Canadian Cancer Society Statistics Report 2021 Recap

Save Your Skin Foundation
March 2022

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Executive Summary

In November 2021, the Canadian Cancer Society (CCS) published their annual cancer statistics report.[1] [2] [3] This report included statistics regarding cancer incidence, mortality, survival probability, and the burden cancer causes on the Canadian medical system. These statistics were further categorized by type of cancer, sex, age, and geography. This information continues to be imperative in determining which areas of cancer prevention and cancer care are improving over time and which require further attention.

In this Save Your Skin Foundation (SYSF) report, we will be outlining the information in the CCS report as it relates to the state of cancer incidence and mortality at large, with a particular focus on melanoma, followed by a brief outline of the burden cancer presents on the Canadian healthcare system. Data related to non-melanoma skin cancer and ocular melanoma, other areas in which SYSF advocates, are not included in the CCS report.

Specific pages of the CCS report are cited in brackets and figures included are taken directly from the report, including the annotations present in the report. The figures included will be limited to those which include data regarding melanoma. More information about the statistical methods used to gather data for this project can be found in the CCS report appendix. The report can be viewed in full and downloaded [here](#).

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[1] The statistics in this report are only applicable to the population of Canada.

[2] While the report in question was published in 2021, the statistics offered are from previous years due to the time required to report, collate, verify, and analyze surveillance data. Statistics regarding cancer incidence is sourced from data up to 2017; cancer death data up to 2019 (2018 for projections), apart from Quebec, in which incidence data was only available up until 2010 (9). Because of the lack of current data, Quebec is largely excluded from these statistics.

[3] The statistics presented do not consider individual risk, but the likelihood from birth that Canadians will develop cancer in their lifetime (11).

Incidence: How Many People get Cancer in Canada?

This section will outline statistics from the CCS report related to the rates of cancer diagnoses in Canadians, broken down by sex, age, geography, and year.
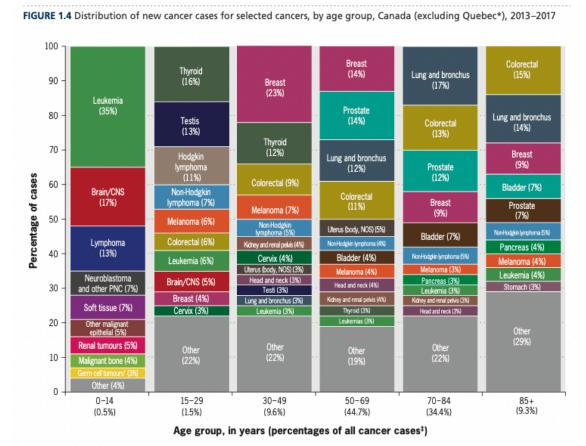
General:

- An estimated 2 in 5, or 43%, of Canadians will be diagnosed with cancer in their lifetime (11).

- It is estimated that in 2021, 229,200 new cases of cancer will be diagnosed in Canada (118,200 in male people, 110,900 in female) (10).

  ○ However, age-standardized incidence rates (ASIR) continue to be approximately 15% higher in female populations than male populations (12).

- The risk of cancer has been decreasing when the incidence factor of age is removed (as incidence rates are increasing due to the aging population) (10).

- Generally, cancer incidence rates are higher in central Canada and the eastern provinces than in the western provinces and territories (10).

- Cancer rates peak in both male and female populations between 85-89 years (13).

Melanoma Specific:

- Despite being largely preventable, melanoma incidence rates continue to rise in Canada (10).

- Melanoma represents the fifth most common cancer diagnosed in youth and young adults (6% in ages 15-29 years) (14).

- Depending on age range (15-85+), melanoma accounted for between 3% and 6% of cancer cases in Canada from 2013 to 2017 (14).

- Melanoma diagnoses have seen a 2.2% increase in male Canadians and 2% in female Canadians (18).

- Between 1984 and 2017, the incidence rate of melanoma increased for both male (2.2%) and female (1.4%) Canadians. Exposure to ultraviolet radiation

through natural and unnatural means (sun lamps, tanning beds) and sun exposure without corresponding sun safety practices continues to account for this increase (21).

- It is projected that in 2021, there were 8,700 new melanoma cases in Canada (4,700 in males, 4,000 in females); this translates to 22.9/100,000 (26.1 males and 20.7 females) (25).

FIGURE 1.4 Distribution of new cancer cases for selected cancers, by age group, Canada (excluding Quebec*), 2013–2017

Table 2:

CNS=central nervous system; PNC=peripheral nervous cell tumours; NOS=not otherwise specified

* Quebec is excluded because cases diagnosed in Quebec from 2011 onward had not been submitted to the Canadian Cancer Registry.

† Also includes trophoblastic tumours and neoplasms of gonads.

‡ The relative percentage is calculated based on the total number of cancer cases over five years (2013–2017) for each age group. Cases aged 0–14 years not mapping to a main childhood cancer diagnostic group were excluded.

Note: Cancers diagnosed in children (aged 0–14 years) were classified according to the Surveillance, Epidemiology and End Results Program (SEER) update to the International Classification of Childhood Cancer, Third Edition (ICCC-3).

Cancers diagnosed in older individuals were classified according to the International Classification of Diseases for Oncology, Third Edition (ICD-O-3). For further details, see *Appendix II: Data sources and methods*. The complete definition of the specific cancers included here can be found in Table A1.

