

2012 Profile of HIV in Michigan (Statewide)

Summary of the HIV Epidemic in Michigan

Data from enhanced HIV/AIDS Reporting System (eHARS)

How many cases?

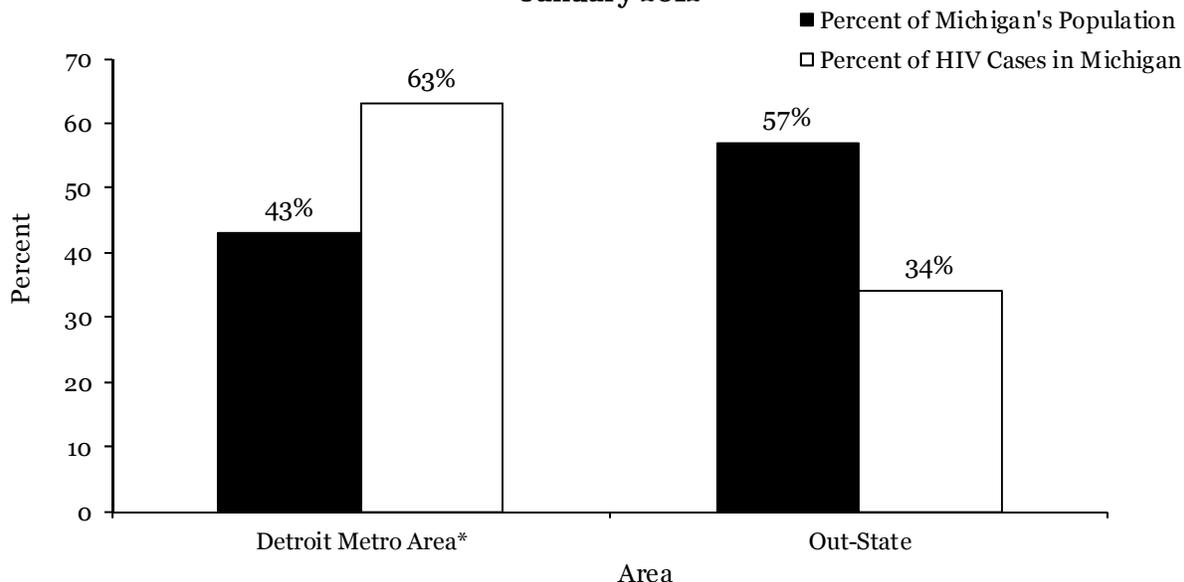
The Michigan Department of Community Health (MDCH) estimates that there are 20,600 persons currently living with HIV in the state of Michigan, of whom 15,753 were reported as of January 1, 2012 (table 8, page 101). The number and rate of new HIV diagnoses remained stable in Michigan between 2006 and 2010, with an average of 803 new cases each year and an average rate of 8.1 cases per 100,000 population (See pages v-vi for information on *2012 Annual Review of HIV Trends in Michigan*). Despite a stable number of new diagnoses each year, there are more new diagnoses of HIV infection than deaths. As a result, the reported number of persons living with HIV infection in Michigan is increasing.



How are the cases geographically distributed?

HIV infections are distributed disproportionately in Michigan. Sixty-three percent of those living with HIV reside in the Detroit Metro Area (DMA) (9,919 of the 15,753 cases currently living in Michigan), but the DMA has only 43 percent of the general population (figure 2). The rest of the state has 34 percent of Michigan HIV cases but 57 percent of the population. The number of new diagnoses remained stable in both geographic areas between 2006 and 2010 (Trends).

