Increasing Survivorship in Communities with an Excess Burden of Cancer

Cancer Survivorship: Embracing the Future

Cancer Survivorship among Underserved Populations
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National Landmark Reports Highlighting Cancer Disparities Problem
Three Major Questions

What populations have poor survival?

What are the causes of disparities in cancer survival?

How can we eliminate cancer disparities?
“Survival is a fundamental instinct seen in all biological forms. Man is no exception. But the social, political, and economic environment in which an individual or group finds itself to a large extent will determine whether one will survive as well as the quality of survival.”

Freeman, Cancer, 1989
Disease always occurs within a context of human circumstances, including economic status, social position, culture and environment.
These human circumstances largely determine whether survival is possible as well as the quality of survival.
Opportunity

Risk/Crisis

機會
危机
What populations have poor survival?
What populations have poor survival?


Figure 2. Life expectancy by race and sex: United States, 1970–2003

- White female
- Black female
- White male
- Black male
What populations have poor survival?


Rate Per 100,000

- White: 242.5 (Men) 164.5 (Women)
- African American: 339.4 (Men) 194.3 (Women)
- Asian/Pacific Islander: 148.0 (Men) 99.4 (Women)
- American Indian/Alaskan Native: 159.7 (Men) 113.8 (Women)
- Hispanic†: 171.4 (Men) 111.0 (Women)

*Per 100,000, age-adjusted to the 2000 US standard population.
†Hispanic is not mutually exclusive from whites, African Americans, Asian/Pacific Islanders, and American Indians/Alaska Natives.

What populations have poor survival?

Five-Year Relative Survival Rates, 1950-2001:
SEER Cancer Statistics Review 1975-2003

- All sites
- Colon/rectum
- Female Breast
- Cervix uteri

- White Male
- Black Male
- White Female
- Black Female
The American Cancer Society estimated that with respect to Black and White differences in survival:

The survival rate of poor people with cancer is 10 to 15 percent lower than that of other Americans.
What populations have poor survival?
What populations have poor survival?

Figure 6.4. SEER Cancer (All Sites Combined) Survival Among Women, 1988–1994 Patient Cohort

Percent of Census Tract Population Below Poverty Level in 1990

<table>
<thead>
<tr>
<th></th>
<th>&lt; 10%</th>
<th>10% to 19.99%</th>
<th>20% or higher</th>
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<tbody>
<tr>
<td>All Races</td>
<td>63.4</td>
<td>58.2</td>
<td>53.1</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>63.3</td>
<td>56.4</td>
<td>54.5</td>
</tr>
<tr>
<td>Black</td>
<td>56.5</td>
<td>52.0</td>
<td>47.8</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>65.8</td>
<td>60.7</td>
<td>56.1</td>
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<tr>
<td>Hispanic</td>
<td>64.7</td>
<td>60.8</td>
<td>59.6</td>
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Note: Based on data from 11 SEER registries. See “Data and Methods” for a list of SEER registries.
What populations have poor survival?

Cancer Mortality Rates by County (Age-adjusted 1970 US Population)
Cervix Uteri: White Females, 1970-98; Pooled White and Black Rates

NOTE:
Shades of purple: ~ 100 counties each
Shades of green: ~ 300 counties each

Sparse data (< 12 observed deaths; 1,490 counties; 7.04% of deaths)
Cancer Mortality Rates by County (Age-adjusted 1970 US Population)
Cervix Uteri: Black Females, 1970-98; Pooled White and Black Rates

What populations have poor survival?

NOTE:
Shades of purple: ~ 100 counties each
Shades of green: ~ 300 counties each

Sparse data (< 12 observed deaths; 2,625 counties; 13.1% of deaths)
What are the causes of disparities in cancer survival?
Causes of Health Disparities

What are the causes of disparities in cancer survival?

Possible Influence on Gene Environment Interaction

Prevention, Early Detection, Diagnosis/Incidence, Treatment, Post Treatment/Quality of Life, Survival and Mortality

Freeman, Adapted from Cancer Epidemiology Biomarkers & Prevention, April 2003
Who are the poor?

What are the causes of disparities in cancer survival?
What are the causes of disparities in cancer survival?

Poverty Rates by Race and Hispanic Origin: 2004 and 2005


What are the causes of disparities in cancer survival?
The Meaning of Poverty

- Substandard housing
- Inadequate information and knowledge
- Risk-promoting lifestyles, attitudes, and behaviors
- Diminished access to health care

What are the causes of disparities in cancer survival?
What are the causes of disparities in cancer survival?

**POVERTY**

**CULTURE**

- Inadequate physical and social environment
- Inadequate information and knowledge
- Risk-promoting lifestyle, attitude, behavior
- Diminished access to health care

**DECREASED SURVIVAL**

Freeman, H.P., 1989.
What are the causes of disparities in cancer survival?

Culture may augment or diminish poverty’s expected negative effects.
What is the meaning of race?

