

Worksheet for Completeness of Case Ascertainment, version 2.2.b

Minnesota, Year of Diagnosis 2003

Interim Completeness Estimates Adjusted for Reference Mortality

Whites*		Blacks		Race Proportional	
Percent Complete	Population	Percent Complete	Population	Percent Complete	Population
47.9%	4,599,065	0.0%	222,918	45.6%	4,821,983

Final Completeness Estimates Adjusted for Reference Mortality and Duplicate Records

- Total Incidence Cases, 2003
- 0.0% Percent Duplicate Records
- 45.6% Race Proportional Completeness, Adjusted for Reference Mortality
- 2003 Adjusted Total Incidence Cases
- 2003 Expected Incidence Cases

0.0% **Final Completeness Estimate for 2003, Minnesota
Adjusted for Reference Mortality and Duplicate Records**

* For registries with no information on Race, the results for All Races combined is shown in the area for White:

Worksheet for Completeness of Case Ascertainment, version 2.2.b
Minnesota, Year of Diagnosis 2003

2003 Calendar Year for Case Completeness Ascertainment
Minnesota Registry Area
Total Incidence Cases in Minnesota for 2003
Percent Duplicate Records, per NAACCR Protocol

4,599,065 Populations for Whites* in Minnesota for 2003
2,277,229 Populations for White Males* in Minnesota for 2003
2,321,836 Populations for White Females* in Minnesota for 2003

222,918 Populations for Blacks in Minnesota for 2003
115,463 Populations for Black Males in Minnesota for 2003
107,455 Populations for Black Females in Minnesota for 2003

4,821,983 Total Population, Whites and Blacks

* For registries with no information on Race, the populations for All Races will be shown in the area for Whites.

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Registry Incidence and Mortality Rates, Blacks

Black Males	Minnesota			SEER (11 Regs) and US Mortality			Unadjusted Results		Mortality Adjustment Terms			Adjusted for Mortality	
	Age-Adjusted Rates (2000 US)			Age-Adjusted Rates (2000 US)			Expected Incidence Rate	Unadjusted Percent Complete	Registry 1999-03 Mort Rate	Adj. Term	Adj Reg 2002-03 Mort Rate	Expected Incidence Rate	Interim Percent Complete
	2003	2002-03	Inc/Mort Ratio	1999-03	1999-03	Inc/Mort Ratio							
Cancer Site	Incidence	Mortality	Ratio	Incidence	Mortality	Ratio							
Buccal Cavity and Pharynx			0.00	18.14	6.93	2.62	-	0.0		1.0000	-	-	0.0
Esophagus			0.00	9.99	10.73	0.93	-	0.0		1.0000	-	-	0.0
Stomach			0.00	17.37	12.37	1.41	-	0.0		1.0000	-	-	0.0
Colon and Rectum			0.00	72.00	33.59	2.14	-	0.0		1.0000	-	-	0.0
Liver			0.00	12.10	8.52	1.42	-	0.0		1.0000	-	-	0.0
Pancreas			0.00	16.39	15.66	1.05	-	0.0		1.0000	-	-	0.0
Lung and Bronchus			0.00	111.12	98.45	1.13	-	0.0		1.0000	-	-	0.0
Melanomas of the Skin				1.26	0.48	2.64	-	0.0		1.0000	-	-	0.0
Prostate*				266.68	65.14	4.09	-	0.0		1.0000	-	-	0.0
Bladder (including in situ)			0.00	20.56	5.51	3.73	-	0.0		1.0000	-	-	0.0
Kidney and Renal Pelvis			0.00	19.90	6.15	3.24	-	0.0		1.0000	-	-	0.0
Brain and Other Nervous System			0.00	4.85	3.26	1.49	-	0.0		1.0000	-	-	0.0
Hodgkin Lymphoma			0.00	2.93	0.51	5.78	-	0.0		1.0000	-	-	0.0
Non-Hodgkin Lymphoma			0.00	17.88	6.79	2.63	-	0.0		1.0000	-	-	0.0
Multiple Myeloma			0.00	13.37	8.58	1.56	-	0.0		1.0000	-	-	0.0
Leukemias			0.00	12.46	8.75	1.42	-	0.0		1.0000	-	-	0.0
Sum of Rates for Black Males	-						-	0.0				-	0.0

