

Chapter 4

TRENDS OVER TIME IN INCIDENCE RATES (AAR) OF AREA 1 AND AREA 2

The time trend analysis was done using actual AAR values rather than the modified AAR values as the trends depending on actual AAR values gives the true trend existing in the data. The trend analysis was also done with modified AAR values but not provided in the report, as the comparison of trends over time in the two areas using these values were not too different from that of the actual AARs.

The leading sites of cancer for either sex with statistical results of slope (b), S.E. (b), t values and p-values of Area 1 and Area 2 are shown in Tables 4(a) to 4(d). The trend graphs of both Linear Regression and Joinpoint Regression are shown in Figures 4.1 to 4.8. The model fitted values along with respective APC values are also shown for each figure in the table below the Joinpoint Regression graph. The APC0 values in JPRM refers to slope of linear regression when log values are considered. The APC1 and APC2 of the JPRM refer to the significance of trends over time for earlier and latter years respectively. Wherever, significant, the AAR values of the corresponding years have been indicated in bold.

Cancer of All Sites

Cancers of all sites in both males and females and in Areas 1 and 2, showed a statistically significant increasing trend in the AARs over the years 1988 to 2007. This significant increase was observed through the Linear Regression Method (LRM) as well as by Joinpoint Regression method (JPRM). However, the latter method showed a more pronounced increase for the earlier years 1988-2003 in males in Area 1 and Area 2 and in females in Area 1 after the year 1999.

Males

Tongue: For Areas 1 and 2, the LRM and the overall JPRM (APC0) showed no significant changes in AARs. The JPRM showed an increasing trend (APC=4.00) for the period 1994-2007 in Area 1.

Mouth: In Area 1, the LRM and the JPRM showed a similar increasing trend (APC=3.80) in AARs for the period 1988-2007. No significant increase or decrease in AARs was observed in Area 2.

Lung: In both Areas 1 and 2 the LRM and the overall JPRM did not show significant variations in the AARs for the entire period 1988-2007. However, in Area 1, the JPRM showed an increasing trend (APC=3.20) from 1988-1998 followed by a decreasing trend (APC=-4.40) for the period 1998-2007.

Females

Breast: In both the Areas 1 and 2 the LRM and the overall JPRM showed an increasing trend. Further, the JPRM showed a higher increasing trend in AARs for both Area 1 and 2 for the period 2002-2007.

Cervix: In Area 1 no significant trend in AARs was observed by both the methods. In Area 2 an overall significant decline was seen.

Ovary: In Area 1 LRM and JPRM (APC0 = 3.0) showed an increasing trend in AARs while no change in AARs was observed in Area 2.

Table 4(a): Summary Results of Time Trend Analysis of Selected Leading Sites of Cancer - Area 1- Bhopal - Males (1988-2007)

Linear Regression Method				
Sites	Slope (b)	S.E.(b)	t value	p-value
All sites	0.626	0.148	4.215	<0.01
Tongue	0.027	0.057	0.477	NS
Mouth	0.261	0.085	3.051	<0.01
Hypopharynx	-0.080	0.055	-1.454	NS
Oesophagus	-0.050	0.070	-0.713	NS
Stomach ^{\$}	-0.123	0.032	-3.820	<0.01
Larynx	0.204	0.040	5.067	<0.01
Lung	-0.048	0.076	-0.634	NS
Prostate ^{\$}	0.007	0.044	0.169	NS
Brain NS ^{\$}	-0.029	0.030	-0.958	NS
NHL ^{\$}	0.105	0.047	2.254	<0.05
Myeloid Leukaemia ^{\$}	0.011	0.042	0.256	NS

^{\$} Sites with small number of cases (<10).

Joinpoint Regression Method			
Sites	APC0	APC1	APC2
All sites	0.60*	1.00*	-1.90
Tongue	0.30	-6.50*	4.00*
Mouth	3.80*		
Hypopharynx	-0.90		
Oesophagus	-0.50		
Stomach ^{\$}	-4.20*		
Larynx	5.00*		
Lung	-0.40	3.20*	-4.40*
Prostate ^{\$}	0.50		
Brain NS ^{\$}	-1.90		
NHL ^{\$}	-0.90		
Myeloid Leukaemia ^{\$}	-6.00		

APC - Annual percent change;

* represents the significant APC ($p < 0.05$) values.

^{\$} Sites with small number of cases (<10).

Table 4(b): Summary Results of Time Trend Analysis of Selected Leading Sites of Cancer- Area 2 - Bhopal - Males (1988-2007)

Linear Regression Method				
Sites	Slope (b)	S.E.(b)	t value	p-value
All sites	0.603	0.223	2.704	< 0.05
Tongue	0.106	0.089	1.190	NS
Mouth	-0.002	0.072	-0.034	NS
Hypopharynx ^{\$}	-0.098	0.053	-1.840	NS
Oesophagus	-0.026	0.056	-0.455	NS
Stomach ^{\$}	-0.067	0.053	-1.266	NS
Larynx ^{\$}	-0.021	0.043	-0.497	NS
Lung	-0.020	0.098	-0.208	NS
Prostate ^{\$}	0.133	0.063	2.108	< 0.05
Brain NS ^{\$}	0.008	0.059	0.140	NS
NHL ^{\$}	0.143	0.051	2.789	< 0.01
Myeloid Leukaemia ^{\$}	0.024	0.041	0.577	NS

^{\$} Sites with small number of cases (<10).

Joinpoint Regression Method			
Sites	APC0	APC1	APC2
All sites	0.70*	2.50*	-1.80
Tongue	3.40		
Mouth	0.50		
Hypopharynx ^{\$}	-1.70		
Oesophagus	-0.43	4.09	-4.15
Stomach ^{\$}	-1.80		
Larynx ^{\$}	0.00		
Lung	0.00		
Prostate ^{\$}	3.90*	34.60*	0.00
Brain NS ^{\$}	4.00	99.80*	-5.50
NHL ^{\$}	-1.20		
Myeloid Leukaemia ^{\$}	-3.80		

APC - Annual percent change;

* represents the significant APC ($p < 0.05$) values.

^{\$} Sites with small number of cases (<10).

**Table 4(c): Summary Results of Time Trend Analysis of Selected Leading Sites of Cancer-
Area 1 - Bhopal - Females (1988-2007)**

Linear Regression Method				
Sites	Slope (b)	S.E.(b)	t value	p-value
All sites	1.277	0.198	6.449	<0.01
Mouth	0.082	0.052	1.569	NS
Oesophagus ^{\$}	-0.020	0.060	-0.339	NS
Stomach ^{\$}	-0.075	0.039	-1.901	NS
Gall bladder	0.167	0.038	4.353	<0.05
Lung ^{\$}	0.025	0.040	0.632	NS
Breast	0.698	0.192	3.628	<0.01
Cervix	0.062	0.072	0.851	NS
Corpus uteri ^{\$}	-0.042	0.054	-0.766	NS
Ovary	0.145	0.067	2.157	<0.05
Brain NS ^{\$}	0.007	0.025	0.278	NS
Myeloid Leukaemia ^{\$}	0.029	0.031	0.934	NS

^{\$} Sites with small number of cases (<10).

Joinpoint Regression Method			
Sites	APC0	APC1	APC2
All sites	1.30*	0.30	3.00*
Mouth	1.60		
Oesophagus ^{\$}	-0.20		
Stomach ^{\$}	-14.20	3.90	-76.80*
Gall bladder	5.90*		
Lung ^{\$}	1.80		
Breast	3.10*	0.50	22.10*
Cervix	0.30		
Corpus uteri ^{\$}	-7.60		
Ovary	3.00*		
Brain NS ^{\$}	13.90		
Myeloid Leukaemia ^{\$}	8.30		

APC - Annual percent change;

* represents the significant APC ($p < 0.05$) values.

^{\$} Sites with small number of cases (<10).

