CANCER INCIDENCE AND MORTALITY
DELAWARE, 2012-2016

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Delaware Cancer Registry, Division of Public Health
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Overview

• All-site cancer rates
• Eight site-specific cancers
• Special section on Cancer Survivorship
• Census tract analyses
  o All-site cancer incidence rates for Delaware’s 214 census tracts
  o 18 census tracts with all-site cancer incidence rates that were statistically significantly higher than the statewide all-site cancer incidence rates
  o Analysis and findings published in a separate report (available on the DPH website)
ALL-SITE CANCER INCIDENCE
2012-2016 Incidence Facts

• Total of 28,581 cases (average of 5,716 per year)
• By sex
  o Male – 51%
  o Female – 49%
• By race/ethnicity
  o Non-Hispanic Caucasian – 78%
  o Non-Hispanic African American – 17%
  o Hispanic – 3%
• By county
  o New Castle County – 53%
  o Kent County – 18%
  o Sussex County – 29%
All-Site Cancer Incidence; Delaware vs. U.S., 2012-2016

- Delaware remained ranked 2nd highest nationally for cancer incidence (statistically significantly higher than the U.S. incidence rate)
  - Delaware: 491.5 per 100,000
  - U.S.: 435.1 per 100,000

- Delaware males ranked 3rd highest for cancer incidence (statistically significantly higher than the male U.S. incidence rate)
  - Delaware males: 542.9 per 100,000
  - U.S. males: 474.3 per 100,000

- Delaware females ranked 5th highest for cancer incidence (statistically significantly higher than the female U.S. incidence rate)
  - Delaware females: 455.4 per 100,000
  - U.S. females: 409.6 per 100,000
## Most Commonly Diagnosed Cancers in Delaware, 2012-2016

<table>
<thead>
<tr>
<th></th>
<th>MALES</th>
<th>FEMALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prostate</td>
<td>3,749 26%</td>
<td>1. Breast 4,146 30%</td>
</tr>
<tr>
<td>2. Lung</td>
<td>2,103 14%</td>
<td>2. Lung 2,065 15%</td>
</tr>
<tr>
<td>3. Colorectal</td>
<td>1,135 8%</td>
<td>3. Colorectal 1,019 7%</td>
</tr>
<tr>
<td>4. Urinary bladder</td>
<td>1,125 8%</td>
<td>4. Uterine 972 7%</td>
</tr>
<tr>
<td>5. Melanoma</td>
<td>1,043 7%</td>
<td>5. Thyroid+645 5%</td>
</tr>
<tr>
<td>6. NHL</td>
<td>649 4%</td>
<td>6. Melanoma+665 5%</td>
</tr>
<tr>
<td>7. Kidney</td>
<td>639 4%</td>
<td>7. NHL 558 4%</td>
</tr>
<tr>
<td>8. Oral</td>
<td>529 4%</td>
<td>8. Pancreas 402 3%</td>
</tr>
<tr>
<td>9. Leukemia</td>
<td>483 3%</td>
<td>9. Kidney 351 3%</td>
</tr>
<tr>
<td>10. Pancreas</td>
<td>455 3%</td>
<td>10. Ovary 343 2%</td>
</tr>
</tbody>
</table>

*Thyroid cancer incidence rate is higher than melanoma incidence rate*
Five-Year Average Age-Adjusted All-Site Cancer Incidence Rates by Sex; U.S. and Delaware, 1980-2016

From 2002-2006 to 2012-2016:

- **DE Male** – 11% decrease
- **DE Female** – 3% increase
- **U.S. Male** – 14% decrease
- **U.S. Female** – 0% difference
Five-Year Average Age-Adjusted All-Site Cancer Incidence Rates by Sex and Race/Ethnicity; Delaware, 2002-2016
ALL-SITE CANCER MORTALITY
2012-2016 Mortality Facts

