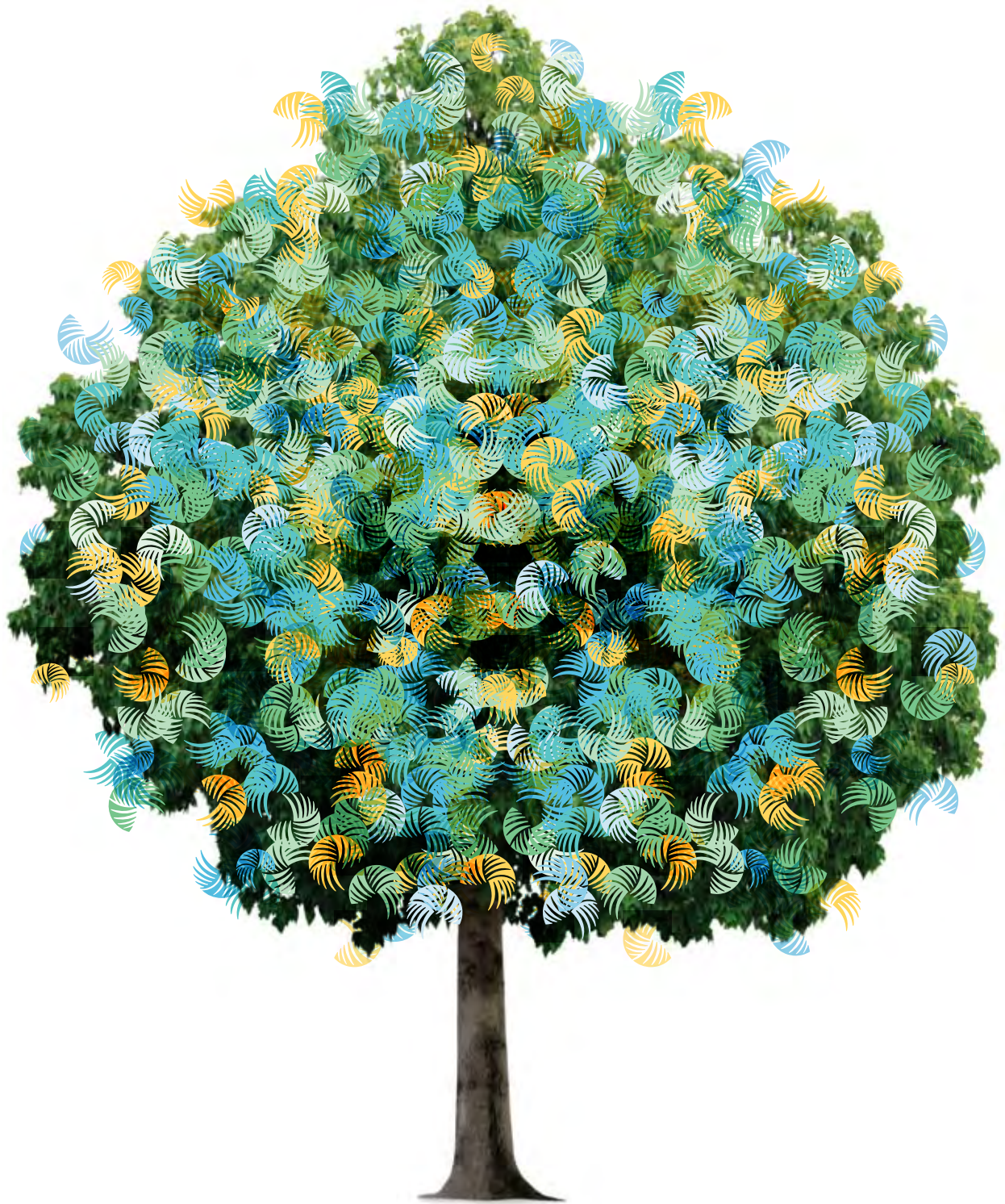


CancerCare Manitoba  
2010 Community  
Health Assessment





## TABLE OF CONTENTS

INTRODUCTION .....	02	OUTCOMES .....	73
INDICATORS: AN OVERVIEW .....	04	Incidence .....	76
KEY FINDINGS .....	06	Mortality .....	90
<b>PREVENTION</b> .....	<b>07</b>	Survival .....	98
Obesity .....	10	Patient Experience .....	104
Smoking .....	12	▶ <i>Patient Satisfaction</i> .....	106
Alcohol .....	14	▶ <i>Emotional Support</i> .....	108
Fruits and Vegetables .....	16	▶ <i>Pain Management</i> .....	110
Physical Activity .....	18	<b>PROJECTIONS</b> .....	<b>113</b>
<b>ACCESS</b> .....	<b>21</b>	New Cancer Cases and Deaths .....	114
Screening .....	22	<b>REGIONAL PROFILES</b> .....	<b>121</b>
▶ <i>Colorectal Cancer Screening</i> .....	24	Assiniboine .....	122
▶ <i>Cervical Cancer Screening</i> .....	26	Brandon .....	126
▶ <i>Breast Cancer Screening</i> .....	28	Burntwood/Churchill .....	130
Wait Times .....	30	Central Manitoba .....	134
▶ <i>Breast Cancer Assessment</i> .....	32	Interlake .....	138
▶ <i>Radiation Therapy</i> .....	34	NOR-MAN .....	142
Treatment .....	40	North Eastman .....	146
▶ <i>Surgery</i> .....	42	Parkland .....	150
▶ <i>Radiation Therapy</i> .....	48	South Eastman .....	154
▶ <i>Radiation Therapy After Breast Conserving Surgery</i> .....	54	Winnipeg .....	158
▶ <i>Systemic Therapy</i> .....	56	<b>ACKNOWLEDGEMENTS</b> .....	162
<i>(Chemotherapy, Hormone Therapy)</i>		<b>GLOSSARY &amp; TECHNICAL APPENDIX</b> ..	164
Additional Access Indicators .....	62	▶ <i>General Terms &amp; Definitions</i> .....	170
▶ <i>Accessing the Cancer System</i> .....	64	▶ <i>Data Source Symbols Reference</i> .....	172
▶ <i>End-of-Life Care</i> .....	70		

# Introduction

**Changing the course of cancer is not a solitary endeavor. Together with our partners, CancerCare Manitoba (CCMB) aims to reduce the impact of cancer throughout the province. CancerCare Manitoba delivers comprehensive care to Manitobans living with cancer and support for their families. We continually strive to do better.**

Like other cancer agencies in Canada and those around the world, CCMB is investigating how to best measure and present cancer control indicators for our population. For example, work done to advance the country's national cancer strategy identified over 600 possible indicators. However, a set of this size is too large to produce a meaningful summary of cancer control that would support its management and focus its activities.

