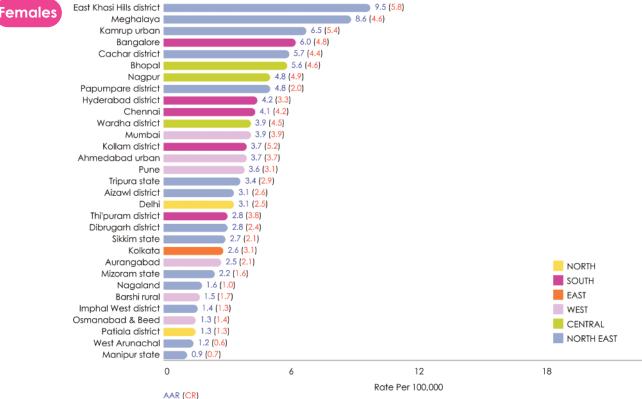
Females: Bhopal PBCR had the highest AAR (4.1) followed by Cachar district PBCR (3.8). The registries of Kamrup urban and Ahmedabad urban shared the third place with an AAR of 3.3.

Fig. 5.3 MOUTH (ICD-10: C03-C06) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP









Males: Ahmedabad urban PBCR showed the highest AAR (19.5) followed by Bhopal PBCR (15.9).

Females: East Khasi Hills district of Meghalaya had the highest AAR (9.5).

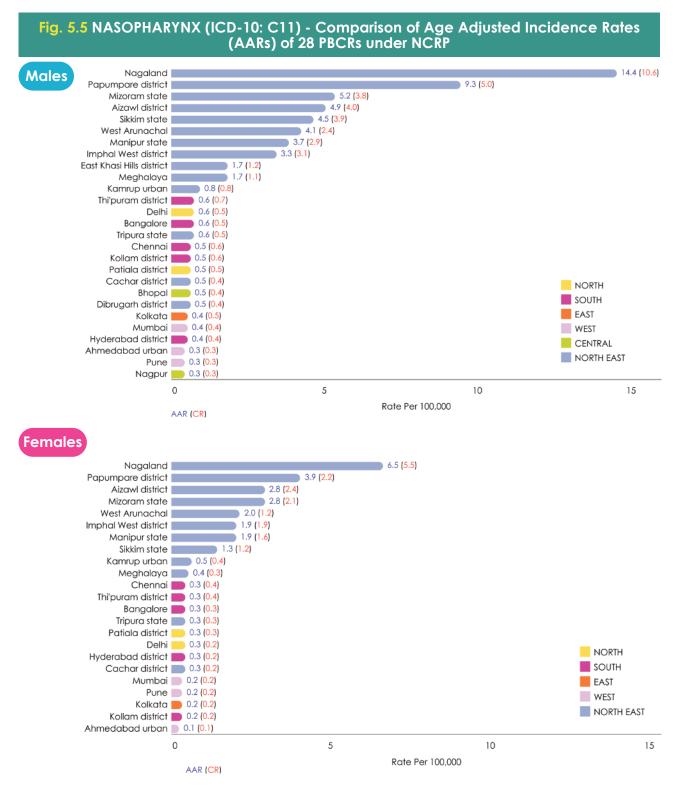
(AARs) of 28 PBCRs under NCRP East Khasi Hills district Males Kamrup urban 8.9 (8.2) Meghalaya 8.3 (4.5) Nagaland 5.6 (3.2) Aizawl district 4.6 (3.9) 4.6 (3.5) Cachar district Delhi 4.2 (3.1) Tripura state 3.7 (3.0) Thi'puram district 2.7 (3.4) Chennai 2.7 (2.8) Mizoram state 2.7 (2.1) Kollam district 2.6 (3.2) Bangalore 2.4 (1.8) Dibrugarh district 2.3 (1.8) Bhopal Ahmedabad urban 1.9 (1.7) Patiala district 1.7 (1.6) 1.5 (1.4) Nagpur Mumbai | 1.4 (1.3) Imphal West district NORTH Aurangabad 1.2 (0.8) SOUTH West Arunachal EAST Kolkata Wardha district WEST Hyderabad district CENTRAL Pune | NORTH EAST Manipur state 0.9 (0.7) Osmanabad & Beed 0.4 (0.4) 8 12 Rate Per 100,000 AAR (CR) **Females** Kamrup urban 3.5 (3.0) East Khasi Hills district Cachar district 1.1 (0.8) Meghalaya 1.0 (0.6) Dibrugarh district 0.8 (0.7) Tripura state 0.8 (0.6) Delhi Aurangabad | 0.6 (0.5) Chennai I 0.5 (0.5) Bangalore | 0.5 (0.4) Mumbai 0.4 (0.4) Hyderabad district Mizoram state 0.4 (0.3) Thi'puram district 0.3 (0.4) NORTH Kolkata 0.3 (0.4) SOUTH Ahmedabad urban 0.3 (0.3) Nagpur -EAST 0.3 (0.3) Patiala district WEST Manipur state 0.3 (0.2) CENTRAL Pune 0.2 (0.2) NORTH EAST Kollam district 0.1 (0.2) Osmanabad & Beed 0.1 (0.1) 8 12 Rate Per 100,000

Fig. 5.4 OROPHARYNX (ICD-10: C09-C10) - Comparison of Age Adjusted Incidence Rates

Males: Six north east registries had higher AARs, East Khasi Hills district PBCR being the highest (11.4) followed Delhi registry with an AAR of 4.2.

Females: Kamrup urban PBCR showed the highest AAR (3.5).

AAR (CR)



Males: Eleven north east registries had higher AARs, Nagaland PBCR being the highest (14.4).

