

Section 33 Veterans Affairs Adjustment

Purpose:

A policy change of the Department of Veterans Affairs (VA) regarding data sharing on VA cancer cases resulted in underreporting on VA hospital cases in some central cancer registries for the 2005 and 2006 data years. The purpose of this chapter is to quantify the missing number of VA cases in SEER registries and provide adjustments of case counts in these years. The VA adjustment factors can be used to adjust age-specific and age-adjusted incidence rates in SEER-9 and SEER-17 regions. The models used to develop adjustments for VA underreporting are based on an assumption that 2005 and 2006 VA cancer cases follow patterns consistent with prior years.

Analytic Approach:

All four of the SEER registries provided VA and non-VA case counts for the years 2000-2006. The VA case counts were provided in tabular format without patient identifiers. The four SEER registries that did not provide this information are not thought to have experienced substantial underreporting from VA hospitals for 2005 or 2006. The VA-case counts were stratified by year of diagnosis, gender, primary cancer site, and 5-year age groups. While the Louisiana registry did submit VA case counts, but Louisiana was excluded from analysis since population displacement following Hurricane Katrina confounded the effects of underreporting of VA cases for Louisiana in 2005 and 2006.

For each registry, the proportion of all patients that were VA cases was estimated by year of diagnosis (2000-2006) and by gender. Since some registries had a reduction in VA case reporting in the last quarter of 2004, the average proportion, based on the combined 2000-2003 proportions, was used as a baseline for comparison with 2005 and 2006 proportions. Changes in the 2005 and 2006 proportions versus the 2000-2003 average proportions were used to estimate the overall VA case underreporting in the SEER program. An estimate was made of the number of missing VA cases in 2005 and 2006, respectively that yielded a proportion of VA to total cases consistent with the 2000-2003 average. The VA-adjustment model assumes that incidence rates in 2005 and 2006 were stable compared to the previous five years. Detailed methods to estimate missing number of VA cases are provided in at the end of this section of the Cancer Statistics Review.

Briefly, missing VA cases for each of 19 age groups were summed to allow VA-adjusted case counts by SEER region (excluding Louisiana) in 2005 and 2006. A ratio between the VA-adjusted and overall incidence rate yielded a VA-adjustment factor for each age-strata for the above years. Age-adjusted rates were then calculated. The VA-adjustment factors do not adjust for routine delays in case reporting.

Estimation of Missing VA Cases:

The impact of underreporting of VA cases on cancer surveillance was more pronounced for males than for females, with approximately 1.4% of cancer cases among men estimated to have been unreported in 2005 and 2.4% underreporting in 2006 (**Table 1**). Among females the proportion of cancer cases that were underreported was lower than for men by approximately one order of magnitude (data not shown).

The estimated impact of underreporting of VA cases was greater among black than white males, and varied by cancer site. The estimated proportion of missing cases approached 4% for cancers of the head and neck and liver and intrahepatic bile duct while it was less than 1% for cancer of the urinary bladder and melanoma of the skin.

For all cancers combined and 10-leading cancer sites, overall correction factors were developed to adjust for missing male VA cases in 2005 and 2006 in SEER-9 and SEER-17 registries (**Table 2**). The overall and site specific correction factors for males, all races combined, SEER 9 registries were used to estimate the effect of the VA undercount on long term cancer incidence trends (**Table 3**). The registries that provided data to estimate missing case counts for SEER 9 were Atlanta, Connecticut, Iowa, New Mexico, San-Francisco, and Utah. Registries that provided data for calculating SEER-17 correction factors were the above registries plus Los Angeles, Rural Georgia, San-Jose, Greater California, Kentucky, and New Jersey. Race-specific correction factors were also estimated for white (**Table 4**) and black males (**Table 5**).

Registry-specific correction factors were estimated for 2005 and 2006 for all cancers combined, among males, all races combined (**Table 6**), white males (**Table 7**), and black males (**Table 8**). In these registries, cancer site specific correction factors were also estimated for males, all races combined for five leading cancer sites: prostate (**Table 9**), lung and bronchus (**Table 10**), colon and rectum (**Table 11**), urinary bladder (**Table 12**), and head and neck (**Table 13**).