Black Females	Minnesota			SEER (11 Regs) and US Mortality			Unadjusted Results		Mortality Adjustment Terms			Adjusted for Mortality	
	Age-Adjusted Rates (2000 US)			Age-Adjusted Rates (2000 US)			Expected Incidence Rate	Unadjusted Percent Complete	Registry 1999-03 Mort Rate	Adj. Term	Adj Reg 2002-03 Mort Rate	Expected Incidence Rate	Interim Percent Complete
	2003	2002-03	Inc/Mort Ratio	1999-03	1999-03	Inc/Mort Ratio							
Cancer Site	Incidence	Mortality	Ratio	Incidence	Mortality	Ratio							
Buccal Cavity and Pharynx			0.00	6.14	1.81	3.40	-	0.0		1.0000	-	-	0.0
Esophagus			0.00	3.56	3.03	1.18	-	0.0		1.0000	-	-	0.0
Stomach			0.00	9.37	6.05	1.55	-	0.0		1.0000	-	-	0.0
Colon and Rectum			0.00	55.52	23.65	2.35	-	0.0		1.0000	-	-	0.0
Liver			0.00	3.45	3.03	1.14	-	0.0		1.0000	-	-	0.0
Pancreas			0.00	13.74	12.49	1.10	-	0.0		1.0000	-	-	0.0
Lung and Bronchus			0.00	55.07	39.84	1.38	-	0.0		1.0000	-	-	0.0
Melanomas of the Skin				0.74	0.41	1.82	-	0.0		1.0000	-	-	0.0
Breast			0.00	119.26	34.45	3.46	-	0.0		1.0000	-	-	0.0
Cervix			0.00	10.70	5.05	2.12	-	0.0		1.0000	-	-	0.0
Corpus and Uterus, NOS			0.00	19.35	7.09	2.73	-	0.0		1.0000	-	-	0.0
Ovary			0.00	10.07	7.39	1.36	-	0.0		1.0000	-	-	0.0
Bladder (including in situ)			0.00	7.85	2.86	2.75	-	0.0		1.0000	-	-	0.0
Kidney and Renal Pelvis			0.00	9.85	2.79	3.53	-	0.0		1.0000	-	-	0.0
Brain and Other Nervous System			0.00	3.43	2.21	1.56	-	0.0		1.0000	-	-	0.0
Hodgkin Lymphoma			0.00	2.12	0.30	7.05	-	0.0		1.0000	-	-	0.0
Non-Hodgkin Lymphoma			0.00	11.89	4.34	2.74	-	0.0		1.0000	-	-	0.0
Multiple Myeloma			0.00	9.32	6.38	1.46	-	0.0		1.0000	-	-	0.0
Leukemias			0.00	7.94	5.34	1.49	-	0.0		1.0000	-	-	0.0
Sum of Rates for Black Females	-						-	0.0				-	0.0

Sum of Blacks, Gender Weighted - - - - - 0.0 0.0%

Notes:

The cancer rates for Male Prostate (Whites and Blacks) and Melanomas of the Skin (Blacks) are not included in the completeness estimates.

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard.

Sites are based on SEER Site Recode

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Registry Incidence and Mortality Rates, Whites

