



Estimated HIV Incidence and Prevalence in the United States, 2010–2015

Estimates of HIV Incidence and Prevalence

- Based on National HIV Surveillance System (NHSS) data reported through June 2017
 - Data from the 50 states and the District of Columbia
 - Data for adults and adolescents aged ≥ 13 years
- Calculated using the first CD4 test after HIV diagnosis and a CD4 depletion model indicating disease progression*
- Provides the following estimates:
 - HIV incidence
 - HIV prevalence (persons living with diagnosed or undiagnosed infection)
 - Percentage of diagnosed HIV infection

* Song R, Hall HI, Green TA, Szwarcwald CL, Pantazis N. Using CD4 data to estimate HIV incidence, prevalence, and percent of undiagnosed infections in the United States. *J Acquir Immune Defic Syndr* 2017;74(1):3–9. doi:10.1097/QAI.0000000000001151.





Estimates of HIV Incidence

- Incidence measures the number of HIV infections that occurred during a specified time (e.g., year).
 - Diagnoses during a specified time refer to infections among persons who may have been infected for a number of years.
- Incidence estimates can be used to assess changes in characteristics of persons most at risk for acquiring HIV infection.





Estimates of HIV Prevalence

- Prevalence refers to the number of persons living with HIV at a given time regardless of the time of infection or whether the person has received a diagnosis.
- Prevalence and the percentage of diagnosed infections reflect the number of persons in need of care and treatment services for HIV infection.
- Calculation of percentage of diagnosed HIV
 - Numerator: Persons aged ≥ 13 years living with diagnosed HIV infection year-end 2015
 - Denominator: Estimated number of persons aged ≥ 13 years living with diagnosed or undiagnosed HIV infection year-end 2015

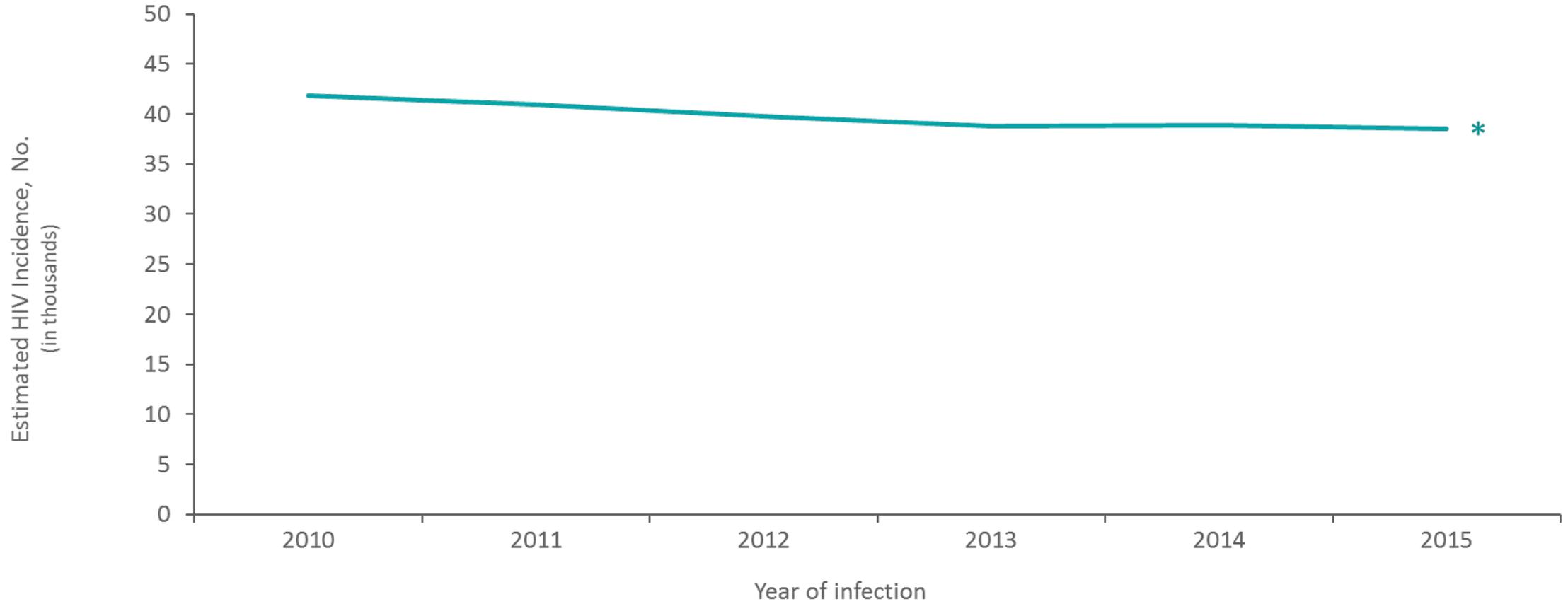


Reliability Standards

- Relative standard errors (RSEs) were calculated for the incidence and prevalence estimates and used to determine reliability.
- All highlights are based on reliable estimates (RSE <30%).
- Estimates with RSEs of 30%–50% are displayed with a footnote that they should be used with caution because they do not meet the standard of reliability.
- Estimates with RSEs of >50% are considered statistically unreliable; they are not displayed because they do not meet the minimum standard of reliability.



Estimated HIV Incidence among Persons Aged ≥ 13 Years, 2010–2015—United States

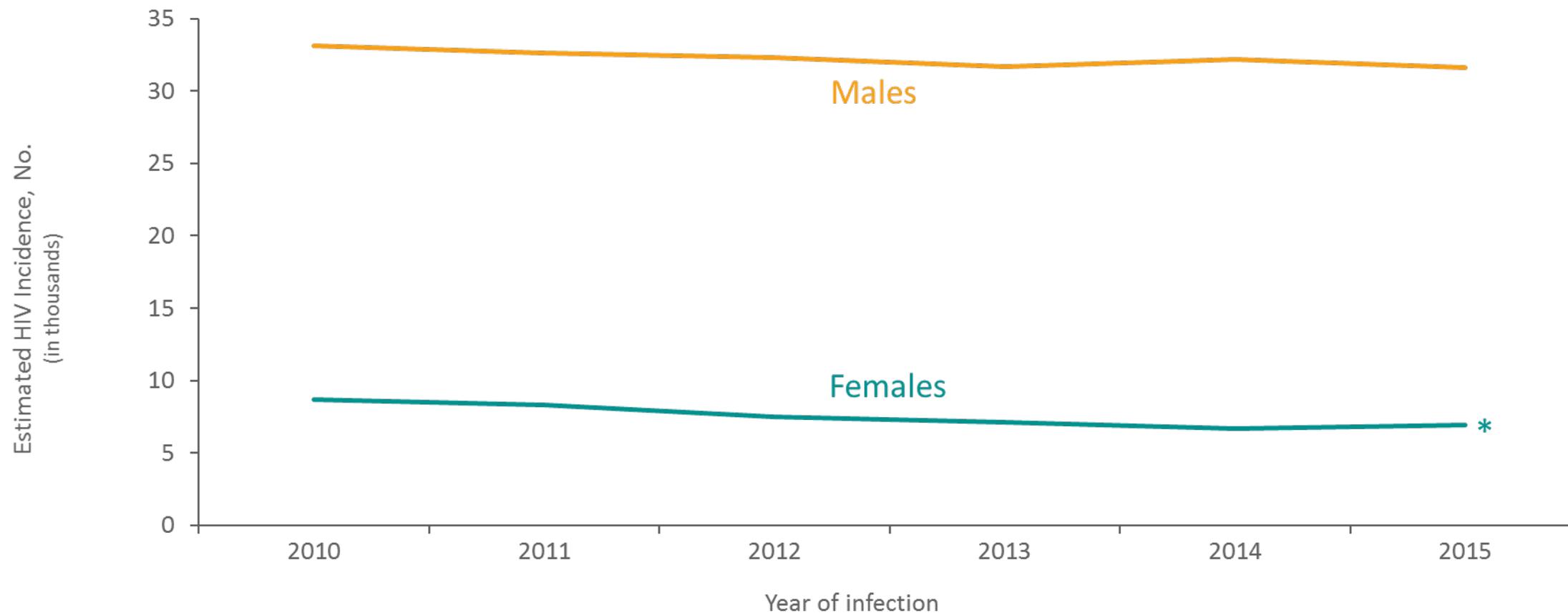


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.

*Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



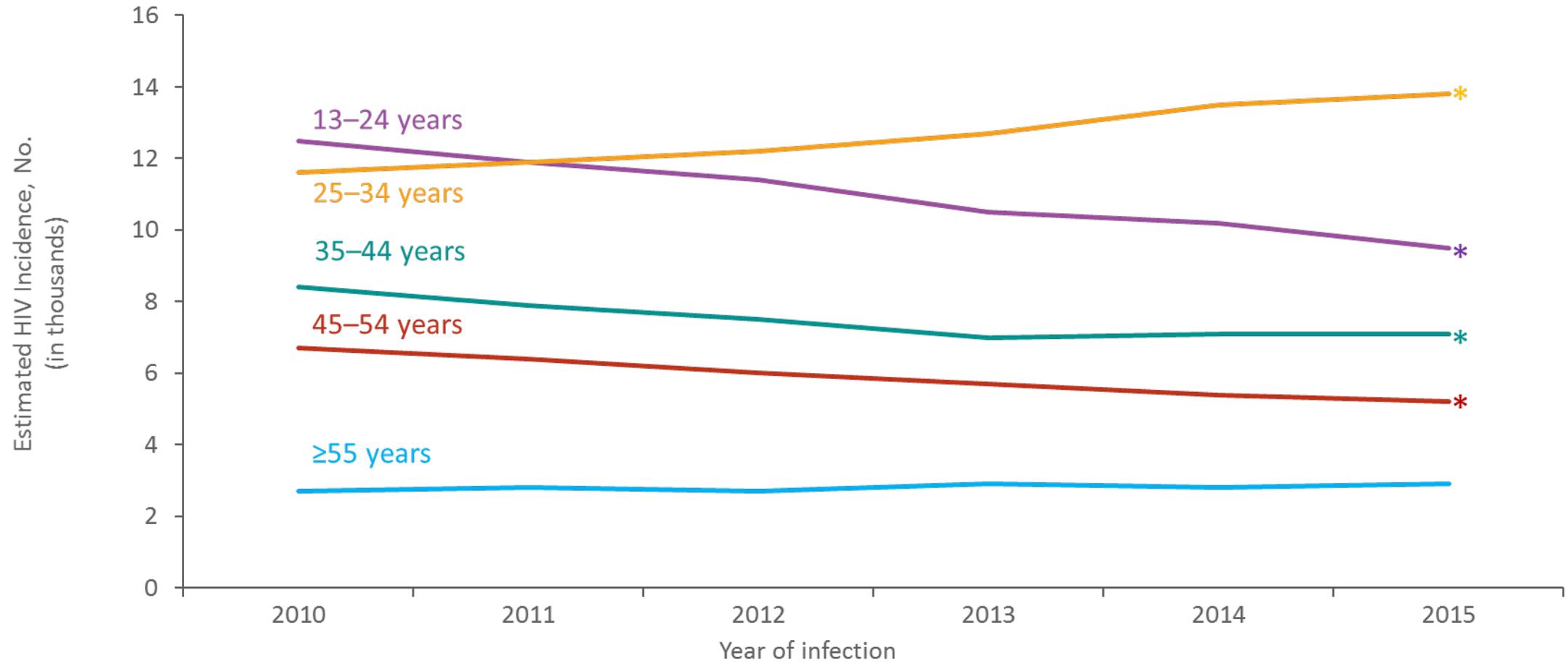
Estimated HIV Incidence among Persons Aged ≥13 Years, by Sex, 2010–2015—United States



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).