Table 4(d): Summary Results of Time Trend Analysis of Selected Leading Sites of Cancer - Area 2 - Bhopal - Females (1988-2007)

Linear Regression Method				
Sites	Slope (b)	S.E.(b)	t value	p-value
All sites	0.683	0.267	2.559	<0.05
Mouth [§]	0.020	0.051	0.389	NS
Oesophagus [§]	0.036	0.061	0.585	NS
Stomach [§]	0.027	0.033	0.799	NS
Gall bladder [§]	0.019	0.070	0.270	NS
Lung [§]	0.001	0.057	0.013	NS
Breast	0.842	0.187	4.490	<0.01
Cervix	-0.307	0.111	-2.779	<0.01
Corpus uteri [§]	0.065	0.033	1.990	NS
Ovary	0.115	0.076	1.522	NS
Brain NS [§]	0.014	0.028	0.497	NS
Myeloid Leukaemia [§]	0.033	0.028	1.172	NS

[§]Sites with small number of cases (<10).

Joinpoint Regression Method			
Sites	APC0	APC1	APC2
All sites	0.80*		
Mouth [§]	0.70	6.3*	-7.6
Oesophagus [§]	0.80		
Stomach [§]	21.90		
Gall bladder [§]	5.60		
Lung [§]	2.40		
Breast	3.00*	1.3*	15.3*
Cervix	-2.10*		
Corpus uteri [§]	15.40		
Ovary	1.90		
Brain NS [§]	1.10		
Myeloid Leukaemia [§]	4.00		

APC - Annual percent change;

* represents the significant APC ($p < 0.05$) values.

[§] Sites with small number of cases (<10).

Fig. 4.1(a): ALL SITES (ICD-10: C00-C96) – Males
Trends over time (1988-2007) in AAR (Linear Regression)

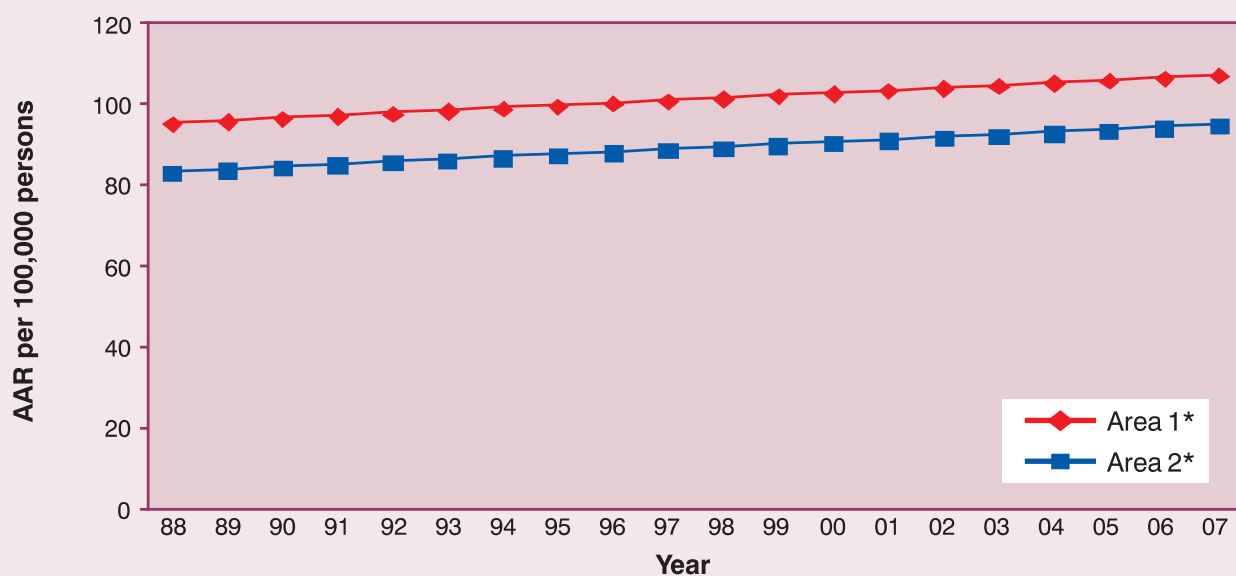


Table 4.1(a): Yearwise Cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	167	89.8	85	81.8
1989	185	95.7	98	82.7
1990	202	98.4	96	74.4
1991	210	98.6	114	86.1
1992	207	96.9	130	88.4
1993	212	94.2	145	92.7
1994	239	100.8	145	88.9
1995	235	97.4	167	95.0
1996	252	100.6	163	92.4
1997	251	97.7	178	92.6
1998	257	98.9	183	89.7
1999	289	109.2	176	82.0
2000	297	104.4	190	87.5
2001	308	107.4	205	84.6
2002	325	107.2	210	85.3
2003	331	105.5	221	84.8
2004	323	107.5	210	86.5
2005	305	107.5	246	96.6
2006	348	100.5	309	102.1
2007	359	99.2	317	99.7
b(Slope)		0.626		0.603
p-value		< 0.01		< 0.01

Fig. 4.1(b) : ALL SITES (ICD-10: C00-C96) – Males
Trends over time (1988-2007) in AAR (Joinpoint Regression)

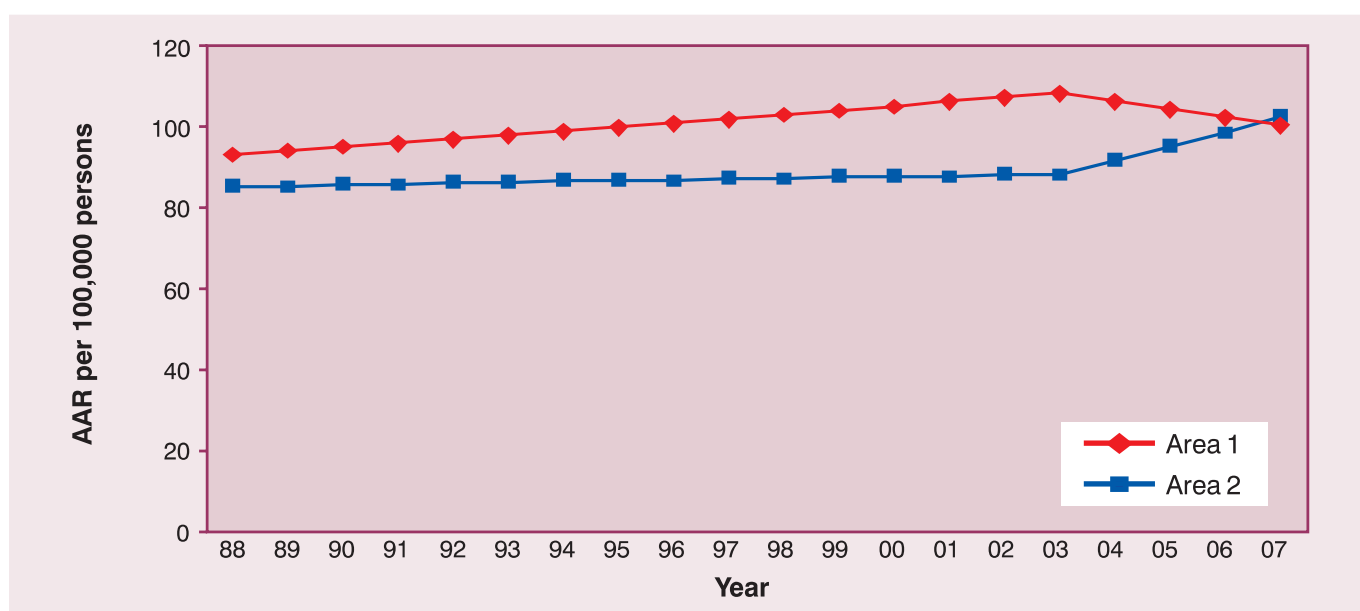


Table 4.1(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	93.00	85.02
1989	93.93	85.22
1990	94.86	85.42
1991	95.81	85.62
1992	96.77	85.82
1993	97.73	86.02
1994	98.71	86.22
1995	99.69	86.43
1996	100.69	86.63
1997	101.69	86.83
1998	102.70	87.03
1999	103.73	87.24
2000	104.76	87.44
2001	105.81	87.64
2002	106.86	87.85
2003	107.93	88.05
2004	105.92	91.37
2005	103.95	94.81
2006	102.02	98.37
2007	100.12	102.08
APC0	0.60*	0.70*
APC1	1.00*	2.50*
APC2	-1.90	-1.80

Values of years where a shift in trend is observed is highlighted; * represents significant joinpoint model and APC ($p < 0.05$) values.