Females: Ten north east registries had higher AARs and Nagaland PBCR led the list (6.5).

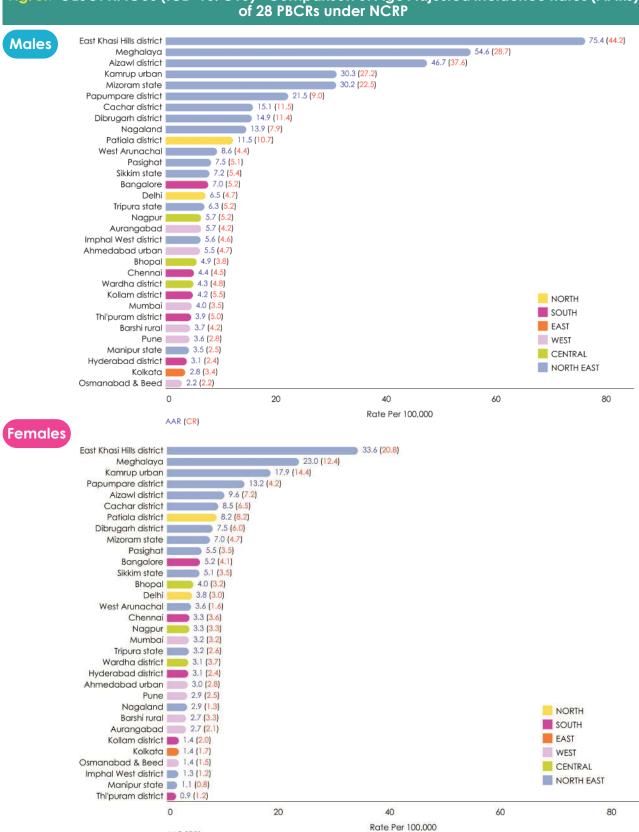
East Khasi Hills district 21.8 (12.9) Males Kamrup urban 20.0 (18.2) Aizawl district Meghalaya | 15.3 (8.2) Cachar district Dibrugarh district 10.8 (8.4) 10.4 (7.6) Mizoram state Nagaland | 9.0 (5.3) Papumpare district 7.3 (3.0) 4.8 (4.0) Pasighat | 4.4 (3.5) Tripura state 3.9 (3.0) Bhopal Bangalore | 3.7 (2.8) Chennai I 3.4 (3.4) Ahmedabad urban | 3.1 (2.7) 2.7 (1.3) West Arunachal 2.6 (1.9) Aurangabad | 2.4 (1.6) Delhi 2.2 (1.9) Mumbai | Kollam district 2.1 (2.7) Imphal West district 1.8 (1.6) Hyderabad district 1.8 (1.4) Kolkata 1.7 (2.0) Nagpur 1.7 (1.5) NORTH Sikkim state 1.7 (1.3) SOUTH Thi'puram district 1.6 (2.1) EAST Patiala district WEST Pune 1.4 (1.0) Barshi rural CENTRAL Manipur state 1.2 (0.9) NORTH EAST Osmanabad & Beed _____ 1.0 (1.0) Wardha district 0.7 (0.8) 21 Rate Per 100,000 AAR (CR) **Females** Kamrup urban 3.7 (2.9) Cachar district 2.5 (1.9) Dibrugarh district 2.3 (1.9) East Khasi Hills district 2.3 (1.5) Meghalaya 2.1 (1.2) Aizawl district 1.6 (1.3) Chennai | Hyderabad district Mizoram state 1.1 (0.8) Bangalore 0.9 (0.8) Ahmedabad urban 0.8 (0.8) Nagpur | 0.7 (0.8) Mumbai 0.7 (0.7) Patiala district 0.6 (0.6) Aurangabad 0.6 (0.5) Wardha district 0.5 (0.6) NORTH Delhi 0.5 (0.4) SOUTH Pune 0.5 (0.4) EAST Tripura state 0.4 (0.4) Bhopal 0.4 (0.4) WEST Osmanabad & Beed 0.3 (0.3) CENTRAL Thi'puram district 0.2 (0.3) NORTH EAST Kolkata | 0.2 (0.3) Kollam district 0.2 (0.2) 21 14 Rate Per 100,000 AAR (CR)

Fig. 5.6 HYPOPHARYNX (ICD-10: C12-C13) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP

Males: East Khasi Hills district of Meghalaya (21.8) had the highest AAR followed by Kamrup urban (20.0) and Aizawl district (17.0).

Females: Kamrup urban showed the highest AAR (3.7).

Fig. 5.7 OESOPHAGUS (ICD-10: C15) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



Males: East Khasi Hills district showed the highest AAR (75.4) followed by Meghalaya PBCR (54.6) and Aizawl district (46.7).

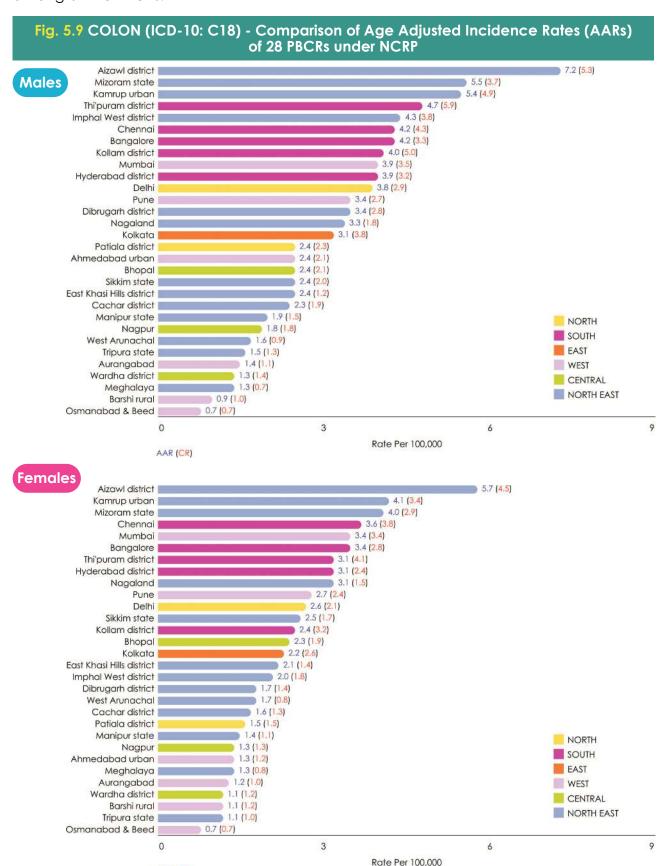
AAR (CR)

