

**Data Brief:**

**Cancer Incidence in Massachusetts,**

**2011-2015 – Preliminary Data**

Massachusetts Department of Public Health, Office of Data Management and Outcomes Assessment, Massachusetts Cancer Registry, sept 2017

This data brief provides preliminary cancer incidence data for the Commonwealth for 24 types of cancer over a period of five years, from 2011 through 2015. Data are broken out by type of cancer, race/ethnicity and sex. Data from 2011-2014 are complete, while data for 2015 are preliminary data with a completion estimate of 94%. The incidence data included in this brief are based on cases that were reported to the Massachusetts Cancer Registry as of June 5, 2017. 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 2015.**  Cases reported only from non-hospital sources are processed as resources allow, so completeness of these cases varies by year. However, the number of new cases from non-hospital sources is small since most are eventually reported by other sources. Cases whose only report is from a death certificate are not included for 2015. 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. The types of cancers for ‘death certificate only’ cases include pancreas, lung, liver, leukemia and multiple myeloma.

***Preliminary incidence (newly diagnosed cases) for all sites combined and top four sites,***

***2011-2015 by sex:***

***MALES***

* *all cancer types combined* – 485.0 per 100,000 men;
* *prostate cancer* – 104.6 per 100,000 men;
* *bronchus and lung cancer –* 68.1 per 100,000 men;
* *colon/rectum cancer* – 41.6 per 100,000 men;
* *urinary bladder cancer –* 40.1 per 100,000 men;

***FEMALES***

* *all cancer types combined* – 445.8 per 100,000 women;
* *invasive breast cancer –* 137.4 per 100,000 women;
* *bronchus and lung cancer* – 59.3 per 100,000 women;
* *colon/rectum cancer –* 32.9 per 100,000 women;
* *thyroid*  – 29.5 per 100,000 women;

This data brief is organized in the following sections:

* **TABLES** which present cancer incidence rates for 2011-2015. 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 2006-2010: Statewide Report available at*** [***www.mass.gov/dph/mcr***](http://www.mass.gov/dph/mcr)

**Table 1.**

**ANNUAL AGE-ADJUSTED1 INCIDENCE RATES2 FOR SELECTED CANCER SITES**

**Massachusetts, 2011-2015 – Preliminary Data (as of June 5, 2017)**

**MALES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cancer Site / Type** | **2011** | **2012** | **2013** | **2014** | **2015** |
| **All Sites** | 538.9 | 500.2 | 483.0 | 479.3 | 430.0 |
| **Brain & Other Nervous System** | 7.9 | 7.4 | 9.1 | 7.5 | 6.7 |
| **Breast** | 1.5 | 1.2 | 1.5 | 1.7 | 1.5 |
| **Breast *in situ*3** | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 |
| **Bronchus & Lung** | 74.6 | 71.3 | 67.0 | 68.1 | 60.1 |
| **Colon / Rectum** | 43.5 | 42.2 | 40.7 | 44.0 | 38.1 |
| **Esophagus** | 11.0 | 9.8 | 9.8 | 9.1 | 8.2 |
| **Hodgkin Lymphoma** | 3.6 | 3.6 | 3.1 | 3.2 | 0.1 |
| **Kidney & Renal Pelvis** | 20.6 | 20.9 | 23.3 | 23.2 | 23.3 |
| **Larynx** | 5.3 | 5.2 | 6.3 | 5.7 | 5.1 |
| **Leukemia** | 17.4 | 17.6 | 16.1 | 16.4 | 14.0 |
| **Liver & Intrahepatic Bile Ducts** | 12.4 | 14.2 | 12.5 | 12.3 | 10.8 |
| **Melanoma of Skin** | 29.2 | 25.8 | 25.0 | 22.8 | 21.1 |
| **Multiple Myeloma** | 7.9 | 8.2 | 8.9 | 7.5 | 7.5 |
| **Non-Hodgkin Lymphoma** | 22.1 | 22.5 | 23.2 | 23.4 | 19.5 |
| **Oral Cavity & Pharynx** | 18.0 | 18.7 | 16.8 | 18.0 | 15.8 |
| **Pancreas** | 14.3 | 14.3 | 14.7 | 13.9 | 13.9 |
| **Prostate** | 138.2 | 106.9 | 97.6 | 92.9 | 90.6 |
| **Stomach** | 9.0 | 8.9 | 10.3 | 9.9 | 8.1 |
| **Testis** | 6.7 | 6.7 | 6.6 | 6.5 | 6.0 |
| **Thyroid** | 10.8 | 10.4 | 9.3 | 11.6 | 11.2 |
| **Urinary Bladder** | 41.6 | 42.3 | 39.6 | 39.0 | 38.2 |

