

Rural-Urban Disparities in Early Onset Gastric Cancer Among Hispanics and Non-Hispanics

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INTRODUCTION

Rural-urban disparities in incidence have been described for several other cancers, but it is unknown whether rural-urban disparities in incidence of early-onset gastric cancer (EOGC) exist.^{1,2} We used population-based data to evaluate if rural-urban disparities exist among Hispanic and non-Hispanic persons and whether these disparities intersect with ethnic disparities given most Hispanics reside in urban areas.

METHODS

We utilized the SEER Census Tract-level Socioeconomic Status and Rurality database from 2006 to 2018 to calculate incidence rates and incidence rate ratios of non-cardia EOGC among Hispanic and non-Hispanic persons. Annual percent change was estimated using Joinpoint software.

RESULTS

Incidence rates of EOGC were significantly higher among Hispanics than non-Hispanics in both urban and rural census tracts. Hispanics had higher incidences of EOGC by stage of disease and age when compared to non-Hispanics living in both urban and rural census tracts.

CONCLUSION

Although in other cancers there exist rural urban disparities, among Hispanic and non-Hispanic persons with EOGC, the higher incidence rates of Hispanics persist across location. Ethnicity may be the primary modifier behind higher incidence rates of EOGC among Hispanics when compared to non-Hispanics. Further studies focused on genetics are needed to determine factors contributing to this disparity among Hispanic persons.

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DISCLOSURES

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Table 1: Age-Adjusted Incidence Rates (IR) and Incidence Rate Ratios (IRR) of Early Onset Gastric Cancer among Hispanics and Non-Hispanics in rural and urban census tracts by age and stage of disease

	Rural			Urban		
	Hispanic IR	Non-Hispanic IR	IRR*	Hispanic IR	Non-Hispanic IR	IRR*
Age (20-49)	1.44 (1.15-1.78)	0.68 (0.60-0.77)	2.12 (1.64-2.73)	1.75 (1.66-1.83)	0.86 (0.83-0.89)	2.03 (1.91-2.16)
20-29	0.11 (0.02-0.32)	0.05 (0.02-0.11)	2.23 (0.36-10.47)	0.31 (0.26-0.37)	0.14 (0.12-0.16)	2.23 (1.74-2.84)
30-39	1.17 (0.77-1.70)	0.51 (0.39-0.66)	2.29 (1.39-3.67)	1.36 (1.25-1.49)	0.62 (0.57-0.67)	2.19 (1.94-2.46)
40-49	2.84 (2.14-3.69)	1.38 (1.18-1.59)	2.06 (1.50-2.80)	3.35 (3.15-3.55)	1.7 (1.63-1.78)	1.97 (1.82-2.12)
Stage						
In situ/localized	0	0	-	0	0	-
Regional	0.77 (0.56-1.03)	0.41 (0.35-0.49)	1.86 (1.30-2.60)	0.84 (0.79-0.90)	0.49 (0.46-0.51)	1.73 (1.59-1.89)
Distant	0.57 (0.39-0.79)	0.19 (0.15-0.24)	3.02 (1.93-4.61)	0.67 (0.62-0.72)	0.26 (0.24-0.28)	2.55 (2.30-2.83)

*Comparing Hispanic IR to non-Hispanic IR

Figure 2. Demographic Characteristics of Hispanics and non-Hispanics in rural and urban census tracts*

