



## Data Brief: Cancer Incidence in Massachusetts, 2009-2013 – Preliminary Data

Massachusetts Department of Public Health, Office of Data Management and Outcomes Assessment, Massachusetts Cancer Registry, NOV 2015

This data brief provides preliminary cancer incidence data for the Commonwealth for 24 types of cancer and for all cancers combined for 2009 through 2013. Breakdowns are provided by type of cancer, race/ethnicity and sex. Data from 2009-2012 are considered complete, while data for 2013 are preliminary data with a completion estimate of 90%. The incidence data included in this brief are based on cases that were reported to the Massachusetts Cancer Registry as of June 4, 2015. Due to the time required for collection, processing, and quality assurance activities, data for a particular calendar year are typically not complete and available for dissemination until two to three years after the diagnosis year. **Data presented in this brief are preliminary and must be interpreted with caution, especially for the year 2013.** Cases reported only from non-hospital sources are not included for 2012 and 2013, and cases whose only report is from a death certificate are not included for 2013. The types of cancers most likely to be underreported due to cases missing from non-hospital sources include prostate, melanoma, leukemia, lymphoma and multiple myeloma, while for ‘death certificate only’ cases, the types include pancreas, lung, liver, leukemia and multiple myeloma.

### *Preliminary incidence (newly diagnosed cases) for all sites combined and top four sites, 2009-2013 by sex:*

#### **MALES**

- *all cancer types combined* – 514.2 per 100,000 men;
- *prostate cancer* – 123.1 per 100,000 men;
- *bronchus and lung cancer* – 71.5 per 100,000 men;
- *colon/rectum cancer* – 43.5 per 100,000 men;
- *urinary bladder cancer* – 41.2 per 100,000 men;

#### **FEMALES**

- *all cancer types combined* – 449.8 per 100,000 women;
- *invasive breast cancer* – 135.5 per 100,000 women;
- *bronchus and lung cancer* – 61.2 per 100,000 women;
- *colon/rectum cancer* – 34.7 per 100,000 women;
- *corpus uteri & uterus, nos* – 29.4 per 100,000 women;

This data brief is organized in the following sections:

- **TABLES** which present cancer incidence rates for 2009-2013. There are 6 tables in this section with breakdowns by year, sex, race/ethnicity, and cancer type.
- **APPENDICES** which provide information supplemental to this brief, including a listing of codes used to prepare the report, information on population and rate changes, and population estimates.

*Note: For more detailed information on the methods of the Massachusetts Cancer Registry, please refer to Cancer Incidence and Mortality in Massachusetts 2007-2011: Statewide Report available at [www.mass.gov/dph/mcr](http://www.mass.gov/dph/mcr)*

**Table 1.**  
**ANNUAL AGE-ADJUSTED<sup>1</sup> INCIDENCE RATES<sup>2</sup> FOR SELECTED CANCER SITES**  
**Massachusetts, 2009-2013 – Preliminary Data (as of June 4, 2015)**  
**MALES**

<b>Cancer Site / Type</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>All Sites</b>	565.7	533.1	538.3	490.3	451.8
<b>Brain &amp; Other Nervous System</b>	7.8	8.2	7.9	7.5	8.7
<b>Breast</b>	1.4	1.2	1.5	1.2	1.7
<b>Breast <i>in situ</i><sup>3</sup></b>	0.1	0.2	0.2	0.2	0.3
<b>Bronchus &amp; Lung</b>	78.8	73.4	74.6	70.7	60.9
<b>Colon / Rectum</b>	48.7	44.8	43.5	42.2	39.1
<b>Esophagus</b>	11.4	10.0	10.9	9.7	9.3
<b>Hodgkin Lymphoma</b>	3.1	3.4	3.7	3.6	3.1
<b>Kidney &amp; Renal Pelvis</b>	22.9	20.0	20.6	20.8	22.6
<b>Larynx</b>	6.9	6.1	5.3	5.2	6.2
<b>Leukemia</b>	17.8	15.9	17.2	16.9	14.6
<b>Liver &amp; Intrahepatic Bile Ducts</b>	13.2	12.8	12.6	13.7	10.7
<b>Melanoma of Skin</b>	26.9	25.0	29.0	24.3	23.6
<b>Multiple Myeloma</b>	8.2	7.8	7.9	8.1	8.4
<b>Non-Hodgkin Lymphoma</b>	26.3	23.8	22.1	22.1	19.5
<b>Oral Cavity &amp; Pharynx</b>	17.0	17.7	17.9	18.3	16.5
<b>Pancreas</b>	14.6	13.0	14.3	14.2	13.0
<b>Prostate</b>	145.6	140.6	138.0	102.9	92.7
<b>Stomach</b>	9.7	9.9	8.9	8.8	10.1
<b>Testis</b>	6.5	5.6	6.7	6.6	6.6
<b>Thyroid</b>	10.4	9.4	10.8	10.4	9.4
<b>Urinary Bladder</b>	44.0	40.4	41.7	41.2	38.8

