

Cancer in Ontario

1 in 2

Ontarians will develop cancer in their lifetime



1 in 4

Ontarians will die from cancer



1

Cancer in Ontario — An overview

Cancer is a group of more than 200 different diseases that are characterized by abnormal cells in the body that divide and spread without control. In 2012 alone, 77,941 new cases of cancer were diagnosed in Ontario and 27,442 people died from the disease.

Cancer as a leading cause of death

In 2012, 30.2% of all deaths in Ontario were attributable to cancer, making it the leading cause of death in this province (**Figure 1.1**). Cancer caused the same number of deaths as the next three leading causes of death combined—cardiovascular disease, cerebrovascular disease and unintentional injuries.¹

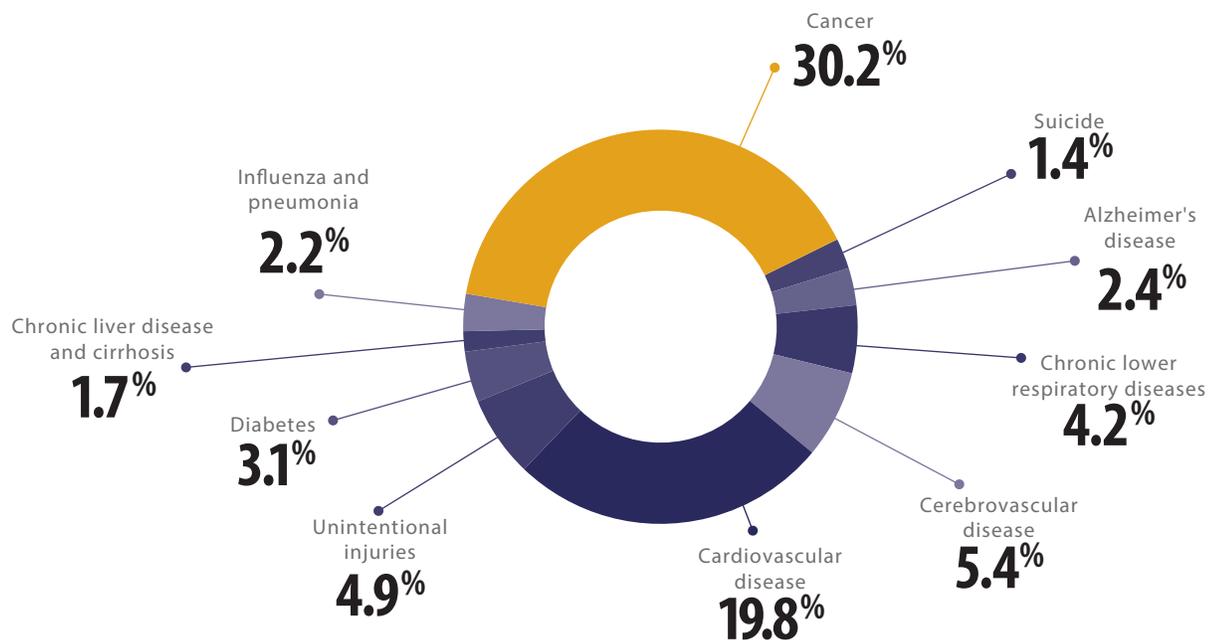
The number of deaths caused by cancer increased by nearly 18% between 2000 and 2012. In comparison, the number of deaths caused by cardiovascular disease and cerebrovascular disease, the next two leading causes of death, decreased by 14.4% and 20.0% respectively, over the same time period.¹

Cancer contributed an identical proportion of deaths in 2012 at the national level (30.2%) as it did in Ontario. The proportion of deaths from cancer varied between 23.6% and 33.5% in the other provinces and territories.¹

In 2012, 30.2% of all deaths in Ontario were attributable to cancer, making it the leading cause of death in this province.

Figure 1.1

Leading causes of death, Ontario, 2012



Analysis by: Surveillance, Analytics and Informatics, CCO

Source: Statistics Canada, Canadian Vital Statistics, Death Database and population estimates, Table 102-0563

Cancer across the lifespan

The majority of new cancer cases were diagnosed in people 50 years of age and older in 2012 (**Figure 1.2**). The greatest proportion of cases were diagnosed in people between the ages of 60 and 69 (26.6% of new cases) and 70 and 79 (24.1%).