White Males	Minnesota			SEER (11 Regs) and US Mortality			Unadjusted Results		Mortality Adjustment Terms			Adjusted for Mortality	
	Age-Adjusted Rates (2000 US)			Age-Adjusted Rates (2000 US)			Expected Incidence Rate	Unadjusted Percent Complete	Registry 1999-03 Mort Rate	Adj. Term	Adj Reg 2002-03 Mort Rate	Expected Incidence Rate	Interim Percent Complete
	2003	2002-03	Inc/Mort Ratio	1999-03	1999-03	Inc/Mort Ratio							
Cancer Site	Incidence	Mortality	Ratio	Incidence	Mortality	Ratio							
Buccal Cavity and Pharynx	7.7	2.2	3.50	15.31	3.81	4.02	8.85	87.0	7.6	0.5009	1.98	7.97	96.7
Esophagus			0.00	7.78	7.63	1.02	-	0.0		1.0000	-	-	0.0
Stomach			0.00	10.45	5.40	1.94	-	0.0		1.0000	-	-	0.0
Colon and Rectum			0.00	59.97	23.73	2.53	-	0.0		1.0000	-	-	0.0
Liver			0.00	6.74	5.17	1.30	-	0.0		1.0000	-	-	0.0
Pancreas			0.00	12.49	12.00	1.04	-	0.0		1.0000	-	-	0.0
Lung and Bronchus			0.00	75.23	73.81	1.02	-	0.0		1.0000	-	-	0.0
Melanomas of the Skin			0.00	26.36	4.31	6.12	-	0.0		1.0000	-	-	0.0
Prostate*				168.96	26.68	6.33	-			1.0000	-	-	0.0
Bladder (including in situ)			0.00	39.76	7.87	5.06	-	0.0		1.0000	-	-	0.0
Kidney and Renal Pelvis			0.00	17.04	6.19	2.75	-	0.0		1.0000	-	-	0.0
Brain and Other Nervous System			0.00	8.43	5.88	1.43	-	0.0		1.0000	-	-	0.0
Hodgkin Lymphoma			0.00	3.28	0.60	5.51	-	0.0		1.0000	-	-	0.0
Non-Hodgkin Lymphoma			0.00	24.69	10.26	2.41	-	0.0		1.0000	-	-	0.0
Multiple Myeloma			0.00	6.72	4.41	1.52	-	0.0		1.0000	-	-	0.0
Leukemias			0.00	16.97	10.41	1.63	-	0.0		1.0000	-	-	0.0
Sum of Rates for White Males	7.70						8.85	87.0				7.97	96.7

White Females	Minnesota			SEER (11 Regs) and US Mortality			Unadjusted Results		Mortality Adjustment Terms			Adjusted for Mortality	
	Age-Adjusted Rates (2000 US)			Age-Adjusted Rates (2000 US)			Expected Incidence Rate	Unadjusted Percent Complete	Registry 1999-03 Mort Rate	Adj. Term	Adj Reg 2002-03 Mort Rate	Expected Incidence Rate	Interim Percent Complete
	2003	2002-03	Inc/Mort Ratio	1999-03	1999-03	Inc/Mort Ratio							
Cancer Site	Incidence	Mortality	Ratio	Incidence	Mortality	Ratio							
Buccal Cavity and Pharynx			0.00	6.21	1.51	4.11	-	0.0		1.0000	-	-	0.0
Esophagus			0.00	1.92	1.66	1.16	-	0.0		1.0000	-	-	0.0
Stomach			0.00	4.97	2.68	1.85	-	0.0		1.0000	-	-	0.0
Colon and Rectum			0.00	44.25	16.43	2.69	-	0.0		1.0000	-	-	0.0
Liver			0.00	2.36	1.88	1.26	-	0.0		1.0000	-	-	0.0
Pancreas			0.00	9.61	9.00	1.07	-	0.0		1.0000	-	-	0.0
Lung and Bronchus			0.00	51.01	41.96	1.22	-	0.0		1.0000	-	-	0.0
Melanomas of the Skin			0.00	17.50	1.99	8.81	-	0.0		1.0000	-	-	0.0
Breast			0.00	137.69	25.40	5.42	-	0.0		1.0000	-	-	0.0
Cervix			0.00	8.43	2.40	3.52	-	0.0		1.0000	-	-	0.0
Corpus and Uterus, NOS			0.00	25.34	3.87	6.54	-	0.0		1.0000	-	-	0.0
Ovary			0.00	14.62	9.23	1.58	-	0.0		1.0000	-	-	0.0
Bladder (including in situ)			0.00	9.88	2.26	4.38	-	0.0		1.0000	-	-	0.0
Kidney and Renal Pelvis			0.00	8.58	2.79	3.07	-	0.0		1.0000	-	-	0.0
Brain and Other Nervous System			0.00	5.90	3.94	1.50	-	0.0		1.0000	-	-	0.0
Hodgkin Lymphoma			0.00	2.56	0.41	6.27	-	0.0		1.0000	-	-	0.0
Non-Hodgkin Lymphoma			0.00	16.90	6.66	2.54	-	0.0		1.0000	-	-	0.0
Multiple Myeloma			0.00	4.16	2.88	1.45	-	0.0		1.0000	-	-	0.0
Leukemias			0.00	9.91	5.93	1.67	-	0.0		1.0000	-	-	0.0
Sum of Rates for White Females	-						-	0.0				-	0.0

Sum of Whites, Gender Weighted 3.81 4.38 87.0 3.94 47.9%

Notes:

The cancer rates for Male Prostate (Whites and Blacks) and Melanomas of the Skin (Blacks) are not included in the completeness estimates.