Currently there is no single data system in place to answer all our cancer questions, but there is growing consensus regarding specific indicators that describe the cancer system's performance. We first introduced some of these indicators in the 2008-09 Annual Progress Report which included measures of:

- ▶ Prevention
- ▶ Screening
- ▶ Access (diagnosis and treatment)
- ▶ Outcomes

These indicators represent the key activities of the cancer system and were developed based on three guiding principles:

1. using reliable data that are already published or are routinely cited, wherever possible
2. using indicator definitions that are used by at least one other partner (provincial or national), wherever possible
3. providing an indication of whether CCMB is improving in a particular cancer-related area by indicating the trend

To produce the 2010 Community Health Assessment, we have extended the application of these principles and expanded the indicator list in consultation with our partners. We recognize that measurement is an essential part of good cancer system management. It allows us to focus on improving both the health of our community and the care we provide to Manitobans living with cancer.

The chosen indicators allow assessment of trends over time and by geography. Inspired by work done by colleagues in the U.K., Cancer Care Ontario and the Canadian Partnership Against Cancer, we recognize that indicator development is an ongoing progressive process to be improved and refined as CCMB learns more and as better information and measurement tools become available.

The information contained in this assessment examines cancer risk factors, screening participation rates, access to care and treatment, patient satisfaction and cancer trends over time. Where we present information on time trends, arrows summarize the patterns: increases of 10% or more (↑), little change (↔) or a drop of 10% or more (↓). Colour shows whether the trend is good (green), neutral (yellow) or needs to improve (red). Where we present information by region, areas that are significantly different from the overall provincial measure are noted. We have also presented regional data using the standard order the Manitoba Centre for Health Policy uses for its reports. It is based on the premature mortality rate - an indicator of the relative health of a population.

The information found in this report was carefully developed to reflect the most current, complete data. Data sources for this report include:

- ▶ Canadian Community Health Survey (CCHS)
- ▶ Manitoba Health
- ▶ NRC Picker's Ambulatory Oncology Survey
- ▶ CCMB, specifically the Manitoba Cancer Registry, Screening Programs and Radiation Therapy Program

We are grateful for the analysis performed by CCMB staff (Epidemiology Unit, Screening, Patient Navigation) as well as our colleagues at the Manitoba Centre for Health Policy who analyzed the CCHS data and NRC Picker Institute who analyzed the patient satisfaction survey data.

We have provided additional epidemiological data which are not indicators but are useful planning tools: projection of cancer cases and cancer deaths to 2026, and an analysis of the contributions of the main drivers for the number of new cancer cases – population aging, population growth and risk.

Measures can be defined and calculated differently, which is why it is important that comparisons be made to similarly-defined and calculated indicators - hence the need to provide the direction and meaning of a trend in the indicators in this report. Often national benchmarks are not readily available, but where possible, we have incorporated information to appropriately compare Manitoba with other provinces. However, until standardized measurements are adopted across provinces (ultimately also international jurisdictions), readers are cautioned that comparisons to data from other sources are not always valid and should be avoided.

In closing, though mandated by Manitoba Health to prepare this report, CCMB also has a moral obligation to measure the performance of the cancer system and share this information openly with partners in order to improve the system and reduce the burden of cancer in Manitoba.



**DR. DONNA TURNER, PhD**

Provincial Director, Population Oncology  
CancerCare Manitoba





# CancerCare Manitoba's 2010 Indicators: An Overview

CancerCare Manitoba's Community Health Assessment measures the performance of the cancer system in Manitoba by examining over 20 health indicators. The indicators used in this report span the cancer spectrum from prevention to palliation and even provide a look into the future.

To be truly meaningful and interpreted appropriately by the reader, health indicators must be clearly defined. The following is an overview of the measures presented in this report; further details are provided in the Glossary and Technical Appendix at the back.

## Prevention

Risk factors for cancer include lifestyle, environmental factors and family history. For this report, we have focused on lifestyle, including obesity, smoking, alcohol consumption, poor diet and physical inactivity. These behaviours have been addressed using data from the Canadian Community Health Survey (CCHS) using cycle 1.1 (2000-2001) data as baseline and cycle 3.1 (2005) data to measure current status, except for fruit and vegetable consumption which was not asked in the 2005 CCHS, so cycle 2.1 (2003) was used. These data were analyzed for CancerCare Manitoba (CCMB) by the Manitoba Centre for Health Policy.

Readers should note that we have used crude rates of risk factors which are consistent with data shown by Statistics Canada and the Canadian Partnership Against Cancer. While others have used age-adjusted rates (the Manitoba Centre for Health Policy's *Manitoba RHA Indicator Atlas* for example), we found that the adjustment made little difference. Therefore, for ease of interpretation, we have used the more straightforward crude rates (a simple percent).

Additionally, the measure of physical activity for this report includes all activity (work, travel and leisure), not strictly leisure time activities. This is consistent with the definition used by the Manitoba Centre for Health Policy, but not our national partners who typically use leisure time measures of physical activity only.

## Access

### Screening

Screening rates for cervical and breast cancer are based on information routinely collected by CCMB's well-established Manitoba Breast Screening Program and Manitoba Cervical Cancer Screening Program. The newest screening program, ColonCheck Manitoba, is too new to have such data, so self-report from a baseline survey administered by CCMB (with funding support from the Canadian Partnership Against Cancer) in 2007-2008 has been used here. The more established breast and cervical programs use measures that are consistent with definitions used by national screening networks. Similar standards for colorectal cancer screening are currently under development. The indicators all reflect participation rates in the target populations in a specified timeframe.

### Wait times

Two wait time indicators are presented in this report representing two points along the cancer journey – diagnosis (breast assessment after an abnormal screen) and treatment (radiation therapy).

#### *Breast assessment waits*

The Manitoba Breast Screening Program follows national standards and records the time to final diagnosis for women who have an abnormal mammogram. Only participants of the screening program are included in the analysis. This report uses 2004-2006 information as baseline with current measures based on 2006-2008 data.

#### *Radiation therapy waits*

CancerCare Manitoba's Radiation Therapy Program uses national standard definitions from the Canadian Association of Radiation Oncologists to report the time between "ready to treat" to start of radiation therapy. This report uses patient data collected about five years ago (2005-2006) and from a more recent timeframe (2007-2008).

## Treatment utilization

This report used data from the Manitoba Cancer Registry to determine the percentage of patients who underwent surgery (excluding biopsies), radiation therapy and systemic therapy (chemotherapy or hormone therapy) for their cancer. Figures show treatment utilization changes from patients diagnosed in 2000-2002 to those diagnosed five years later.