Rates are age-adjusted to the 2000 U.S. Standard Population.

2per 100,000 males

3Breast *in situ* is excluded from “All Sites”

Source: Massachusetts Cancer Registry

**Table 2.**

**ANNUAL AGE-ADJUSTED1 INCIDENCE RATES2 FOR SELECTED CANCER SITES**

**Massachusetts, 2011-2015 – Preliminary Data (as of June 5, 2017)**

**FEMALES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cancer Site / Type** | **2011** | **2012** | **2013** | **2014** | **2015** |
| **All Sites** | 457.4 | 457.0 | 447.1 | 446.5 | 422.1 |
| **Brain & Other Nervous System** | 6.3 | 5.6 | 6.1 | 5.6 | 5.9 |
| **Breast** | 137.3 | 137.1 | 137.3 | 138.6 | 136.5 |
| **Breast *in situ*3** | 41.6 | 42.6 | 42.6 | 40.9 | 38.9 |
| **Bronchus & Lung** | 60.7 | 61.2 | 60.7 | 58.5 | 55.7 |
| **Cervix Uteri** | 5.1 | 5.0 | 4.9 | 5.5 | 5.0 |
| **Colon / Rectum** | 34.3 | 33.2 | 33.2 | 32.3 | 31.5 |
| **Corpus Uteri & Uterus, NOS** | 31.2 | 28.3 | 29.8 | 27.6 | 29.4 |
| **Esophagus** | 2.0 | 1.7 | 2.4 | 2.6 | 2.2 |
| **Hodgkin Lymphoma** | 2.7 | 2.6 | 2.4 | 2.7 | 0.2 |
| **Kidney & Renal Pelvis** | 10.6 | 10.9 | 10.7 | 10.8 | 10.4 |
| **Larynx** | 1.4 | 1.8 | 1.2 | 1.2 | 1.4 |
| **Leukemia** | 10.3 | 10.0 | 10.3 | 9.1 | 9.3 |
| **Liver & Intrahepatic Bile Ducts** | 3.3 | 3.8 | 4.1 | 4.1 | 3.1 |
| **Melanoma of Skin** | 18.6 | 17.8 | 16.2 | 15.6 | 15.4 |
| **Multiple Myeloma** | 6.0 | 5.2 | 5.3 | 4.9 | 4.5 |
| **Non-Hodgkin Lymphoma** | 15.5 | 17.8 | 16.7 | 15.8 | 13.3 |
| **Oral Cavity & Pharynx** | 6.2 | 7.9 | 7.3 | 6.7 | 7.2 |
| **Ovary** | 12.1 | 12.9 | 10.5 | 11.3 | 10.7 |
| **Pancreas** | 11.0 | 11.0 | 11.6 | 12.1 | 10.7 |
| **Stomach** | 4.5 | 4.3 | 4.4 | 5.0 | 4.8 |
| **Thyroid** | 30.7 | 29.7 | 26.9 | 31.2 | 28.7 |
| **Urinary Bladder** | 12.1 | 11.7 | 10.8 | 10.9 | 10.6 |

Rates are age-adjusted to the 2000 U.S. Standard Population.