Fig. 4.2(a): ALL SITES (ICD-10: C00-C96) – Females
Trends over time (1988-2007) in AAR (Linear Regression)

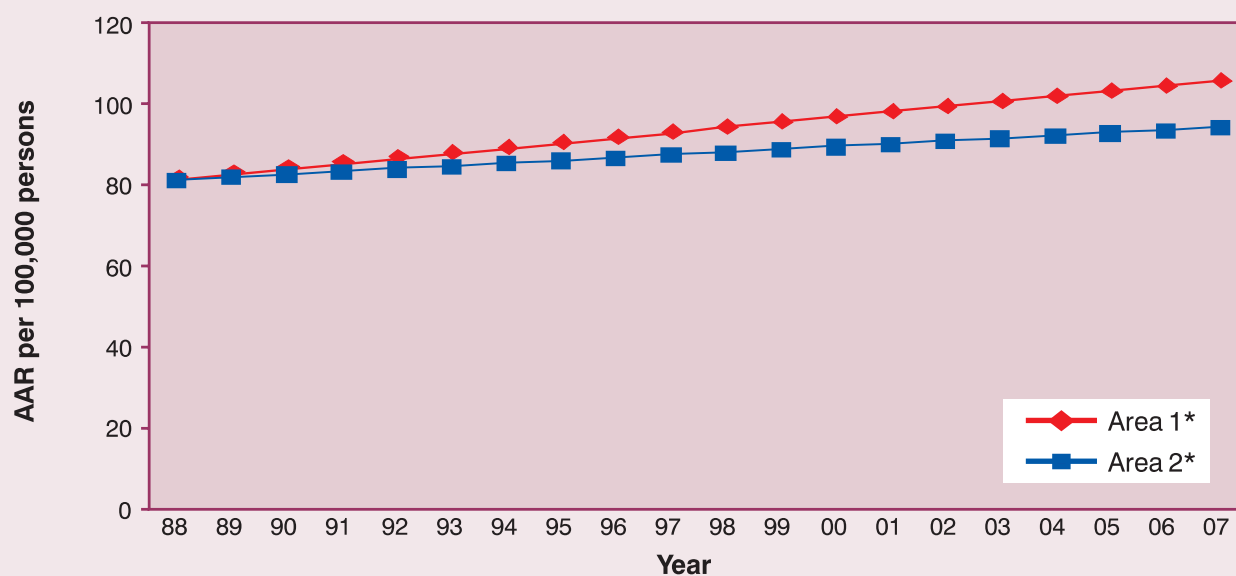


Table 4.2(a): Yearwise cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	138	83.3	95	89.7
1989	162	89.1	81	72.2
1990	178	83.7	103	78.9
1991	183	89.4	104	77.3
1992	185	88.6	122	84.3
1993	182	84.9	139	90.9
1994	193	86.8	146	89.3
1995	198	88.4	133	80.2
1996	198	87.3	166	92.7
1997	214	91.5	181	95.3
1998	209	84.4	174	85.4
1999	225	89.7	186	85.7
2000	239	92.8	197	86.0
2001	239	90.7	210	88.2
2002	269	99.8	222	86.4
2003	262	94.3	206	75.3
2004	286	109.4	246	100.6
2005	278	103.6	251	99.7
2006	330	107.9	268	89.8
2007	367	113.7	305	97.2
b(Slope)		1.277		0.683
p-value		<0.01		<0.05

Fig. 4.2(b): ALL SITES (ICD-10: C00-C96) – Females
Trends over time (1988-2007) in AAR (Joinpoint Regression)

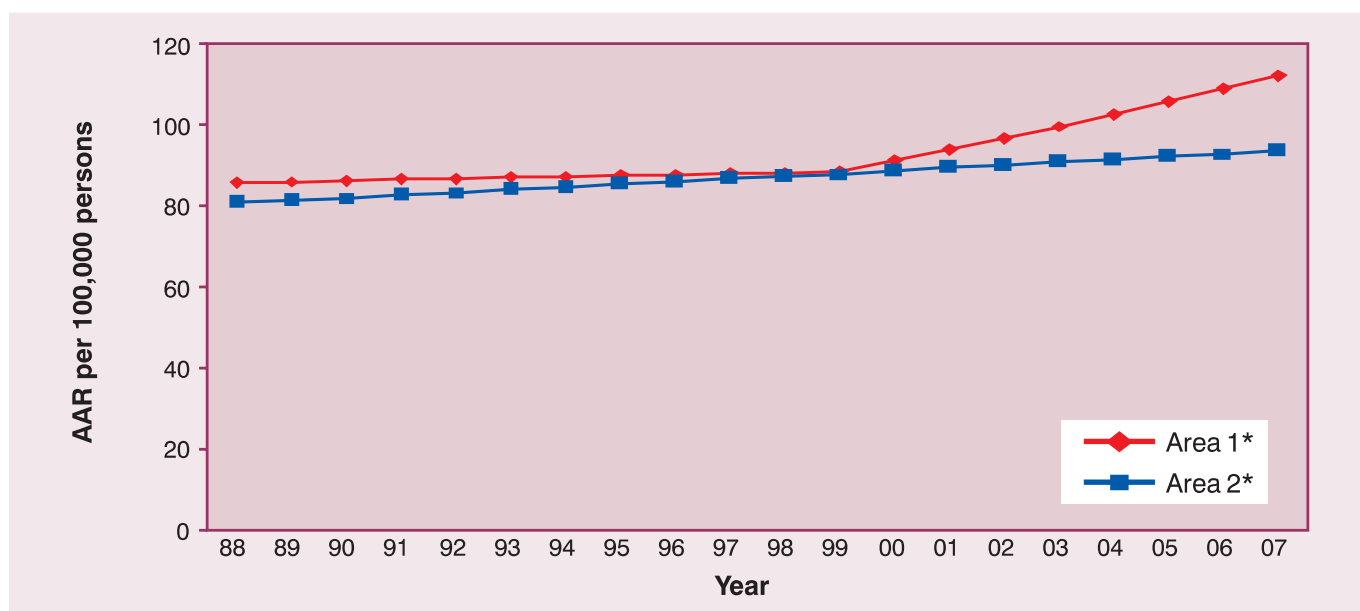


Table 4.2(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	85.86	80.69
1989	86.10	81.32
1990	86.34	81.96
1991	86.58	82.60
1992	86.82	83.25
1993	87.07	83.90
1994	87.31	84.56
1995	87.55	85.23
1996	87.80	85.89
1997	88.04	86.57
1998	88.29	87.25
1999	88.53	87.93
2000	91.22	88.62
2001	93.98	89.32
2002	96.83	90.02
2003	99.77	90.72
2004	102.80	91.44
2005	105.90	92.15
2006	109.10	92.88
2007	112.40	93.60
APC0	1.30*	0.80*
APC1	0.30	
APC2	3.00*	

Values of years where a shift in trend is observed is highlighted; * represents significant joinpoint model and APC ($p < 0.05$) values.

