

# Cancer in Manitoba

DEPARTMENT OF EPIDEMIOLOGY & CANCER REGISTRY

Annual Statistical Report

# 2014

 CancerCare Manitoba  
ActionCancer Manitoba





# Department of Epidemiology and Cancer Registry

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## Vision

Through engaged partnerships, effective research, and knowledge exchange, generate relevant information on all essential facets of cancer control including prevention, screening, early detection, treatment, and palliation.

## Mission

To enhance the development and evaluation of a cancer control strategy by collecting data, and conducting surveillance and research across the spectrum of cancer control in Manitoba.

## Department of Epidemiology and Cancer Registry

### 2014 Report from the Managers

The Department of Epidemiology and Cancer Registry continues its contribution to the advancement of cancer control initiatives and works diligently to provide high quality cancer information and data. The staff provide quality research and analytic support to CancerCare Manitoba (CCMB) clinicians, researchers, administrators, program planners and the CancerCare Manitoba Foundation (CCMF).

There has been an increasing trend in the number of projects and initiatives. The Department is actively involved in strategic planning with CCMB and our stakeholders to best meet the growing demand and need for data and research support.

#### Data Requests

YEAR	PROGRAM PLANNING	SURVEILLANCE / EDUCATIONAL	RESEARCH	TOTAL
2010	29	25	38	92
2011	17	28	64	109
2012	35	23	45	103
2013	17	26	63	106
2014	44	29	66	139

#### 2014 initiatives and ongoing work include:

- **Data Quality**

The Manitoba Cancer Registry has submitted 2014 data to the North American Association of Central Cancer Registries for certification. The Registry has held gold certification since 2006.

- **Staging**

Recognized as a leader in capturing stage amongst North American cancer registries, the Registry has stage at diagnosis information on cancer cases diagnosed from 2004 onward.

- **Clinical Epidemiology**

The Department staff collaborate with and provide research support to CCMB clinicians, scientists and other trainees in the following ways:

- Dedication of cancer registrars to specific disease site groups.
- Customization and optimization of data collection and extraction tools for clinical research databases.
- Technical consultation and analytic support offered throughout the research process.

- **Indicators: A Focus on Wait Times**

As part of a provincial initiative to reduce the wait times from suspicion of cancer to treatment, the Department has used multiple data sources (cancer registry, administrative, clinical, survey) to monitor wait times and to inform improvements to the cancer patient journey. Department staff are leading the development of algorithms to track and measure various segments of the journey.

### • Cancer System Performance

The Department has been producing sets of indicators to monitor and inform many aspects of the delivery of cancer services in Manitoba. For example, the Department successfully launched the key provincial report, *CCMB 2013-2014 Community Health Assessment*. The report has been utilized for clinical operations planning and research prioritization throughout the province.

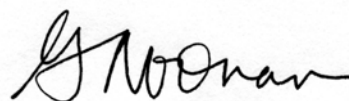
The Department also works with the Canadian Partnership Against Cancer (CPAC) to update and improve performance indicators at the national level. Additionally, staff are involved in international, national and regional studies to discuss and compare data collection, clinical outcomes and system performance metrics, including patterns of disease, treatment and survival.

### • Prevention

The Department has engaged in a number of projects related to cancer risk reduction:

- Public education on sun/UV safety and related outreach activities supported by CCMF.
- Summarization and dissemination of cancer prevention knowledge and provision of expert advice for development of public policy in collaboration with other CCMB stakeholders.
- Coordination and dissemination of *2012-2013 Manitoba Youth Health Survey (YHS) Report* which focused on youth behavioural risk factors. The report reflected the responses of 65,000 students across the province.

Our dedicated team of experts remains up-to-date on current methodologies through various professional development activities. We are highly committed to supporting population-based research initiatives in the context of the Manitoba cancer control strategy.



Gail Noonan

MANAGER, MANITOBA CANCER REGISTRY  
CancerCare Manitoba



Al Artaman

DIRECTOR, EPIDEMIOLOGY UNIT  
CancerCare Manitoba

## Introduction to the Data

The Manitoba Cancer Registry is an essential tool for evidence-based, data-driven decision making that has an immense impact on treatment and research. This year's report is based on the following information.

*NOTE: All statistics in the body of this report only include Manitoba residents.*

### Manitoba Cancer Registry data is used for:

- health care planning and monitoring
- surveillance and studies on the causes and prevention of cancer, cancer clusters, treatment patterns, outcomes and survival
- patient care
- quality assurance
- reporting to the Canadian Cancer Registry, the North American Association of Central Cancer Registries and the International Association of Cancer Registries

### Information sources include:

- provincial cytology and pathology departments
- admission/separation data from the provincial hospital abstracting system
- Manitoba Provincial Client Registry
- letters and "Report of Malignant Neoplasm Forms" from physicians and other health care providers
- hospital health records
- correspondence from other provincial and territorial cancer registries on Manitoba residents diagnosed and/or treated in those jurisdictions

### Incidence data

Incidence refers to the number of new cases of cancer diagnosed in Manitoba every year. Cancer cases referenced were diagnosed in the 2014 calendar year. Incidence is also provided by stage of disease at diagnosis.