- Total of 9,945 deaths from cancer (average of 1,989 per year)
- By sex
  - Male – 52%
  - Female – 48%
- By race/ethnicity
  - Non-Hispanic Caucasian – 80%
  - Non-Hispanic African American – 17%
  - Hispanic – 2%
- By county
  - New Castle County – 52%
  - Kent County – 19%
  - Sussex County – 29%
All-Site Cancer Mortality; Delaware vs. U.S., 2012-2016

- DE ranked 15\textsuperscript{th} highest nationally for cancer mortality (statistically significantly higher than the U.S. mortality rate)
  - Delaware: 174.0 per 100,000
  - U.S.: 161.1 per 100,000
- DE males ranked 18\textsuperscript{th} highest for cancer mortality (statistically significantly higher than the male U.S. mortality rate)
  - Delaware males: 206.8 per 100,000
  - U.S. males: 193.3 per 100,000
- DE females ranked 14\textsuperscript{th} highest for cancer mortality (statistically significantly higher than the female U.S. mortality rate)
  - Delaware females: 150.1 per 100,000
  - U.S. females: 137.8 per 100,000
- Non-Hispanic Caucasians in DE had a statistically significantly higher mortality rate than non-Hispanic Caucasians in the U.S.
Five-Year Average Age-Adjusted All-Site Cancer Mortality Rates by Sex; U.S. and Delaware, 1980-2016

Rate/100,000 of Population

<table>
<thead>
<tr>
<th>Year of Death</th>
<th>DE Male</th>
<th>DE Female</th>
<th>U.S. Male</th>
<th>U.S. Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>80-84</td>
<td>300</td>
<td>275</td>
<td>320</td>
<td>290</td>
</tr>
<tr>
<td>81-85</td>
<td>295</td>
<td>270</td>
<td>315</td>
<td>285</td>
</tr>
<tr>
<td>82-86</td>
<td>290</td>
<td>265</td>
<td>310</td>
<td>280</td>
</tr>
<tr>
<td>83-87</td>
<td>285</td>
<td>260</td>
<td>305</td>
<td>275</td>
</tr>
<tr>
<td>84-88</td>
<td>280</td>
<td>255</td>
<td>300</td>
<td>270</td>
</tr>
<tr>
<td>85-90</td>
<td>275</td>
<td>250</td>
<td>295</td>
<td>265</td>
</tr>
<tr>
<td>86-91</td>
<td>270</td>
<td>245</td>
<td>290</td>
<td>260</td>
</tr>
<tr>
<td>87-92</td>
<td>265</td>
<td>240</td>
<td>285</td>
<td>255</td>
</tr>
<tr>
<td>88-93</td>
<td>260</td>
<td>235</td>
<td>280</td>
<td>250</td>
</tr>
<tr>
<td>89-94</td>
<td>255</td>
<td>230</td>
<td>275</td>
<td>245</td>
</tr>
<tr>
<td>90-95</td>
<td>250</td>
<td>225</td>
<td>270</td>
<td>240</td>
</tr>
<tr>
<td>91-96</td>
<td>245</td>
<td>220</td>
<td>265</td>
<td>235</td>
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<tr>
<td>92-97</td>
<td>240</td>
<td>215</td>
<td>260</td>
<td>230</td>
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<tr>
<td>93-98</td>
<td>235</td>
<td>210</td>
<td>255</td>
<td>225</td>
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<tr>
<td>94-99</td>
<td>230</td>
<td>205</td>
<td>250</td>
<td>220</td>
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<tr>
<td>95-00</td>
<td>225</td>
<td>200</td>
<td>245</td>
<td>215</td>
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<tr>
<td>96-01</td>
<td>220</td>
<td>195</td>
<td>240</td>
<td>210</td>
</tr>
<tr>
<td>97-02</td>
<td>215</td>
<td>190</td>
<td>235</td>
<td>205</td>
</tr>
<tr>
<td>98-03</td>
<td>210</td>
<td>185</td>
<td>230</td>
<td>200</td>
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<tr>
<td>99-04</td>
<td>205</td>
<td>180</td>
<td>225</td>
<td>195</td>
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<tr>
<td>00-05</td>
<td>200</td>
<td>175</td>
<td>220</td>
<td>190</td>
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<tr>
<td>01-06</td>
<td>195</td>
<td>170</td>
<td>215</td>
<td>185</td>
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<tr>
<td>02-07</td>
<td>190</td>
<td>165</td>
<td>210</td>
<td>180</td>
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<tr>
<td>03-08</td>
<td>185</td>
<td>160</td>
<td>205</td>
<td>175</td>
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<tr>
<td>04-09</td>
<td>180</td>
<td>155</td>
<td>200</td>
<td>170</td>
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<tr>
<td>05-10</td>
<td>175</td>
<td>150</td>
<td>195</td>
<td>165</td>
</tr>
<tr>
<td>06-11</td>
<td>170</td>
<td>145</td>
<td>190</td>
<td>160</td>
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<tr>
<td>07-12</td>
<td>165</td>
<td>140</td>
<td>185</td>
<td>155</td>
</tr>
<tr>
<td>08-13</td>
<td>160</td>
<td>135</td>
<td>180</td>
<td>150</td>
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<tr>
<td>09-14</td>
<td>155</td>
<td>130</td>
<td>175</td>
<td>145</td>
</tr>
<tr>
<td>10-15</td>
<td>150</td>
<td>125</td>
<td>170</td>
<td>140</td>
</tr>
<tr>
<td>11-16</td>
<td>145</td>
<td>120</td>
<td>165</td>
<td>135</td>
</tr>
</tbody>
</table>

