Cancer Surveillance Update

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- **Overall** 2016 Incidence: 441.6 per 100,000
  - Ranks 36th
  - Declined by 14% since 1997
  - US Rate: 435.6

- **White** 2016 Incidence: 436.9 per 100,000
  - Declined by 13%

- **Black** 2016 Incidence: 443.1 per 100,000
  - Declined by 25%
Cancer Incidence By County

- Osceola county's rate has increased by 8%.
- Other counties that saw an increase are Charlevoix, Mecosta, Menominee, and Cheboygan.
- Mason county has had a 38% decrease in cancer incidence.
- The city of Detroit has seen an 8% decrease in cancer incidence.
Cancer Mortality: 1998 - 2017

- Overall 2017 Mortality: 161.0 per 100,000
  - Ranks 15th
  - Declined by 29% since 1998
  - US Rate: 155.8
- White 2017 Mortality: 158.2 per 100,000
  - Declined by 26%
- Black 2017 Mortality: 185.8 per 100,000
  - Ranks 10th
  - Declined by 18%
Cancer Mortality By County

- Ontonagon mortality rate has increased by 17%.
  - Other counties that saw an increase are Alger, Roscommon, Oceana, and Branch.
- Luce county has had a 41% decrease in cancer mortality.
- The city of Detroit has seen an 20% decrease in cancer mortality.
## Top Cancers

### Incidence (2012-2016)
1. Prostate
2. Female Breast
3. Lung and Bronchus
4. Colorectal
5. Corpus Uteri
6. Urinary Bladder
7. Non-Hodgkin Lymphoma
8. Melanoma
9. Kidney and Renal Pelvis
10. Thyroid

### Mortality (2013-2017)
1. Lung and Bronchus
2. Prostate
3. Colorectal
4. Pancreas
5. Female Breast
6. Ovary
7. Non-Hodgkin Lymphoma
8. Liver and Intrahepatic Bile Duct
9. Urinary Bladder
10. Esophagus
2016 Incidence: 60.5 per 100,000
- Ranks 20th
- Declined by 20% since 1999
- US Rate: 56.0

2016 Mortality: 43.7 per 100,000
- Ranks 15th
- Declined by 22% since 1999
- US Rate: 38.5

Estimated 2019 cases: 8,070 people
Estimated 2019 deaths: 5,410 people

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Lung Cancer Incidence and Mortality Disparities

- Native American Males have the highest incidence rate and mortality rate.

<table>
<thead>
<tr>
<th>Age-Adjusted Rate per 100,000</th>
<th>New Cases (2016)</th>
<th>Deaths (2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>57.5 ± 2.2</td>
<td>36.7 ± 1.9</td>
</tr>
<tr>
<td>Black Male</td>
<td>59.9 ± 2.5</td>
<td>35.6 ± 1.7</td>
</tr>
<tr>
<td>Native American Male</td>
<td>67.7 ± 2.8</td>
<td>15.9 ± 1.0</td>
</tr>
<tr>
<td>Asian Male</td>
<td>81.0 ± 3.7</td>
<td>~ Data Suppressed</td>
</tr>
<tr>
<td>White Female</td>
<td>33.6 ± 1.2</td>
<td>40.6 ± 2.3</td>
</tr>
<tr>
<td>Black Female</td>
<td>53.4 ± 1.9</td>
<td>42.1 ± 2.0</td>
</tr>
<tr>
<td>Native American Female</td>
<td>54.6 ± 2.1</td>
<td>49.0 ± 2.2</td>
</tr>
<tr>
<td>White Male</td>
<td>25.4 ± 1.7</td>
<td>59.6 ± 2.8</td>
</tr>
<tr>
<td>Michigan</td>
<td>122.5 ± 5.0</td>
<td>64.8 ± 3.5</td>
</tr>
</tbody>
</table>

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Lung Cancer Staging and Survival

Lung Cancer Staging, 2014-2016
- In Situ, 0.3%
- Localized, 20.8%
- Regional, 22.0%
- Distant, 48.3%
- Unstaged/Unknown, 8.7%

U.S. Five-Year Relative Survival Percentage by Stage at Diagnosis, SEER 2008-2014
- Localized: White Male 61.3%, White Female 59.1%
- Regional: Black Male 33.3%, Black Female 31.1%
- Distant: White Male 26.2%, White Female 23.7%, Black Male 3.7%, Black Female 3.9%
- Unstaged/Unknown: White Male 50.5%, White Female 44.6%, Black Male 6.4%, Black Female 7.6%

