Louisiana Cancer Facts & Figures
Pediatric/Young Adult Cancer Cases Diagnosed in 2017

Louisiana Tumor Registry
August 8, 2017
Pediatric/Young Adult Cancer Cases

- Pediatric/young adult cancer cases refer to patients younger than 20 years old who were diagnosed with malignant cancers and solid benign and borderline tumors of the brain and central nervous system.
- Between 2010 and 2014, the average annual incidence rate of all cancer sites in Louisiana was the 35th highest and the mortality rate was the 8th highest in the U.S. \(^1\)
- 204 New cancer cases were diagnosed and 31 deaths due to cancer among pediatric/young adult cancer cases in Louisiana each year during 2010-2014\(^1\).

\(^1\) Data source: NCI state cancer profile.
Pediatric/Young Adult: Cancer Incidence Rates\(^1,\#\) by Cancer Site, Louisiana, 2010-2014

- **Leukemia**: 37.0
- **Brain and Other Nervous System**: 34.1
- **Lymphoma**: 19.1
- **Endocrine System**: 13.2
- **Soft Tissue including Heart**: 12.6
- **Bones and Joints**: 10.8
- **Kidney and Renal Pelvis**: 9.0
- **Testis**: 3.9
- **Ovary**: 2.1

\(^1\)Rates are per 1,000,000 and age-adjusted to the 2000 U.S. standard population.

\(^\#\)Invasive cases only.
Pediatric/Young Adult Cancer: Age-Specific Incidence Rates*, Louisiana, 2010-2014

*Invasive cases only.
Pediatric/Young Adult Cancer: Age-Specific Incidence Rates† by Gender, 2010-2014

U.S. data source: 18 SEER registries.

† Invasive cases only.
Pediatric/Young Adult Cancer: Age-Specific Incidence Rates# by Race, 2010-2014

U.S. data source: 18 SEER registries.

# Invasive cases only.
Pediatric/Young Adult Cancer: Incidence Rates¹#
Louisiana vs. the U.S.², 2010-2014

1 Age-adjusted to the 2000 U.S. standard population.
2 Incidence data source: 18 SEER registries.
# Invasive cases only.
↑↓ Incidence rate of Louisiana is significantly different from that of U.S.
Pediatric/Young Adult Cancer Cases: Incidence Rate Map for Louisiana, 2010-2014

Notes:
Created by Louisiana Tumor Registry on 09/07/2017.
Counties with less than 16 cases were aggregated with neighboring counties using NY state Geographic Aggregation Tool (GAT).
# Invasive cases only.
Pediatric/Young Adult Cancer: Incidence Rates\(^1,2,#\) by Region\(^3\): Louisiana, Whites, 2010-2014

\[ \text{Rate Per 1,000,000} \]

# Invasive cases only.

\(^1\) Age-adjusted to the 2000 US standard population.

\(^2\) Data source for US was the 18 SEER registries.

\(^3\) See Appendix A.

* Incidence rate of regions/Louisiana is significantly different from that of US.
Pediatric/Young Adult Cancer: Incidence Rates\textsuperscript{1,2,#} by Region\textsuperscript{3}: Louisiana, Blacks, 2010-2014

# Invasive cases only.
\textsuperscript{1} Age-adjusted to the 2000 US standard population.
\textsuperscript{2} Data source for US was the 18 SEER registries.
\textsuperscript{3} See Appendix A.

* Incidence rate of regions/Louisiana is significantly different from that of US.
Pediatric/Young Adult Cancer: Trends of Incidence Rates\textsuperscript{1,2,#}, Whites, 1988-2014

\textsuperscript{1} Age-adjusted to the 2000 US standard population.

\textsuperscript{2} US data source: 18 SEER registries.

\textsuperscript{#} Invasive cases only.