DE Male - 15% decrease
DE Female - 7% decrease
U.S. Male – 16% decrease
U.S. Female – 13% decrease
Five-Year Average Age-Adjusted All-Site Cancer Mortality Rates by Sex and Race/Ethnicity; Delaware, 2002-2016

Rate/100,000 of Population

Year of Death

- Non-Hispanic Caucasian Male
- Non-Hispanic Caucasian Female
- Non-Hispanic African American Male
- Non-Hispanic African American Female
- Hispanic Male
- Hispanic Female

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health
Comprehensive Cancer Control Program
NOTABLE SITE-SPECIFIC CANCER DETAILS
Improvements by Cancer Site

• Breast
  o Between 2002-2006 and 2012-2016, mortality rates for female breast cancer decreased by 6% in Delaware and 16% in the U.S.
  o The difference in female breast cancer mortality rates between Delaware (ranked 20th nationally; 22.1 per 100,000) and the U.S. (20.6 per 100,000) was not statistically significant.
  o The percent difference in mortality rate between non-Hispanic African American (AA) women and non-Hispanic Caucasians 40-64 years of age decreased from 56% higher in non-Hispanic AA women in 2010-2014 to 29% higher in 2012-2016.

• Colorectal
  o Between 2002-2006 and 2012-2016, incidence rates for colorectal cancer decreased by 28% in Delaware and 22% in the U.S.
  o Between 2002-2006 and 2012-2016, mortality rates for colorectal cancer decreased by 26% in Delaware and 22% in the U.S.
  o The percentage of colorectal cancer cases diagnosed at local stage has increased from 36% in 2002-2006 to 40% in 2012-2016.
Improvements by Cancer Site

• Lung
  o A larger percentage of lung cancers were diagnosed at local stage in Delaware (24%) than in the U.S. (20%).
  o Between 2011-2015 and 2012-2016, there was a decrease in percentage of lung cancers diagnosed at distant stage from 52% to 50%.

• Melanoma

• Prostate
  o Between 2002-2006 and 2012-2016, mortality rates for prostate cancer decreased by 34% in Delaware and 26% in the U.S.
## Cancers Sites with Statistically Significant Differences from the U.S.