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Tobacco Data: BRFS 2016-2017

- 2017: 19.2%
- 2011: 23.3%

- 2017: 4.0%
- 2011: 4.4%
- 2017: 4.7%

- Cigarettes: 10.7%
- Smokeless Tobacco: 6.3%
- E-Cigarette: 14.8%

Source: 2016-2017 Michigan Behavioral Risk Factor Survey
Female Breast Cancer Trends

- Ranks 41<sup>st</sup>
- Declined by 9% since 1999
- US Rate: 124.2 per 100,000

- Ranks 25<sup>th</sup>
- Declined by 27% since 1999
- US Rate: 20.0 per 100,000

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Female Breast Cancer Incidence and Mortality Disparities

- White females have the highest incidence rate.
- Black females have the highest mortality rate.

**Female Breast Cancer New Cases and Deaths in the U.S. and Michigan by Race, 2016 and 2017**

- **New Cases (2016)**
  - US: 124.8
  - Michigan: 122.1
  - White: 124.4
  - Black: 115.8

- **Deaths (2017)**
  - Native American: ~
  - Black: 27.3
  - White: 18.0
  - Michigan: 19.1
  - US: 20.3

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Female Breast Cancer Staging and Survival

Stage at Diagnosis for Female Breast Cancer, 2014-2016

- Localized, 51.4%
- Regional, 21.0%
- In Situ, 20.3%
- Distant, 4.5%
- Unstaged/Unknown, 2.9%

U.S. Five-Year Relative Survival Percentage by Stage at Diagnosis, SEER 2008-2014

- Localized
  - White: 99.1%
  - Black: 95.4%
- Regional
  - White: 86.4%
  - Black: 76.6%
- Distant
  - White: 28.1%
  - Black: 19.7%
- Unstaged/Unknown
  - White: 52.1%
  - Black: 49.8%
Mammography in the Past Two Years among Women Aged 40 and Older, BRFS 2014 & 2016

- 2016: 79.3%
- 2012: 76.6%

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>74.7%</td>
<td>76.6%</td>
</tr>
<tr>
<td>Black</td>
<td>78.8%</td>
<td>77.7%</td>
</tr>
<tr>
<td>Asian</td>
<td>77.7%</td>
<td>66.9%</td>
</tr>
<tr>
<td>Native American</td>
<td>72.3%</td>
<td>73.0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>75.2%</td>
<td>74.8%</td>
</tr>
<tr>
<td>Arab</td>
<td>71.3%</td>
<td>52.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual Orientation</th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight</td>
<td>75.4%</td>
<td>75.2%</td>
</tr>
<tr>
<td>Gay</td>
<td>74.8%</td>
<td>74.8%</td>
</tr>
<tr>
<td>Bi</td>
<td>52.3%</td>
<td>52.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geography</th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>71.3%</td>
<td>71.3%</td>
</tr>
<tr>
<td>Rural</td>
<td>71.3%</td>
<td>71.3%</td>
</tr>
</tbody>
</table>

Colorectal Cancer Trends

- Ranks 35th
- Declined by 34% since 1999
- US Rate: 37.4 per 100,000

- Ranks 27th
- Declined by 39% since 1999
- US Rate: 13.7 per 100,000

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Colorectal Cancer Incidence and Mortality Disparities

- Black males have the highest incidence and mortality rate.

### Colorectal Cancer New Diagnoses and Deaths in the U.S. and Michigan by Race, 2016 and 2017

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</thead>
<tbody>
<tr>
<td>New Cases (2016)</td>
<td>38.0</td>
<td>36.0</td>
<td>39.0</td>
<td>52.6</td>
<td>31.6</td>
<td>38.2</td>
</tr>
<tr>
<td>Deaths (2017)</td>
<td>14.0</td>
<td>13.8</td>
<td>14.8</td>
<td>23.9</td>
<td>11.7</td>
<td>16.6</td>
</tr>
</tbody>
</table>

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Colorectal Cancer Staging and Survival

Colorectal Cancer by Stage of Diagnosis, 2014-2016

- In Situ, 4.7%
- Localized, 34.6%
- Regional, 33.4%
- Distant, 19.3%
- Unstage/Unknown, 8.0%

U.S. Five-Year Relative Survival Percentage by Stage at Diagnosis, SEER 2008-2014