Fig. 4.3(a): TONGUE (ICD-10: C01-C02) – Males
Trends over time (1988-2007) in AAR (Linear Regression)

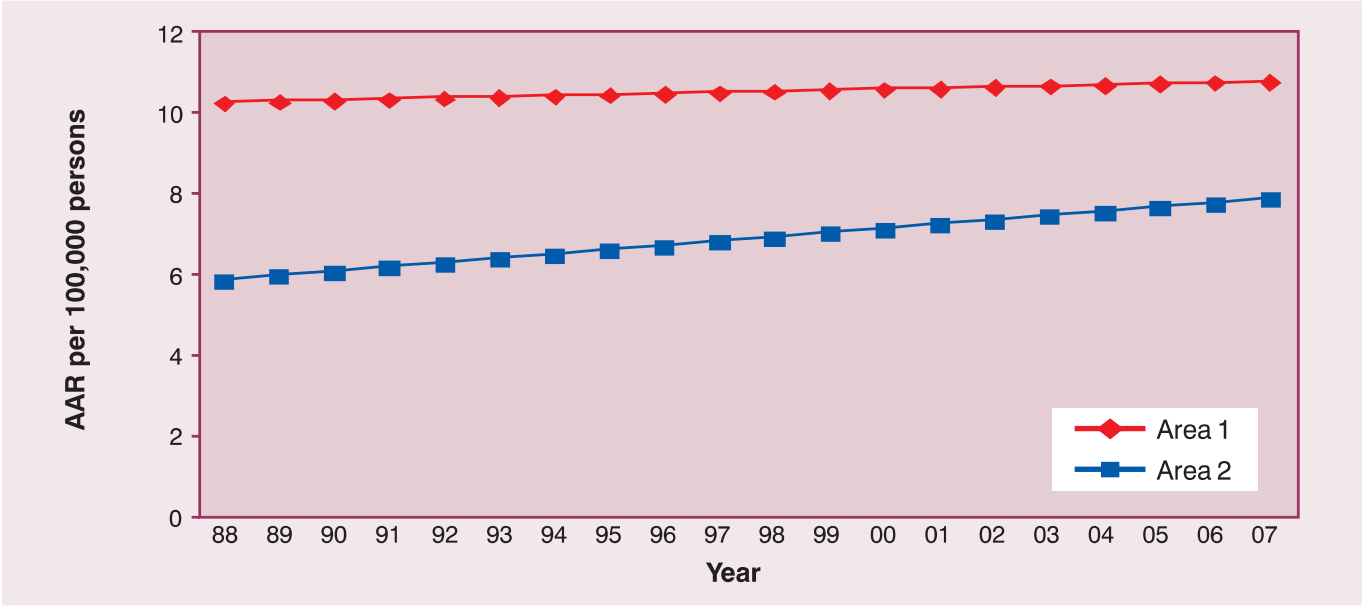


Table 4.3(a): Yearwise Cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	22	12.4	0	1.0
1989	20	11.2	14	11.24
1990	23	12.1	11	10.29
1991	18	9.6	7	4.62
1992	21	10.8	5	4.55
1993	17	8.6	10	6.39
1994	20	8.4	10	7.12
1995	20	8.4	10	5.76
1996	24	10.3	9	5.05
1997	22	9.3	14	7.77
1998	21	9.0	12	5.93
1999	29	10.8	17	7.84
2000	26	8.9	15	6.6
2001	31	11.4	19	7.52
2002	35	11.3	12	4.79
2003	35	11.5	19	7.2
2004	39	13.4	16	6.86
2005	28	11.6	21	7.75
2006	40	10.9	36	10.2
2007	34	9.4	27	8.3
b(Slope)		0.027		0.106
p-value		NS		NS

Fig. 4.3(b): TONGUE (ICD-10: C01-C02) – Males
Trends over time (1988-2007) in AAR (Joinpoint Regression)

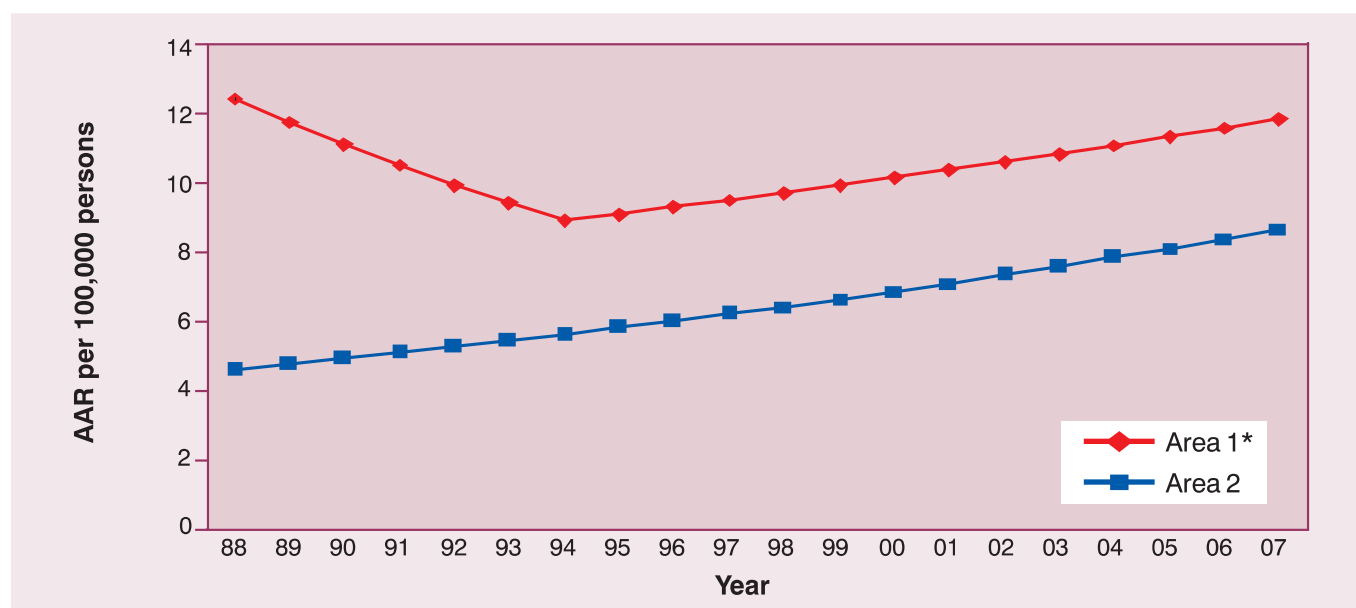


Table 4.3(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	12.36	4.57
1989	11.69	4.72
1990	11.06	4.88
1991	10.46	5.05
1992	9.89	5.22
1993	9.36	5.40
1994	8.85	5.58
1995	9.05	5.77
1996	9.25	5.96
1997	9.45	6.17
1998	9.66	6.38
1999	9.88	6.59
2000	10.10	6.82
2001	10.32	7.05
2002	10.55	7.29
2003	10.78	7.53
2004	11.02	7.79
2005	11.27	8.05
2006	11.52	8.33
2007	11.77	8.61
APC0	0.30	3.40
APC1	-6.50*	
APC2	4.00*	

Values of years where a shift in trend is observed is highlighted; * represents significant joinpoint model and APC ($p < 0.05$) values.

Fig. 4.4(a): MOUTH (ICD-10: C03-C06) – Males
Trends over time (1988-2007) in AAR (Linear Regression)

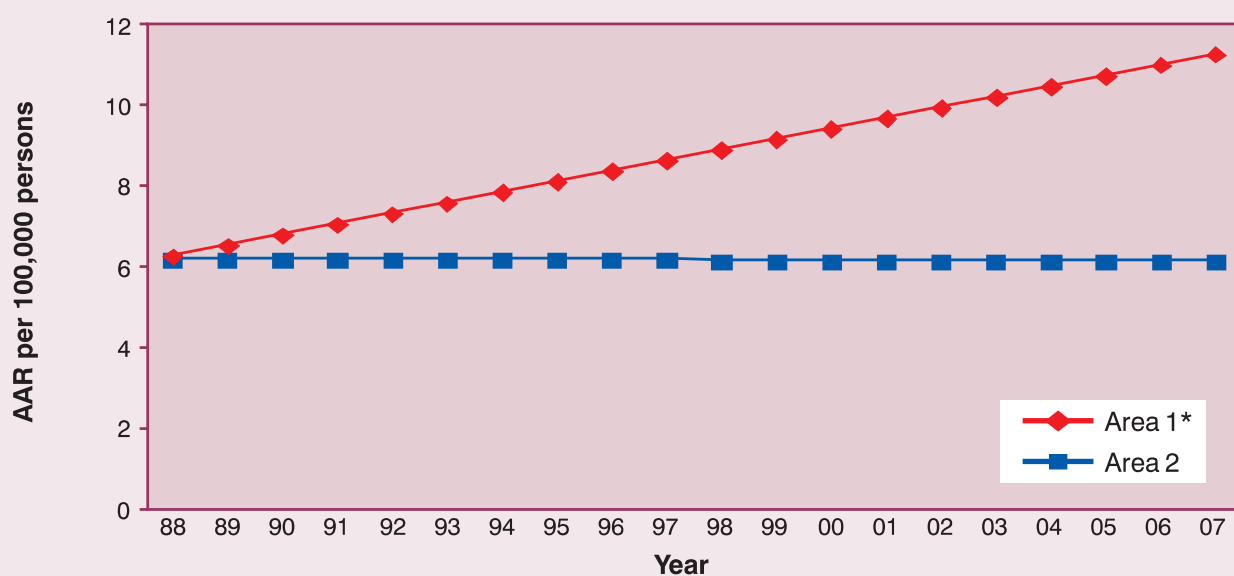


Table 4.4(a): Yearwise Cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	15	8.4	7	8.0
1989	16	9.3	9	7.2
1990	4	2.2	6	4.2
1991	9	4.2	2	1.6
1992	12	5.8	10	6.5
1993	16	6.8	13	7.2
1994	20	8.8	12	7.7
1995	26	10.9	14	7.8
1996	24	9.8	12	6.2
1997	27	9.9	15	6.7
1998	23	8.3	17	8.7
1999	25	8.3	10	4.9
2000	27	8.8	10	4.5
2001	30	10.0	12	5.5
2002	30	9.3	12	4.7
2003	29	8.9	19	6.6
2004	45	12.7	11	3.9
2005	40	14.3	14	5.1
2006	37	9.7	25	8.5
2007	32	8.4	25	7.3
b(Slope)		0.261		-0.002
p-value		<0.01		NS

