

Utah Health Status Update:

Tobacco-Related Cancer Incidence and Mortality in Utah

January 2004

Utah Department of Health

Utah consistently achieves the lowest rates of smoking, incidence of lung cancer, and mortality from lung cancer in the United States (Figure 1). In fact, Utah is the only state to meet the Healthy People 2000 goal to reduce cigarette smoking to a prevalence of no more than 15% among people aged 18 and older.

Despite this success, cancers related to tobacco use and exposure to secondhand smoke remain among the leading causes of cancer deaths for Utahns. Specifically, **lung cancer is the number one cause of cancer mortality in Utah!** More than 2,300 Utah men and more than 1,900 Utah women died from lung cancer between 1991 and 2000. Among Utah men, lung cancer is the leading cause of cancer death; it is the second leading cause of cancer death for Utah women, after breast cancer (see Figure 3 on the reverse side for the leading cancers by sex).

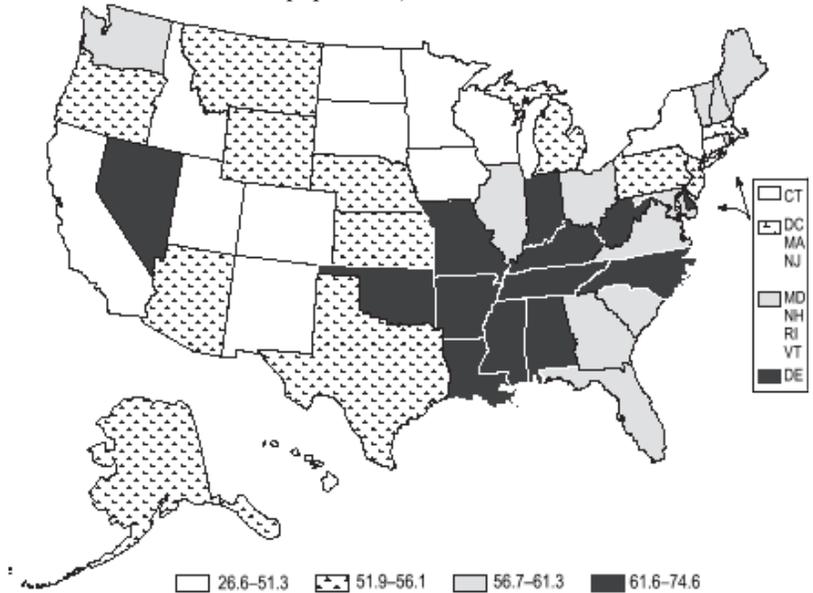
On average, about 450 men and women are diagnosed with lung cancer every year in Utah. Since 1973, when cancer was first regularly tracked through the Utah Cancer Registry and other Surveillance, Epidemiology, and End Results (SEER) registries, lung cancer rates for men have generally declined in both the U.S. and Utah. Unfortunately, lung cancer rates for women have generally increased, dramatically in the U.S., and less dramatically in Utah (Figure 2).

The lung is not the only site or type of cancer related to tobacco use and exposure to secondhand smoke. Smoking has been associated with an increased risk of cancers of the lip, oral cavity, pharynx, esophagus, larynx, pancreas, trachea, cervix, bladder, and kidney, as well as the lung and bronchus. These cancers accounted for 30% of cancer deaths among Utahns between 1991 and 2000.

In Utah, there is a positive correlation between incidence rates for lung cancer and smoking rates by Utah Health District: lower smoking rates correspond to a lower incidence of lung cancer (Figure 4, $R^2 = 0.835$).