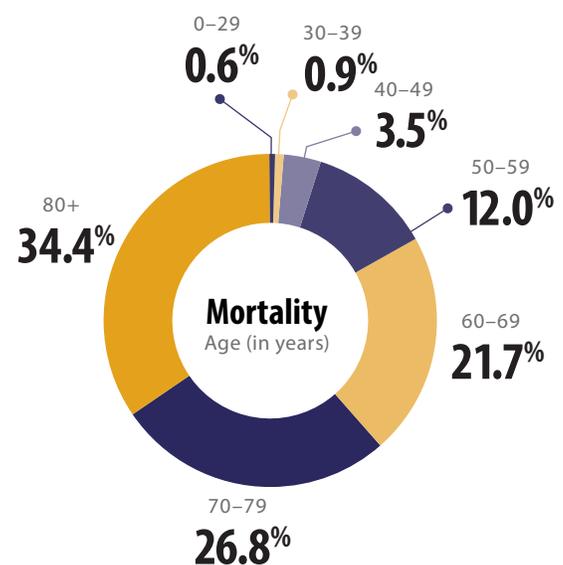
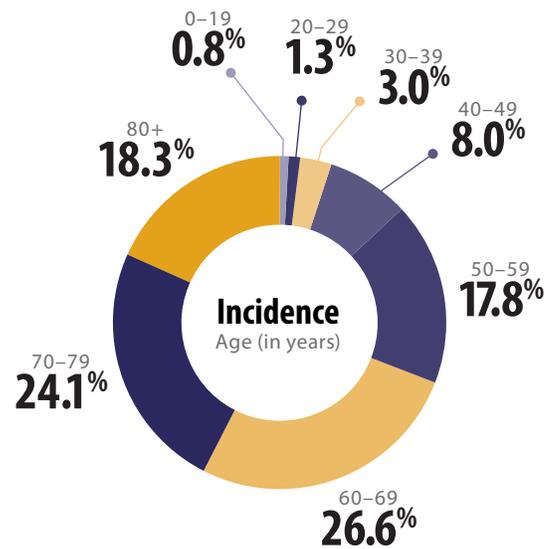
Cancer was rare among children and adolescents, with less than 1% of all new cases diagnosed in people under the age of 20. In fact, almost 95% of all new cases were in people over the age of 40.

The majority of cancer deaths occurred in people 50 years of age and older (**Figure 1.2**). Cancer deaths increased with age, with the greatest proportion of mortality occurring in people 80 years of age and older (34.4% of deaths) followed by people between the ages of 70 and 79 (26.8%). Cancer deaths were rare in children, adolescents and young adults, with only 1.5% of deaths occurring in people under the age of 40.

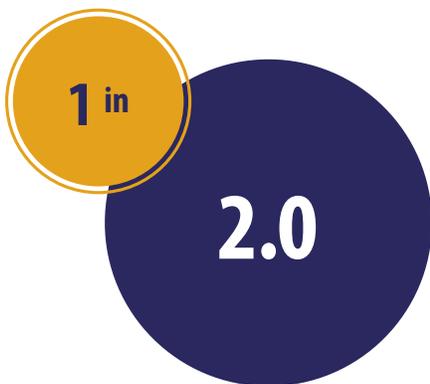
The greatest proportion of new cases were diagnosed in people between the ages of 60 and 69.

Figure 1.2

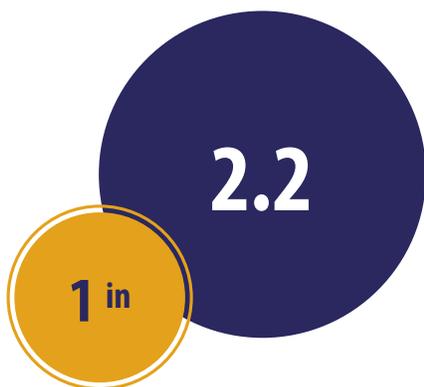
Distribution of cancer incidence and mortality, by age group, Ontario, 2012



Probability of developing cancer among males



Probability of developing cancer among females



Probability of developing or dying from cancer

The probability of developing or dying from cancer refers to the average chance of either being diagnosed with or dying from cancer over the course of one's lifetime. This probability can be expressed both as a percentage and as odds.