Females: East Khasi Hills district showed the highest AAR (33.6) followed by Meghalaya PBCR (23.0).

Fig. 5.8 STOMACH (ICD-10: C16) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP 44.2 (32.3) Aizawl district Males Papumpare district **40.3 (18.7)** Mizoram state | 39.1 (26.2) West Arunachal 24.9 (13.2) Pasighat | 23.9 (16.4) Nagaland 15.7 (11.8) Sikkim state East Khasi Hills district 13.4 (11.9) Kamrup urban | Meghalaya 📗 12.2 (5.8) 10.5 (10.6) Chennai | 8.6 (6.7) Bangalore Dibrugarh district 7,0 (5,3) 6.0 (4.8) Hyderabad district | Kollam district 5.9 (7.5) Cachar district 5.6 (4.1) Tripura state 5.0 (4.1) Thi'puram district 4.8 (6.1) Mumbai 4.8 (4.2) Manipur state 4.5 (3.3) Kolkata 4.2 (5.1) Delhi 3.8 (2.9) Imphal West district 3.6 (3.1) Pune = 3.3 (2.7) NORTH Patiala district SOUTH Nagpur Aurangabad 2.6 (1.9) EAST Barshi rural 2.3 (2.4) WEST Bhopal CENTRAL Ahmedabad urban 1.9 (1.6) NORTH EAST Osmanabad & Beed 1.8 (1.8) Wardha district 1.6 (1.7) 45 Rate Per 100,000 AAR (CR) **Females** Papumpare district 27.1 (11.5) Aizawl district 21.7 (16.1) Mizoram state | 18.8 (12.8) West Arunachal 15.8 (8.2) Pasighat | 12.5 (8.4) Nagaland | **11.8 (6.4)** East Khasi Hills district 8.0 (5.4) Kamrup urban 7.9 (5.5) Sikkim state Meghalaya 🔳 Chennai | Bangalore Dibrugarh district Imphal West district 3.7 (3.2) Cachar district 3.4 (2.6) Hyderabad district Mumbai 🛮 Manipur state 2.7 (2.0) Kolkata | Delhi Tripura state 2.2 (1.9) Patiala district Kollam district Thi'puram district NORTH Barshi rural 1.6 (1.7) SOUTH Nagpur 📗 1.6 (1.5) Pune 1.6 (1.4) Wardha district 1.4 (1.6) WEST Ahmedabad urban 1.2 (1.1) CENTRAL Aurangabad 1.2 (1.0) NORTH EAST Osmanabad & Beed 1.1 (1.2) Bhopal ____ 1.0 (0.8) 0 30 45 Rate Per 100,000

Males: Ten north eastern registry areas occupied the top positions. Aizawl district (44.2), Papumpare district (40.3), Mizoram state (39.1) and West Arunachal (24.9) were in the lead among all the PBCRs.

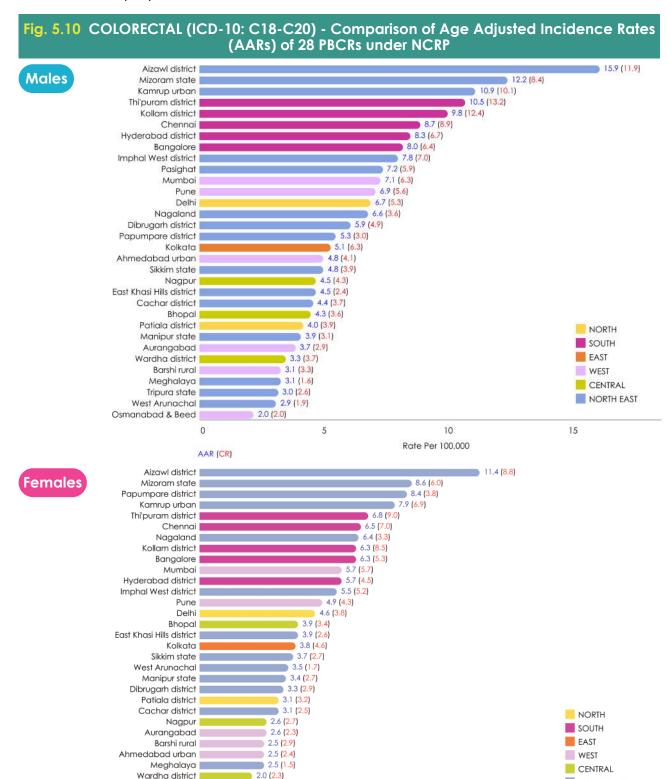
Females: Ten north eastern registry areas occupied the top positions. Papumpare district (27.1), Aizawl district (21.7), Mizoram state (18.8) and West Arunachal (15.8) were in the lead among all the PBCRs.



