

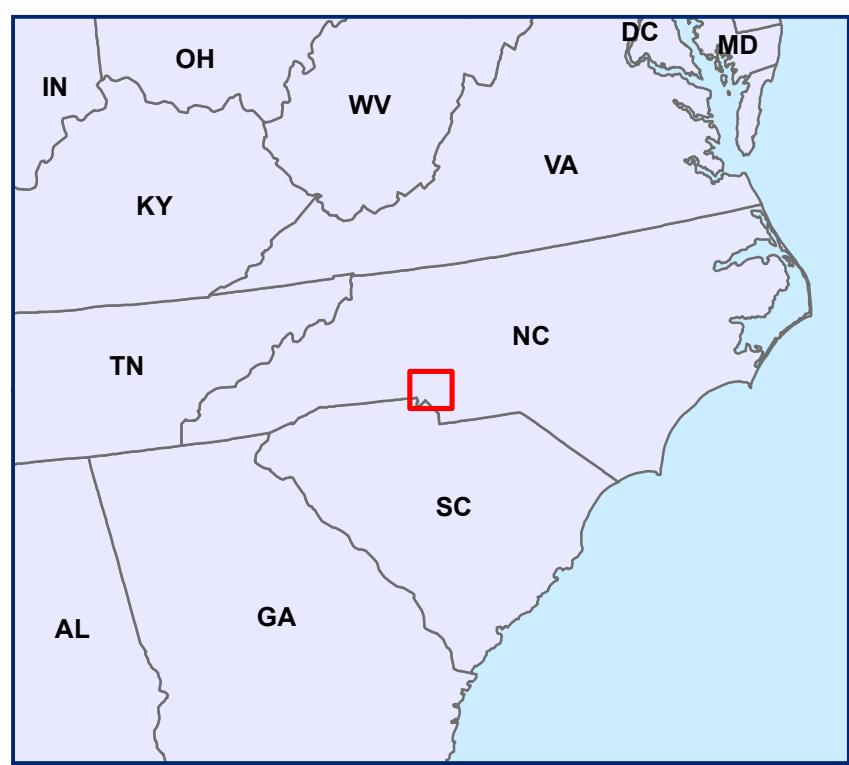


Robert Wood Johnson
Foundation



Author: CDC/NCCDPHP/DPH/ESB-GIS

Date: 7/13/2016



Introduction

The 500 Cities Project—Local Data for Better Health—is a collaboration among the Robert Wood Johnson Foundation, the CDC Foundation, and the Centers for Disease Control and Prevention (CDC), whose purpose is to provide high quality small area estimates for behavioral risk factors that influence health status, for health outcomes, and the use of clinical preventive services. These estimates can be used to identify emerging health problems and to develop and implement of effective, targeted public health prevention activities.

Data Sources

Data was obtained from the CDC Behavioral Risk Factor Surveillance System (BRFSS) 2013, 2014, the Census Bureau 2010 census population data, American Community Survey 2009-2013 and 2010-2014 estimates, and Esri ArcGIS Online basemaps.

Methodology

CDC used small area estimation (SAE) methodology called multilevel regression and poststratification (MRP) that links geocoded health surveys and high spatial resolution population demographic and socioeconomic data to produce local level health related estimates. This approach also accounts for the associations between individual health outcomes, individual characteristics, and spatial contexts and factors at multiple levels (e.g., state, county), the approach also predicts individual disease risk and health behaviors in a multilevel modeling framework and estimates the geographic distributions of population disease burden and health behaviors at city and census tract level.

Further information on the small area estimation methodology can be obtained from

- [Multilevel Regression and Poststratification for Small-Area Estimation of Population Health Outcomes: A Case Study of Chronic Obstructive Pulmonary Disease Prevalence Using the Behavioral Risk Factor Surveillance System \[PDF-5.53MB\]](#)
- [Validation of Multilevel Regression and Poststratification Methodology for Small Area Estimation of Health Indicators from the Behavioral Risk Factor Surveillance System](#)

Limitations

All data presented in this map book are model-based estimates that reflect the statistically expected prevalence of each measure. These small area estimates tend to have narrow confidence ranges and may underestimate some areas with high prevalence or overestimate some areas with low prevalence. Because the small area model cannot detect effects because of local interventions, users are cautioned against using these estimates for program or policy evaluations.

Project Website

For more information please refer to <http://www.cdc.gov/500cities/>.

Contents

1. **Introduction and Contents**
2. Table: City data estimates for each measure
3. **Unhealthy Behaviors**
 4. Map: Binge drinking prevalence among adults aged ≥ 18 years, 2014
 5. Map: Current smoking among adults aged ≥ 18 years, 2014
 6. Map: No leisure-time physical activity among adults aged ≥ 18 years, 2014
 7. Map: Obesity among adults aged ≥ 18 years, 2014
 8. Map: Sleeping less than 7 hours among adults aged ≥ 18 years, 2014
9. **Health Outcomes**
 10. Map: Arthritis among adults aged ≥ 18 years, 2014
 11. Map: Current asthma prevalence among adults aged ≥ 18 years, 2014
 12. Map: High blood pressure among adults aged ≥ 18 years, 2013
 13. Map: High cholesterol among adults aged ≥ 18 years who have been screened in the past 5 years, 2013
 14. Map: Cancer among adults aged ≥ 18 years, 2014
 15. Map: Diagnosed diabetes among adults aged ≥ 18 years, 2014
 16. Map: Chronic kidney disease among adults aged ≥ 18 years, 2014
 17. Map: Chronic obstructive pulmonary disease among adults aged ≥ 18 years, 2014
 18. Map: Coronary heart disease among adults aged ≥ 18 years, 2014
 19. Map: Stroke among adults aged ≥ 18 years, 2014
 20. Map: Mental health not good for ≥ 14 days among adults aged ≥ 18 years, 2014
 21. Map: Physical health not good for ≥ 14 days among adults aged ≥ 18 years, 2014
 22. Map: All teeth lost among adults aged ≥ 65 years, 2014
23. **Use of Preventive Services**
 24. Map: Current lack of health insurance among adults aged 18-64 years, 2014
 25. Map: Visits to doctor for routine checkup within the past year among adults aged ≥ 18 years, 2014
 26. Map: Visits to dentist or dental clinic among adults aged ≥ 18 years, 2014
 27. Map: Taking medicine for high blood pressure control among adults aged ≥ 18 years with high blood pressure, 2013
 28. Map: Cholesterol screening among adults aged ≥ 18 years, 2013
 29. Map: Mammography use among women aged 50-74 years, 2014
 30. Map: Papanicolaou smear use among adult women aged 21-65 years, 2014
 31. Map: Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years, 2014
 32. Map: Up-to-date on a core set of clinical preventive services (flu shot past year, pneumococcal shot ever, Map: colorectal cancer screening) among men aged ≥ 65 years, 2014
 33. Map: Up-to-date on a core set of clinical preventive services (same as men plus mammogram past 2 years) among women aged ≥ 65 years, 2014

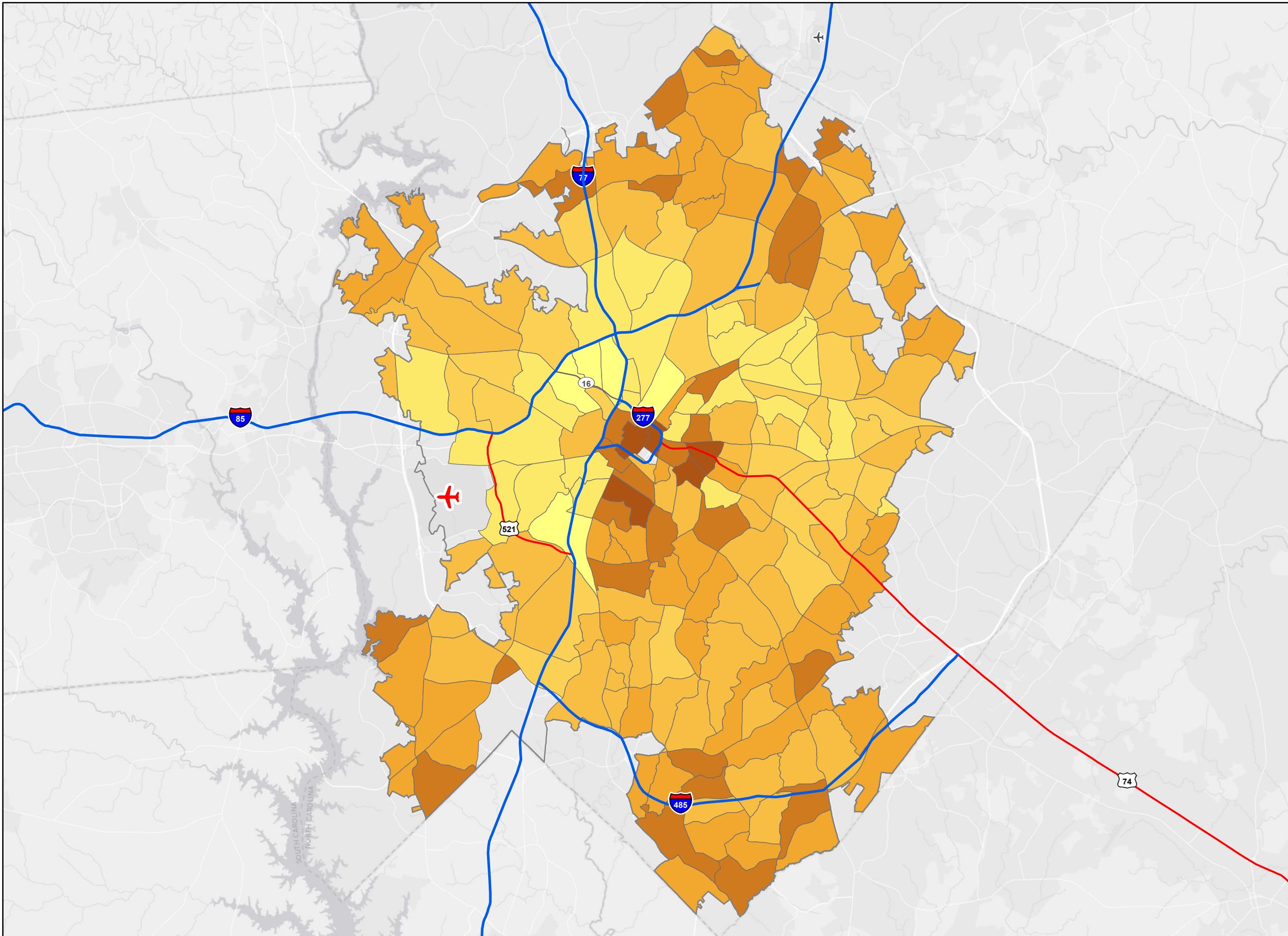
Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health, Epidemiology and Surveillance Branch (CDC/NCCDPHP/DPH/ESB).

October 12, 2016

Measure	Charlotte NC	Crude			Age-Adjusted			State Age-Adjusted Prevalence	US Age-Adjusted Prevalence
		Prevalence	Low 95% CI	High 95% CI	Prevalence	Low 95% CI	High 95% CI		
Binge drinking prevalence among adults aged >=18 years		15.8	15.7	15.8	14.7	14.6	14.7	14.4	16.8
Current smoking among adults aged >=18 years		17.7	17.5	17.9	16.8	16.7	17.0	19.5	17.7
No leisure-time physical activity among adults aged >=18 years		19.9	19.8	20.1	20.5	20.4	20.7	22.8	23.3
Obesity among adults aged >=18 years		27.8	27.7	27.9	27.8	27.7	27.8	29.8	28.7
Sleeping less than 7 hours among adults aged >=18 years		34.7	34.6	34.8	34.0	33.9	34.1	32.5	35.1
Arthritis among adults aged >=18 years		21.8	21.7	21.9	24.3	24.2	24.4	25.8	23.5
Current asthma prevalence among adults aged >=18 years		8.4	8.4	8.5	8.4	8.3	8.4	7.7	8.8
High blood pressure among adults aged >=18 years		31.8	31.7	31.9	34.7	34.6	34.8	33.5	30.2
High cholesterol among adults aged >=18 years who have been screened in the past 5 years		37.3	37.2	37.4	36.0	35.9	36.1	35.5	33.2
Cancer among adults aged >=18 years		4.9	4.9	5.0	5.8	5.8	5.8	5.5	5.9
Diagnosed diabetes among adults aged >=18 years		9.2	9.2	9.3	10.3	10.3	10.4	9.9	9.4
Chronic kidney disease among adults aged >=18 years		2.4	2.4	2.4	2.7	2.7	2.7	2.4	2.6
Chronic obstructive pulmonary disease among adults aged >=18 years		5.6	5.5	5.6	6.1	6.0	6.1	7.3	6.1
Coronary heart disease among adults aged >=18 years		5.1	5.1	5.2	6.1	6.1	6.2	6.9	6.0
Stroke among adults aged >=18 years		2.8	2.8	2.9	3.3	3.3	3.3	3.4	2.8
Mental health not good for >=14 days among adults aged >=18 years		11.7	11.6	11.8	11.4	11.3	11.5	11.4	11.5
Physical health not good for >=14 days among adults aged >=18 years		10.9	10.8	11.0	11.4	11.3	11.5	11.8	11.6
All teeth lost among adults aged >=65 years		15.7	15.3	16.2	15.8	15.3	16.3	20.1	15.4
Current lack of health insurance among adults aged 18-64 years		21.4	21.1	21.6	19.8	19.6	20.0	20.6	14.9
Visits to doctor for routine checkup within the past year among adults aged >=18 years		73.1	73.1	73.2	74.6	74.5	74.7	74.1	68.7
Visits to dentist or dental clinic among adults aged >=18 years		61.6	61.3	61.9	62.2	61.9	62.5	63.9	64.1
Taking medicine for high blood pressure control among adults aged >=18 years with high blood pressure		72.3	72.2	72.4	61.5	61.4	61.6	60.2	58.2
Cholesterol screening among adults aged >=18 years		75.1	74.9	75.2	77.1	76.9	77.3	77.7	74.8
Mammography use among women aged 50-74 years		79.6	79.4	79.9	79.8	79.6	80.1	80.9	75.5
Papanicolaou smear use among adult women aged 21-65 years		84.9	84.7	85.0	85.1	84.9	85.2	85.9	81.1
Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years		66.0	65.7	66.2	67.9	67.7	68.1	67.3	64.0
Up to date on a core set of clinical preventive services (flu shot past year, pneumococcal shot ever, colorectal cancer screening) among men aged >=65 years		40.1	39.5	40.6	38.2	37.7	38.7	37.6	32.9
Up to date on a core set of clinical preventive services (same as men plus mammogram past 2 years) among women aged >=65 years		46.6	46.2	47.1	38.5	38.0	38.9	39.1	30.7

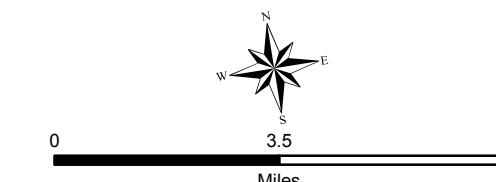
Unhealthy Behaviors

Binge drinking prevalence among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



Classification:
Jenks natural breaks (9 classes) based
on data for all 500 cities' census tracts.
Legend depicts only those data classes
within this map extent.