The Manitoba Cancer Registry uses disease site groupings according to the International Classification of Diseases for Oncology Third Edition (ICD-O3), based on Surveillance Epidemiology and End Results (SEER) Groups. See Appendix 1 for the primary site groupings used for incidence.

### Mortality data

Mortality information refers to Manitobans who died of cancer in the 2014 calendar year, however, those patients may not have been diagnosed in 2014. The Vital Statistics Agency of Manitoba reported cancer as the leading cause of death in the province. In 2014, there were 2,886 deaths due to invasive cancer (age standardized rate – 220.9 per 100,000). The totals in the summary on page 13 include all cancer deaths occurring in Manitoba.

### Rates

Incidence counts and rates are presented in this report. Annual age-standardized rates are per 100,000 population and allow for comparison of cancer rates in different regions with different age structures. Rates are age-standardized (using the direct method) to the 2011 Manitoba population.

### Staging data

The Manitoba Cancer Registry implemented stage data collection for all cases of cancer (excluding non-melanoma skin) diagnosed January 1, 2004 and forward. This data is consistent with the AJCC Cancer Staging Manual, 7th edition.

In this report, stage data is shown for all disease site groups with a cancer incidence of 45 cases per year or more and is represented using pie charts. Stage information, along with frequency of incidence for each of these sites, can also be found in table format on page 10.

### Population data

Data are based on Manitoba estimates provided by Manitoba Health, Seniors and Active Living.

**Additional statistical information is available upon request. Please contact the Manitoba Cancer Registry at:**

1-877-787-1272 (toll-free), or  
[CCMBepireg@cancer.mb.ca](mailto:CCMBepireg@cancer.mb.ca)

## Cancer Profile of Manitoba

### Facts & Figures

#### Cancer Profile of Manitoba

Cancer is a significant health issue. In 2014, **11,635** Manitobans were diagnosed with cancer:

- **6,458** invasive cancers
- **4,678** in situ (confined to the area of origin)
- **388** unspecified cancers
- **111** benign brain and CNS (central nervous system)

In this same year, **2,886** people died from the disease.

The number of cancer cases in Manitoba is influenced by three factors:

- the age of the population
- the size of the population
- risk factors such as unhealthy living (including smoking, poor diet, inactivity, sun exposure), some environmental carcinogens, genetic predisposition and not being screened.

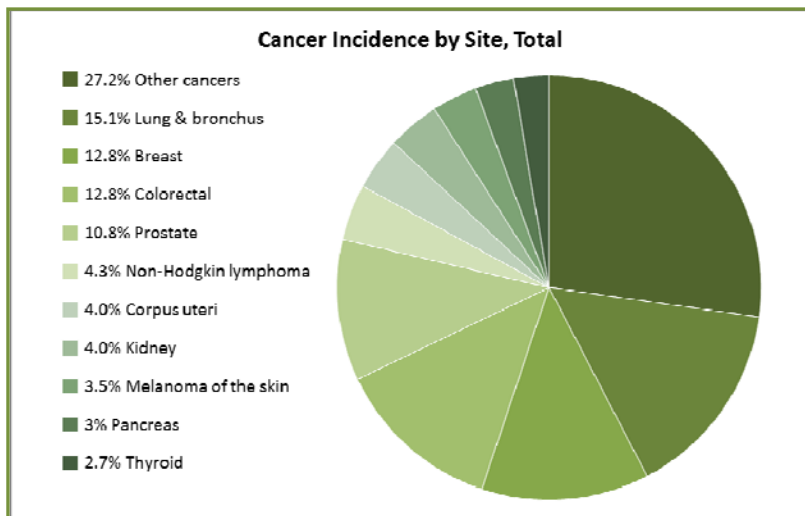
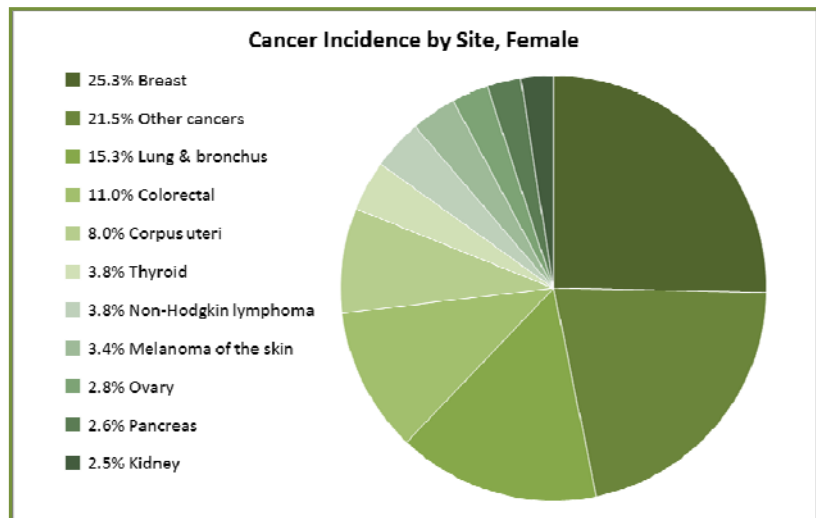
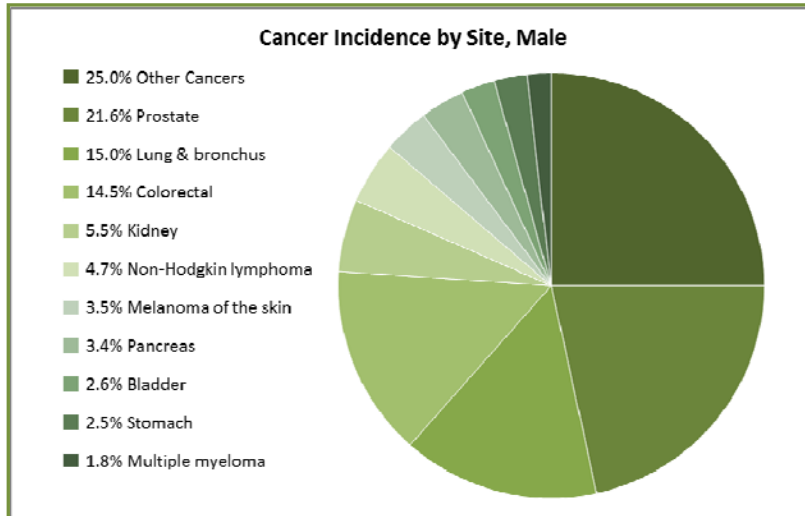
## Most Common Cancer Diagnoses, 2014

### Incidence

Male		Female		Total	
SITE	CASES	SITE	CASES	SITE	CASES
Prostate	694	Breast	820	Lung & bronchus	978
Lung & bronchus	481	Lung & bronchus	497	Breast	826
Colorectal	468	Colorectal	357	Colorectal	825
Kidney	177	Corpus uteri	258	Prostate	694
Non-Hodgkin lymphoma	152	Non-Hodgkin lymphoma	124	Non-Hodgkin lymphoma	276
Melanoma of the skin	112	Thyroid	124	Corpus uteri	258
Pancreas	108	Melanoma of the skin	111	Kidney	257
Bladder	82	Ovary	90	Melanoma of the skin	223
Stomach	80	Pancreas	83	Pancreas	191
Multiple myeloma	59	Kidney	80	Thyroid	173
Esophagus	58	Cervix uteri	60	Stomach	114

# Cancer Incidence by Site

## Invasive cancers only

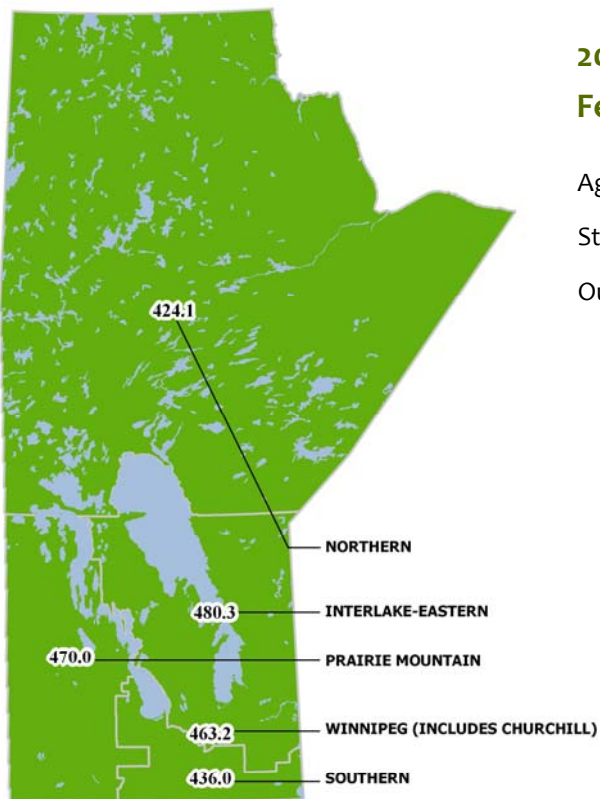




# Manitoba Cancer Rates by Regional Health Authority

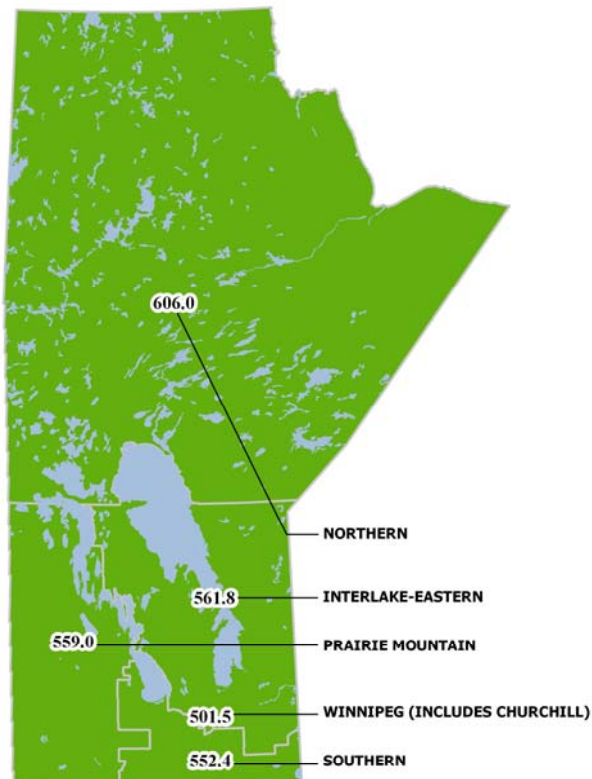
## 2014 All Invasive Cancers Female *Incidence*