<sup>1</sup> Rates are age-adjusted to the 2000 U.S. Standard Population.

<sup>2</sup> per 100,000 males

<sup>3</sup> Breast *in situ* is excluded from “All Sites”

Source: Massachusetts Cancer Registry

**Table 2.**  
**ANNUAL AGE-ADJUSTED<sup>1</sup> INCIDENCE RATES<sup>2</sup> FOR SELECTED CANCER SITES**  
**Massachusetts, 2009-2013 – Preliminary Data (as of June 4, 2015)**

**FEMALES**

<b>Cancer Site / Type</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>All Sites</b>	465.6	443.8	457.3	454.0	428.9
<b>Brain &amp; Other Nervous System</b>	5.5	5.8	6.3	5.6	5.5
<b>Breast</b>	136.1	130.6	137.4	137.0	136.2
<b>Breast <i>in situ</i><sup>3</sup></b>	47.9	44.9	41.6	42.5	42.3
<b>Bronchus &amp; Lung</b>	64.6	62.6	60.5	61.1	57.6
<b>Cervix Uteri</b>	5.5	5.6	5.2	5.0	4.8
<b>Colon / Rectum</b>	38.3	35.9	34.3	33.1	32.0
<b>Corpus Uteri &amp; Uterus, NOS</b>	30.2	28.0	31.2	28.3	29.4
<b>Esophagus</b>	2.6	2.4	2.0	1.7	2.4
<b>Hodgkin Lymphoma</b>	2.9	2.6	2.7	2.6	2.3
<b>Kidney &amp; Renal Pelvis</b>	10.9	10.4	10.6	10.9	10.4
<b>Larynx</b>	1.9	1.5	1.4	1.8	1.3
<b>Leukemia</b>	9.8	10.7	10.3	9.7	9.3
<b>Liver &amp; Intrahepatic Bile Ducts</b>	3.8	3.4	3.3	3.8	3.6
<b>Melanoma of Skin</b>	18.8	18.4	18.6	16.7	15.5
<b>Multiple Myeloma</b>	4.8	4.4	6.0	5.1	4.8
<b>Non-Hodgkin Lymphoma</b>	16.3	16.6	15.4	17.4	13.8
<b>Oral Cavity &amp; Pharynx</b>	7.0	6.5	6.2	7.7	7.2
<b>Ovary</b>	13.2	10.6	12.2	12.9	10.2
<b>Pancreas</b>	12.1	10.7	10.9	10.9	10.4
<b>Stomach</b>	4.4	4.6	4.5	4.3	4.2
<b>Thyroid</b>	30.1	27.4	30.7	29.6	26.7
<b>Urinary Bladder</b>	11.5	11.0	12.1	11.7	10.5

<sup>1</sup> Rates are age-adjusted to the 2000 U.S. Standard Population.