Age-specific correction factors for males, all races combined, are presented for SEER-9 and SEER-17 registries for diagnosis years 2005 and 2006 for all cancers combined (**Table 14**). Correction factors for these years and registries are also provided for 10 leading cancer sites: prostate (**Table 15**), lung and bronchus (**Table 16**), colon and rectum (**Table 17**), urinary bladder (**Table 18**), head and neck (**Table 19**), melanoma of the skin (**Table 20**), kidney and renal pelvis (**Table 21**), leukemia (**Table 22**), Non-Hodgkin lymphoma (**Table 23**) and liver and intrahepatic bile duct (**Table 24**).

Elaboration on Adjustment Model:

To calculate missing number of cases for male VA cases, by cancer site, the following steps are performed:

Step 1:

The proportion of males VA cases for each of the 19 age groups was determined for each year of diagnosis from 2000 through 2006. The average proportion for the years 2000, 2001, 2002 and 2003 was denoted as p . The value p was subtracted from 2005 and 2006 proportions. Assuming a steady state, if there were missing male VA cases in 2005 or 2006, the proportion of male VA cases would be smaller than p , the proportion for 2000-2003. The difference between the mean of the prior years and 2005 and 2006 proportions would be negative for age groups with missing cases. An excess of cases in 2005 or 2006 proportion within an age group was assumed to indicate no underreporting for that year.

Step 2:

A formula was derived to estimate missing male VA cases for 2005 and for 2006. For example, the formula to estimate how many VA cases should be added to the 2005 VAC counts to be consistent with the 2000-2003 average proportion of cases that were VAC (p) is written as follows:

$$p = (\text{Count}_{VA\ 2005} + X) / (\text{Count}_{Total\ 2005} + X) \quad (\text{equation 1})$$

or alternatively,

$$p = (\text{Count}_{VA\ 2005} + X) / (\text{Count}_{VA\ 2005} + \text{Count}_{NON-VA\ 2005} + X) = \quad (\text{equation 2})$$

where X is the missing number of male VACs in 2005. Using equation 2, we can solve for X : $X = [(p / (1 - p)) * \text{Count}_{NON-VA\ 2005} - \text{Count}_{VA\ 2005}]$.

This calculation is performed for each of the 19 age groups.

Assumptions we are making when estimating missing cases:

- a) The proportion of male VACs remained constant 2000 onward
- b) Previous male VACs have the same amount of delay as Non-VACS.

Adjusting Total Case Count for Estimated Missing VA Cases:

Using 2005 data for illustration, missing VAC estimates for each age group were used to adjust the 2005 total case count. Rate correction factors were determined for all 19 age groups in SEER-9 and SEER-17 registries. The correction factor is the expected count divided by the observed count. Resulting cancer-site specific correction factors can be applied to age-specific rates or counts obtained in SEER*Stat to adjust for underreporting of VA cases.

Table 1. Annual Proportion of Cancer Cases Reported by Veterans Administration (VA) Facilities, 2000 to 2006 with Estimated Missing VA Cases and VA-Adjustment Factors for 2005 and 2006, All Cancers Combined (All Races, Whites and Blacks) and Top Ten Cancer Sites, Males, All Races Combined, SEER 17.*