Age-standardized rate per 100,000  
 Standard population: Manitoba 2011  
 Out of province residents excluded



## 2014 All Invasive Cancers Male *Incidence*

Age-standardized rate per 100,000  
 Standard population: Manitoba 2011  
 Out of province residents excluded



Cancer Incidence - Cases and Rates in Manitoba by Site, 2014

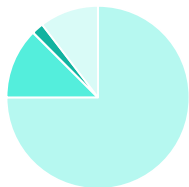
CANCER SITE	00-29			30-39			40-49			50-59			60-69			70-79			80+			TOTAL COUNT			ASIR*				
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T		
Lip	0	0	0	0	1	2	1	1	2	5	1	6	4	2	6	12	3	15	12	5	17	35	13	48	6.1	1.79	3.65		
Tongue	0	0	0	0	1	1	7	1	8	10	3	13	5	8	13	6	1	7	1	3	4	30	16	46	4.73	2.26	3.5		
Major salivary gland	0	1	1	0	1	1	0	0	0	0	2	2	0	1	1	3	0	3	3	1	4	6	6	12	1.11	0.88	0.91		
Floor of mouth	0	0	0	0	0	0	0	0	0	2	0	2	2	3	5	1	0	1	0	2	2	5	5	10	0.76	0.67	0.74		
Gum & other mouth	0	0	0	0	1	1	1	0	1	2	2	4	2	1	3	0	4	4	2	3	5	7	11	18	1.18	1.53	1.37		
Nasopharynx	0	0	0	0	1	1	0	0	0	1	1	2	1	0	1	0	0	0	0	0	0	3	1	4	0.45	0.15	0.3		
Oropharynx	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0.15	0	0.08		
Hypopharynx	0	0	0	0	1	1	0	0	0	1	0	1	1	1	2	1	2	3	0	0	0	4	3	7	0.61	0.42	0.52		
Other buccal cavity & pharynx	0	0	0	0	0	0	0	0	0	6	3	9	8	0	8	1	0	1	0	0	0	15	3	18	2.24	0.46	1.33		
Esophagus	0	0	0	0	1	1	0	0	0	13	2	15	17	4	21	12	8	20	15	4	19	58	18	76	9.69	2.49	5.7		
Stomach	0	0	0	0	1	1	4	3	7	12	9	21	21	6	27	24	9	33	18	7	25	80	34	114	13.33	4.86	8.61		
Small intestine	0	0	0	0	0	0	2	1	3	3	3	6	5	1	6	6	4	10	5	1	6	21	10	31	3.53	1.45	2.35		
Colon excluding rectum	3	1	4	2	1	3	22	13	35	46	38	84	67	50	117	79	69	148	73	80	153	292	252	544	49.17	34.95	41.25		
Rectum & rectosigmoid	1	1	2	2	2	4	15	13	28	40	15	55	42	23	65	43	23	66	33	28	61	176	105	281	28.97	14.87	21.33		
Anus	0	0	0	0	0	0	0	0	0	1	3	4	5	7	12	2	2	4	1	2	3	9	14	23	1.41	1.97	1.7		
Liver	0	0	0	0	0	0	2	2	4	11	3	14	9	4	13	10	6	16	4	7	11	36	22	58	5.76	3.07	4.39		
Gallbladder	0	0	0	0	0	0	1	1	2	1	2	3	3	5	8	2	4	6	2	6	8	9	18	27	1.5	2.48	2.04		
Pancreas	0	0	0	1	1	2	3	2	5	20	12	32	35	18	53	29	22	51	20	28	48	108	83	191	17.64	11.42	14.36		
Other digestive system	1	0	1	0	0	0	2	3	5	1	3	4	8	11	19	9	12	21	9	6	15	30	35	65	5.14	4.93	4.9		
Larynx	0	0	0	0	0	0	0	0	0	1	0	1	9	1	10	10	2	12	11	0	11	31	3	34	5.38	0.42	2.55		
Lung & bronchus	2	0	2	0	1	1	10	11	21	49	57	106	154	150	304	168	168	336	98	110	208	481	497	978	79.35	68.98	73.15		
Other respiratory system	0	0	0	0	1	1	1	0	1	1	2	3	0	2	2	0	2	2	1	2	3	4	8	12	0.68	1.12	0.91		
Bones & joints	0	1	1	1	1	1	1	1	2	1	3	4	1	1	2	1	1	2	0	0	0	5	7	12	0.77	1.07	0.92		
Soft tissue (including heart)	2	4	6	0	0	0	1	1	2	3	2	5	6	2	8	2	2	4	6	6	12	20	17	37	3.38	2.42	2.82		
Kaposi sarcoma	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	3	0	3	0.46	0	0.22		
Mesothelioma	0	0	0	0	0	0	1	1	2	2	1	3	2	2	4	9	1	10	2	1	3	16	6	22	2.62	0.87	1.66		
Melanoma of the skin	0	1	1	1	4	15	19	9	7	16	20	38	29	28	57	27	23	50	23	19	42	112	111	223	18.53	15.86	16.84		
Breast	0	2	2	0	2	26	26	0	108	108	0	193	1	218	219	5	153	158	0	120	120	6	820	826	0.94	118.82	62.69		
Cervix uteri	1					9			13		23		8		1				5			60		9.1					
Corpus uteri	0					6			19		62		88		56				27			258		37.13					
Uterus, NOS	0					0			0		0		1		0				0			1		0.14					
Ovary	2					10			9		25		21		12				11			90		13.16					
Other female genital system	0					1			4		10		8		10				7			40		5.75					