Analysis by: Centre for Surveillance and Applied Research, Public Health Agency of Canada; Centre for Population Health Data, Statistics Canada

Data source: Canadian Cancer Registry database at Statistics Canada

Figure 1: "Figure 1.4: Distribution of new cancer cases for selected cancers, by age group, Canada (excluding Quebec*), 2013-2017" (14)

TABLE 1.2 Projected new cases and age-standardized incidence rates (ASIR) for cancers, by sex, Canada,* 2021

	New cases (2021 estimates)			Cases per 100,000		
	Total†	Males	Females	Both sexes	Males	Females
All cancers‡	229,200	118,200	110,900	515.2	556.3	484.9
Lung and bronchus	29,600	14,800	14,800	59.5	62.0	57.9
Breast	28,000	260	27,700	66.5	1.2	126.8
Colorectal	24,800	13,700	11,100	54.9	64.1	46.6
Prostate	24,000	24,000	—	—	117.9	—
Bladder	12,500	9,500	3,000	25.0	41.4	11.3
Non-Hodgkin lymphoma	11,100	6,200	5,000	25.7	30.3	21.8
Melanoma	8,700	4,700	4,000	22.9	26.1	20.7
Uterus (body, NOS)	8,000	—	8,000	—	—	37.2
Kidney and renal pelvis	7,800	5,200	2,600	17.6	24.5	11.3
Head and neck	7,400	5,400	2,000	16.5	25.1	8.8
Pancreas	6,700	3,700	3,000	14.1	16.5	12.0
Leukemia	6,700	4,000	2,700	15.7	20.0	11.9
Thyroid	6,700	1,800	4,900	17.3	9.2	25.2
Stomach	4,000	2,600	1,400	8.7	12.3	5.7
Multiple myeloma	3,800	2,300	1,500	8.4	10.9	6.2
Liver	3,300	2,600	800	7.1	11.5	3.1
Brain/CNS	3,100	1,800	1,350	7.2	8.6	5.8
Ovary	3,000	—	3,000	—	—	13.5
Esophagus	2,400	1,900	560	5.6	9.2	2.4
Cervix	1,450	—	1,450	—	—	7.5
Testis	1,200	1,200	—	—	6.5	—
Hodgkin lymphoma	1,050	600	460	2.7	3.0	2.4
All other cancers	23,800	12,200	11,600	50.8	56.0	46.9

— Not applicable; CNS=central nervous system; NOS=not otherwise specified

* Quebec is included in the cases because of their importance in determining the national total projected number. Quebec is excluded from the rates because a different projection method was used for this province than for other regions.

† Column totals may not sum to row totals due to rounding. See *Rounding for reporting* in *Appendix II* for more information on rounding procedures.

‡ "All cancers" includes *in situ* bladder cancer and excludes non-melanoma skin cancer (neoplasms, NOS; epithelial neoplasms, NOS; and basal and squamous).

Note: Rates are age-standardized to the 2011 Canadian standard population. The complete definition of the specific cancers included here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada

Data source: Canadian Cancer Registry database at Statistics Canada

Table 1: "Table 1.2: Projected new cases and age-standardized incidence rates (ASIR) for cancer, by sex, Canada, 2021*" (25)

TABLE 1.4 Projected age-standardized incidence rates (ASIR) for selected cancers, by sex and province, Canada (excluding Quebec*), 2021

	Cases per 100,000										
	CA†	BC	AB	SK	MB	ON	QC*	NB	NS	PE	NL
Males											
All cancers‡	556.3	501.8	519.4	517.7	509.4	587.6		560.5	598.9	559.2	580.1
Prostate	117.9	115.7	116.7	108.8	101.7	120.7		116.4	122.1	127.8	105.2
Lung and bronchus	62.0	55.2	62.9	63.6	61.2	59.9		90.6	84.0	68.4	77.9
Colorectal	64.1	61.1	59.6	82.9	64.3	61.5		66.7	76.5	84.9	105.0
Bladder	41.4	41.7	41.8	39.0	36.1	41.5		43.7	44.1	39.4	39.4
Non-Hodgkin lymphoma	30.3	23.2	25.9	22.1	25.7	35.5		27.3	29.3	23.8	31.1
Head and neck	25.1	24.2	20.9	20.4	23.1	27.1		23.0	23.6	29.9	27.6
Kidney and renal pelvis	24.5	20.8	22.8	24.5	25.4	25.1		26.3	31.3	22.7	35.0
Melanoma	26.1	22.1	21.7	17.4	28.4	28.5		22.3	37.5	42.8	24.3
Leukemia	20.0	16.9	18.9	23.1	16.7	22.2		22.2	18.1	15.8	11.5
Pancreas	16.5	15.4	15.6	16.1	15.4	17.5		17.3	16.1	16.7	11.0
Stomach	12.3	9.6	9.7	12.0	12.7	14.0		13.3	9.1	12.9	16.0
Liver	11.5	13.6	11.2	9.2	8.9	11.8		6.0	10.0	8.4	6.1
Multiple myeloma	10.9	8.1	9.6	9.7	9.1	13.0		8.8	9.6	10.7	8.3
Esophagus	9.2	9.7	9.1	8.2	8.6	8.9		8.2	12.6	9.9	11.1
Brain/CNS	8.6	8.7	8.2	7.9	7.4	8.9		8.5	9.5	9.7	9.6
Thyroid	9.2	5.0	8.9	5.6	8.2	11.4		8.3	7.4	5.0	14.3
Testis	6.5	6.7	6.5	5.8	6.6	6.7		7.1	6.8	4.4	4.8
Hodgkin lymphoma	3.0	2.7	3.0	2.6	2.8	3.1		3.4	3.0	3.2	2.5
Breast	1.2	1.1	1.0	1.2	1.0	1.3		1.4	1.7	—	1.4
Females											
All cancers‡	484.9	421.5	459.6	456.6	467.7	517.2		468.3	493.1	448.9	542.9
Breast	126.8	116.4	131.5	119.7	113.9	131.3		119.2	124.4	114.0	136.6
Lung and bronchus	57.9	54.3	58.1	66.6	56.3	56.2		68.0	74.9	69.8	68.3
Colorectal	46.6	46.7	44.6	48.2	46.2	45.0		46.5	48.8	53.2	80.3
Uterus (body, NOS)	37.2	29.8	34.0	34.9	53.3	40.2		33.0	34.3	30.0	41.9
Non-Hodgkin lymphoma	21.8	16.6	17.1	18.7	18.8	25.7		20.5	18.9	16.6	22.8
Thyroid	25.2	12.8	19.4	13.1	21.5	33.4		19.5	18.3	8.9	32.0
Melanoma	20.7	17.3	18.4	23.7	19.3	21.8		22.0	29.1	35.3	18.3
Bladder	11.3	9.8	10.1	10.6	10.1	12.2		11.8	12.4	11.6	13.8
Pancreas	12.0	12.0	12.4	11.7	13.2	11.9		12.3	12.0	11.3	9.9
Ovary	13.5	11.8	10.9	12.5	11.8	15.6		9.9	11.0	12.5	13.6
Leukemia	11.9	10.3	12.5	13.2	9.6	12.6		16.3	10.4	9.3	8.9
Kidney and renal pelvis	11.3	9.3	11.7	15.1	11.8	10.7		14.9	17.8	12.2	16.1
Head and neck	8.8	7.7	7.2	7.6	9.5	9.7		8.0	8.8	10.4	7.8
Multiple myeloma	6.2	5.0	5.4	5.5	5.1	7.2		5.8	5.3	6.5	5.8
Cervix	7.5	6.5	8.4	8.2	7.2	7.6		7.5	5.9	8.9	10.4
Stomach	5.7	4.1	4.2	4.5	5.0	6.9		5.5	4.5	4.8	8.1
Brain/CNS	5.8	5.7	5.4	5.6	5.2	6.0		5.9	6.2	4.6	6.4
Liver	3.1	3.7	2.8	2.2	2.9	3.4		1.6	1.9	2.8	2.2
Esophagus	2.4	2.8	2.3	2.0	2.1	2.4		1.6	3.5	2.6	2.1
Hodgkin lymphoma	2.4	2.0	2.0	2.1	2.3	2.7		2.5	2.5	—	2.5

