The Epidemiology of Breast Cancer Among Young Women

Federal Advisory Committee Meeting
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CDR Jacqueline Miller, MD, FACS
US Public Health Service
Medical Director, National Breast and Cervical Cancer Early Detection Program
Program Services Branch
Division of Cancer Prevention and Control
Centers for Disease Control and Prevention
Breast Cancer

- Breast cancer is the most commonly diagnosed cancer among women
- Second leading cause of cancer death among women
- About 5% invasive breast cancer cases occur among women aged <40 years
- Breast cancer in young women most often associated with family history and/or genetic mutations
Who Gets Breast Cancer?

Known Risk Factors include:

- Increasing age
- Alcohol use
- Obesity
- Late menopause
- Early menarche
- Not breast feeding
- Late pregnancy
- Benign breast disease
- Hormone replacement therapy

- Family history of breast cancer
- Inherited genetic mutations (BRCA1 and BRCA2)
What About Tobacco?

New risk factor by recent studies:

- Appears to increase risk
- Smoking at early ages
- Second-hand smoke
- Data still preliminary
Percent of Women who Develop Breast Cancer at 10-year Intervals by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>10 years</th>
<th>20 years</th>
<th>30 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>0.43</td>
<td>1.86</td>
<td>4.13</td>
</tr>
<tr>
<td>40</td>
<td>1.45</td>
<td>3.75</td>
<td>6.87</td>
</tr>
<tr>
<td>50</td>
<td>2.38</td>
<td>5.60</td>
<td>8.66</td>
</tr>
<tr>
<td>60</td>
<td>3.45</td>
<td>6.71</td>
<td>8.65</td>
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</tbody>
</table>

*NCI: SEER Cancer Statistics*
Breast Cancer Incidence Counts, United States 2007

<table>
<thead>
<tr>
<th>Age</th>
<th>All women</th>
<th>Women &lt;40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invasive</td>
<td>202,964</td>
<td>9,663</td>
</tr>
<tr>
<td><em>In situ</em></td>
<td>50,944</td>
<td>1,506</td>
</tr>
</tbody>
</table>
Breast Cancer Death Counts, United States 2007

<table>
<thead>
<tr>
<th>Age</th>
<th>All women</th>
<th>Women &lt;40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invasive</td>
<td>40,598</td>
<td>1,080</td>
</tr>
<tr>
<td><em>In situ</em></td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Age-Specific Female Breast Cancer Incidence, United States 2003-2007

Rates are per 100,000 persons and are age adjusted to the 2000 U.S. standard population (19 age groups Census P25 1130). Data are from selected statewide and metropolitan area cancer registries that meet the data quality criteria for all invasive cancer sites combined. Rates cover approximately 97% of the U.S. population.
Age-Specific Female Breast Cancer Incidence by Race, United States 2003-2007

Rates are per 100,000 persons and are age adjusted to the 2000 U.S. standard population (19 age groups Census P25 1130). Data are from selected statewide and metropolitan area cancer registries that meet the data quality criteria for all invasive cancer sites combined. Rates cover approximately 97% of the U.S. population. Hispanic origin is not mutually exclusive from race categories (white, black, Asian/Pacific Islander, American Indian/Alaska Native).
Age-Specific Female Breast Cancer Death Rates, United States 2003-2007

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Age-Specific Female Breast Cancer Death Rates by Race, United States 2003-2007

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Female Breast Cancer Incidence among Women <40 by Year, United States 2003-2007

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Female Breast Cancer Incidence among Women <40 by Year, United States 2003-2007

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Female Breast Cancer Death Rates among Women <40 by Year, United States 2003-2007

Data are from the National Vital Statistics System (NVSS).
Female Breast Cancer Death Rates among Women <40 by Year, United States 2003-2007

Data are from the National Vital Statistics System (NVSS). AI/AN too small to report.
Age-Specific 5-Year Relative Survival Rates

SEER Survival Monograph, 12 SEER Areas, 1988-2001
Diagnostic Dilemma for Breast Cancer in Young Women

- Diagnostic work-up more difficult because there is no good tool for young women due to breast density
- Fibrocystic changes difficult to distinguish from cancer
- Younger women often present with more aggressive disease
Surveillance Dilemma for Breast Cancer in Young Women

- Unable to identify high-risk subpopulations
- Limitations on genetic data
- Incomplete tumor marker data
- Small numbers prohibit more detailed stratification
Where Do We Go From Here?

- While magnitude in numbers may be small, impact on young women diagnosed with breast cancer is huge
- Support for those diagnosed with cancer is critical
- Knowledge family history is key
- Healthcare providers and young women need to be aware and take appropriate interventions for primary prevention and early detection
- What are the appropriate interventions?
Thus……

- We look forward to your dialogue regarding directions and priorities
- Must have appropriate messages
- Clearly identify target audiences
For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INF0 (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov   Web: www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.