

Environmental Data and Studies of Behavioral Cancer Risk

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Social-Environmental Injustice and Cancer Screening



Local Moran's I Cluster Maps of Hotspots of Social-Environmental Injustice



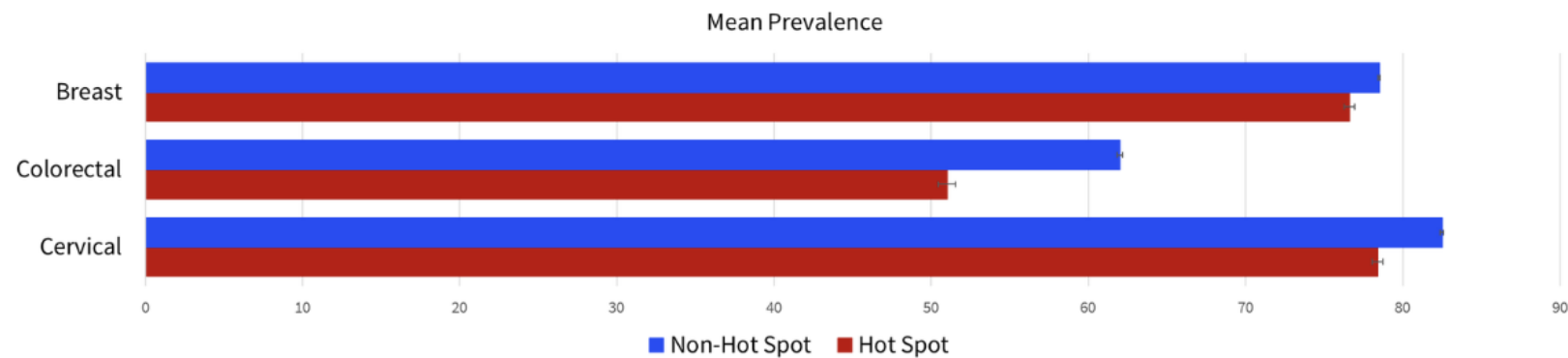
Dataset: Environmental Justice Index (2022) and CDC PLACES (2020)

Methods: Local Moran's I to identify geographic "hotspots" ($p < 0.05$) of SV and EB, defined hotspots of social-environmental injustice (SEI) as hotspots of both SV and EB

Compared the prevalence of cancer screening between hotspots and non-hotspots of SV-alone, EB-alone, and SEI.

Conclusion: SEI hotspots had the lowest prevalence of breast, cervical, and colorectal cancer screening, and the greatest prevalence differences relative to non-hotspots.

Cancer Screening Prevalence in Hotspots of Social-Environmental Injustice



Identifying areas of greatest SEI can inform priority areas for place-based cancer control and prevention efforts, including bolstering access to preventive cancer screening

Limitations & Opportunities

Limitations:

- Long windows of exposure data are less applicable for behavioral studies (i.e. pre-incidence)
- Aggregation of many variables into a singular metric limits actionable insights

Opportunities:

- Satellite data can be used to evaluate outcomes along the cancer continuum beyond the traditional exposure-incidence relationship (THREAD)
- Neighborhood-level environmental data may supplement existing survey data (HINTS)