2per 100,000 males

3Breast *in situ* is excluded from “All Sites”

Source: Massachusetts Cancer Registry

**Table 3.**

**ANNUAL AGE-ADJUSTED1 INCIDENCE RATES2 FOR SELECTED CANCER SITES**

**Massachusetts, 2011-2015 – Preliminary Data (as of June 5, 2017)**

**TOTAL**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cancer Site / Type** | **2011** | **2012** | **2013** | **2014** | **2015** |
| **All Sites** | 489.8 | 472.4 | 459.4 | 456.9 | 421.6 |
| **Brain & Other Nervous System** | 7.0 | 6.4 | 7.5 | 6.5 | 6.3 |
| **Breast** | -- | -- | -- | -- | -- |
| **Breast *in situ*3** | -- | -- | -- | -- | -- |
| **Bronchus & Lung** | 66.4 | 65.1 | 63.1 | 62.3 | 57.3 |
| **Cervix Uteri** | -- | -- | -- | -- | -- |
| **Colon / Rectum** | 38.3 | 37.2 | 36.5 | 37.5 | 34.4 |
| **Corpus Uteri & Uterus, NOS** | -- | -- | -- | -- | -- |
| **Esophagus** | 5.9 | 5.3 | 5.7 | 5.5 | 4.9 |
| **Hodgkin Lymphoma** | 3.1 | 3.1 | 2.7 | 3.0 | 0.1 |
| **Kidney & Renal Pelvis** | 15.2 | 15.5 | 16.4 | 16.5 | 16.3 |
| **Larynx** | 3.2 | 3.3 | 3.5 | 3.2 | 3.0 |
| **Leukemia** | 13.4 | 13.4 | 12.8 | 12.2 | 11.4 |
| **Liver & Intrahepatic Bile Ducts** | 7.5 | 8.5 | 8.0 | 7.8 | 6.6 |
| **Melanoma of Skin** | 22.9 | 21.0 | 19.8 | 18.7 | 17.6 |
| **Multiple Myeloma** | 6.9 | 6.5 | 6.9 | 6.0 | 5.9 |
| **Non-Hodgkin Lymphoma** | 18.3 | 19.8 | 19.6 | 19.2 | 16.1 |
| **Oral Cavity & Pharynx** | 11.6 | 12.9 | 11.7 | 11.9 | 11.2 |
| **Ovary** | -- | -- | -- | -- | -- |
| **Pancreas** | 12.5 | 12.6 | 13.0 | 12.9 | 12.2 |
| **Prostate** | -- | -- | -- | -- | -- |
| **Stomach** | 6.5 | 6.4 | 7.0 | 7.2 | 6.2 |
| **Testis** | -- | -- | -- | -- | -- |
| **Thyroid** | 21.0 | 20.3 | 18.5 | 21.7 | 20.2 |
| **Urinary Bladder** | 24.6 | 24.8 | 23.1 | 22.8 | 22.3 |

Rates are age-adjusted to the 2000 U.S. Standard Population.

2per 100,000 total population

3Breast *in situ* is excluded from “All Sites”