<sup>2</sup>per 100,000 males

<sup>3</sup>Breast *in situ* is excluded from “All Sites”

Source: Massachusetts Cancer Registry

**Table 3.**  
**ANNUAL AGE-ADJUSTED<sup>1</sup> INCIDENCE RATES<sup>2</sup> FOR SELECTED CANCER SITES**  
**Massachusetts, 2009-2013 – Preliminary Data (as of June 4, 2015)**

Cancer Site / Type	2009	2010	2011	2012	2013
<b>All Sites</b>	504.2	479.2	489.5	466.4	435.8
<b>Brain &amp; Other Nervous System</b>	6.6	6.9	7.0	6.4	7.0
<b>Breast</b>	74.1	71.1	74.7	74.2	73.9
<b>Breast <i>in situ</i><sup>3</sup></b>	25.2	23.9	22.0	22.5	22.4
<b>Bronchus &amp; Lung</b>	70.0	66.7	66.2	64.7	58.7
<b>Cervix Uteri</b>	--	--	--	--	--
<b>Colon / Rectum</b>	42.8	39.8	38.2	37.1	35.1
<b>Corpus Uteri &amp; Uterus, NOS</b>	--	--	--	--	--
<b>Esophagus</b>	6.4	5.8	5.9	5.3	5.4
<b>Hodgkin Lymphoma</b>	3.0	3.0	3.1	3.1	2.7
<b>Kidney &amp; Renal Pelvis</b>	16.3	14.7	15.2	15.4	16.0
<b>Larynx</b>	4.1	3.5	3.2	3.3	3.5
<b>Leukemia</b>	13.1	12.8	13.3	12.9	11.6
<b>Liver &amp; Intrahepatic Bile Ducts</b>	8.0	7.7	7.6	8.3	6.9
<b>Melanoma of Skin</b>	22.0	21.1	22.9	19.8	18.9
<b>Multiple Myeloma</b>	6.2	5.9	6.9	6.4	6.4
<b>Non-Hodgkin Lymphoma</b>	20.7	19.8	18.3	19.4	16.4
<b>Oral Cavity &amp; Pharynx</b>	11.6	11.6	11.6	12.7	11.5
<b>Ovary</b>	--	--	--	--	--
<b>Pancreas</b>	13.1	11.7	12.5	12.5	11.6
<b>Prostate</b>	--	--	--	--	--
<b>Stomach</b>	6.8	6.9	6.4	6.3	6.8
<b>Testis</b>	--	--	--	--	--
<b>Thyroid</b>	20.5	18.7	21.1	20.3	18.3
<b>Urinary Bladder</b>	25.0	23.2	24.7	24.3	22.6

<sup>1</sup> Rates are age-adjusted to the 2000 U.S. Standard Population.

<sup>2</sup> per 100,000 total population

<sup>3</sup> Breast *in situ* is excluded from “All Sites”

<sup>4</sup> Dashes indicate cancers found in only one sex or predominantly in one sex (breast cancer).

Source: Massachusetts Cancer Registry

**Table 4.**  
**AGE-ADJUSTED<sup>1</sup> INCIDENCE RATES<sup>2</sup> AND 95% CONFIDENCE LIMITS (95% CL)**  
**FOR SELECTED CANCER SITES BY RACE/ETHNICITY<sup>3</sup>**  
**Massachusetts, 2009-2013 - Preliminary Data (as of June 4, 2015)**  
**MALES**