The utilization measures shown in this report can be used to aid in the planning for services because they indicate the number of patients who will require specific services. However, the treatment rates do not always indicate appropriateness and should not be over-interpreted (for example, more is not necessarily better). Many factors contribute to treatment including the specific cancer diagnosis, its stage (how far it has spread), a patient's medical fitness and patient choice. Our data may also miss treatment occurring outside of Manitoba.

Radiation therapy after breast conserving surgery in women with early stage breast cancer is considered standard of care, other than in exceptional circumstances, and may be used as a measure of appropriate care: women who do not have radiation therapy after this surgery are at a high risk of recurrence. But as with all treatment measures used in this report, women with early stage breast cancer who have breast conserving surgery without radiation therapy may still be receiving appropriate care due to specific clinical factors or patient choice.

## Accessing the cancer system

The proportion of patients diagnosed at a late stage (stage IV, when metastasis or distant spread of the cancer has already occurred) is an overall indicator of effectiveness of early detection and access to the cancer system. In the case of breast cancer, where the public is aware of signs and symptoms, and early detection is possible through population-based screening, this percentage is very low and survival is very good. The same circumstances do not exist for most other types of cancer. Data for these measures are available starting in 2004 from the Manitoba Cancer Registry – the first cancer registry in Canada to collect stage at diagnosis for all cancer types on a population-wide basis. For this report, data are shown for patients diagnosed in 2005-2007.

## End-of-life care

The current measure, Manitobans dying of cancer who have an acute care hospital stay in the last two weeks of life, shows that many cancer patients currently need hospitalization near end-of-life. These data are shown for patients dying of cancer in 2000-2002 (baseline) and 2005-2007 (current). As with the other treatment utilization indicators, this is a helpful measure for planning services, but does not show appropriateness of care.

## Outcomes

### Incidence, mortality and survival

Information on the number of new cancers (incidence), mortality and five-year relative survival (a way of comparing survival of people who have cancer with those who don't - it shows how much cancer shortens life\*) is based on data from the Manitoba Cancer Registry.

Incidence, mortality and survival are classic cancer surveillance measures. The numbers have been age-standardized to the 2001 Manitoba population to support comparisons with other disease rates calculated by Manitoba sources (Manitoba Health and the Manitoba Centre for Health Policy for example). However, readers are cautioned not to compare these rates to those in other reports such as those produced by Statistics Canada; these reports may use *other* standard populations which, by definition, mean the statistics are not comparable.

### Patient experience

Results recorded in this section come from a standardized patient satisfaction survey used by many Canadian cancer centres administered by NRC Picker. For Manitoba, this survey has been used twice, first in 2004 and most recently in 2008. The survey measures many aspects of patient satisfaction including overall satisfaction, emotional support and pain management.

## Projections

The number of new cancer cases and deaths expected in the next 20 years have been estimated using historical data from the Manitoba Cancer Registry applied to population projections.

While not an indicator of cancer system performance, this information is essential for planning future cancer programs and services.

\* From the National Cancer Institute ([www.cancer.gov](http://www.cancer.gov)), Dictionary of Cancer Terms, *relative survival rate*.



# Key Findings

Based on these system indicators, the overall picture of cancer care and control in Manitoba is satisfactory, but has room for improvement. Variations are shown by service, geography, and type of cancer, as well as over time. Some regions show challenges in many aspects of cancer control, particularly those in the North.

## Prevention

- ▶ Risk factors for cancer (and many other chronic diseases) show considerable variation by region and are frequently higher in the North. If unaddressed, there could be serious implications for cancer rates and need for service delivery in the future.

## Access

- ▶ Screening is an important part of a healthy lifestyle. Some Manitoba communities have embraced testing more than others. Higher uptake is found in the southwest corner of the province, with lower participation rates in the North. Colorectal cancer screening is the newest provincial screening program and, not surprisingly has a lower rate of uptake than the more established breast and cervical programs; still, Manitoba's colorectal screening rates are the highest in the country
- ▶ Wait times can be improved. Of the components measured along the cancer journey (wait times from mammogram to final diagnosis and ready to treat to start of radiation therapy), women in the North wait almost twice as long for a final diagnosis after an abnormal mammogram. Radiation therapy waits have reduced considerably over time and in the time since data were analyzed for this report, have reached the national benchmark of 100% treatment within four weeks of being ready to treat.
- ▶ Data show CancerCare Manitoba is responsive to updated clinical guidelines and new treatments. For example, radiation therapy treatment for rectal cancer has increased substantially because of a change in standard management of the disease. At the same time, it has decreased for prostate cancer, likely due to an increased (and appropriate) use of the watch and wait management strategies.

- ▶ Radiation therapy use is the lowest in the southwest corner of the province. This is expected to change with the opening of the Western Manitoba Cancer Centre in Brandon in 2011.
- ▶ The Manitoba Breast Screening Program is well established and the community is aware of signs and symptoms of breast cancer. The rate of late stage breast cancer is low – around 5% - and that corresponds with the survival rate approaching 90%.
- ▶ The highest proportion of people diagnosed with late stage colorectal cancer and prostate cancer are in the North, which corresponds inversely with cancer mortality rates.

## Outcomes

- ▶ Outcomes are the ultimate measures of cancer control, and while Manitoba outcomes (incidence, mortality and survival) are remaining fairly stable, overall there is little positive progress.
- ▶ Cancer rates in the rural south are relatively low, consistent with lower risk factor prevalence (for example smoking and alcohol consumption rates are low).
- ▶ The ultimate measure of overall cancer system success is a lower mortality rate. As an early indicator of success, there is a lower proportion of late stage diagnosis in areas where screening programs, for example colorectal cancer screening, have become part of the population's regular health care routine. Unfortunately, not all cancers can be screened for.
- ▶ Overall, patients report they are satisfied with care they receive throughout the province. However, when the components of care are separately categorized, there is room for improvement.

## Projections

- ▶ Most of the increase in new cases of cancer over the last 20 years is due to Manitoba's aging population. Looking ahead another 20 years, if the risk factor prevalence in Manitoba does not change, we expect there will be over 8,000 cases of cancer diagnosed every year, an increase of almost 50% compared to current numbers.



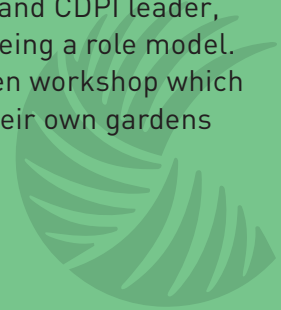
# Prevention

Eugennie Mercredi started the Blue Light Project in November 2007. With funds from the Chronic Disease Prevention Initiative (CDPI), she bought blue light bulbs, then she and her partner Reg Mercredi went door-to-door asking people if they were smoking in their house. If the house was smoke-free, she gave them a blue light bulb. “People were pretty excited about it,” she said. By the time Christmas rolled around, there were a lot of blue lights in Cross Lake and “it really looked awesome.”