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

Source: Massachusetts Cancer Registry

**Table 4.**

**AGE-ADJUSTED[[1]](#footnote-1) INCIDENCE RATES[[2]](#footnote-2) AND 95% CONFIDENCE LIMITS (95% CL)**

**FOR SELECTED CANCER SITES BY RACE/ETHNICITY[[3]](#footnote-3)**

**Massachusetts, 2011-2015 - Preliminary Data (as of June 5, 2017)**

**MALES**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All Races** | | **White, non-Hispanics** | | **Black, non-Hispanics** | | **Asian, non-Hispanics** | | **Hispanics** | |
| **Cancer Site / Type** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** |
| **All Sites** | 485.0 | 481.7-488.3 | 488.9 | 485.3-492.5 | 503.7 | 487.8-519.6 | 305.7 | 292.0-319.3 | 369.1 | 354.7-383.4 |
| **Brain & Other Nervous System** | 7.7 | 7.3-8.2 | 8.4 | 7.9-8.9 | 4.2 | 2.9-5.5 | \* | \* | 4.9 | 3.4-6.3 |
| **Breast** | 1.5 | 1.3-1.7 | 1.5 | 1.3-1.7 | \* | \* | \* | \* | \* | \* |
| **Breast *in situ*4** | 0.2 | 0.1-0.3 | 0.2 | 0.1-0.3 | \* | \* | \* | \* | \* | \* |
| **Bronchus & Lung** | 68.1 | 66.8-69.3 | 69.8 | 68.4-71.2 | 63.5 | 57.4-69.5 | 56.5 | 50.4-62.7 | 38.8 | 33.8-43.8 |
| **Colon / Rectum** | 41.6 | 40.6-42.6 | 41.7 | 40.6-42.7 | 46.7 | 41.7-51.6 | 31.9 | 27.5-36.3 | 35.3 | 30.6-40.0 |
| **Esophagus** | 9.5 | 9.1-10.0 | 10.2 | 9.6-10.7 | 6.8 | 4.9-8.7 | 5.2 | 3.3-7.0 | 3.5 | 2.0-4.9 |
| **Hodgkin Lymphoma** | 2.7 | 2.4-3.0 | 2.9 | 2.6-3.2 | 2.5 | 1.5-3.4 | 1.0 | 0.4-1.6 | 2.6 | 1.5-3.6 |
| **Kidney & Renal Pelvis** | 22.3 | 21.6-23.0 | 22.8 | 22.1-23.6 | 21.7 | 18.4-24.9 | 10.3 | 7.9-12.7 | 18.2 | 15.2-21.1 |
| **Larynx** | 5.5 | 5.1-5.8 | 5.6 | 5.2-6.0 | 4.8 | 3.3-6.4 | \* | \* | 6.4 | 4.5-8.3 |
| **Leukemia** | 16.3 | 15.6-16.9 | 16.7 | 16.0-17.4 | 12.0 | 9.6-14.4 | 9.7 | 7.3-12.0 | 10.0 | 7.7-12.4 |
| **Liver & Intrahepatic Bile Ducts** | 12.5 | 11.9-13.0 | 10.8 | 10.3-11.3 | 18.9 | 16.0-21.7 | 24.5 | 20.7-28.2 | 20.5 | 17.3-23.8 |
| **Melanoma of Skin** | 24.7 | 23.9-25.5 | 27.1 | 26.3-28.0 | \* | \* | \* | \* | \* | \* |
| **Multiple Myeloma** | 8.0 | 7.6-8.4 | 7.6 | 7.2-8.1 | 14.5 | 11.7-17.3 | 4.4 | 2.8-5.9 | 7.2 | 5.3-9.1 |
| **Non-Hodgkin Lymphoma** | 22.1 | 21.4-22.8 | 22.6 | 21.8-23.4 | 16.6 | 13.8-19.4 | 11.7 | 9.1-14.3 | 19.3 | 16.1-22.5 |
| **Oral Cavity & Pharynx** | 17.4 | 16.8-18.0 | 17.9 | 17.2-18.6 | 13.8 | 11.2-16.4 | 13.6 | 11.0-16.3 | 13.9 | 11.2-16.7 |
| **Pancreas** | 14.2 | 13.6-14.8 | 14.5 | 13.8-15.1 | 15.8 | 12.9-18.8 | 7.9 | 5.7-10.2 | 9.5 | 7.1-12.0 |
| **Prostate** | 104.6 | 103.1-106.1 | 98.6 | 97.1-100.1 | 180.8 | 171.6-190.0 | 56.0 | 50.1-61.8 | 105.6 | 98.1-113.1 |
| **Stomach** | 9.3 | 8.8-9.7 | 8.3 | 7.8-8.8 | 17.1 | 14.0-20.3 | 12.2 | 9.4-14.9 | 13.9 | 10.9-16.8 |
| **Testis** | 6.5 | 6.1-6.9 | 7.9 | 7.4-8.5 | \* | \* | \* | \* | 3.1 | 2.3-3.9 |
| **Thyroid** | 10.7 | 10.2-11.2 | 11.2 | 10.6-11.8 | 6.0 | 4.4-7.6 | 10.7 | 8.6-12.9 | 6.5 | 4.9-8.1 |
| **Urinary Bladder** | 40.1 | 39.1-41.0 | 42.5 | 41.4-43.6 | 17.8 | 14.6-21.1 | 14.3 | 11.1-17.5 | 19.0 | 15.5-22.6 |