Lung Cancer Mortality Rates

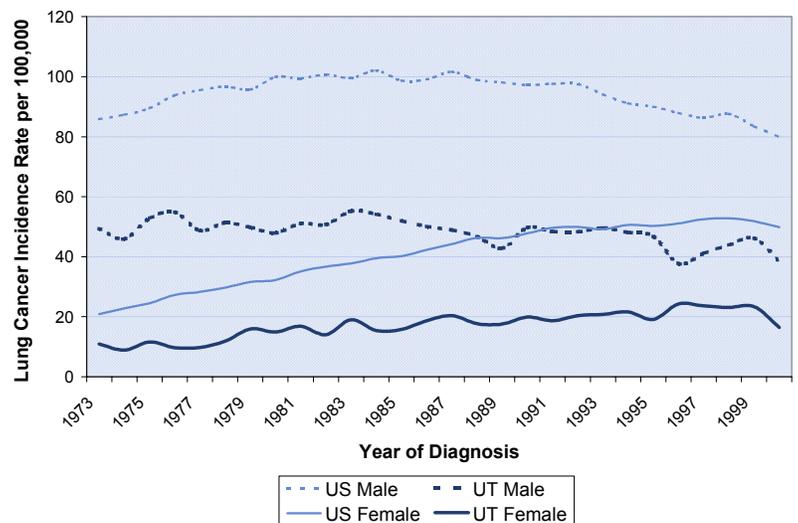
Figure 1. Lung cancer mortality rates per 100,000, U.S., 1999 (age-adjusted to the 2000 U.S. standard population).



Source: Centers for Disease Control and Prevention:
www.cdc.gov/nccdphp/burdenbook2002/02_lungcancer.htm.

Lung Cancer Incidence Rates

Figure 2. Lung cancer incidence rates per 100,000 by year of diagnosis and sex, Utah and U.S., 1973-2000 (age-adjusted to the 2000 U.S. standard population).



Thus, despite the relative success in Utah regarding smoking and tobacco-related cancers, there is a continued need for expanded public health efforts to further reduce tobacco use and secondhand smoke.

Leading Sites of Cancer Incidence and Mortality

Figure 3. Ten leading sites of cancer incidence and mortality rate per 100,000 (age-adjusted to the 2000 U.S. standard population) by sex, Utah, 1991-2000.

Utah Females

| | Incidence | | | Mortality | |
|----------------------------|-------------|--------------|----------------------------|-------------|--------------|
| | Rate | Number* | | Rate | Number* |
| Breast | 114.9 | 8,858 | Breast | 25.0 | 1,931 |
| | | | Lung & Bronchus | 17.0 | 1,310 |
| Colon & Rectum | 36.7 | 2,844 | Colon & Rectum | 14.8 | 1,148 |
| Corpus Uteri & Uterus | 24.1 | 1,858 | Ovary | 9.1 | 706 |
| Lung & Bronchus | 21.2 | 1,631 | Non-Hodgkin Lymphoma | 7.1 | 550 |
| Ovary | 16.8 | 1,340 | Pancreas | 6.8 | 526 |
| Melanoma of the Skin | 15.5 | 1,310 | Corpus Uteri & Uterus | 3.9 | 302 |
| Non-Hodgkin Lymphoma | 14.3 | 1,126 | Brain & Nervous System | 3.8 | 305 |
| Thyroid | 10.9 | 960 | Stomach | 2.9 | 223 |
| Cervix | 8.0 | 666 | Cervix | 2.2 | 175 |
| Urinary Bladder | 6.9 | 537 | | | |
| All Sites | 340.2 | 26,937 | All Sites | 129.8 | 10,141 |