### Delaware Incidence Rate Statistically Significantly Higher than U.S.

<table>
<thead>
<tr>
<th>Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-site</td>
</tr>
<tr>
<td>Breast</td>
</tr>
<tr>
<td>Lung</td>
</tr>
<tr>
<td>Prostate</td>
</tr>
<tr>
<td>Melanoma</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
</tr>
<tr>
<td>Uterine</td>
</tr>
<tr>
<td>Thyroid</td>
</tr>
</tbody>
</table>

### Delaware Incidence Rate Not Statistically Significantly Different from U.S.

<table>
<thead>
<tr>
<th>Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal</td>
</tr>
</tbody>
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*DELaware Health and Social Services*

DiviSiOn of Public Health

Comprehensive Cancer Control Program
Cancer Sites with Dramatic Increases in Incidence from 2002-2006 to 2012-2016

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Delaware Percent change 2002-2006 to 2012-2016</th>
<th>U.S. Percent change 2002-2006 to 2012-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melanoma</td>
<td>+35%</td>
<td>+17%</td>
</tr>
<tr>
<td>Thyroid</td>
<td>+55%</td>
<td>+51%</td>
</tr>
</tbody>
</table>
Cancer Sites with Dramatic Decreases in Incidence from 2002-2006 to 2012-2016

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Delaware Percent change 2002-2006 to 2012-2016</th>
<th>U.S. Percent change 2002-2006 to 2012-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorectal</td>
<td>-28%</td>
<td>-22%</td>
</tr>
<tr>
<td>Prostate</td>
<td>-27%</td>
<td>-34%</td>
</tr>
</tbody>
</table>
Cancer Sites with Dramatic Increases in Mortality from 2002-2006 to 2012-2016

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Delaware Percent change 2002-2006 to 2012-2016</th>
<th>U.S. Percent change 2002-2006 to 2012-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uterine</td>
<td>+32%</td>
<td>+12%</td>
</tr>
</tbody>
</table>
Cancer Sites with Dramatic Decreases in Mortality from 2002-2006 to 2012-2016

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Delaware Percent change 2002-2006 to 2012-2016</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Colorectal</td>
<td>-26%</td>
<td>-22%</td>
</tr>
<tr>
<td>Lung</td>
<td>-19%</td>
<td>-22%</td>
</tr>
<tr>
<td>Prostate</td>
<td>-34%</td>
<td>-26%</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
<td>-6%</td>
<td>-21%</td>
</tr>
</tbody>
</table>
Cancer Survivorship in Delaware

• As of January 1, 2016, there were an estimated 50,760 cancer survivors in Delaware\textsuperscript{1}
• According to the 2018 BRFSS, about 21% of the cancer survivors have more than one type of cancer\textsuperscript{2}
• 50.5% of the survivors received a written summary of all their cancer treatment\textsuperscript{2}
• 58% of the survivors received their survivorship health care through primary care physicians or internist\textsuperscript{2}
• 98.6% of the survivors had health insurance (includes Medicare, Medicaid, or other types of state health programs) that paid for all or part of their cancer treatment\textsuperscript{2}

\textsuperscript{1} American Cancer society. Cancer Treatment and Survivorship facts & figures 2016-2017. Atlanta: American Cancer Society.
\textsuperscript{2} Delaware Department of Health and Social Services, Division of Public Health, Delaware Behavioral Risk Factor Survey (BRFS) Module, 2018.
Cancer Survivorship in Delaware

• Delaware continues to provide services and access to care to cancer survivors via the programs in the following areas:
  
  o **Cancer Screening and Prevention**
    • Screening for Life
    • Delaware Tobacco Prevention and Control Programs
  
  o **Insurance and Treatment**
    • The Health Care Connection (HCC)
    • Delaware’s Cancer Treatment Program
  
  o **Follow-up and Maintenance**
    • Care coordinators
    • Cancer: Thriving and Surviving (CTS) program
    • Live Strong at the YMCA
Cancer Screening

• The Behavioral Risk Factor Survey (BRFS) collects information on cancer screening

• Breast cancer – Delaware ranks 3rd nationally for mammography
  o 79% of Delaware females 40 and older were screened for breast cancer in the previous 2 years compared to 72% nationally