Mercredi quit smoking three years ago. As an aboriginal diabetes worker and CDPI leader, she has become aware of practising healthy eating and active living and being a role model. In conjunction with Manitoba Foods, she helped set up a community garden workshop which attracted 21 participants. A lot of people at Cross Lake are now making their own gardens with free seeds from Manitoba Hydro.




Cross Lake, Blue Lights for Smoke-Free Homes



MANITOBA STORIES, CHRONIC DISEASE PREVENTION INITIATIVE (CDPI)





# Prevention

<b>INCREASE YOUR RISK</b>		Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>
	<b>Obesity</b> percent of adults (ages 18+) with Body Mass Index classified as "obese". Based on self-reported height and weight. <sup>a</sup>	18.2%	18.4%	→	16.0% - 27.2%
	<b>Smoking</b> percent of daily current or occasional smokers (ages 12+) <sup>a</sup>	24.9%	20.6%	↓	14.2% - 37.1%
	<b>Alcohol</b> percent consuming five or more alcoholic drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	18.0%	17.1%	→	12.1% - 27.9%

<b>REDUCE YOUR RISK</b>		Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>
	<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	30.8%	36.1%	↑	25.5% - 40.3%
	<b>Total Physical Activity</b> percent of employed residents at moderate or active physical activity (ages 15 - 75) <i>(Note: Includes work, travel/ and leisure time activity.)</i> <sup>a</sup>	61.3%	67.2%	→	64.8% - 77.6%

Source: <sup>a</sup>Canadian Community Health Survey Cycles 1.1 (2001), 2.1 (2003), and 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red).

RHA refers to Regional Health Authority.

## What does this tell us?

### More can be done to reduce personal risk.

- ▶ In Manitoba, obesity rates and alcohol consumption have remained similar over the past two years while smoking has decreased slightly.
- ▶ At the same time, Manitobans are doing more to prevent the occurrence of cancer by increasing their consumption of fruits and vegetables and being fairly active.

### The results tell us that:

- ▶ 20.6% of Manitobans 12 years of age and older are smokers.
- ▶ The majority of all Manitobans are active in their daily routine.
- ▶ Risk factors vary by region.

## Why is this important?

### Prevention can help to reduce cancer risk.

- ▶ The combination of risk factors including smoking, alcohol and poor eating habits increases the risk of developing some cancers.<sup>1,2</sup>
- ▶ Research shows that up to 50% of cancer could be prevented through lifestyle changes.<sup>2,3</sup>

## How do we compare?

- ⊗ Obesity and alcohol rates are slightly higher in Manitoba than the Canadian average.<sup>4</sup>
- ⊗ Fruit and vegetable consumption is lower in Manitoba than the Canadian average.<sup>4</sup>
- ⊖ Total physical activity in Manitoba is similar to the national average.<sup>4</sup>
- ⊖ Smoking rates in Manitoba are similar to the national average.<sup>4</sup>

## What is CancerCare Manitoba doing to help prevent cancer?

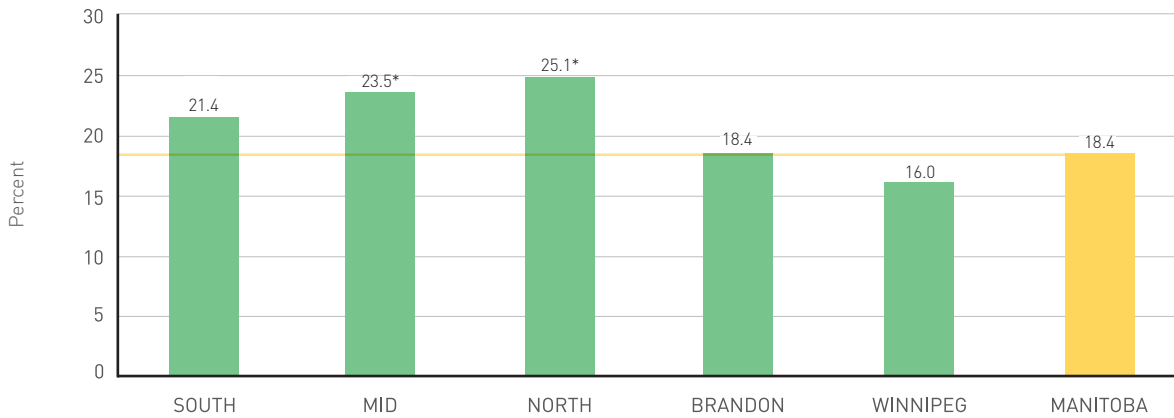
### With our partners we are working to raise awareness about healthy living as a way to prevent chronic diseases including cancer.

- ▶ CancerCare Manitoba supports healthy living efforts including:
  - ▶ working with a variety of partners to fulfill our role of preventing cancer, particularly measuring risk factors at a community level and supporting healthy public policies. Our partners in these efforts include the Alliance for the Prevention of Chronic Disease, Partners in Planning for Healthy Living, the Regional Health Authorities and government departments who share the common mandate of preventing chronic diseases.
  - ▶ involvement in special projects working with particular populations and communities, including the Youth Smoking Survey and the CCMB-Norway House Cancer Services Adaptation Initiative.
  - ▶ the three provincial screening programs partnering with the CancerCare Manitoba Foundation to develop the *Reduce Your Risk* DVD with voice-overs in 16 languages. The DVD includes information about prevention as well as screening. Available to view online in many languages or to order, it has been distributed to over 1,000 health workers, clinics and community volunteers in Manitoba.
- ▶ CancerCare Manitoba Foundation supports healthy lifestyles through the promotion of the five steps everyone can take to reduce their cancer risk as well as through the Challenge for Life fundraising event, which encourages participants to set lifestyle goals in addition to fundraising goals.