AAR (CR)

Males: Aizawl district had the highest AAR (7.2), followed by Mizoram state (5.5) and Kamrup urban (5.4).

Females: Aizawl district had the highest AAR (5.7), followed by Kamrup urban (4.1) and Mizoram state (4.0).



Males and Females: Aizawl district led the list of PBCRs with an AAR of (Males: 15.9 and Females: 11.4). Mizoram state had the second highest AAR (Males: 12.2 and Females: 8.6).

Rate Per 100,000

1.9 (1.8)

Tripura state | Osmanabad & Beed |

0

AAR (CR)

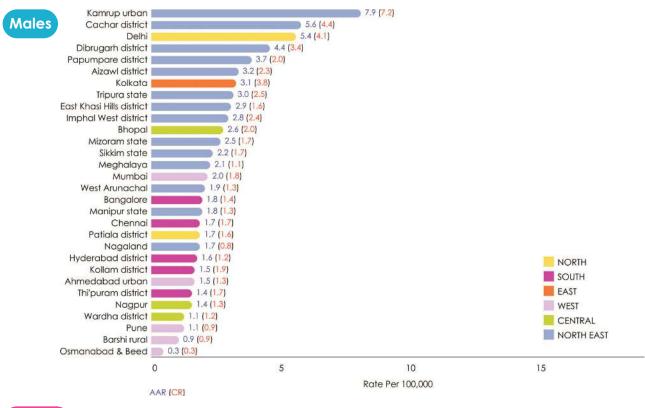
NORTH EAST

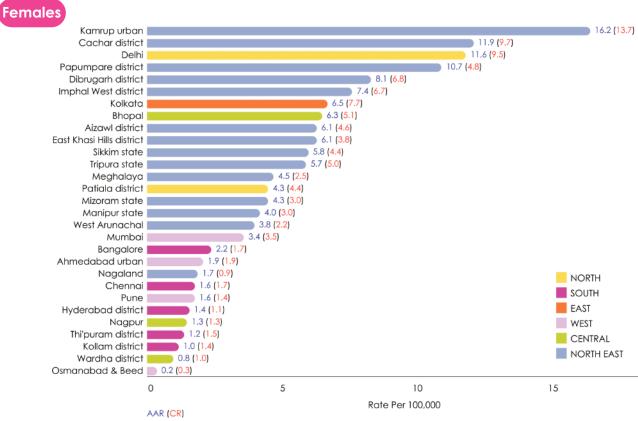
15

Fig. 5.11 LIVER (ICD-10: C22) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP Papumpare district Males West Arunachal 21.5 (11.4) Aizawl district 12.2 (9.6) Mizoram state 10.0 (7.2) Pasighat | 6.8 (5.8) Kamrup urban Mumbai Sikkim state Thi'puram district 6.3 (7.9) Kollam district 6.0 (7.7) Banaalore I 5.6 (4.1) 4.8 (4.7) Chennai I Imphal West district 4.5 (3.9) East Khasi Hills district 4.5 (2.3) Wardha district 4.2 (4.6) Patiala district 4.1 (3.7) Delhi 4.1 (3.0) Nagaland 📗 4.1 (2.3) Dibrugarh district 3.7(3.1)Pune | 3.7 (2.9) Meghalaya 3.6 (1.7) Barshi rural 3.3 (3.3) Kolkata | 3.2 (3.9) Hyderabad district NORTH Manipur state SOUTH Bhopal EAST Nagpur Tripura state _____ 1.9 (1.6) WEST Osmanabad & Beed 1.8 (1.8) CENTRAL Ahmedabad urban 1.8 (1.5) NORTH EAST Cachar district 1.7 (1.3) Aurangabad 1.3 (0.9) 0 10 20 30 Rate Per 100,000 AAR (CR) **Females** Papumpare district 14.4 (5.8) 8.0 (4.3) West Arunachal Mizoram state 5.9 (4.2) Pasighat | 5.2 (3.2) Sikkim state 4.8 (4.0) Aizawl district 3.3 (3.3) Mumbai Kamrup urban 3.3 (2.9) Bangalore | Delhi Nagaland 2.0 (1.1) Kolkata I 1.9 (2.3) Dibrugarh district 1.9 (1.6) East Khasi Hills district 1.9 (1.2) Wardha district 1.7 (1.9) Pune 1.7 (1.4) Chennai 1.6 (1.7) Patiala district 1.6 (1.7) Thi'puram district Meghalaya 1.4 (0.8) Kollam district Tripura state 1.3 (1.1) Hyderabad district 1.3 (0.9) Bhopal | 1.2 (1.0) NORTH Manipur state 1.2 (0.9) SOUTH Nagpur ____ 1.1 (1.2) EAST Cachar district 1.1 (0.8) Imphal West district 1.0 (1.1) WEST Barshi rural ____ 1.0 (1.0) CENTRAL Osmanabad & Beed 0.7 (0.8) NORTH EAST Aurangabad 0.7 (0.5) Ahmedabad urban 0.5 (0.5) 10 20 30 Rate Per 100,000 AAR (CR)

Males and Females: All the areas covered by West Arunachal PBCR recorded higher AARs than any other PBCR. Papumpare district had the highest AAR both among males (35.2) and females (14.4) within West Arunachal PBCR.