Estimated HIV Incidence among Persons Aged ≥13 Years, by Age, 2010–2015—United States



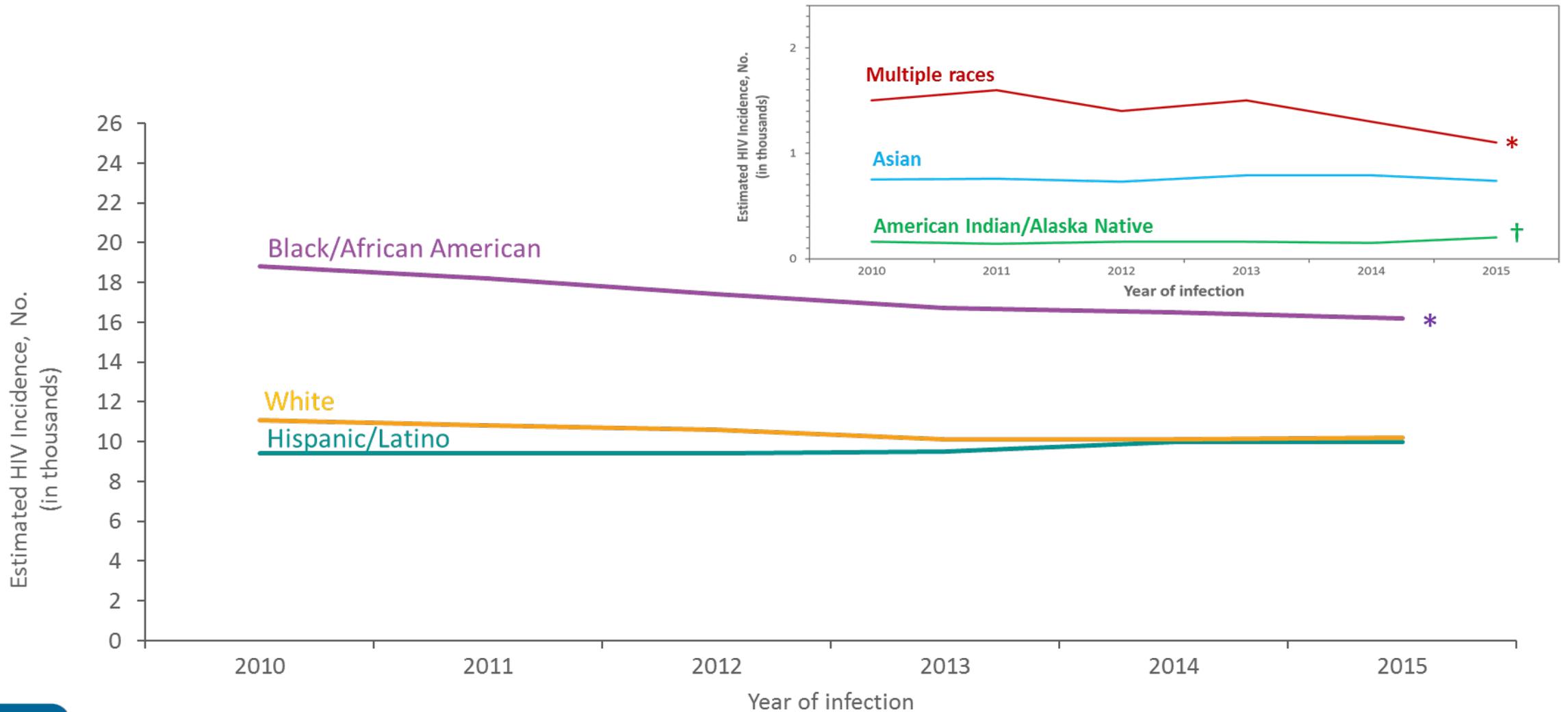
Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).





Estimated HIV Incidence among Persons Aged ≥13 Years, by Race/Ethnicity, 2010–2015—United States



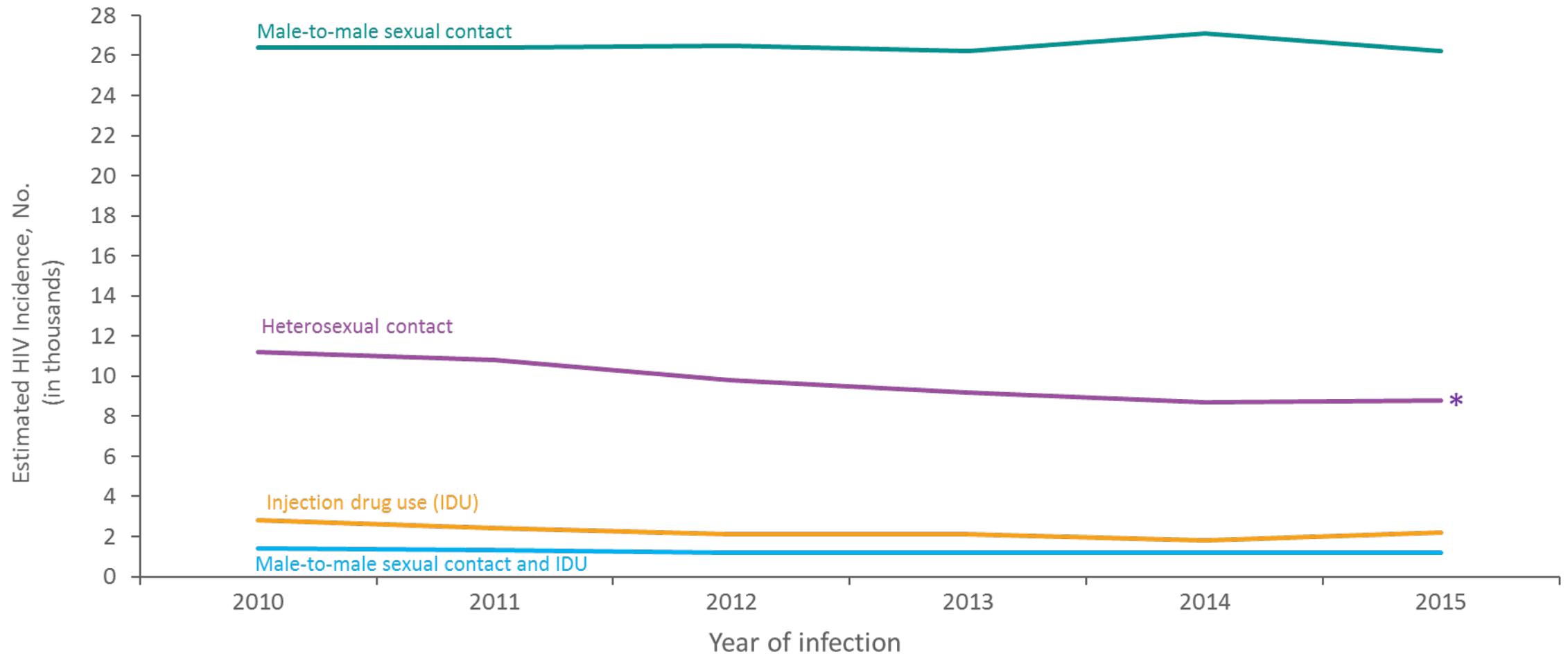
Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Hispanics/Latinos can be of any race.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).

† Estimates should be used with caution because they do not meet the standard of reliability.



Estimated HIV Incidence among Persons Aged ≥13 Years, by Transmission Category, 2010–2015—United States

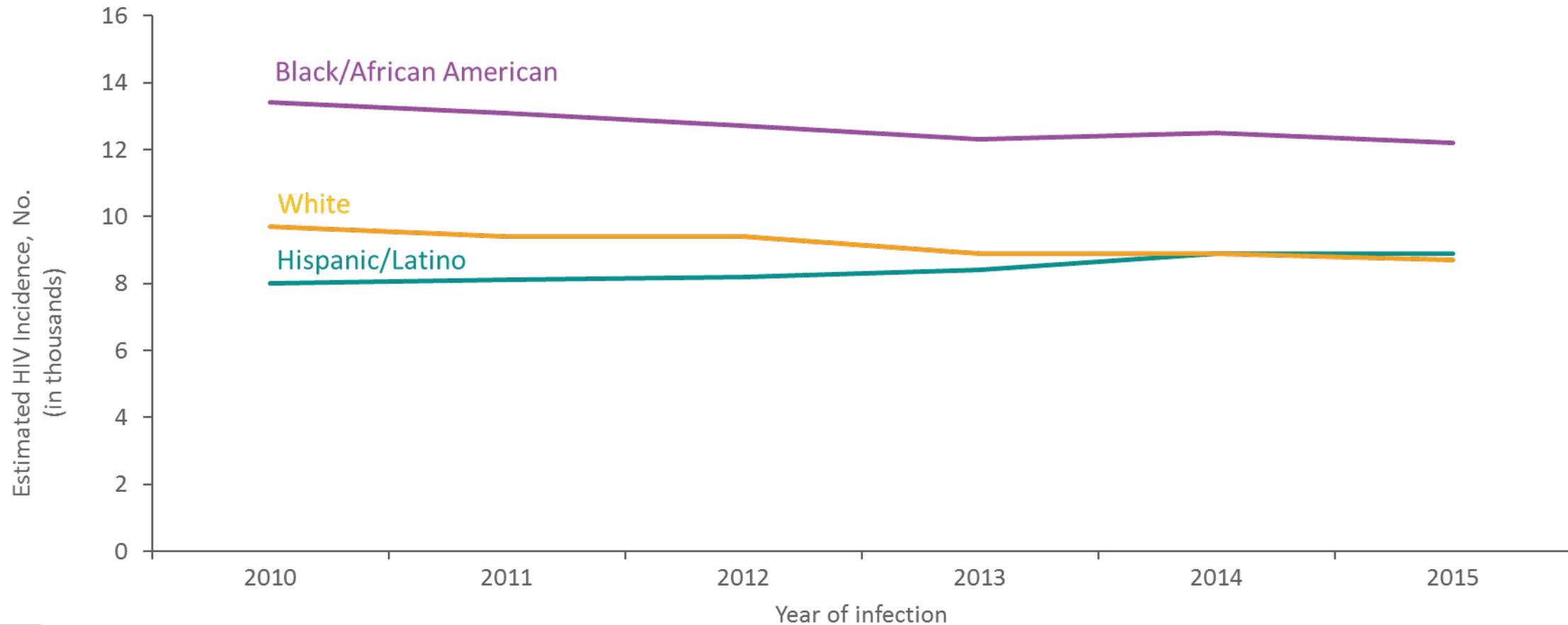


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



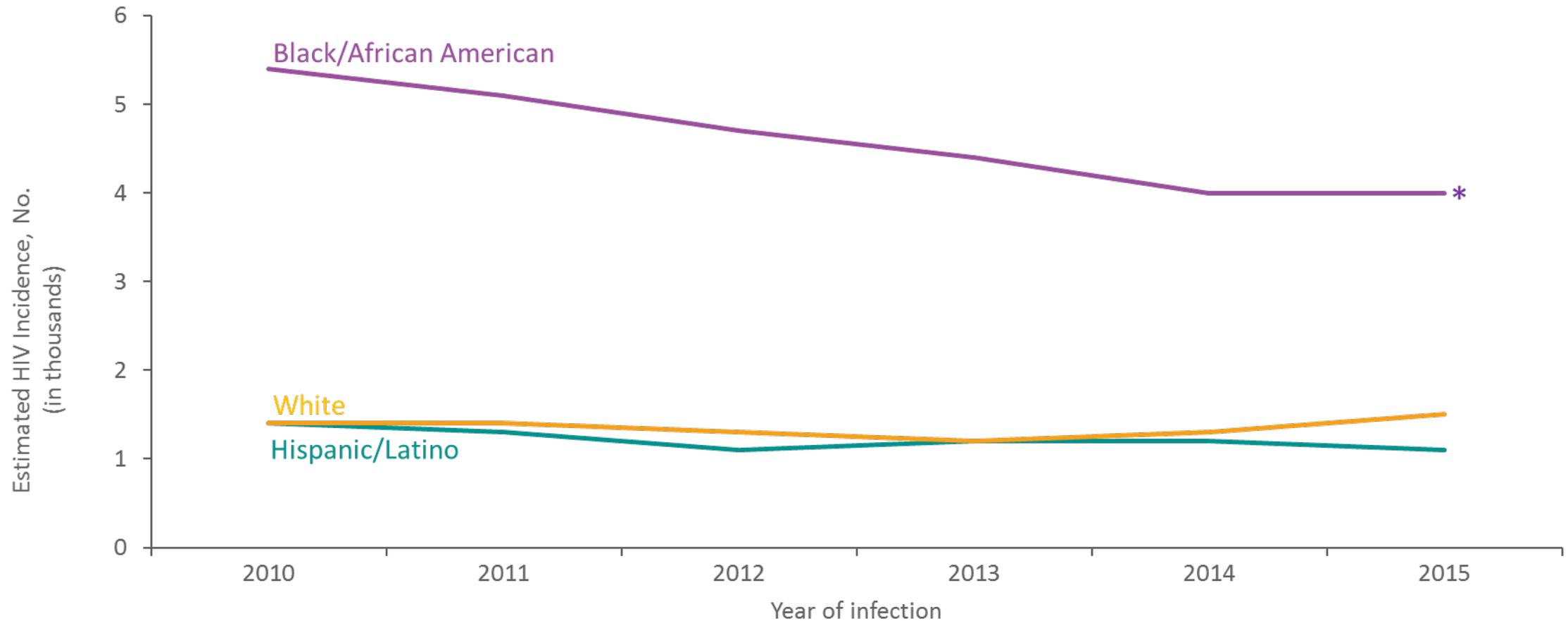
Estimated HIV Incidence among Males Aged ≥ 13 Years, by Race/Ethnicity, 2010–2015—United States



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Hispanics/Latinos can be of any race.