- Localized: 90.1% (White), 86.9% (Black)
- Regional: 71.9% (White), 66.1% (Black)
- Distant: 14.6% (White), 11.0% (Black)
- Unknown: 31.8% (White), 38.8% (Black)
Colorectal Cancer Screening among People 50 and Older, BRFS 2014 & 2016

- 2017: 72.4%
- 2012: 67.3%
- Uninsured: 40.3%
- Gay/Lesbian: 60.1%
- Rural: 66.6%

Prostate Cancer Trends

- Ranks 24th
- Declined by 49% since 1999
- US Rate: 101.4 per 100,000

- Ranks 32nd
- Declined by 41% since 1999
- US Rate: 19.4 per 100,000

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Prostate Cancer Incidence and Mortality Disparities

- Black males have the highest incidence and mortality rate.

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Prostate Cancer Staging and Survival

Stage at Diagnosis for Prostate Cancer in Michigan, 2014-2016:
- Localized: 71%
- Regional: 15%
- Distant: 6%
- In Situ: <1%
- Unknown: 8%

U.S. Five-Year Relative Survival Percentage by Stage at Diagnosis, SEER 2008-2014:
- Localized: 100.0% (Black), 100.0% (White)
- Regional: 29.5% (Black), 29.9% (White)
- Distant: 74.5% (White)
- Unknown: 70.2%
Men Aged 50 or Older Who Have Ever Discussed Advantages of the PSA Test with a Doctor in Michigan, 2014 & 2016

- 2016: 63.8%
- 2012: 73.0%


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Cervical Cancer Trends

- Ranks 37th
- Declined by 25% since 1999
- US Rate: 7.7 per 100,000

- Ranks 31st
- Declined by 2% since 1999
- US Rate: 2.2 per 100,000

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Cervical Cancer Incidence and Mortality Disparities

- Hispanic females have the highest incidence rate.

Cervical Cancer New Cases and Deaths in the U.S. and Michigan by Race, 2016 and 2017

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Michigan</th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Cases (2016)</td>
<td>7.7</td>
<td>6.6</td>
<td>6.3</td>
<td>6.3</td>
<td>11.8</td>
</tr>
<tr>
<td>Deaths (2017)</td>
<td>2.2</td>
<td>2.0</td>
<td>2.2</td>
<td>1.7</td>
<td>~</td>
</tr>
</tbody>
</table>
Stage at Diagnosis for Cervical Cancer in Michigan, 2014-2016

- In Situ: 86.7%
- Localized: 6.1%
- Regional: 4.5%
- Distant: 2.0%
- Unknown: 0.7%

U.S. Five-Year Relative Survival Percentage by Stage at Diagnosis, 2008-2014

- Localized: White 92.3%, Black 87.1%
- Regional: White 57.2%, Black 49.4%
- Distant: White 18.5%, Black 10.6%
- Unknown/unstaged: White 48.5%, Black 42.8%

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Pap Test among Women 18 and Older in the Past Two Years, BRFS 2014 & 2016

- 2016: 72.5%
- 2012: 79.4%

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Five-Year Increase in Incidence

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
Five-Year Increase in Mortality

- Bladder, 0.8%
- Uterine, 0.7%
- Thyroid, 0.1%
- Pancreas, 0.6%
- Melanoma, 2.3%
- Oral, 0.5%
- Liver, 0.2%
- Oral, 8.2%
- Liver, 1.6%

Source: Michigan Cancer Surveillance Program, Division of Vital Records and Health Statistics
<table>
<thead>
<tr>
<th></th>
<th>Michigan</th>
<th>White</th>
<th>Black</th>
<th>Asian</th>
<th>American Indian</th>
<th>Arab</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Obese</strong></td>
<td>31.5%</td>
<td>30.5%</td>
<td>34.4%</td>
<td>10.8%</td>
<td>22.8%</td>
<td>20.2%</td>
<td>22.1%</td>
</tr>
<tr>
<td><strong>Binge Drinking</strong></td>
<td>37.8%</td>
<td>40.4%</td>
<td>20.2%</td>
<td>14.8%</td>
<td>11.3%</td>
<td>15.6%</td>
<td>21.2%</td>
</tr>
<tr>
<td><strong>No Leisure Physical Activity</strong></td>
<td>34.4%</td>
<td>31.6%</td>
<td>24.4%</td>
<td>19.1%</td>
<td>22.4%</td>
<td>29.9%</td>
<td>29.3%</td>
</tr>
</tbody>
</table>
Questions?

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