

Canadian cancer statistics, 2020

Released at 8:30 a.m. Eastern time in *The Daily*, Tuesday, September 22, 2020

Canadian Cancer Statistics: A 2020 special report on lung cancer

Lung cancer most commonly diagnosed cancer and leading cause of cancer death

Lung cancer is the most commonly diagnosed cancer and the leading cause of cancer death in Canada. More Canadians die of lung cancer than colorectal, pancreatic and breast cancers combined. In 2020 alone, it is estimated that more than 21,000 Canadians are expected to die of lung cancer. The high rate of death (mortality rate) from lung cancer reflects both its high rate of diagnosis (incidence rate) and its low survival.

The *Canadian Cancer Statistics: A 2020 special report on lung cancer*, developed by the Canadian Cancer Statistics Advisory Committee in collaboration with the Canadian Cancer Society, Statistics Canada and the Public Health Agency of Canada, provides new insight into lung cancer patterns in Canada. The report also provides information on important and emerging issues related to lung cancer, such as risk factors, screening and treatment. While the results predate the COVID-19 pandemic, they provide a baseline with which to eventually gauge the impact of the pandemic on rates of lung cancer incidence, mortality and survival.

Lung cancer rates increase dramatically with age and are higher among males than females

Lung cancer incidence and mortality rates increase dramatically with age. Incidence rates peak among Canadians aged 75 to 84 years (410 per 100,000 people), while mortality rates peak among Canadians aged 85 years and older (352 per 100,000 people). Overall, the incidence rate of lung cancer is about 20% higher among males than females and the mortality rate is about 31% higher among males than females. However, among Canadians younger than 55 years of age, rates are higher among females than males.

Rates of diagnosis of lung cancer converging over time between males and females

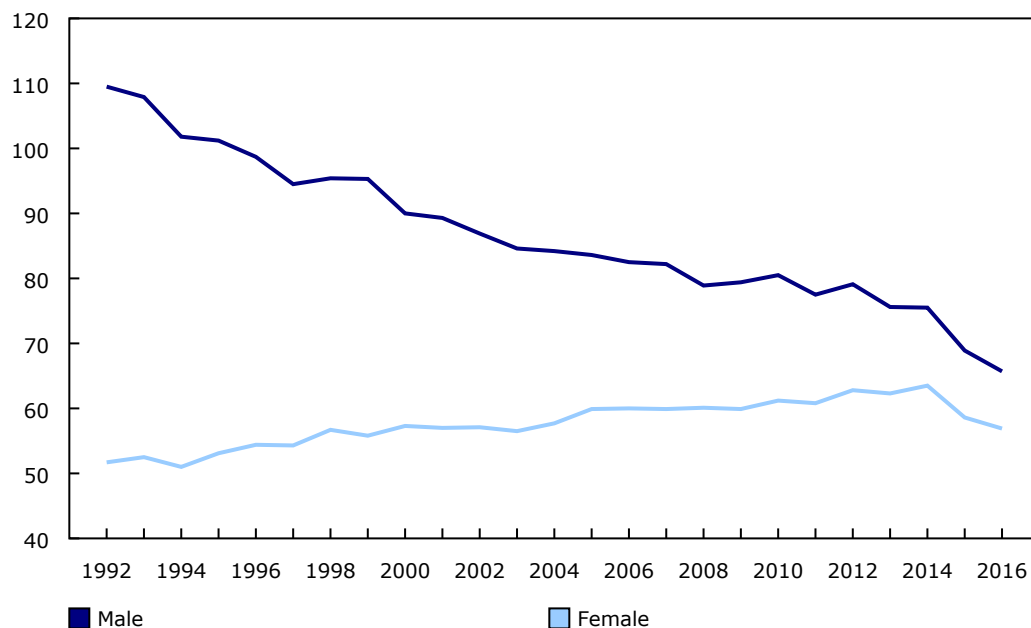
While lung cancer incidence rates are higher among males than females, these rates have been getting closer over time. In 1992, the lung cancer incidence rate among males (109 per 100,000 males) was over twice that recorded among females (52 per 100,000 females). However, by 2012 the gap had narrowed considerably (79 per 100,000 males versus 63 per 100,000 females) due to decreasing rates among males and increasing rates among females. Rates have subsequently been decreasing in both sexes, but more quickly among males.

The difference in lung cancer rates in males and females over time largely reflects past differences in tobacco smoking. Among males, a decrease in the prevalence of daily smoking began in the mid-1960s, preceding the decrease in lung cancer incidence by about 20 years. Among females, the decrease in daily smoking did not start until the 1980s. Trends in lung cancer mortality rates largely follow trends in lung cancer incidence.



Chart 1
Age-standardized incidence rate trend of lung cancer, by sex, Canada excluding Quebec, 1992 to 2016

Rate (per 100,000 people)



Source(s): Canadian Cancer Registry (3207).