Fig. 4.4(b): MOUTH (ICD-10: C03-C06) – Males
Trends over time (1988-2007) in AAR (Joinpoint Regression)

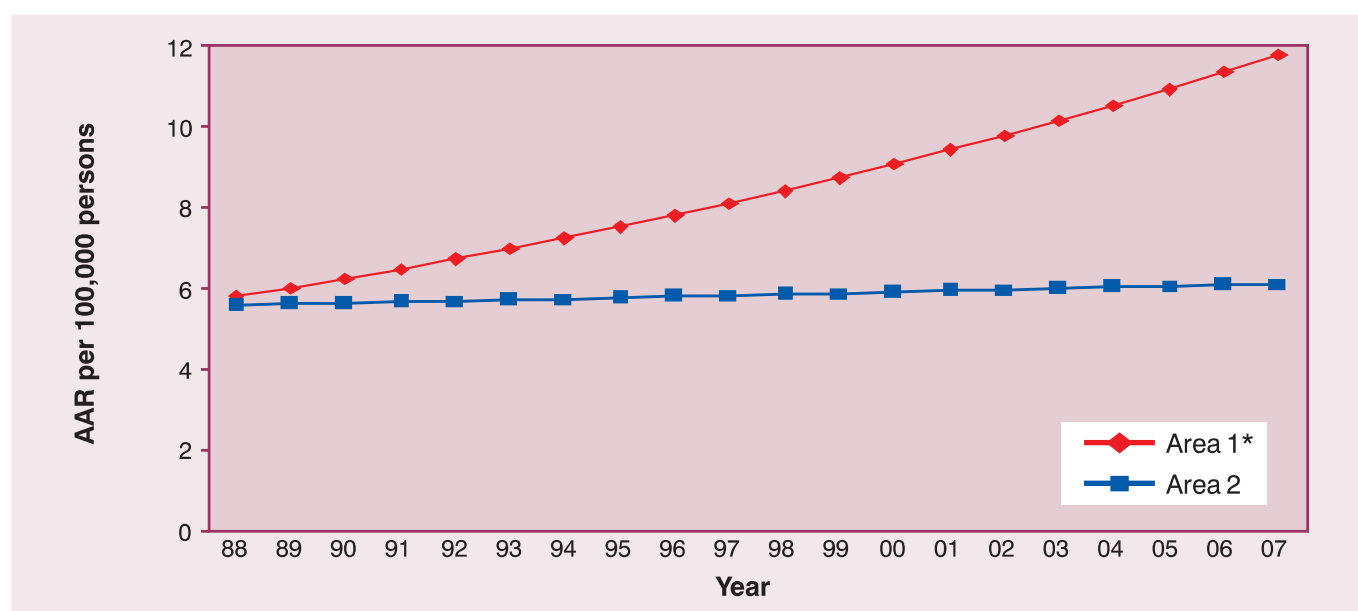


Table 4.4(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	5.75	5.53
1989	5.97	5.56
1990	6.20	5.58
1991	6.44	5.61
1992	6.68	5.64
1993	6.94	5.67
1994	7.20	5.69
1995	7.48	5.72
1996	7.76	5.75
1997	8.06	5.78
1998	8.37	5.81
1999	8.69	5.83
2000	9.02	5.86
2001	9.36	5.89
2002	9.72	5.92
2003	10.09	5.95
2004	10.47	5.98
2005	10.87	6.01
2006	11.29	6.04
2007	11.72	6.06
APC0	3.80*	0.50
APC1		
APC2		

* represents significant joinpoint model and APC ($p < 0.05$) values.

Fig. 4.5(a): LUNG (ICD-10: C33-C34) – Males
Trends over time (1988-2007) in AAR (Linear Regression)

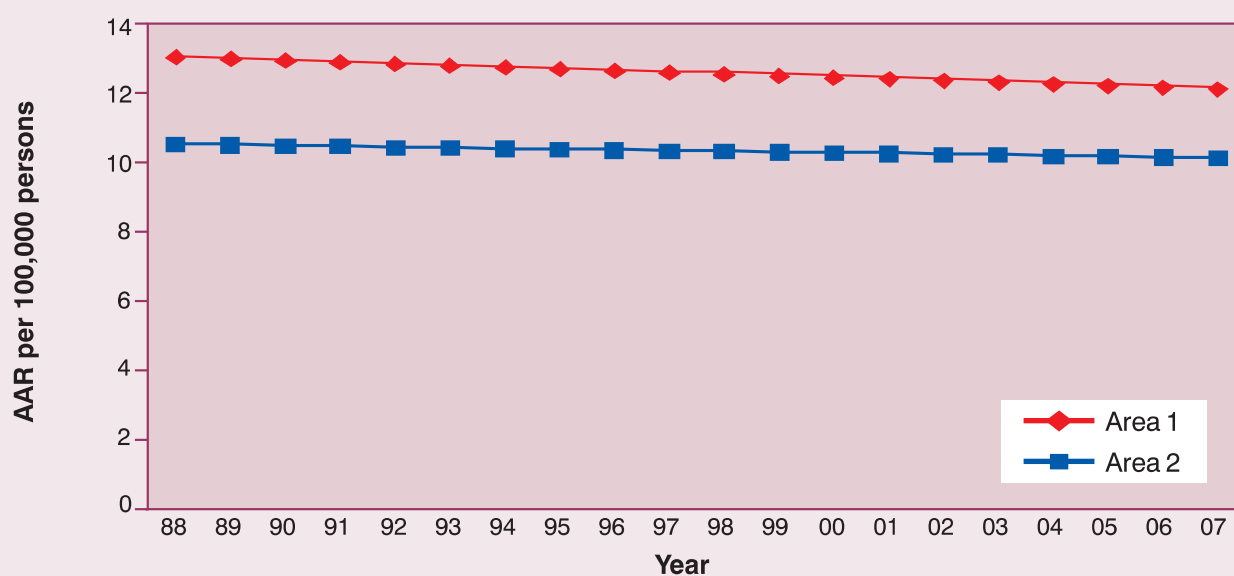


Table 4.5(a): Yearwise Cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	14	8.9	12	11.1
1989	19	11.2	14	13.9
1990	24	12.6	8	5.3
1991	24	13.4	16	13.2
1992	31	15.8	15	10.1
1993	25	12.2	18	13.9
1994	26	11.6	15	8.8
1995	28	12.6	18	11.0
1996	34	14.4	16	9.7
1997	36	14.5	19	11.0
1998	33	15.0	15	7.6
1999	38	14.6	16	8.0
2000	35	13.4	16	7.5
2001	39	14.7	16	7.0
2002	30	10.8	30	12.5
2003	34	11.7	28	11.6
2004	34	11.5	19	7.7
2005	28	9.7	30	11.8
2006	38	12.1	36	11.9
2007	32	10.0	37	11.8
b(Slope)		-0.05		-0.02
p-value		NS		NS

Fig. 4.5(b): LUNG (ICD-10: C33-C34) – Males
Trends over time (1988-2007) in AAR (Joinpoint Regression)