# Obesity

Figure 1.1

Percent of adults (ages 18+) with Body Mass Index classified as “obese”, by regional groupings

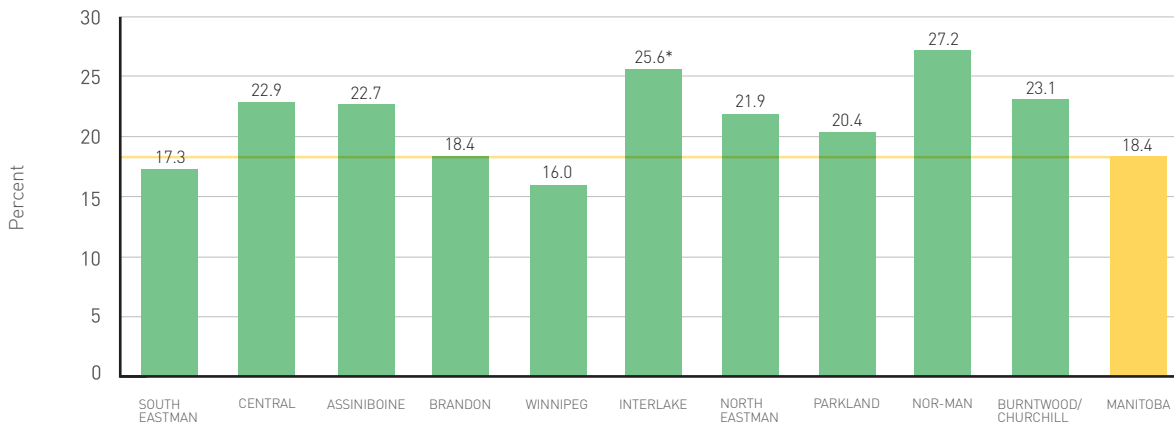


Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 1.2

Percent of adults (ages 18+) with Body Mass Index classified as “obese”, by Regional Health Authority



Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

**Obesity rates in many health regions in Manitoba are above the provincial average.**

- ▶ Figure 1.1 shows the highest prevalence of obesity is in the North at 25.1%.
- ▶ Figure 1.2 shows the highest percentage of obesity is in the NOR-MAN region at 27.2% and the lowest percentage is in Winnipeg at 16.0%.

## What else do we know?

- ▶ Obesity rates have remained constant over the past five years.
- ▶ In Manitoba, the proportion of obesity is higher among men than women.<sup>4</sup>

## Why is this important?

**Obesity is linked to many health conditions including cancer.**

- ▶ Obesity is one the leading factors related to cancer development.<sup>1</sup>
- ▶ The World Health Organization estimates that diet is directly related to 30% to 40% of cancer cases in men and up to 60% of cancer cases in women.<sup>5</sup>
- ▶ Nationally, obesity rates are on the rise and research is linking the rise to increased risk of cancer.<sup>1,6</sup>

---

## How do we compare?

**More improvements could be made in Manitoba.**

- ✘ Prevalence of obesity in Manitoba is higher than the national average by about 2%.<sup>4</sup>
- ✘ The lowest obesity rate in Canada is found in British Columbia. The rate is about 5% lower than observed in Manitoba.<sup>4</sup>

---

## What is CancerCare Manitoba doing to help reduce obesity?

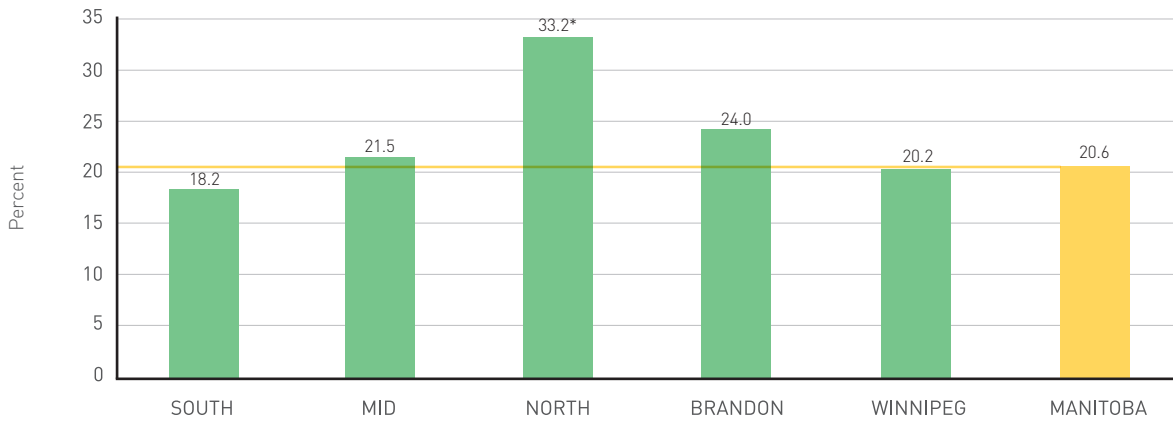
**With our partners we are raising the profile of healthy living including maintaining a healthy weight.**

- ▶ CancerCare Manitoba, in partnership with CancerCare Manitoba Foundation, launched the risk reduction campaign to promote the five steps we can all take to reduce our cancer risk including eating well and shaping up.
- ▶ The Foundation also tied a healthy lifestyle component to the Challenge for Life fundraising event. In addition to raising funds to support all cancers, the Challenge asks participants to set a personal health and fitness goal.
- ▶ Patients can access nutritional counselling through Patient and Family Support Services to discuss topics such as unwanted weight gain or general questions about healthy eating or a healthy diet after cancer treatment.

# Smoking

Figure 1.3

Percent of current daily or occasional smokers (ages 12+), by regional groupings

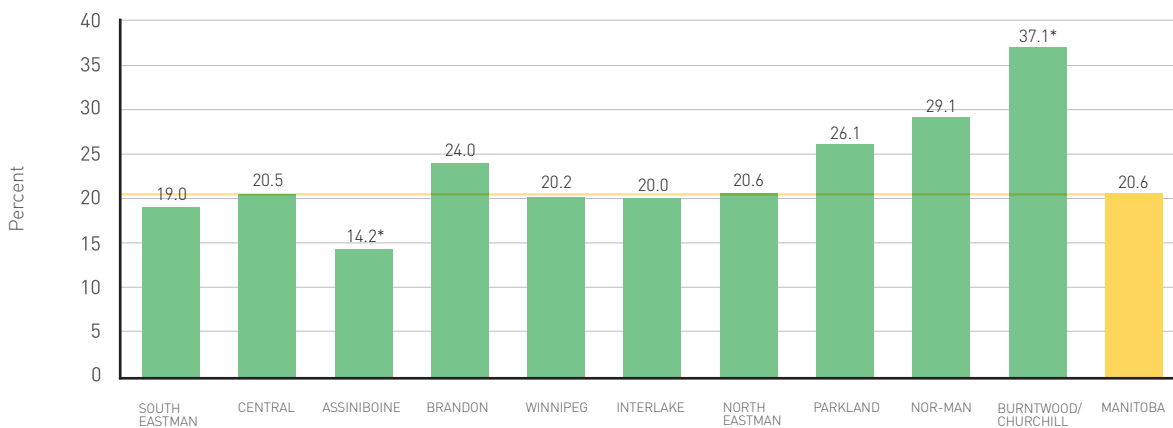


Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 1.4

Percent of current daily or occasional smokers (ages 12+), by Regional Health Authority



Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

### Smoking continues to be a health issue in Manitoba.

- ▶ Figure 1.3 shows smoking rates are highest in the North at 33.2%.
- ▶ Figure 1.4 shows the highest percentage of smokers is in the Burntwood/Churchill regions at 37.1% and the lowest percentage is in the Assiniboine region at 14.2%.