— Projected incidence rate based on fewer than 3 cases; CNS=central nervous system; NOS=not otherwise specified

* Quebec is excluded because a different projection method was used for Quebec than the other regions, meaning the estimates are not comparable. For further details, see _Appendix II: Data source and methods_.

† Canada totals include provincial and territorial estimates, except Quebec. Territories are not listed due to small numbers.

‡ "All cancers" includes _in situ_ bladder and excludes non-melanoma skin cancer (neoplasms, NOS; epithelial neoplasms, NOS; and basal and squamous).

Note: Rates are age-standardized to the 2011 Canadian standard population. The complete definition of the specific cancers included here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada
Data source: Canadian Cancer Registry database at Statistics Canada

Table 2: "Table 1.4: Projected age-standardized incidence rates (ASIR) for selected cancers, by sex and province, Canada (excluding Quebec*), 2021" (28)

Mortality: How many people die from cancer in Canada?

This section will outline cancer mortality statistics in Canada by sex, age, geography, and year. This measure, the CCS notes, provides the ideal measure of progress in cancer control (33).

General:

- It is estimated that 84,600 Canadians died from cancer in 2021 (33).

- 96% of cancer deaths in Canada are expected to occur in those older than 50 years of age (33).

    - 78% of these occur in those aged 65 years and older and 46% occur in those between the ages of 50 to 74 years (36).

- Generally, cancer mortality rates are lower in Ontario and the western provinces relative to Quebec and the eastern provinces (33).

- While mortality rates for all cancers peaked in 1988 and have decreased since, the number of deaths increases each year due to the aging Canadian population (33).

Melanoma Specific:

- Melanoma counted for 3% of deaths between Canadians aged 15-49 in the years between 2015 and 2019 (37).

- In the years between 1984 and 2019, the annual percent change in age-standardized melanoma mortality rates was -2.6% per year for males and -4.9% for females (40).

- Mortality rates across both sexes and all cancers have decreased by -1.9% per year since 2015 (41).

    - In males, this is partially due to a decrease in melanoma mortality (-2.6% annually) (41).

    - In females, the decrease in mortality rates is partially due to a decrease in melanoma mortality (-4.9% annually) (41).

- In 2019, the lifetime probability of dying from cancer was 0.3 (1 in 292), 0.5 in males (1 in 211) and 0.2 in females (1 in 479) (48).
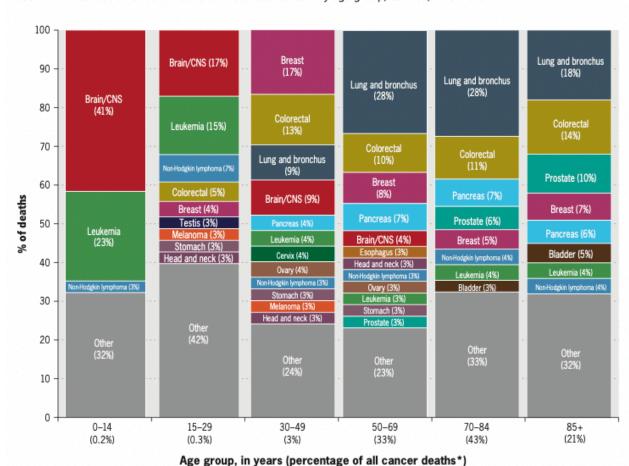
FIGURE 2.4 Distribution of cancer deaths for selected cancers by age group, Canada, 2015–2019

CNS=central nervous system; NOS=not otherwise specified

* The relative percentage is calculated based on the total number of cancer deaths over five years (2015–2019) for each age group.