Cancer Site / Type	All Races		White, non-Hispanics		Black, non-Hispanics		Asian, non-Hispanics		Hispanics	
	Rates	95% CL	Rates	95% CL	Rates	95% CL	Rates	95% CL	Rates	95% CL
<b>All Sites</b>	514.2	510.7-517.7	512.3	508.6-516.0	565.3	547.4-583.2	327.3	312.0-342.5	418.6	401.9-435.2
<b>Brain &amp; Other Nervous System</b>	8.0	7.6-8.5	8.6	8.1-9.1	5.0	3.4-6.5	3.5	2.0-4.9	7.3	5.2-9.4
<b>Breast</b>	1.4	1.2-1.6	1.5	1.3-1.7	*	*	*	*	*	*
<b>Breast <i>in situ</i><sup>4</sup></b>	0.2	0.1-0.2	0.1	0.1-0.2	*	*	*	*	*	*
<b>Bronchus &amp; Lung</b>	71.5	70.2-72.8	72.9	71.5-74.3	73.2	66.3-80.0	58.9	52.1-65.8	43.2	37.4-49.0
<b>Colon / Rectum</b>	43.5	42.5-44.5	43.4	42.3-44.4	51.6	46.0-57.2	34.0	29.1-38.8	35.7	30.5-40.8
<b>Esophagus</b>	10.2	9.7-10.7	10.8	10.3-11.3	8.4	6.1-10.7	5.4	3.4-7.5	4.2	2.4-6.1
<b>Hodgkin Lymphoma</b>	3.4	3.1-3.7	3.4	3.1-3.8	3.6	2.5-4.7	*	*	4.2	2.7-5.8
<b>Kidney &amp; Renal Pelvis</b>	21.4	20.7-22.1	21.9	21.1-22.6	20.5	17.2-23.8	10.7	8.1-13.4	18.2	15.0-21.5
<b>Larynx</b>	5.9	5.5-6.3	5.9	5.5-6.3	5.9	4.0-7.7	*	*	7.2	5.0-9.5
<b>Leukemia</b>	16.4	15.8-17.1	16.9	16.2-17.6	9.6	7.4-11.8	8.9	6.4-11.4	10.7	8.2-13.2
<b>Liver &amp; Intrahepatic Bile Ducts</b>	12.6	12.1-13.1	10.6	10.1-11.2	20.7	17.5-24.0	30.7	26.2-35.2	22.8	19.1-26.5
<b>Melanoma of Skin</b>	25.7	24.9-26.5	27.7	26.9-28.6	*	*	*	*	*	*
<b>Multiple Myeloma</b>	8.1	7.6-8.5	7.6	7.1-8.0	18.6	15.2-22.1	4.7	2.9-6.6	8.8	6.4-11.3
<b>Non-Hodgkin Lymphoma</b>	22.7	22.0-23.4	23.0	22.2-23.8	18.7	15.6-21.8	12.9	10.0-15.8	19.0	15.5-22.4
<b>Oral Cavity &amp; Pharynx</b>	17.5	16.9-18.1	17.9	17.2-18.6	13.9	11.2-16.6	11.8	9.2-14.5	17.8	14.4-21.2
<b>Pancreas</b>	13.8	13.2-14.4	14.0	13.4-14.6	16.1	12.9-19.3	7.1	4.7-9.5	11.1	8.2-14.0
<b>Prostate</b>	123.1	121.4-124.7	113.9	112.2-115.5	212.5	201.9-223.1	64.4	57.6-71.2	137.5	128.1-146.9
<b>Stomach</b>	9.5	9.0-10.0	8.7	8.2-9.2	16.5	13.3-19.7	12.7	9.6-15.8	15.0	11.7-18.3
<b>Testis</b>	6.4	6.0-6.8	7.6	7.1-8.1	*	*	1.9	1.1-2.7	3.6	2.6-4.5
<b>Thyroid</b>	10.1	9.6-10.5	10.4	9.8-10.9	6.6	4.8-8.3	11.4	9.0-13.9	6.1	4.5-7.7
<b>Urinary Bladder</b>	41.2	40.2-42.2	43.5	42.4-44.6	19.0	15.5-22.6	14.6	11.1-18.0	17.1	13.4-20.8

<sup>1</sup> Rates are age-adjusted to the 2000 U.S. Standard Population.

<sup>2</sup> per 100,000

<sup>3</sup> Race/ethnicity categories are mutually exclusive. Cases are only included in one race/ethnicity category. <sup>4</sup> Breast *in situ* is excluded from 'All Sites'.

\*An age-adjusted incidence rate was not calculated when there were fewer than 20 cases.

