Population Based Evaluation of Nasopharyngeal Carcinoma Mortality Trends in the United States

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Introduction

Background

- Nasopharyngeal Cancer
- Risk Factors
  - Epstein-Barr Virus
  - Alcohol, Smoking, Tobacco Use
  - Diet (Salted, Cured, Fermented Foods)
- Global Mortality Rate: < 1 per 100,000
- Mortality Rates Differ by Race: Asians have not been Disaggregated in Literature

Objective

- To characterize NPC mortality trends by race, nativity, sex, and age

Results

Crude Mortality Counts by Race and Age

Race
- Asian Indian alone
- Chinese alone
- Filipino alone
- Japanese alone
- Korean alone
- Vietnamese alone
- White alone

Age-Adjusted Mortality Rates by Race and (a) Nativity (b) Sex

Comparison of AAMR: US vs Asia

<table>
<thead>
<tr>
<th>Race</th>
<th>US AAMR (per 100,000 person-years)</th>
<th>Asian Country AAMR (per 100,000 person-years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Asian Indian</td>
<td>0.113 [0.093-0.139]</td>
<td>0.081 [0.073-0.089]</td>
</tr>
<tr>
<td>Chinese</td>
<td>2.311 [2.199-2.559]</td>
<td>0.578 [0.538-0.629]</td>
</tr>
<tr>
<td>Filipino</td>
<td>0.730 [0.657-0.843]</td>
<td>0.259 [0.233-0.271]</td>
</tr>
<tr>
<td>Japanese</td>
<td>0.237 [0.210-0.278]</td>
<td>0.192 [0.173-0.217]</td>
</tr>
<tr>
<td>Korean</td>
<td>1.649 [1.755-1.959]</td>
<td>0.302 [0.244-0.417]</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>1.388 [1.249-1.593]</td>
<td>0.579 [0.560-0.679]</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>0.336 [0.334-0.356]</td>
<td>0.124 [0.120-0.125]</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

Future Work

- Missing Data: Asian Subgroup Classification
  - Asian Countries with Highest AAMR

<table>
<thead>
<tr>
<th>Country</th>
<th>Age-Adjusted Mortality rate (per 100,000 person-years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>3.3</td>
</tr>
<tr>
<td>Vietnam</td>
<td>3.3</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.8</td>
</tr>
<tr>
<td>Malaysia</td>
<td>2.5</td>
</tr>
</tbody>
</table>

- Confounding Variables
  - Socioeconomic factors in diagnosis/treatment
- National Vital Statistics System Mortality Data (Restricted)
- Surveillance, Epidemiology, and End Results (SEER)

Methods


Asian Americans
- Asian Indian, Japanese, Chinese, Filipinos, Vietnamese

Non-Hispanic Whites

Race Analysis
- Standardization
- Multivariate

Sex Analysis
- Logistic regression

References