Fig. 5.12 GALL BLADDER (ICD-10: C23-C24) - Comparison of Age Adjusted Incidence
Rates (AARs) of 28 PBCRs under NCRP

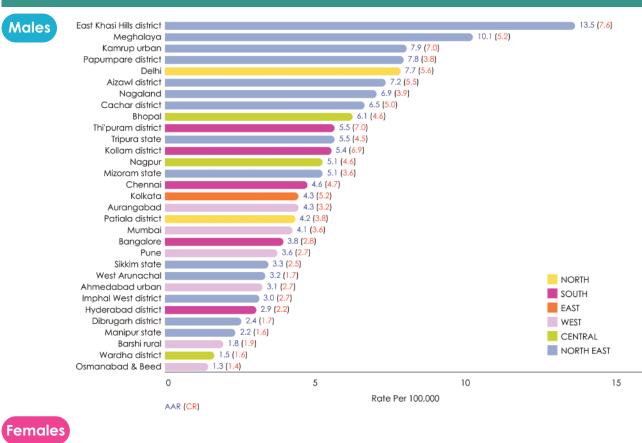


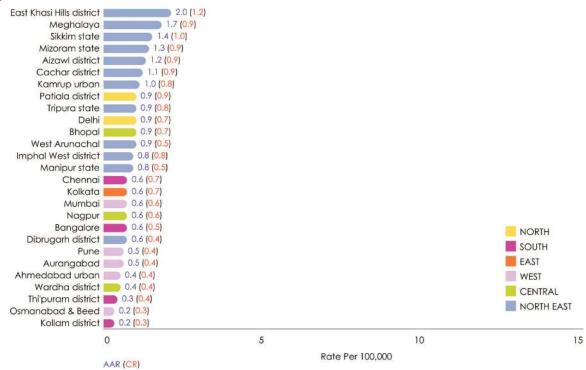


Males: Kamrup urban showed the highest AAR (7.9) followed by and Cachar district (5.6) and Delhi (5.4).

Females: Kamrup urban showed the highest AAR (16.2) followed by Cachar district (11.9), Delhi (11.6) and Papumpare district (10.7).

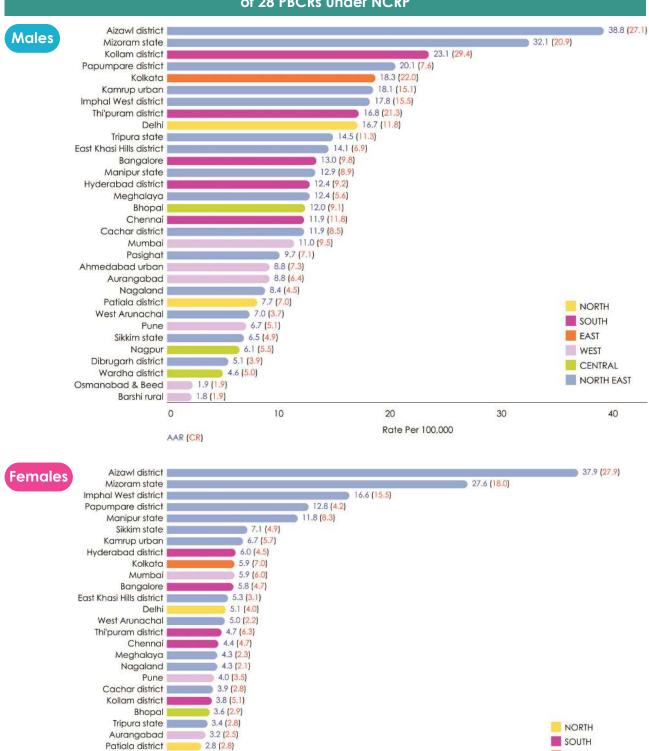
Fig. 5.13 LARYNX (ICD-10: C32) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP





Males: East Khasi Hills district (13.5) had the highest AAR followed by Meghalaya (10.1).

Fig. 5.14 LUNG (ICD-10: C33-C34) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



Males: Aizawl district (38.8), Mizoram state (32.1) and Kollam district (23.1) had higher AARs than any other PBCR.

2.7 (2.7)

2.3 (2.6)

Nagpur Ahmedabad urban

Osmanabad & Beed _____ 1.0 (1.1)

Dibrugarh district 2.0 (1.5)

Barshi rural 1.9 (2.1)

0

AAR (CR)

Wardha district

Females: The three areas of Aizawl district (37.9), Mizoram state (27.6) and Imphal West district (16.6) were at the top followed by Papumpare district (12.8).

EAST

WEST

30

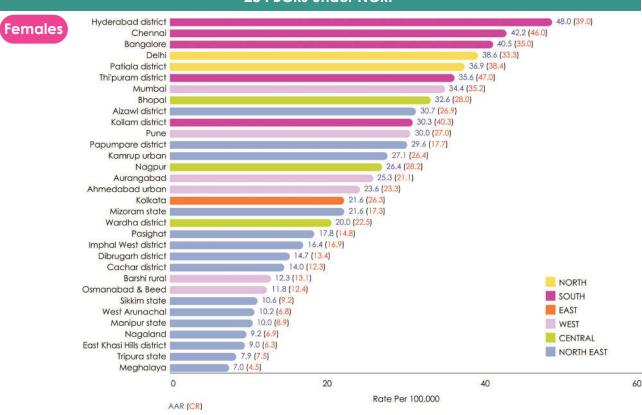
Rate Per 100,000

CENTRAL

NORTH EAST

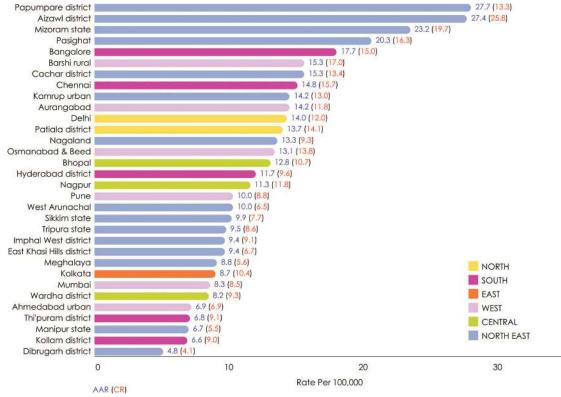
40

Fig. 5.15 BREAST (ICD-10: C50) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



Hyderabad district (48.0), Chennai (42.2), Bangalore (40.5) and Delhi (38.6) occupied the top four places for cancer breast among all the PBCRs.