Male genital	Prostate	0	0	0	7	101	272		214	100	694	111.47					
	Testis	20	12	6	6	4	1	0	0	0	43	6.59					
Urinary	Penis	0	0	1	1	0	5	7	7	2	15	2.43					
	Other male genital system	0	0	0	0	0	1	1	1	1	3	0.52					
Bladder	Bladder	0	0	0	0	0	3	12	19	26	82	14.09	3.61				
	Kidney	2	0	2	4	3	7	19	9	28	177	28.38	11.41				
Other urinary system	Ureter	0	0	0	0	0	0	0	2	4	9	1.61	0.7				
	Other urinary system	0	0	0	0	0	0	0	1	1	2	0.36	0.12				
Brain & other nervous	Eye	0	0	0	1	1	0	0	3	3	7	1.16	0.83				
	Brain	6	2	8	4	0	4	1	5	12	13	7.04	4.13				
Endocrine	Other nervous system	0	1	1	0	0	0	0	0	0	0	0	0.33				
	Thyroid	2	9	11	11	20	31	7	23	39	51	9	23				
Lymphoma	Other endocrine	2	2	4	1	2	1	0	2	1	2	3	1				
	Hodgkin lymphoma	8	6	14	2	5	7	4	0	4	1	2	2				
Multiple myeloma	Non-Hodgkin lymphoma	5	4	9	2	4	6	12	6	18	34	19	53				
	Acute lymphocytic leukemia	4	11	15	0	0	1	1	2	3	0	3	1				
Leukemias	Chronic lymphocytic leukemia	0	0	0	1	1	1	0	1	1	8	3	11				
	Acute myeloid leukemia	1	2	3	0	5	4	2	6	3	8	9	8				
Other, ill defined & unknown	Chronic myeloid leukemia	2	0	2	0	0	0	3	1	2	1	2	3				
	Acute monocytic leukemia	0	0	0	0	0	0	0	0	0	0	0	0				
TOTAL - ALL INVASIVE	Other leukemias	0	0	0	0	0	0	0	2	0	2	1	3				
	Other, ill defined & unknown	2	1	3	2	0	2	3	3	6	10	13	27				
In situ	Other, ill defined & unknown	64	52	116	56	115	171	158	265	423	600	1112	933				
	Other skin & in situ	2	13	15	21	35	56	98	96	194	264	484	522				
TOTAL - INVASIVE & IN SITU	Breast in situ	0	0	0	0	5	5	0	10	10	0	38	38				
	Cervix in situ	189				129		51			25	14	1				
Bladder in situ	Prostate in situ	0	0	0	0	0	0	0	7	0	28	4.28					
	Bladder in situ	0	0	0	2	0	2	4	1	5	10	6	16				
Other in situ (Excl. Breast, Skin, Cervix, Prostate, Bladder)	Other in situ (Excl. Breast, Skin, Cervix, Prostate, Bladder)	2	2	4	6	4	10	18	18	36	63	44	107				
	TOTAL - INVASIVE & IN SITU	68	256	324	85	288	373	278	441	719	861	933	1794				
Brain uncertain & unspecified	Brain uncertain & unspecified	0	0	0	1	1	2	2	0	2	3	2	0				
	Neoplasms (Uncertain & unspecified, excluding brain)	16	13	29	11	12	23	8	26	34	19	35	54				
ALL CANCERS	Brain & nervous system benign	3	5	8	1	5	6	10	16	5	15	20	13				
	ALL CANCERS	87	274	361	98	306	404	294	477	771	886	985	1871				
*Age-standardized incidence rate per 100,000 Standard population: Manitoba 2011													11635	5746	5889	11635	840.83

# Staging on sites with more than 45 cases\*

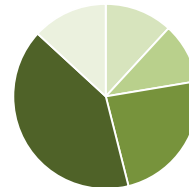
## Lip

	Frequency	Percent
Stage I	36	75.0
Stage II	6	12.5
Stage III	0	0.0
Stage IV	1	2.1
Unknown	5	10.4
<b>Total</b>	<b>48</b>	<b>100</b>



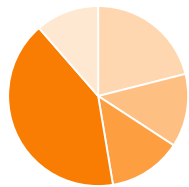
## Esophagus

	Frequency	Percent
Stage I	9	11.8
Stage II	8	10.5
Stage III	18	23.7
Stage IV	31	40.8
Unknown	10	13.2
<b>Total</b>	<b>76</b>	<b>100</b>