Lung cancer survival higher among females than males

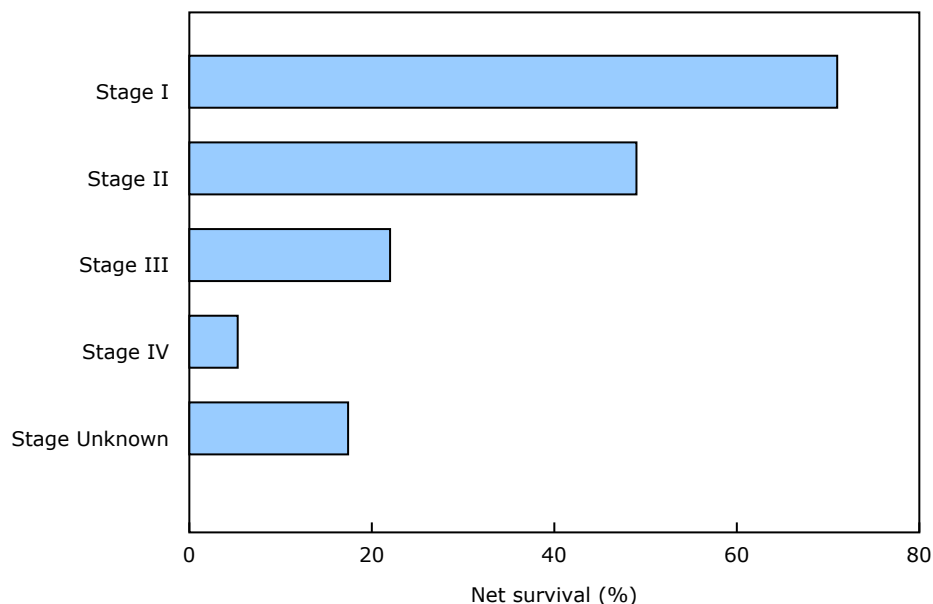
Lung cancer survival is typically higher among females than males, regardless of age or province at diagnosis. For example, five-year net survival among females was 22%, compared with 15% among males. While survival tends to be higher among females for many cancers, the strength of this advantage among lung cancer patients is particularly notable.

About half of lung cancer cases are diagnosed at the latest stage when survival is extremely low

Staging is a way of classifying a cancer based on the extent of disease in the body at the time of diagnosis. Staging levels typically run from I to IV, with the higher number indicating greater spread of disease in the body from the origin of the cancer. About half of all lung cancers are diagnosed at stage IV, at which point survival is extremely low—three-year net survival of 5%. In contrast, slightly less than 1 in 10 lung cancers are diagnosed at stage I where the cancer is relatively small and contained within the lung and the three-year prognosis is much better (71%).

Chart 2

Lung cancer three-year predicted net survival estimates by stage at diagnosis, Canada excluding Quebec, 2012–2014



Source(s): Canadian Cancer Registry (3207) linked to mortality data from the Canadian Vital Stats Death Database (3233) and death information from the T1 Personal Master File (CCR-CVSD-T1PMF).

Note to readers

Lung cancer incidence refers to the number of newly diagnosed cases of lung cancer. **Lung cancer mortality** refers to deaths attributed to lung cancer. In this article, these measures are presented as rates per 100,000 people. Unless otherwise noted, incidence and mortality rates cover the five-year periods from 2012 to 2016 and 2013 to 2017 respectively.

In the analysis of incidence and mortality time trends, **age-standardized rates** were used. These rates represent the number of new cancer cases or deaths per 100,000 people that would have occurred if the population under study had had the same age distribution as the 2011 Canadian standard population. Age-standardization allows for comparisons of incidence or mortality rates over time that are unaffected by changes in the age distribution of the population.

This release presents data from the [Canadian Cancer Registry \(CCR\)](#), a population-based database maintained by Statistics Canada. The CCR contains information on cases diagnosed from 1992 onward, compiled from reports from every provincial and territorial cancer registry.

It also presents data from the [Canadian Vital Statistics – Death Database](#), which collects demographic and cause of death information annually from all provincial and territorial vital statistics registries on all deaths in Canada.

Incidence data from Quebec are excluded because cases diagnosed in Quebec from 2011 onward had not been submitted to the CCR. Mortality data from this province have also been excluded for consistency with the incidence data.

Lung cancer net survival refers to the percentage of people diagnosed with lung cancer who survive a given period of time past their diagnosis assuming that lung cancer is the only possible cause of death. Net survival is the preferred method for comparing cancer survival in population-based cancer studies because it adjusts for the fact that different populations may have different levels of background risk of death.

For more information about this report visit the [Canadian Cancer Society](#) website.

Definitions, data sources and methods: survey number [3207](#).

For more information about the Canadian Cancer Registry, contact us (toll-free 1-800-263-1136; 514-283-8300; STATCAN.infostats-infostats.STATCAN@canada.ca) or Media Relations (613-951-4636; STATCAN.mediahotline-ligneinfomedias.STATCAN@canada.ca).

For media inquiries about the publication *Canadian Cancer Statistics: A 2020 special report on lung cancer*, contact the Canadian Cancer Society (Nuala.Mckee@cancer.ca).