Who is Black?
What are the causes of disparities in cancer survival?

Race
Perhaps the single most defining issue in the history of American society
What are the causes of disparities in cancer survival?

**Historical Timetable**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1492</td>
<td>Columbus “discovered” America</td>
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<tr>
<td>1619</td>
<td>First African Slaves arrive in America</td>
</tr>
<tr>
<td>1776</td>
<td>Declaration of Independence</td>
</tr>
<tr>
<td>1857</td>
<td>Dred Scott Decision</td>
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<tr>
<td>1861-65</td>
<td>Civil War</td>
</tr>
<tr>
<td>1863</td>
<td>Emancipation Proclamation</td>
</tr>
<tr>
<td>1865-77</td>
<td>Reconstruction</td>
</tr>
<tr>
<td>1866</td>
<td>14th Amendment</td>
</tr>
<tr>
<td>1896</td>
<td>Plessy v. Ferguson</td>
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<tr>
<td>1954</td>
<td>Brown v. Board of Education</td>
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<tr>
<td>1960’s</td>
<td>Civil Rights Movement</td>
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</table>
What are the causes of disparities in cancer survival?

In our society we see, value, and behave toward one another through a powerful lens of race.
In keeping with this process, certain human conditions and characteristics were attributed to and/or imposed upon "races".

These include:

**Economic status** – ex: poverty

**Culture** – ex: lifestyles, attitudes, behaviors

**Genetic similarities** – ex: racially identified genetic makeup
Biomedical and social scientists have demonstrated that these attributed and imposed factors are not innate to racial categories.

In other words, economic status, culture, and genetics have, to a large extent, been disentangled from race.

What are the causes of disparities in cancer survival?
How can we eliminate cancer disparities?
How can we eliminate cancer disparities?

The Discovery-Delivery Disconnect

Discovery  Development  Delivery

Critical Disconnect

This *discovery to delivery* “disconnect” is a key determinant of the unequal burden of cancer.
How can we eliminate cancer disparities?

The Delivery Disconnect

Delivery = Access to information and knowledge
Access to quality care

Critical Disconnect

Prevention Early Detection Diagnosis/Incidence Treatment Post Treatment/Quality of Life Survival and Mortality

Freeman, H.P., 2006
Interdisciplinary Investigation of Health Disparities

How can we eliminate cancer disparities?

Social Justice
Civil & Human Rights

Biomedical Science

Social Sciences & History

Freeman, 2005
How can we eliminate cancer disparities?

Provide universal access to health care, and apply what we know at any given time to all Americans, irrespective of their ability to pay.
At a minimum:

Ensure that populations at highest risk have access to age- and gender-appropriate screening and follow-up services for the four screenable cancers initially, and expanding as new advances in screening become available.
How can we eliminate cancer disparities?

Delineate and target geographically and culturally defined areas of extreme excess mortality in America and designate them as “chronic disaster areas” analogous to that given to natural disaster areas.
Target these areas with an intense approach to providing culturally relevant education, control of tobacco use, appropriate access to early diagnosis and treatment, patient navigation and other social support networks.
Systems for monitoring treatment equity should be established and implemented to address the existence of bias in the provision of health care.

Each individual regardless of economic status must share in the responsibility for promoting his/her own health and well being.
Augment the role of patient navigators.
Augmenting Patient Navigation across the Health Care Continuum

Freeman, 2006.
## Impact of Harlem Hospital Center Breast Cancer Screening Program with Patient Navigation

### Comparison of Stage at Diagnosis

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<tbody>
<tr>
<td>Stage 0</td>
<td>0%</td>
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<tr>
<td>Stage I</td>
<td>6%</td>
<td>29%</td>
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<tr>
<td>Stage II</td>
<td>45%</td>
<td>38%</td>
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<tr>
<td>Stage III</td>
<td>39%</td>
<td>14%</td>
</tr>
<tr>
<td>Stage IV</td>
<td>10%</td>
<td>7%</td>
</tr>
</tbody>
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### Comparison of 5-year Survival

*Before access to screening & patient navigation (1964-1986)*

*After access to screening & patient navigation (1995-2000)*

*Oluwole/Freeman, Journal of American College of Surgeons, 2003*
Signed into law
June 29, 2005

"Patient Navigator Outreach and Chronic Disease Prevention Act of 2005"
P.L. 109-18
Final Thoughts
The most robust measure of health disparities is who dies too soon.
In our society we see, value, and behave toward one another through a powerful lens of race.
The unequal burden of disease in our society is a challenge to science and a moral and ethical dilemma for our nation.
The drive to reach Scientific Truth must be wedded to concern for Social Justice
There is a need for a call for Justice in the distribution of medical resources.
Poverty should NOT be an offense which is punishable by death.
Of all of the forms of inequality, injustice in health is the most shocking and inhumane.

Martin Luther King, Jr.