Incidence	Cancer Site	Percent of Cancer Cases from VA Facilities*								Missing VA Cases/Adjustment Factors			
		2000	2001	2002	2003	2004	2005	2006	Mean (2000-2003)	Missing Cases (%) 2006†	VA-adjustment 2006¶	Missing Cases (%) 2005†	VA-adjustment 2005¶
	All Sites Combined, All races	3.1%	3.3%	3.5%	3.4%	3.2%	1.9%	0.9%	3.3%	2.41%	1.0200	1.36%	1.0133
	All Sites Combined, Whites	2.7%	2.9%	3.1%	3.1%	2.8%	1.7%	0.8%	3.0%	2.20%	1.0182	1.25%	1.0116
	All Sites Combined, Blacks	7.4%	7.4%	7.8%	7.7%	7.6%	5.4%	2.8%	7.6%	4.75%	1.0443	2.16%	1.0274
1	Prostate	3.0%	3.5%	3.7%	3.6%	3.5%	2.1%	1.0%	3.5%	2.50%	1.0208	1.35%	1.0137
2	Lung and Bronchus	4.4%	4.3%	4.3%	4.4%	4.1%	2.5%	1.5%	4.3%	2.87%	1.0234	1.88%	1.0183
3	Colon and Rectum	3.2%	3.2%	3.5%	3.5%	3.1%	2.2%	0.8%	3.3%	2.56%	1.0214	1.14%	1.0124
4	Urinary Bladder	1.9%	1.9%	2.1%	1.9%	1.9%	1.3%	0.6%	1.9%	1.34%	1.0103	0.62%	1.0056
5	Head and Neck	4.8%	5.3%	5.3%	4.4%	4.2%	2.5%	1.3%	4.9%	3.67%	1.0312	2.48%	1.0232
6	Melanomas - Skin	1.9%	2.3%	2.2%	2.5%	2.5%	1.4%	0.6%	2.2%	1.65%	1.0147	0.77%	1.0077
7	Kidney and Renal Pelvis	4.0%	4.1%	3.8%	3.9%	3.7%	2.4%	1.0%	4.0%	2.96%	1.0257	1.58%	1.0155
8	Leukemia	2.7%	2.5%	3.1%	3.1%	2.1%	1.5%	1.0%	2.9%	1.89%	1.0159	1.36%	1.0124
9	Non-Hodgkin Lymphoma	2.3%	2.3%	2.7%	2.0%	2.1%	1.3%	0.6%	2.3%	1.69%	1.0143	1.03%	1.0116
10	Liver and Intrahepatic Bile Duct	4.3%	4.6%	3.9%	4.8%	3.9%	1.9%	0.8%	4.4%	3.58%	1.0306	2.48%	1.0220

* SEER Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Rural Georgia, Greater California, Kentucky, Los Angeles, and New Jersey. Louisiana reported missing VA cases in 2006 only.

† Estimated difference between average proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively.

¶ Adjustments to age-adjusted incidence rates, November 2008 SEER data submission.

Table 2. Adjustment Factors for Veterans Administration Underreporting in 2005 and 2006, Age-Adjusted Incidence Rates, All Cancers Combined and Top Ten Cancer Sites of Males, All Races Combined, SEER 9 and SEER 17 Registries

Primary Cancer Site	2005 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-17
All Cancers Combined	1.0036	1.0133	1.0099	1.0200
Prostate	1.0027	1.0137	1.0088	1.0208
Lung and Bronchus	1.0049	1.0183	1.0118	1.0234
Colon and Rectum	1.0075	1.0124	1.0132	1.0214
Urinary Bladder	1.0026	1.0056	1.0056	1.0103
Head and Neck	1.0048	1.0232	1.0091	1.0312
Melanoma of Skin	1.0044	1.0077	1.0100	1.0147
Kidney and Renal Pelvis	1.0078	1.0155	1.0154	1.0257
Leukemia	1.0074	1.0124	1.0109	1.0159
Non-Hodgkin Lymphoma	1.0063	1.0116	1.0091	1.0143
Liver and Intrahepatic Bile Duct	1.0129	1.0220	1.0181	1.0306

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 3. Age- and Delay-Adjusted Incidence Trends, With and Without Adjustment for Veterans Administration Underreporting, 2005 and 2006, All Cancers Combined and Selected Cancer Sites, Males, All Races, SEER 9 Registries, 1975 to 2006.* Joinpoint analyses for 1975–2006†