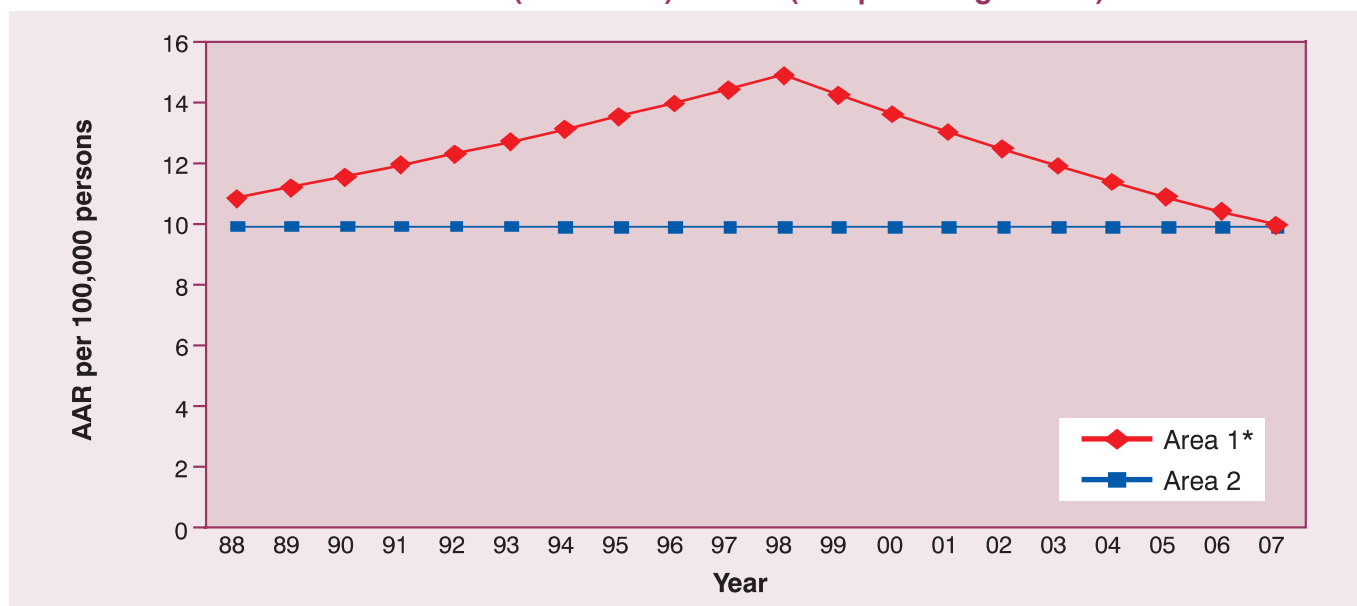


Table 4.5(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	10.88	9.98
1989	11.23	9.97
1990	11.59	9.97
1991	11.97	9.97
1992	12.35	9.97
1993	12.75	9.97
1994	13.17	9.96
1995	13.59	9.96
1996	14.03	9.96
1997	14.48	9.96
1998	14.95	9.96
1999	14.30	9.95
2000	13.67	9.95
2001	13.07	9.95
2002	12.50	9.95
2003	11.95	9.95
2004	11.43	9.94
2005	10.93	9.94
2006	10.45	9.94
2007	9.99	9.94
APC0	-0.40	0.00
APC1	3.20*	
APC2	-4.40*	

Values of years where a shift in trend is observed is highlighted; * represents significant joinpoint model and APC ($p < 0.05$) values.

Fig. 4.6(a): BREAST (ICD-10: C50)
Trends over time (1988-2007) in AAR (Linear Regression)

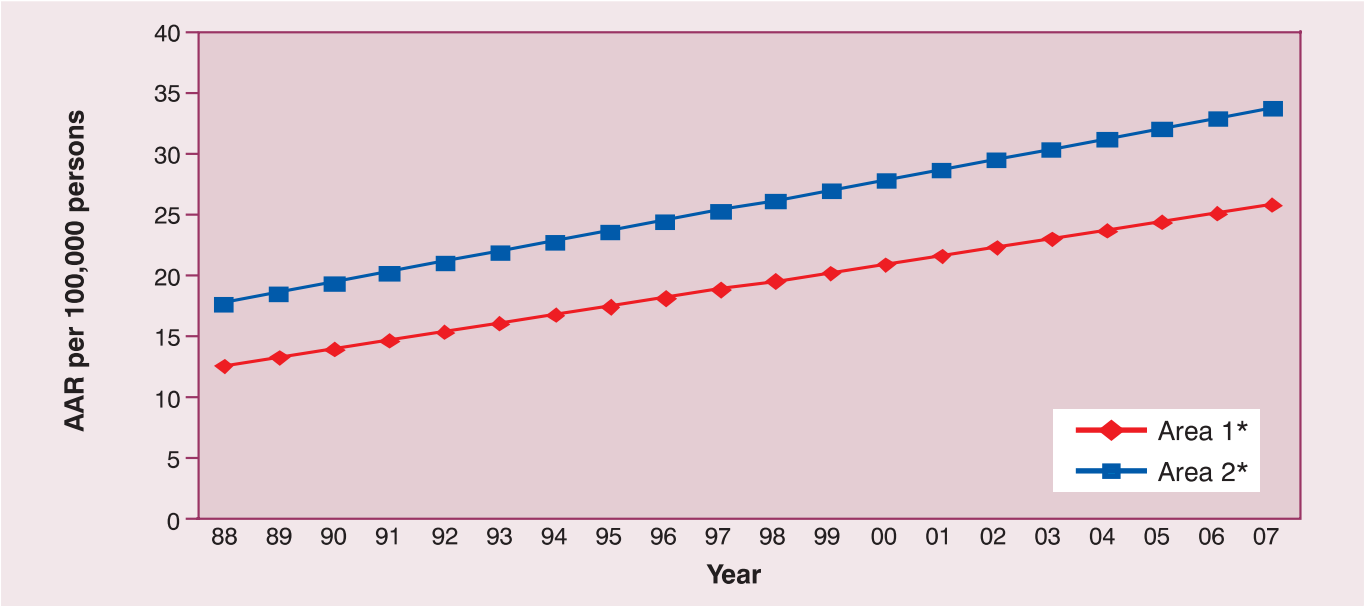


Table 4.6(a): Yearwise Cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	27	15.8	22	20.5
1989	30	17.3	22	19.7
1990	32	16.1	28	20.8
1991	36	18.9	24	17.3
1992	34	14.9	34	24.5
1993	37	16.8	36	24.0
1994	36	15.9	40	24.3
1995	34	13.9	40	23.2
1996	41	16.4	39	20.7
1997	36	14.3	49	25.0
1998	43	17.2	51	25.0
1999	40	15.1	62	27.2
2000	52	18.1	53	23.3
2001	48	16.3	60	24.8
2002	54	19.3	66	24.8
2003	58	19.8	66	22.8
2004	56	20.1	73	28.7
2005	78	24.8	69	27.6
2006	76	29.1	77	41.6
2007	70	41.3	77	46.0
b(Slope)		0.698		0.842
p-value		<0.01		<0.01

Fig. 4.6(b): BREAST (ICD-10: C50)
Trends over time (1988-2007) in AAR (Joinpoint Regression)