Figure 2: Michigan living HIV infection cases and population by area, January 2012



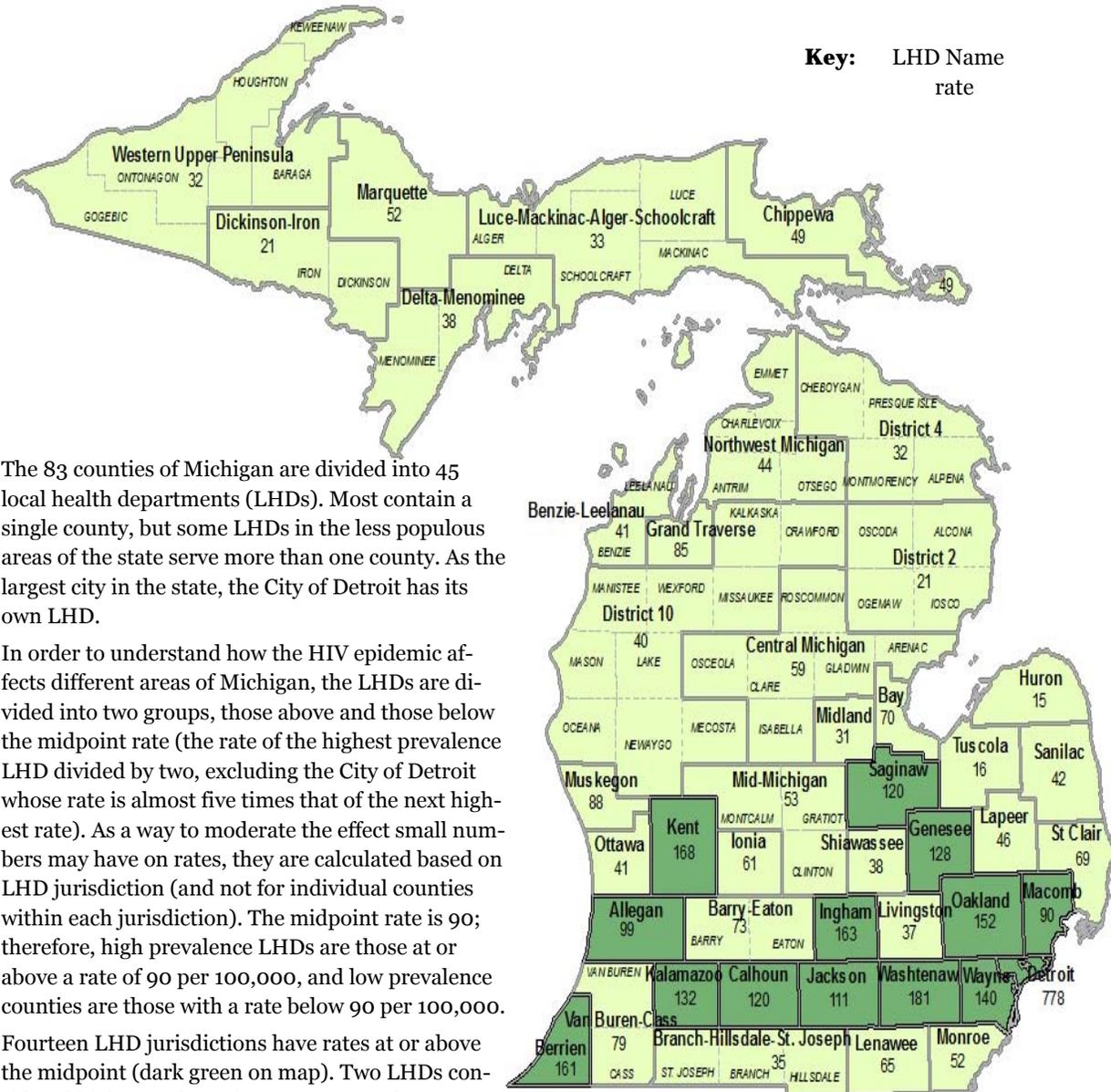
*Detroit Metro Area includes the City of Detroit, Lapeer County, Macomb County, Monroe County, Oakland County, St. Clair County, and Wayne County.