The probability of developing a specific type of cancer depends on many factors, including the population's characteristics (e.g., demographics), the prevalence of risk factors (e.g., smoking, obesity) and current life expectancy. Furthermore, these probabilities reflect the average risks for the overall population and do not take into account personal risk factors. In other words, an individual's risk may be higher or lower than the numbers reported here.

PROBABILITY OF DEVELOPING CANCER

In Ontario, 1 in 2.1 people will develop cancer in their lifetime (Table 1.1). Males have a greater chance of developing cancer at 49.9% (1 in 2.0) compared to females at 45.6% (1 in 2.2).

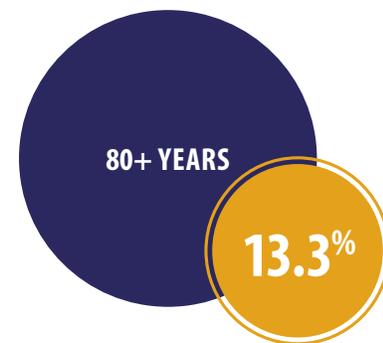
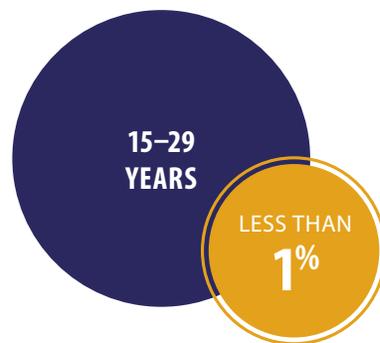
THE PROBABILITY OF DEVELOPING CANCER VARIES BY THE TYPE OF CANCER	
Among males, the probability is highest for developing:	Among females, the probability is highest for developing:
Prostate 1 in 6.5	Breast 1 in 7.8
Lung 1 in 11.4	Lung 1 in 13.7
Colorectal 1 in 12.8	Colorectal 1 in 15.1

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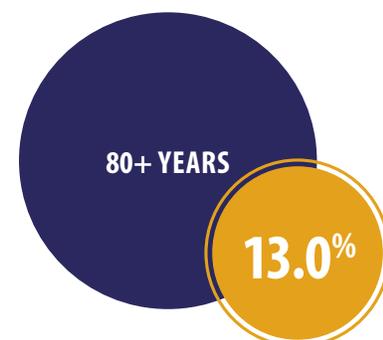
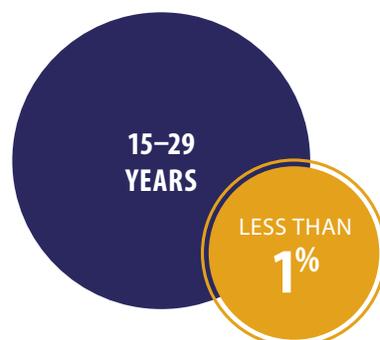
The probability of developing cancer generally increases with advancing age (see **Table DA.1** in the *Data appendix*):

- Among males, the probability of developing cancer between the ages of 15 and 29 is less than 1%, but it increases to 13.3% (1 in 7.5) for those 80 years of age and older.
- The probability of developing cancer increases from less than 1% for females between the ages of 15 and 29 to 13.0% (1 in 7.7) for females 80 years of age and older.

Probability of developing cancer among males increases with age



Probability of developing cancer among females increases with age



In Ontario, males have a greater chance of dying from cancer at 28.5% (1 in 3.5) compared to females at 24.0% (1 in 4.2).

PROBABILITY OF DYING FROM CANCER

In Ontario, 1 in 3.8 people will die from cancer (**Table 1.1**). Males have a greater chance of dying from cancer at 28.5% (1 in 3.5) compared to females at 24.0% (1 in 4.2).

As with the chance of developing cancer, the probability of dying from cancer varies based on cancer type:

- Among males, the probability is highest for lung (1 in 14.3), prostate (1 in 26.8) and colorectal (1 in 28.6) cancers.
- Among females, the probability is highest for lung (1 in 18.3), breast (1 in 29.8) and colorectal (1 in 33.4) cancers.

The probability of dying from cancer also generally increases as an individual ages (see **Table DA.2** in the *Data appendix*):

- Among males, the probability of dying from cancer is less than 1% between the ages of 15 and 29, but it increases to 13.3% (1 in 7.5) for those aged 80 years and older.
- Among females, the probability of dying from cancer increases from less than 1% for those between the ages of 15 and 29 to 11.8% (1 in 8.5) for those 80 years of age and older.