Utah Males

| | Incidence | | | Mortality | |
|----------------------------------|-------------|--------------|----------------------------|-------------|--------------|
| | Rate | Number* | | Rate | Number* |
| Prostate | 194.4 | 12,119 | Lung & Bronchus | 37.6 | 2,318 |
| Colon & Rectum | 50.2 | 3,101 | Prostate | 37.5 | 1,934 |
| Lung & Bronchus | 44.6 | 2,804 | Colon & Rectum | 20.5 | 1,192 |
| Urinary Bladder | 30.0 | 1,809 | Non-Hodgkin Lymphoma | 10.2 | 641 |
| Melanoma of the Skin | 23.1 | 1,621 | Pancreas | 9.5 | 579 |
| Non-Hodgkin Lymphoma | 21.5 | 1,452 | Urinary Bladder | 6.1 | 328 |
| Oral Cavity & Pharynx | 13.5 | 899 | Brain & Nervous System | 5.6 | 397 |
| Kidney & Renal Pelvis | 10.6 | 714 | Stomach | 5.1 | 309 |
| Pancreas | 9.9 | 609 | Melanoma of the Skin | 4.5 | 302 |
| Brain & Nervous System | 8.1 | 640 | Esophagus | 4.3 | 276 |
| All Sites | 491.2 | 31,778 | All Sites | 191.8 | 11,426 |

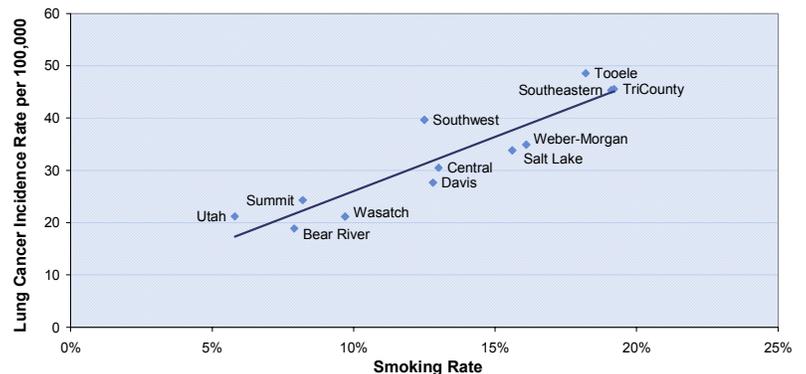
* Total number for 1999-2001.

Note: Bold indicates a smoking-related cancer.

Source: Utah Cancer Registry (www.uuhsc.utah.edu/ucr); SEER (www.seer.cancer.gov)

Smoking Rates and Lung Cancer Incidence

Figure 4. Percentage of the population who are current smokers (anyone who has ever smoked 100 cigarettes or more and currently smokes), 1999-2001, and lung cancer incidence rates per 100,000 (age-adjusted to the 2000 U.S. standard population), 1992-2001, for Utah local health districts.



◆ Health District's Smoking Rate by Lung Cancer Rate — Trend of Lung Cancer Rate by Smoking Rate

| Health District | Lung Cancer Incidence Rate | Smoking Rate |
|----------------------|----------------------------|--------------|
| Bear River | 18.9 | 8% |
| Central | 30.5 | 13% |
| Davis | 27.7 | 13% |
| Salt Lake | 33.8 | 16% |
| Southeastern | 45.4 | 19% |
| Southwest | 39.7 | 13% |
| Summit | 24.3 | 8% |
| Tooele | 48.6 | 18% |
| TriCounty | 45.6 | 19% |
| Utah | 21.2 | 6% |
| Wasatch | 21.2 | 10% |
| Weber-Morgan | 34.9 | 16% |
| State of Utah | 31.9 | 13% |
| U.S. | 66.8 | 23% |

Sources: Incidence rates - Utah Cancer Registry (www.uuhsc.utah.edu/ucr); SEER (www.seer.cancer.gov); smoking rates - Utah Behavioral Risk Factor Surveillance System Local Health District Report, 1999-2001, Office of Public Health Assessment, Utah Department of Health

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Additional information about this topic can be found on the Utah Cancer Registry website: uuhsc.utah.edu/ucr, or by contacting the Utah Cancer Registry at 546 Chipeta Way, Suite 410, Salt Lake City, UT 84108, (801) 581-8407, email: ucr.info@hsc.utah.edu; or by contacting the Office of Public Health Assessment, Utah Department of Health, P.O. Box 142101, Salt Lake City, Utah 84114-2101, (801) 538-6108, FAX (801) 538-9346, email: phdata@utah.gov.