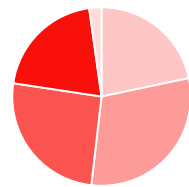
## Stomach

	Frequency	Percent
Stage I	24	21.1
Stage II	15	13.2
Stage III	15	13.2
Stage IV	47	41.2
Unknown	13	11.4
<b>Total</b>	<b>114</b>	<b>100</b>



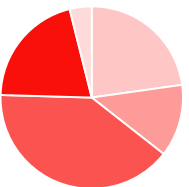
## Colon excluding rectum

	Frequency	Percent
Stage I	118	21.7
Stage II	164	30.2
Stage III	139	25.6
Stage IV	111	20.4
Unknown	12	2.2
<b>Total</b>	<b>544</b>	<b>100</b>



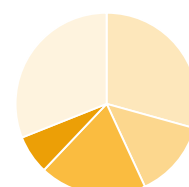
## Rectum & rectosigmoid

	Frequency	Percent
Stage I	64	22.8
Stage II	36	12.8
Stage III	112	39.9
Stage IV	58	20.6
Unknown	11	3.9
<b>Total</b>	<b>281</b>	<b>100</b>



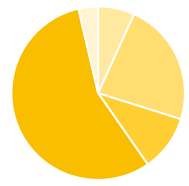
## Liver

	Frequency	Percent
Stage I	17	29.3
Stage II	8	13.8
Stage III	11	19.0
Stage IV	4	6.9
Unknown	18	31.0
<b>Total</b>	<b>58</b>	<b>100</b>



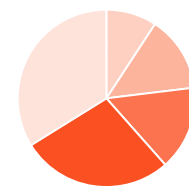
## Pancreas

	Frequency	Percent
Stage I	13	6.8
Stage II	44	23.0
Stage III	20	10.5
Stage IV	107	56.0
Unknown	7	3.7
<b>Total</b>	<b>191</b>	<b>100</b>



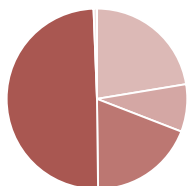
## Other digestive system

	Frequency	Percent
Stage I	6	9.2
Stage II	9	13.9
Stage III	10	15.4
Stage IV	18	27.7
Unknown	22	33.9
<b>Total</b>	<b>65</b>	<b>100</b>



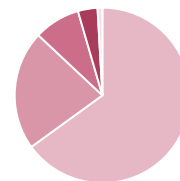
**Lung & bronchus**

	Frequency	Percent
Stage I	219	22.4
Stage II	83	8.5
Stage III	185	18.9
Stage IV	485	49.6
Unknown	6	0.6
Occult	0	0.0
<b>Total</b>	<b>978</b>	<b>100</b>



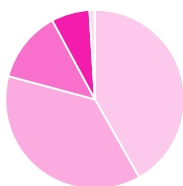
**Melanoma of the skin**

	Frequency	Percent
Stage I	145	65.0
Stage II	49	22.0
Stage III	19	8.5
Stage IV	8	3.6
Unknown	2	0.9
<b>Total</b>	<b>223</b>	<b>100.0</b>



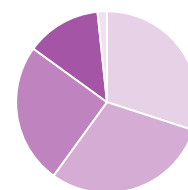
**Breast**

	Frequency	Percent
Stage I	345	41.8
Stage II	309	37.4
Stage III	107	13.0
Stage IV	57	6.9
Unknown	8	1.0
<b>Total</b>	<b>826</b>	<b>100</b>



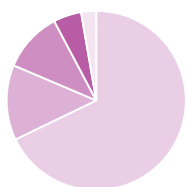
**Cervix uteri**

	Frequency	Percent
Stage I	18	30.0
Stage II	18	30.0
Stage III	15	25.0
Stage IV	8	13.3
Unknown	1	1.7
<b>Total</b>	<b>60</b>	<b>100</b>



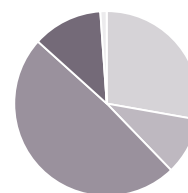
**Corpus uteri**

	Frequency	Percent
Stage I	175	67.8
Stage II	35	13.6
Stage III	28	10.9
Stage IV	13	5.0
Unknown	7	2.7
<b>Total</b>	<b>258</b>	<b>100</b>



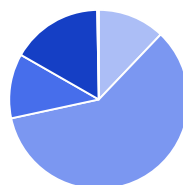
**Ovary**

	Frequency	Percent
Stage I	25	27.8
Stage II	9	10.0
Stage III	44	48.9
Stage IV	11	12.2
Unknown	1	1.1
<b>Total</b>	<b>90</b>	<b>100</b>



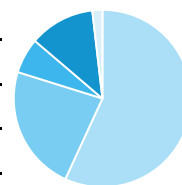
**Prostate**

	Frequency	Percent
Stage I	84	12.1
Stage II	413	59.5
Stage III	81	11.7
Stage IV	114	16.4
Unknown	2	0.3
<b>Total</b>	<b>694</b>	<b>100</b>



