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Title

Rural/urban and racial/ethnic disparities in invasive melanoma, a retrospective cohort study

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Publication Date

2024-04-01

Data Availability

The data associated with this publication are not available for this reason: NA



How do race and ethnicity impact rural-urban disparities in melanoma incidence?

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INTRODUCTION

- Melanoma is the 5th most common cancer in the United States and is curable if detected early. Identifying disparities in melanoma incidence may guide public health initiatives and improve outcomes.
- Melanoma is most common in non-Hispanic White (NHW) patients, but other racial and ethnic groups are more often diagnosed at late-stage disease and experience higher mortality than NHW patients.
- Higher melanoma incidence has been reported in rural than in urban settings, but the intersection of rurality with race and ethnicity has not been thoroughly explored.
- This study examines melanoma incidence, stratified by rural-urban residence and race and ethnicity, to identify populations experiencing disproportionately heightened melanoma burden.

METHODS

Melanoma

- 484,841 cases from 459,529 patients
- Surveillance, Epidemiology, and End Results (SEER)
- Data from 2000-2019
- 27% - 48% US population coverage

Rural-Urban Axis

- United States Department of Agriculture Rural Urban Continuum Codes (RUCC)
- RUCC 1-3 considered urban, RUCC 4-9 considered rural by convention

Statistical Analysis

- Generated age-adjusted incidence per 100,000 (IR)
- Compared rural-urban incidence stratified by patient race and ethnicity (rural-urban incidence rate ratios, IRR)

RESULTS

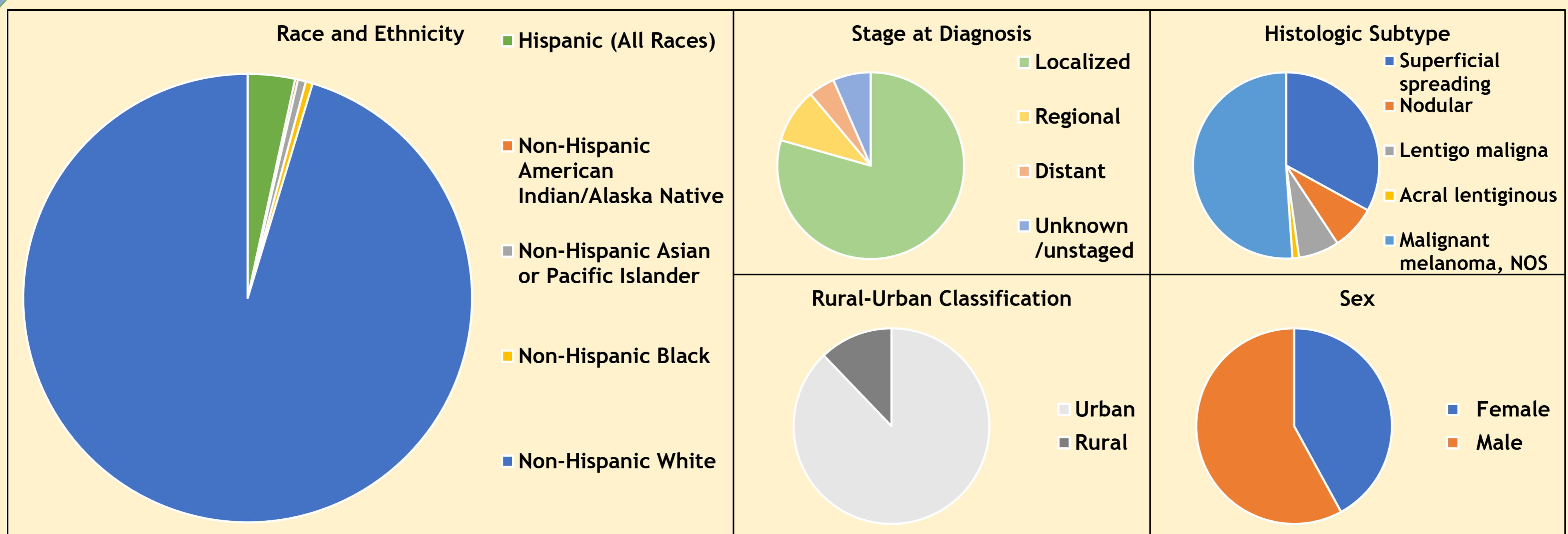


Figure 1. Selected patient demographics and tumor characteristics

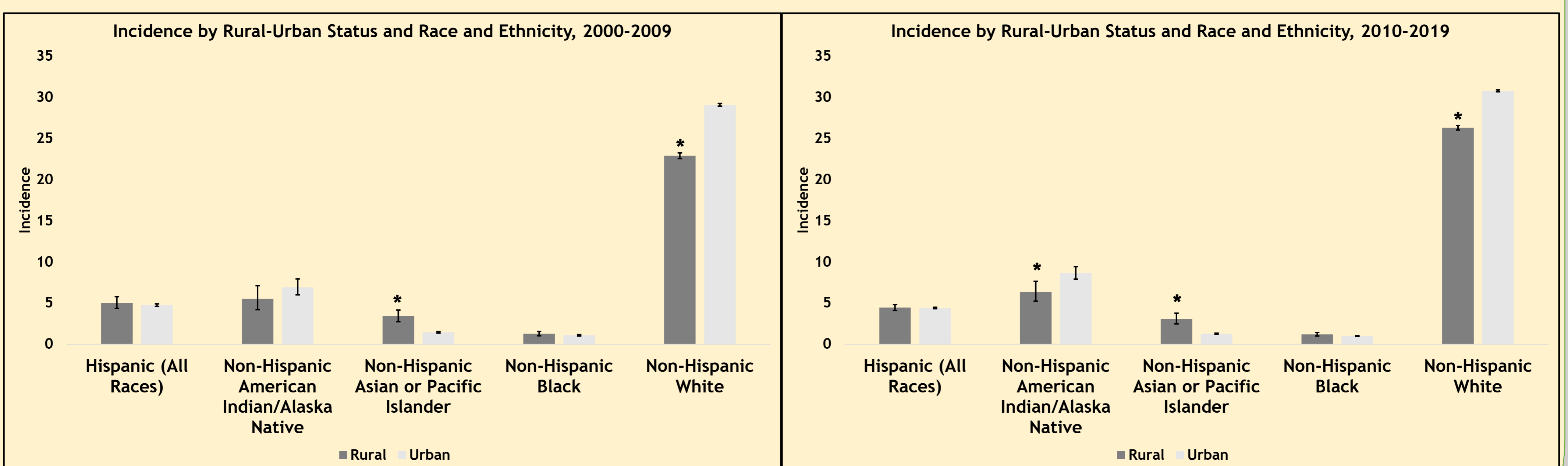


Figure 2. Age-adjusted melanoma incidence (per 100,000) by rural-urban residence and race and ethnicity. Error bars represent 95% confidence intervals, and asterisks denote statistically significant rural-urban incidence rate ratios.

CONCLUSIONS

- The impact of rurality on melanoma incidence is not consistent across different racial and ethnic groups.
- For non-Hispanic Native American/Alaska Native and non-Hispanic White patients, rurality correlates with lower incidence, while for non-Hispanic Asian or Pacific Islander patients, rurality correlates with higher incidence.
- Further studies are needed to determine the mechanisms driving rural-urban incidence disparities in specific populations.