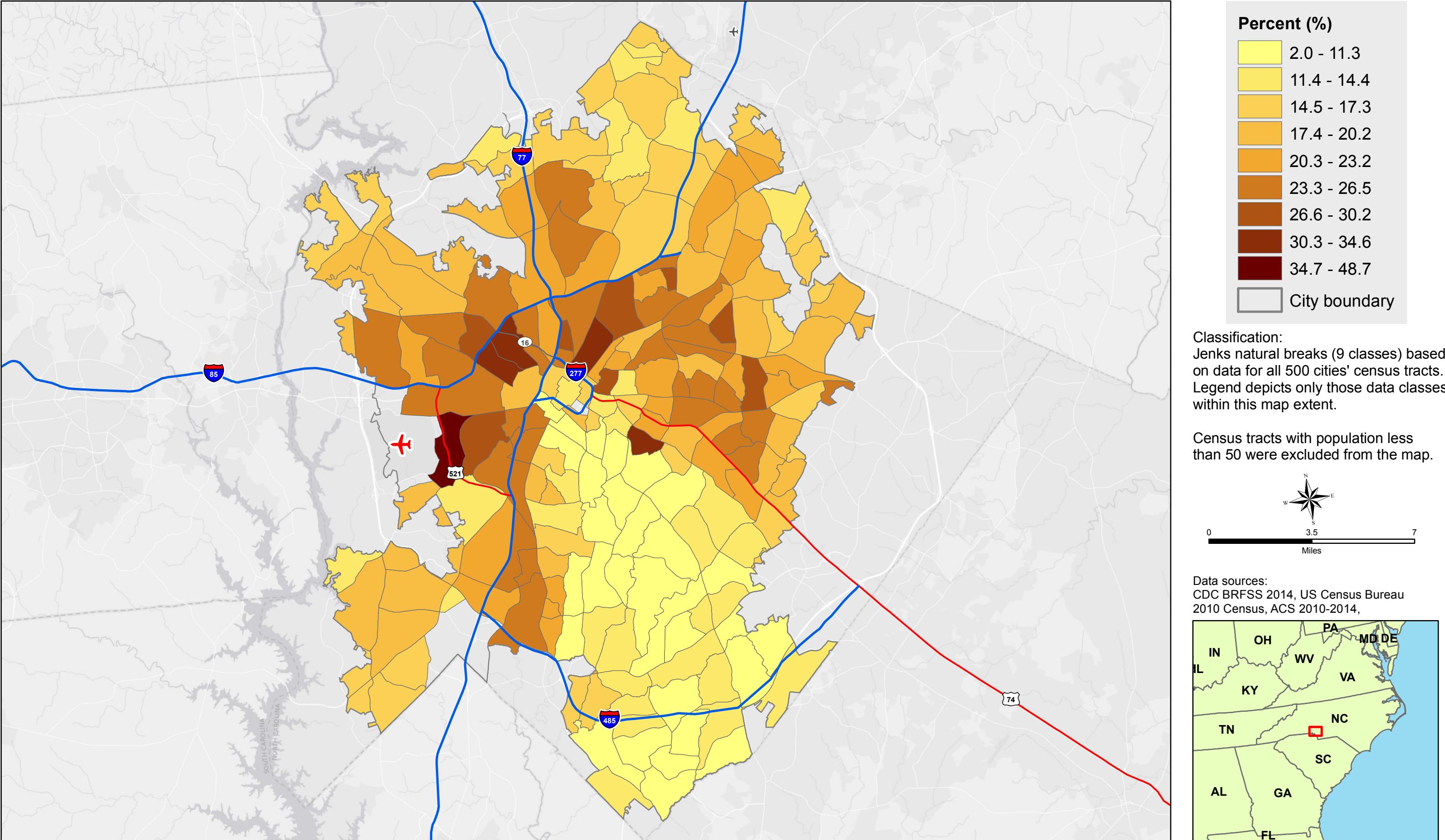
Census tracts with population less
than 50 were excluded from the map.



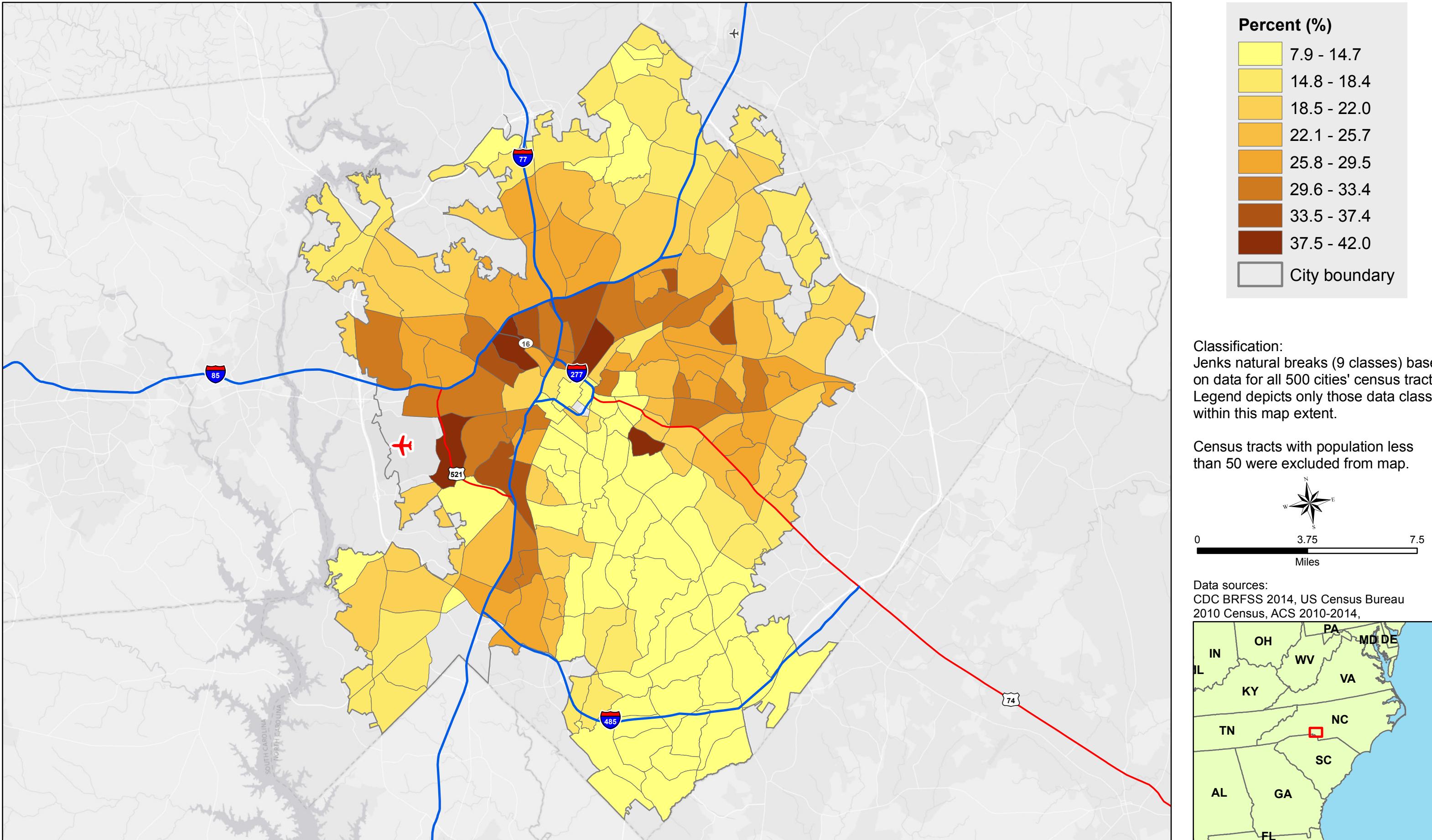
Data sources:
CDC BRFSS 2014, US Census Bureau
2010 Census, ACS 2010-2014,



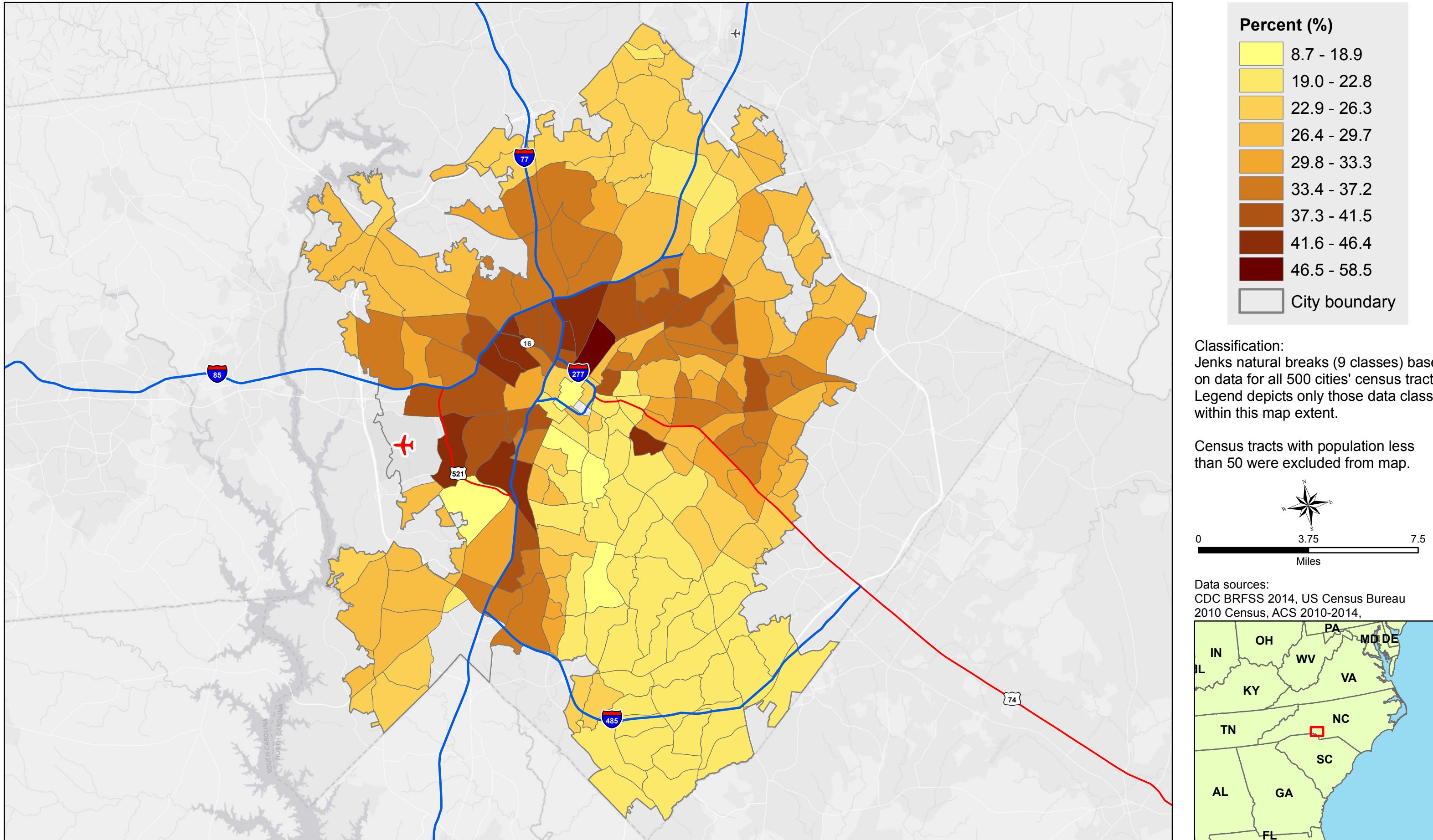
Current smoking among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



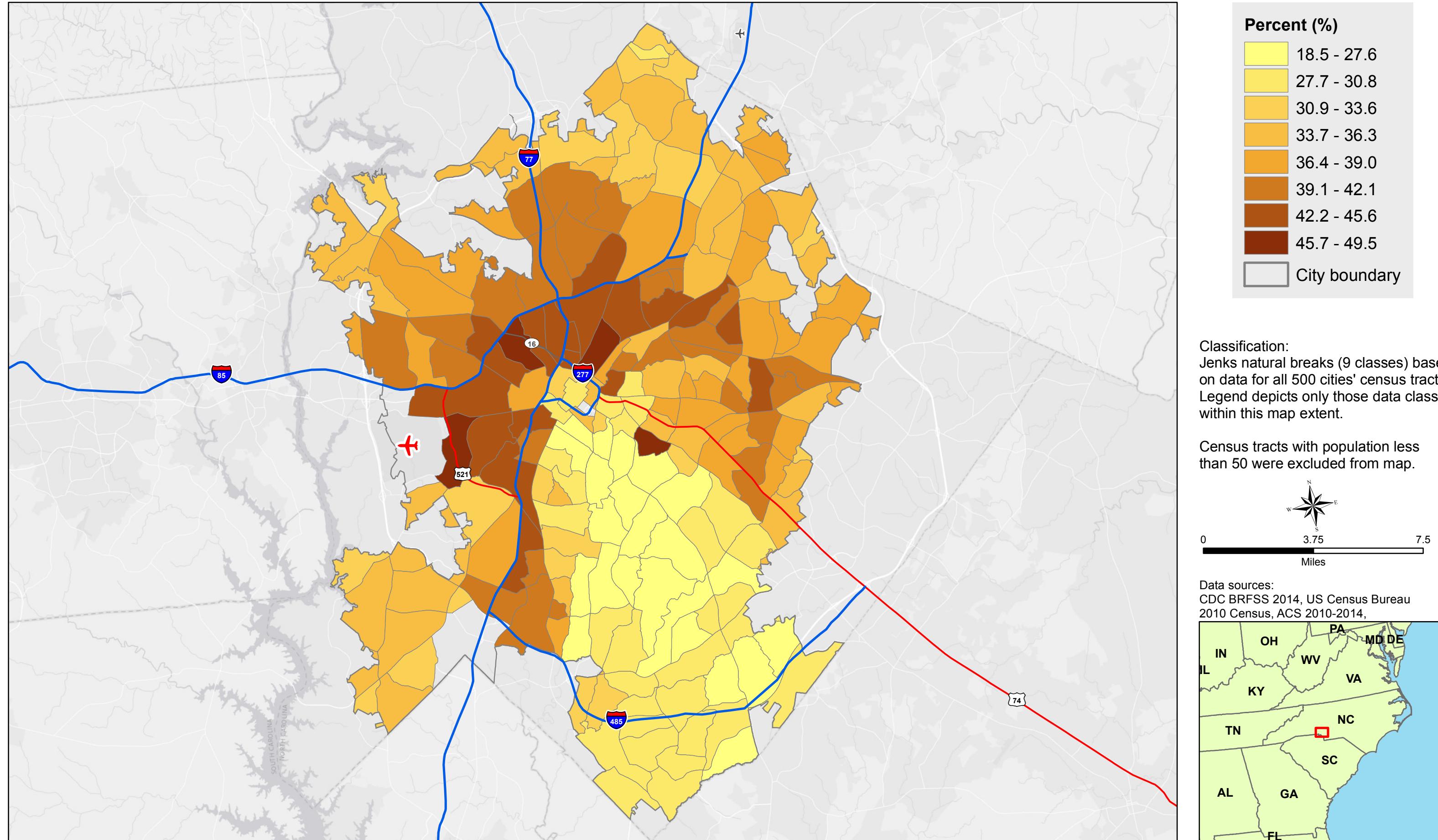
No leisure-time physical activity among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