**Table 5.**

**AGE-ADJUSTED[[4]](#footnote-4) INCIDENCE RATES[[5]](#footnote-5) AND 95% CONFIDENCE LIMITS (95% CL)**

**FOR SELECTED CANCER SITES BY RACE/ETHNICITY[[6]](#footnote-6)**

**Massachusetts, 2011-2015 - Preliminary Data (as of June 5, 2017)**

**FEMALES**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All Races** | | **White, non-Hispanics** | | **Black, non-Hispanics** | | **Asian, non-Hispanics** | | **Hispanics** | |
| **Cancer Site / Type** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** |
| **All Sites** | 445.8 | 442.9-448.7 | 458.8 | 455.5-462.1 | 394.4 | 382.6-406.1 | 302.6 | 290.8-314.4 | 323.4 | 312.4-334.4 |
| **Brain & Other Nervous System** | 5.9 | 5.5-6.3 | 6.2 | 5.8-6.6 | 4.2 | 3.0-5.3 | 4.4 | 3.1-5.8 | 4.7 | 3.4-6.0 |
| **Breast** | 137.4 | 135.7-139.0 | 143.4 | 141.5-145.2 | 120.4 | 113.9-126.9 | 90.5 | 84.3-96.7 | 89.6 | 84.0-95.2 |
| **Breast *in situ*4** | 41.3 | 40.4-42.2 | 43.3 | 42.2-44.3 | 37.8 | 34.2-41.4 | 31.3 | 27.7-34.9 | 28.6 | 25.5-31.7 |
| **Bronchus & Lung** | 59.3 | 58.3-60.4 | 62.8 | 61.7-64.0 | 43.1 | 39.1-47.1 | 32.4 | 28.3-36.6 | 27.4 | 23.9-30.9 |
| **Cervix Uteri** | 5.1 | 4.8-5.4 | 4.5 | 4.2-4.9 | 8.2 | 6.5-9.9 | 7.1 | 5.4-8.8 | 9.2 | 7.4-11.0 |
| **Colon / Rectum** | 32.9 | 32.1-33.7 | 33.1 | 32.2-33.9 | 35.2 | 31.7-38.8 | 28.0 | 24.2-31.7 | 25.3 | 22.1-28.6 |
| **Corpus Uteri & Uterus, NOS** | 29.3 | 28.5-30.0 | 30.3 | 29.4-31.1 | 26.8 | 23.7-29.8 | 15.5 | 12.9-18.1 | 21.0 | 18.3-23.7 |