Source: Massachusetts Cancer Registry

**Table 5.**  
**AGE-ADJUSTED<sup>1</sup> INCIDENCE RATES<sup>2</sup> AND 95% CONFIDENCE LIMITS (95% CL)**  
**FOR SELECTED CANCER SITES BY RACE/ETHNICITY<sup>3</sup>**  
**Massachusetts, 2009-2013 - Preliminary Data (as of June 4, 2015)**  
**FEMALES**

Cancer Site / Type	All Races		White, non-Hispanics		Black, non-Hispanics		Asian, non-Hispanics		Hispanics	
	Rates	95% CL	Rates	95% CL	Rates	95% CL	Rates	95% CL	Rates	95% CL
<b>All Sites</b>	449.8	446.9-452.8	462.3	459.0-465.6	395.6	383.3-407.9	298.8	286.2-311.4	323.7	311.9-335.4
<b>Brain &amp; Other Nervous System</b>	5.8	5.4-6.1	6.0	5.6-6.4	4.2	3.0-5.4	3.6	2.3-4.9	4.3	3.1-5.6
<b>Breast</b>	135.5	133.9-137.2	141.1	139.2-142.9	118.6	111.9-125.2	87.3	80.8-93.8	90.1	84.1-96.1
<b>Breast <i>in situ</i><sup>4</sup></b>	43.8	42.9-44.8	45.6	44.5-46.6	40.0	36.2-43.9	31.1	27.4-34.9	32.4	28.9-35.8
<b>Bronchus &amp; Lung</b>	61.2	60.1-62.3	64.7	63.6-65.9	44.0	39.8-48.2	31.6	27.3-36.0	26.7	23.0-30.3
<b>Cervix Uteri</b>	5.2	4.9-5.5	4.7	4.4-5.1	8.6	6.9-10.4	6.8	5.1-8.6	8.6	6.8-10.5
<b>Colon / Rectum</b>	34.7	33.9-35.5	34.7	33.8-35.6	37.3	33.4-41.1	28.9	24.8-33.1	26.7	23.1-30.3
<b>Corpus Uteri &amp; Uterus, NOS</b>	29.4	28.7-30.2	30.5	29.6-31.3	24.6	21.5-27.6	14.7	12.0-17.4	21.3	18.4-24.2
<b>Esophagus</b>	2.2	2.0-2.4	2.2	2.0-2.4	2.1	1.2-3.0	*	*	2.2	1.2-3.3
<b>Hodgkin Lymphoma</b>	2.6	2.4-2.9	2.9	2.6-3.2	1.7	1.0-2.5	*	*	2.7	1.7-3.7
<b>Kidney &amp; Renal Pelvis</b>	10.6	10.2-11.1	10.8	10.3-11.3	12.3	10.1-14.4	5.5	3.8-7.3	8.6	6.7-10.4
<b>Larynx</b>	1.6	1.4-1.7	1.6	1.4-1.8	*	*	*	*	*	*
<b>Leukemia</b>	9.9	9.5-10.4	9.9	9.4-10.4	7.5	5.8-9.2	7.3	5.4-9.1	8.5	6.6-10.3
<b>Liver &amp; Intrahepatic Bile Ducts</b>	3.6	3.3-3.9	3.2	3.0-3.5	4.4	3.1-5.7	8.9	6.6-11.2	6.2	4.4-8.0
<b>Melanoma of Skin</b>	17.6	17.0-18.2	19.4	18.7-20.1	*	*	*	*	2.7	1.6-3.7
<b>Multiple Myeloma</b>	5.0	4.7-5.3	4.4	4.1-4.7	14.1	11.7-16.5	*	*	7.5	5.6-9.3
<b>Non-Hodgkin Lymphoma</b>	15.9	15.3-16.4	16.0	15.4-16.6	13.7	11.4-16.0	9.8	7.4-12.1	16.0	13.3-18.7
<b>Oral Cavity &amp; Pharynx</b>	6.9	6.6-7.3	7.0	6.6-7.4	4.7	3.4-6.0	7.1	5.0-9.1	6.5	4.7-8.3
<b>Ovary</b>	11.8	11.3-12.3	12.3	11.8-12.9	8.5	6.7-10.3	7.7	5.8-9.7	7.2	5.6-8.9
<b>Pancreas</b>	11.0	10.6-11.5	11.1	10.6-11.6	13.4	11.1-15.7	8.2	5.9-10.5	8.0	6.0-10.0
<b>Stomach</b>	4.4	4.1-4.7	3.8	3.5-4.1	7.5	5.7-9.2	9.4	7.0-11.7	7.7	5.8-9.6
<b>Thyroid</b>	28.9	28.1-29.7	29.1	28.2-30.0	24.1	21.1-27.0	27.6	24.2-31.1	27.4	24.4-30.3
<b>Urinary Bladder</b>	11.3	10.9-11.8	11.9	11.4-12.4	6.9	5.2-8.6	*	*	5.8	4.1-7.5

<sup>1</sup> Rates are age-adjusted to the 2000 U.S. Standard Population.