Obesity among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014

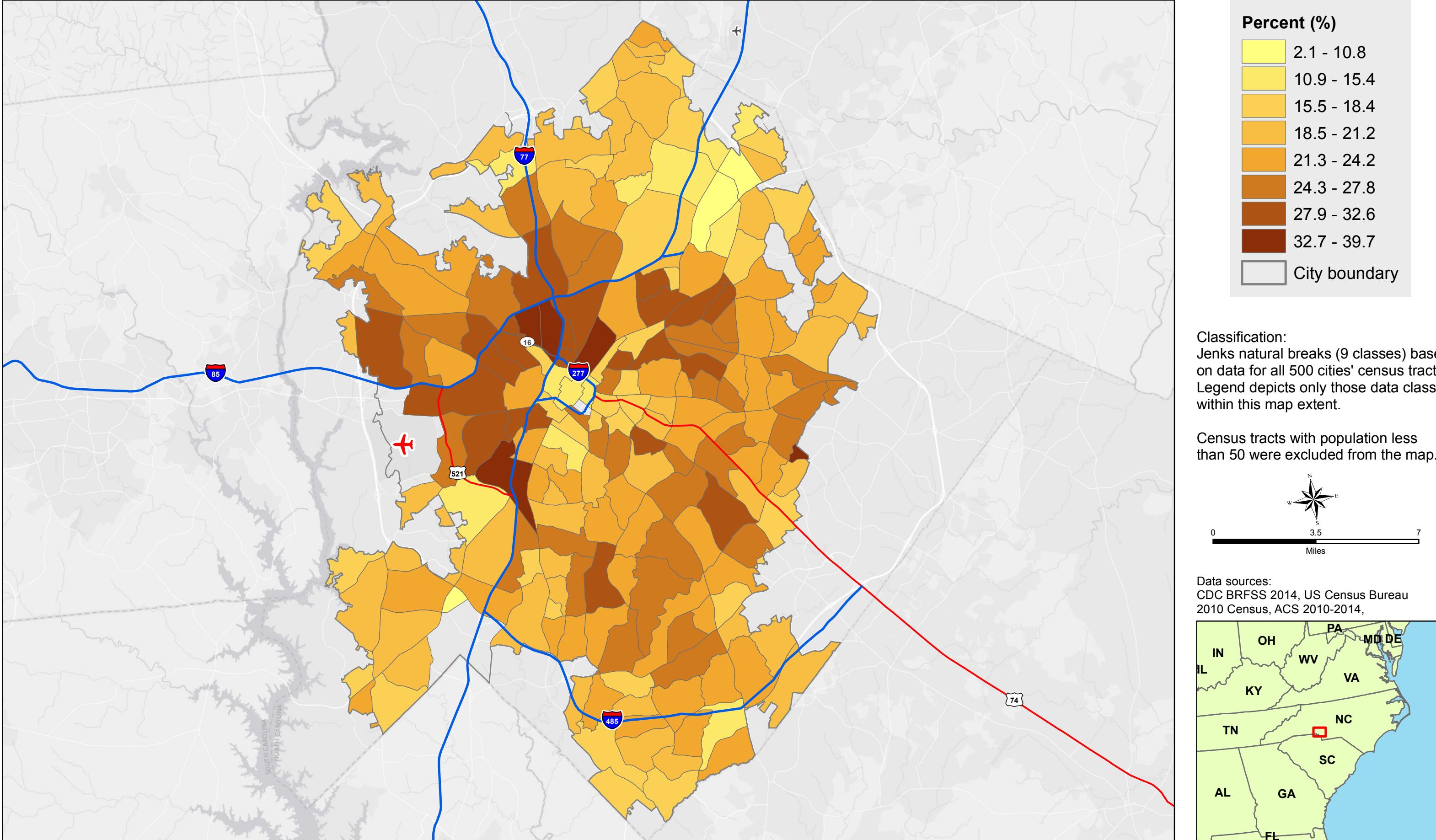


Sleeping less than 7 hours among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014

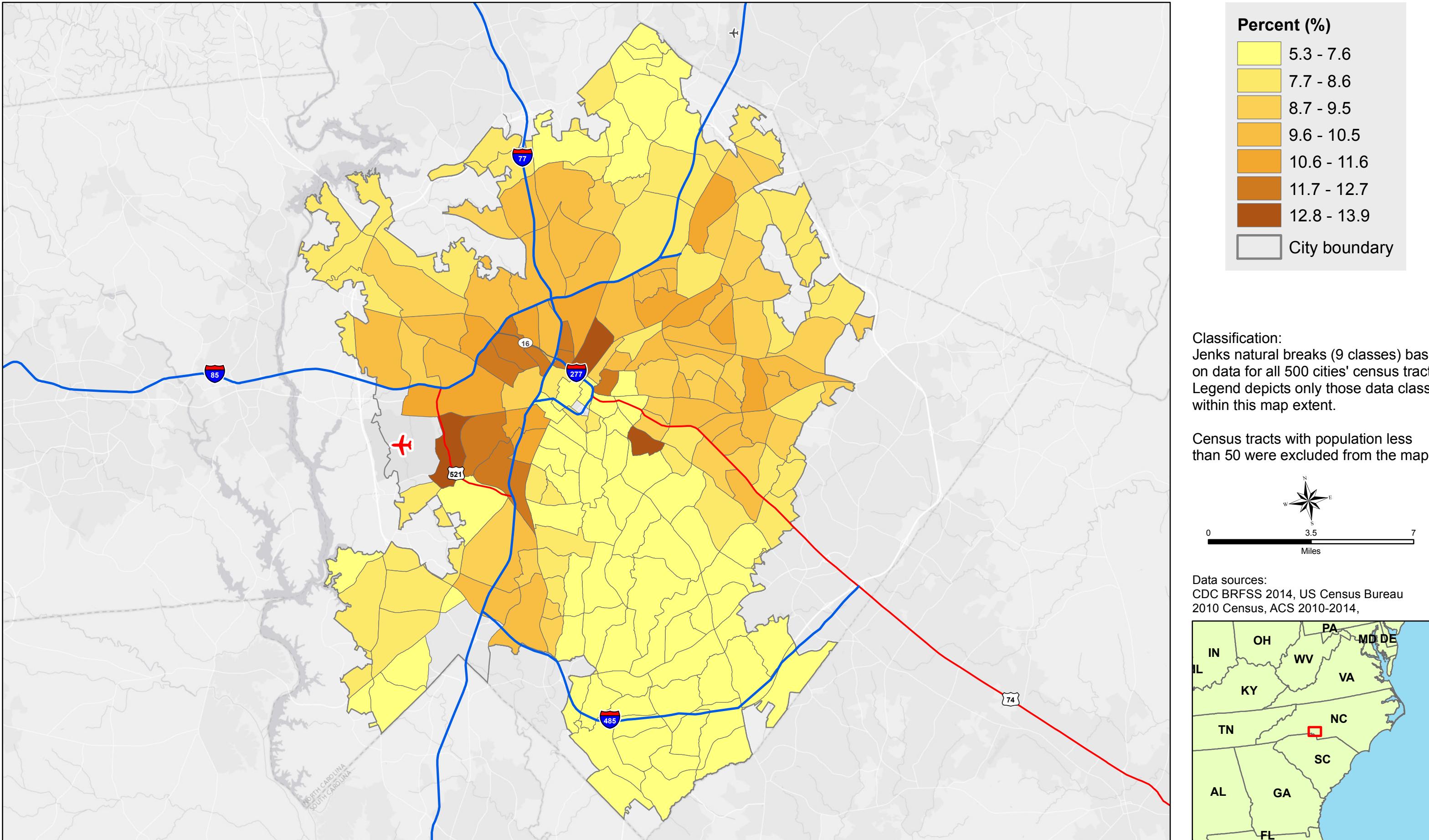


Health Outcomes

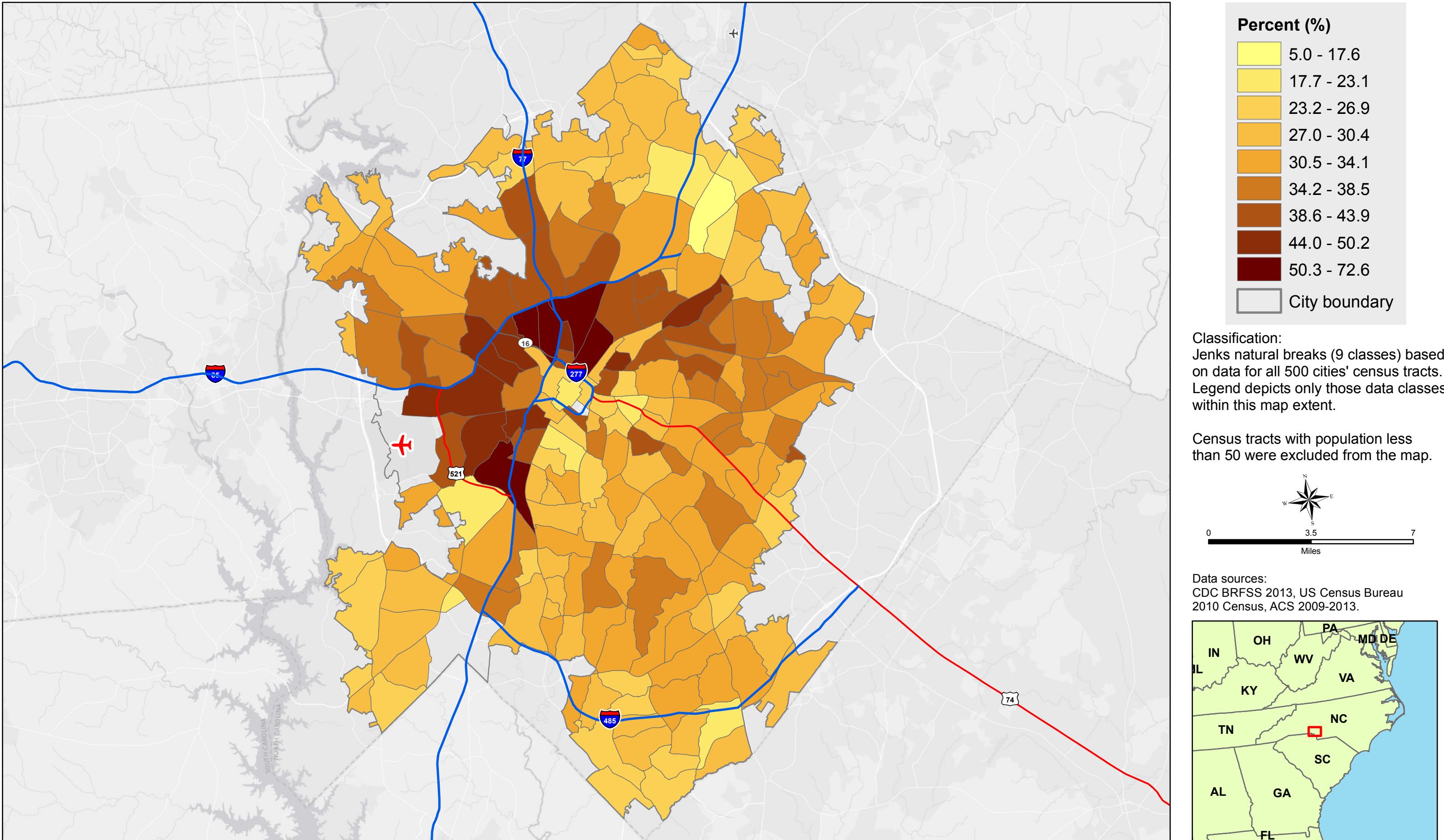
Arthritis among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