Fig. 5.16 CERVIX UTERI (ICD-10: C53) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



Papumpare district (27.7), Aizawl district (27.4), Mizoram state (23.2) and Pasighat PBCR (20.3) occupied the top four places for cancer cervix among all the PBCRs.

Tripura state Manipur state 0.5 (0.4) 0

AAR (CR)

9

(AARs) of 28 PBCRs under NCRP 8.0 (6.0) Hyderabad district Chennai 6.3 (6.5) Bangalore 5.9 (4.8) Thi'puram district 5.8 (7.6) 5.8 (4.6) Delhi Mumbai 4.5 (4.4) 4.0 (3.4) Pune 3.8 (3.3) Kamrup urban 3.7 (3.1) Aizawl district Patiala district 3.6 (3.5) Kollam district 3.3 (4.4) Kolkata 3.2 (3.8) 3.2 (3.2) Nagpur Bhopal 3.1 (2.4) 2.5 (1.9) Mizoram state Ahmedabad urban 2.3 (2.1) Auranaabad 2.1 (1.7) Wardha district 1.5 (1.6) 1.4 (1.1) Sikkim state Dibrugarh district 1.3 (1.1) NORTH East Khasi Hills district 1.1 (0.7) SOUTH 1.0 (0.7) Nagaland | EAST Imphal West district 0.9 (0.9) Osmanabad & Beed 0.8 (0.8) WEST Cachar district 0.8 (0.7) CENTRAL Meghalaya 0.8 (0.5) NORTH EAST

Fig. 5.17 CORPUS UTERI (ICD-10: C54) - Comparison of Age Adjusted Incidence Rates

Hyderabad district (8.0), Chennai (6.3), Bangalore (5.9) and Thiruvananthapuram district (5.8) and Delhi (5.8) occupied the top five places for cancer corpus uteri among all the PBCRs.

Rate Per 100,000

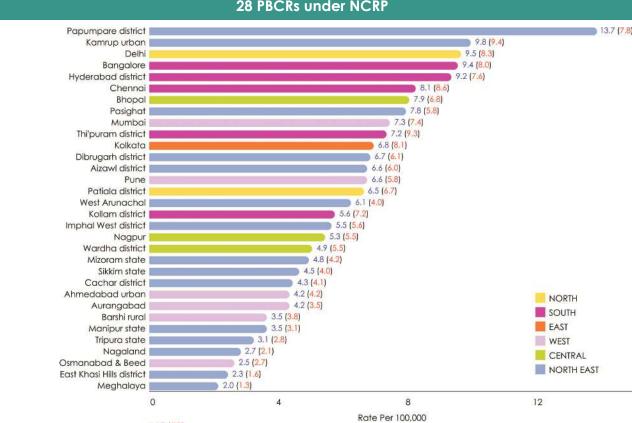
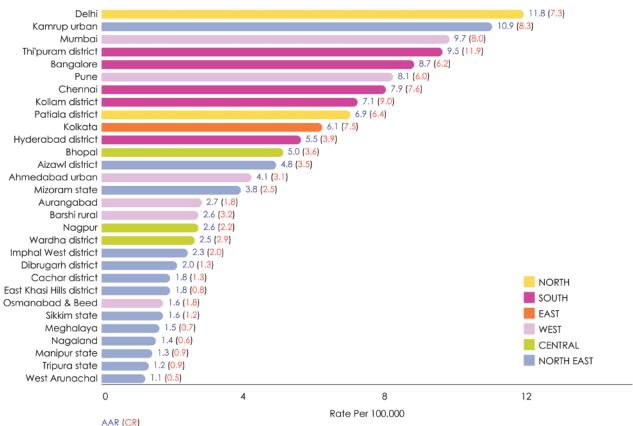


Fig. 5.18 OVARY (ICD-10: C56) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP

Papumpare district (13.7) had the highest AAR, followed by Kamrup urban (9.8) and Delhi PBCR (9.5) for cancer ovary.

Fig. 5.19 PROSTATE (ICD-10: C61) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



Delhi (11.8) recorded the highest AAR, followed by Kamrup urban (10.9) and Mumbai (9.7) for cancer prostate.

Cachar district

Mizoram state

Tripura state

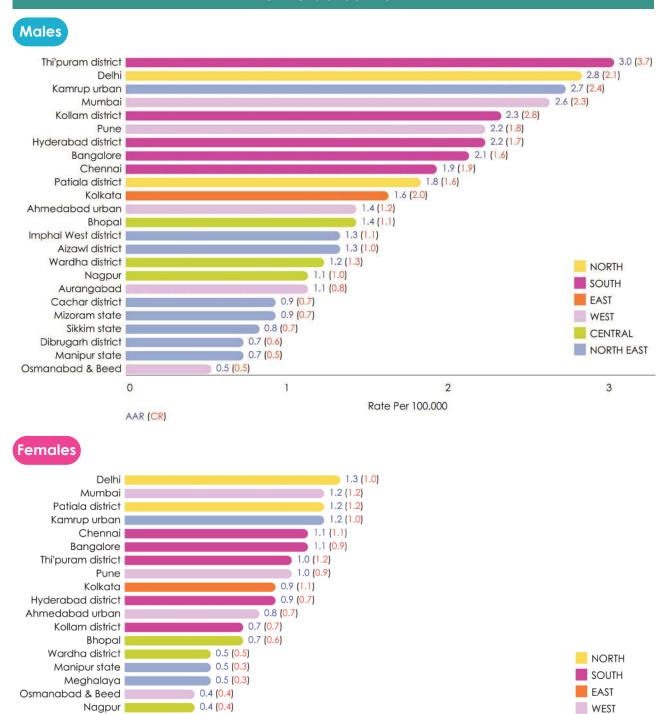
AAR (CR)