<sup>2</sup> per 100,000

<sup>3</sup> Race/ethnicity categories are mutually exclusive. Cases are only included in one race/ethnicity category. <sup>4</sup> Breast *in situ* cases are excluded from 'All Sites'.

\* An age-adjusted incidence rate was not calculated when there were fewer than 20 cases.

Source: Massachusetts Cancer Registry

**Table 6.**  
**AGE-ADJUSTED<sup>1</sup> INCIDENCE RATES<sup>2</sup> AND 95% CONFIDENCE LIMITS (95% CL)**  
**FOR SELECTED CANCER SITES BY RACE/ETHNICITY<sup>3</sup>**  
**Massachusetts, 2009-2013 - Preliminary Data (as of June 4, 2015)**  
**TOTAL**

Cancer Site / Type	All Races		White, non-Hispanics		Black, non-Hispanics		Asian, non-Hispanics		Hispanics	
	Rates	95% CL	Rates	95% CL	Rates	95% CL	Rates	95% CL	Rates	95% CL
<b>All Sites</b>	474.4	472.1-476.6	480.2	477.8-482.6	464.0	453.9-474.2	310.2	300.6-319.9	361.2	351.5-370.8
<b>Brain &amp; Other Nervous System</b>	6.8	6.5-7.1	7.2	6.9-7.5	4.5	3.5-5.4	3.5	2.6-4.5	5.6	4.4-6.7
<b>Breast</b>	--	--	--	--	--	--	--	--	--	--
<b>Breast <i>in situ</i><sup>4</sup></b>	--	--	--	--	--	--	--	--	--	--
<b>Bronchus &amp; Lung</b>	65.2	64.3-66.0	67.8	66.9-68.7	55.3	51.7-59.0	43.9	40.0-47.7	33.4	30.2-36.5
<b>Cervix Uteri</b>	--	--	--	--	--	--	--	--	--	--
<b>Colon / Rectum</b>	38.5	37.9-39.2	38.5	37.8-39.2	42.9	39.7-46.0	31.3	28.1-34.4	30.3	27.4-33.3
<b>Corpus Uteri &amp; Uterus, NOS</b>	--	--	--	--	--	--	--	--	--	--
<b>Esophagus</b>	5.8	5.5-6.0	6.1	5.8-6.3	4.6	3.6-5.6	3.3	2.2-4.3	3.0	2.1-4.0
<b>Hodgkin Lymphoma</b>	3.0	2.8-3.2	3.1	2.9-3.4	2.7	2.0-3.3	1.3	0.8-1.9	3.3	2.5-4.2
<b>Kidney &amp; Renal Pelvis</b>	15.6	15.1-16.0	15.9	15.4-16.3	15.8	13.9-17.7	8.0	6.4-9.5	12.8	11.0-14.5
<b>Larynx</b>	3.5	3.3-3.7	3.6	3.4-3.8	3.3	2.4-4.2	*	*	3.5	2.5-4.5
<b>Leukemia</b>	12.7	12.4-13.1	13.0	12.6-13.4	8.4	7.1-9.7	7.9	6.4-9.4	9.4	7.9-11.0
<b>Liver &amp; Intrahepatic Bile Ducts</b>	7.7	7.4-8.0	6.6	6.3-6.9	11.5	10.0-13.0	19.1	16.7-21.5	13.5	11.6-15.4
<b>Melanoma of Skin</b>	20.9	20.4-21.4	22.8	22.2-23.3	*	*	*	*	2.4	1.6-3.1
<b>Multiple Myeloma</b>	6.4	6.1-6.6	5.8	5.5-6.1	15.9	13.9-17.9	3.4	2.4-4.5	8.0	6.5-9.5
<b>Non-Hodgkin Lymphoma</b>	18.9	18.4-19.3	19.1	18.6-19.6	16.1	14.2-17.9	11.3	9.4-13.1	17.4	15.2-19.5
<b>Oral Cavity &amp; Pharynx</b>	11.8	11.5-12.2	12.1	11.7-12.5	8.6	7.3-10.0	9.3	7.7-11.0	11.4	9.7-13.2
<b>Ovary</b>	--	--	--	--	--	--	--	--	--	--
<b>Pancreas</b>	12.3	11.9-12.6	12.4	12.0-12.8	14.7	12.8-16.6	7.7	6.1-9.3	9.3	7.6-10.9
<b>Prostate</b>	--	--	--	--	--	--	--	--	--	--
<b>Stomach</b>	6.6	6.4-6.9	5.9	5.7-6.2	11.2	9.5-12.8	10.8	8.9-12.7	10.8	9.0-12.5
<b>Testis</b>	--	--	--	--	--	--	--	--	--	--
<b>Thyroid</b>	19.8	19.3-20.2	20.0	19.4-20.5	15.9	14.2-17.7	19.9	17.8-22.1	17.4	15.6-19.1
<b>Urinary Bladder</b>	23.9	23.4-24.4	25.3	24.7-25.8	11.8	10.1-13.5	8.0	6.3-9.6	10.4	8.6-12.2