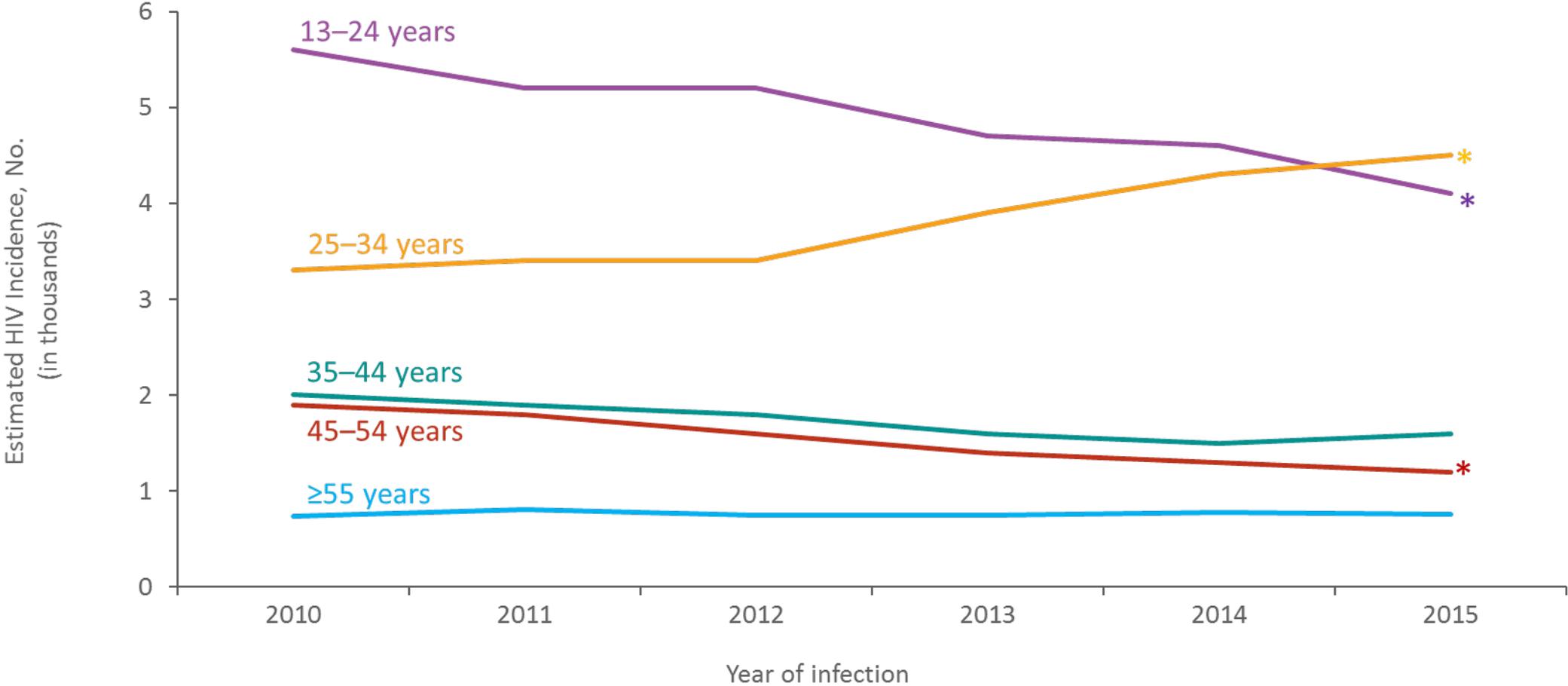
Estimated HIV Incidence among Females Aged ≥ 13 Years, by Race/Ethnicity, 2010–2015—United States



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Hispanics/Latinos can be of any race.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).

Estimated HIV Incidence among Black/African American Males Aged ≥13 Years, by Age, 2010–2015—United States

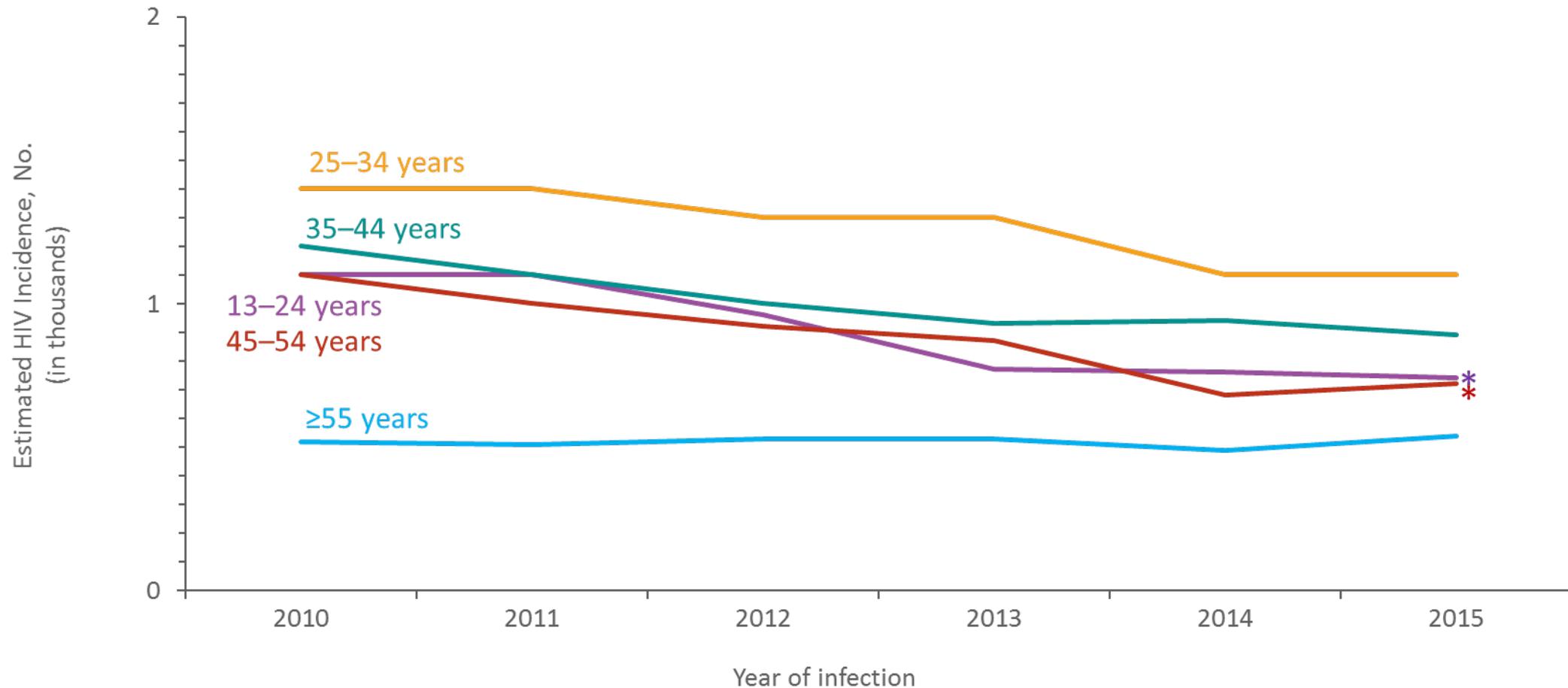


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.

* Difference from the 2010 estimate was deemed statistically significant (P < .05).



Estimated HIV Incidence among Black/African American Females Aged ≥13 Years, by Age, 2010–2015—United States

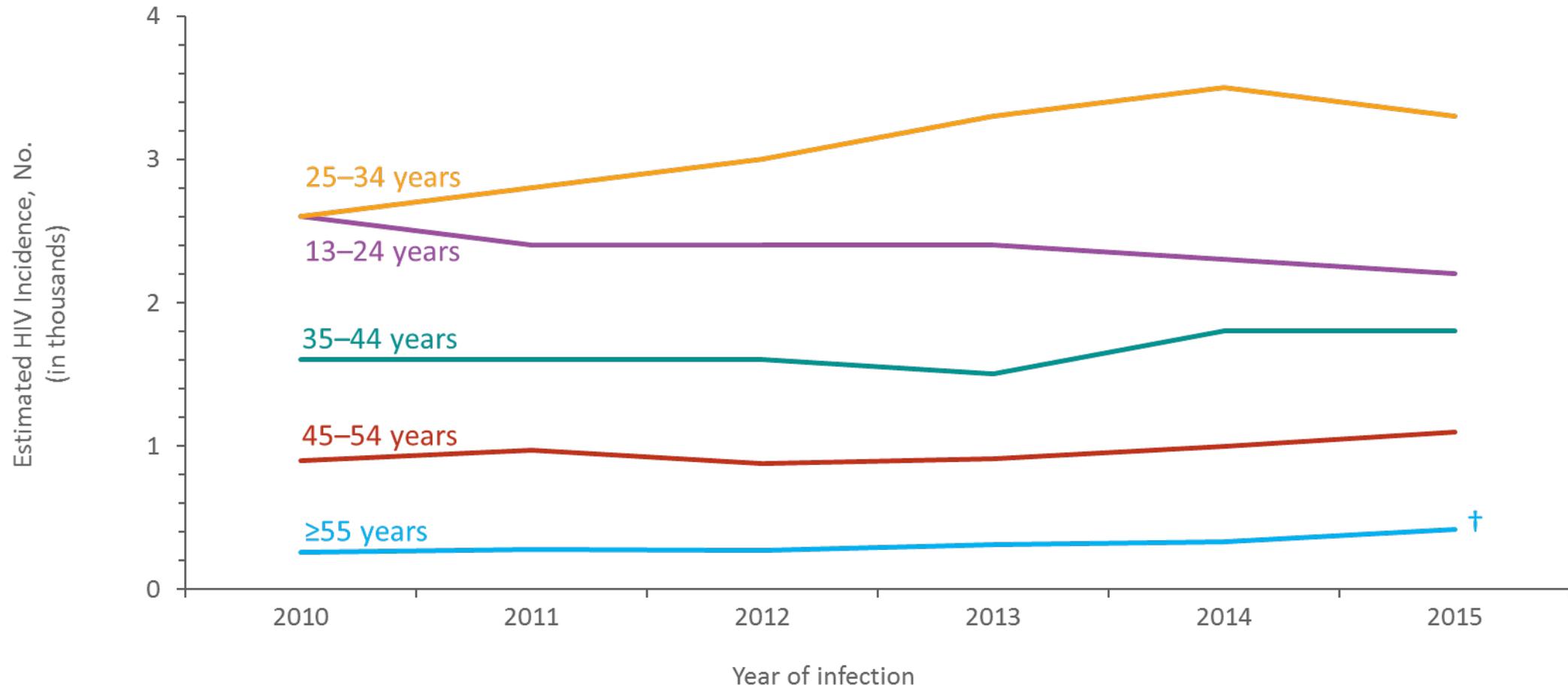


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.

*Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



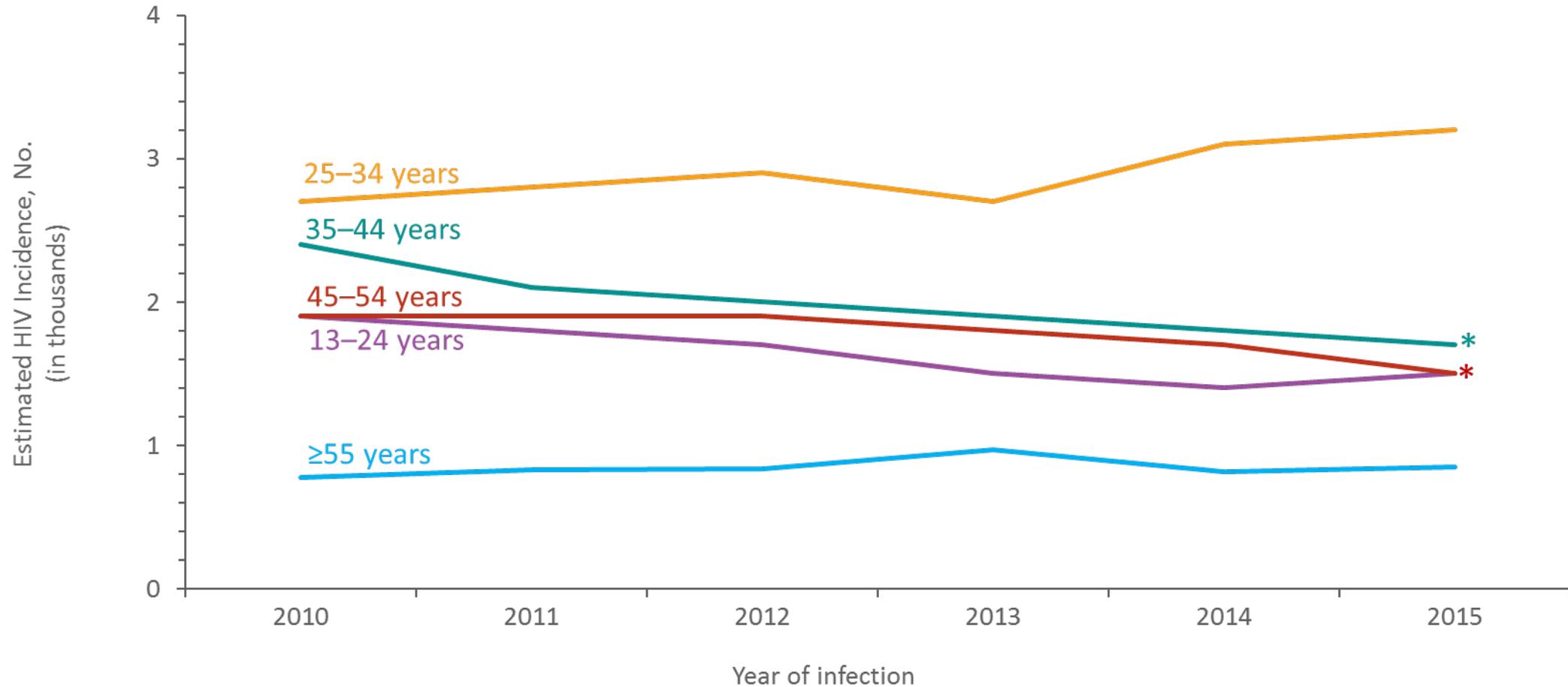
Estimated HIV Incidence among Hispanic/Latino Males Aged ≥13 Years, by Age, 2010–2015—United States



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.
†Estimates should be used with caution because they do not meet the standard of reliability.



Estimated HIV Incidence among White Males Aged ≥13 Years, by Age, 2010–2015—United States

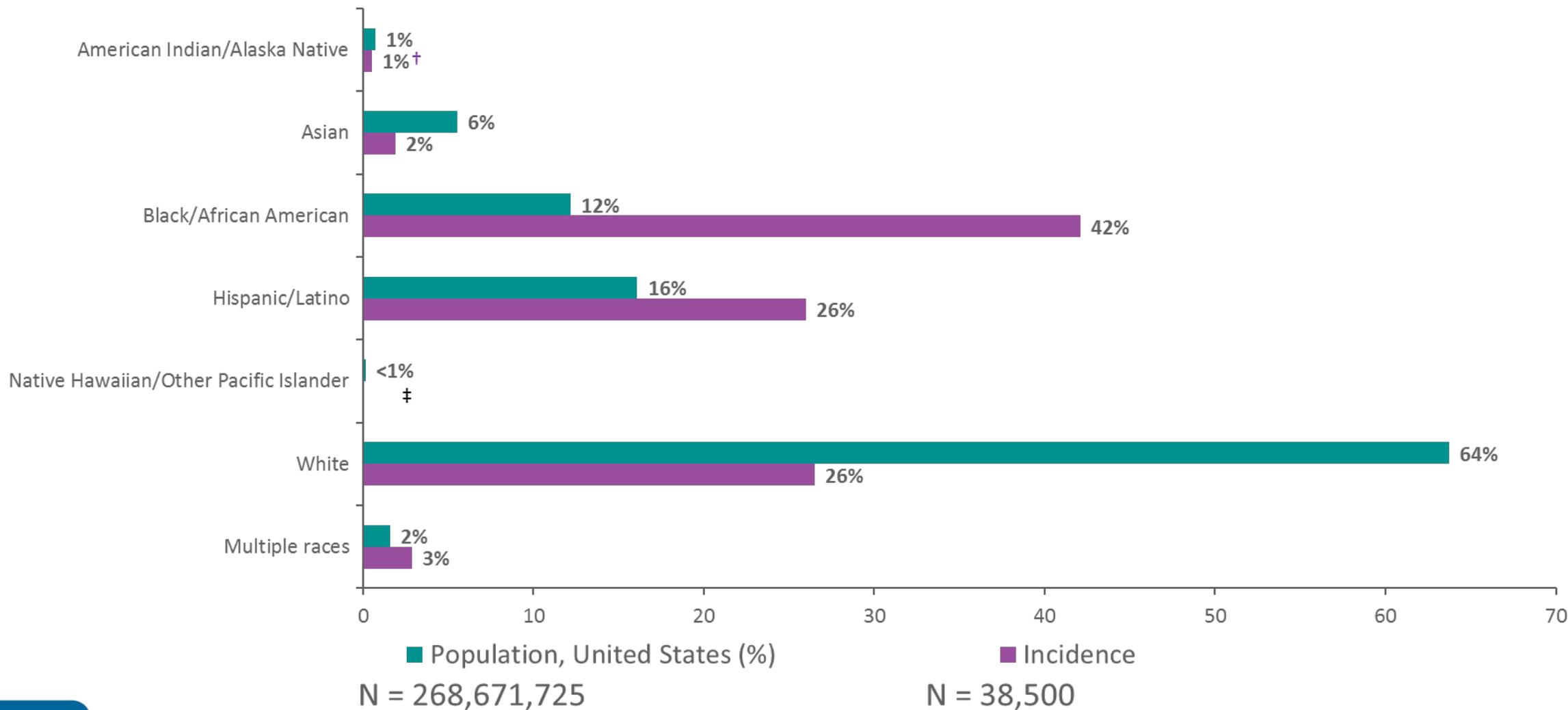


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.

*Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



Estimated HIV Incidence and Population among Persons Aged ≥13 Years, by Race/Ethnicity, 2015—United States



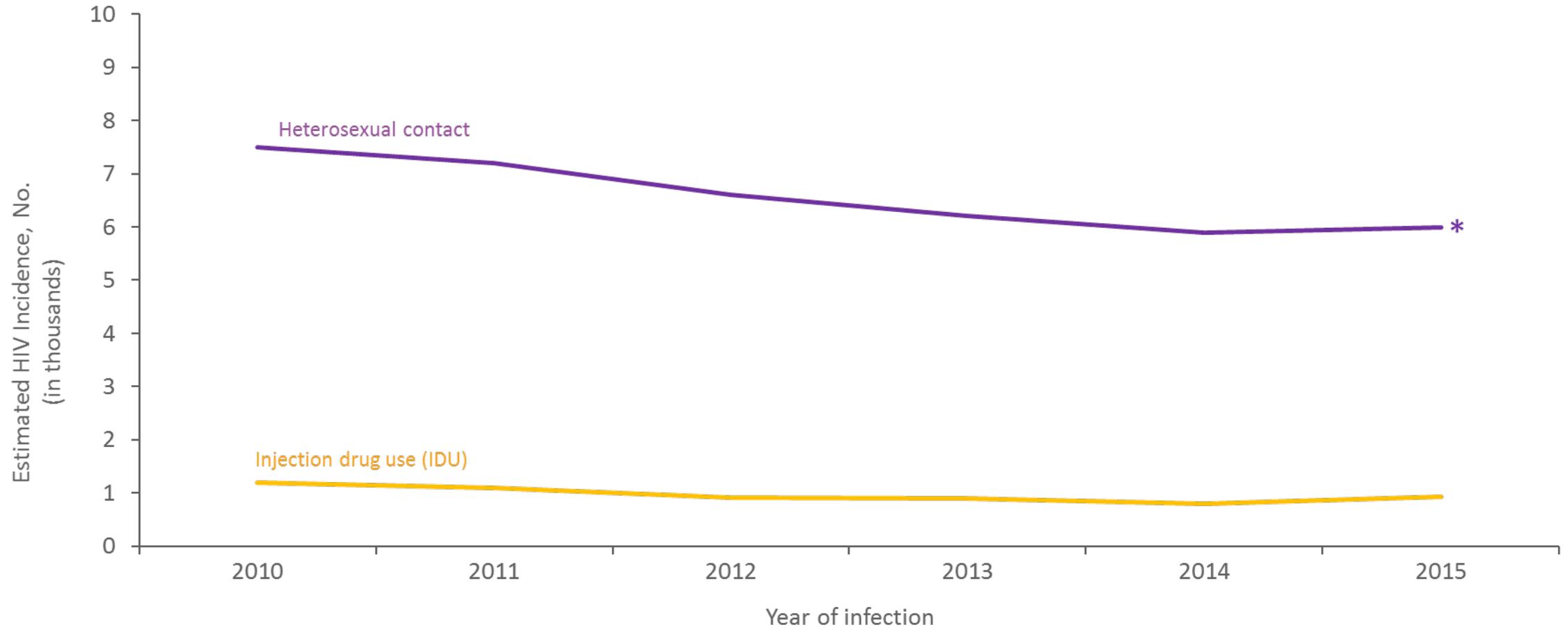
Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Hispanics/Latinos can be of any race.

† Estimate should be used with caution because it does not meet the standard of reliability.

‡ Incidence estimate is not provided for Native Hawaiians/other Pacific Islanders because it does not meet the minimum standard of reliability.



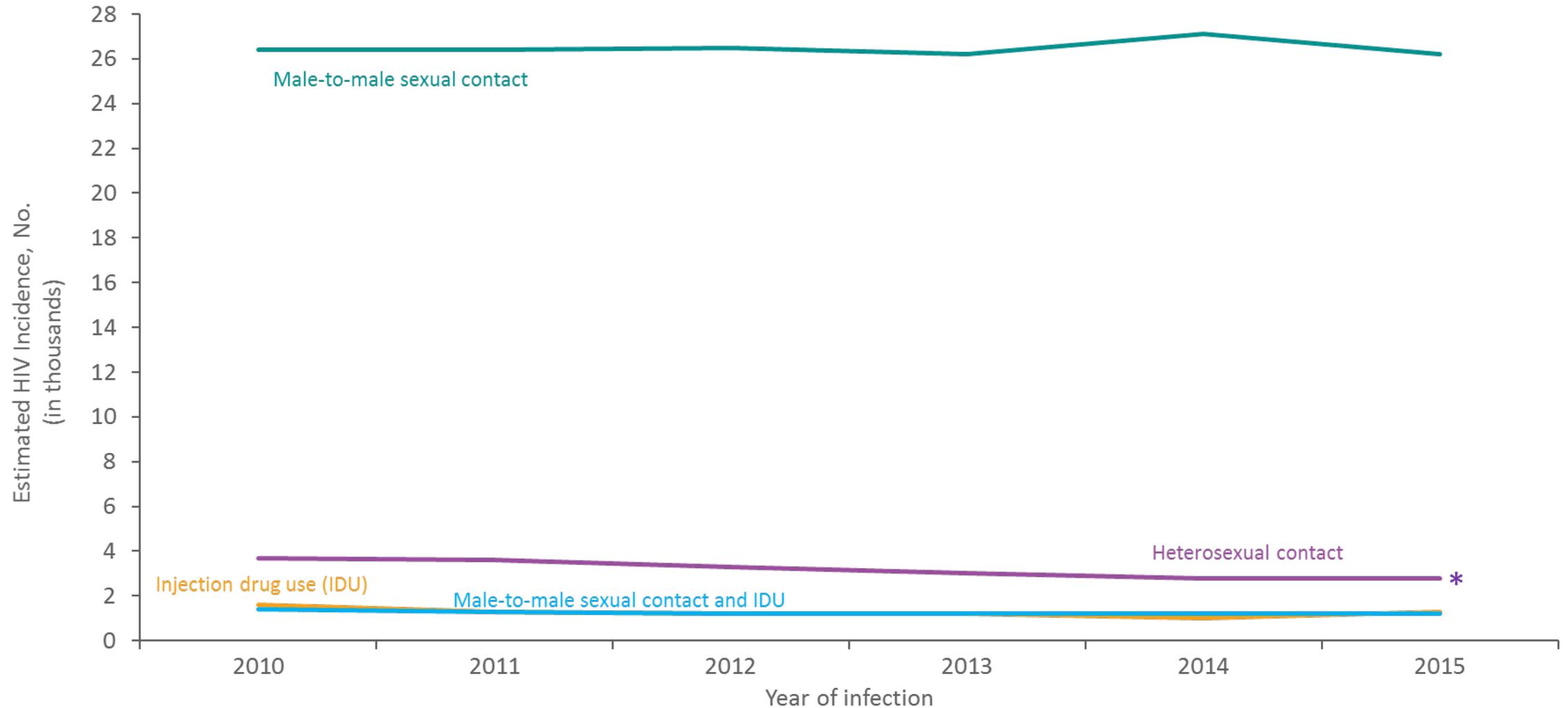
Estimated HIV Incidence among Females Aged ≥ 13 Years, by Transmission Category, 2010–2015—United States



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).

