Lung Cancer Disparity in African American Males Compared to the General White Male Population

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Lung Cancer

- An uncontrolled growth of cells in the lung that disrupts the body’s ability to absorb oxygen

- Two general categories of lung cancer
  - Non-small cell lung cancer (NSCLC)
  - Small cell lung cancer (SCLC)
A health disparity is defined as the differences in health condition between a minority group of people compared to that of the dominant or major population.

Blacks only make up 6% of the Massachusetts population (7).
Reasons for Disparity

- Mix of biological, environmental, political and cultural factors.
- Tobacco use
- Socioeconomic status
- Environmental exposures
- Genetics
Causes of Lung Cancer

- 85-90% of lung cancer is caused by carcinogens in tobacco that cause damage (11)
- Secondhand smoke causes an estimated 3,400 lung cancer deaths in the U.S. each year (5)
- Nationally Black males are 50% more likely to suffer from lung cancer than white males (9)

### Smoking Incidence

<table>
<thead>
<tr>
<th>State</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts</td>
<td>14.00%</td>
<td>15.60%</td>
</tr>
<tr>
<td>US</td>
<td>17.40%</td>
<td>19.10%</td>
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(7)
Symptoms and Treatment

- Persistent cough
- Shortness of breath
- Wheezing
- Coughing up blood
- Chest pain
- Recurring pneumonia or bronchitis.

- Surgery
- Chemotherapy
- Radiation therapy
- Targeted therapy
Socioeconomic Status

- Federal poverty level for a family of 4 is $89,400(8)
- The avg. cost of living in a low-cost-urban-area is $91,363(8)
lower income people, a group disproportionately Black, have often found lower housing costs in highly polluted neighborhoods
Exposure to air pollutants, asbestos, and environmental carcinogens can also lead to lung cancer.

EPA has reported a 40 percent higher risk of lung cancer to those exposed than for those who do not experience exposure.
Researchers discovered that African Americans with lung cancer are often missing the cellular characteristic that is targeted by one of the common cancer drugs.

Forms of enzyme CYP2A6 were more prevalent in African Americans (22%) than in Whites (9%) (12).
Disparity in Treatment and Access to Health Care

- Farjah and colleagues' study found that black individuals accepted surgical recommendations 14% less of the time than white individuals for early stage lung cancer surgery (2009)(15)

- Do not trust health providers
- Military study (11)
- Disadvantaged communities have limited access
Eliminating Disparity

- **Medical**: Increase diversity within the field of health care
- **Political**: We need more funding for cancer research
  - In fiscal year 2010, the National Institutes of Health (NIH) spent more than $6 billion on cancer research, but only $203 million of that was spent on lung cancer (10)
- **Social**:
  - create community awareness
  - clean up neighborhoods
  - community development groups

- **Smoking Control**
Conclusion

- Lung Cancer is the leading cause of death among cancers in Massachusetts, especially in African American males.
- The disparity between African American males and white males is caused by a combination of social, political, economic, environmental, and genetic factors.
- We must put an end to the lung cancer disparity among African American Males and White Males by actively addressing the issue.
References