Cancer Site	Race	Joinpoint Trend 1 Year Range	Joinpoint Trend 1 APC‡	Joinpoint Trend 2 Year Range	Joinpoint Trend 2 APC‡	Joinpoint Trend 3 Year Range	Joinpoint Trend 3 APC‡	Joinpoint Trend 4 Year Range	Joinpoint Trend 4 APC‡	Joinpoint Trend 5 Year Range	Joinpoint Trend 5 APC‡
All sites	All	1975–1989	1.3§	1989–1992	5.2§	1992–1995	-4.9§	1995–2000	0.5	2000–2006	-1.3§
All sites (VA-adjusted)	All					1992–1995	-4.8§	1995–2000	0.5	2000–2006	-1.1§
All sites	White	1975–1989	1.4§	1989–1992	5.0§	1992–1995	-5.0§	1995–2001	0.6§	2001–2006	-1.5§
All sites (VA-adjusted)	White					1992–1995	-5.1§	1995–2000	0.8	2000–2006	-1.1§
All sites	Black	1975–1981	2.8§	1981–1989	0.7	1989–1992	6.9§	1992–2006	-1.7§		
All sites (VA-adjusted)	Black					1989–1992	6.8§	1992–2006	-1.7§		
Oral cavity and pharynx	All	1975–2006	-1.2§								
Oral cavity and pharynx (VA-adjusted)	All										
Colon and rectum	All	1975–1985	1.1§	1985–1991	-1.2§	1991–1995	-3.2§	1995–1998	2.1	1998–2006	-3.0§
Colon and rectum (VA-adjusted)	All					1991–1995	-3.1§	1995–1998	2.0	1998–2006	-2.9§
Liver and IBD	All	1975–2006	3.6§								
Liver and IBD (VA-adjusted)	All										
Lung and bronchus	All	1975–1982	1.4§	1982–1991	-0.4	1991–2006	-1.8§				
Lung and bronchus (VA-adjusted)	All	1975–1982	1.5§	1982–1991	-0.4	1991–2006	-1.8§				
Melanoma of the skin	All	1975–1986	5.4§	1986–2006	3.1§						
Melanoma of the skin (VA-adjusted)	All										
Prostate	All	1975–1988	2.6§	1988–1992	16.5§	1992–1995	-11.7§	1995–2000	2.4	2000–2006	-2.4§
Prostate (VA-adjusted)	All									2000–2006	-2.3§
Urinary bladder	All	1975–1987	0.9§	1987–2006	0.0						
Urinary bladder (VA-adjusted)	All	1975–1986	0.9§	1986–2006	0.0						
Kidney and renal pelvis	All	1975–2006	1.8§								
Kidney and renal pelvis (VA-adjusted)	All										
Non-Hodgkin lymphoma	All	1975–1991	4.2§	1991–2006	0.3						
Non-Hodgkin lymphoma (VA-adjusted)	All										
Leukemia	All	1975–2006	0.1§								
Leukemia (VA-adjusted)	All										

* SEER 9 Registries: Connecticut, Hawaii, Iowa, Utah, and New Mexico, metropolitan San Francisco, Detroit, Atlanta, and Seattle-Puget Sound. Correction factors apply to the November 2008 SEER data submission.

†Joinpoint analyses with up to four joinpoints are based on rates per 100,000 persons and were age-adjusted to the 2000 US standard population (19 age groups – Census p25–1130). Joinpoint (JP) Regression Program, v 3.3.1. April 2008, National Cancer Institute.

‡APC is based on delay-adjusted rates that were age-adjusted to the 2000 US standard population (19 age groups – Census p25–1130).

§APC is statistically significantly different from zero ($P<.05$, two-sided Student t -test.).

|| The trend based on Veterans adjustment reporting did not differ from the delay-adjusted trend.

Table 4. Adjustment Factors for Veterans Administration Underreporting in 2005 and 2006, Age-Adjusted Incidence Rates, All Cancers Combined and Top Ten Cancer Sites of Males, White Race, SEER 9 and SEER 17 Registries

Primary Cancer Site	2005 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-17
All Cancers Combined	1.0041	1.0116	1.0105	1.0182
Prostate	1.0043	1.0114	1.0092	1.0178
Lung and Bronchus	1.0049	1.0165	1.0117	1.0209
Colon and Rectum	1.0084	1.0118	1.0138	1.0201
Urinary Bladder	1.0027	1.0058	1.0053	1.0094
Head and Neck	1.0059	1.0222	1.0130	1.0303
Melanoma of Skin	1.0042	1.0075	1.0101	1.0148
Kidney and Renal Pelvis	1.0067	1.0119	1.0156	1.0227
Leukemia	1.0081	1.0115	1.0121	1.0159
Non-Hodgkin Lymphoma	1.0060	1.0105	1.0087	1.0138
Liver and Intrahepatic Bile Duct	1.0248	1.0258	1.0243	1.0352

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 5. Adjustment Factors for Veterans Administration Underreporting in 2005 and 2006, Age-Adjusted Incidence Rates, All Cancers Combined and Top Ten Cancer Sites of Males, Black Race, SEER 9 and SEER 17 Registries

