Racial Disparities in Cancer Incidence, Staging, and Survival among the Oldest Old in the United States

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Acknowledgements

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Funding Sources

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Background

- Cancer is predominately a disease of the elderly
  - Over half of all newly cancer diagnoses
  - Almost three quarters of cancer deaths

- The oldest old is the fastest growing segment of the U.S. population
  - Racial minority populations are also increasing

- Increased life expectancy and advances in cancer screening have resulted in an increasing number of cancer diagnoses in the oldest old
Objective

- To examine white and black differences in cancer incidence rates, stage at diagnosis, and survival probabilities among the oldest old using data from the SEER Program of the National Cancer Institute
Methods

- 18 SEER registries
- White and black adults aged 85 years and older
- Invasive colorectal, lung and bronchus, breast (women only), and prostate cancer

Years examined

- Cancer incidence and stage at diagnosis: 2008-2012 and 1973-2012
- 5-year survival probability: 2005-2011
Results

- 148,383 men and women aged 85 years or older with invasive cancer diagnosed during 2008 to 2012

- Of the 148,383 adults with cancer, 68,675 were from the four sites of interest:
  - 63,331 (92.2%) white, 5,344 (7.8%) black

- Lung: 32%
- Colorectal: 31%
- Breast: 23%
- Prostate: 14%
Incidence trends of colorectal, lung and bronchus, breast, and prostate cancer among the oldest old age group, 1973-2012
Incidence trends of colorectal, lung and bronchus, breast, and prostate cancer among white and black adults aged 85 years and older, 1973-2012
Cancer staging among white and black adults aged 85 years and older, diagnosed 2008-2012

**a. Colorectal Cancer**

**b. Lung and Bronchus Cancer**

**c. Breast Cancer**

**d. Prostate Cancer**
### Five-year relative survival probability for selected invasive cancers by stage at diagnosis, among white and black adults aged 85 years and older and diagnosed 2005-2011

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>White % (95% CI)</th>
<th>Black % (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Colorectal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Localized</td>
<td>83.0 (79.6-85.9)</td>
<td>67.8 (57.3-76.2)</td>
</tr>
<tr>
<td>Regional</td>
<td>60.7 (57.6-63.5)</td>
<td>51.8 (41.2-61.5)</td>
</tr>
<tr>
<td>Distant</td>
<td>4.5 (3.3-5.9)</td>
<td>2.4 (0.7-6.0)</td>
</tr>
<tr>
<td>Unstaged/Missing</td>
<td>9.0 (6.8-11.5)</td>
<td>9.7 (4.4-17.4)</td>
</tr>
<tr>
<td><strong>Lung and Bronchus</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Localized</td>
<td>35.1 (31.2-39.0)</td>
<td>11.6 (4.4-22.5)</td>
</tr>
<tr>
<td>Regional</td>
<td>12.2 (9.8-14.7)</td>
<td>3.2 (0.8-8.8)</td>
</tr>
<tr>
<td>Distant</td>
<td>2.1 (1.6-2.7)</td>
<td>1.1 (0.3-3.5)</td>
</tr>
<tr>
<td>Unstaged/Missing</td>
<td>2.4 (1.5-3.6)</td>
<td>1.4 (0.1-6.8)</td>
</tr>
<tr>
<td><strong>Breast</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Localized</td>
<td>100.0 (100.0)</td>
<td>80.0 (67.7-88.0)</td>
</tr>
<tr>
<td>Regional</td>
<td>65.8 (61.5-69.7)</td>
<td>45.3 (34.1-55.8)</td>
</tr>
<tr>
<td>Distant</td>
<td>17.7 (13.6-22.2)</td>
<td>5.4 (0.5-20.1)</td>
</tr>
<tr>
<td>Unstaged/Missing</td>
<td>25.0 (19.8-30.5)</td>
<td>30.7 (13.8-49.4)</td>
</tr>
<tr>
<td><strong>Prostate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Localized</td>
<td>100.0 (100.0)</td>
<td>99.6 (66.1-100.0)</td>
</tr>
<tr>
<td>Regional</td>
<td>70.2 (54.6-81.3)</td>
<td>68.3 (34.0-87.4)</td>
</tr>
<tr>
<td>Distant</td>
<td>16.5 (13.3-20.1)</td>
<td>13.1 (7.0-21.2)</td>
</tr>
<tr>
<td>Unstaged/Missing</td>
<td>44.8 (38.9-50.6)</td>
<td>39.6 (26.4-52.4)</td>
</tr>
</tbody>
</table>
Discussion

- Results demonstrate continued racial disparities in cancer incidence, staging, and survival among the fastest growing portion of the U.S. population.

- Screening is crucial, however, the question remains if it is beneficial for men and women aged 85+.

- A growing consensus stresses the importance of considering the individual’s particular combination of functional status, personal preferences and goals, comorbidities, and life expectancy regarding screening recommendations.
Discussion

- Invasive lung and bronchus cancer incidence increased over time among this population with slight decreases from 2010-2012
  - 85+ were part of a generation that had the highest smoking rates

- Black adults aged 85+ may face a number of barriers to cancer screening and treatment
Conclusion

- This study found white-black differences in cancer incidence rates, stage at diagnosis, and survival probabilities among the oldest old using SEER data.

- Better ways to reduce racial disparities in cancer prevention and treatment among this population are urgently needed:
  - Need for geriatric oncology
  - Need for recruitment into clinical trials
Thank you!