The subsequent chapters present both actual and projected data for incidence and mortality, as well as estimates for relative survival and prevalence.

In Ontario, males have a greater chance of dying from cancer than females



REFERENCES

1. Statistics Canada. Leading causes of death, total population, by sex, Canada, provinces and territories, annual. CANSIM table 102-0563 [Internet]. Ottawa: Statistics Canada; 2015 [cited December 2015]. Available from: <http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1020563>

Table 1.1 Lifetime probability of developing or dying from cancer, by cancer type and sex, Ontario, 2009–2012

Cancer type	Probability of developing cancer						Probability of dying from cancer					
	Total		Males		Females		Total		Males		Females	
	%	1 in	%	1 in	%	1 in	%	1 in	%	1 in	%	1 in
All cancers	47.5	2.1	49.9	2.0	45.6	2.2	26.0	3.8	28.5	3.5	24.0	4.2
Bladder	2.1	47.4	3.3	30.4	1.1	95.2	0.8	119.5	1.2	80.9	0.5	202.0
Brain	0.8	120.7	0.9	111.6	0.8	131.3	0.6	169.7	0.7	150.2	0.5	193.8
Breast (female)	12.8	7.8	—	—	12.8	7.8	3.4	29.8	—	—	3.4	29.8
Cervix	0.8	131.8	—	—	0.8	131.8	0.2	437.4	—	—	0.2	437.4
Colorectal	7.2	13.9	7.8	12.8	6.6	15.1	3.2	30.9	3.5	28.6	3.0	33.4
Esophagus	0.7	149.4	1.0	99.5	0.4	280.6	0.7	153.8	1.0	102.5	0.3	287.2
Hodgkin lymphoma	0.2	444.7	0.2	416.2	0.2	477.2	0.0	2,331.4	0.1	2,144.9	0.0	2,532.5
Kidney	1.4	71.8	1.7	57.2	1.1	94.8	0.5	190.3	0.7	153.0	0.4	244.7
Larynx	0.3	308.1	0.6	177.5	0.1	984.5	0.1	728.8	0.2	427.3	0.1	2,036.0
Leukemia	2.0	50.1	2.3	42.7	1.7	59.4	1.0	99.7	1.2	84.3	0.8	118.7
Liver	0.8	118.3	1.2	84.9	0.5	188.4	0.8	122.2	1.1	93.1	0.6	172.1
Lung	8.0	12.5	8.8	11.4	7.3	13.7	6.2	16.2	7.0	14.3	5.5	18.3
Melanoma	2.1	48.5	2.4	41.4	1.8	57.1	0.4	260.3	0.5	203.9	0.3	347.7
Myeloma	1.0	104.7	1.1	92.6	0.8	118.7	0.5	200.1	0.5	182.6	0.5	218.9
Non-Hodgkin lymphoma	2.6	39.0	2.8	35.6	2.3	42.6	1.0	102.0	1.1	92.5	0.9	111.8
Oral cavity and pharynx	1.2	81.7	1.6	60.7	0.8	122.4	0.4	255.7	0.5	185.5	0.3	396.6
Ovary	1.7	58.7	—	—	1.7	58.7	1.1	91.6	—	—	1.1	91.6
Pancreas	1.5	65.6	1.5	67.8	1.6	63.9	1.5	68.3	1.4	71.3	1.5	66.1
Prostate	15.4	6.5	15.4	6.5	—	—	3.7	26.8	3.7	26.8	—	—
Stomach	1.2	85.7	1.5	66.9	0.9	115.5	0.7	143.0	0.9	114.7	0.5	183.8
Testis	0.4	235.6	0.4	235.6	—	—	0.0	5,258.2	0.0	5,258.2	—	—
Thyroid	1.6	61.3	0.8	129.3	2.5	40.4	0.1	1,404.5	0.1	1,697.4	0.1	1,224.2
Uterus	3.2	31.4	—	—	3.2	31.4	0.7	149.7	—	—	0.7	149.7

Analysis by: Surveillance, Analytics and Informatics, CCO

Data source: Ontario Cancer Registry (November 2015), CCO; Statistics Canada, Canadian Vital Statistics, Birth and Death Databases and population estimates, CANSIM table 102-0504; CCO SEER*Stat Package Release 10—OCR (August 2015); Statistics Canada, Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual, CANSIM table 051-0001