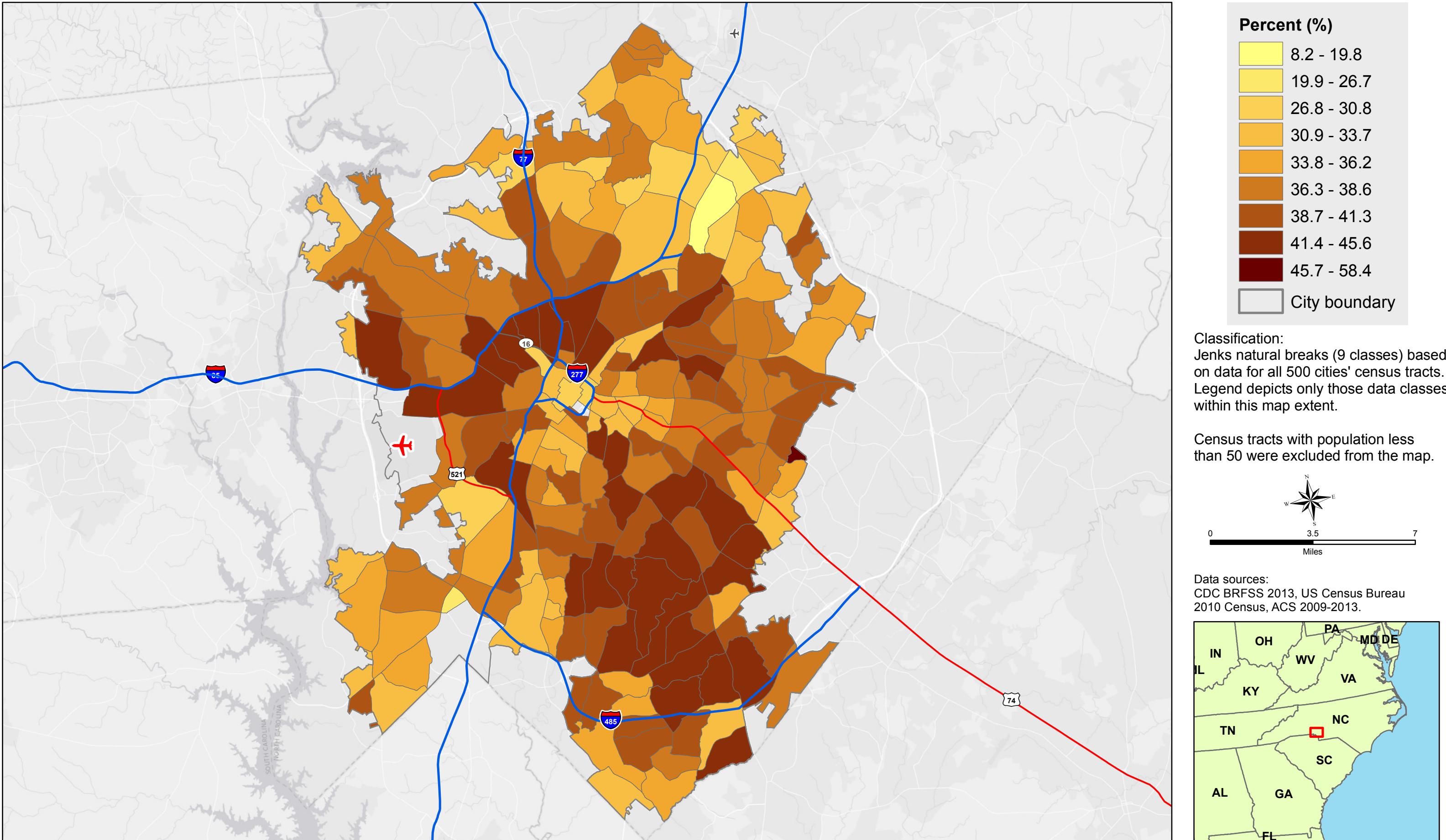
Current asthma prevalence among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



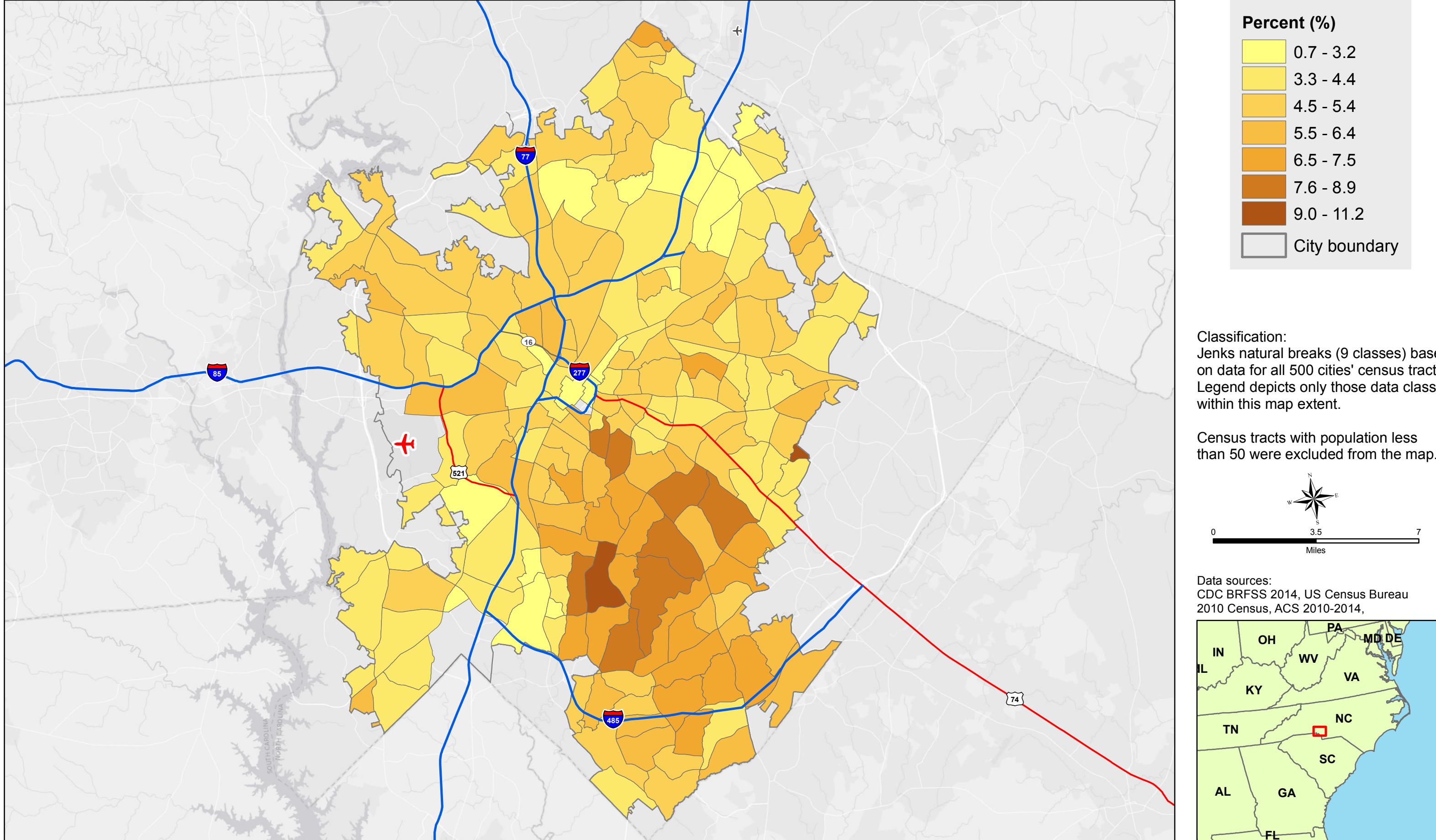
High blood pressure among adults aged ≥ 18 years by census tract, Charlotte, NC, 2013



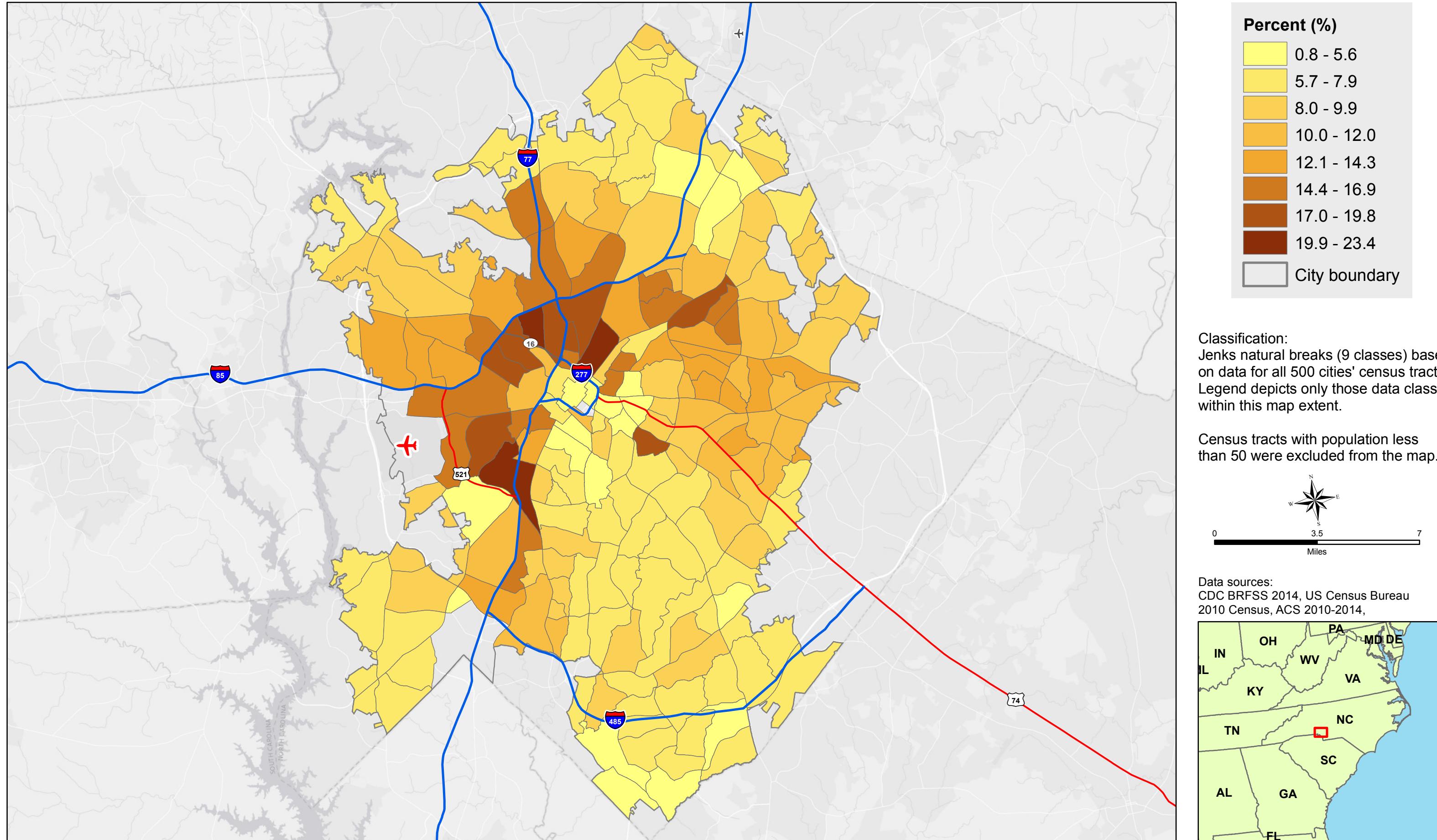
High cholesterol among adults aged ≥ 18 years who have been screened in the past five years by census tract, Charlotte, NC, 2013



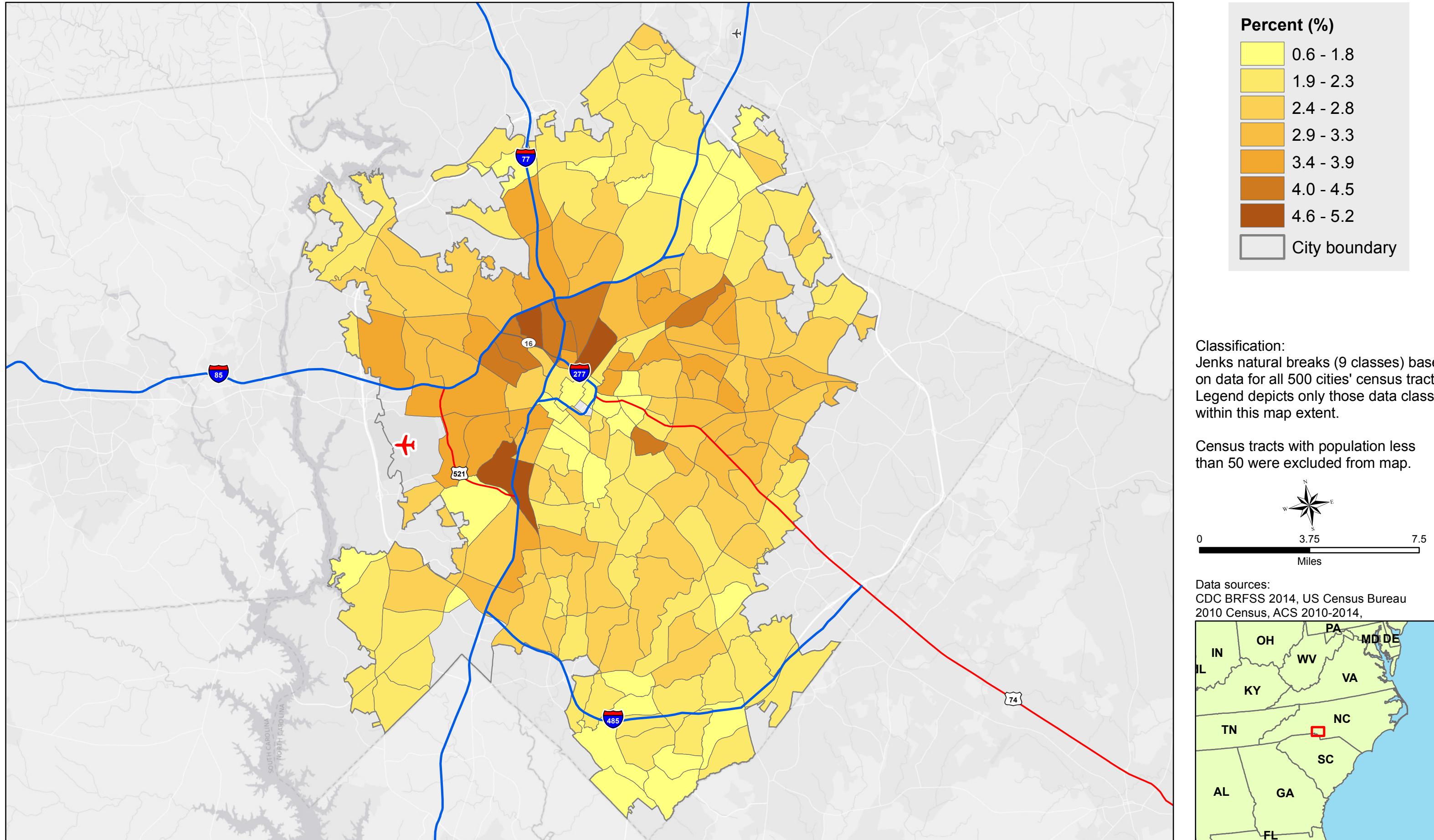
Cancer among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