Primary Cancer Site	2005 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-17
All Cancers Combined	1.0023	1.0274	1.0089	1.0443
Prostate	1.0008	1.0264	1.0143	1.0476
Lung and Bronchus	1.0126	1.0367	1.0173	1.0541
Colon and Rectum	1.0123	1.0232	1.0225	1.0477
Urinary Bladder	1.0141	1.0098	1.0273	1.0347
Head and Neck	1.0107	1.0394	1.0250	1.0563
Melanoma of Skin	1.0000	1.0510	1.0510	1.0167
Kidney and Renal Pelvis	1.0483	1.0471	1.0477	1.0632
Leukemia	1.0344	1.0339	1.0183	1.0353
Non-Hodgkin Lymphoma	1.0195	1.0266	1.0194	1.0220
Liver and Intrahepatic Bile Duct	1.0025	1.0219	1.0302	1.0518

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 6. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, All Cancers Combined, Males, All Races

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0017	1.0031
Greater California	1.0297	1.0376
Iowa	1.0032	1.0236
Kentucky	1.0036	1.0087
Louisiana**		1.0310
Los Angeles	1.0241	1.0330
New Jersey	1.0075	1.0114
New Mexico	1.0467	1.0552
Rural Georgia	1.0475	1.0238
San Francisco-Oakland	1.0139	1.0214
San Jose-Monterey	1.0062	1.0280
Utah	1.0037	1.0153

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 7. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, All Cancers Combined, White Males

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0050	1.0043
Greater California	1.0288	1.0364
Iowa	1.0031	1.0228
Kentucky	1.0035	1.0077
Louisiana**		1.0236
Los Angeles	1.0189	1.0270
New Jersey	1.0041	1.0072
New Mexico	1.0462	1.0547
Rural Georgia	1.0393	1.0159
San Francisco-Oakland	1.0128	1.0200
San Jose-Monterey	1.0064	1.0291
Utah	1.0033	1.0150

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 8. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, All Cancers Combined, Black Males

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0034	1.0093
Greater California	1.0726	1.0930
Iowa	1.0250	1.0731
Kentucky	1.0329	1.0373
Louisiana**		1.0581
Los Angeles	1.0785	1.1004
New Jersey	1.0394	1.0516
New Mexico	1.1173	1.1331
Rural Georgia	1.0723	1.0495
San Francisco-Oakland	1.0283	1.0511
San Jose-Monterey	1.0539	1.0782
Utah	1.2739	1.2949

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 9. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, Prostate Cancer, Males, All Races

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0031	1.0108
Greater California	1.0297	1.0368
Iowa	1.0096	1.0264
Kentucky	1.0058	1.0169
Louisiana**		1.0437
Los Angeles	1.0283	1.0362
New Jersey	1.0098	1.0145
New Mexico	1.0458	1.0566
Rural Georgia	1.0717	1.0313
San Francisco-Oakland	1.0114	1.0161
San Jose-Monterey	1.0049	1.0189
Utah	1.0029	1.0102

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 10. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, Cancers of the Lung and Bronchus, Males, All Races

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0026	1.0070
Greater California	1.0394	1.0485
Iowa	1.0007	1.0208
Kentucky	1.0101	1.0076
Louisiana**		1.0285
Los Angeles	1.0328	1.0469
New Jersey	1.0065	1.0111
New Mexico	1.0671	1.0737
Rural Georgia	1.0793	1.0391
San Francisco-Oakland	1.0226	1.0317
San Jose-Monterey	1.0309	1.0525
Utah	1.0251	1.0228

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 11. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, Cancers of the Colon and Rectum, All Races

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0129	1.0104
Greater California	1.0317	1.0399
Iowa	1.0138	1.0249
Kentucky	1.0010	1.0118
Louisiana**		1.0354
Los Angeles	1.0178	1.0260
New Jersey	1.0084	1.0108
New Mexico	1.0449	1.0576
Rural Georgia	1.0576	1.0557
San Francisco-Oakland	1.0208	1.0263
San Jose-Monterey	1.0116	1.0328
Utah	1.0249	1.0453