| **Esophagus** | 2.2 | 2.0-2.4 | 2.2 | 2.0-2.5 | 2.0 | 1.2-2.8 | \* | \* | \* | \* |
| **Hodgkin Lymphoma** | 2.1 | 1.9-2.3 | 2.3 | 2.0-2.6 | \* | \* | \* | \* | 2.8 | 1.9-3.8 |
| **Kidney & Renal Pelvis** | 10.7 | 10.2-11.1 | 10.9 | 10.4-11.4 | 11.0 | 9.1-13.0 | 4.7 | 3.2-6.3 | 9.1 | 7.2-10.9 |
| **Larynx** | 1.4 | 1.2-1.6 | 1.5 | 1.3-1.6 | \* | \* | \* | \* | \* | \* |
| **Leukemia** | 9.8 | 9.3-10.2 | 9.8 | 9.3-10.3 | 7.1 | 5.5-8.6 | 6.8 | 5.1-8.5 | 8.4 | 6.7-10.2 |
| **Liver & Intrahepatic Bile Ducts** | 3.7 | 3.4-3.9 | 3.2 | 2.9-3.5 | 5.0 | 3.7-6.3 | 9.1 | 6.8-11.3 | 5.9 | 4.3-7.6 |
| **Melanoma of Skin** | 16.7 | 16.1-17.3 | 18.8 | 18.2-19.5 | \* | \* | \* | \* | 2.9 | 1.9-3.9 |
| **Multiple Myeloma** | 5.2 | 4.9-5.5 | 4.6 | 4.3-4.9 | 13.5 | 11.3-15.7 | \* | \* | 8.0 | 6.2-9.8 |
| **Non-Hodgkin Lymphoma** | 15.8 | 15.3-16.3 | 15.9 | 15.3-16.5 | 12.9 | 10.8-15.0 | 9.8 | 7.6-12.0 | 16.5 | 13.9-19.1 |
| **Oral Cavity & Pharynx** | 7.0 | 6.7-7.4 | 7.1 | 6.7-7.5 | 4.8 | 3.5-6.1 | 6.6 | 4.8-8.4 | 5.9 | 4.3-7.4 |
| **Ovary** | 11.5 | 11.0-12.0 | 11.9 | 11.4-12.4 | 9.0 | 7.3-10.8 | 9.3 | 7.2-11.3 | 6.8 | 5.3-8.4 |
| **Pancreas** | 11.3 | 10.8-11.7 | 11.3 | 10.8-11.8 | 12.6 | 10.5-14.7 | 8.9 | 6.6-11.1 | 8.1 | 6.3-10.0 |
| **Stomach** | 4.6 | 4.3-4.9 | 3.9 | 3.6-4.2 | 8.7 | 6.9-10.5 | 8.8 | 6.7-10.9 | 7.4 | 5.7-9.1 |
| **Thyroid** | 29.5 | 28.6-30.3 | 29.6 | 28.7-30.6 | 22.7 | 20.0-25.4 | 29.4 | 26.0-32.7 | 28.2 | 25.4-31.0 |
| **Urinary Bladder** | 11.2 | 10.8-11.6 | 11.9 | 11.4-12.4 | 7.3 | 5.6-8.9 | \* | \* | 5.6 | 4.1-7.2 |