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Distribution of HIV Cases by Local Health Department Jurisdiction

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 3: Reported HIV prevalence rate per 100,000 by local health department jurisdiction, January 2012



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Recommendations: Ranking of Behavioral Groups

Data from enhanced HIV/AIDS Reporting System (eHARS)

To assist in prioritizing prevention activities, the MDCH HIV/STD/VH/TB Epidemiology Section ranks the three behavioral groups most at risk for HIV infection in Michigan. The guiding question used in this process is, “In which populations can strategies prevent the most infections from occurring?” Effectively reducing transmission in populations where most of the HIV transmission is taking place will have the greatest impact on the overall epidemic. The percentage of cases for each behavioral group and trends over time were used to determine the ranked order of the following three behavioral groups: MSM, heterosexuals, and IDU.

- **Men who have sex with men (MSM)*:** MSM make up 54 percent of all reported cases of HIV currently living in Michigan (8,470 out of 15,753 cases) (table 8, page 101). The MSM behavioral group continues to be the most affected behavioral group statewide. Between 2006 and 2010, the number of new diagnoses among MSM remained stable with an average of 388 new cases each year. Although the number of new MSM cases did not increase, the majority of new cases in this behavioral group continue to be among black MSM (Trends).
- **Heterosexuals:** Heterosexual cases constitute 17 percent of the total number of reported cases (2,754 out of 15,753 cases) currently living in Michigan (table 8). This behavioral group is comprised of males who had sex with females known to be at risk for HIV (heterosexual contact with female with known risk, HCFR) and females who had sex with males, regardless of what is known about the male partners’ risk behaviors (heterosexual contact with male, HCM). HCFR is more completely defined as males who had sex with females known to be IDU, recipients of HIV-infected blood products, or HIV-positive persons. See the glossary in appendix A, page 223, for further description of the heterosexual risk transmission category. Eighty percent of all heterosexual cases are among females. The number of new HIV diagnoses in persons with heterosexual transmission decreased by eight percent between 2006 and 2010. This is the third consecutive trend analysis showing a decrease in new diagnoses among persons with heterosexual risk (Trends).
- **Injection drug users (IDU)*:** Of all reported cases of HIV currently living in Michigan, 14 percent are IDU (2,238 out of 15,753 cases) (table 8). The number of new HIV diagnoses among IDU decreased between 2006 and 2010 by an average of 12 percent per year. This is the seventh consecutive trend analysis showing significant decreases in new HIV diagnoses among IDU (Trends).

*Both MSM and IDU numbers and percentages include persons with a dual risk of MSM/IDU.

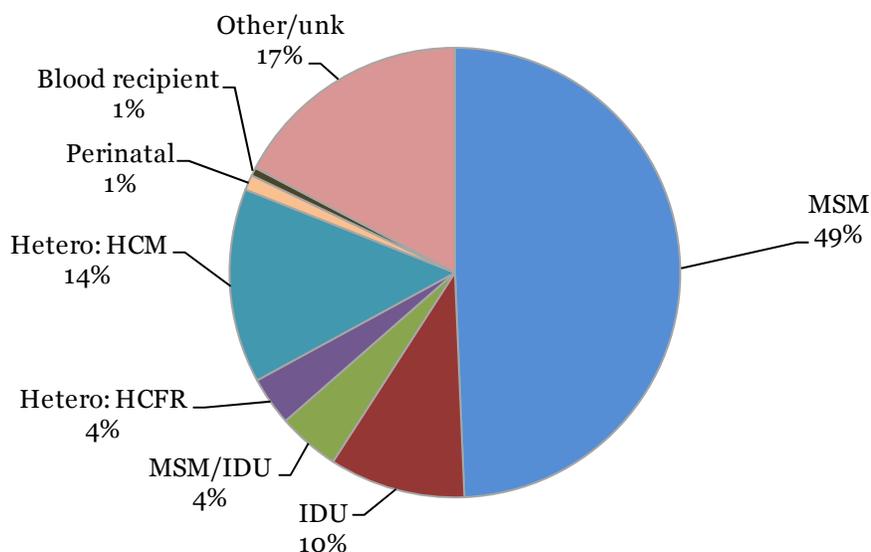
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Distribution of Living HIV Cases by Risk Transmission Category

Data from enhanced HIV/AIDS Reporting System (eHARS)

