

# Lung Cancer Survival in Minnesota, 2021

## FACTS AND FIGURES

### The burden of lung cancer in Minnesota is high

Lung cancer is second most diagnosed cancer in both men and women in the state. It is the leading cause of cancer death in both men and women, accounting for nearly one in four cancer deaths.

### Lung cancer survival in Minnesota

#### Summary

- Survival of lung cancer is low compared with other common cancers. Patients have the best chance of surviving their lung cancer when the tumor is diagnosed early, before the tumor has spread. Survival is very low if the cancer is diagnosed only after the tumor has spread to distant parts of the body.
- One reason lung cancer survival is low is because a high percentage of cancers are only detected after the cancer has spread within the lung or to distant parts of the body.
- Lung cancer survival has improved since the 1990s.

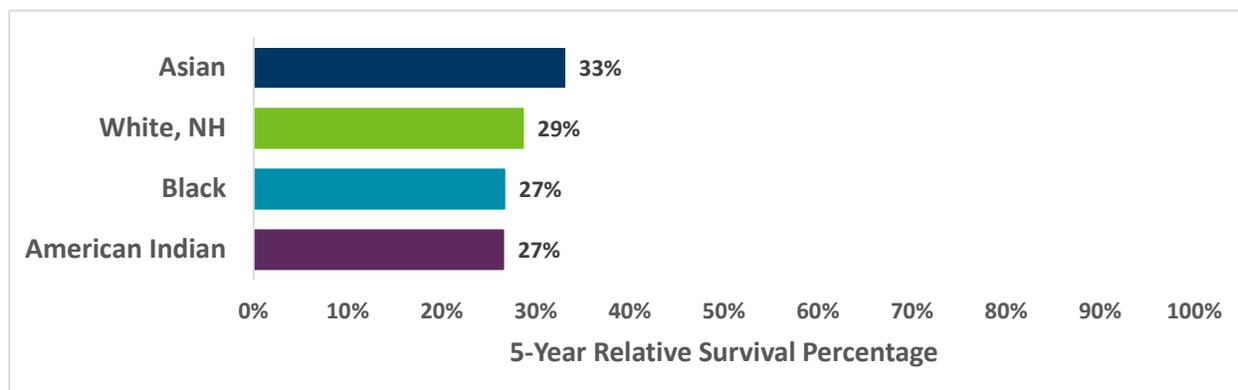
#### Lung cancer survival is low.

Minnesotans who have lung cancer are about 29% as likely as people who don't lung cancer to live for at least 5 years after being diagnosed. Other common cancers in Minnesota have much higher relative survival: breast (93%), prostate (94%) and colorectal cancer (69%).

#### Lung cancer survival does not appear to differ by race.

Lung cancer five-year relative survival is similar for Minnesotans of different race groups. Although estimated survival among Asians (33%) appears slightly higher than for other Minnesota populations (27 to 29%), the differences are small and not statistically significant.

### Lung Cancer Five-Year Lung Cancer Relative Survival by Race



White, NH; White race excluding Hispanic. The Asian, Black, and American Indian race groups include Hispanic. Age-standardized relative survival ratios for Hispanics could not be calculated due to small numbers. Minnesota Cancer Reporting System (MCRS) data. Minnesota residents (n=23,153) 15 years and older, diagnosed with invasive lung cancer over 7 years from 2011 to 2017, and followed for vital status through 2018, using the National Cancer Institute (NCI) complete analysis method, ([NCI Cancer Survival Statistics: Cohort Definitions Using Diagnosis Year \(surveillance.cancer.gov/survival/cohort.html\)](https://surveillance.cancer.gov/survival/cohort.html)).

### Lung cancer survival is highest when diagnosed early.

Lung cancer five-year relative survival is 67% when the tumor is diagnosed at the local stage but drops to 39% if diagnosed only after the tumor has spread in the lung (regional stage), and only 7% if the cancer has metastasized (distant stage). One reason overall five-year lung cancer survival is so low (29%) is that the majority of lung cancers are diagnosed at a late stage (regional, 23%; distant, 48%). Relative survival is higher in females than males at all stages.

### Lung Cancer Five-Year Relative Survival by SEER Summary Stage

SEER Summary Stage	Males and Females	Males	Females
All malignant cancers	29%	25%	33%
Localized	67%	62%	71%
Regional	39%	34%	44%
Distant	7%	6%	9%

MCRS data. Minnesota residents (n=23,153) 15 years and older, diagnosed with invasive lung cancer over 7-years from 2011 to 2017, and followed for vital status through 2018. Complete analysis method. Relative survival percentages are age-standardized. SEER Summary Stage is the NCI Surveillance, Epidemiology and End Results (SEER) Program staging system, based on cancer spread. Unstaged or unknown stage cancers (3.7% of total) were not included.

### Lung cancer survival improved over the past two decades.

In the mid-1990s, lung cancer five-year survival was only 16%. Relative survival has increased since then, reaching 27% for the cohort diagnosed from 2011 to 2013.

### Lung Cancer 5-Year Relative Survival by Diagnosis Cohort

Diagnosis Years	1993 to 1995	1996 to 1998	1999 to 2001	2002 to 2004	2005 to 2007	2008 to 2010	2011 to 2013
5-Year Relative Survival Percentage	16%	16%	19%	20%	21%	24%	27%

Minnesota Cancer Reporting System data. Minnesota residents 15 years and older, diagnosed with microscopically confirmed invasive lung cancer, all stages combined. NCI Cohort method: we compared survival for seven successive 3-year cohorts defined by year of diagnosis (min n=6,929, max n=9,129). All cases were followed 5 years for vital status ([NCI Cancer Survival Statistics: Cohort Definitions Using Diagnosis Year, \(surveillance.cancer.gov/survival/cohort.html\)](https://surveillance.cancer.gov/survival/cohort.html)). Relative survival percentages are age-standardized. The 27% estimate above for cases diagnosed from 2011 to 2013 above differs slightly from the 29% reported on page 1 (i.e., for cancers diagnosed 2011 to 2017), because the analysis above does not include cancers diagnosed 2014 to 2017).

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