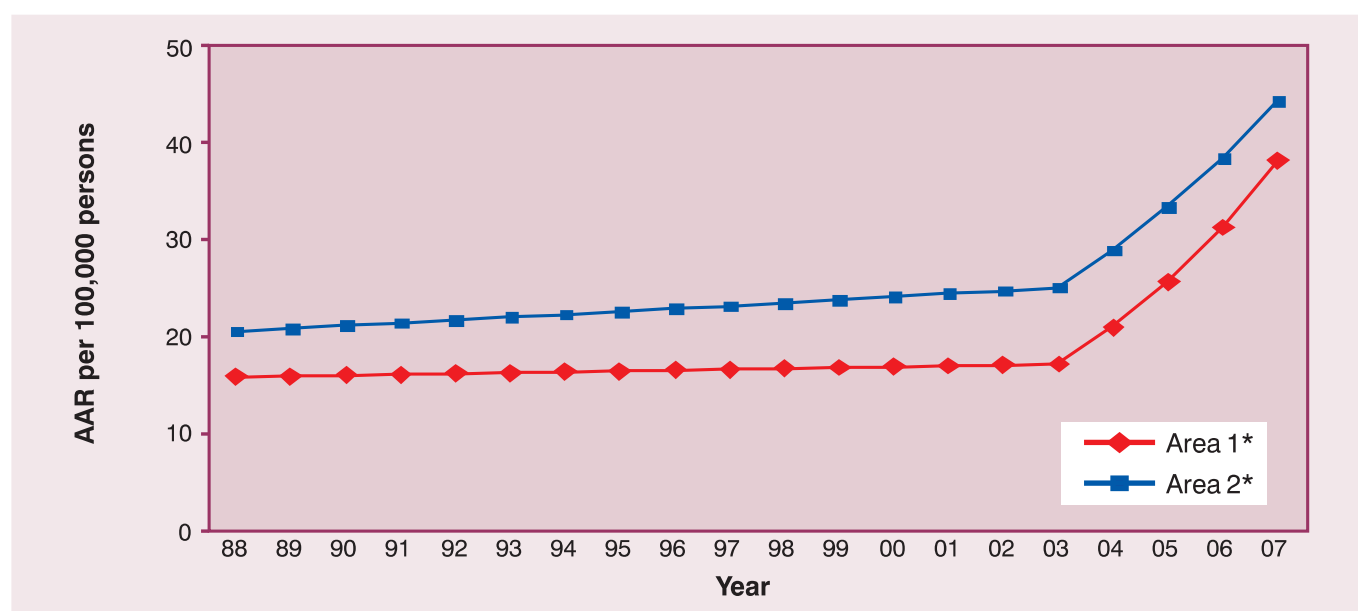


Table 4.6(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	15.82	20.58
1989	15.91	20.85
1990	15.99	21.13
1991	16.08	21.41
1992	16.17	21.70
1993	16.25	21.98
1994	16.34	22.28
1995	16.43	22.57
1996	16.52	22.87
1997	16.61	23.17
1998	16.70	23.48
1999	16.79	23.79
2000	16.88	24.11
2001	16.97	24.43
2002	17.06	24.75
2003	17.15	25.08
2004	20.95	28.92
2005	25.58	33.34
2006	31.23	38.44
2007	38.13	44.32
APC0	3.10*	3.00*
APC1	0.50	1.30*
APC2	22.10*	15.30*

Values of years where a shift in trend is observed is highlighted; * represents significant joinpoint model and APC ($p < 0.05$) values.

Fig. 4.7(a): CERVIX (ICD-10: C53)
Trends over time (1988-2007) in AAR (Linear Regression)

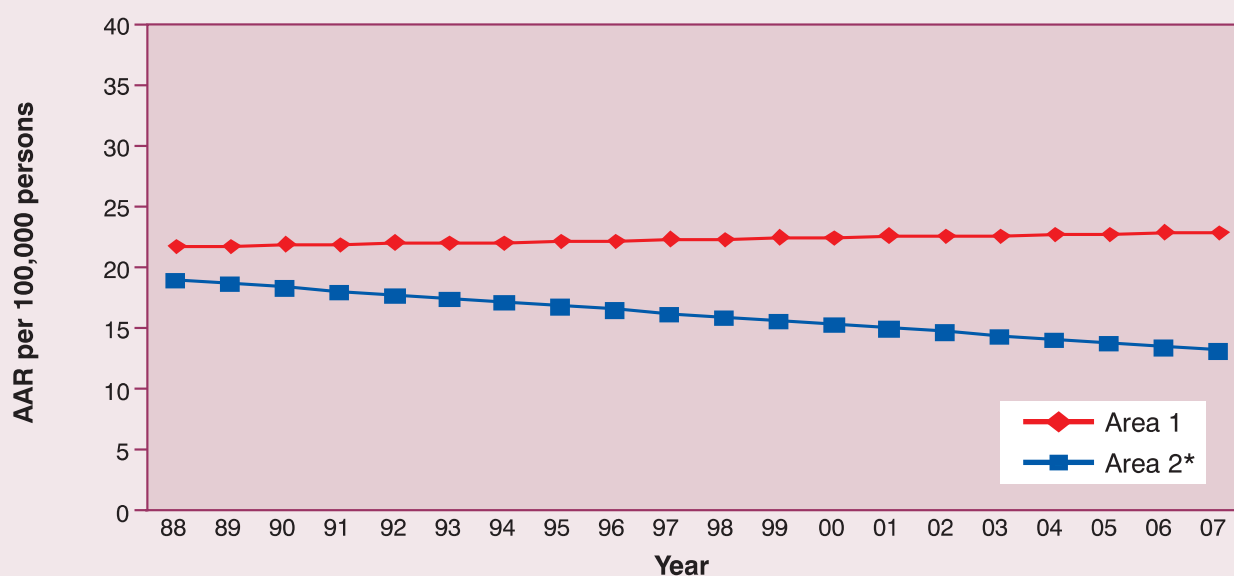


Table 4.7(a): Yearwise Cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	36	19.6	22	21.7
1989	41	23.2	18	14.5
1990	45	21.7	19	15.0
1991	48	24.7	26	18.9
1992	47	21.5	24	16.3
1993	44	20.2	33	20.3
1994	51	22.2	31	18.4
1995	53	22.1	26	15.5
1996	52	21.9	33	18.7
1997	54	22.3	34	17.4
1998	55	22.4	30	14.1
1999	52	21.9	37	17.8
2000	54	22.2	38	16.1
2001	47	19.0	42	17.0
2002	69	26.9	29	10.8
2003	66	24.4	25	7.4
2004	63	25.0	36	16.3
2005	57	21.6	32	11.7
2006	63	21.8	44	14.8
2007	72	21.3	48	14.6
b(Slope)		0.062		-0.307
p-value		NS		<0.01

Fig. 4.7(b): CERVIX (ICD-10: C53)
Trends over time (1988-2007) in AAR (Joinpoint Regression)

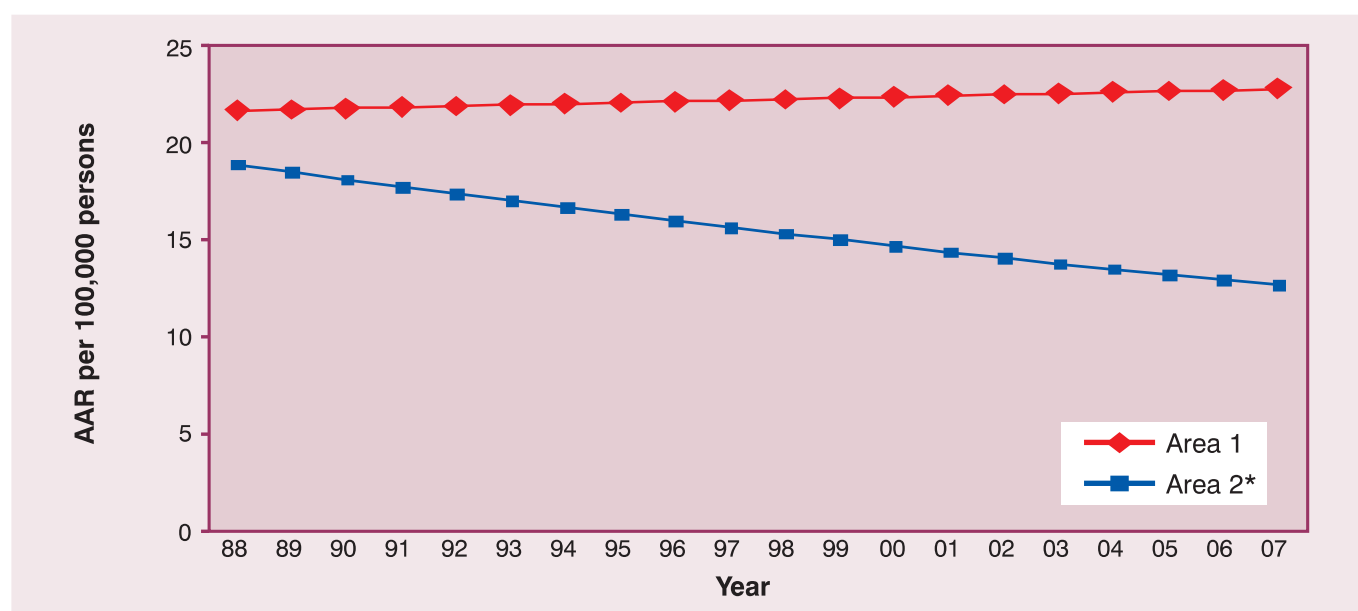


Table 4.7(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	21.66	18.90
1989	21.72	18.50
1990	21.78	18.12
1991	21.84	17.74
1992	21.90	17.37
1993	21.95	17.01
1994	22.01	16.65
1995	22.07	16.30
1996	22.13	15.96
1997	22.19	15.63
1998	22.25	15.31
1999	22.31	14.99
2000	22.37	14.67
2001	22.43	14.37
2002	22.49	14.07
2003	22.55	13.77
2004	22.61	13.49
2005	22.67	13.20
2006	22.73	12.93
2007	22.79	12.66
APC0	0.30	-2.10*
APC1		
APC2		

* represents significant joinpoint model and APC ($p < 0.05$) values.