Note: The complete definition of the specific cancers included here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada

Data source: Canadian Vital Statistics Death database at Statistics Canada

Figure 2: "Figure 2.4: Distribution of cancer deaths for selected cancers by age group, Canada, 2015-2019" (37)
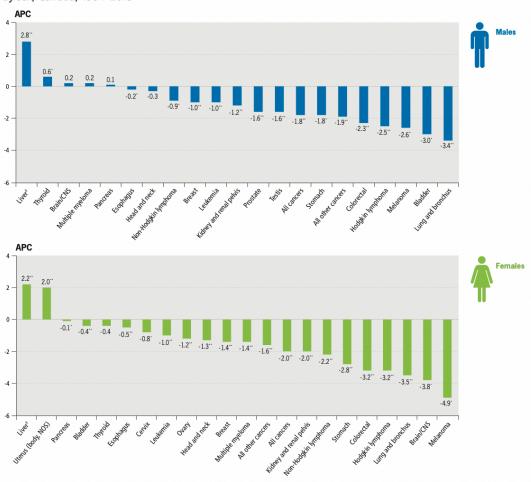
FIGURE 2.7 Most recent annual percent change (APC)† in age-standardized mortality rates (ASMR) for selected cancers, by sex, Canada, 1984–2019

CNS=central nervous system; NOS=not otherwise specified

* APC differs significantly from 0, p<0.05

** APC differs significantly from 0, p<0.001

† The APC was calculated using the Joinpoint Regression Program and rates age-standardized to the 2011 Canadian standard population. If one or more significant changes in the trend of rates was detected, the APC reflects the trend from the most recent significant change (reference year) to 2019. Otherwise, the APC reflects the trend in rates over the entire period (1984–2019). For further details, see *Appendix II: Data sources and methods*.

‡ Liver cancer mortality was underestimated because deaths from liver cancer, unspecified (ICD-10 code C22.9), were excluded. For further details, see *Appendix II: Data sources and methods*.

Note: The reference year for each cancer is in Table 2.7. The range of scales differs between the figures. The complete definition of the specific cancers listed here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada

Data source: Canadian Vital Statistics Death database at Statistics Canada

Figure 3: "Figure 2.7: Most recent annual percent change (APC) in age-standardized mortality rates (AMSR) for selected cancers, by sex, Canada, 1984-2019" (40)

TABLE 2.1 Lifetime probability of dying from cancer, Canada (excluding Quebec), 2019

| | Lifetime probability of dying from cancer | | | | | |
| | % | | | One in: | | |
	Both sexes	**Males**	**Females**	**Both sexes**	**Males**	**Females**
All cancers	**23.4**	**25.6**	**21.5**	**4.3**	**3.9**	**4.7**
Lung and bronchus	5.2	5.4	5.0	19	18	20
Colorectal	2.7	3.0	2.5	37	34	40
Pancreas	1.5	1.5	1.5	66	65	68
Breast	1.5	0.0	2.9	66	3,344	34
Prostate	—	3.5	—	—	29	—
Leukemia	0.8	1.0	0.7	118	102	140
Non-Hodgkin lymphoma	0.9	1.0	0.7	115	97	140
Bladder	0.8	1.1	0.4	131	90	225
Brain/CNS	0.6	0.7	0.4	181	149	227
Esophagus	0.6	1.0	0.3	156	101	329
Head and neck	0.5	0.7	0.3	194	133	337
Stomach	0.6	0.7	0.4	178	140	229
Kidney and renal pelvis	0.5	0.7	0.4	190	145	273
Ovary	—	—	1.0	—	—	103
Multiple myeloma	0.5	0.6	0.4	213	181	263
Liver*	0.4	0.6	0.2	271	174	602
Melanoma	0.3	0.5	0.2	292	211	479
Uterus (body, NOS)	—	—	0.7	—	—	137
Cervix	—	—	0.2	—	—	486
Thyroid	0.1	0.1	0.1	1,258	1,580	995
Hodgkin lymphoma	0.0	0.0	0.0	2,825	2,500	7,463
Testis	—	0.0	—	—	6,667	—

— Not applicable; CNS=central nervous system; NOS=not otherwise specified; 0.0 indicates that value is less than 0.05

* Liver cancer mortality was underestimated because deaths from liver cancer, unspecified (ICD-10 code C22.9), were excluded. For further details, see *Appendix II: Data sources and methods*.

Note: The probability of dying from cancer is calculated based on age-, sex- and cause-specific mortality rates for Canada excluding Quebec in 2019. For further details, see *Appendix II: Data sources and methods*. The complete definition of the specific cancers included here can be found in Table A1.

Analysis by: Centre for Surveillance and Applied Research, Public Health Agency of Canada
Data source: Canadian Vital Statistics Death Database at Statistics Canada

Table 3: "Table 2.1: Lifetime probability of dying from cancer, Canada (excluding Quebec), 2019" (48)

TABLE 2.5 Projected deaths for selected cancers by sex and province, Canada,* 2021