# Invasive cases only.
Pediatric/Young Adult Cancer: Trends of Incidence Rates\textsuperscript{1,2,\#}, Blacks, 1988-2014

\begin{itemize}
  \item \textsuperscript{1} Age-adjusted to the 2000 US standard population.
  \item \textsuperscript{2} US data source: 18 SEER registries.
  \item \textsuperscript{\#} Invasive cases only.
\end{itemize}
Pediatric/Young Adult Cancer: Mortality Rates\(^1\)
Louisiana vs. U.S.\(^2\), 2010-2014

<table>
<thead>
<tr>
<th></th>
<th>Louisiana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Male</td>
<td>27.9</td>
<td>26.3</td>
</tr>
<tr>
<td>White Female</td>
<td>23.0</td>
<td>21.2</td>
</tr>
<tr>
<td>Black Male</td>
<td>29.0</td>
<td>23.7</td>
</tr>
<tr>
<td>Black Female</td>
<td>22.5</td>
<td>20.6</td>
</tr>
</tbody>
</table>

\(^1\) Age-adjusted to the 2000 US standard population.
\(^2\) Mortality data source: National Center of Health Statistics (NCHS).
No mortality rate of Louisiana is significantly different from that of US.
Pediatric/Young Adult Cancer Cases: Mortality Rate Map for U.S., 2010-2014

Notes:
- Alaska, DC, Hawaii and Puerto Rico are not drawn to scale.
- State Cancer Registries may provide more current or more local data.
- Data presented for the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).
- Source: Data provided for the National Vital Statistics System public use data file. Death rates calculated by the National Cancer Institute using SEER*Stat. Death rates (deaths per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ..., 80-84, 85+). The Healthy People 2020 goals are based on rates adjusted using different methods but the differences should be minimal.
- Population counts for denominators are based on the Census 1995-2015 US Population Data File as modified by NCI.
- * Data have been suppressed to ensure confidentiality and stability of rate estimates. Data is currently being suppressed if there are fewer than 15 counts for the time period.
- ** Data have been suppressed for states with a population below 50,000 per sex combination for American Indian/Alaska Native or Asian/Pacific Islanders because of concerns regarding the relatively small size of these populations in some states.
- Data for the United States does not include data from Puerto Rico.
Pediatric/Young Adult Cancer: Mortality Rates\textsuperscript{1,2} by Cancer Site, Louisiana, 2010-2014

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Rate per 1,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain and Other Nervous System</td>
<td>7.11</td>
</tr>
<tr>
<td>Leukemia</td>
<td>5.50</td>
</tr>
<tr>
<td>Bones and Joints</td>
<td>2.77</td>
</tr>
<tr>
<td>Endocrine System</td>
<td>2.60</td>
</tr>
<tr>
<td>Soft Tissue including Heart</td>
<td>1.94</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>1.80</td>
</tr>
</tbody>
</table>

\textsuperscript{1} Rates are per 1,000,000 and age-adjusted to the 2000 US standard population.
\textsuperscript{2} Data source: National Center of Health Statistics (NCHS).
Pediatric/Young Adult Cancer: Trends of Mortality Rates\(^1\), \(^2\), 1988-2014

1 Age-adjusted to the 2000 US standard population.
2 Data source: National Center of Health Statistics (NCHS).
Pediatric/Young Adult Cancer: Louisiana, 1988-2014
Trends of Incidence# and Mortality Rates

Annual average percent change (APC) were calculated using weighted least squares method.
* APC significantly different from zero.
# Invasive cases only.
Pediatric/Young Adult Cancer: Louisiana 5-Year Relative Survival by Stage\textsuperscript{1}, White Males, 2007-2013

\textsuperscript{1} The stage distribution is based on Derived Summary Stage 2000.
Pediatric/Young Adult Cancer: Louisiana 5-Year Relative Survival by Stage\(^1\), White Females, 2007-2013

Percent of Cases by Stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>42%</td>
</tr>
<tr>
<td>Regional</td>
<td>16%</td>
</tr>
<tr>
<td>Distant</td>
<td>36%</td>
</tr>
<tr>
<td>Unstaged</td>
<td>6%</td>
</tr>
</tbody>
</table>

\(^1\) The stage distribution is based on Derived Summary Stage 2000. Survival rate for Unstaged was suppressed (with less than 25 cases).
Pediatric/Young Adult Cancer: Louisiana 5-Year Relative Survival by Stage\(^1\), Black Males, 2007-2013

![Bar Chart]