Fig. 4.8(a): OVARY (ICD-10: C56)
Trends over time (1988-2007) in AAR (Linear Regression)

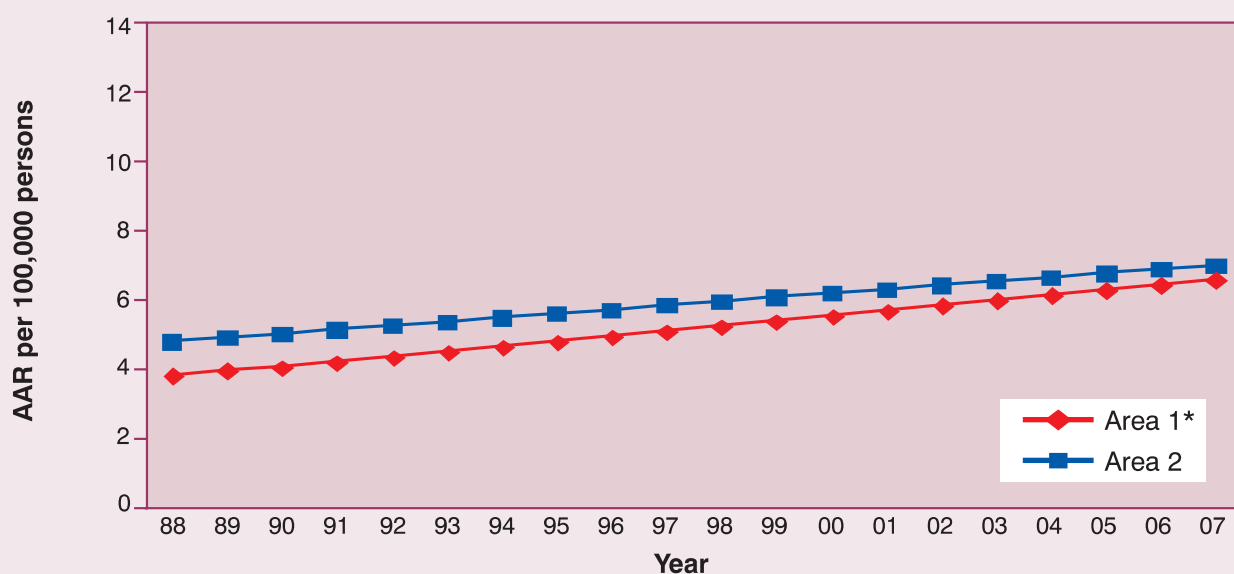


Table 4.8(a): Yearwise Cases and AARs

Year	Area 1		Area 2	
	Cases	AAR	Cases	AAR
1988	4	1.9	6	6.2
1989	10	5.2	5	4.3
1990	12	5.3	4	2.9
1991	8	3.2	11	8.3
1992	19	8.3	9	4.4
1993	9	4.2	10	6.3
1994	9	3.2	11	6.8
1995	13	5.9	10	5.8
1996	12	5.3	8	4.5
1997	13	4.5	11	5.3
1998	10	3.9	12	5.2
1999	12	5.7	6	2.8
2000	11	3.7	9	3.6
2001	16	5.2	13	5.6
2002	13	4.8	21	7.7
2003	14	3.3	14	5.7
2004	18	5.71	29	11.5
2005	14	5.7	17	6.8
2006	26	8.5	21	7.7
2007	31	9.5	18	5.8
b(Slope)		0.145		0.115
p-value		< 0.05		NS

Fig. 4.8(b): OVARY (ICD-10: C56)
Trends over time (1988-2007) in AAR (Joinpoint Regression)

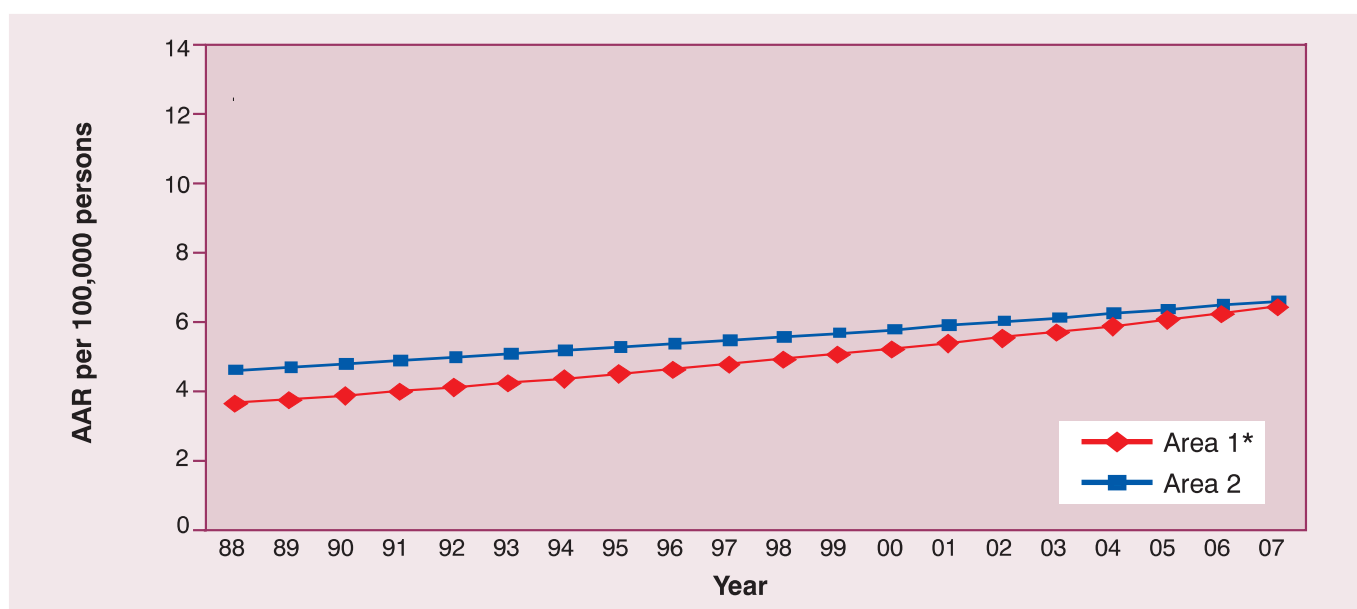


Table 4.8(b): Value of Joinpoint AARs with Annual Percent Change (APC)

Year	Area 1	Area 2
1988	3.63	4.63
1989	3.74	4.72
1990	3.86	4.81
1991	3.97	4.90
1992	4.09	5.00
1993	4.22	5.09
1994	4.35	5.19
1995	4.48	5.29
1996	4.61	5.39
1997	4.75	5.49
1998	4.90	5.60
1999	5.05	5.70
2000	5.20	5.81
2001	5.36	5.92
2002	5.52	6.04
2003	5.69	6.15
2004	5.86	6.27
2005	6.04	6.39
2006	6.22	6.51
2007	6.41	6.63
APC0	3.00*	1.90
APC1		
APC2		

* represents significant joinpoint model and APC ($p < 0.05$) values.