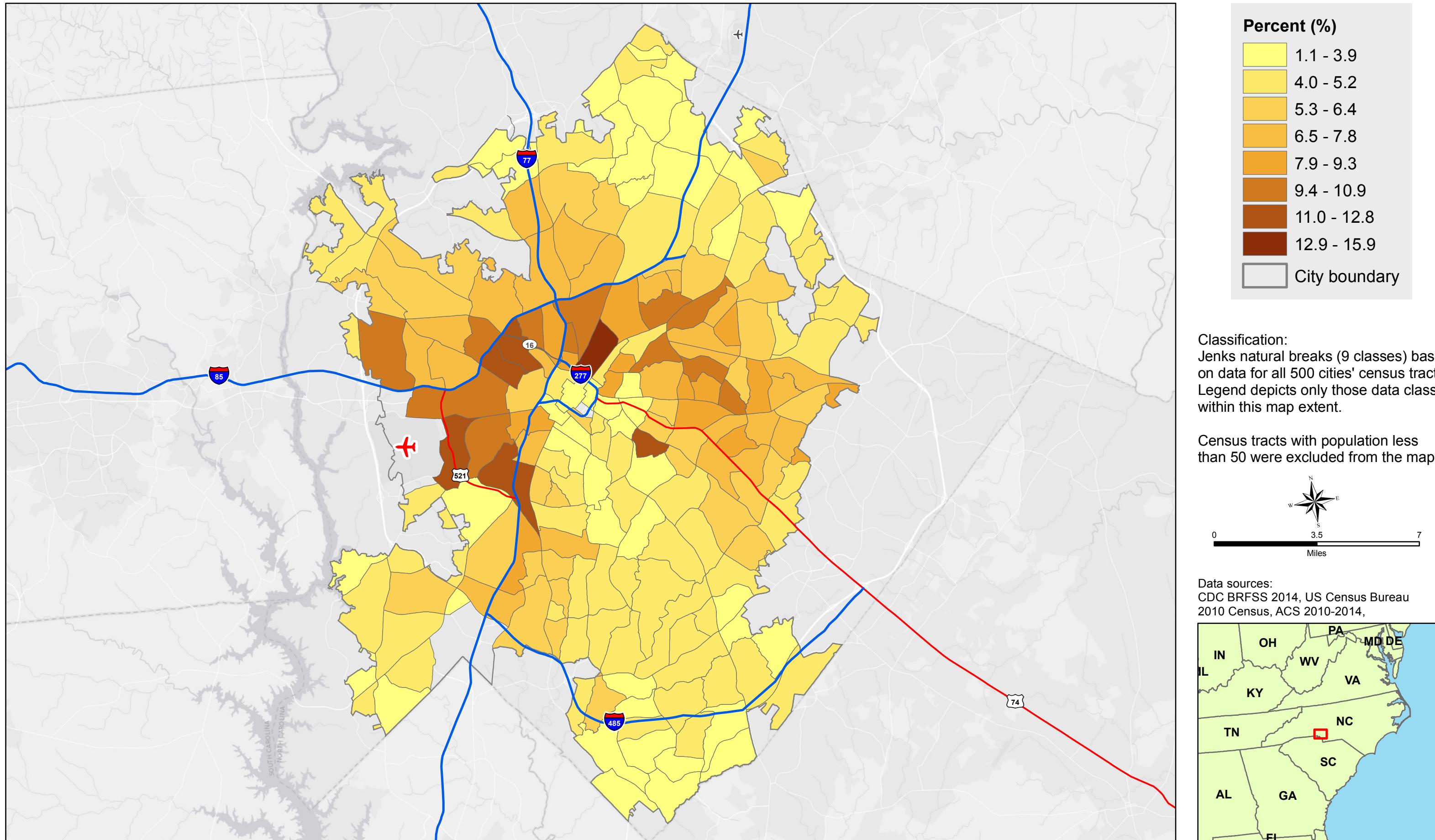
Diagnosed diabetes among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



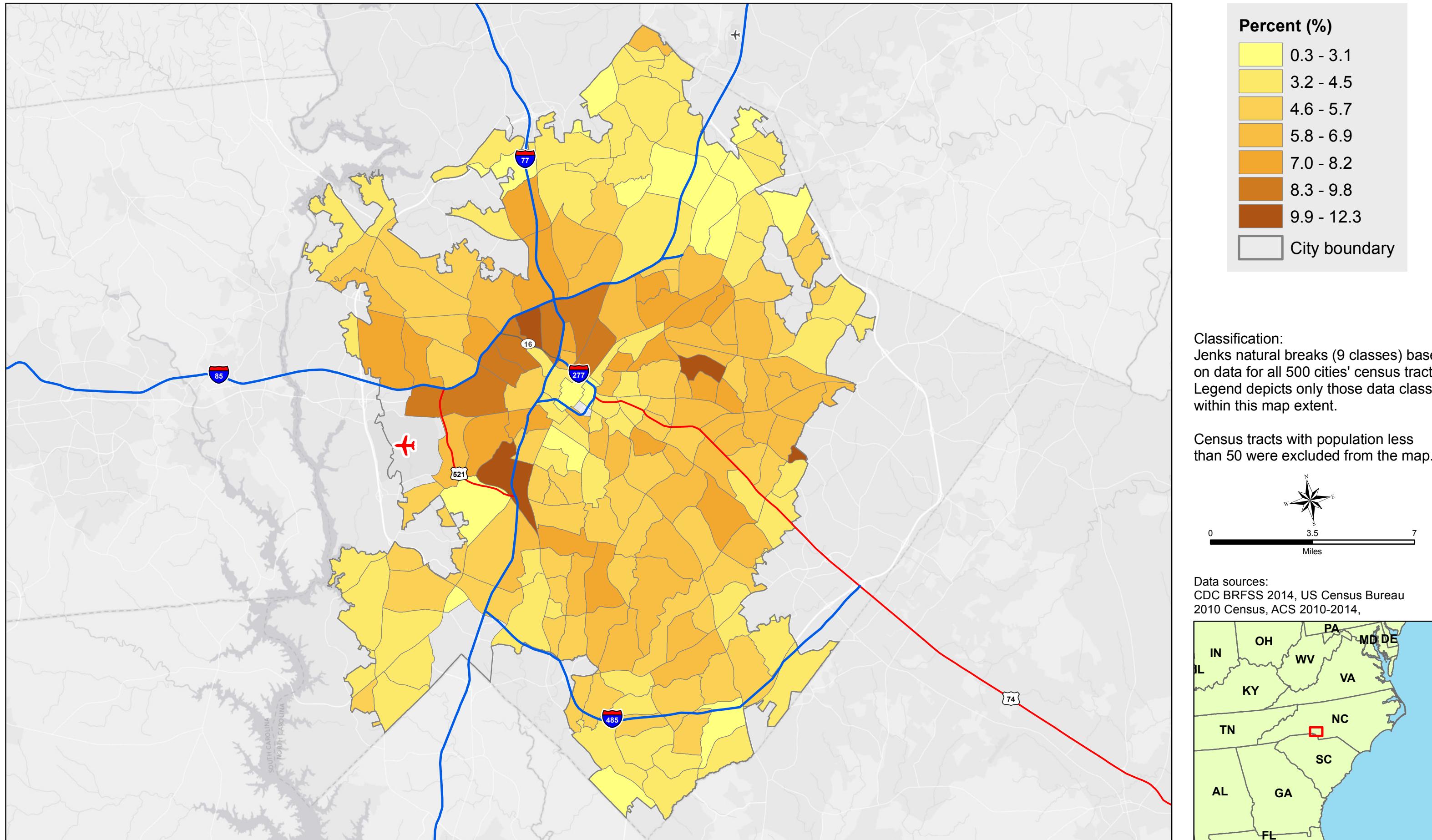
Chronic kidney disease among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



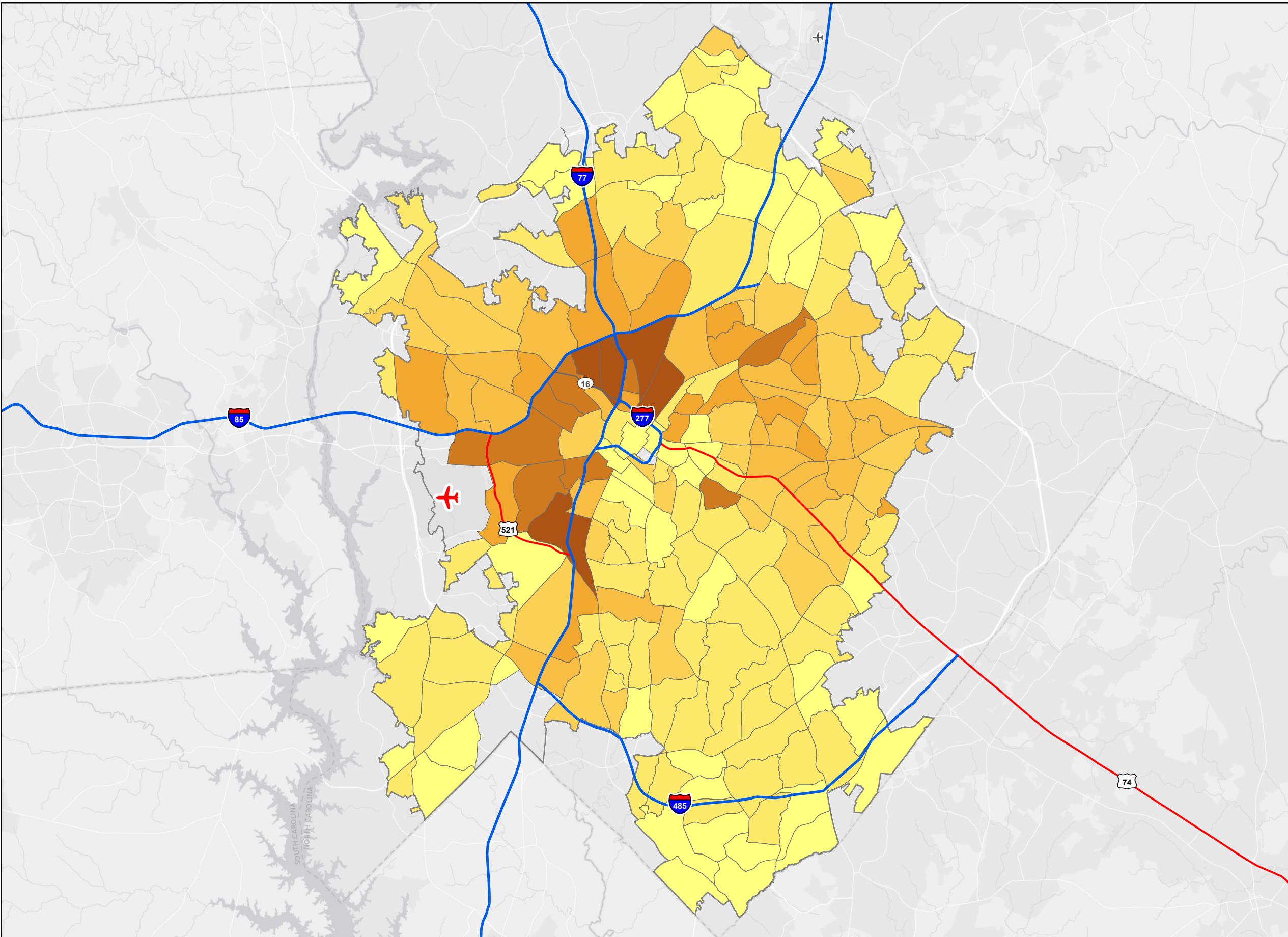
Chronic obstructive pulmonary disease among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



Coronary heart disease among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014

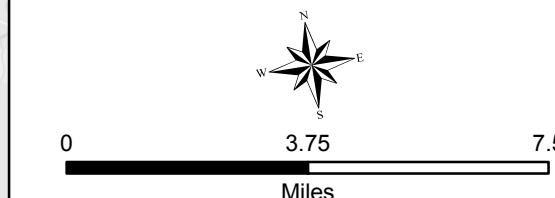


Stroke among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



Classification:
Jenks natural breaks (9 classes) based
on data for all 500 cities' census tracts.
Legend depicts only those data classes
within this map extent.

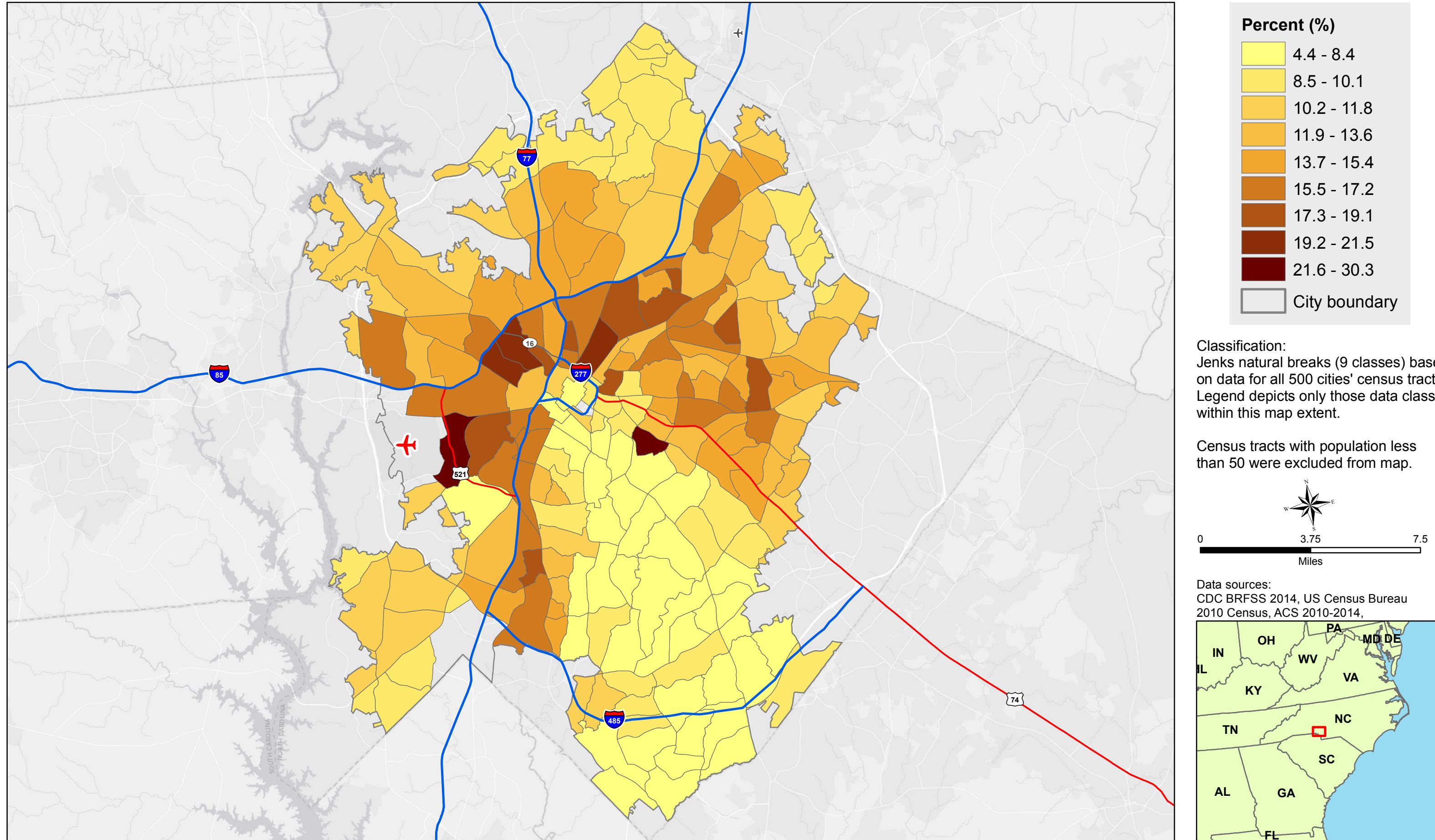
Census tracts with population less
than 50 were excluded from map.