**Table 6.**

**AGE-ADJUSTED[[7]](#footnote-7) INCIDENCE RATES[[8]](#footnote-8) AND 95% CONFIDENCE LIMITS (95% CL)**

**FOR SELECTED CANCER SITES BY RACE/ETHNICITY[[9]](#footnote-9)**

**Massachusetts, 2011-2015 - Preliminary Data (as of June 5, 2017)**

**TOTAL**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All Races** | | **White, non-Hispanics** | | **Black, non-Hispanics** | | **Asian, non-Hispanics** | | **Hispanics** | |
| **Cancer Site / Type** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** | **Rates** | **95% CL** |
| **All Sites** | 459.4 | 457.2-461.5 | 468.0 | 465.6-470.4 | 438.3 | 428.9-447.8 | 302.4 | 293.6-311.3 | 340.4 | 331.7-349.1 |
| **Brain & Other Nervous System** | 6.7 | 6.5-7.0 | 7.2 | 6.9-7.5 | 4.2 | 3.3-5.1 | 4.0 | 3.1-5.0 | 4.9 | 3.9-5.8 |
| **Breast** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Breast *in situ*4** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Bronchus & Lung** | 62.7 | 61.9-63.5 | 65.4 | 64.6-66.3 | 51.0 | 47.6-54.3 | 43.2 | 39.6-46.7 | 32.1 | 29.2-35.0 |
| **Cervix Uteri** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Colon / Rectum** | 36.7 | 36.1-37.3 | 36.9 | 36.2-37.5 | 39.9 | 37.0-42.7 | 29.8 | 26.9-32.6 | 29.4 | 26.7-32.1 |
| **Corpus Uteri & Uterus, NOS** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Esophagus** | 5.5 | 5.2-5.7 | 5.8 | 5.5-6.1 | 4.0 | 3.1-4.9 | 2.9 | 2.0-3.8 | 2.2 | 1.4-2.9 |
| **Hodgkin Lymphoma** | 2.4 | 2.2-2.5 | 2.6 | 2.4-2.8 | 1.6 | 1.1-2.1 | 0.9 | 0.5-1.3 | 2.7 | 2.0-3.4 |
| **Kidney & Renal Pelvis** | 16.0 | 15.6-16.4 | 16.4 | 16.0-16.9 | 15.5 | 13.8-17.3 | 7.3 | 5.9-8.7 | 13.1 | 11.4-14.7 |
| **Larynx** | 3.2 | 3.1-3.4 | 3.3 | 3.1-3.5 | 2.9 | 2.1-3.7 | \* | \* | 3.1 | 2.3-4.0 |
| **Leukemia** | 12.6 | 12.3-13.0 | 12.9 | 12.5-13.3 | 9.1 | 7.8-10.4 | 8.1 | 6.7-9.5 | 9.1 | 7.7-10.5 |
| **Liver & Intrahepatic Bile Ducts** | 7.7 | 7.4-8.0 | 6.7 | 6.4-6.9 | 11.2 | 9.8-12.6 | 16.3 | 14.2-18.4 | 12.4 | 10.7-14.1 |
| **Melanoma of Skin** | 20.0 | 19.5-20.4 | 22.2 | 21.7-22.7 | 1.0 | 0.6-1.5 | \* | \* | 2.3 | 1.6-3.1 |
| **Multiple Myeloma** | 6.4 | 6.2-6.7 | 5.9 | 5.7-6.2 | 14.0 | 12.2-15.7 | 3.3 | 2.4-4.3 | 7.7 | 6.4-9.1 |
| **Non-Hodgkin Lymphoma** | 18.6 | 18.1-19.0 | 18.9 | 18.4-19.4 | 14.6 | 12.9-16.3 | 10.7 | 9.0-12.3 | 17.8 | 15.8-19.8 |
| **Oral Cavity & Pharynx** | 11.9 | 11.5-12.2 | 12.2 | 11.8-12.6 | 8.7 | 7.4-10.0 | 10.0 | 8.4-11.6 | 9.4 | 7.9-10.8 |
| **Ovary** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Pancreas** | 12.6 | 12.3-13.0 | 12.8 | 12.4-13.1 | 14.2 | 12.5-16.0 | 8.4 | 6.9-10.0 | 8.7 | 7.2-10.1 |
| **Prostate** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Stomach** | 6.6 | 6.4-6.9 | 5.8 | 5.6-6.1 | 12.1 | 10.5-13.8 | 10.4 | 8.7-12.1 | 10.1 | 8.5-11.7 |
| **Testis** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Thyroid** | 20.3 | 19.9-20.8 | 20.6 | 20.1-21.2 | 14.9 | 13.3-16.6 | 20.5 | 18.5-22.6 | 18.0 | 16.3-19.7 |
| **Urinary Bladder** | 23.5 | 23.0-23.9 | 25.0 | 24.4-25.5 | 11.6 | 9.9-13.2 | 7.7 | 6.1-9.2 | 11.2 | 9.5-12.9 |

**APPENDIX I**

**ICD CODES USED FOR THIS REPORT**

|  |  |
| --- | --- |
| **Cancer Site/Type** | **ICD-O-3** |
| Brain and Other  Nervous System | C70.0 – C72.9  except 9590-9980 |
| Breast  (includes *in situ*) | 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 |
| **Cancer Site/Type** | **ICD-O-3** |
| 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 *in situ*) | 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 2011-2015 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. (1) 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 2015 Bridged-race postcensal population estimates for April 10, 2010, July 1, 2010 - July 1, 2015, by year, county, single-year of age (0 to 85+ years), bridged-race, Hispanic origin, and sex (6/28/2016) Available at: <http://www.cdc.gov/nchs/nvss/bridged_race.htm>

