
26%

Lung
- Male: 100% decrease
- Female: 23% decrease

Colorectal
- Female: 53% decrease

Female breast
- Female: 40% decrease

Prostate
- Male: 51% decrease

Rates per 100,000 persons
Large disparities in progress against cancer

• Race (black vs white)

• Socioeconomic status

• Residence (state)

• The effects of the Affordable Care Act on cancer disparities

*Rates are per 100,000, age-adjusted to the US standard population.
Data Source: National Center for Health Statistics, Centers for Disease Control and Prevention, provided by the SEER program.

- *Rates are per 100,000, age-adjusted to the US standard population.
- Data Source: National Center for Health Statistics, Centers for Disease Control and Prevention, provided by the SEER program.
Trends in Adult Smoking Prevalence by Race and Sex, 1965-2014

Source: DeSantis et al. 2016. CA A Cancer J clinician

![Graph showing trends in daily smoking among black and white high school seniors from 1977 to 1996. The graph indicates a decrease in smoking prevalence for white males and females, and black males, while black females show a slight increase.]

Female breast

<table>
<thead>
<tr>
<th>Year of death</th>
<th>Black</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1978</td>
<td></td>
<td></td>
</tr>
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<td>1994</td>
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<td>1998</td>
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<tr>
<td>2002</td>
<td></td>
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<td>2006</td>
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<td></td>
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<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Colon & Rectum

<table>
<thead>
<tr>
<th>Year of death</th>
<th>Black</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
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<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Rates are per 100,000, age-adjusted to the US standard population.
Data Source: National Center for Health Statistics, Centers for Disease Control and Prevention, provided by the SEER program.
Stage Distribution for Female Breast and Colorectal Cancers, SEER 18, 2008-2014

Female breast

<table>
<thead>
<tr>
<th>Stage</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>63</td>
<td>54</td>
</tr>
<tr>
<td>Regional</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>Distant</td>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>

Colorectum

<table>
<thead>
<tr>
<th>Stage</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>39</td>
<td>38</td>
</tr>
<tr>
<td>Regional</td>
<td>36</td>
<td>32</td>
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<tr>
<td>Distant</td>
<td>21</td>
<td>26</td>
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</tbody>
</table>
Cumulative Probability of Interval CRC by Race, SEER-Medicare 2002-2011

5-year Relative Survival for Female Breast and Colorectal Cancers, SEER 18, 2008-2014

Female breast

<table>
<thead>
<tr>
<th>Stage</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>99</td>
<td>95</td>
</tr>
<tr>
<td>Regional</td>
<td>86</td>
<td>77</td>
</tr>
<tr>
<td>Distant</td>
<td>28</td>
<td>20</td>
</tr>
</tbody>
</table>

Colorectum

<table>
<thead>
<tr>
<th>Stage</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>90</td>
<td>86</td>
</tr>
<tr>
<td>Regional</td>
<td>72</td>
<td>65</td>
</tr>
<tr>
<td>Distant</td>
<td>14</td>
<td>10</td>
</tr>
</tbody>
</table>
Receipt of trastuzumab among women with human epidermal growth factor receptor 2–positive breast cancer by stage and race

Source: Reeder-Hayes et al. JCO, 2016

Contributing factors to Black-White Disparities in Survival Among Women ages 19-64 Years With Stage I-III Breast Cancer, 2004-2013

Source: Jemal et al., JCO 2017
Contributing Factors to Black-White Disparities in Survival Among Persons ages 18-64 Years With Colorectal Cancer, 2004-2013

Source: Sineshaw, Gastroenterology 2018
Eliminating Racial Disparities in Colorectal Cancer in the Real World: It Took a Village

Stephen S. Grubbs, Delaware Cancer Consortium, Dover; and Helen F. Graham Cancer Center, Newark, DE
Blase N. Polite, The University of Chicago, Chicago, IL
John Carney Jr, US House of Representatives, Washington, DC

Source: Grubbs et al. JCO, 2013
The Colorectal Cancer Control Program was Cost Effective

- Cost of screening = $1 million per year ($1.15 per resident)
- Cost of treatment for all cancers = $6 million
- Saving = $8.5 million annually from reduced incidence and stage shift to cancers requiring less aggressive therapy

Source: Grubbs et al. JCO, 2013
Disparity in Progress against Cancer by State

• Most policies that affect cancer prevention and control are designed and implemented at the state level

• “States as laboratories of democracy” by Louis Dembitz Brandeis, supreme court justice of the United States
Disparity in Lung Cancer Death Rates by State

Lung cancer death rates, 2011-2015

Current cigarette smoking prevalence in adult ages 18+ years, 2016
Proportion of Cancer Deaths Attributable to Smoking, 2014

State Cigarette Excise Tax Rates, 2018 (dollars per pack)

- Below $0.89 per pack (50% of national average)
- Between $0.89 and $1.79 per pack
- Above national average of $1.79 per pack
State Funding for Tobacco Control as Percent of CDC Recommendations, Fiscal Year 2018

State Tobacco Prevention Spending vs. State Tobacco Revenue and CDC Recommendations, 2018

- 2.6% of total state tobacco revenues
- 21% of CDC recommended funding level

Source: Broken promises to our children: A state-by-state look at the 1998 tobacco settlement 19 years later
Decline in Female Breast Cancer Death Rates, 1988-90 to 2013-15 by State

Siegel et al. 2018. CA A Can J Clinician
Decline in Colorectal Cancer Death Rates, 1980-82 to 2013-15 by state

Percent decline
- 12 - 31%
- 32 - 43%
- 44 - 54%
- 55 - 63%

Siegel et al. 2018. CA A Can J Clinician
Poverty rates by county, 2012

Lower Mississippi corridor

North Carolina/Virginia coastal

South - West Appalachian region
Early effects of the Affordable Care Act on Cancer Disparity
Affordable Care Act

- March 2010
  - Signed into law
- January 1, 2014
  - Dependent coverage expansion
  - Elimination of cost-sharing for preventive services

State Medicaid Expansion

To broad range of low-income adults <65 years with annual income of $34,000 or less for a family of four in 2017
Status of State Medicaid Expansion Decisions

NOTES: Current status for each state is based on KFF tracking and analysis of state activity. *Expansion is adopted but not yet implemented in ID, ME, NE, and UT. **VA began enrollment on November 1, 2018 for Medicaid expansion coverage that will take effect on January 1, 2019. (See link below for additional state-specific notes)

Studies on Early Effects of the ACA: Medicaid Expansion, January 1, 2014
Changes in Quarterly Percent Uninsured in Newly Diagnosed Cancer Patients Ages 18-64 Years by Income Following the ACA, 2013-2014

Source: Jemal et al. JCO, 2017
Changes in Percent Uninsured by Race/Ethnicity among Newly Diagnosed Cancer Patients Following the ACA

Han et al. JAMA Oncol 2018
Increased Cancer Screening for Low-income Adults Under the Affordable Care Act Medicaid Expansion

*Michael Hendryx, PhD* and *Juhua Luo, PhD*  Med Care 2018;56: 944–949)
Changes in CRC Screening Prevalence in Age 50-75 Years Following Elimination of Cost Sharing for Preventive Services (2008 vs 2013) by income

Fedewa et al. 2015
Conclusions

• Pervasive disparity in progress against cancer in the US

• Considerable opportunities for reducing disparities and accelerate progress against cancer

• Stronger policies and political commitment for broad and equitable dissemination of known interventions
Thank you!