<sup>1</sup> Rates are age-adjusted to the 2000 U.S. Standard Population.

<sup>2</sup> per 100,000

<sup>3</sup> Race/ethnicity categories are mutually exclusive. Cases are only included in one race/ethnicity category. <sup>4</sup> Breast *in situ* cases are excluded from 'All Sites'. <sup>5</sup> Dashes indicate cancers found in only one sex or predominantly in one sex (breast cancer).

Source: Massachusetts Cancer Registry

**APPENDIX I**  
**ICD CODES USED FOR THIS REPORT**

<b>Cancer Site/Type</b>	<b>ICD-O-3</b>
Brain and Other Nervous System	C70.0 – C72.9 except 9590-9980
Breast (includes <i>in situ</i> )	C50.0 – C50.9 except 9590-9989
Bronchus & Lung	C34.0 – C34.9 except 9590 – 9989
Cervix Uteri	C53.0 – C53.9
Colon/Rectum	C18.0 – C18.9 C19.9, C20.9, C26.0 except 9590-9989
Corpus Uteri & Uterus, NOS	C54.0 - C54.9, C55.9 except 9590-9980
Esophagus	C15.0 - C15.9 except 9590-9989
Hodgkin Lymphoma	C00.00 - C89.9 (includes 9650 – 9667)
Kidney & Renal Pelvis	C64.9, C65.9 except 9590-9980
Larynx	C32.0 – C32.9 except 9590-9980
Leukemia	C00.0-C89.9 (includes 9733, 9742, 9800-9820, 9826, 9831 – 9948, 9963—9964)
Liver and Intrahepatic Bile Ducts	C22.0, C22.1 except 9590-9980
Melanoma of Skin	C44.0 – C44.9 (includes 8720-8790)
Multiple Myeloma	C00.0-C80.9 (includes 9731, 9732, 9734)
Non-Hodgkin Lymphoma	C00.0 – C80.9 (includes 9590 – 9596, 9670 – 9729) All sites except C42.0, C42.1, C42.4 (includes 9823, 9827)
Oral Cavity & Pharynx	C00.0 – C14.8 except 9590-9980
Ovary	C56.9 except 9590-9980
Pancreas	C25.0 – C25.9 except 9590-9980



<b>Cancer Site/Type</b>	<b>ICD-O-3</b>
Prostate	C61.9 except 9590-9980
Stomach	C16.0 – C16.9 except 9590-9980
Testis	C62.0 – C62.9 except 9590-9980
Thyroid	C73.9 except 9590-9980
Urinary Bladder (includes <i>in situ</i> )	C67.0 – C67.9 except 9590-9980

*International Classification of Disease for Oncology, 3d Ed.*

## APPENDIX II

### Population and Rate Changes

The population estimates for 2009-2013 used in this report were produced by the National Center for Health Statistics (NCHS) in collaboration with the U.S. Census Bureau's Population Estimation Program. The NCHS takes the Census Bureau population estimates file and reallocates the multiple race categories required by the 1997 Office of Management and Budget (OMB) specifications back into the four race categories specified in the 1977 OMB specifications so that the estimates will be compatible with previous years' populations. (2) The estimates are divided into mutually exclusive racial/ethnic categories similar to those of the MCR.