• Colorectal cancer – Delaware ranks 11th nationally for meeting USPSTF colorectal cancer screening
  o 73% of Delawareans met the USPSTF recommendations compared to 70% nationally

• Prostate cancer – Delaware ranks 8th for PSA tests
  o 38% of Delaware males 40 and older has a PSA test in the past 2 years compared to 33% nationally
Cancer Prevention

• Tobacco use is the leading risk factor
  o In 2018, 17% of Delawareans were current smokers, almost the same as nationally (16%)
  o Contributes to many cancers including lung, esophagus, kidney, urinary bladder, stomach, and pancreas

• Lack of physical activity and unhealthy eating are associated with increased risk of multiple cancers

• Alcohol abuse is a risk factor for many cancers

• Excessive sun exposure is a risk factor for melanoma
*Note: maps for % late stage are not from 2012-2016, but are used as an example.
Summary

• Delaware continues to have the second highest cancer incidence in the nation even though incidence rates are declining.
• Delaware mortality rates are decreasing even though Delaware ranks 15th nationally for cancer mortality.
• Cancer screening rates continue to be high in Delaware with an increasing number of cancers being diagnosed at earlier, more treatable stages.
• Delaware cancer survivorship is increasing due to proper coordination and care between cancer specialists and primary care physicians.
  o Delaware has available cancer programs and services that focus on the needs of cancer survivors that include screening and prevention, insurance, treatments, and survivorship programs that have goals in improving the cancer survivor’s health and quality of life.
• There need to be continued efforts to improve and enhance not only cancer screening, but also cancer prevention in Delaware by addressing behavioral risk factors and social determinants of health.
The full report can be found at

http://dhss.delaware.gov/dph/dpc/cancer.html
Discussion/Wrap Up

Helen Arthur, MHA
Section Chief, Health Promotion and Disease Prevention, Division of Public Health
ADVANCING HEALTHY LIFESTYLES

- Healthy Lifestyles Subcommittee Update
- Prevention work continues in DPH
- COVID-19 & Cancer Screenings
- Achieving Health Equity
- My Healthy Community Portal
HEALTHY LIFESTYLES SUBCOMMITTEE

**Goals:** To focus on impact and equity and stay focused on priority areas

**Charge:** Responsible for developing actionable policy recommendations to positively influence healthy lifestyles

**Priority:** Birth to age 18

**Priority:** Workplace Wellness

**Priority:** Broader policy approaches

For more information visit HealthyDelaware.org
PREVENTION EFFORTS

Physical Activity, Nutrition, Obesity Prevention (PANO) Program
Request For Proposal (RFP)
ADVANCING HEALTHY LIFESTYLES: CHRONIC DISEASE, HEALTH EQUITY & COVID-19

• **Goal**: to reduce the prevalence of obesity and other chronic diseases by promoting healthy lifestyles and improving health outcomes for Delawareans

• **Objectives**: develop & Implement evidence-based PSE strategies that will help Delawareans engage in regular physical activity, better nutrition, and make intentional lifestyle changes, lowering the risk of developing heart disease, cancer, chronic lower respiratory disease, diabetes, and other chronic diseases

For more information visit bids.delaware.gov
COVID-19 & CANCER SCREENINGS

Screening for Life Cancer Screening Rates 2019 vs 2020

Breast

Cervical

Colorectal
# ACHIEVING HEALTH EQUITY

## Causes of Health Disparities
- Social determinants of health
- Behavioral determinants of health
- Environmental determinants of health
- Biological and genetic determinant of health

## National Stakeholder Strategy Goals
- Awareness
- Leadership
- Healthy System and Life Experience
- Cultural and Linguistic Competency
- Data, Research and Evaluation

## Community Engagement, Partnerships, Cultural & Linguistic Competency, Non-Discrimination
MY HEALTHY COMMUNITY PORTAL

Coronavirus (COVID-19) Data Dashboard
State of Delaware

A resource of COVID-19 data and facts for Delaware families and communities.

Delaware's Official Coronavirus Website
More health data about State of Delaware

STATE OF DELAWARE
Population: 974,051