- Localized: 82.4%
- Regional: 85.5%
- Distant: 66.0%
- Unstaged: 0.0%

**Percent of Cases by Stage**

- Localized: 35%
- Regional: 15%
- Distant: 44%
- Unstaged: 6%

\(^1\) The stage distribution is based on Derived Summary Stage 2000. Survival rate for Unstaged was suppressed (with less than 25 cases).
Pediatric/Young Adult Cancer: Louisiana 5-Year Relative Survival by Stage\textsuperscript{1}, Black Females, 2007-2013

\begin{itemize}
  \item Localized: 88.1\%
  \item Regional: 75.7\%
  \item Distant: 61.2\%
  \item Unstaged: 0.0\%
\end{itemize}

\textsuperscript{1} The stage distribution is based on Derived Summary Stage 2000. Survival rate for Unstaged was suppressed (with less than 25 cases).
Data Sources


For Incidence:
• Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2016 Sub (2000-2014) <Katrina/Rita Population Adjustment>

For Mortality:
• mortality – All COD, Aggregated With State, Total U.S. (1969-2014) <Katrina/Rita Population Adjustment>

For Survival:
• Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2015 Sub (1973-2013 varying)
Data Sources

• USCS:

• Cancer facts & figures
Data Sources

NCI State profiles

• Incidence Data Sources:
  • Incidence data are provided by the National Program of Cancer RegistriesExternal Web Site Policy Cancer Surveillance System (NPCR-CSS), Centers for Disease Control and Prevention and by the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) ProgramExternal Web Site Policy.
  • Population counts for denominators are based on Census populations as modified by NCI.
  • Rates are calculated using SEER*StatExternal Web Site Policy.

• Mortality Data Sources:
  • Mortality data are provided by the National Vital Statistics SystemExternal Web Site Policy at the National Center for Health Statistics of the Centers for Disease Control and Prevention.
  • Population counts for denominators are based on Census populations as modified by NCI.
  • Rates are calculated using SEER*StatExternal Web Site Policy.
  • Trends are determined by using JoinpointExternal Web Site Policy analysis of available historical data and reporting the last segment as the most recent trend.
### Appendix A. Regions of the Louisiana Tumor Registry

<table>
<thead>
<tr>
<th>Regional Registry</th>
<th>Beginning Date of the Registry</th>
<th>Average Annual Population, 2010-2014</th>
<th>Parishes Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region 1 – New Orleans</td>
<td>1974</td>
<td>21,864</td>
<td>Jefferson, Orleans, St. Bernard</td>
</tr>
<tr>
<td>Region 3 – Southeast Louisiana</td>
<td>1983</td>
<td>17,036</td>
<td>Lafourche, Plaquemines, St. Charles, St. James, St. John, St. Tammany, Terrebonne, Washington</td>
</tr>
<tr>
<td>Region 4 – Acadiana</td>
<td>1983</td>
<td>17,032</td>
<td>Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, St. Mary, Vermilion</td>
</tr>
<tr>
<td>Region 5 – Southwest Louisiana</td>
<td>1983</td>
<td>7,698</td>
<td>Allen, Beauregard, Calcasieu, Cameron, Jefferson Davis</td>
</tr>
<tr>
<td>Region 6 – Central Louisiana</td>
<td>1988</td>
<td>8,283</td>
<td>Avoyelles, Catahoula, Concordia, Grant, La Salle, Rapides, Vernon, Winn</td>
</tr>
<tr>
<td>Region 7 – Northwest Louisiana</td>
<td>1988</td>
<td>14,817</td>
<td>Bienville, Bossier, Caddo, Claiborne, De Soto, Natchitoches, Red River, Sabine, Webster</td>
</tr>
<tr>
<td>Region 8 – Northeast Louisiana</td>
<td>1988</td>
<td>9,061</td>
<td>Caldwell, East Carroll, Franklin, Jackson, Lincoln, Madison, Morehouse, Ouachita, Richland, Tensas, Union, West Carroll</td>
</tr>
<tr>
<td>Entire State</td>
<td>1988</td>
<td>119,201</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Bureau of Census and National Cancer Institute, April 2017.
Acknowledgements

• Hospital cancer registries (http://louisianatumorregistry.lsuhsc.edu/)
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  • Medical records offices
  • Pathology laboratories
  • Physician offices and clinics
  • Hospice programs and nursing homes
• Regional and central offices of the Louisiana Tumor Registry
  (http://louisianatumorregistry.lsuhsc.edu/regionalregistries.html)
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