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard.

Sites are based on SEER Site Recode

Worksheet for Completeness of Case Ascertainment, version 2.2.b

Notes and Instructions for the Completeness of Case Ascertainment Estimate Worksheets

Notes:

1. The spreadsheet has been loaded with the information from the SEER Incidence and US Mortality cancer databases.
2. The SEER and US Mortality rates may be suppressed due to publication schedules.
3. Cancer rates throughout the spreadsheet are per 100,000 and are age-adjusted to the 2000 U.S. Standard.
4. The cancer rates for Male Prostate (Whites and Blacks) and Melanomas of the Skin (Blacks) are not included in the completeness estimate computations.
5. The areas requiring information from the Registry are highlighted in yellow.
6. The Adjustment Terms have been set to .2 and .2, as per the NAACCR Data Evaluation and Publication Committee.

Instructions:

To obtain an estimate of the completeness of case ascertainment for your registry, perform the following steps:

A: Preliminary Steps:

- A1. Calculate the total number (count) of reportable cases for your registry for the reporting year.
- A2. Complete the NAACCR Duplicate Record Protocol on a sample of all reportable cases.

B: Spreadsheet Setup:

Enter the following information on the *RegistryInfo* worksheet:

- B1. Enter the Reporting Year for case ascertainment.
- B2. Enter the Registry Area from the list provided.
- B3. Enter the Total Number of reportable cases for your registry for the reporting year (from Step A1).
- B4. Enter the Percent of Duplicate Records per 1,000 records, as per the NAACCR protocol (from Step A2).

C: Registry-specific Incidence and Mortality Rates:

- C1. Compute the age-adjusted cancer incidence and cancer mortality rates (adjusted to US Std Population (19 age groups - Census P25-1130) stratified by:
 - White Males
 - White Females
 - Black Males
 - Black Females

Note: Three sets of rates are required for each of the four race/sex groups:

1. Incidence rates, one year only, for the reporting year
 2. Mortality rates, 2 year average (Current Mortality), for the 2 year period ending in the reporting year*
 3. Mortality rates, 5 year average (Reference Mortality), for the 5 year period ending in the reporting year
- When the Reporting Year and Registry Area are entered in the *RegistryInfo* worksheet, the column headers throughout the workbook will display the required year ranges.

* For registries with total populations under 500,000 for one year, use the 3 year average mortality rate

for the 3 year period ending in the reporting year.

Note: For registries with no information on Race, compute the incidence and mortality rates for All Races Combined, enter this information in the *Whites* worksheet, and enter zeroes for all values in the *Blacks* worksheet. The *RegistryInfo* and *Completeness Report* worksheets will report the All Races information in the White race areas and zeros in the Black race areas.

C2. Enter the information from step C1 above on these two worksheets:

Whites

Enter the Age-adjusted Incidence rates for your registry for White Males and White Females in column B.

Enter the Age-adjusted Mortality rates (Current) for your registry for White Males and White Females in column C.

Enter the Age-adjusted Mortality rates (Reference) for your registry for White Males and White Females in column J.

Blacks

Enter the Age-adjusted Incidence rates for your registry for Black Males and Black Females in column B.

Enter the Age-adjusted Mortality rates (Current) for your registry for Black Males and Black Females in column C.

Enter the Age-adjusted Mortality rates (Reference) for your registry for Black Males and Black Females in column J.

Results:

The completeness of case ascertainment estimates are displayed on the *Completeness Report* worksheet.