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 12. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, Urinary Bladder Cancer, Males, All Races

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0216	1.0227
Greater California	1.0173	1.0231
Iowa	1.0054	1.0157
Kentucky	1.0084	1.0028
Louisiana**		1.0121
Los Angeles	1.0079	1.0132
New Jersey	1.0024	1.0069
New Mexico	1.0210	1.0230
Rural Georgia	1.0779	1.0439
San Francisco-Oakland	1.0060	1.0114
San Jose-Monterey	1.0121	1.0301
Utah	1.0097	1.0053

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 13. Registry-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Age-Adjusted Incidence Rates, Cancers of the Head and Neck, All Races

Registry	2005 Correction Factor*†	2006 Correction Factor*†
Atlanta	1.0246	1.0402
Greater California	1.0467	1.0611
Iowa	1.0096	1.0270
Kentucky	1.0266	1.0211
Louisiana**		1.0454
Los Angeles	1.0589	1.0735
New Jersey	1.0104	1.0131
New Mexico	1.0519	1.0462
Rural Georgia	1.0000	1.0837
San Francisco-Oakland	1.0160	1.0200
San Jose-Monterey	1.0176	1.0245
Utah	1.0117	1.0150

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey.

** Louisiana estimated missing VA cases in 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission.

Table 14. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, All Cancers, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	1.0007	1.0008
20-24 years	1.0021	1.0023	1.0022	1.0013
25-29 years	1.0044	1.0045	1.0024	1.0042
30-34 years	1.0003	0.0000	1.0022	1.0018
35-39 years	0.0000	1.0037	1.0023	1.0029
40-44 years	1.0021	1.0039	1.0048	1.0067
45-49 years	1.0013	1.0050	1.0099	1.0135
50-54 years	1.0108	1.0131	1.0222	1.0281
55-59 years	0.0000	1.0065	1.0112	1.0220
60-64 years	0.0000	1.0080	1.0150	1.0221
65-69 years	1.0061	1.0119	1.0171	1.0242
70-74 years	1.0034	1.0102	1.0141	1.0205
75-79 years	1.0079	1.0145	1.0177	1.0247
80-84 years	1.0020	1.0110	1.0115	1.0193
85+ years	0.0000	1.0066	1.0033	1.0080

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 15. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Prostate Cancer, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	0.0000	0.0000
25-29 years	0.0000	0.0000	0.0000	0.0000
30-34 years	0.0000	0.0000	0.0000	0.0000
35-39 years	0.0000	0.0000	1.0096	1.0117
40-44 years	0.0000	1.0009	1.0012	1.0061
45-49 years	0.0000	0.0000	1.0058	1.0076
50-54 years	1.0098	1.0153	1.0189	1.0257
55-59 years	0.0000	1.0037	1.0077	1.0193
60-64 years	1.0006	1.0059	1.0140	1.0200
65-69 years	1.0026	1.0087	1.0173	1.0244
70-74 years	0.0000	1.0095	1.0132	1.0211
75-79 years	1.0067	1.0124	1.0171	1.0231
80-84 years	1.0055	1.0126	1.0141	1.0213
85+ years	0.0000	1.0046	1.0038	1.0055

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 16. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Cancers of the Lung and Bronchus, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	0.0000	0.0000
25-29 years	0.0000	0.0000	0.0000	0.0000
30-34 years	0.0000	0.0000	0.0000	0.0000
35-39 years	0.0000	0.0000	0.0000	0.0000
40-44 years	1.0063	1.0059	1.0033	1.0079
45-49 years	1.0010	1.0107	1.0197	1.0218
50-54 years	1.0125	1.0153	1.0316	1.0344
55-59 years	0.0000	1.0054	1.0147	1.0264
60-64 years	0.0000	1.0104	1.0186	1.0252
65-69 years	1.0062	1.0147	1.0189	1.0286
70-74 years	1.0038	1.0085	1.0179	1.0208
75-79 years	1.0087	1.0155	1.0224	1.0274
80-84 years	1.0051	1.0139	1.0153	1.0211
85+ years	1.0027	1.0075	1.0071	1.0076