Although case reporting includes ascertainment of multiple behaviors associated with HIV transmission, current surveillance methods cannot determine the specific route of HIV transmission in persons who have engaged in more than one risk behavior. For the purposes of analysis and interpretation, in the 1980s the Centers for Disease Control and Prevention created a risk hierarchy to classify people into risk transmission categories. The hierarchy is intended to account for the efficiency of HIV transmission associated with each behavior, along with the probability of exposure to an infected person within the population. The adult/adolescent categories, in order, are as follows: (1) men who have sex with men (MSM); (2) injection drug users (IDU); (3) men who have sex with men and inject drugs (MSM/IDU); (4) hemophilia/coagulation disorders; (5) heterosexual contact (HC); (6) receipt of HIV-infected blood or blood components; and (7) no identified risk (NIR). Figure 4 shows the distribution of risk for all persons currently living with HIV in Michigan as of January 2012 (data also found on table 8, page 101).

Figure 4: HIV infection cases currently living in Michigan by risk transmission category, January 2012 (N = 15,753)



- Over half (53 percent) of persons currently living with HIV in Michigan are men who have sex with men (MSM), including four percent who also inject drugs (MSM/IDU).
- Eighteen percent have a risk of heterosexual sex, 14 percent of whom are females who had sex with males (HCM) and four percent of whom are males who had sex with females with known risk (HCFR).
- Fourteen percent are injection drug users (IDU), including four percent who are also MSM (MSM/IDU).
- Two percent are other known risk, including perinatal transmission and receipt of HIV-infected blood products.
- Seventeen percent have unknown risk, which includes males who had sex with females of unknown risk.

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Distribution of Living HIV Cases by Exposure Category

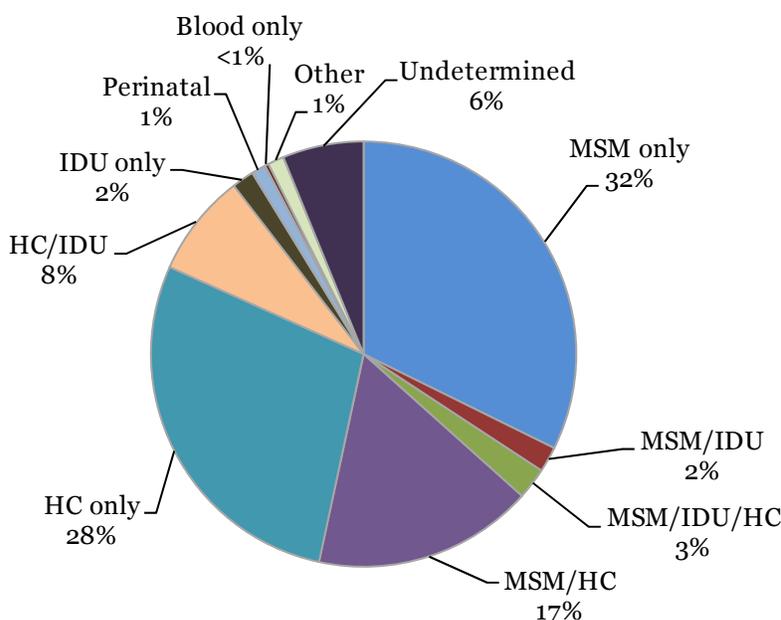
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When the risk transmission categories were created, the hierarchy was based on what was known at the beginning of the epidemic about how HIV was transmitted, when almost all cases were among males and there was little documented heterosexual transmission. Since then, the hierarchy has not changed, even though our understanding of the most efficient HIV transmission routes has. Additionally, concerns have been raised that use of hierarchical categories masks the identification of multiple risks that a person may have. For this reason, Michigan also presents exposure categories, which convey all known modes of HIV exposure. Like the traditional risk transmission categories, the exposure categories are mutually exclusive, meaning that each case is included in only one category. Exposure categories, however, allow readers to see all the reported ways in which a person may have been exposed to HIV without stating definitively how the person was infected. Please see the glossary in appendix A (page 223) for more detailed definitions of exposure categories.