	CA†	BC	AB	SK	MB	ON	QC	NB	NS	PE	NL
Males											
All cancers	44,600	6,000	3,800	1,300	1,550	16,400	11,600	1,200	1,600	230	860
Lung and bronchus	10,800	1,300	870	300	330	3,600	3,400	330	380	60	230
Colorectal	5,300	720	450	160	190	1,800	1,400	140	210	30	140
Prostate	4,500	640	440	170	180	1,700	980	100	160	20	85
Pancreas	2,900	410	260	80	95	1,150	710	75	90	10	45
Bladder	1,900	290	120	55	65	700	530	50	65	10	30
Leukemia	1,800	240	150	65	70	660	480	50	60	5	25
Esophagus	1,750	290	170	60	60	670	360	50	70	10	30
Non-Hodgkin lymphoma	1,650	230	140	45	50	650	420	45	55	10	30
Head and neck	1,500	200	130	35	40	600	400	30	50	5	25
Brain/CNS	1,400	200	140	30	35	530	370	30	45	5	25
Liver‡	1,300	240	120	20	35	520	280	25	40	5	10
Kidney and renal pelvis	1,250	170	100	45	60	440	330	45	55	10	30
Stomach	1,250	140	95	25	35	500	330	30	35	5	35
Multiple myeloma	930	140	80	25	35	350	240	20	25	5	15
Melanoma	790	100	60	20	20	380	150	15	35	5	10
Thyroid	110	20	10	5	5	50	25	—	5	—	5
Hodgkin lymphoma	65	10	10	—	5	30	20	—	—	—	—
Breast	55	10	5	—	5	25	15	5	5	—	—
Testis	35	5	5	—	—	15	10	—	—	—	—
Females											
All cancers	40,000	5,300	3,500	1,150	1,350	14,700	10,600	980	1,350	190	730
Lung and bronchus	10,300	1,400	880	300	350	3,400	3,000	270	380	60	170
Breast	5,400	680	510	170	180	2,100	1,400	120	170	20	90
Colorectal	4,300	590	350	140	160	1,500	1,200	110	170	25	110
Pancreas	2,700	390	250	70	90	1,050	690	65	75	10	40
Ovary	1,950	320	160	60	70	720	450	45	65	10	35
Uterus (body, NOS)	1,400	180	120	35	50	570	340	30	50	5	25
Leukemia	1,300	180	100	35	45	490	340	35	40	5	20
Non-Hodgkin lymphoma	1,250	170	100	35	45	490	310	35	45	5	25
Brain/CNS	1,050	140	95	25	30	390	280	20	30	5	20
Stomach	740	80	60	20	25	300	200	20	15	5	15
Bladder	720	100	55	20	20	270	200	15	20	5	10
Multiple myeloma	690	95	55	20	25	250	190	20	25	5	15
Kidney and renal pelvis	660	75	50	25	30	240	180	20	30	5	20
Head and neck	560	85	45	15	15	210	160	10	15	5	5
Esophagus	530	95	45	15	20	210	110	15	20	5	5
Melanoma	450	50	40	10	10	200	100	15	15	5	5
Cervix	380	50	40	15	15	150	80	10	10	5	10
Liver‡	330	60	35	5	10	140	80	5	5	—	5
Thyroid	130	20	15	5	5	50	30	5	5	—	5
Hodgkin lymphoma	40	5	5	—	—	15	15	—	—	—	—

— Fewer than 3 deaths; CNS=central nervous system; NOS=not otherwise specified

* Canada totals include provincial and territorial estimates. Territories are not listed due to small numbers.

† Canadian counts may not sum to row totals due to rounding. See *Rounding for reporting* in *Appendix II* for more information on rounding procedures.

‡ Liver cancer mortality was underestimated because deaths from liver cancer, unspecified (ICD-10 code C22.9), were excluded. For further details, see *Appendix II: Data sources and methods*.

Note: The complete definition of the specific cancers listed here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada
Data source: Canadian Vital Statistics Death Database at Statistics Canada

Table 4: "Table 2.5: Projected deaths for selected cancers by sex and province, Canada,* 2021" (52)

Survival: What is the probability of surviving cancer in Canada?

This section will outline statistics regarding net cancer survival in Canada by sex, age, geography, and over time (56).

General:

- Net cancer survival is generally higher among females (66%) than males (62%) (56).

- Net survival generally decreases with advancing age (56).

- For people diagnosed with any cancer between 15-99 years of age, adjusted net survival is 64% at five years and 58% at ten years (57).

- Cancer survival in Canada has improved over the past 20-25 years for most cancer types (61).

Melanoma specific:

- Five-year net survival for melanoma between 2015-2017 was 89% across both sexes (males: 86%, females: 92%) (62).

- Ten-year net survival for melanoma between 2015-2017 was 85% across both sexes (males: 82%, females: 90%) (62).

- Depending on age, the net five-year survival of Canadians diagnosed with melanoma between 2015-2017 ranges from 75-95% (63).

— Not applicable; CI=confidence interval; CNS=central nervous system; NOS=not otherwise specified

* Quebec is excluded because cases diagnosed in Quebec from 2011 onward had not been submitted to the Canadian Cancer Registry.

† Estimates for all cancers combined were calculated as a weighted average of sex–specific estimates for individual cancers. For further details, see *Appendix II: Data sources and methods*.

‡ Ten year net survival for bladder cancer does not include *in situ* cases for Ontario diagnosed prior to 2010 because they were not submitted to the Canadian Cancer Registry.

Note: Estimates associated with a standard error >0.05 and ≤0.10 are italicized. The complete definition of the specific cancers listed here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada
Data sources: Canadian Cancer Registry death linked file (1992–2017) and life tables at Statistics Canada

TABLE 3.1 Predicted five- and 10-year net survival for selected cancers by sex, ages 15–99, Canada (excluding Quebec*), 2015–2017