*Unknown census tract: 42 Hispanics, 127 Non-Hispanics

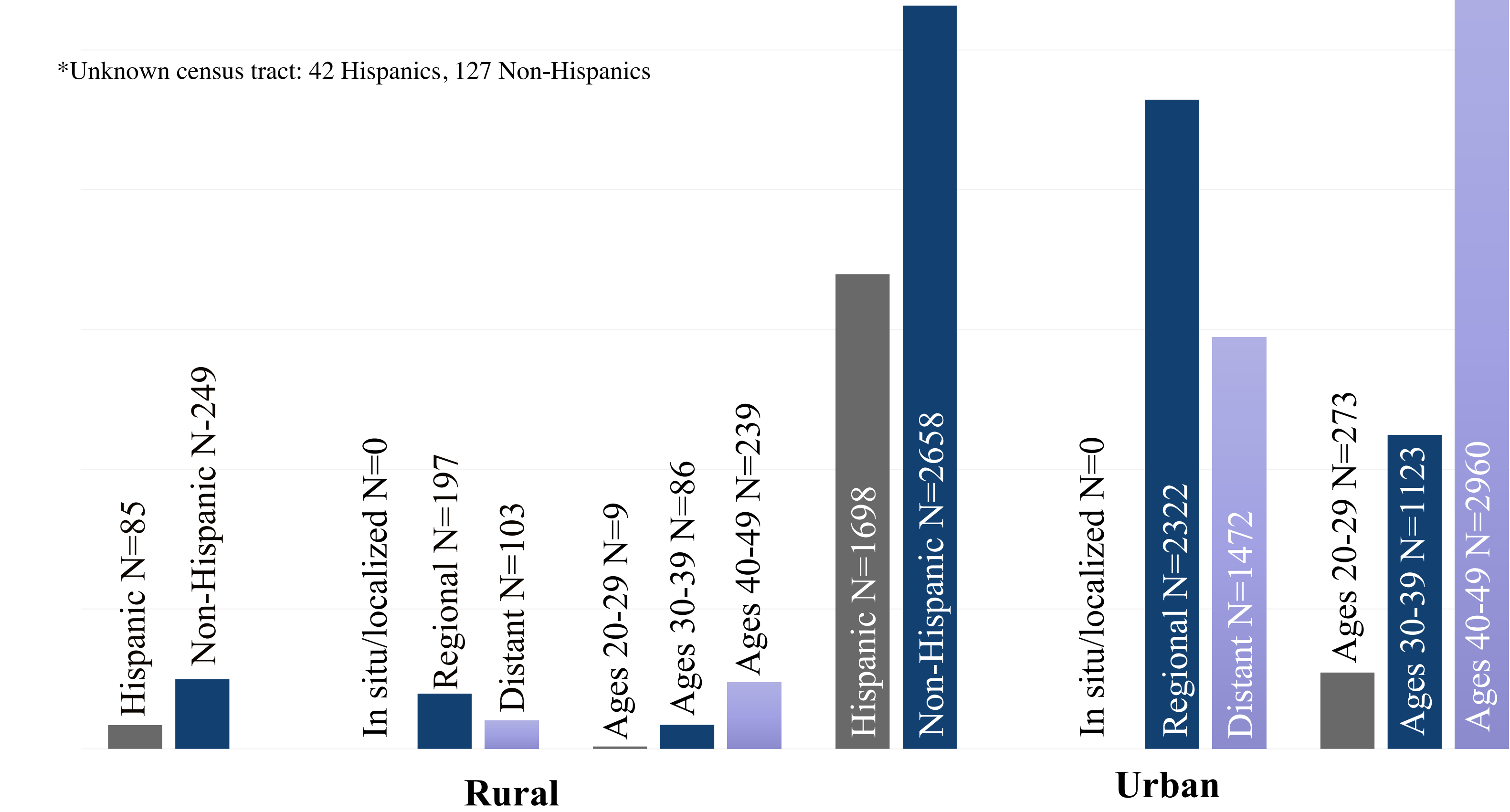
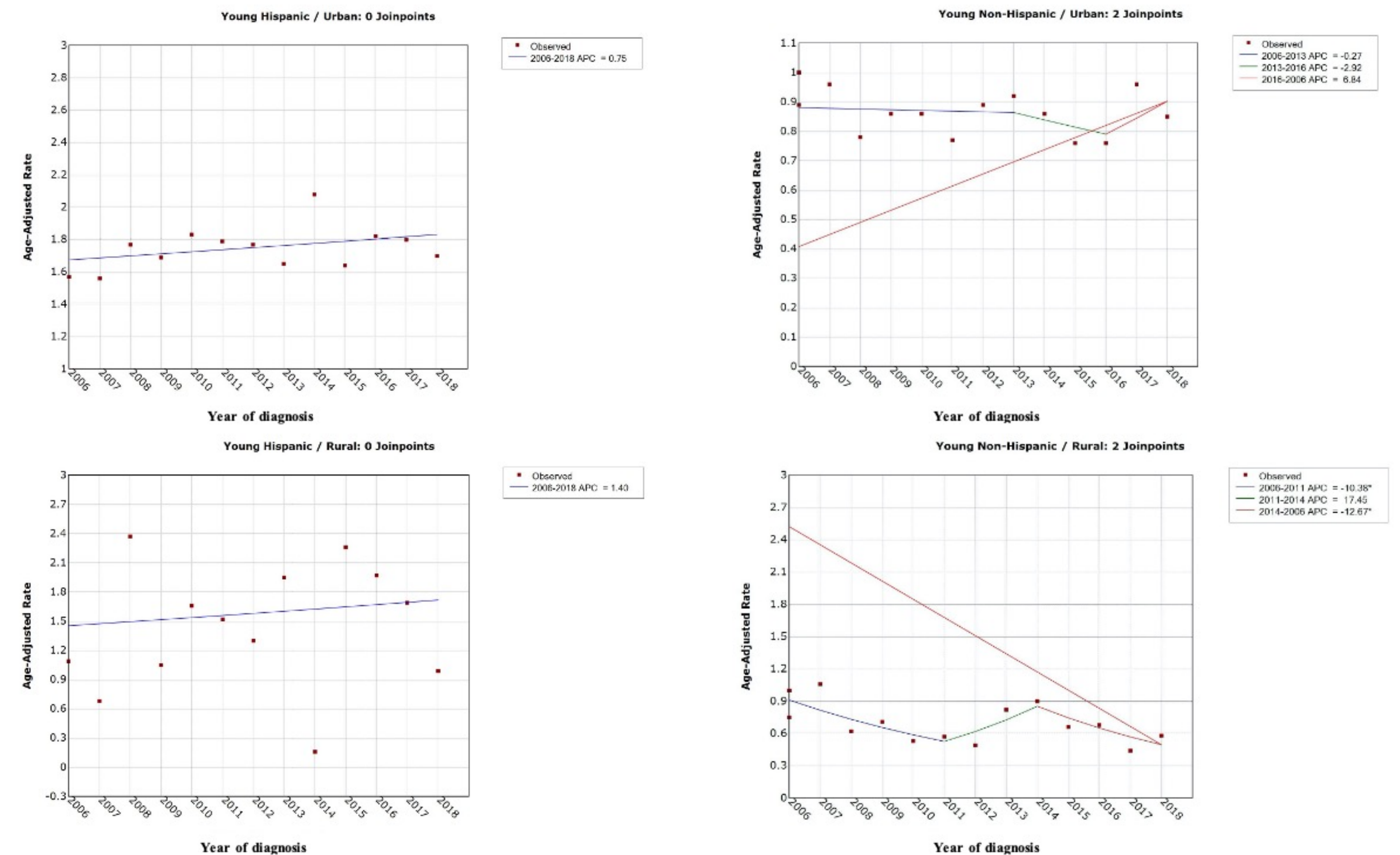


Figure 1. Annual percent change of incidence rates in EOGC among Hispanics and non-Hispanics in urban and rural census tracts



*Indicates that the Annual Percent Change (APC) is significantly different from zero at the alpha = 0.05 level