Lung and Bronchus Cancer

• Lung cancer was the 1st most common cancer and the leading cause of cancer deaths in Louisiana from 2010 to 2014.¹

• Between 2010 and 2014, the Louisiana incidence rate for lung cancer and the mortality rate both ranked 7th in the nation.¹

• About 3,510 new lung cancers are expected to be diagnosed and about 2,610 patients are expected to die of lung cancer in 2017 in Louisiana.²

1. Data source: NCI state cancer profile.
Lung and Bronchus Cancer: Age-Specific Incidence Rates#, Louisiana, 2010-2014

#Invasive cases only.
Lung and Bronchus Cancer: Age-Specific Incidence Rates by Gender, 2010-2014

#Invasive cases only.
U.S. data source: 18 SEER registries.
Lung and Bronchus Cancer: Age-Specific Incidence Rates* by Race, 2010-2014

*Invasive cases only.
U.S. data source: 18 SEER registries.
Lung and Bronchus Cancer: Incidence Rates#, 1, 2, 2010-2014

# Invasive cases only.

1 Age-adjusted to the 2000 U.S. standard population.

2 U.S. Incidence data source: 18 SEER registries.

↓↑Rate of Louisiana is significantly different from that of the U.S.
Incidence Rates of Lung and Bronchus Cancer in the U.S., All Races, Both Sexes, 2010-2014

# Only invasive cases.
Lung and Bronchus Cancer Incidence\#,1,2 by Louisiana Region3: Whites, 2010-2014

# Invasive cases only.
1 Age-adjusted to the 2000 U.S. standard population.
2 Data source for U.S. was the 18 SEER registries.
3 See Appendix A.

* Incidence rate of regions/Louisiana is significantly different from that of U.S.
Lung and Bronchus Cancer Incidence#,1,2 by Louisiana Region3: Blacks, 2010-2014

Rate per 100,000

- New Orleans: 77.7*
- Baton Rouge: 67.0
- Southeast: 75.4*
- Acadiana: 83.6*
- Southwest: 72.3
- Central: 76.6*
- Northwest: 74.0*
- Northeast: 77.1*
- LA: 74.5*
- U.S.: 63.0

* Invasive cases only.
1 Age-adjusted to the 2000 U.S. standard population.
2 Data source for U.S. was the 18 SEER registries.
3 See Appendix A.

* Incidence rate of regions/Louisiana is significantly different from that of U.S.
Lung and Bronchus Cancer: Trend of Incidence Rates#,1,2, Whites 1988-2014

# Invasive cases only.
1 Age-adjusted to the 2000 U.S. standard population.
2 U.S. data source: 18 SEER registries.
Lung and Bronchus Cancer: Trend of Incidence Rates\(^1,2,\#\), Blacks 1988-2014

\(^\#\) Invasive cases only.

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

\(^2\) U.S. data source: 18 SEER registries.
Lung and Bronchus Cancer: Mortality Rates, Louisiana vs. U.S., 2010-2014

Rate Per 100,000

White Male

<table>
<thead>
<tr>
<th>Louisiana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>67.9</td>
<td>55.9</td>
</tr>
</tbody>
</table>

White Female

<table>
<thead>
<tr>
<th>Louisiana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>43.1</td>
<td>37.5</td>
</tr>
</tbody>
</table>

Black Male

<table>
<thead>
<tr>
<th>Louisiana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>91.1</td>
<td>68.0</td>
</tr>
</tbody>
</table>

Black Female

<table>
<thead>
<tr>
<th>Louisiana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.3</td>
<td>34.6</td>
</tr>
</tbody>
</table>

↑ Rate of Louisiana is significantly different from that of the U.S.