	5-year net survival (%) (95% CI)			10-year net survival (%) (95% CI)		
	Both sexes	**Males**	**Females**	**Both sexes**	**Males**	**Females**
All cancers†	64 (64–64)	62 (62–62)	66 (66–66)	58 (57–58)	55 (55–56)	60 (59–60)
Thyroid	97 (97–98)	95 (93–96)	98 (98–99)	97 (96–98)	93 (91–95)	99 (98–99)
Testis	—	97 (96–98)	—	—	96 (95–97)	—
Prostate	—	91 (91–92)	—	—	88 (87–88)	—
Melanoma	89 (88–90)	86 (85–88)	92 (91–93)	85 (84–87)	82 (79–84)	90 (87–92)
Breast	89 (88–89)	76 (70–81)	89 (88–89)	82 (81–83)	60 (50–69)	82 (82–83)
Hodgkin lymphoma	85 (83–87)	84 (81–86)	86 (84–89)	81 (79–83)	80 (76–82)	82 (79–85)
Uterus (body, NOS)	—	—	82 (82–83)	—	—	80 (79–81)
Bladder‡	77 (76–77)	77 (76–78)	75 (73–77)	66 (64–68)	65 (63–67)	69 (66–72)
Cervix	—	—	74 (72–75)	—	—	68 (67–70)
Kidney and renal pelvis	73 (72–74)	73 (71–74)	73 (71–74)	64 (63–66)	64 (62–66)	64 (62–66)
Non–Hodgkin lymphoma	69 (69–70)	68 (67–69)	71 (70–73)	61 (60–62)	59 (57–60)	64 (62–65)
Colorectal	67 (66–67)	66 (66–67)	67 (66–68)	61 (60–61)	60 (59–61)	61 (60–62)
Rectum	67 (67–68)	67 (66–68)	69 (67–70)	60 (59–62)	59 (57–60)	64 (61–66)
Colon	66 (66–67)	66 (65–67)	66 (65–67)	61 (60–62)	62 (60–63)	60 (59–62)
Head and neck	64 (63–65)	64 (63–65)	65 (63–67)	56 (55–57)	56 (54–57)	57 (54–60)
Leukemia	61 (60–62)	60 (59–62)	61 (60–63)	52 (50–53)	51 (49–53)	53 (50–56)
Chronic lymphocytic leukemia	86 (85–88)	84 (82–86)	89 (86–91)	73 (70–76)	70 (67–74)	77 (72–82)
Chronic myeloid leukemia	58 (56–61)	55 (52–59)	63 (59–67)	49 (46–53)	46 (42–51)	54 (49–59)
Acute lymphocytic leukemia	47 (42–51)	51 (44–57)	42 (35–48)	41 (36–46)	44 (38–51)	37 (29–45)
Acute myeloid leukemia	23 (22–25)	22 (19–24)	26 (23–29)	20 (19–22)	19 (17–21)	23 (20–25)
Ovary	—	—	44 (43–45)	—	—	35 (33–36)
Multiple myeloma	50 (49–52)	50 (48–52)	51 (48–53)	30 (28–32)	28 (26–31)	32 (29–35)
Stomach	29 (28–30)	27 (26–29)	32 (30–34)	25 (24–27)	23 (21–25)	29 (26–32)
Lung and bronchus	22 (22–23)	19 (18–19)	26 (25–26)	15 (15–16)	13 (12–13)	18 (17–19)
Liver	22 (21–23)	22 (21–23)	22 (20–25)	16 (15–18)	16 (14–18)	18 (15–21)
Brain/CNS	22 (21–23)	21 (20–22)	23 (21–24)	17 (16–18)	16 (15–17)	18 (16–20)
CNS	61 (54–67)	61 (51–70)	59 (49–67)	51 (44–58)	50 (40–60)	51 (41–60)
Brain	20 (19–21)	19 (18–21)	20 (19–22)	15 (14–16)	14 (13–16)	16 (14–17)
Esophagus	16 (15–18)	16 (15–18)	17 (15–20)	13 (11–14)	12 (11–14)	14 (12–17)
Pancreas	10 (9–10)	10 (9–11)	9 (9–10)	8 (7– 9)	8 (7– 9)	8 (7– 9)

Table 5: "Table 3.1: Predicted five- and 10-year net survival for selected cancers by sex, ages 15-99, Canada (excluding Quebec *), 2015-2017" (62)

TABLE 3.2 Predicted five-year net survival for selected cancers by age group, Canada (excluding Quebec*), 2015–2017

Age group (years)	Net survival (%) (95% CI)					
	Prostate	**Breast (female)**	**Colorectal**	**Lung and bronchus**	**Thyroid**	**Melanoma**
15–44	94 (88–97)	88 (87–89)	74 (73–76)	43 (38–47)	100 (99–100)	95 (94–96)
45–54	96 (95–97)	91 (91–92)	73 (72–74)	29 (28–31)	99 (98–99)	94 (92–95)
55–64	97 (96–97)	91 (90–91)	71 (70–72)	26 (25–27)	98 (97–98)	91 (89–92)
65–74	95 (95–96)	91 (90–92)	70 (69–71)	24 (24–25)	95 (93–96)	90 (89–92)
75–84	85 (84–86)	85 (83–86)	62 (61–63)	19 (18–20)	92 (86–95)	83 (81–86)
85–99	52 (49–56)	73 (70–77)	50 (47–52)	11 (9–12)	57 (41–70)	75 (68–80)

Age group (years)	Net survival (%) (95% CI)				
	Uterus (body, NOS)	**Bladder**	**Kidney and renal pelvis**	**Non–Hodgkin lymphoma**	**Pancreas**
15–44	91 (88–93)	91 (87–93)	92 (90–94)	86 (84–87)	43 (37–49)
45–54	88 (87–90)	86 (84–88)	85 (84–87)	83 (82–85)	21 (18–23)
55–64	88 (87–89)	83 (82–85)	77 (76–79)	78 (77–80)	12 (10–13)
65–74	81 (79–82)	81 (79–82)	73 (71–75)	72 (70–73)	9 (8–10)
75–84	69 (67–72)	74 (72–75)	59 (57–62)	56 (55–58)	6 (5–7)
85–99	56 (49–63)	58 (54–62)	33 (27–38)	42 (38–46)	2 (1–4)

CI=confidence interval; NOS=not otherwise specified

* Quebec is excluded because cases diagnosed in Quebec from 2011 onward had not been submitted to the Canadian Cancer Registry.