It is important to note that in the exposure categories, unlike the risk transmission categories, males are counted in the heterosexual contact (HC) category regardless of what is known about their female partners' risk behaviors. This results in an increased proportion of persons in the HC category.

Figure 5 below shows the distribution of exposures among HIV-positive persons currently living in Michigan as of January 2012 (data also found on table 10, page 104).

Figure 5: HIV infection cases currently living in Michigan by exposure category, January 2012 (N = 15,753)



- While over half of all prevalent HIV cases are classified as men who have sex with men (MSM) in the risk transmission hierarchy, nineteen percent are behaviorally bisexual, reporting sex with both males and females (MSM/HC and MSM/HC/IDU).
- Almost all injection drug users (IDU) reported additional risk behaviors, including eight percent reporting heterosexual contact (HC/IDU) and three percent reporting both heterosexual contact and male-male sex (MSM/IDU/HC).

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Distribution of Living HIV Cases by Race and Sex

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figures 6 and 7 show the impact of the HIV epidemic on six race/sex groups.

Figure 6: Estimated prevalence of persons living with HIV in Michigan by race and sex, January 2012

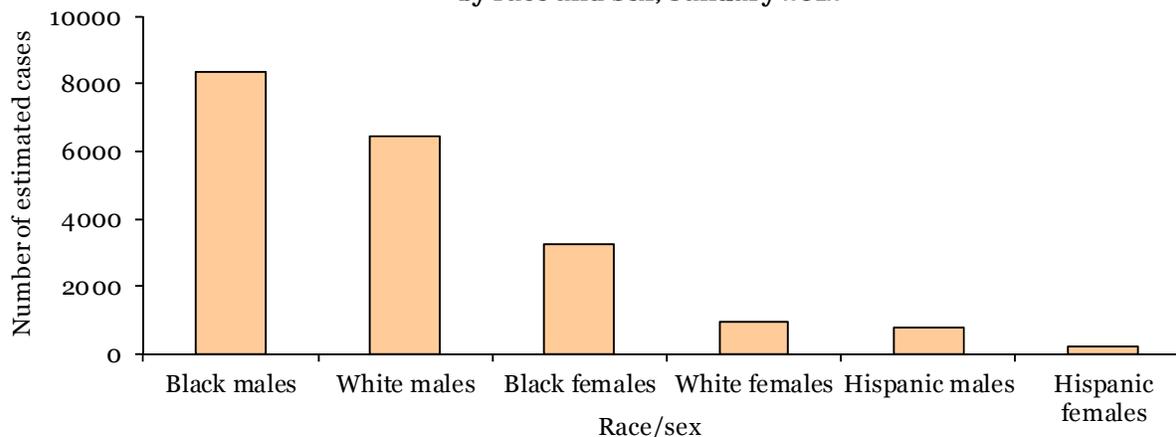
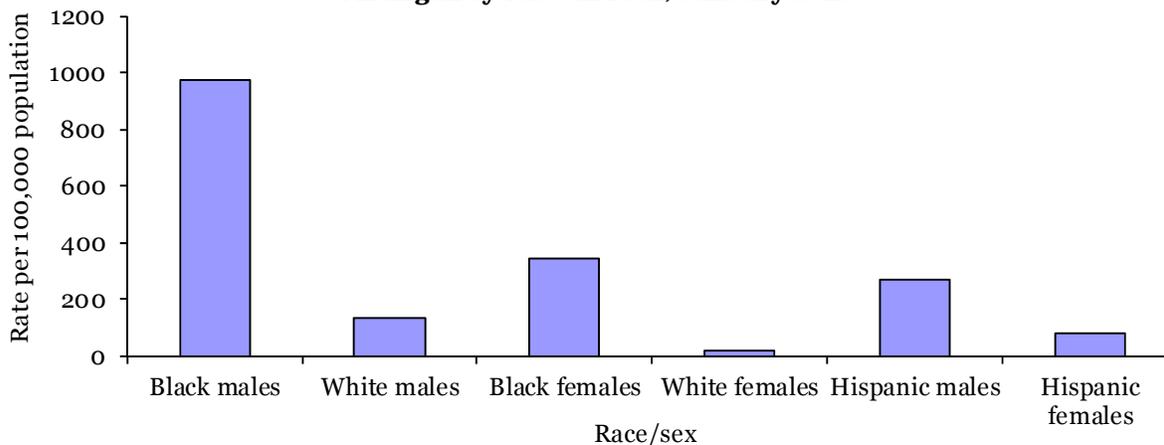