1 Age-adjusted to the 2000 U.S. standard population.
2 Mortality data source was National Center of Health Statistics (NCHS).
Mortality Rates of Lung and Bronchus Cancer in the U.S., All Races, Both Sexes, 2010-2014

Notes:
- State Cancer Registries may provide more current or more local data.
- Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).
- Source: Death data provided by 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 1969-2015 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 16 counts for the time period.
Lung and Bronchus Cancer:
Trends of Mortality Rates$^{1,2}$, Whites, 1988-2014

1 Age-adjusted to the 2000 U.S. standard population.
2 Data source: National Center of Health Statistics (NCHS).
Lung and Bronchus Cancer:
Trends of Mortality Rates\(^1,2\), Blacks, 1988-2014

1 Age-adjusted to the 2000 U.S. standard population.
2 Data source: National Center of Health Statistics (NCHS).
Lung and Bronchus: Louisiana, 1988-2014
Trends of Incidence* and Mortality Rates by Gender

<table>
<thead>
<tr>
<th>Year of Diagnosis/Death</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>100</td>
</tr>
<tr>
<td>1993</td>
<td>90</td>
</tr>
<tr>
<td>1998</td>
<td>80</td>
</tr>
<tr>
<td>2003</td>
<td>70</td>
</tr>
<tr>
<td>2008</td>
<td>60</td>
</tr>
<tr>
<td>2013</td>
<td>50</td>
</tr>
</tbody>
</table>

Male Incidence (APC = -1.8*)
Female Incidence (APC = 0.4)
Male Mortality (-2.1*)
Female Mortality (APC = 0.1)

*Invasive cases only.
Annual average percent change (APC) were calculated using weighted least squares method.
* APC significantly different from zero.
Lung and Bronchus: Louisiana, 1988-2014
Trends of Incidence # and Mortality Rates by Race

#Invasive cases only.

Annual average percent change (APC) were calculated using weighted least squares method.

* APC significantly different from zero.
Lung and Bronchus Cancer#: Louisiana 5-Year Relative Survival by Stage¹, White Males, 2007-2013

#Only invasive cases.
¹ The stage distribution is based on Summary Stage 2000.
Lung and Bronchus Cancer#: Louisiana
5-Year Relative Survival by Stage¹, Black Males, 2007-2013

5-year Relative Survival Rate (%)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>37.0%</td>
</tr>
<tr>
<td>Regional</td>
<td>16.8%</td>
</tr>
<tr>
<td>Distant</td>
<td>6.2%</td>
</tr>
<tr>
<td>Unstaged</td>
<td>3%</td>
</tr>
</tbody>
</table>

Percent of Cases by Stage

- Localized: 13%
- Regional: 22%
- Distant: 62%
- Unstaged: 3%

#Only invasive cases.
¹ The stage distribution is based on Summary Stage 2000.
Lung and Bronchus Cancer#: Louisiana 5-Year Relative Survival by Stage\textsuperscript{1}, White Females, 2007-2013

\textsuperscript{#}Only invasive cases.
\textsuperscript{1} The stage distribution is based on Summary Stage 2000.
Lung and Bronchus Cancer#: Louisiana 5-Year Relative Survival by Stage¹, Black Females, 2007-2013

Percent of Cases by Stage

- Localized: 15%
- Regional: 25%
- Distant: 58%
- Unstaged: 2%

5-year Relative Survival Rate (%)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized</td>
<td>50.4</td>
</tr>
<tr>
<td>Regional</td>
<td>25.5</td>
</tr>
<tr>
<td>Distant</td>
<td>25.6</td>
</tr>
<tr>
<td>Unstaged</td>
<td>0%</td>
</tr>
</tbody>
</table>

#Only invasive cases
¹ The stage distribution is based on Summary Stage 2000.
# 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.
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 Registries External 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) Program External Web Site Policy.
  – Population counts for denominators are based on Census populations as modified by NCI.
  – Rates are calculated using SEER*Stat External Web Site Policy.

• Mortality Data Sources:
  – Mortality data are provided by the National Vital Statistics System External 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*Stat External Web Site Policy.
  – Trends are determined by using Joinpoint External Web Site Policy analysis of available historical data and reporting the last segment as the most recent trend.
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)
• School of Public Health, LSU Health Sciences Center–New Orleans
• Louisiana Cancer and Lung Trust Fund Board
• Coroners’ offices
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• Centers for Disease Control and Prevention (CDC), National Program of Cancer Registries (NPCR)
• Louisiana Health Care Services Division
Questions?

Contact:
LTR-info@lsuhsc.edu
or
504/568-5757