Note: Estimates associated with a standard error >0.05 and ≤0.10 are italicized. The complete definition of the specific cancers listed here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada

Data sources: Canadian Cancer Registry death linked file (1992–2017) and life tables at Statistics Canada

Table 6: "Table 3.2: Predicted five-year net survival for selected cancers by age group, Canada (excluding Quebec*), 2015-2017" (63)

TABLE 3.4 Predicted five-year age-standardized net survival for selected cancers by province, ages 15–99, Canada (excluding Quebec*), 2015–2017

Province	Net survival (%) (95% CI)						
	Prostate	Breast (female)	Colorectal	Lung and bronchus	Thyroid	Melanoma	Uterus (body, NOS)
Canada*	**91 (91–92)**	**89 (88–89)**	**66 (66–67)**	**22 (22–23)**	**98 (97–98)**	**89 (88–90)**	**83 (82–83)**
British Columbia (BC)	91 (90–92)	88 (87–89)	67 (66–68)	21 (20–21)	95 (93–96)	90 (88–91)	83 (81–85)
Alberta (AB)	91 (90–92)	89 (88–90)	67 (65–68)	22 (20–23)	97 (95–98)	88 (85–90)	83 (81–85)
Saskatchewan (SK)	86 (84–88)	88 (86–89)	64 (62–67)	18 (17–20)	95 (91–97)	87 (82–91)	87 (83–91)
Manitoba (MB)	91 (89–93)	88 (86–89)	64 (61–67)	22 (20–24)	97 (93–99)	90 (84–94)	85 (82–88)
Ontario (ON)	92 (92–93)	89 (88–89)	67 (66–67)	24 (23–24)	98 (98–99)	89 (88–90)	82 (81–83)
New Brunswick (NB)	91 (88–93)	88 (86–91)	63 (60–65)	21 (20–23)	98 (93–99)	93 (87–96)	83 (78–87)
Nova Scotia (NS)	90 (88–92)	89 (86–90)	62 (60–64)	20 (18–22)	95 (91–97)	91 (86–94)	77 (73–81)
Prince Edward Island (PE)	88 (82–93)	90 (84–94)	67 (60–73)	..	91 (62–98)	82 (72–88)	79 (67–87)
Newfoundland and Labrador (NL)	91 (87–93)	89 (85–91)	68 (65–71)	23 (20–26)	97 (93–98)	87 (78–92)	88 (82–92)

Province	Net survival (%) (95% CI)			
	Bladder	Kidney and renal pelvis	Non-Hodgkin lymphoma	Pancreas
Canada*	**77 (76–77)**	**72 (72–73)**	**69 (69–70)**	**10 (9–10)**
British Columbia (BC)	75 (73–77)	69 (67–72)	69 (67–71)	7 (6– 8)
Alberta (AB)	77 (74–80)	71 (68–74)	70 (67–72)	9 (8–11)
Saskatchewan (SK)	73 (68–77)	65 (60–69)	70 (65–74)	9 (7–12)
Manitoba (MB)	72 (67–77)	66 (62–70)	69 (65–73)	11 (9–15)
Ontario (ON)	77 (76–78)	76 (75–77)	70 (69–71)	12 (11–13)
New Brunswick (NB)	75 (70–80)	71 (66–75)	70 (65–74)	..
Nova Scotia (NS)	77 (72–82)	69 (65–73)	66 (62–70)	9 (7–12)
Prince Edward Island (PE)	68 (55–78)	..	67 (52–78)	..
Newfoundland and Labrador (NL)	82 (73–88)	70 (64–75)	69 (63–75)	..

.. estimate can not be calculated as one or more of the age-specific estimates are undefined; CI=confidence interval; NOS=not otherwise specified

* Quebec is excluded because cases diagnosed in Quebec from 2011 onward have not been submitted to the Canadian Cancer Registry.

Note: Estimates were age-standardized using the Canadian Cancer Survival Standard weights. For further details, see *Appendix II: Data sources and methods*. The complete definition of the specific cancers listed here can be found in Table A1. Estimates associated with a standard error > 0.05 and ≤ 0.10 are italicized.

Analysis by: Centre for Population Health Data, Statistics Canada

Data sources: Canadian Cancer Registry death linked file (1992–2017) and life tables at Statistics Canada

Table 7: "Table 3.4: Predicted five-year age-standardized net survival for selected cancers by province, ages 15-99, Canada (excluding Quebec*), 2015-2017" (65)

TABLE 3.5 Predicted net survival for one year and for five years from diagnosis (conditional on having survived one year), for selected cancers, by sex, ages 15–99, Canada (excluding Quebec*), 2015–2017