## What else do we know?

### Some groups are smoking more than others.

- ▶ Smoking is slightly more common among men than women.<sup>4</sup>
- ▶ Adults between 20 and 34 years old have the highest smoking rates.<sup>4</sup>
- ▶ Smoking prevalence has decreased slightly over the past five years.
- ▶ Smoking rates in the Burntwood/Churchill regions have declined slightly over the past five years.

## Why is this important?

### Smoking is linked to mortality and chronic diseases.

- ▶ One in five deaths in Canada is due to tobacco use and 22% of all deaths in Canada are due to smoking.<sup>7,8</sup>
- ▶ Smoking causes chronic diseases including cancer, heart disease, emphysema, and ulcers.<sup>9</sup>
- ▶ Smoking is linked to cancer of the lung, larynx, and esophagus.<sup>1,5</sup>
- ▶ Quitting smoking at any age helps, but the earlier you quit, the greater the benefit.
- ▶ The incidence and mortality rates of lung cancer decrease to 30-50% within 10 years after quitting.<sup>10</sup>

## How do we compare?

### The smoking rates are average in Manitoba.

- ⊖ The Manitoba smoking rate is similar to the national rate.<sup>4</sup>
- ✖ The lowest smoking rates in Canada are in British Columbia. The rates are about 5% lower than in Manitoba.<sup>4</sup>

## What is CancerCare Manitoba doing to help reduce smoking?

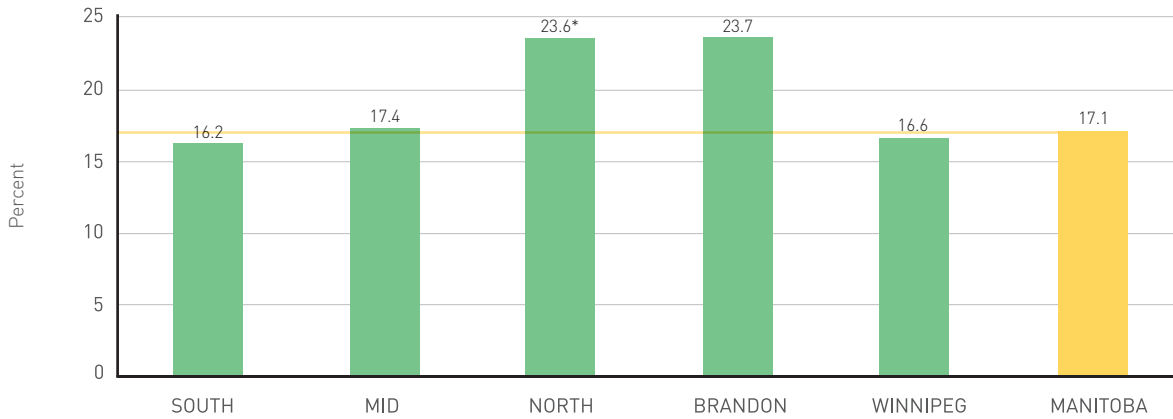
### CancerCare Manitoba supports tobacco reduction policies and activities.

- ▶ CancerCare Manitoba Foundation is promoting the "Be Tobacco Free" campaign. The campaign focuses on teaching the public, particularly young people, about the ill effects of smoking.
- ▶ To help reduce this risk factor, CCMB partners with a number of organizations including MANTRA (Manitoba Tobacco Reduction Alliance) and the Alliance for the Prevention of Chronic Disease.
- ▶ CancerCare Manitoba was the provincial coordinating centre for the most recent national Youth Smoking Survey with the University of Waterloo. The survey records youth smoking behaviour and trends, providing information for program managers and policy makers.

# Alcohol

Figure 1.5

Percent consuming five or more alcoholic drinks on one occasion, at least once a month in the past year (ages 12+), by regional groupings

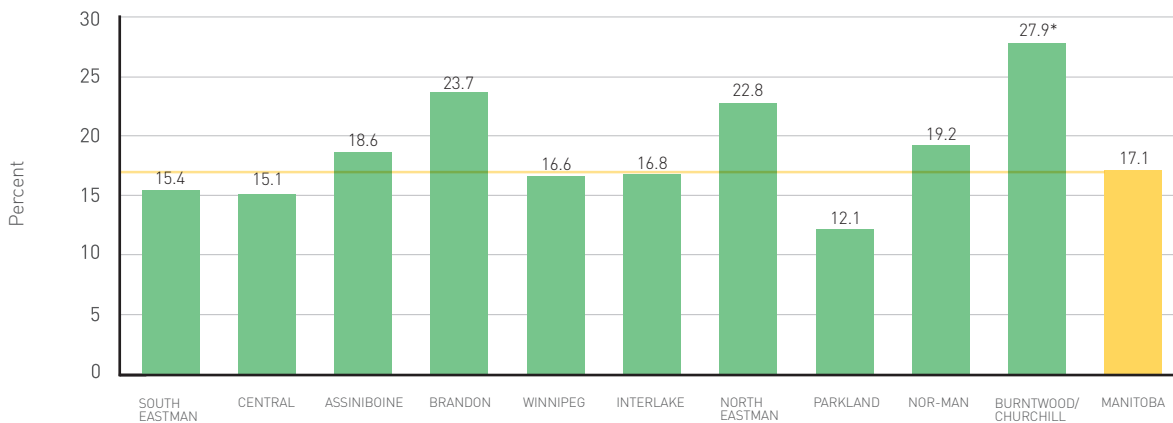


Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 1.6

Percent consuming five or more alcoholic drinks on one occasion, at least once a month in the past year (ages 12+), by Regional Health Authority



Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

**Excessive alcohol consumption, described as five or more drinks on one occasion at least once a month in the past year, has slightly decreased in Manitoba.**

- ▶ Figure 1.5 shows excessive alcohol consumption rates are highest in Brandon at 23.7% and the North at 23.6%.
- ▶ Figure 1.6 shows the highest rate of excessive alcohol consumption is in the Burntwood/Churchill regions at 27.9% and the lowest rate is in the Parkland region at 12.1%.