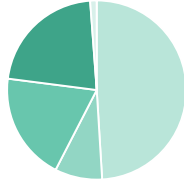
**Bladder**

	Frequency	Percent
Stage I	62	56.9
Stage II	25	22.9
Stage III	7	6.4
Stage IV	13	11.9
Unknown	2	1.8
<b>Total</b>	<b>109</b>	<b>100</b>



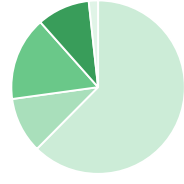
**Kidney**

	Frequency	Percent
Stage I	126	49.0
Stage II	22	8.6
Stage III	50	19.5
Stage IV	56	21.8
Unknown	3	1.2
<b>Total</b>	<b>257</b>	<b>100</b>



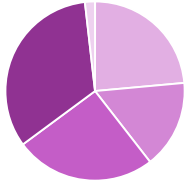
**Thyroid**

	Frequency	Percent
Stage I	108	62.4
Stage II	18	10.4
Stage III	27	15.6
Stage IV	17	9.8
Unknown	3	1.7
<b>Total</b>	<b>173</b>	<b>100</b>



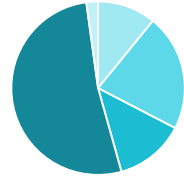
**Non-Hodgkin lymphoma**

	Frequency	Percent
Stage I	65	23.6
Stage II	44	15.9
Stage III	70	25.4
Stage IV	92	33.3
Unknown	5	1.8
<b>Total</b>	<b>276</b>	<b>100</b>



**Tongue**

	Frequency	Percent
Stage I	5	10.9
Stage II	10	21.7
Stage III	6	13.0
Stage IV	24	52.2
Unknown	1	2.2
<b>Total</b>	<b>46</b>	<b>100</b>



*\*In keeping with international coding conventions, all invasive brain tumours, multiple myeloma and leukemia are considered unstageable using the collaborative staging system utilized by all population-based North American Cancer Registries.*

## Deaths by Underlying Cause in Manitoba<sup>1</sup>

(Rate per 100,000)

CAUSES OF DEATH	2014			2013			2012		
	AMOUNT	Rate per MB Health Population	Rate per Statistics Canada Population	AMOUNT	Rate per MB Health Population	Rate per Statistics Canada Population	AMOUNT	Rate per MB Health Population	Rate per Statistics Canada Population
Accidents (V01-X59, Y85-Y86)	526	40.3	41.0	515	39.9	40.8	533	41.9	42.1
<b>Cancer (C00-C97)</b>	<b>2886</b>	<b>220.9</b>	<b>225.1</b>	<b>2,673</b>	<b>207.3</b>	<b>212.0</b>	<b>2704</b>	<b>212.7</b>	<b>213.4</b>
Cerebrovascular Disease (I60-I69)	651	49.8	50.8	608	47.2	48.2	612	48.1	48.3
Diabetes (E10-E14)	324	24.8	25.3	339	26.3	26.9	323	25.4	25.5
Diseases of the heart (I00-I09, I11, I13, I20-I25, I26-I51)	2217	169.7	172.9	2076	161.0	164.6	2105	165.6	166.1
Pneumonia (J12-J18)	226	17.3	17.6	220	17.1	17.4	235	18.5	18.5
Suicide (X60-X84, Y890)	176	13.5	13.7	158	12.3	12.5	165	13.0	13.0

### Reference

<sup>1</sup>Vital Statistics Agency, 2014/15 Annual Report. Government of Manitoba; 2016. [cited Dec 14, 2016].

[http://vitalstats.gov.mb.ca/pdf/2015\\_vs\\_annual\\_report\\_en.pdf](http://vitalstats.gov.mb.ca/pdf/2015_vs_annual_report_en.pdf)

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## Research

### 2014 Publications

This is only a sample of publications that have used Manitoba Cancer Registry Data. For a complete listing, please visit [www.cancercare.mb.ca](http://www.cancercare.mb.ca) and click on Epidemiology and Cancer Registry under the Research tab. Articles with names in bold are authored by department staff.

Allemani C, Weir HK, Carreira H, Harewood R, Spika D, Wang XS, et al. Global surveillance of cancer survival 1995-2009: analysis of individual data for 25 676 887 patients from 279 population-based registries in 67 countries (CONCORD-2). *Lancet* 2014.

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Bernstein CN, **Nugent Z**, Targownik LE, Singh H, Lix LM. Predictors and risks for death in a population-based study of persons with IBD in Manitoba. *Gut* 2014.

Campbell SH, Hall AE, Sanson-Fisher RW, Barker D, **Turner D**, Taylor-Brown J. Development and validation of the Short-Form Survivor Unmet Needs Survey (SF-SUNS). *Support Care Cancer* 2014;22:1071-9.

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Clouston K, Katz A, Martens PJ, Sisler J, **Turner D**, Lobchuk M, et al. Does access to a colorectal cancer screening website and/or a nurse-managed telephone help line provided to patients by their family physician increase fecal occult blood test uptake?: results from a pragmatic cluster randomized controlled trial. *BMC Cancer* 2014;14:263.