	1-year net survival (%) (95% CI)			5-year conditional net survival (%) (95% CI)		
	Both Sexes	**Males**	**Females**	**Both sexes**	**Males**	**Females**
Thyroid	98 (98–98)	96 (96–97)	99 (98–99)	99 (99–100)	98 (97–99)	100 (99–100)
Testis	—	98 (98–99)	—	—	98 (97–99)	—
Prostate	—	97 (97–98)	—	—	94 (93–94)	—
Breast	97 (97–97)	96 (92–98)	97 (97–97)	91 (91–92)	79 (73–84)	91 (91–92)
Melanoma	97 (96–97)	96 (95–96)	98 (97–98)	92 (91–93)	90 (89–91)	94 (93–95)
Uterus (body, NOS)	—	—	93 (92–93)	—	—	89 (88–90)
Hodgkin lymphoma	91 (90–92)	90 (88–91)	93 (91–94)	93 (92–95)	93 (91–95)	93 (91–95)
Bladder	89 (89–90)	91 (90–91)	85 (84–86)	86 (85–87)	85 (84–86)	88 (87–90)
Cervix	—	—	89 (88–90)	—	—	82 (81–84)
Kidney and renal pelvis	85 (85–86)	86 (85–87)	85 (83–86)	85 (84–86)	85 (83–86)	86 (85–88)
Colorectal	84 (83–84)	84 (84–85)	83 (82–83)	80 (79–80)	79 (78–79)	81 (80–82)
Rectum	87 (87–88)	88 (87–88)	87 (86–88)	77 (76–78)	76 (75–77)	79 (78–81)
Colon	82 (81–82)	83 (82–83)	81 (81–82)	81 (80–82)	80 (79–81)	82 (81–83)
Head and neck	83 (83–84)	84 (83–85)	82 (81–84)	77 (76–78)	76 (75–78)	79 (77–81)
Non–Hodgkin lymphoma	81 (81–82)	81 (80–82)	82 (81–83)	85 (84–86)	84 (83–85)	87 (86–88)
Multiple myeloma	80 (78–81)	79 (78–81)	80 (78–81)	63 (62–65)	63 (61–66)	64 (61–66)
Ovary	—	—	76 (75–77)	—	—	57 (56–59)
Leukemia	75 (74–76)	76 (75–77)	74 (73–75)	81 (80–82)	80 (78–81)	83 (81–84)
Chronic lymphocytic leukemia	94 (94–95)	94 (93–95)	95 (93–96)	91 (90–93)	90 (87–91)	94 (91–96)
Chronic myeloid leukemia	81 (79–83)	79 (76–82)	83 (80–86)	72 (69–75)	70 (66–74)	76 (71–80)
Acute lymphocytic leukemia	67 (63–71)	69 (64–74)	64 (58–70)	70 (64–75)	73 (65–79)	65 (56–72)
Acute myeloid leukemia	46 (44–48)	45 (43–48)	46 (44–49)	51 (48–54)	48 (43–52)	56 (51–60)
Stomach	53 (52–54)	53 (51–54)	53 (51–55)	55 (53–57)	52 (50–54)	61 (57–64)
Liver	50 (48–51)	51 (49–52)	47 (44–49)	45 (42–47)	44 (41–46)	48 (43–52)
Brain/CNS	49 (48–50)	49 (47–50)	50 (47–52)	44 (42–46)	43 (40–46)	45 (42–48)
CNS	79 (73–84)	81 (73–87)	76 (67–83)	77 (70–82)	76 (65–84)	77 (67–84)
Brain	48 (46–49)	47 (46–49)	48 (46–50)	41 (39–43)	41 (38–43)	42 (39–45)
Lung and bronchus	48 (48–49)	44 (43–44)	53 (52–53)	46 (45–47)	43 (42–44)	49 (48–50)
Esophagus	45 (44–47)	46 (44–47)	43 (40–46)	37 (34–39)	36 (33–38)	40 (35–45)
Pancreas	31 (30–32)	32 (31–33)	30 (29–32)	32 (30–33)	32 (29–35)	31 (29–34)

—not applicable; CI=confidence interval; CNS=central nervous system; NOS=not otherwise specified

* Quebec is excluded because cases diagnosed in Quebec from 2011 onward have not been submitted to the Canadian Cancer Registry.

Note: The complete definition of the specific cancers listed here can be found in Table A1.

Analysis by: Centre for Population Health Data, Statistics Canada

Data sources: Canadian Cancer Registry death linked file (1992–2017) and life tables at Statistics Canada

Table 8: "Table 3.5: Predicted net survival for one year and for five years from diagnosis (conditional on having survived one year), for selected cancers, by sex, ages 15-99, Canada (excluding Quebec*), 2015-2017" (66)

Cancer in Context: The Cancer Burden in Canada

Highlights

- Cancer continues to be the leading cause of death in Canada, causing 28.2% of all deaths in 2019 (67).

- Cancer was the leading cause of premature death in Canada from 2017-2019 (68).

- Cancer outcomes in Canada, including survival, are among the best in the world (69).

- Unfortunately, cancer outcomes in Canada continue to be contingent on race, ethnicity, geography, and socio-economic status (69-71).

- While it is difficult to attain exact metrics of the cost of cancer, the costs of cancer for both individuals and the Canadian medical system continues to rise (69).

- Progress in knowledge surrounding the causes of cancer and innovations in cancer care over time are reflected in decreasing incidence rates and lower mortality rates when adjusted for age (70).

- Due to the aging population in Canada, cancer incidence rates and mortality rates are rising in general (71-72).

Glossary of Abbreviations

CSS: Canadian Cancer Society

SYSF: Save Your Skin Foundation

ASIR: Age-standardized incidence rates

The number of new incidences of cancer per every 100,000 people. Offers comparisons over time across populations and can reflect changes in screening and risk factors (8). Demonstrates where progress is (or is not) being made in cancer prevention (8).

ASMR: Age-standardized morality rates

Demonstrates where progress is being made in early detection, diagnosis, and treatment of cancers, and indicates which areas need improvement (8). Can also facilitate changes in incidence rates across populations and over time (8).

APC: Annual percentage change

Demonstrates trends in age-standardized incidence and mortality rates over time (8).

Works Cited

Canadian Cancer Statistics Advisory Committee in collaboration with the Canadian Cancer Society, Statistics Canada and the Public Health Agency of Canada. *Canadian Cancer Statistics 2021*. Toronto, ON: Canadian Cancer Society; 2021. Available at: https://cdn.cancer.ca/-/media/files/research/cancer-statistics/2021-statistics/2021-pdf-en-final.pdf (09 March 2022).