Please note that the statewide age-adjusted rates published in this report cannot be compared with those published in reports prior to July 2007, because the overall population count and the age distribution of the population, which were based on the Census 2000 count, differ.

The difference in the new population estimates is pronounced for Hispanics and black, non-Hispanics. The Hispanic and black, non-Hispanic populations have increased 15% since 2000, while the overall state population has increased by 1%. It is important to remember that both age-adjusted cancer incidence and cancer death rates are not a measure of the actual risk of cancer or of death from it. Rather, age-adjusted rates are summary measures used to compare cancer incidence and mortality trends over time or among different populations whose age distributions differ. For specific examples of the effect of new population estimates on age-adjusted rates, see Appendix II in the report *Cancer Incidence and Mortality in Massachusetts 2000-2004: Statewide Report*, available at [www.mass.gov/dph/mcr](http://www.mass.gov/dph/mcr).

1. National Center for Health Statistics, U.S. Department of Health and Human Services. Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Vintage 2013 Bridged-race postcensal population estimates for April 1, 2010, July 1, 2010 - July 1, 2013, by year, county, single-year of age (0 to 85+ years), bridged-race, Hispanic origin, and sex (6/26/2014 Available at: [http://www.cdc.gov/nchs/nvss/bridged\\_race.htm](http://www.cdc.gov/nchs/nvss/bridged_race.htm) Accessed August 28, 2014.

### Appendix III

#### POPULATION ESTIMATES BY AGE, RACE/ETHNICITY, AND SEX Massachusetts, 2009-2013

Age Group	White, non-Hispanic			Black, non-Hispanic			Asian, non-Hispanic			Hispanic			Total
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	
00-04	623630	594870	1218500	87396	83438	170834	68061	66517	134578	163964	157042	321006	
05-09	677387	647736	1325123	85892	81700	167592	64988	65735	130723	149706	144070	293776	
10-14	737012	701325	1438337	85336	82083	167419	56721	58400	115121	142152	136498	278650	
15-19	840650	818023	1658673	100394	97427	197821	64892	70894	135786	157448	149897	307345	
20-24	839434	843045	1682479	101862	100449	202311	81160	89193	170353	159642	150951	310593	
25-29	805696	810487	1616183	86524	87478	174002	89862	100417	190279	147978	139564	287542	
30-34	730408	742274	1472682	78422	83096	161518	86775	97178	183953	139650	137052	276702	
35-39	730733	753803	1484536	73102	80015	153117	84998	89932	174930	117826	123175	241001	
40-44	877947	911466	1789413	75348	82105	157453	73161	78504	151665	106309	113270	219579	
45-49	1005262	1040594	2045856	78048	81657	159705	62315	66318	128633	93060	102565	195625	
50-54	1027343	1073423	2100766	70718	75807	146525	51090	55151	106241	73208	82185	155393	
55-59	924800	982585	1907385	55144	61621	116765	41519	46634	88153	53306	62945	116251	
60-64	794710	865270	1659980	40974	49304	90278	31904	36318	68222	37982	47040	85022	
65-69	585861	661774	1247635	27050	35833	62883	21736	24334	46070	24703	32171	56874	
70-74	402201	488137	890338	18287	26317	44604	16640	18894	35534	15669	22438	38107	
75-79	311691	416006	727697	12584	20328	32912	11562	13496	25058	9970	15410	25380	
80-84	244935	382049	626984	7788	14791	22579	6760	9060	15820	5981	9909	15890	
85+	215613	482348	697961	5983	14286	20269	4869	7822	12691	4904	9268	14172	

Population Data Source: United States Census Data (2009-2013)

