Cancer incidence in Canada, 2020

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In 2020, the first year of the COVID-19 pandemic, about 140,330 new cancer cases were diagnosed and subsequently reported to the Canadian Cancer Registry (CCR). After adjusting for changes in the age structure of the population over time, this represents an incidence rate of 449.5 new cancer cases per 100,000 people, a figure which is 12.3% lower than the average annual rate calculated over the previous five-year period (512.5 new cases per 100,000 people from 2015 to 2019). Overall, cancer diagnoses among the male population (-13.2%) declined more than those affecting the female population (-11.4%).

Screening service disruptions, difficulties accessing primary care services, and fewer in-person appointments due to lockdowns and travel restrictions, all may have impacted the registration of new cancer cases in the Canadian population. In the months that followed the first lockdowns in mid-March 2020, the number of registered cancer cases dropped from 11,510 in March to 8,640 in April and 9,235 in May, but returned to a count of 11,585 in June. From September to December, reported cancer counts were either comparable to, or higher than, the previous five-year average.

Rates lower than expected for the four most commonly diagnosed cancers

The observed incidence rates of the four most commonly diagnosed cancer types—breast, lung and bronchus, prostate and colorectal cancers—all appear significantly lower than the 2015-to-2019 average rate, with a relative percent difference ranging from -11.3% for breast cancer to -18.0% for prostate cancer. The incidence rates of other frequently diagnosed cancer types—such as melanoma of the skin (-18.2%), thyroid (-16.1%), kidney and renal pelvis (-10.7%) and urinary bladder (-9.8%) cancers—were also substantially lower than previously observed. A similar situation has recently been reported with respect to the United States' National Cancer Database.

Increasing rates for oropharyngeal and anal cancers

In spite of the potential impact of healthcare service disruptions on cancer diagnoses, the 2020 incidence rates for some cancers exceeded the corresponding 2015-to-2019 average rates. For example, the incidence rates for oropharyngeal (throat) (+13.9%) and anal (+3.5%) cancers both increased. In the case of anal cancer, the overall increase in incidence was driven by rising rates among the female population (+5.4%). While both of these cancer sites are associated with the human papillomavirus (HPV), the incidence rate for cervical cancer, also strongly associated with HPV infection, did not significantly increase in 2020. However, the incidence rate of acute myeloid leukemia, the most common type of acute cancer of the blood and bone marrow diagnosed in the adult population, exceeded its previous five-year average by 2.2% in 2020.

Also of note, updated Quebec data have been integrated into the most recent version of the CCR, extending the cancer data series for this province up to 2017.



Table 1

Observed and expected age-standardized rates, per 100,000 people, for all cancers combined and top 10 cancers, Canada excluding Quebec and Nova Scotia, 2015 to 2019 and 2020

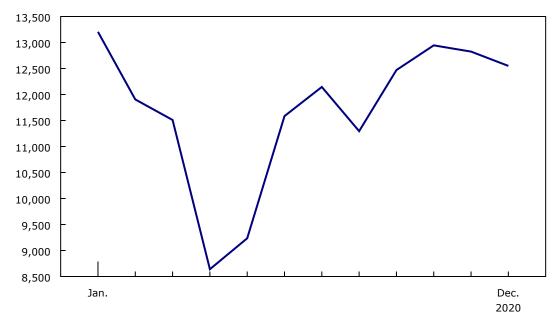
	Both sexes (expected)	Both sexes (observed)	Males (expected)	Males (observed)	Females (expected)	Females (observed)
	age-standardized rates per 100,000 people					
All cancers combined	512.5	449.5	557.9	484.0	479.1	424.3
Breast	67.3	59.7	1.2	1.1	128.5	114.1
Lung and bronchus	62.6	52.9	68.5	56.2	59.2	50.7
Prostate			124.9	102.4		
Colorectal	55.2	45.9	66.3	53.7	46.3	39.0
Non-Hodgkin lymphoma	23.8	22.2	28.5	26.7	19.7	18.4
Urinary bladder (including in situ)	23.8	21.5	42.1	35.6	11.7	9.6
Melanoma of the skin	20.4	16.7	25.0	19.7	18.5	14.4
Body of the uterus					33.9	32.2
Kidney and renal pelvis	16.2	14.5	22.7	20.4	11.7	9.1
Pancreas	12.8	12.8	15.5	14.6	12.6	11.1

... not applicable

Source(s): Canadian Cancer Registry (3207) and annual demographic estimates.

Chart 1 New cancer diagnoses by month, Canada excluding Quebec and Nova Scotia, 2020

monthly cancer counts



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

Note to readers

The Canadian Cancer Registry (CCR) is a population-based registry that includes data collected and reported to Statistics Canada by each Provincial/Territorial Cancer Registry. The goal of the person-based CCR is to collect information about each new primary cancer diagnosed among Canadian residents since 1992.

Cancer incidence refers to the number of new cases of cancer in a population over a given period, usually one year. The cancer incidence rate is typically expressed as the number of new cancer cases per 100,000 people. The rates presented above were age-standardized using the 2011 Canadian standard population to take into consideration any differences in the age structure of the population of the provinces and territories over time.

While available in Quebec, cancer incidence data for Quebec (link in French only) have not yet been submitted to the CCR for diagnosis years 2018 onward. For tables 13-10-0111-01, 13-10-0747-01 and 13-10-0840-01, cancer incidence estimates for Canada excluding Quebec were produced for all diagnosis years up to 2018. Cancer incidence data for Nova Scotia are also currently unavailable for diagnosis years 2019 and 2020. As a consequence, the estimates for Canada excluding Quebec are unavailable for the last two data points in the aforementioned tables. The estimates reported in this article exclude data from both Quebec and Nova Scotia.

As the CCR is updated annually with new records and changes to previous records, the incidence for any given diagnosis year may change from one release to the next. In particular, delays in the reporting of new cases to Statistics Canada typically result in undercounts of cases which are more pronounced in the most recently reported diagnosis year. Generally, the reporting delay ranges between 2% and 3% nationally. In addition, cases for which the sole source of identification was through a death certificate (referred to as death certificate only cases) have not been systematically reported by Manitoba since 2013 and are missing for Ontario in 2020. As a consequence, about 1,500 cases are not reflected in the current version of the database but will eventually be reported to the CCR.

All cancers combined refers to all invasive cancers excluding non-melanoma skin cancer but including in situ urinary bladder cancer.

Available tables: 13-10-0111-01, 13-10-0747-01 and 13-10-0840-01.

Definitions, data sources and methods: survey number 3207.

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; infostats@statcan.gc.ca) or Media Relations (statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca).