

# 2019 Distillation of Melanoma Statistics

From the Canadian Cancer Society Documents:

Canadian Cancer Statistics 2019

Canadian Cancer Statistics: A 2018 Special Report on Cancer Incidence by Stage.

Canadian Cancer Statistics 2017: Special Topic: Pancreatic Cancer.

Canadian Cancer Statistics 2016: Special Topic: HPV-Associated Cancers.

Save Your Skin Foundation, September 2019.

### Introduction

In the 2019 cancer statistics report, "Canadian Cancer Statistics," the Canadian Cancer Society (CCS) provided a statistical overview of the incidence, mortality, and net survival rates of cancer in Canada. Here, Save Your Skin Foundation will provide an overview of these statistics as they are relevant to melanoma, and recap some of the statistics covered in past reports. All of the statistics included in this report are relevant exclusively to the Canadian population.

It is important to note that while non-melanoma skin cancers (NMSC) are the most commonly diagnosed cancer in Canada, they are not included in the CCS statistics report. Given the variety of ways that non-melanoma skin cancers are diagnosed and treated, in both general practitioner and dermatologist offices, this data is generally not reported to governing bodies.

Comparing Melanoma Incidence Statistics by Sex, from the Canadian Cancer Society 2017 and 2019 Reports

- In 2017, there were estimated to be 206, 300 new cases of cancer. 103, 100 of these were male; 103, 200 were female (CCS 2017, 21, fig. 1.2, below).
  - Of the male cases, 3.9% were estimated to be melanoma (CCS 2017, 21, fig. 1.2, below).
  - Of the female cases, 3.2% were estimated to be melanoma (CCS 2017, 21, fig. 1.2, below).
- In 2019, there are projected to be 220, 400 cases of cancer, 113, 000 male and 107, 400 female (CCS 2019, fig. 1.2).
  - Of the male cases, 3.8% are estimated to be melanoma (CCS 2019, fig. 1.2, below).
  - Of the female cases, 3.3% are estimated to be melanoma (CCS 2019, fig. 1.2, below).
- Melanoma is one of the most commonly diagnosed (7%) cancers among youth and young adults (aged 15-29) and Canadians 30-49 (CCS 2019, pp. 14)
- In a Canadian Cancer Society study spanning cancer incidence trends from 1984-2015, melanoma increased by 2.2% in males and 2.0% in females, and was the third greatest increase in any one cancer indication during that time period (CCS 2019, pp. 17).

FIGURE 1.2 Percent distribution of projected new cancer cases, by sex, Canada, 2017

Males 103,100 New cases	)	Females 103,200 New cases	0
Prostate	20.7%	Breast	25.5%
Colorectal	14.5%	Lung and bronchus	13.8%
Lung and bronchus	14.0%	Colorectal	11.5%
Bladder	6.5%	Uterus (body, NOS)	7.1%
Non-Hodgkin lymphoma	4.5%	Thyroid	5.2%
Kidney and renal pelvis	4.1%	Non-Hodgkin lymphoma	3.6%
Melanoma	3.9%	Melanoma	3.2%
Leukemia	3.5%	Ovary	2.7%
Oral	3.1%	Pancreas	2.6%
Pancreas	2.7%	Leukemia	2.5%
Stomach	2.1%	Kidney and renal pelvis	2.3%
Liver	1.8%	Bladder	2.1%
Esophagus	1.7%	Cervix	1.5%
Brain/CNS	1.6%	Oral	1.4%
Multiple myeloma	1.6%	Brain/CNS	1.3%
Thyroid	1.6%	Stomach	1.3%
Testis	1.1%	: Multiple myeloma	1.2%
Larynx	0.9%	Liver	0.6%
Hodgkin lymphoma	0.6%	Esophagus	0.5%
Breast	0.2%	Hodgkin lymphoma	0.4%
All other cancers	9.3%	Larynx	0.2%
		All other cancers	9.6%

CNS=central nervous system, NOS=not otherwise specified

**Note:** The complete definition of the specific cancers listed here can be found in Table A2.

Analysis by: Surveillance and Epidemiology Division, CCDP, Public Health Agency of Canada Data sources: Canadian Cancer Registry and National Cancer Incidence Reporting System databases at Statistics Canada

Figure 1: CCS 2017, fig. 1.2, pp. 21, "Percent Distribution of Projected New Cancer Cases, by Sex, Canada, 2017"

FIGURE 1.2 Percent distribution of projected new cancer cases, by sex, Canada, 2019

Males 113,00 New cases	00	Females 107,40 New cases	
Prostate	20.3%	Breast	25.0%
Lung and bronchus	13.2%	Lung and bronchus	13.5%
Colorectal	12.9%	Colorectal	10.9%
Bladder	8.1%	Uterus (body, NOS)	6.7%
Non-Hodgkin lymphor	ma 5.0%	Thyroid	5.7%
Kidney and renal pelv	is 4.2%	Non-Hodgkin lymphon	na 4.1%
Melanoma	3.8%	Melanoma	3.3%
Leukemia	3.5%	Ovary	2.8%
Oral	3.3%	Pancreas	2.6%
Pancreas	2.7%	Leukemia	2.5%
Stomach	2.3%	Bladder	2.5%
Liver	1.9%	Kidney and renal pelvi	is 2.3%
Thyroid	1.9%	Oral	1.5%
Multiple myeloma	1.7%	Stomach	1.4%
Esophagus	1.6%	Multiple myeloma	1.3%
Brain/CNS	1.5%	Cervix	1.3%
Testis	1.0%	Brain/CNS	1.2%
Larynx	0.9%	Liver	0.7%
Hodgkin lymphoma	0.5%	Esophagus	0.5%
Breast	0.2%	Hodgkin lymphoma	0.4%
All other cancers	9.7%	Larynx	0.2%
		All other cancers	9.6%

CNS=central nervous system, NOS=not otherwise specified

Note: The complete definition of the specific cancers included here can be found in  $\underline{\mathsf{Table}}\ \mathsf{A1}.$ 

Analysis by: Centre for Surveillance and Applied Research, Public Health Agency of Canada

Data sources: Canadian Cancer Registry and National Cancer Incidence Reporting System databases at Statistics Canada

Figure 2: CCS 2019, fig.1.2, pp. 12, "Percent Distribution of Projected New Cancer Cases, by Sex, Canada, 2019"

TABLE 1.5 Projected new cases for selected cancers, by sex and province, Canada,\* 2019

	CAT	BC	AB	SK	MB	ON	QC‡	NB	NS	PE	NL
Males											
All cancers <sup>5</sup>	113,000	13,900	10,800	3,100	3,500	44,400	28,500	2,700	3,400	510	1,950
Prostate	22,900	3,100	2,800	710	730	9,600	4,300	510	610	90	410
Lung and bronchus	14,900	1,550	1,150	390	470	5,100	4,800	430	520	85	270
Colorectal	14,600	2,000	1,400	520	510	4,900	3,800	370	530	80	380
Bladder	9,100	1,100	770	230	220	3,300	2,800	220	260	35	130
Non-Hodgkin lymphoma	5,600	620	500	140	170	2,500	1,300	130	170	20	90
Kidney and renal pelvis	4,700	540	450	140	160	1,700	1,250	140	180	20	110
Melanoma	4,300	610	380	85	130	2,100	590	100	190	30	65
Leukemia	4,000	510	430	120	130	1,650	890	120	100	10	45
Oral	3,700	470	350	85	120	1,450	900	70	110	25	60
Pancreas	3,000	390	270	90	100	1,050	840	80	90	15	35
Stomach	2,600	280	190	75	95	1,150	680	60	60	10	60
Liver	2,200	350	180	50	60	860	590	30	55	10	25
Thyroid	2,100	150	180	35	55	1,100	490	40	55	5	40
Multiple myeloma	1,950	210	180	55	55	830	500	40	50	10	20
Esophagus	1,800	250	220	40	50	660	390	40	80	10	30
Brain/CNS	1,650	220	170	45	55	620	440	35	50	5	30
Testis	1,150	160	160	30	40	450	240	20	20	5	5
Larynx	980	95	75	25	25	350	330	25	30	5	20
Hodgkin lymphoma	560	70	65	15	20	210	150	10	15	-	5
Breast	230	30	15	5	5	95	60	5	10	_	5
Females											
All cancers <sup>§</sup>	107,400	13,000	9,800	2,800	3,400	43,300	27,100	2,400	3,300	460	1,800
Breast	26,900	3,500	2,700	730	850	10,600	6,600	580	800	120	440
Lung and bronchus	14,500	1,700	1,250	420	480	5,300	4,100	390	530	70	240
Colorectal	11,700	1,600	1,100	370	350	4,200	3,000	280	430	65	270
Uterus (body, NOS)	7,200	900	720	190	300	3,000	1,600	160	210	30	110
Thyroid	6,100	370	480	80	140	3,300	1,400	100	130	5	110
Non-Hodgkin lymphoma	4,400	520	380	110	130	1,900	1,000	100	120	15	75
Melanoma	3,500	530	340	85	110	1,650	480	95	160	25	55
Ovary	3,000	430	230	90	90	1,250	740	55	80	10	45
Pancreas	2,800	360	270	75	100	1,050	770	70	85	10	45
Bladder	2,700	300	210	70	75	1,000	890	60	85	10	50
Leukemia	2,700	350	280	85	80	1,100	610	85	65	10	20
Kidney and renal pelvis	2,500	230	230	85	90	980	640	75	110	10	65
Oral	1,600	200	140	40	60	690	380	35	45	5	20
Stomach	1,450	140	100	30	35	640	390	30	25	5	30
Multiple myeloma	1,400	160	110	35	40	610	340	35	35	5	20
Cervix	1,350	190	170	40	45	530	280	20	30	5	30
Brain/CNS	1,300	160	130	40	45	490	360	30	35	5	25
Liver	780	110	70	15	20	310	220	5	10	_	10
Esophagus	540	90	50	15	15	210	110	10	20	_	5
Hodgkin lymphoma	440	55	40	15	15	190	100	5	10	_	5
Larynx	190	15	10	5	5	60	70	5	10		5

<sup>—</sup> Fewer than 3 cases; CNS=central nervous system; NOS=not otherwise specified

**Analysis by:** Centre for Surveillance and Applied Research, Public Health Agency of Canada

**Data sources:** Canadian Cancer Registry and National Cancer Incidence Reporting System databases at Statistics Canada

Figure 4: CCS 2019, tab. 1.5, pp. 27, "Projected New Cases for Selected Cancers, by Sex and Province, Canada,\* 2019"

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

<sup>†</sup> Canadian counts may not sum to row totals due to rounding.

<sup>‡</sup> Quebec projections were calculated differently from the other provinces and territories because actual data were only available to 2010 for Quebec, whereas they were available to 2015 for the other regions. See Appendix II: Data source and methods for additional details.

<sup>§ &</sup>quot;All cancers" includes *in situ* bladder cancer and excludes non-melanoma skin cancer (neoplasms, NOS; epithelial neoplasms, NOS; and basal and squamous). The complete definition of the specific cancers listed here can be found in <u>Table A1</u>.

Table 1.5, above, breaks down projected new cancer cases by province. It is worth noting that Québec was calculated differently from other provinces as the data set from Quebec is available to 2010, whereas the other provinces recorded relevant data until 2015. Given these collection dates, it is worth noting for all provinces that these totals are estimated from incidence rates since 2015.

For male melanoma cases, Ontario ranks the most highly in terms of individual cases. That being said, in terms of population, Ontario's total melanoma cases (3, 750 for both males and females), equates to approximately 0.003% of Ontario's population, as the most densely populated Canadian province (StatCan). In the order of highest incidence, Ontario is followed by British Columbia (1, 140 total cases) and Québec (970 total cases). The provinces with the fewest incidences of melanoma are Prince Edward Island (55 total cases or 0.004% of provincial population) and Newfoundland and Labrador (120 total cases, or 0.002% of provincial population) (StatCan).

## Mortality of Melanoma

The following statistics discuss the mortality rates of melanoma in Canada. Overall these statistics demonstrate that mortality due to melanoma in Canada is increasing, especially in males; in the period between 1984-2015, melanoma mortality increased by 1.2% in men.

Table 2.2 (below) estimates the age-standardized mortality rates of cancers by sex, in Canada in 2019. The table suggests that In 2019, there will be a total of 1, 300 Canadian deaths due to melanoma in 2019; 840 of these are male, and 450 are female. This equates to 3.1/100, 000 total deaths; 4.4/100, 000 male, and 2.0/100, 000 female. In raw numbers, this equates to a 16.7% relationship between mortality and new incidences of melanoma in 2019. By comparing these figures to the 2017 statistics, which are the most recently published by the Canadian Cancer Society, it is apparent that the number of deaths due to melanoma has slightly increased over the past two years, by 50 in raw numbers, or 4%. This increase seems to be disproportionately attributed to the male population; while the death toll for female melanoma patients was 450 in raw numbers in both 2017 and 2019, the number of male deaths increased by the full 50.

TABLE 2.2 Projected deaths and age-standardized mortality rates (ASMR)\* for cancers, by sex, Canada, 2019

	Deaths	(2019 estimate	s)	Deaths per 100,000			
	Total <sup>†</sup>	Males	Females	Both sexes	Males	Females	
All cancers	82,100	43,300	38,700	190.3	222.8	166.0	
Lung and bronchus	21,000	10,900	10,100	48.1	54.7	43.1	
Colorectal	9,500	5,200	4,400	22.1	26.8	18.2	
Pancreas	5,200	2,700	2,500	12.0	13.5	10.7	
Breast	5,100	55	5,000	12.2	0.3	22.4	
Prostate	4,100	4,100	_	_	22.2	_	
Leukemia	3,000	1,750	1,250	6.9	9.1	5.2	
Non-Hodgkin lymphoma	2,800	1,600	1,250	6.6	8.3	5.2	
Bladder	2,500	1,800	700	5.7	9.7	2.8	
Brain/CNS	2,400	1,400	1,050	5.8	7.1	4.7	
Esophagus	2,200	1,700	500	5.1	8.6	2.1	
Stomach	1,950	1,200	760	4.6	6.2	3.3	
Kidney and renal pelvis	1,900	1,250	670	4.4	6.4	2.8	
Ovary	1,900	_	1,900	_	_	8.4	
Multiple myeloma	1,550	860	690	3.6	4.4	2.9	
Oral	1,450	1,050	430	3.5	5.3	1.8	
Liver*	1,400	1,100	280	3.2	5.4	1.2	
Melanoma	1,300	840	450	3.1	4.4	2.0	
Uterus (body, NOS)	1,250	_	1,250	_	_	5.3	
Cervix	410	_	410	_	_	2.0	
Larynx	400	330	75	0.9	1.7	0.3	
Thyroid	230	100	130	0.5	0.5	0.5	
Hodgkin lymphoma	100	60	40	0.2	0.3	0.2	
Testis	35	35	_	_	0.2	_	
All other cancers	10,300	5,300	4,900	23.8	27.9	20.8	

<sup>-</sup> Not applicable; CNS=central nervous system; NOS=not otherwise specified

Analysis by: Centre for Surveillance and Applied Research, Public Health Agency of Canada

Data source: Canadian Vital Statistics Death Database at Statistics Canada

Figure 6: CCS 2019, tab. 2.2, pp. 47, "Projected Deaths and Age-Standardized Mortality Rates (ASMR)\* for Cancers, by Sex, Canada, 2019"

<sup>\*</sup> Rates are age-standardized to the 2011 Canadian population.

<sup>†</sup> Column totals may not sum to row totals due to rounding.

<sup>‡</sup> 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.

TABLE 2.2 Projected deaths and age-standardized mortality rates (ASMR) for selected cancers, by sex, Canada, 2017

		Deaths		Deaths per 100,000			
	Total*	Males	Females	Total*	Males	Females	
All cancers	80,800	42,600	38,200	198.1	233.3	172.1	
Lung and bronchus	21,100	11,100	10,000	51.4	59.4	45.3	
Colorectal	9,400	5,100	4,300	23.1	28.1	19.0	
Breast	5,000	60	5,000	12.6	0.3	23.2	
Pancreas	4,800	2,400	2,400	11.9	13.1	10.8	
Prostate	4,100	4,100	_	_	23.8	_	
Leukemia	2,900	1,650	1,250	7.2	9.2	5.5	
Non-Hodgkin lymphoma	2,700	1,500	1,200	6.7	8.4	5.3	
Bladder	2,400	1,700	680	5.7	9.5	2.9	
Brain/CNS	2,400	1,350	1,050	6.0	7.1	5.0	
Esophagus	2,200	1,650	480	5.3	8.9	2.1	
Stomach	2,100	1,250	790	5.1	6.9	3.6	
Kidney and renal pelvis	1,900	1,200	670	4.6	6.6	3.0	
Ovary	1,800	_	1,800	_	_	8.2	
Multiple myeloma	1,450	810	650	3.5	4.4	2.9	
Oral	1,250	860	400	3.1	4.6	1.8	
Melanoma	1,250	790	450	3.1	4.3	2.1	
Liver†	1,200	950	270	3.0	5.0	1.2	
Uterus (body, NOS)	1,150	_	1,150	_	_	5.3	
Larynx	440	350	95	1.1	1.9	0.4	
Cervix	400	_	400	_	_	2.0	
Thyroid	220	95	120	0.5	0.5	0.5	
Hodgkin lymphoma	140	85	60	0.4	0.5	0.3	
Testis	45	45	_	_	0.2	_	
All other cancers	10,400	5,500	4,900	25.5	30.7	21.6	

Analysis by: Surveillance and Epidemiology Division, CCDP, Public Health Agency of Canada Data source: Canadian Vital Statistics Death database at Statistics Canada

CNS=central nervous system; NOS=not otherwise specified

- Not applicable
- \* Column totals may not sum to row totals due to rounding.
- <sup>†</sup> Liver cancer mortality was underestimated because deaths from liver cancer, unspecified (ICD-10 code C22.9), were excluded; see Appendix II: Data sources and methods.

**Note:** Rates are age-standardized to the 2011 Canadian population. The complete definition of the specific cancers included here can be found in Table A2.

Figure 7: CCS 2017, tab. 2.2, pp. 62, "Projected Deaths and Age-Standardized Mortality Rates (ASMR)\* for Cancers, by Sex, Canada, 2017"

Table 2.4 (below) breaks these figures down by sex and province. These statistics suggest that the province with the highest mortality due to melanoma in raw numbers is Ontario, with 480 total deaths per year (390 male; 190 female). This is consistent with the higher incidence rates in Ontario due to population density. The following two provinces with the highest mortality due to melanoma, Québec (265 total deaths, 170 male and 95 female) and British Columbia (160 total deaths, 100 male and 60 female), are also consistent with incidence rates.

TABLE 2.5 Projected deaths for selected cancers by sex and province, Canada,\* 2019

	CA <sup>†</sup>	BC	AB	SK	MB	ON	QC	NB	NS	PE	NL
Males											
All cancers	43,300	5,800	3,700	1,250	1,550	15,600	11,700	1,150	1,550	210	850
Lung and bronchus	10,900	1,250	840	310	320	3,600	3,500	350	420	65	250
Colorectal	5,200	720	450	170	200	1,650	1,450	130	220	25	150
Prostate	4,100	600	430	160	170	1,500	880	90	140	20	80
Pancreas	2,700	380	230	80	90	1,000	670	75	80	10	45
Bladder	1,800	280	150	60	60	680	460	45	65	10	25
Leukemia	1,750	230	140	50	70	660	460	40	60	10	20
Esophagus	1,700	270	200	60	65	650	320	45	65	10	25
Non-Hodgkin lymphoma	1,600	220	130	55	55	630	370	40	55	5	30
Brain/CNS	1,400	190	140	35	35	520	370	30	40	5	20
Kidney and renal pelvis	1,250	160	110	45	55	440	320	40	50	5	30
Stomach	1,200	140	95	25	40	460	350	25	30	_	35
Liver*	1,100	200	100	15	30	430	260	25	35	_	10
Oral	1,050	130	80	25	25	470	260	20	20	5	20
Multiple myeloma	860	110	75	20	35	330	230	20	25	5	15
Melanoma	840	100	65	25	25	390	170	15	35	5	10
Larynx	330	30	35	10	5	110	100	10	15	_	10
Thyroid	100	15	10	5	5	45	20	5	_	_	_
Hodgkin lymphoma	60	10	5	_	_	25	20	_	_	_	_
Breast	55	5	5	_	_	20	10	_	5	_	_
Testis	35	5	5	_	_	15	10	_	_	_	_
Females											
All cancers	38,700	5,100	3,300	1,150	1,400	14,100	10,400	950	1,350	170	740
Lung and bronchus	10,100	1,250	870	300	360	3,300	3,100	260	380	50	170
Breast	5,000	650	470	170	180	1,900	1,300	110	160	15	95
Colorectal	4,400	650	330	140	160	1,500	1,200	100	160	20	120
Pancreas	2,500	340	240	70	85	960	650	60	85	10	35
Ovary	1,900	280	160	60	65	700	480	50	70	5	35
Non-Hodgkin lymphoma	1,250	150	100	40	40	490	310	40	50	10	25
Leukemia	1,250	170	100	35	40	480	320	30	40	10	15
Uterus (body, NOS)	1,250	150	110	30	35	520	290	25	50	5	20
Brain/CNS	1,050	140	85	25	25	400	280	20	30	_	20
Stomach	760	90	65	15	20	310	210	15	15	5	20
Bladder	700	95	50	15	20	280	180	15	20	_	10
Multiple myeloma	690	100	55	20	25	260	180	20	20	_	10
Kidney and renal pelvis	670	75	55	25	30	220	180	25	30	_	20
Esophagus	500	80	50	15	15	200	110	15	20	_	5
Melanoma	450	60	45	10	15	190	95	10	15	_	5
Oral	430	65	35	10	15	160	120	10	10	_	5
Cervix	410	45	40	20	15	160	95	10	10	_	10
Liver*	280	45	30	5	10	120	65	_	5	_	5
Thyroid	130	20	15	_	5	50	25	5	_	_	5
Larynx	75	5	5	_	_	20	35	_	5	_	_
Hodgkin lymphoma	40	5	5			20	15				

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

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

Analysis by: Centre for Surveillance and Applied Research, Public Health Agency of Canada

Data source: Canadian Vital Statistics Death Database at Statistics Canada

Figure 8: CCS 2019, tab. 2.5, pp. 50, "Projected Deaths for Selected Cancers, by Sex and Province, Canada,\* 2019"

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

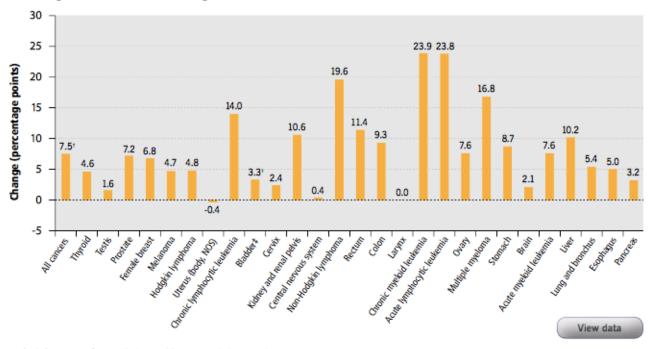
<sup>†</sup> Canadian counts may not sum to row totals due to rounding.

<sup>‡</sup> Liver cancer deaths are underestimated; see Appendix II: Data sources and methods.

#### Cancer Survival Statistics

The third section of the Canadian Cancer Society Statistics Report concerns cancer survival. Figure 3.2 (below) which compares net melanoma survival in the periods between 1992-1994 and 2012-2014, suggests that the later period sees a 4.7% increase in melanoma survival relative to the earlier. While the 2019 report does not contain updated survival statistics, the continuing emergence of innovative therapies for melanoma and other cancers have only continued to improve survival statistics since 2014. This is particularly true for females, who in the period between 2012-2014 saw a 91% five-year net survival for melanoma (CCS 2019, pp. 56).

FIGURE 3.2 Predicted change in five-year age-standardized net survival between 1992–1994 and 2012–2014 for selected cancers, ages 15–99, Canada (excluding Quebec\*)



Analysis by: Centre for Population Health Data, Statistics Canada

Data sources: Canadian Cancer Registry death linked file (1992–2014) and life tables at Statistics Canada. Partially adapted from Table 2 in Ellison LF. Progress in net cancer survival in Canada over 20 years. Health Reports 2018; 29(9):10–8.

Figure 7: CCS 2019, fig. 3.2, pp. 57, "Projected Change in Five-Year Age-Standardized Net Survival Between 1992-1994 and 2012-2014 for Selected Cancers, Ages 15-99, Canada (Excluding Québec\*)"

## The Cancer Burden in Canada

The final section of the Canadian Cancer Society 2019 statistics report regards the mortal and economic burden of cancer in Canada. This chapter contains figure 4.5 (below), which includes a colour-coded summary to "key cancer control and outcome characteristics" for many cancer types. The characteristics on this chart include "preventability," "detectability," "incidence," "survival," and "mortality." As the chart demonstrates, melanoma has high (green) preventability and survival relative to other cancer types. For the remaining characteristics, detectability, incidence, and mortality, melanoma falls into the yellow category, meaning that there are improvements to be made. Given the green rating for the preventability of melanoma, as the highest risk factor is consistent and unprotected UV exposure, there will ideally be a decrease in melanoma incidence moving forward with continually increasing sun safety awareness and education. As melanoma scored yellow for detectability, it is clear that skin checks and other early detection methods, such as regular dermatologist visits, continue to need advertisement. While melanoma's green rating in survival may seem incongruous with its yellow rating for mortality, this discrepancy demonstrates the high rate of mortality associated with melanoma alongside the improvement of survival statistics.

Additionally, the Canadian Cancer Society notes at this point that there are likely errors in the melanoma data collected from Québec. As Québec primarily collects hospital data, cancers that represent their diagnostic information mainly through pathology reports are often under-recorded, including melanoma. Therefore, incidences of melanoma in Québec are likely higher than statistics suggest (CCS 2019, pp. 83).

FIGURE 4.5 Summary of key cancer control and outcome characteristics by cancer type

	Preventability	Detectability	Incidence	Survival	Mortality
Lung and bronchus					
Breast					
Colorectal					
Prostate					
Bladder					
Non-Hodgkin lymphoma					
Thyroid					
Melanoma					
Kidney and renal pelvis					
Uterus (body, NOS)					
Leukemia					
Pancreas					
Oral					
Stomach					
Multiple myeloma					
Brain/CNS					
Ovary					
Liver					
Esophagus					
Cervix					
Larynx					
Testis					
Hodgkin lymphoma					

CNS=central nervous system; NOS=not otherwise specified

**Preventability** — Relative ratings are assigned to each cancer site based primarily on the population attributable risk reported by Canadian Population Attributable Risk of Cancer (ComPARe) study. <u>Green</u> represents cancers for which it is estimated that at least 50% of cancers are preventable or for which screening programs can detect treatable precancerous lesions, <u>yellow</u> where 25%—49% are preventable and <u>red</u> where less than 25% are preventable. Where information was not available through ComPARe, Cancer Research UK was used.

**Detectability** — Relative ratings were assigned as <u>green</u> if organized screening programs are available in Canada, <u>yellow</u> if opportunistic early detection is available and <u>red</u> if no organized screening and limited early detection procedures are available.

Incidence — Relative ratings were assigned as green if there were less than 5,000 cases, <u>yellow</u> if there were less than 15,000 cases and <u>red</u> if there at least 15,000 cases in 2019 (<u>Table 1.2</u>).

**Survival** — Relative ratings are assigned based on predicted five-year net survival probabilities listed in <u>Table 3.1</u>. Red represents a survival of less than 50%, yellow represents 50%–79% and green represents 80% or more.

Mortality — Relative ratings were assigned as green if there were less than 1,000 deaths, yellow if there were 1,000–4,000 deaths and red if there were more than 4,000 deaths in 2019 (Table 2.2).

Figure 8: CCS 2019, fig. 4.5, pp. 70, "Summary of Key Cancer Control and Outcome Characteristics by Cancer Type"

## Conclusions

The updated 2019 cancer statistics supplied by the Canadian Cancer Society reflect an almost reassuring lack of change in regards to melanoma; while the incidence rates of cancer overall have increased, there has been a 1% drop in melanoma incidences among males, and an increase of 1% in females (fig. 1.2). Additionally, while melanoma mortality rates have increased by 4% in the period between 2017 and 2019 (tabs. 2.2, 2017 and 2019), this increase has been matched by the 4.7% increase in melanoma survival depicted in figure 3.2, while these statistics are only as recent as 2014, have continued to improve. While there is still work to be done in the areas of prevention and early detection, as demonstrated by figure 4.5, melanoma outlooks are continuing to improve.

## Works Cited

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