0.4(0.3)

0.4 (0.3)

Dibrugarh district

Fig. 5.20 KIDNEY (ICD-10: C64) Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



Males: Thiruvananthapuram district (3.0) recorded the highest AAR, followed by Delhi PBCR (2.8) and Kamrup urban PBCR (2.7).

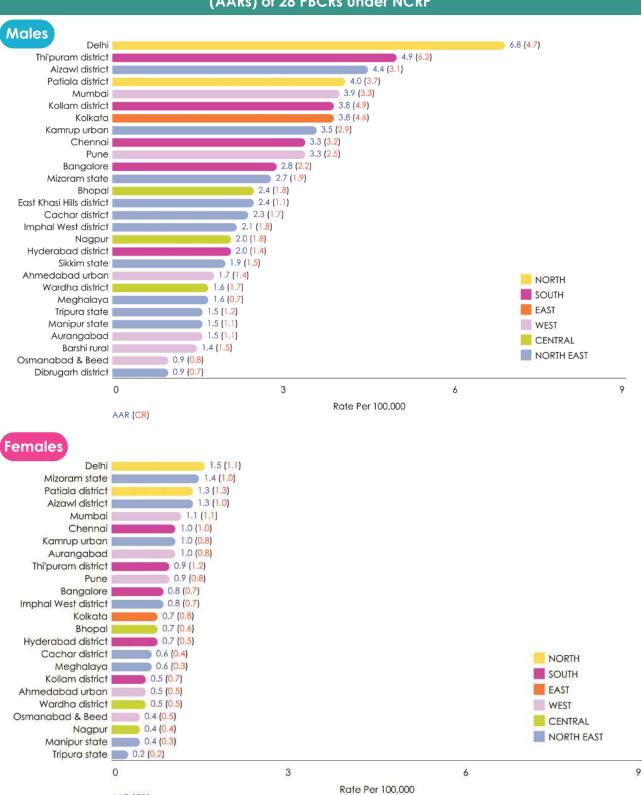
Rate Per 100,000

CENTRAL

NORTH EAST

3

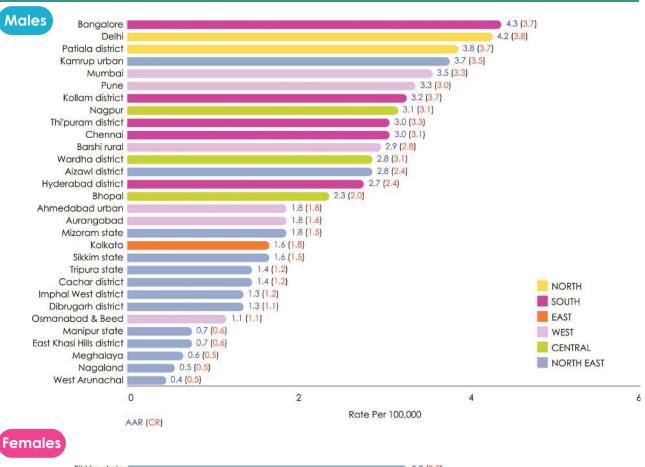
Fig. 5.21 URINARY BLADDER (ICD-10: C67) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP

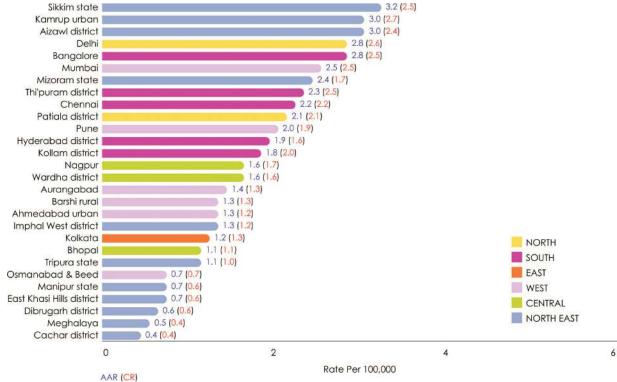


Males: Delhi had the highest AAR (6.8), followed by Thiruvananthapuram district (4.9).

AAR (CR)

Fig. 5.22 BRAIN, NS (ICD-10: C70-C72) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



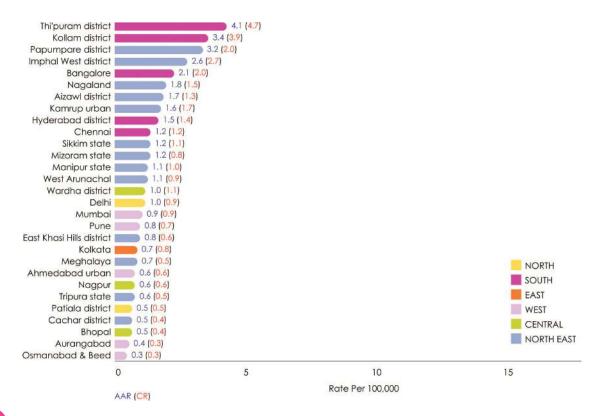


Males: Bangalore led the list of PBCRs with an AAR of 4.3 followed by Delhi (4.2).