The first set of numbers on the *Completeness Report* worksheet shows the completeness estimates adjusted for the reference mortality. These figures are for:

Whites, as calculated on the *Whites* and *RegistryInfo* worksheets

Blacks, as calculated on the *Blacks* and *RegistryInfo* worksheets

Race proportional completeness estimates

The second set of numbers on the *Completeness Report* worksheet show the final completeness estimates results, adjusted for reference mortality and duplicate records.

For registries with no information on Race, the results for All Races is shown in the area for Whites.

Questions:

Questions regarding this spreadsheet should be directed to the NAACCR Executive Office.

Note:

If you want to save results for each year, do the calculations and then save the spreadsheet with a new name, e.g., complete99PA.xls

andard) for your registry for:

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Documentation for Worksheet Formulas

Race/Sex Cancer Site	Your State/Province/Area			SEER (11 Regs) and US Mortality			Unadjusted Results		Mortality Adjustment Terms			Adjusted for Mortality	
	Age-Adjusted Rates (2000 US)			Age-Adjusted Rates (2000 US)			Expected Incidence Rate	Unadjusted Percent Complete	Registry 1997-01 Mort Rate	Adjust. Term	Adj Reg 2000-01 Mort Rate	Expected Incidence Rate	Interim Percent Complete
	2001 Incidence	2000-01 Mortality	Inc/Mort Ratio	1997-01 Incidence	1997-01 Mortality	Inc/Mort Ratio							
	(1)	(2)	(3)=(1)/(2)	(4)	(5)	(6)=(4)/(5)	(7)=(6)*2	(8)=[(1)/(7)]*100	(9)	(10)=(5)/(9)	(11)	(12)=(6)*(11)	(13)=[(1)/(12)]*100
	Current Mortality for Your State/Province/Area Incidence Rates for Your State/Province/Area						Reference Mortality for Your State/Province/Area						
Sum of Race, Gender Weighted													(14)

Formula for Column (11) is as follows:

If (10)<=1

then (11)=(1-AdjHigh)*(2) + AdjHigh*(10)*(2)

else (11)=(1-AdjLow)*(2) + AdjLow*(10)*(2)

where AdjHigh and AdjLow are the reference mortality adjustment terms given on the *Adjustment Info* sheet.

Formula for Cell (14) is as follows:

(14) = ((SumOfRaceMaleCompleteness*RaceMalePop + SumOfRaceFemaleCompleteness*RaceFemalePop)/RacePop)/100

where RaceMalePop and RaceFemalePop are race-specific populations for males and females from the *Populations by Race and Sex* sheet, and RacePop is the race-specific population for males and females combined from the *Populations by Race* sheet.

Interim Completeness Estimates, Adjusted for Reference Mortality

Whites		Blacks		Race Proportional	
Percent Complete	Population	Percent Complete	Population	Percent Complete	Population
(A)	(B)	(C)	(D)	(E)	(F)

Data for Columns (A), (B), (C), (D), and (F) are from the *Whites*, *Blacks* and *RegistryInfo* worksheets.

Formula for Column (E) is (E)=[(A)*(B) + (C)*(D)]/(F)

Formula for Column (F) is (B) + (D)

Final Completeness Estimates, Adjusted for Reference Mortality and Duplicates

(AA)	Total Incidence Cases, 2001
(BB)	Percent Duplicate Records
(CC)=(E)	Race Proportional Completeness Estimates, Adjusted for Reference Mortality
(DD)	2001 Adjusted Total Incidence Cases
(EE)=(AA)/(CC)	2001 Expected Incidence Cases
(FF)=(DD)/(EE)	Final Completeness Estimate for 2001, Your State/Province/Area, Adjusted for Reference Mortality and Duplicate Records

Formula for Row (DD) is as follows:

(DD)=(AA) - [(AA)*(BB)]

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Minnesota, Year of Diagnosis 2003

Mortality Adjustment Terms

0.2 Target Mortality Higher Than Reference Mortality (AdjHigh)

0.2 Target Mortality Lower Than Reference Mortality (AdjLow)

Date of last spreadsheet update: 04/27/2006

Start Year	End Year	Types of Rates
2003	03	Registry Case Year
2002	03	Registry Mortality (Current) Years
1999	03	Registry Mortality (Reference) Years
1999	03	SEER11 Incidence Reference Years
1999	03	US Mortality Reference Years