**Tract-Estimated Congressional District Populations**

Population data by race/ethnicity for congressional districts can be ascertained by aggregating census blocks, but this data is only available as part of the decennial census. Intercensal tract level population estimates by race/ethnicity are available, but census tracts do not translate directly to congressional districts as some census tracts are split across one or more congressional districts.

An analysis was conducted to compare populations between actual congressional districts to tract-estimated congressional districts to determine the potential effect of calculating cancer rates by congressional districts using tract estimated congressional district populations. For the analysis, each tract was assigned to only one congressional district.

* When a tract is split across multiple congressional districts, the tract was assigned to the congressional district based on the piece of tract that has the most people.
* When the population of split tracts was equal (n=3), the tract was assigned to the lowest numbered congressional district.

Block-level populations were aggregated to produce counts for both the actual congressional districts and the tract-estimated congressional districts by:

* Sex: male, female
* Race/ethnicity groups: non-Hispanic white, non-Hispanic black, non-Hispanic American Indian or Alaska Native, non-Hispanic Asian Pacific Islander, non-Hispanic Other, Hispanic
* Age groups: 0-49, 50-64, 65+

To compare the actual congressional district populations with the tract-estimated congressional district populations, we converted the counts of each population subgroup to percentages and calculated the absolute value of the differences between the two percentages. We also summarized the percent difference in population for all the congressional districts in each state and for the US as a whole.

After comparing differences in counts in the overall populations and populations by sex, race/ethnicity, and age groups, the tract-estimated congressional districts were found to have small differences compared to the actual congressional district population counts. With small differences in populations and subgroups of interest, these tract-estimated congressional district populations could be used to calculate congressional district cancer rates that would likely be close to the rates if the actual congressional district populations were available. Using these tract-estimated congressional districts to calculate cancer rates has the added advantage of aligning well with cancer case geocoding that is usually developed and verified at the census tract level.