Unmet Challenges in Cancer Disparities—Letter

Janet M. Hock1, Amelia Nealley1, Deborah Morrison1, Christopher Farah1, H. Dean Hosgood2, and Sheila Zahm2

As recently reviewed by Gehlert and Colditz, cancer disparities in race and ethnicity are well recognized (1). We agree that much less is known about other population groups included in the definition of health disparities (2) and would like to add our observations on underserved whites in non-agrarian rural communities. Of the U.S. population, 59 million (21%) who live in rural America commonly suffer disparities of isolation, poverty, and difficult access to health care. For example, in Maine, a rural state, whites have among the highest overall cancer incidence and death rates in the United States (refs. 3, 4; Table 1).

A case series of 24 men and 60 women with cancer recruited from a community medical center serving north-east Maine shows the unhealthy profiles in a disadvantaged rural community. Data are expressed as percentage or mean ± SEM. Participants diagnosed with cancer requiring surgical resection completed questionnaires.

Cases were white, 65 ± 1 years old with median body mass index of 28. There were 48 lung, 23 breast, and 13 other cancers. About 63% families reported household income below poverty level, whereas 60% cases had less than college education. Cases reported 4.3 ± 0.3 jobs/case with 25% reporting ever employment in shift work. Of the 84 cases, 13 men and 2 women reported military service for about 5 years. About 43% cases reported one or more cancers prior to current diagnosis. Only 8% cases were in families with no cancer history and 82% reported average 4.6 first-degree relatives with cancer/family. Ever-smokers and current smokers comprised 56% and 24% of cases, respectively. Pack-years were 43 ± 8 for men and 39 ± 5 for women. About 87% reported 39 ± 2 years

Table 1. Age-adjusted incidence and mortality rates for cancer among people in Maine a

<table>
<thead>
<tr>
<th>Age-adjusted cancer rates (per 100,000/y)</th>
<th>Men</th>
<th></th>
<th>Women</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maine</td>
<td>United States</td>
<td>Maine</td>
<td>United States</td>
<td>Maine</td>
</tr>
<tr>
<td>Lung</td>
<td>96.9 (93.6-100.3)</td>
<td>83.6 (83.4-83.9)</td>
<td>66.8 (64.4-69.3)</td>
<td>57.3 (57.1-57.5)</td>
<td>79.5 (77.5-81.5)</td>
</tr>
<tr>
<td>Bladder</td>
<td>48.2 (45.8-50.6)</td>
<td>39.4 (38.3-39.6)</td>
<td>13.5 (12.5-14.7)</td>
<td>9.8 (9.7-9.9)</td>
<td>28.3 (27.2-29.6)</td>
</tr>
<tr>
<td>Mortality</td>
<td>245 (240-251)</td>
<td>228 (227-228)</td>
<td>170 (166-174)</td>
<td>159 (159-159)</td>
<td>200 (197-203)</td>
</tr>
<tr>
<td>All cancers</td>
<td>76.9 (73.9-80.0)</td>
<td>71.1 (70.9-71.3)</td>
<td>48.9 (46.8-51.0)</td>
<td>43.8 (43.7-44.0)</td>
<td>60.5 (58.8-62.3)</td>
</tr>
<tr>
<td>Lung</td>
<td>10.1 (9.0-11.3)</td>
<td>8.2 (8.1-8.3)</td>
<td>3.2 (2.7-3.8)</td>
<td>2.3 (2.2-2.3)</td>
<td>6.0 (5.5-6.6)</td>
</tr>
<tr>
<td>Mortality</td>
<td>22.5 (21.1-24.0)</td>
<td>23.9 (23.8-24.1)</td>
<td>22.5 (21.1-24.0)</td>
<td>23.9 (23.8-24.1)</td>
<td>22.4 (22.0-22.8)</td>
</tr>
</tbody>
</table>

aCompared with the U.S. overall and with U.S. African/minorities to illustrate the higher rates among population subsets with cancer disparities.


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northern New England have a high prevalence of unhealthy lifestyle factors and comorbidities. Research on cancer disparities in rural areas may offer unique opportunities to assess the effect of multiple concurrent risk factors, as well as genetic susceptibility.

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No potential conflicts of interest were disclosed.

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References

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