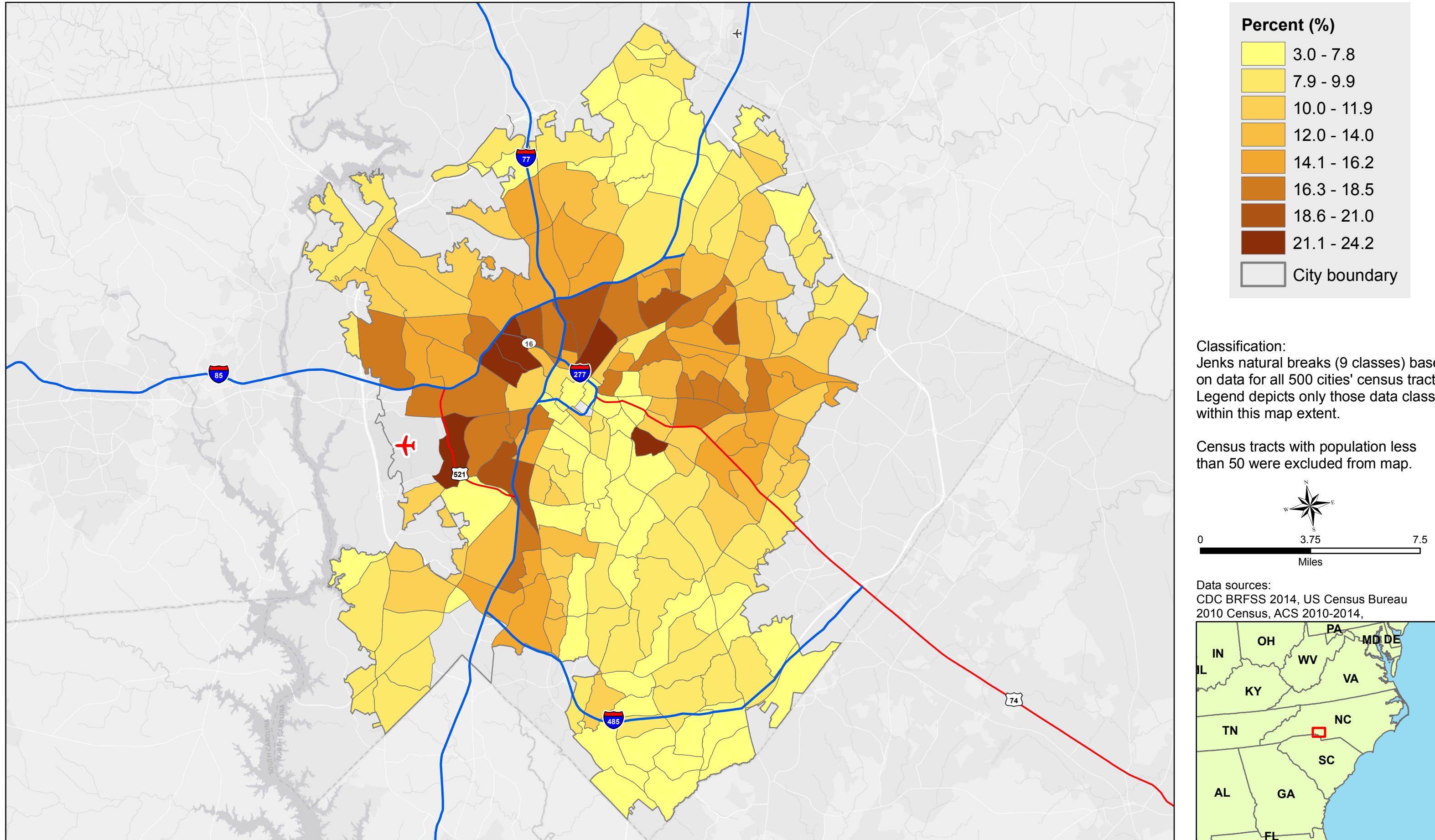
Data sources:
CDC BRFSS 2014, US Census Bureau
2010 Census, ACS 2010-2014,



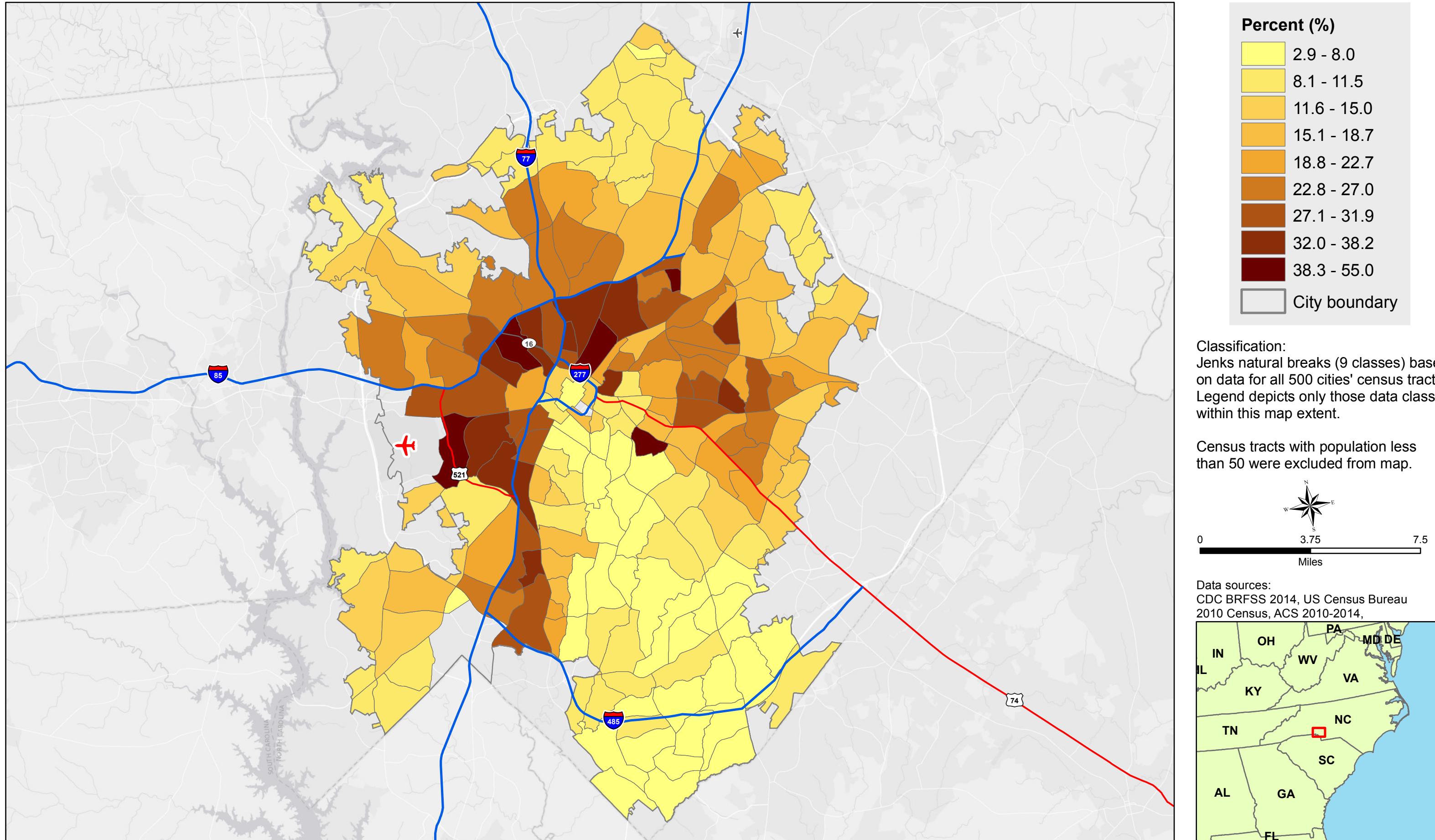
Mental health not good for ≥ 14 days among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



Physical health not good for ≥ 14 days among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014