## What else do we know?

- ▶ In Manitoba, excessive alcohol consumption among men is almost double that of women.<sup>4</sup>
- ▶ Excessive alcohol consumption is highest in 20 to 34 year olds.<sup>4</sup>

## Why is this important?

**Excessive alcohol consumption leads to increased risk for cancer.**

- ▶ Drinking alcohol causes cancers of the oral cavity, pharynx, larynx, esophagus, and liver.<sup>1,11</sup>
- ▶ Research now shows that alcohol consumption is also linked to breast cancer and colorectal cancer.<sup>1,13</sup>
- ▶ According to the results from the Million Women Study in the United Kingdom, even low to moderate alcohol consumption increases risk for cancer.<sup>14</sup>
- ▶ Alcoholic drinks are now classified as a Group 1 carcinogen by the International Agency for Research on Cancer.

---

## How do we compare?

**Excessive alcohol consumption is higher in Manitoba than in other parts of Canada.**

- ✖ Data from national surveys show that the excessive drinking rate in Manitoba is higher than the national rate by about 2%.<sup>4</sup>
- ✖ Ontario and British Columbia generally have the lowest rates of excessive alcohol consumption in Canada, about 3-4% lower than found in Manitoba.<sup>4</sup>

---

## What does CancerCare Manitoba do to help reduce excessive alcohol consumption?

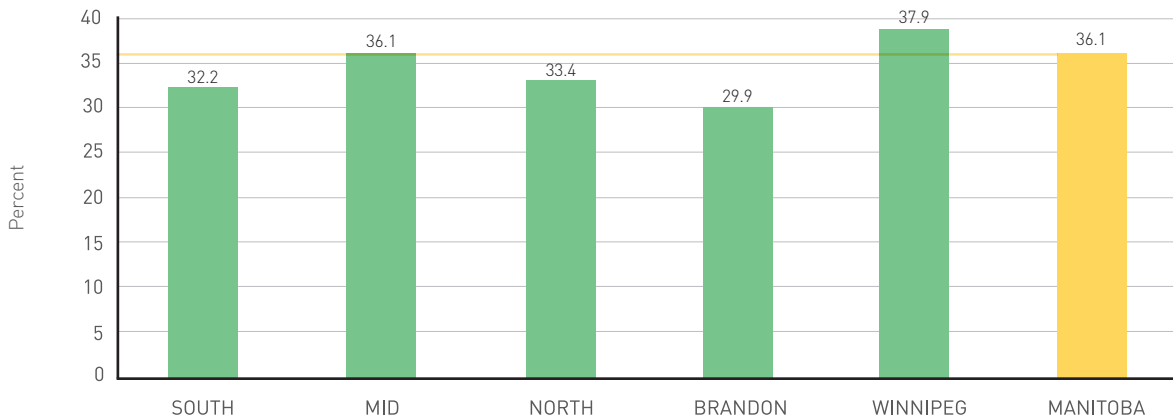
- ▶ In Manitoba, our understanding of the scientific literature on the effects of alcohol needs to be communicated to target populations.
- ▶ More strategies with a wider range of organizations and community partners are needed to reduce excessive alcohol intake among younger age groups and high risk populations.



# Fruits and Vegetables

Figure 1.7

Percent consuming five or more fruits and vegetables a day (ages 12+), by regional groupings

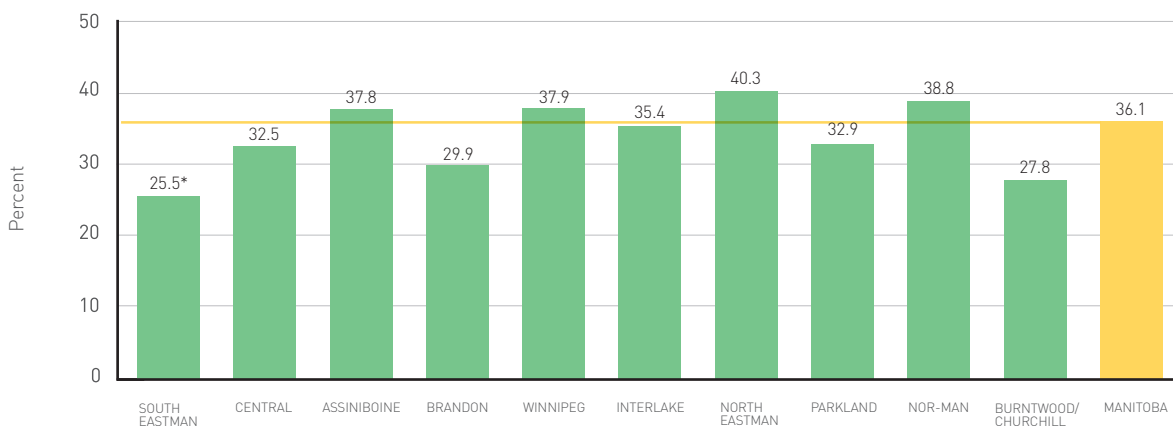


Source: Canadian Community Health Survey cycle 2.1 (2003) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 1.8

Percent consuming five or more fruits and vegetables a day (ages 12+), by Regional Health Authority



Source: Canadian Community Health Survey cycle 2.1 (2003) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

**In Manitoba, the majority of the population does not consume the recommended number of fruit and vegetable servings.**

- ▶ Figure 1.7 shows that when looking at RHA groupings and major urban areas, the lowest fruit and vegetable consumption is in Brandon at 29.9%.
- ▶ Figure 1.8 shows that among the RHAs, the highest percentage of fruit and vegetable consumption is in the North Eastman region at 40.3% and the lowest percentage is in the South Eastman region at 25.5%.

## What else do we know?

- ▶ Women eat more fruits and vegetables daily than men.<sup>4</sup>
- ▶ Vegetable and fruit consumption is lowest among Manitobans aged 35 to 44 years old.<sup>4</sup>
- ▶ Vegetable and fruit consumption has increased over the past five years.<sup>4</sup>

## Why is this important?

**Eating well can reduce overall cancer risk.**

- ▶ A high intake of green and yellow vegetables and fruits is linked to a reduced risk for lung, colon, esophagus and stomach cancers.<sup>5,15</sup>
- ▶ Diets high in plant foods can protect against cancers of the endometrium and colon.<sup>15</sup>

## How do we compare?

**More could be done to encourage good eating habits.**

- ✘ Fruit and vegetable intake in Manitoba is 5-10% lower than the national average.<sup>4</sup>
- ✘ Quebec has the highest fruit and vegetable consumption in Canada. The rates are over 10% higher than Manitoba's.<sup>4</sup>