**Appendix III**

**POPULATION ESTIMATES BY AGE, RACE/ETHNICTIY, AND SEX**

**Massachusetts, 2011-2015**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **White, non-Hispanic** | | | **Black, non-Hispanic** | | | **Asian, non-Hispanic** | | | **Hispanic** | | |
| **Age Group** | **Males** | **Females** | **Total** | **Males** | **Females** | **Total** | **Males** | **Females** | **Total** | **Males** | **Females** | **Total** |
| **00-04** | 599582 | 572123 | 1171705 | 89827 | 84540 | 174367 | 69502 | 54350 | 137371 | 174587 | 166763 | 341350 |
| **05-09** | 647533 | 618894 | 1266427 | 89285 | 84545 | 173830 | 68095 | 54065 | 135647 | 160176 | 154452 | 314628 |
| **10-14** | 712339 | 679236 | 1391575 | 88149 | 84700 | 172849 | 62596 | 50233 | 126322 | 151779 | 146428 | 298207 |
| **15-19** | 818320 | 800816 | 1619136 | 100453 | 98611 | 199064 | 70209 | 60752 | 147133 | 164804 | 157439 | 322243 |
| **20-24** | 832986 | 834697 | 1667683 | 109635 | 107192 | 216827 | 90551 | 77185 | 188489 | 175779 | 166330 | 342109 |
| **25-29** | 820012 | 825186 | 1645198 | 93392 | 94324 | 187716 | 99234 | 88248 | 211188 | 160076 | 152239 | 312315 |
| **30-34** | 749333 | 759781 | 1509114 | 82815 | 88511 | 171326 | 94803 | 83665 | 201542 | 150186 | 147639 | 297825 |
| **35-39** | 694231 | 713345 | 1407576 | 76803 | 83213 | 160016 | 86589 | 75018 | 182000 | 128862 | 133550 | 262412 |
| **40-44** | 808466 | 842405 | 1650871 | 76304 | 83508 | 159812 | 81411 | 68705 | 169067 | 112245 | 121365 | 233610 |
| **45-49** | 938105 | 975726 | 1913831 | 78866 | 84123 | 162989 | 67390 | 57181 | 140124 | 100361 | 110546 | 210907 |
| **50-54** | 1019746 | 1064497 | 2084243 | 75759 | 81341 | 157100 | 56875 | 48493 | 118825 | 82382 | 93083 | 175465 |
| **55-59** | 956796 | 1014650 | 1971446 | 62403 | 69649 | 132052 | 46583 | 41689 | 99358 | 61788 | 72103 | 133891 |
| **60-64** | 823817 | 896351 | 1720168 | 46705 | 54976 | 101681 | 37077 | 33473 | 79755 | 43954 | 53257 | 97211 |
| **65-69** | 647698 | 726488 | 1374186 | 31740 | 40768 | 72508 | 25370 | 22509 | 54753 | 29601 | 38432 | 68033 |
| **70-74** | 438022 | 523693 | 961715 | 20329 | 29264 | 49593 | 18884 | 17038 | 40530 | 18782 | 25836 | 44618 |
| **75-79** | 313303 | 410083 | 723386 | 13806 | 22188 | 35994 | 13580 | 12120 | 29113 | 11642 | 17619 | 29261 |
| **80-84** | 240271 | 364116 | 604387 | 8543 | 15842 | 24385 | 8095 | 8124 | 18428 | 6808 | 11451 | 18259 |
| **85+** | 229216 | 489437 | 718653 | 7043 | 16512 | 23555 | 5936 | 7178 | 15236 | 5749 | 10680 | 16429 |

Population Data Source: United States Census Data (2011-2015)

1. Rates are age-adjusted to the 2000 U.S. Standard Population. [↑](#footnote-ref-1)
2. per 100,000 [↑](#footnote-ref-2)
3. Race/ethnicity categories are mutually exclusive. Cases are only included in one race/ethnicity category. 4 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 [↑](#footnote-ref-3)
4. Rates are age-adjusted to the 2000 U.S. Standard Population. [↑](#footnote-ref-4)
5. per 100,000 [↑](#footnote-ref-5)
6. Race/ethnicity categories are mutually exclusive. Cases are only included in one race/ethnicity category. 4 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 [↑](#footnote-ref-6)
7. Rates are age-adjusted to the 2000 U.S. Standard Population. [↑](#footnote-ref-7)
8. per 100,000 [↑](#footnote-ref-8)
9. Race/ethnicity categories are mutually exclusive. Cases are only included in one race/ethnicity category. 4 Breast *in situ* cases are excluded from ‘All Sites’. 5 Dashes indicate cancers found in only one sex or predominantly in one sex (breast cancer).

   Source: Massachusetts Cancer Registry

   \* An age-adjusted incidence rate was not calculated when there were fewer than 20 cases [↑](#footnote-ref-9)