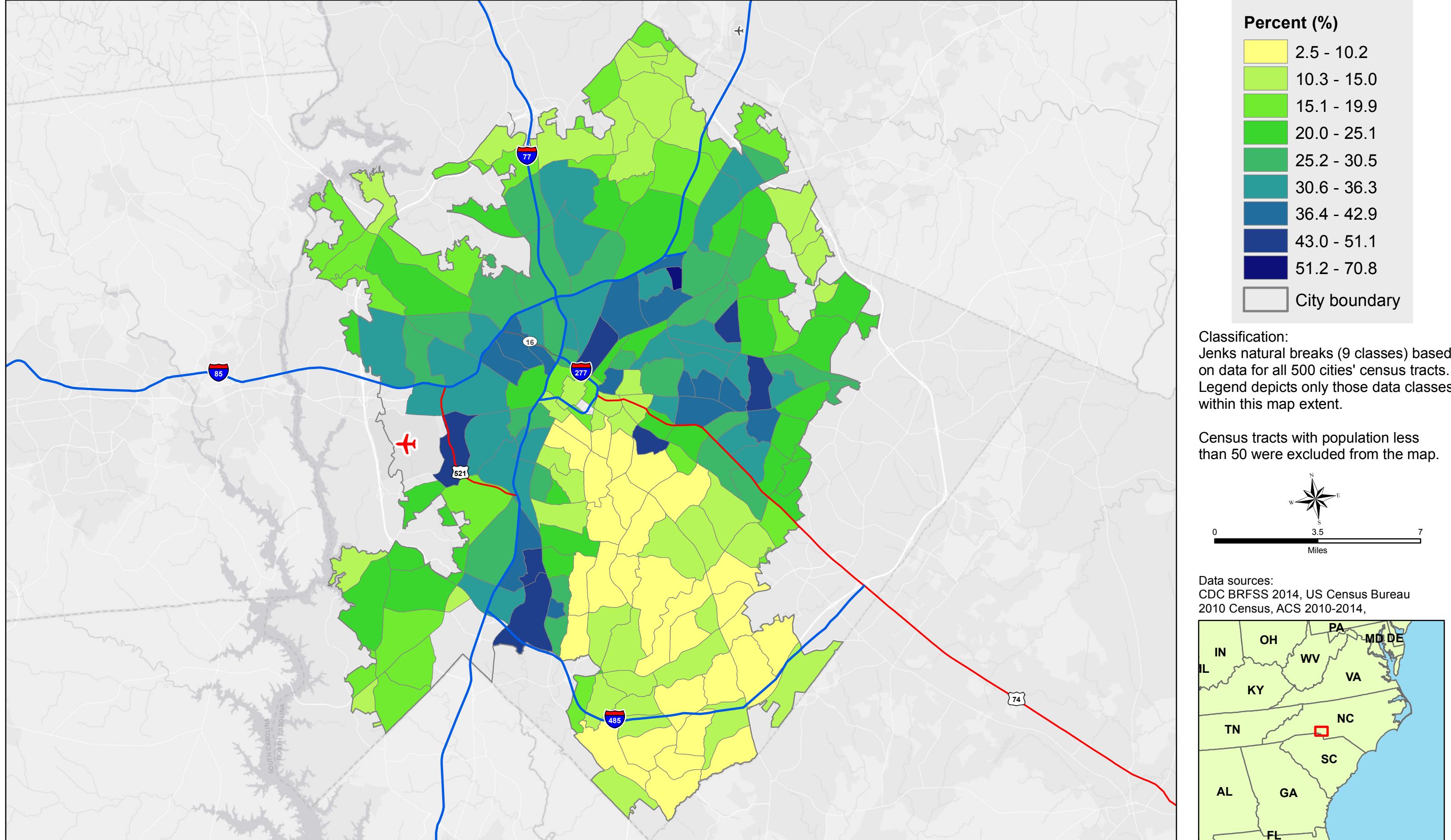


All teeth lost among adults aged >65 years by census tract, Charlotte, NC, 2014

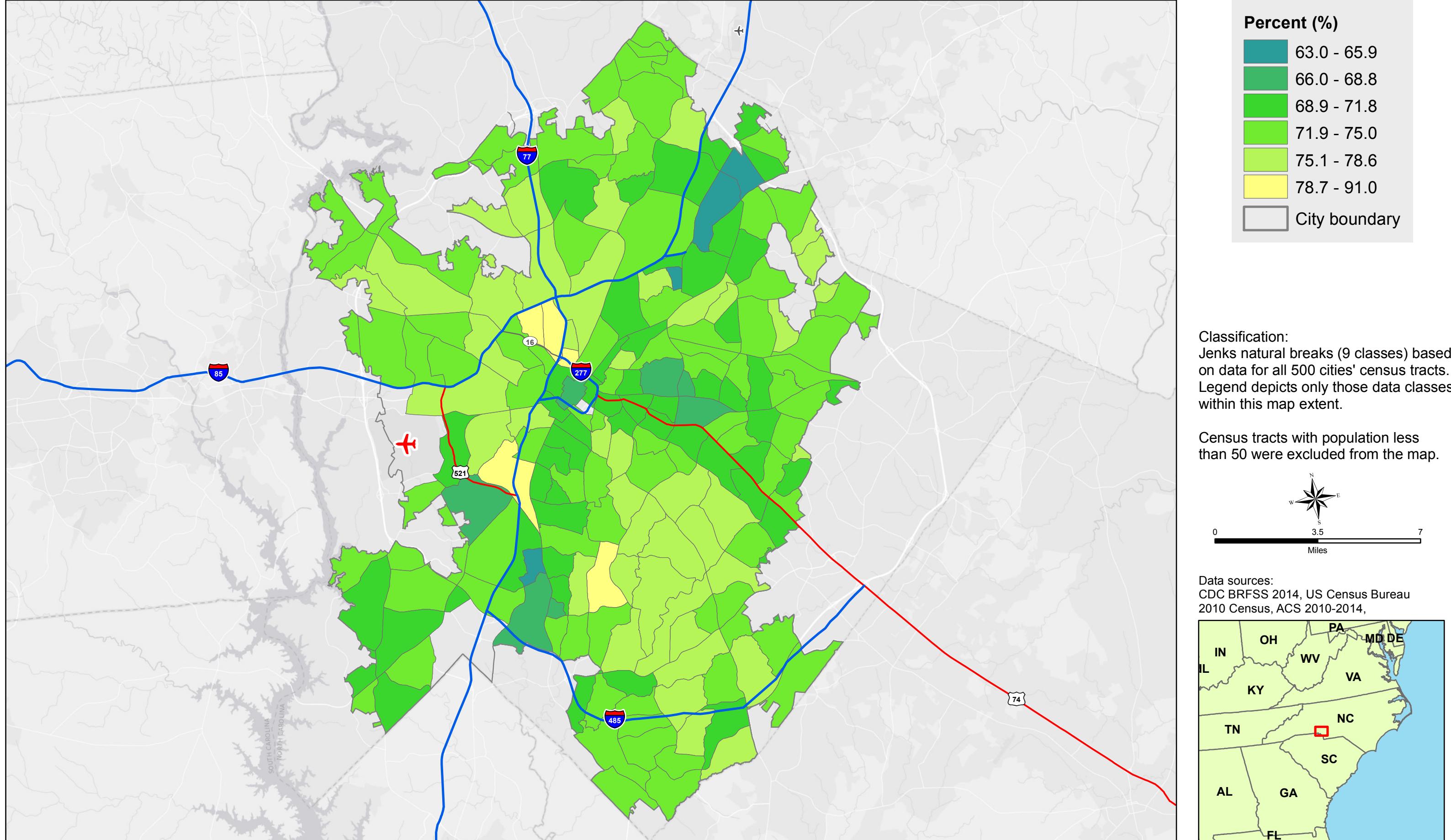


Use of Preventive Services

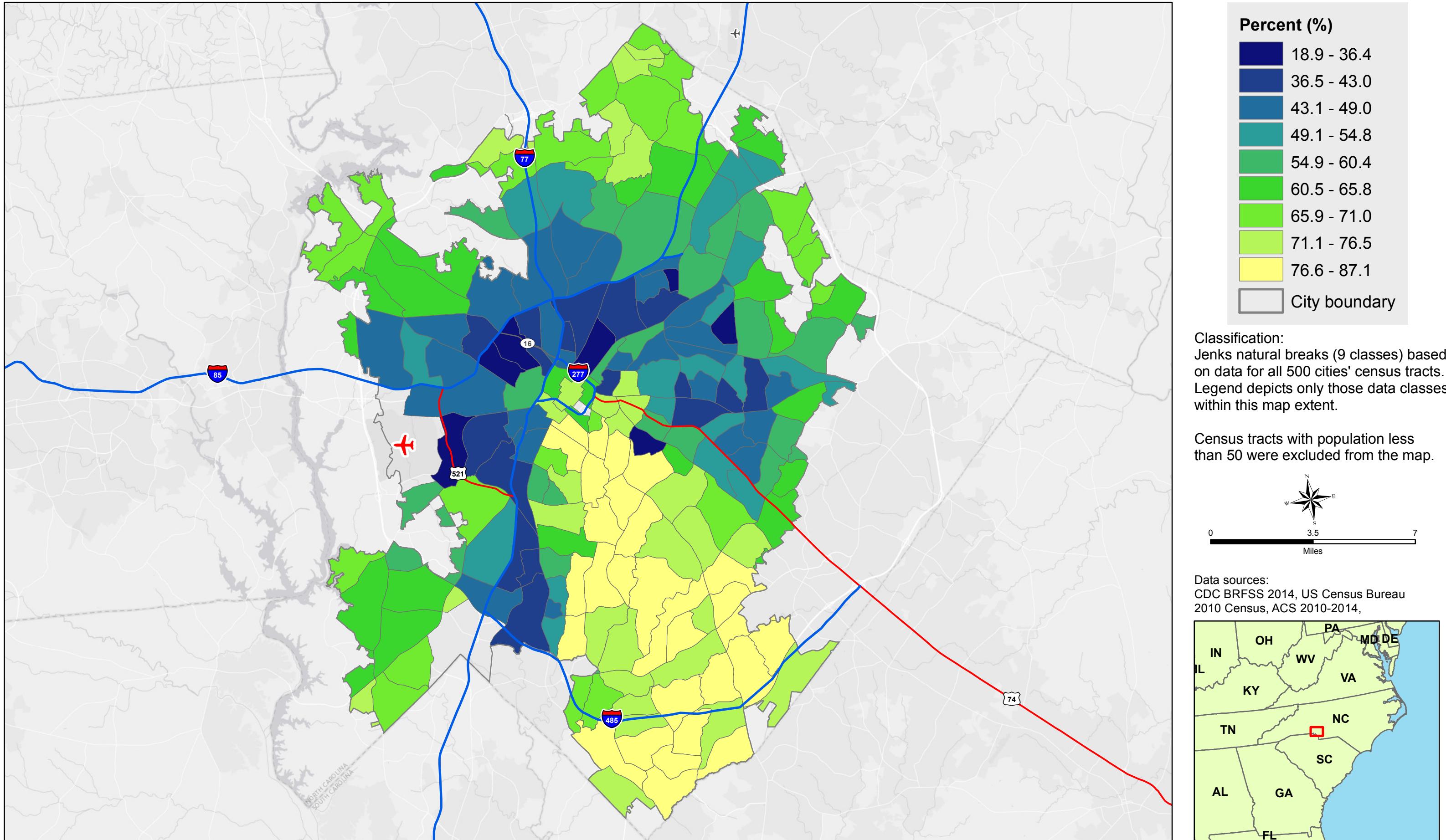
Current lack of health insurance among adults aged 18-64 years by census tract, Charlotte, NC, 2014



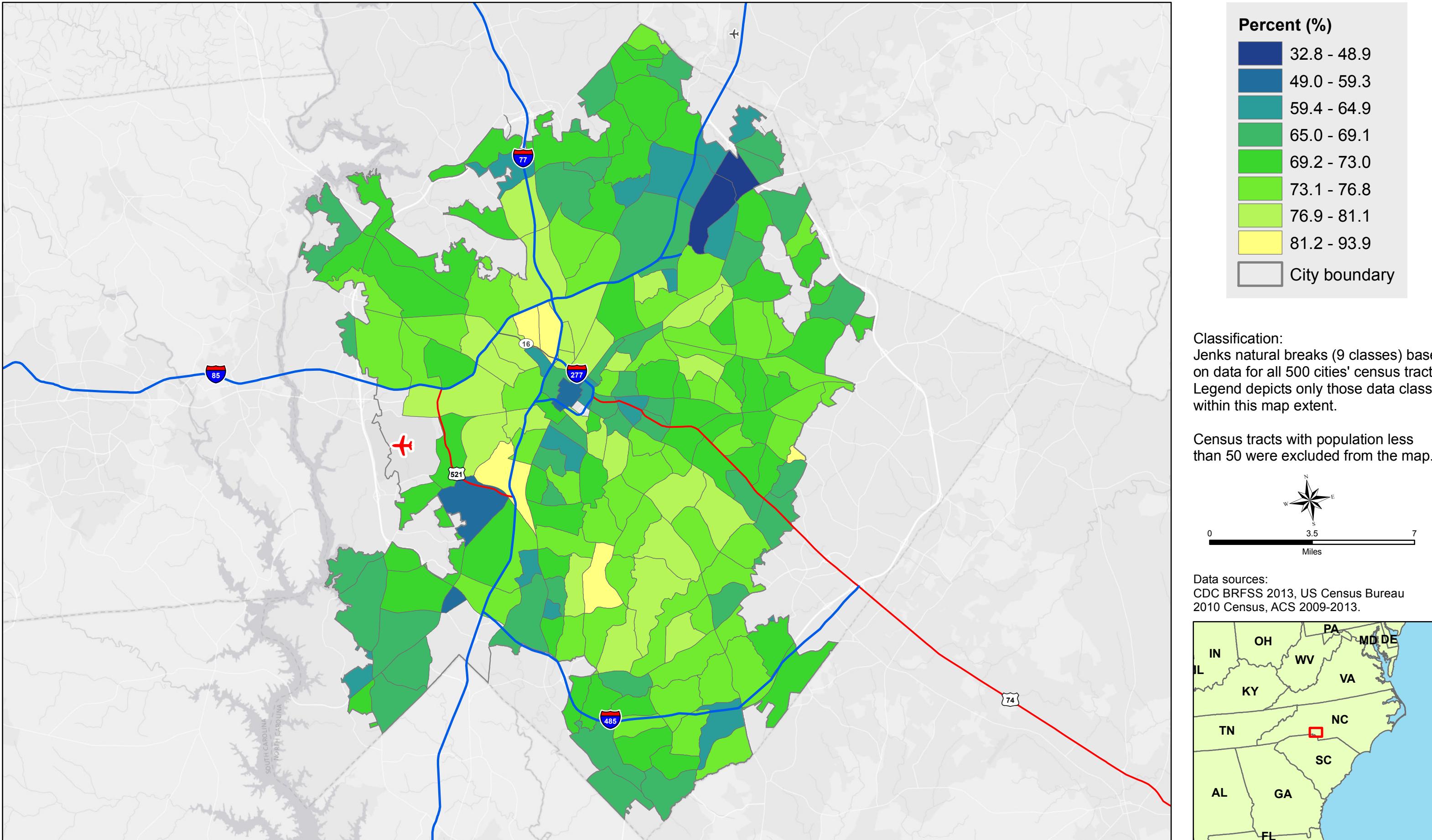
Visits to doctor for routine checkup within the past year among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



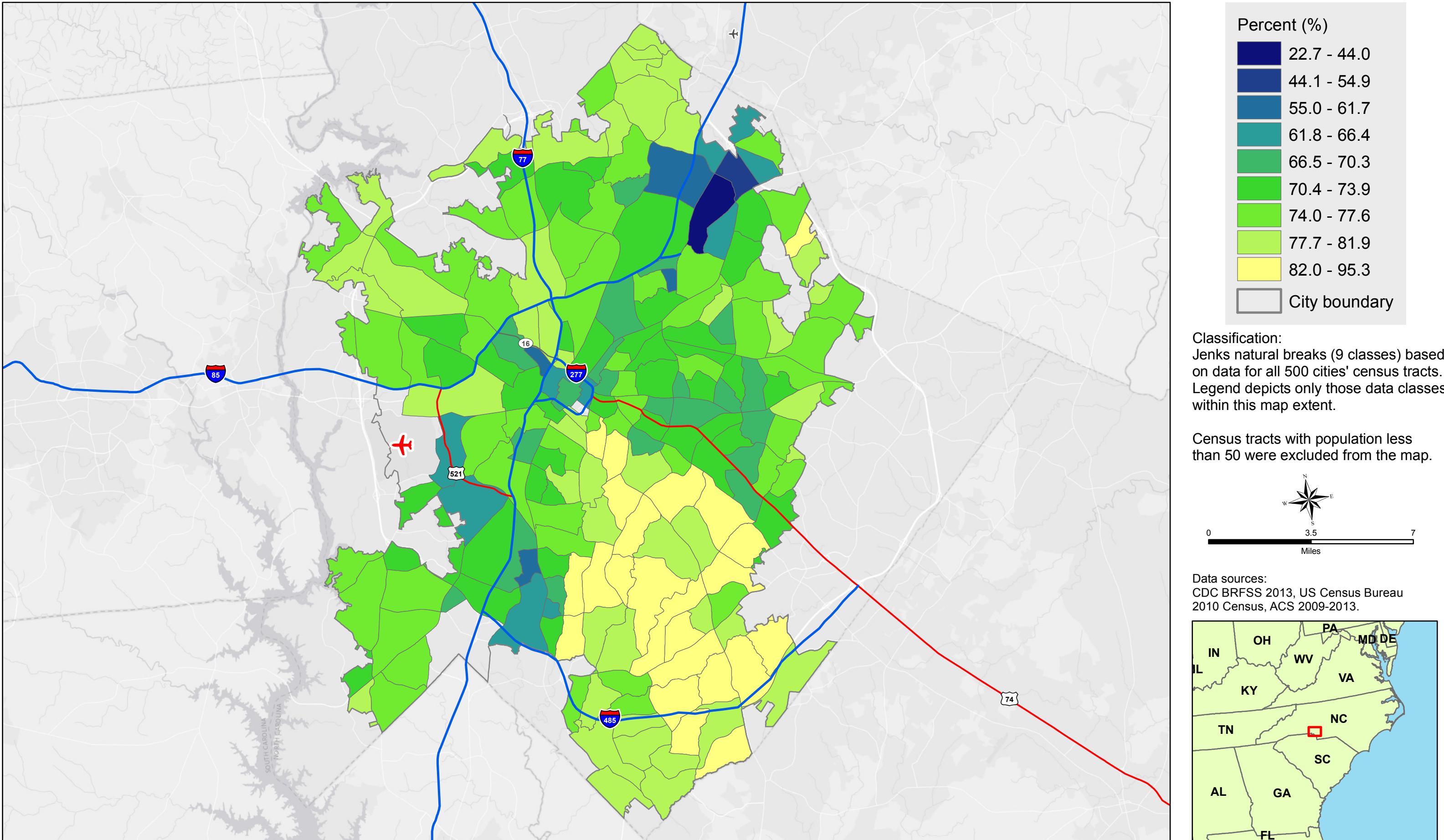
Visits to dentist or dental clinic among adults aged ≥ 18 years by census tract, Charlotte, NC, 2014