Figure 7: Reported prevalence rate of persons living with HIV in Michigan by race and sex, January 2012



- Black males have both the highest rate per 100,000 (973) and the highest estimated number (8,360) of HIV cases. This high rate means the impact of the epidemic is greatest on this demographic group.
- Black females have the second highest rate (343) and the third highest estimated number (3,260) of cases of HIV.
- Hispanic males have the third highest rate (272) and the fifth highest estimated number (790) of cases. This indicates the impact of the epidemic is high on a relatively small demographic group.
- White males have the fourth highest rate (133) and the second highest estimated number (6,470) of cases.
- Hispanic females have the fifth highest rate (76) and the second lowest estimated number (210) of cases.
- White females have the lowest rate (19) and the lowest estimated number (940) of HIV cases.
- Data can also be found on table 8, page 101.

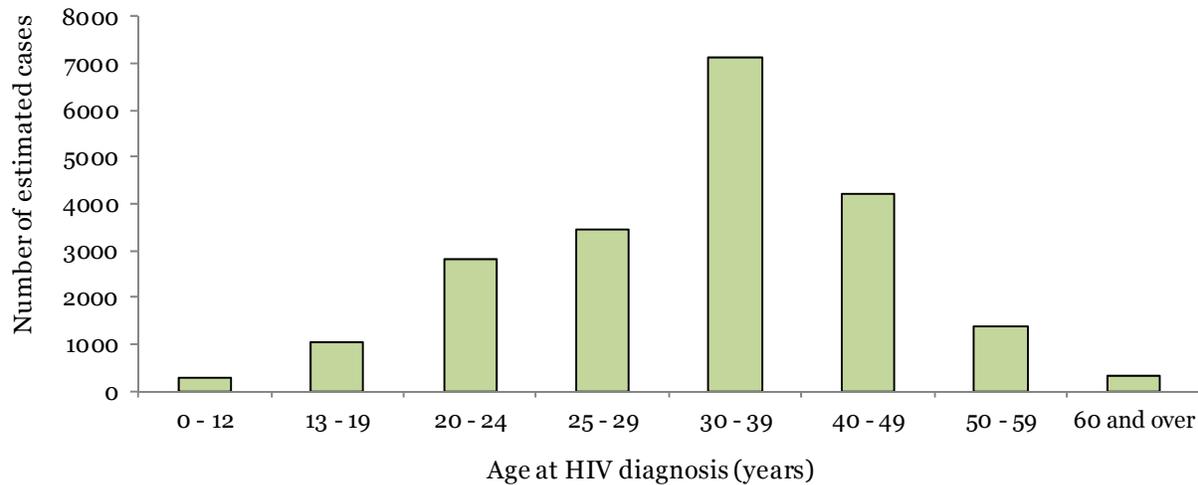
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Distribution of Living HIV Cases by Age at Diagnosis

Data from enhanced HIV/AIDS Reporting System (eHARS)

Figure 8 shows the breakdown of prevalent cases by age at diagnosis.

Figure 8: Estimated prevalence of persons living with HIV in Michigan by age at diagnosis, January 2012



- The majority of all prevalent cases (an estimated 7,140) were 30-39 years old at the time of diagnosis.
- The next highest number of estimated cases is among persons 40-49 years at diagnosis, followed closely by 25-29 year olds (4,200 vs. 3,440, respectively).
- The smallest number of estimated cases is among individuals diagnosed at 60 years and older, followed by individuals diagnosed between the ages of 0 and 12 years.
- There were an estimated 10 cases with unknown age at diagnosis not included in this figure.
- Data can also be found on table 8, page 101.