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Mahmud SM, **Kliwer EV, Lambert P**, Bozat-Emre S, **Demers AA**. Effectiveness of the quadrivalent human papillomavirus vaccine against cervical dysplasia in Manitoba, Canada. *J Clin Oncol* 2014;32:438-43.

McKay A, Donaleshen J, Helewa RM, Park J, Wirtzfeld D, Hochman D, et al. Does young age influence the prognosis of colorectal cancer: a population-based analysis. *World J Surg Oncol* 2014;12:370.

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Weir HK, Johnson CJ, Mariotto AB, **Turner D**, Wilson RJ, Nishri D, et al. Evaluation of North American Association of Central Cancer Registries' (NAACCR) Data for Use in Population-Based Cancer Survival Studies. *J Natl Cancer Inst Monogr* 2014;2014:198-209.

Ye X, Casaclang N, Mahmud SM. Use of non-steroidal anti-inflammatory drugs and risk of non-Hodgkin lymphoma: a systematic review and meta-analysis. *Hematol Oncol* 2014.

## Appendix 1

### INTERNATIONAL CLASSIFICATION OF DISEASES FOR ONCOLOGY 3rd Edition

PRIMARY SITE	SITE/ CELL TYPE	PRIMARY SITE	SITE/ CELL TYPE
<b>Buccal cavity and pharynx</b>	C00:C14	<b>Male genital system</b>	C60:C63
Lip	C000:C009	Prostate	C619
Tongue	C019:C029	Testis	C620:C629
Major salivary gland	C079:C089	Penis	C600:C609
Floor of mouth	C040:C049	Other male genital system	C630:C639
Gum & other mouth	C030:C039, C050:C059, C060:C069	<b>Urinary system</b>	C64:C68
Nasopharynx	C110:C119	Bladder (incl. in situ)	C670:C679
Oropharynx	C100:C109	Kidney and renal pelvis	C649, C659
Hypopharynx	C129, C130:C139	Ureter	C669
Other buccal cavity & pharynx	C090:C099, C140, C142:C148	Other urinary system	C680:C689
<b>Digestive system</b>	C15:C26	<b>Eye</b>	C690:C699
Esophagus	C150:C159	<b>Brain &amp; other nervous system</b>	C70:C72
Stomach	C160:C169	Brain	C710:C719
Small intestine	C170:C179	Other nervous system	C710:C719 ( 953), C700:C709, C720:C729
Colon excluding rectum	C180:C189, C260	<b>Endocrine</b>	C73:C75
Rectum & Rectosigmoid	C199, C209	Thyroid	C739
Anus	C210:C212, C218	Other endocrine	C379, C740:C749, C750:C759
Liver	C220	<b>Lymphomas</b>	
Gallbladder	C239	Hodgkin lymphoma	9650-9667
Pancreas	C250:C259	Non-Hodgkin lymphoma	9590-9597, 9670-9671, 9673, 9675, 9678-9680, 9684, 9687-9691, 9695, 9698-9702, 9705, 9708-9709, 9712, 9714-9719, 9724-9729, 9735, 9737, 9738
Other digestive system	C240:C249, C221, C480, C481:C482, C268:C269, C488		9811-9818 (except C421) 9823 (except C421) 9827 (except C421) 9837 (except C421)
<b>Respiratory system</b>	C30:C39	Myeloma	9731-9732, 9734
Larynx	C320:C329	<b>Leukemias</b>	C42
Lung & bronchus	C340:C349	Acute lymphocytic	9826, 9835-9836 9811-9818 (only C421) 9837 (only C421)
Other respiratory system	C300:C301, C310:C319, C384, C339, C381:C383, C388, C390:C399	Chronic lymphocytic	9823 (only C421)
<b>Bones &amp; joints</b>	C400:C419	Acute myeloid	9840, 9861, 9865-9867, 9869, 9871-9874, 9895-9897, 9898, 9910-9911, 9920
<b>Soft tissue (including heart)</b>	C380, C470:C479, C490:C499	Acute monocytic	9891
<b>Mesothelioma</b>	9050:9055	Chronic myeloid	9863, 9875-9876, 9945-9946
<b>Kaposi sarcoma</b>	9140	Other	9733, 9742, 9800, 9801, 9805-9809, 9820, 9831-9834, 9860, 9870, 9930, 9931, 9940, 9948, 9963, 9964 9827 (only C421)
<b>Skin</b>	C44	<b>Other, ill-defined, &amp; unknown</b>	9740-9741, 9750-9769, 9950, 9960-9962, 9965-9967, 9970-9971, 9975, 9980, 9982-9987, 9989, 9991-9992 C420-C424 (except 9050-9055, 9140, 9590-9992) C760-C768 (except 9050-9055, 9140, 9590-9992) C770-C779 (except 9050-9055, 9140, 9590-9992) C809 (except 9050-9055, 9140, 9590-9992)
Melanomas of the skin	C440:C449 ( 8720:8790)		
Other skin	C440:C449		
<b>Breast</b>	C500:C509		
<b>Female genital system</b>	C51:C58		
Cervix uteri	C530:C539		
Corpus uteri	C540:C549		
Uterus, NOS	C559		
Ovary	C569		
Other female genital system	C529, C510:C519, C570:C589		

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