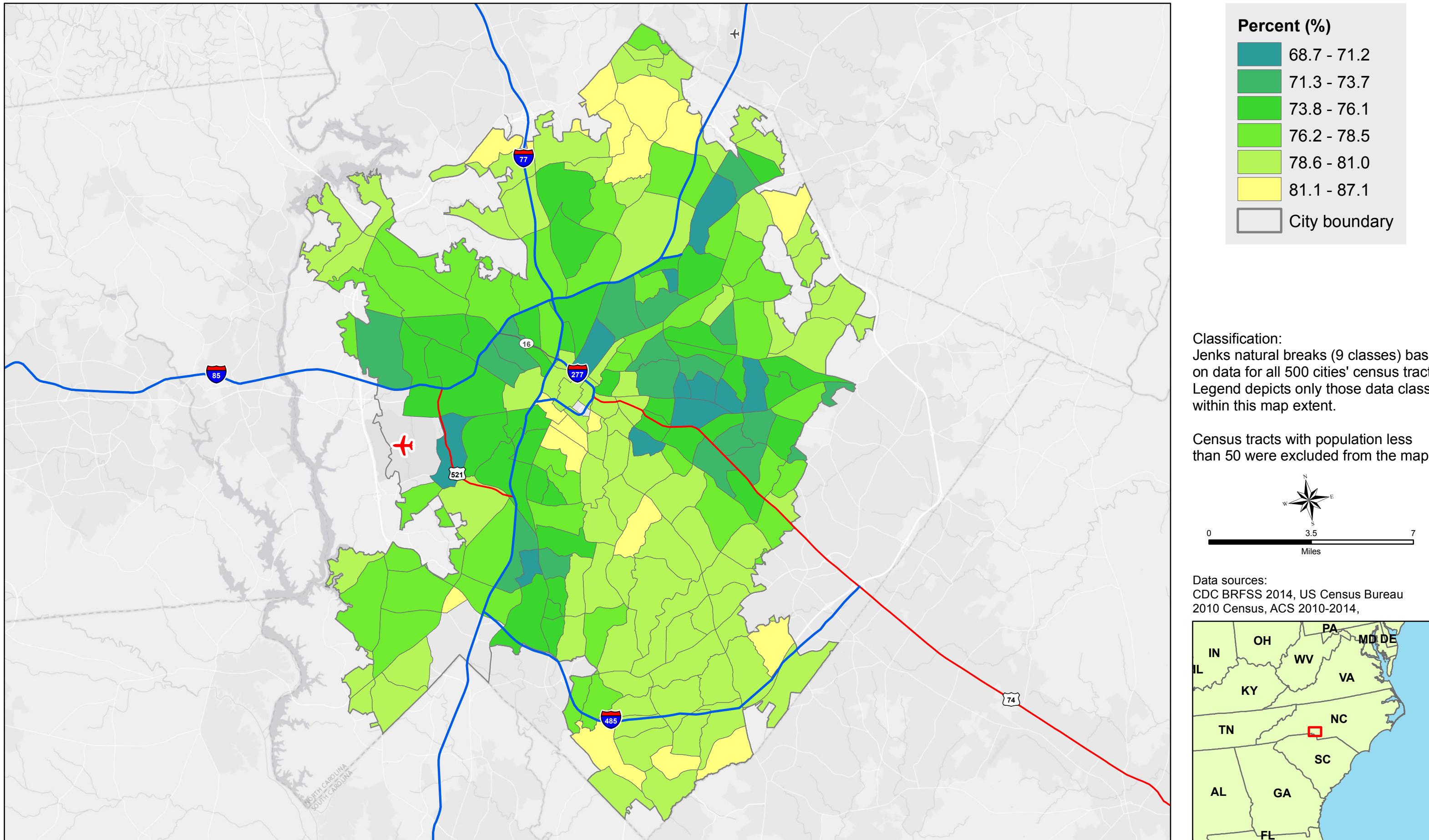
Taking medicine for high blood pressure control among adults aged ≥ 18 years with high blood pressure by census tract, Charlotte, NC, 2013



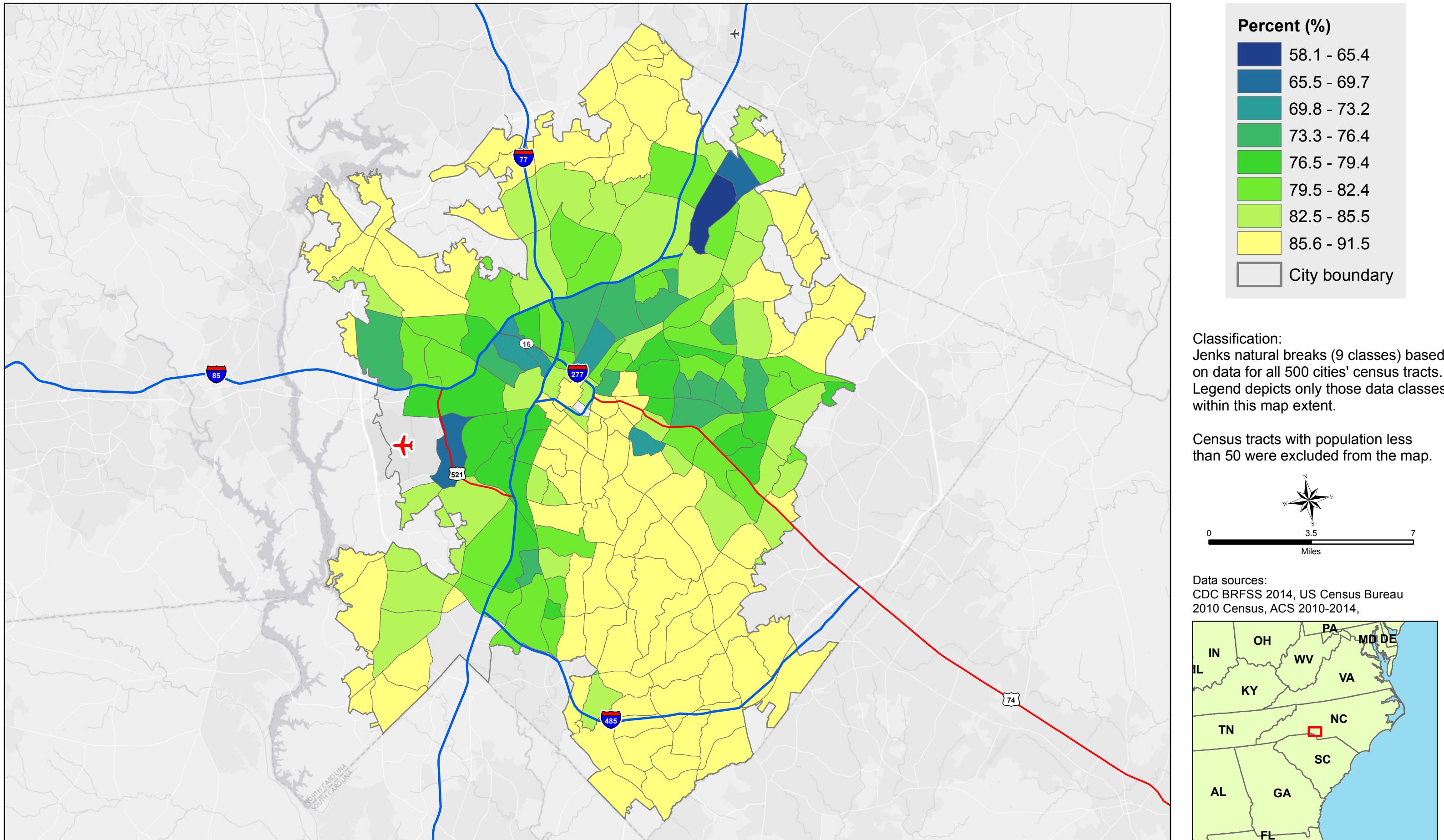
Cholesterol screening among adults aged ≥ 18 years by census tract, Charlotte, NC, 2013



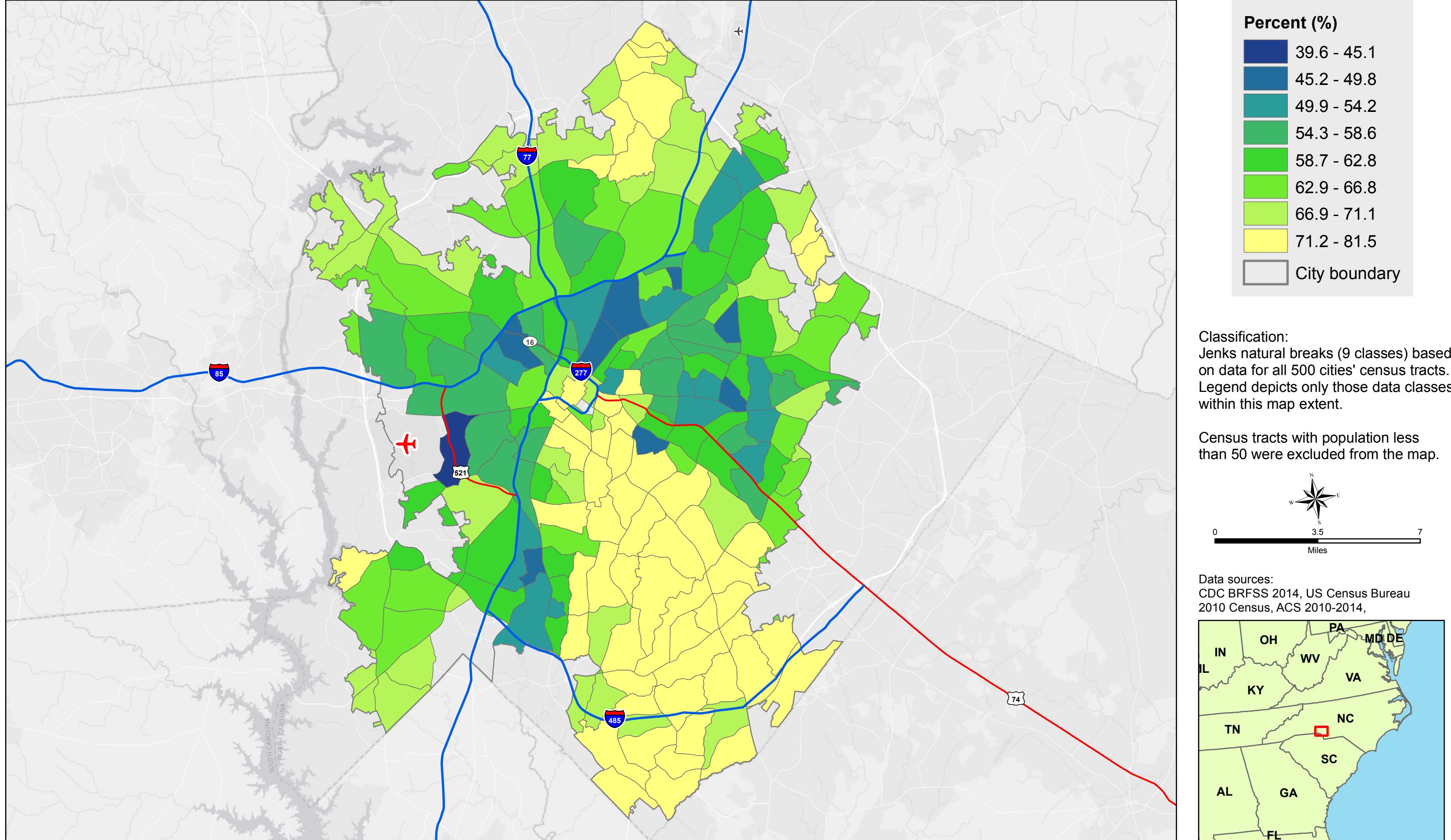
Mammography use among women aged 50-74 years by census tract, Charlotte, NC, 2014



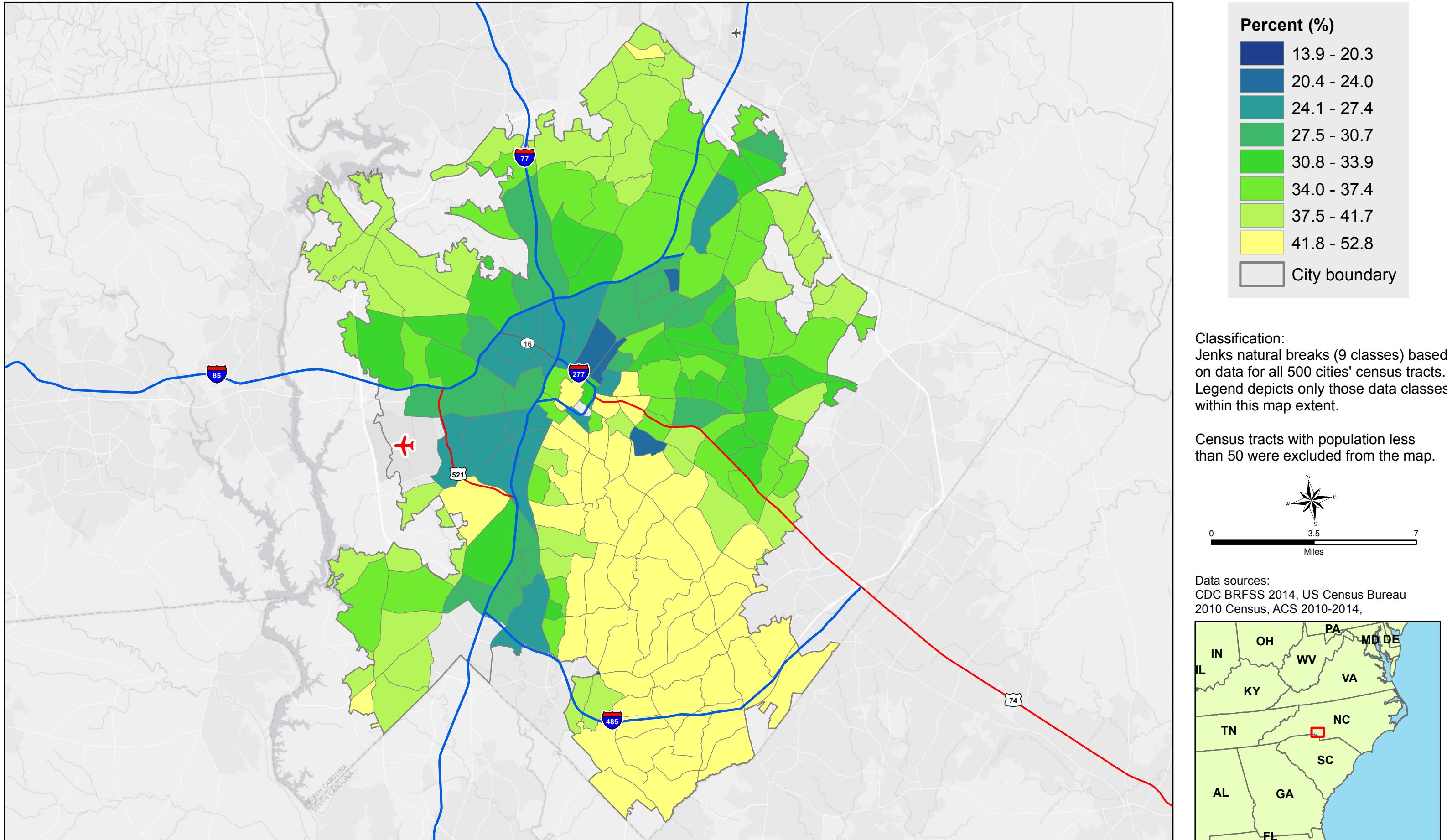
Papanicolaou smear use among adult women aged 21-65 years by census tract, Charlotte, NC, 2014



Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years by census tract, Charlotte, NC, 2014



Up to date on a core set of clinical preventive services (flu shot past year, pneumococcal shot ever, colorectal cancer screening) among men aged ≥ 65 years by census tract, Charlotte, NC, 2014



Up to date on a core set of clinical preventive services (same as men plus mammogram past 2 years) among women aged ≥ 65 years by census tract, Charlotte, NC, 2014