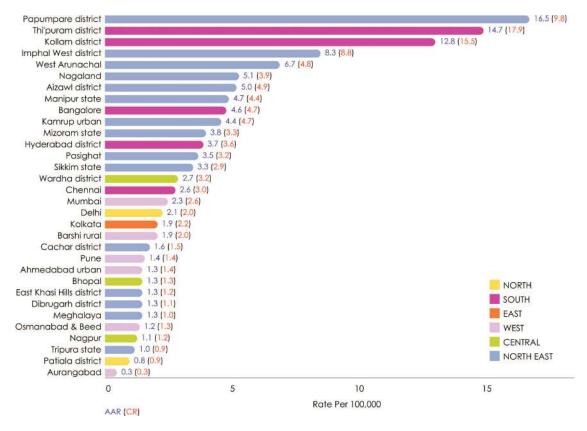
Females: Sikkim state (3.2) had the highest AAR followed by Kamrup urban (3.0).

Fig. 5.23 THYROID (ICD-10: C73) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



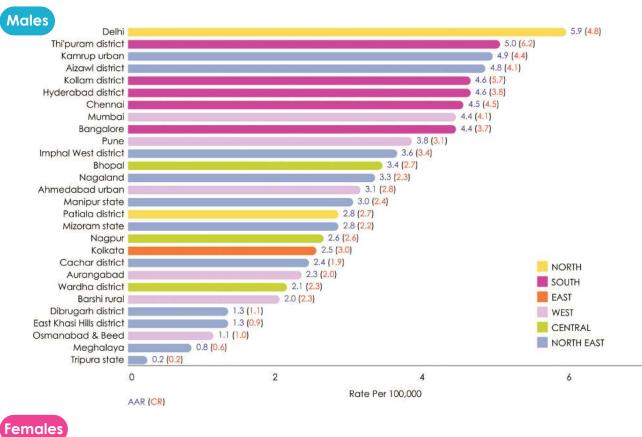




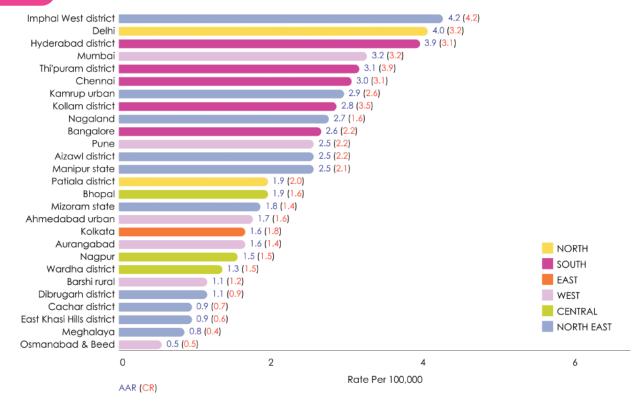


Females: Papumpare district (16.5) topped the list of PBCRs. The two registries in Kerala namely, Thiruvananthapuram district (14.7) and Kollam district (12.8) followed next.

Fig. 5.24 NHL (ICD-10: C82-C85) - Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



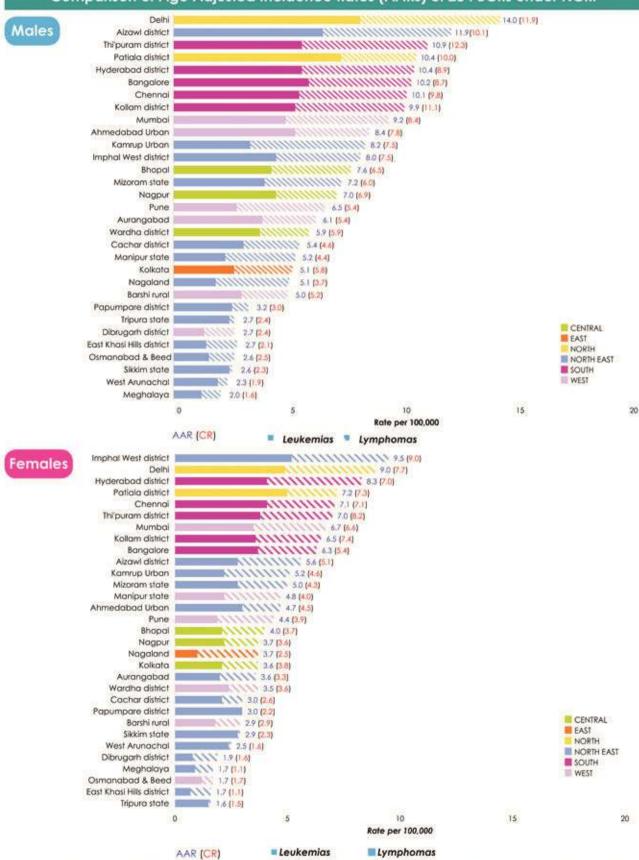




Males: Delhi PBCR showed the highest AAR (5.9) followed by Thiruvananthapuram district (5.0) and Kamrup urban (4.9).

Females: Imphal West district PBCR showed the highest AAR (4.2).

Fig. 5.25 Leukaemias (ICD-10: C91-C95, C96) and Lymphomas (ICD-10: C82-C85, C96) -Comparison of Age Adjusted Incidence Rates (AARs) of 28 PBCRs under NCRP



Males: Delhi (14.0), Aizawl district (11.9) and Thiruvananthapuram district (10.9) had higher AARs than any other PBCR.

Females: Imphal West district (9.5), Delhi (9.0) and Hyderabad district (8.3) were at the top followed by Patiala district (7.2).