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 17. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Cancers of the Colon and Rectum, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	1.0100	1.0107
25-29 years	0.0000	0.0000	0.0000	0.0000
30-34 years	1.0060	1.0079	1.0017	1.0021
35-39 years	1.0055	1.0053	1.0008	1.0053
40-44 years	0.0000	1.0055	0.0000	1.0043
45-49 years	1.0032	1.0066	1.0068	1.0092
50-54 years	1.0128	1.0133	1.0192	1.0289
55-59 years	1.0106	1.0107	1.0134	1.0222
60-64 years	0.0000	1.0055	1.0100	1.0184
65-69 years	1.0102	1.0166	1.0146	1.0243
70-74 years	1.0080	1.0170	1.0142	1.0243
75-79 years	1.0190	1.0218	1.0227	1.0285
80-84 years	0.0000	1.0109	1.0070	1.0225
85+ years	0.0000	1.0080	1.0022	1.0116

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 18. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Urinary Bladder Cancer, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	0.0000	0.0000
25-29 years	0.0000	0.0000	0.0000	0.0000
30-34 years	0.0000	0.0000	0.0000	0.0000
35-39 years	0.0000	0.0000	0.0000	0.0000
40-44 years	1.0052	1.0059	1.0004	1.0063
45-49 years	0.0000	1.0051	1.0064	1.0134
50-54 years	1.0102	1.0105	1.0049	1.0171
55-59 years	0.0000	0.0000	0.0000	1.0139
60-64 years	1.0065	1.0062	1.0106	1.0160
65-69 years	1.0067	1.0083	1.0123	1.0115
70-74 years	1.0017	1.0002	1.0046	1.0077
75-79 years	1.0031	1.0077	1.0084	1.0108
80-84 years	0.0000	1.0093	1.0030	1.0100
85+ years	0.0000	1.0037	1.0007	1.0059

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 19. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Cancers of the Head and Neck, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	0.0000	0.0000
25-29 years	0.0000	0.0000	0.0000	0.0000
30-34 years	0.0000	0.0000	0.0000	0.0000
35-39 years	0.0000	0.0000	1.0022	0.0000
40-44 years	1.0066	1.0068	1.0150	1.0070
45-49 years	1.0082	0.0000	1.0226	1.0220
50-54 years	1.0114	1.0186	1.0396	1.0513
55-59 years	0.0000	1.0122	1.0177	1.0359
60-64 years	0.0000	1.0034	1.0280	1.0342
65-69 years	1.0219	1.0083	1.0335	1.0399
70-74 years	0.0000	1.0139	1.0324	1.0417
75-79 years	0.0000	1.0055	1.0091	1.0234
80-84 years	0.0000	1.0095	1.0223	1.0173
85+ years	0.0000	1.0168	1.0029	1.0118

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 20. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Melanoma of the Skin, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	0.0000	0.0000
25-29 years	1.0091	1.0074	1.0075	1.0072
30-34 years	0.0000	0.0000	0.0000	1.0036
35-39 years	1.0023	1.0019	1.0025	0.0000
40-44 years	0.0000	0.0000	1.0009	1.0010
45-49 years	1.0059	1.0019	1.0076	1.0035
50-54 years	1.0011	1.0059	1.0073	1.0156
55-59 years	1.0041	1.0080	1.0091	1.0125
60-64 years	1.0059	1.0154	1.0133	1.0246
65-69 years	1.0091	1.0133	1.0128	1.0180
70-74 years	1.0148	1.0227	1.0112	1.0164
75-79 years	0.0000	1.0147	1.0090	1.0258
80-84 years	0.0000	1.0008	1.0005	1.0162
85+ years	0.0000	1.0116	1.0034	1.0064

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 21. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Cancers of the Kidney and Renal Pelvis, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	1.0485	1.0500
25-29 years	0.0000	0.0000	1.0085	1.0086
30-34 years	0.0000	0.0000	1.0063	1.0055
35-39 years	0.0000	0.0000	1.0095	1.0102
40-44 years	1.0068	1.0076	1.0149	1.0126
45-49 years	1.0175	1.0178	1.0178	1.0221
50-54 years	1.0143	0.0000	1.0304	1.0213
55-59 years	0.0000	1.0119	1.0117	1.0292
60-64 years	0.0000	1.0083	1.0063	1.0170
65-69 years	0.0000	1.0187	1.0111	1.0303
70-74 years	1.0254	1.0196	1.0228	1.0312
75-79 years	1.0114	1.0318	1.0194	1.0355
80-84 years	0.0000	1.0123	1.0151	1.0295
85+ years	1.0054	1.0232	1.0076	1.0159