Estimated HIV Incidence among Males Aged ≥13 Years, by Transmission Category, 2010–2015—United States

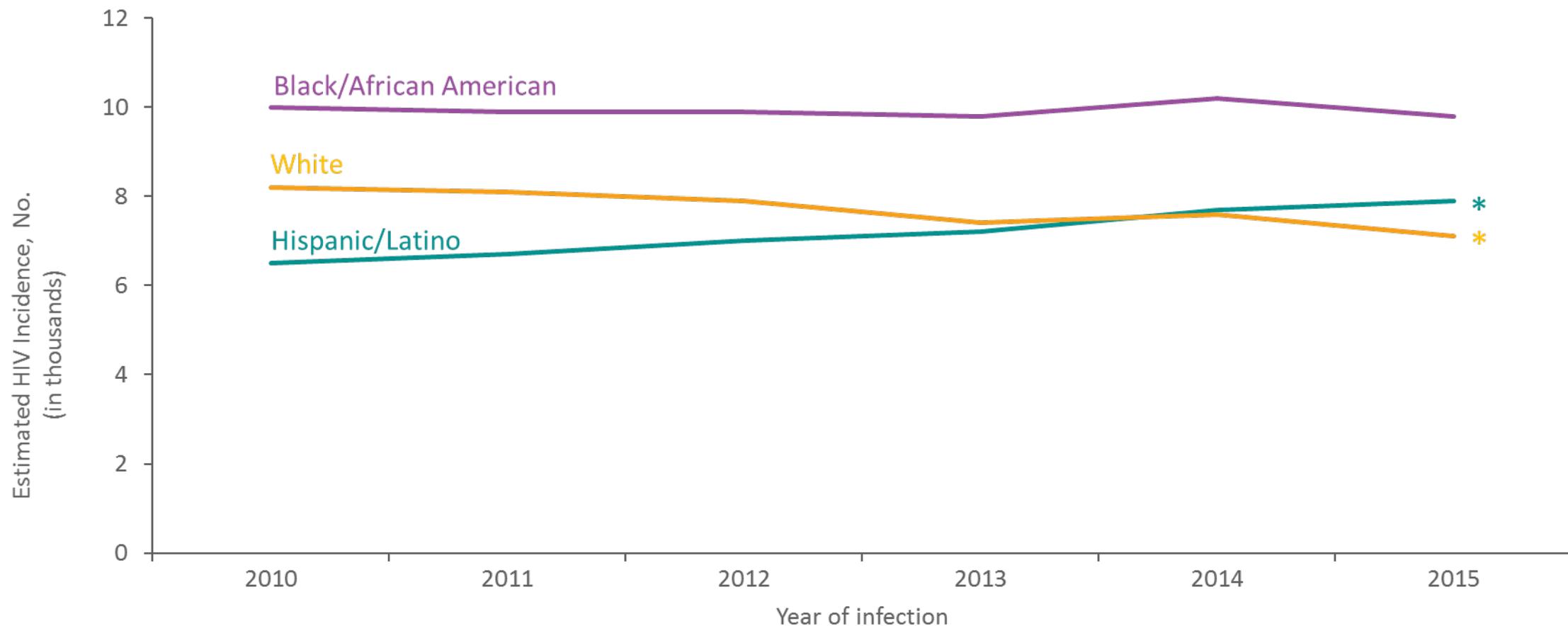


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Heterosexual contact is with a person known to have, or to be at high risk for, HIV infection.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



Estimated HIV Incidence among Men Who Have Sex with Men Aged ≥13 Years, by Race/Ethnicity, 2010–2015—United States

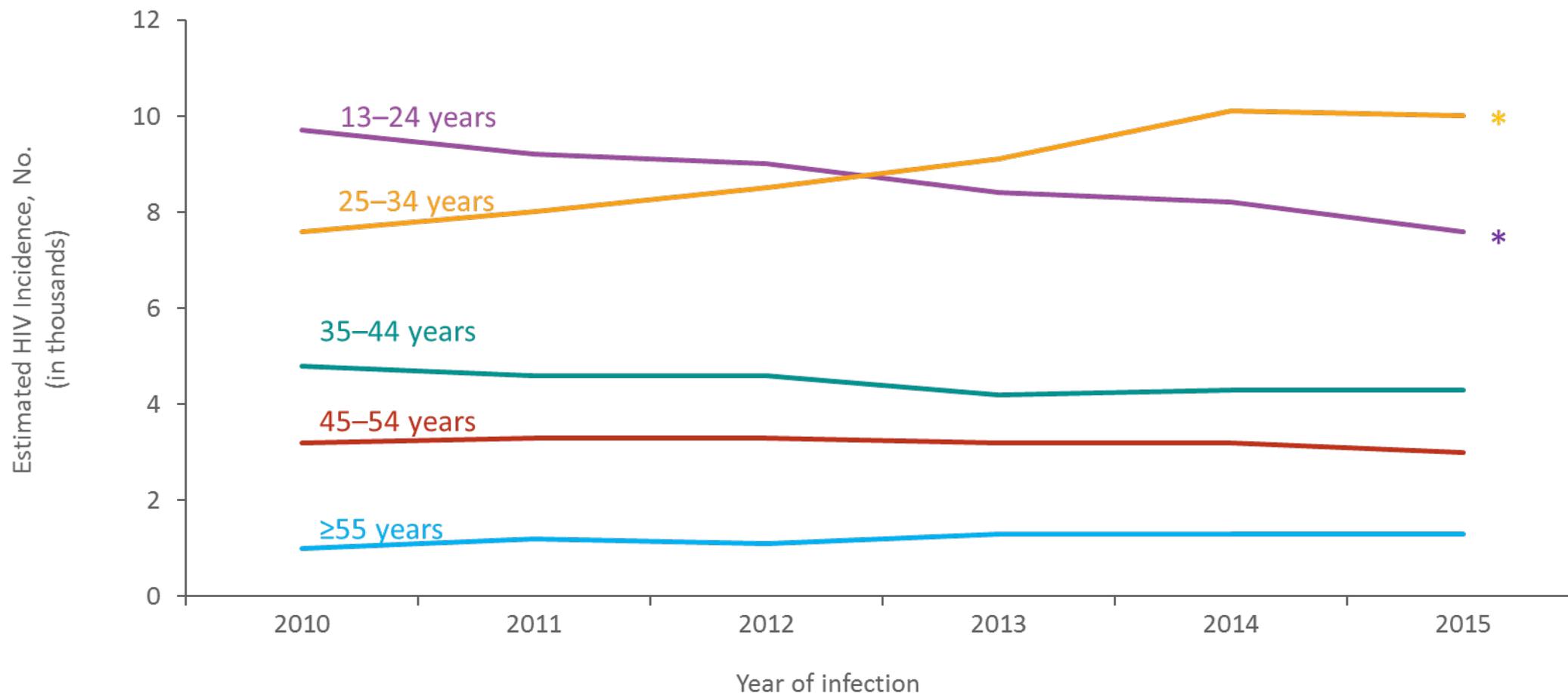


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Data on men who have sex with men do not include men with HIV infection attributed to male-to-male sexual contact and injection drug use. Hispanics/Latinos can be of any race.

*Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



Estimated HIV Incidence among Men who Have Sex with Men Aged ≥ 13 Years, by Age, 2010–2015—United States

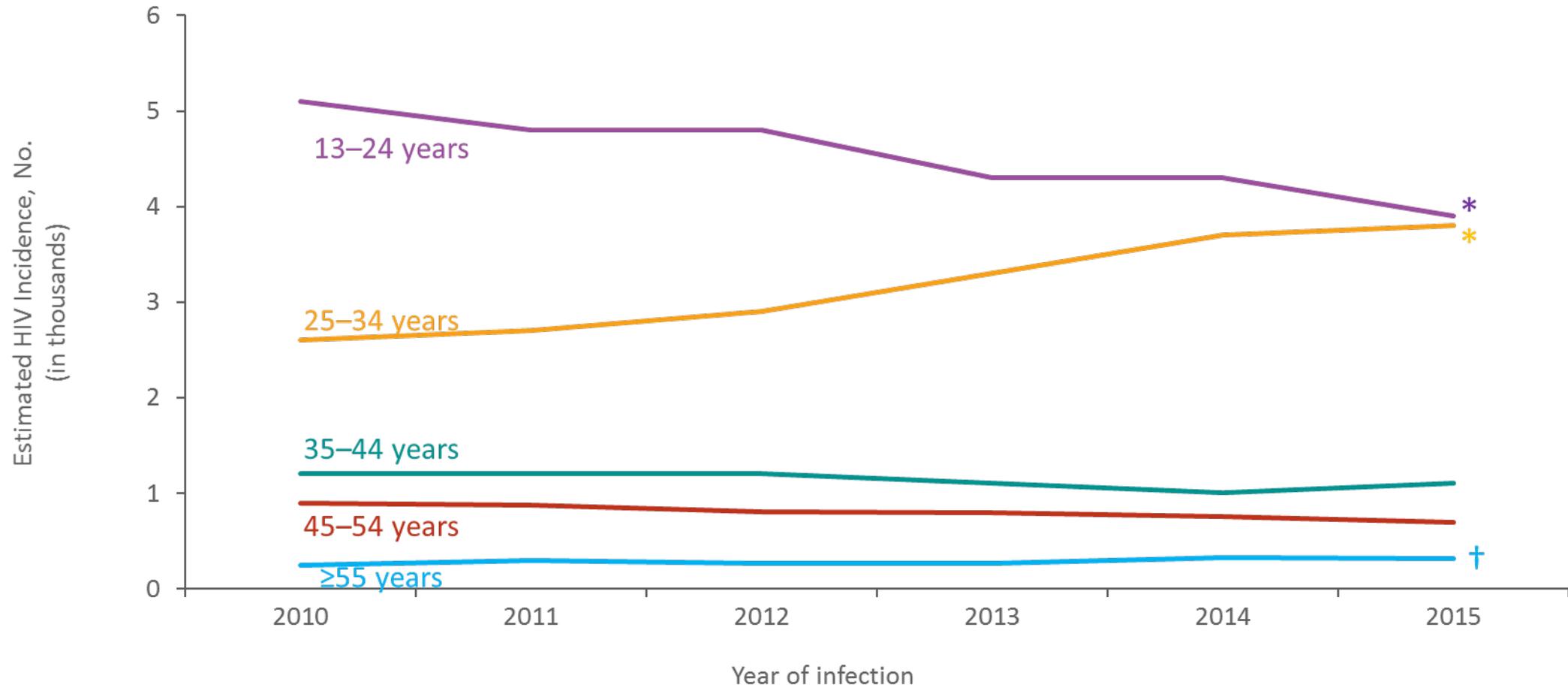


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Data on men who have sex with men do not include men with HIV infection attributed to male-to-male sexual contact and injection drug use.

*Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



Estimated HIV Incidence among Black/African American Men who Have Sex with Men Aged ≥13 Years, by Age, 2010–2015—United States

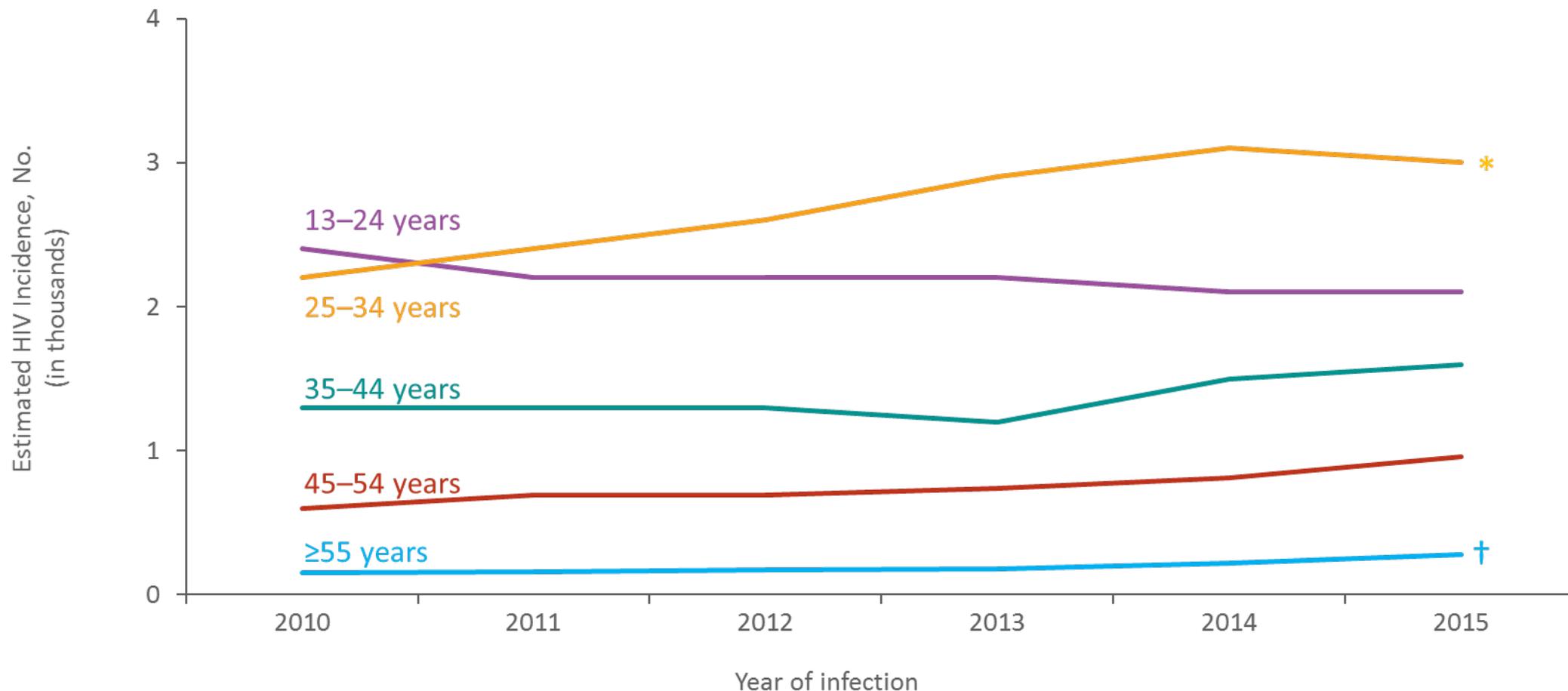


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Data on men who have sex with men do not include men with HIV infection attributed to male-to-male sexual contact and injection drug use.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).

† Estimates should be used with caution because they do not meet the standard of reliability.

Estimated HIV Incidence among Hispanic/Latino Men who Have Sex with Men Aged ≥13 Years, by Age, 2010–2015—United States



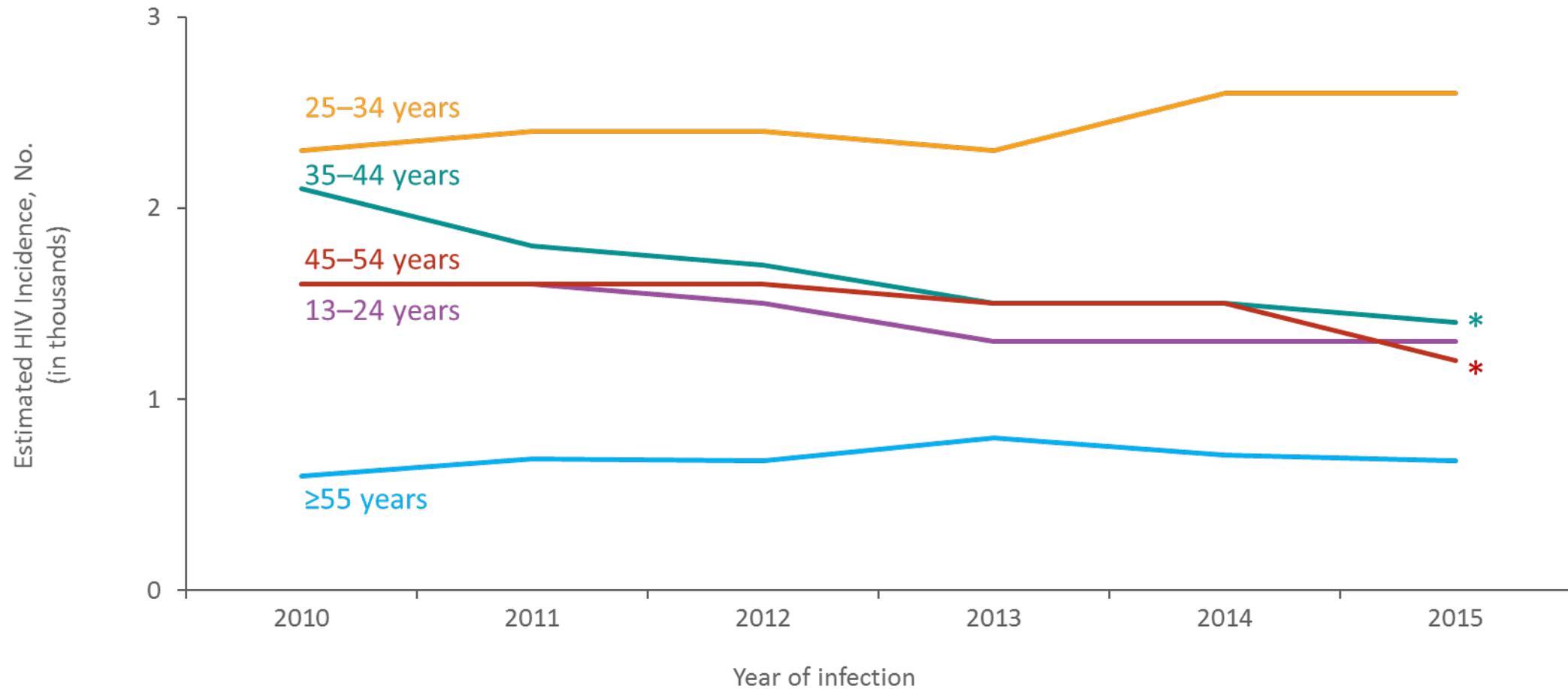
Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Data on men who have sex with men do not include men with HIV infection attributed to male-to-male sexual contact and injection drug use. Hispanics/Latinos can be of any race.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).

† Estimates should be used with caution because they do not meet the standard of reliability.



Estimated HIV Incidence among White Men who Have Sex with Men Aged ≥13 Years, by Age, 2010–2015—United States



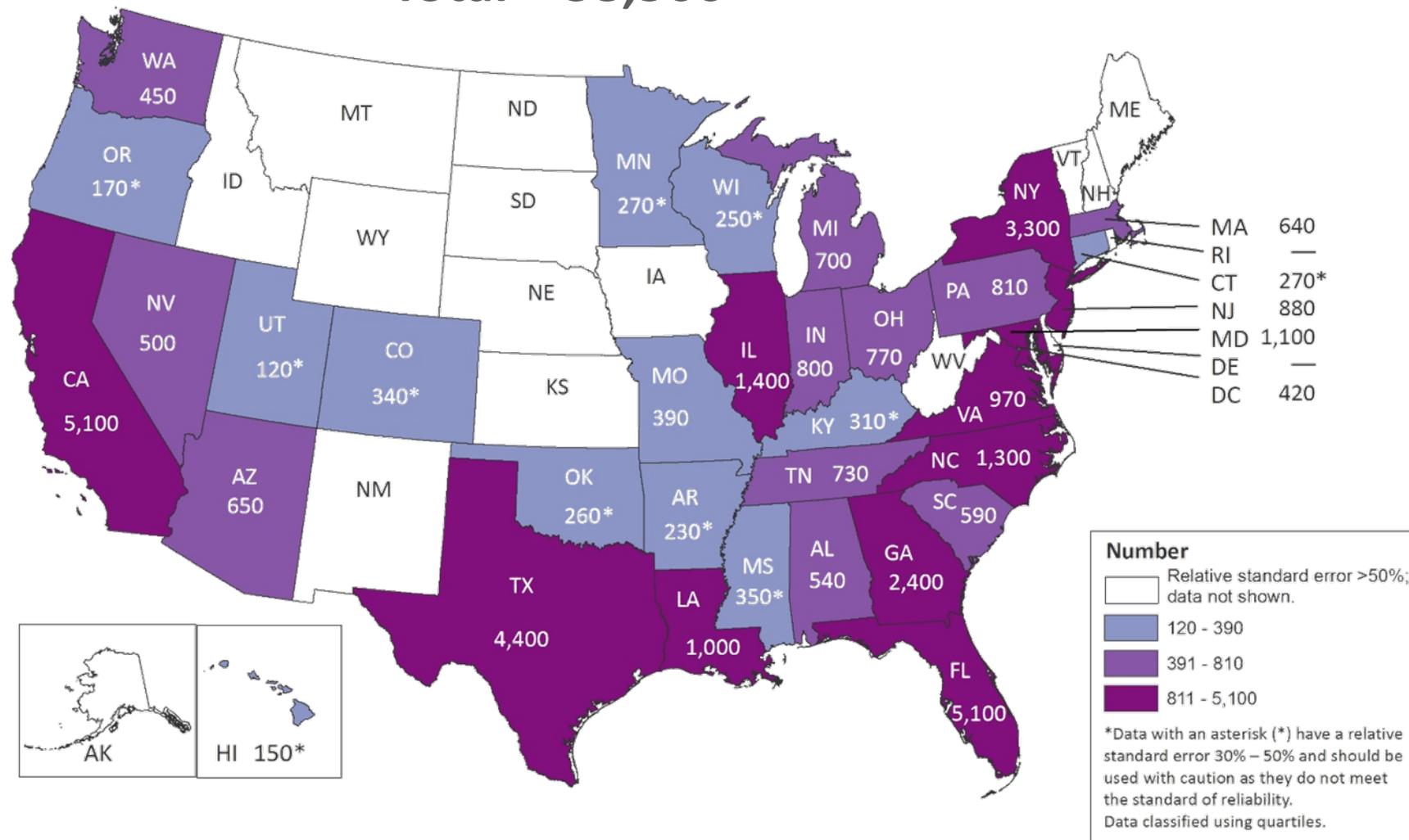
Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Data on men who have sex with men do not include men with HIV infection attributed to male-to-male sexual contact and injection drug use.

* Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



Estimated HIV Incidence among Persons Aged ≥13 Years, by Area of Residence, 2015—United States

Total = 38,500

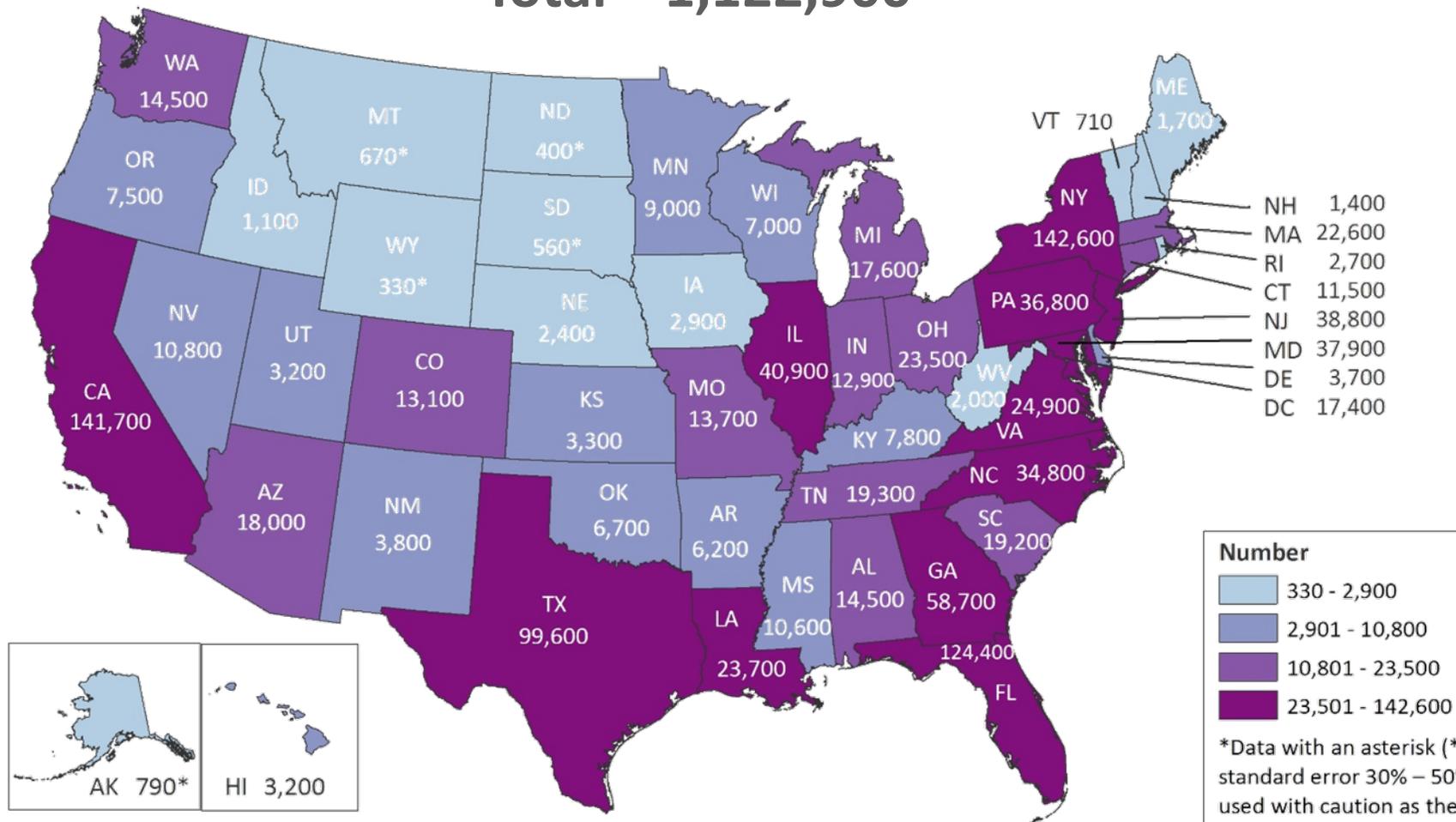


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Estimates rounded to the nearest 100 for estimates >1,000 and to the nearest 10 for estimates ≤1,000 to reflect model uncertainty.



Estimated HIV Prevalence among Persons Aged ≥ 13 years, by Area of Residence, 2015—United States

Total = 1,122,900



Number

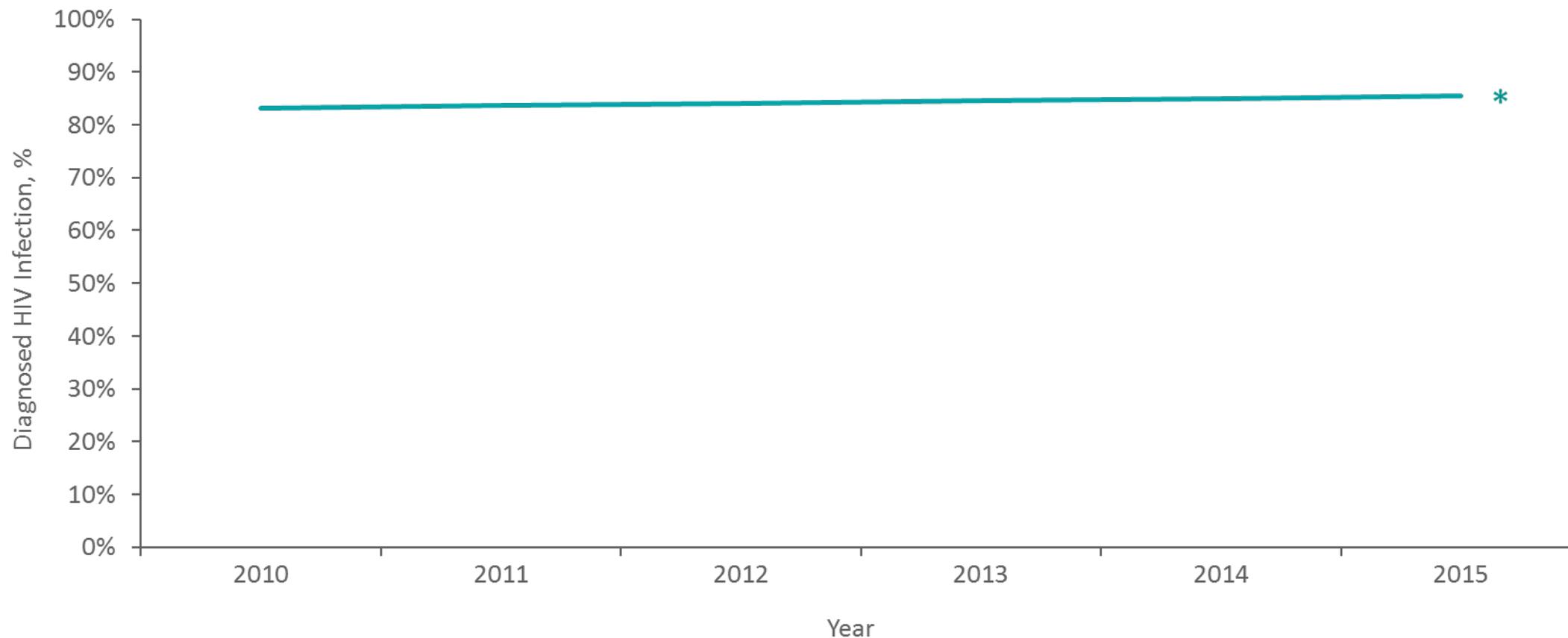
- 330 - 2,900
- 2,901 - 10,800
- 10,801 - 23,500
- 23,501 - 142,600

Data with an asterisk () have a relative standard error 30% – 50% and should be used with caution as they do not meet the standard of reliability.
Data classified using quartiles.

Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Estimates rounded to the nearest 100 for estimates >1,000 and to the nearest 10 for estimates $\leq 1,000$ to reflect model uncertainty.



Diagnosed Infection among Persons Aged ≥ 13 Years Living with Diagnosed or Undiagnosed HIV Infection, 2010–2015—United States

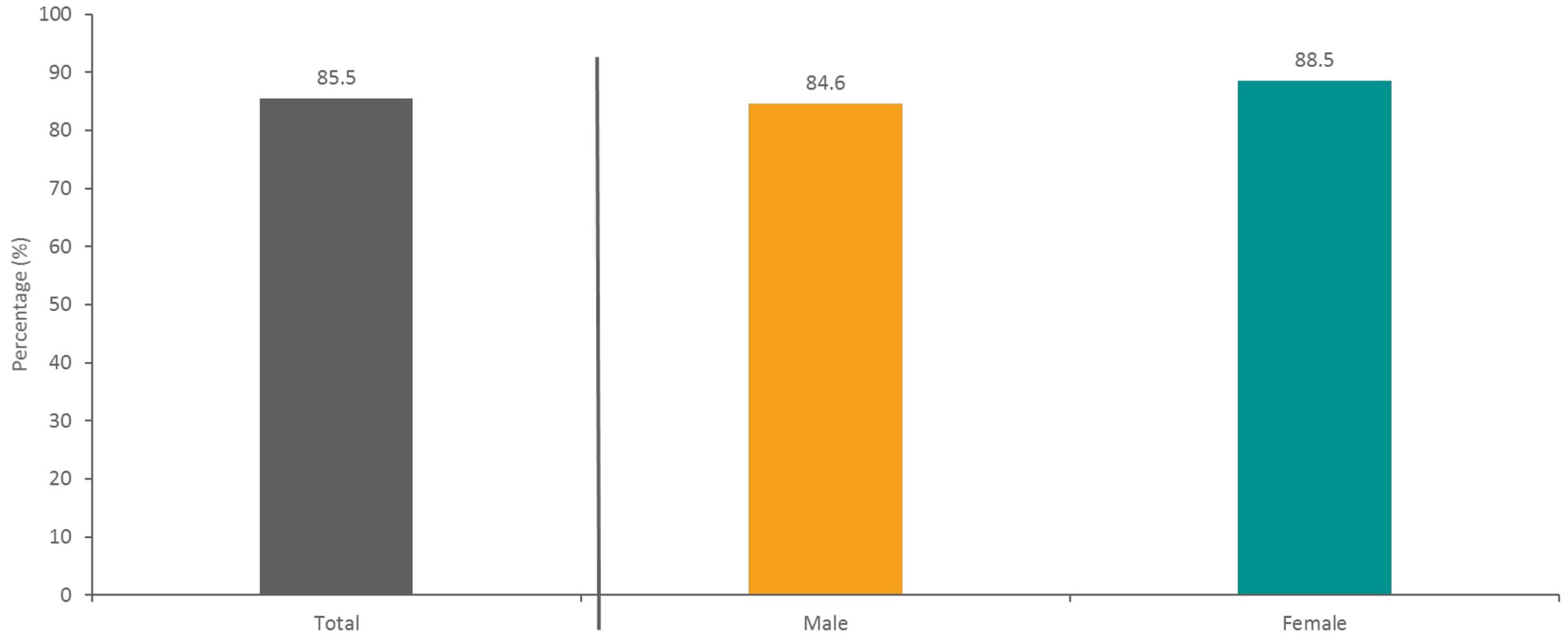


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.

*Difference from the 2010 estimate was deemed statistically significant ($P < .05$).



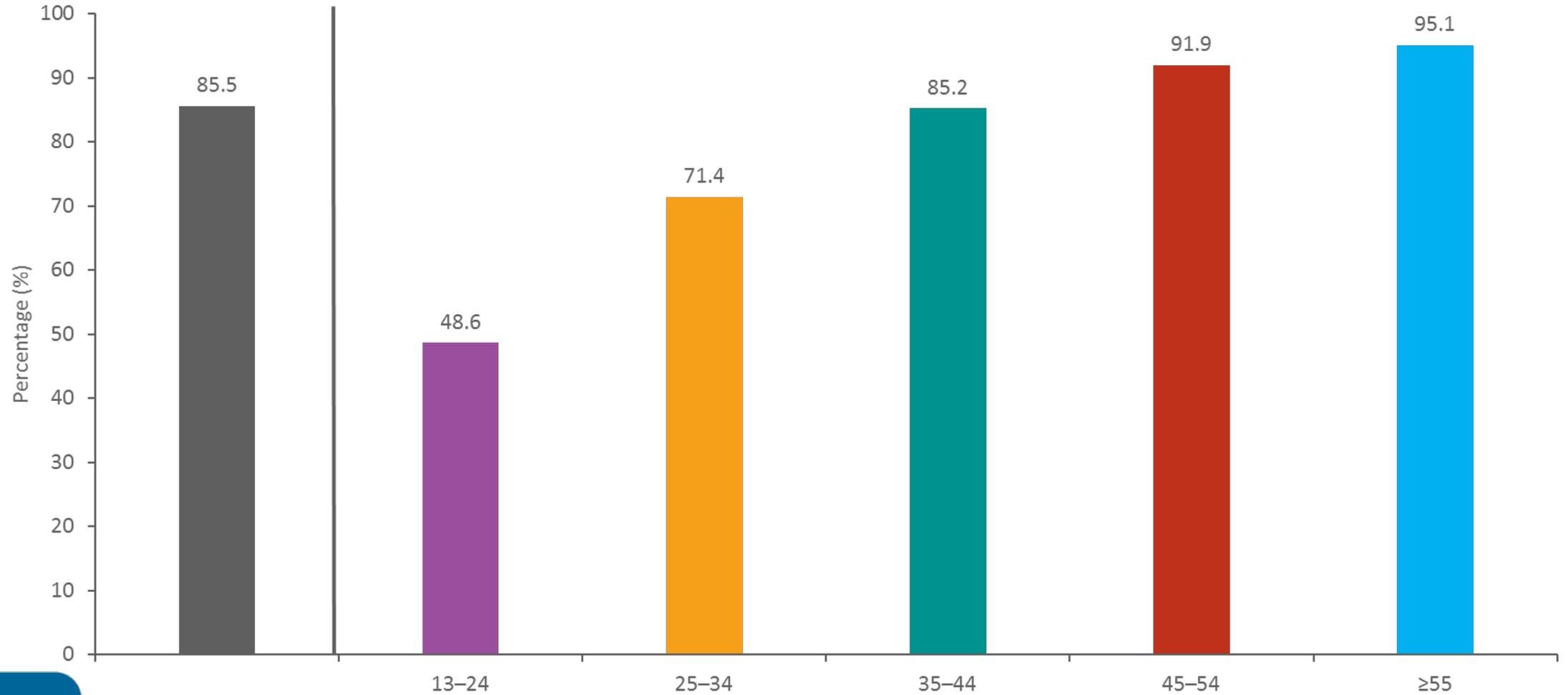
Diagnosed Infection among Persons Aged ≥ 13 Years Living with Diagnosed or Undiagnosed HIV Infection, by Sex, 2015—United States



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.