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 22. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Leukemia, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
05-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	1.0064	1.0081
25-29 years	0.0000	0.0000	1.0042	1.0047
30-34 years	0.0000	0.0000	0.0000	0.0000
35-39 years	1.0061	1.0071	1.0091	1.0095
40-44 years	0.0000	1.0129	1.0024	1.0104
45-49 years	1.0154	1.0134	1.0147	1.0149
50-54 years	1.0198	1.0248	1.0237	1.0313
55-59 years	1.0160	0.0000	1.0162	1.0040
60-64 years	1.0008	1.0146	1.0141	1.0120
65-69 years	1.0110	1.0137	1.0186	1.0224
70-74 years	1.0072	1.0141	1.0154	1.0223
75-79 years	1.0116	1.0268	1.0176	1.0347
80-84 years	1.0086	0.0000	1.0122	1.0104
85+ years	0.0000	1.0057	1.0064	1.0082

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 23. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Non-Hodgkin Lymphoma, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	1.0029	1.0030
25-29 years	0.0000	0.0000	0.0000	0.0000
30-34 years	0.0000	0.0000	1.0044	1.0047
35-39 years	0.0000	1.0041	0.0000	0.0000
40-44 years	1.0068	1.0061	1.0062	1.0095
45-49 years	0.0000	0.0000	1.0047	1.0099
50-54 years	1.0124	1.0027	1.0162	1.0175
55-59 years	1.0065	1.0108	1.0129	1.0184
60-64 years	1.0058	1.0126	1.0191	1.0182
65-69 years	1.0105	1.0156	1.0133	1.0175
70-74 years	1.0037	1.0114	1.0126	1.0177
75-79 years	1.0146	1.0185	1.0158	1.0191
80-84 years	1.0012	0.0000	1.0117	1.0126
85+ years	1.0051	1.0087	1.0067	1.0071

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.

Table 24. Age-Specific Correction Factors for Veterans Administration Underreporting, 2005 and 2006, Cancers of the Liver and Intrahepatic Bile Duct, Males, All Races, SEER 9 and SEER 17 Registries

Age at Diagnosis	2005 Correction Factor*† SEER-9	2006 Correction Factor*† SEER-9	2005 Correction Factor*† SEER-17	2006 Correction Factor*† SEER-17
0-4 years	0.0000	0.0000	0.0000	0.0000
5-9 years	0.0000	0.0000	0.0000	0.0000
10-14 years	0.0000	0.0000	0.0000	0.0000
15-19 years	0.0000	0.0000	0.0000	0.0000
20-24 years	0.0000	0.0000	0.0000	0.0000
25-29 years	0.0000	0.0000	0.0000	0.0000
30-34 years	0.0000	0.0000	0.0000	0.0000
35-39 years	0.0000	0.0000	0.0000	0.0000
40-44 years	1.0180	1.0146	1.0105	1.0006
45-49 years	1.0171	1.0269	1.0187	1.0263
50-54 years	1.0095	1.0188	1.0330	1.0507
55-59 years	1.0048	1.0241	1.0307	1.0400
60-64 years	0.0000	1.0301	1.0212	1.0384
65-69 years	1.0150	1.0220	1.0307	1.0365
70-74 years	0.0000	0.0000	1.0108	1.0242
75-79 years	1.0216	1.0208	1.0164	1.0227
80-84 years	1.0482	1.0218	1.0277	1.0173
85+ years	1.0125	0.0000	1.0058	1.0063

* Registries reporting VA case counts for 2005, 2006: Atlanta, Iowa, New Mexico, San Francisco, Utah, San Jose-Monterey, Los Angeles, Rural Georgia, Greater California, Kentucky, and New Jersey. Louisiana estimated missing VA cases for 2006 only.

† Adjustment based on proportion of cases reported by VA from 2000-2003 versus 2005 and 2006, respectively, November 2008 SEER data submission. In childhood and young adult age-strata with no missing VA cases correction factors are set to 0.