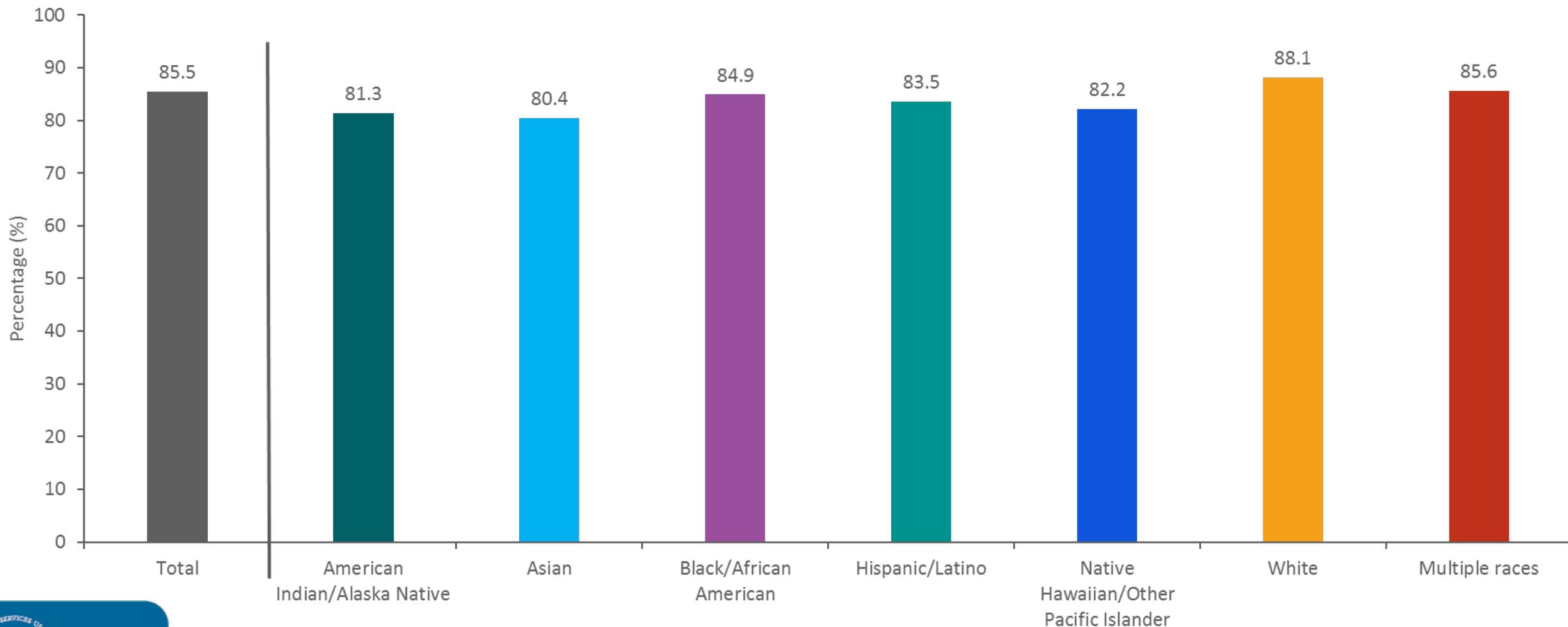
Diagnosed Infection among Persons Aged ≥ 13 Years Living with Diagnosed or Undiagnosed HIV Infection, by Age, 2015—United States



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.



Diagnosed Infection among Persons Aged ≥ 13 Years Living with Diagnosed or Undiagnosed HIV Infection, by Race/Ethnicity, 2015—United States

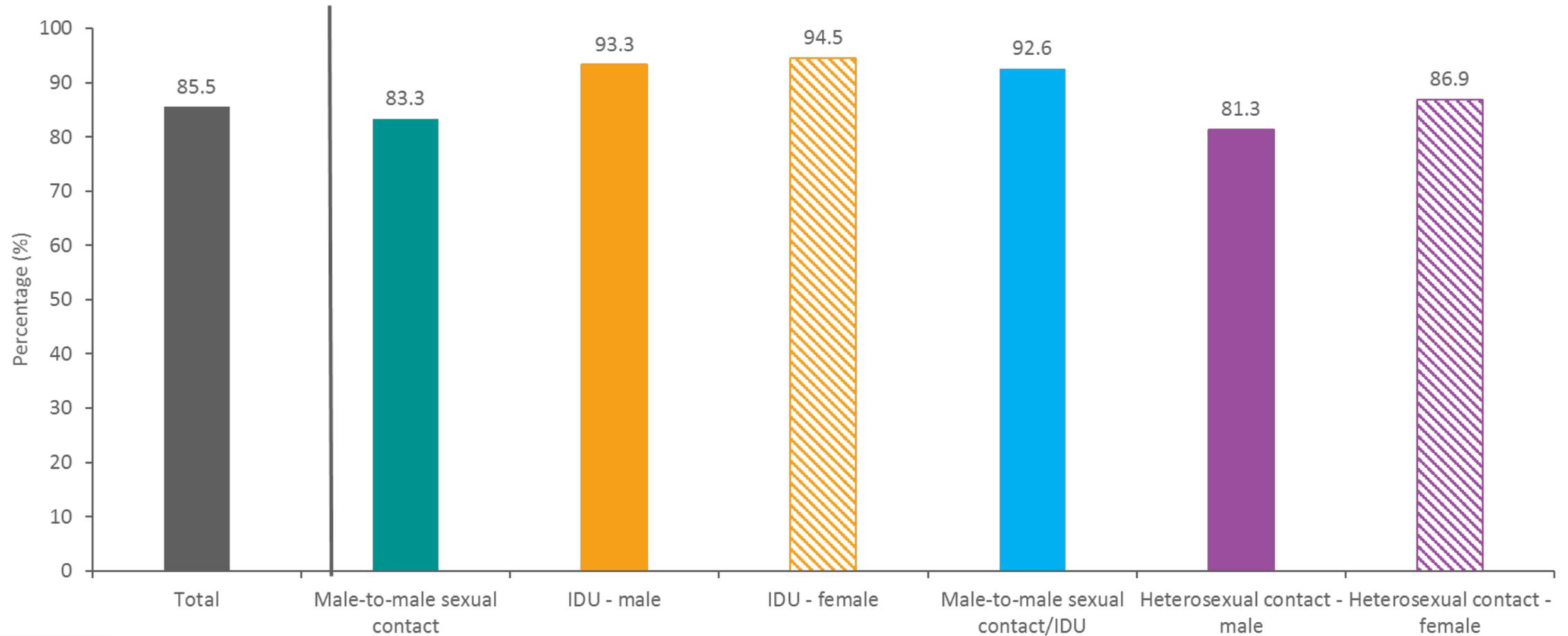


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Asian includes Asian/Pacific Islander legacy cases. Hispanics/Latinos can be of any race.





Diagnosed Infection among Persons Aged ≥ 13 Years Living with Diagnosed or Undiagnosed HIV Infection, by Transmission Category, 2015—United States

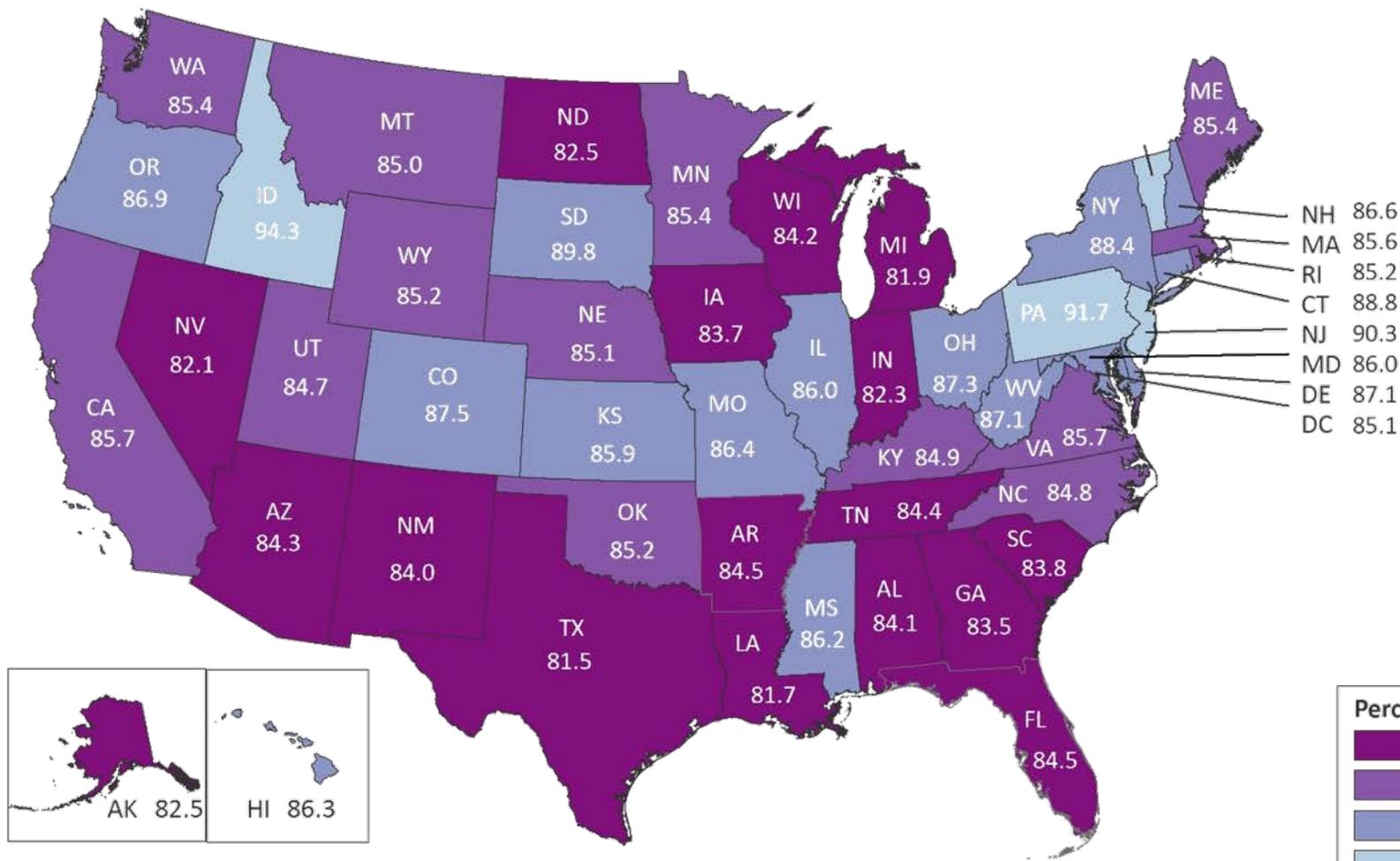


Note. Estimates were derived from a CD4 depletion model using HIV surveillance data. Data have been statistically adjusted to account for missing transmission category. Heterosexual contact is with a person known to have, or be at high risk for, HIV infection. IDU, injection drug use



Diagnosed Infection among Persons Aged ≥ 13 Years Living with Diagnosed or Undiagnosed HIV Infection, 2015—United States

Total = 85.5%



Note. Estimates were derived from a CD4 depletion model using HIV surveillance data.



Percentage

- 81.5% - 84.5%
- 84.6% - 85.7%
- 85.8% - 89.9%
- 90.0% - 94.3%

Data classified manually