## What is CancerCare Manitoba doing to encourage vegetable and fruit intake?

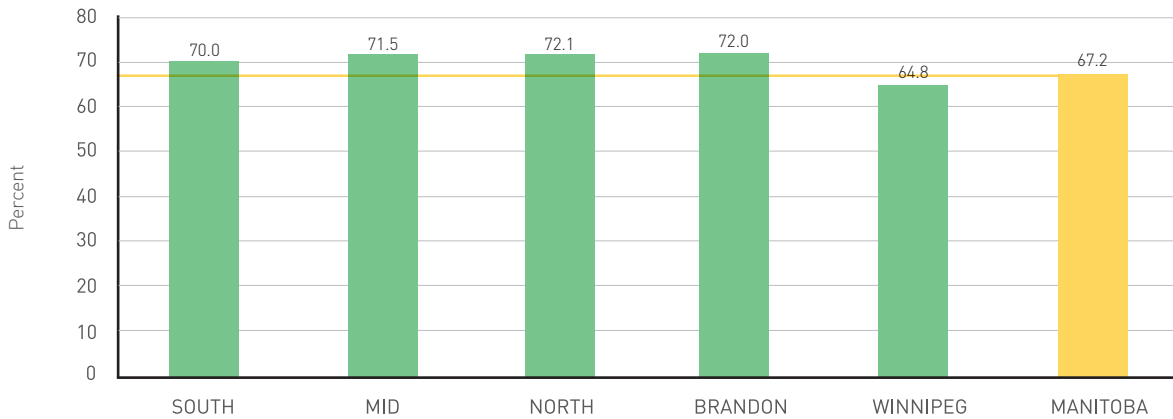
**CancerCare Manitoba supports policies and messaging advocating a good diet as part of a healthy lifestyle.**

- ▶ Many health organizations including CCMB, have come together under the Chronic Disease Prevention Initiative to help develop activities such as community gardens throughout Manitoba.
- ▶ CancerCare Manitoba has also partnered with the Alliance for the Prevention of Chronic Disease to encourage healthy eating.
- ▶ CancerCare Manitoba Foundation is actively promoting the risk reduction campaign which includes the Eat Well! message - *"It's as easy as following Canada's Food Guide to Healthy Eating!"*

# Physical Activity

Figure 1.9

Percent of employed residents reporting moderate or active physical activity (ages 15 - 75), by regional groupings



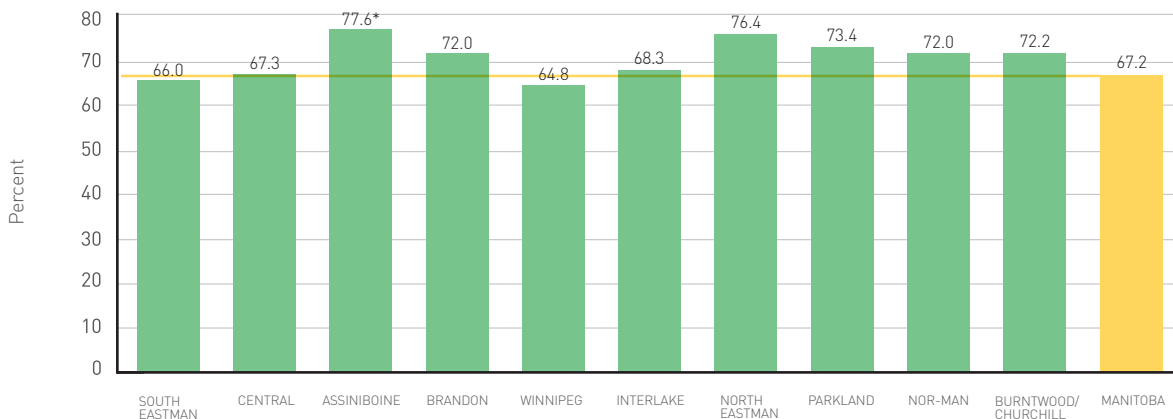
Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Note: Measure combines work, travel and leisure time activity.

Figure 1.10

Percent of employed residents reporting moderate or active physical activity (ages 15 - 75), by Regional Health Authority



Source: Canadian Community Health Survey cycle 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Note: Measure combines work, travel and leisure time activity.



## What does this tell us?

### Over half of Manitobans are physically active.

- ▶ Figure 1.9 shows that among the RHA groupings, physical activity is lowest in Winnipeg at 64.8%.
- ▶ Figure 1.10 shows that among the RHAs, the highest rate of physical activity is in the Assiniboine region at 77.6% and the lowest rate is in Winnipeg at 64.8%.

## What else do we know?

- ▶ Most population-based reports of “physical activity” have focused only on leisure time activity, which does not include exercise rates among people whose work is physically labour-intensive.
- ▶ Even using these measures, the majority of men and women are physically active during their daily routine.<sup>4</sup>
- ▶ Physical activity rates have increased in Manitoba between 2001 and 2005.

## Why is this important?

### Regular exercise can decrease the risk of developing cancer.

- ▶ Physical activity lowers the risk of developing colon cancer and may lower the risk for breast, prostate and endometrial cancers.<sup>16</sup>
- ▶ Some research suggests that moderate to high levels of activity have been found to lower the risk for stomach, lung and liver cancers.<sup>17,18,19</sup>

---

## How do we compare?

### Manitobans are fairly active, similar to other Canadians.

- ⊖ The proportion of Manitobans who are physically active in their leisure time is similar to the national rate,<sup>4</sup> but incorporating work (and travel) exercise increases this rate substantially.
- ✖ British Columbia is the most active population in Canada. The leisure time physical activity rates are about 5% higher than Manitoba's.<sup>4</sup>

---

## What is CancerCare Manitoba doing to encourage active living?

### CancerCare Manitoba supports policies and messaging emphasizing physical activity as an important part of a healthy lifestyle and supports chronic disease prevention policy.

- ▶ CancerCare Manitoba partners with the Alliance for the Prevention of Chronic Disease to encourage active living.
- ▶ CancerCare Manitoba Foundation actively promotes exercise through its risk reduction campaign and the *Shape Up!* message - just 10 minutes 3 times a day can help protect against colon and breast cancer.
- ▶ CancerCare Manitoba Foundation supports physical activity through the Challenge for Life fundraising event which encourages participants to set lifestyle goals as well as fundraising goals.

# References

- 1 Danaei G et al. (2005). One-third of cancer deaths may be attributable to nine modifiable risk factors. *Lancet* 366:1784-03.
- 2 Ford E, Bergmann M, Kroger J, Schienkiewitz A et al. (2009). Healthy Living as the best revenge: findings from the European Prospective Investigation into cancer and nutrition-Potsdam Study. *Arch Inter Med* 169(5): 1355-62.
- 3 Harvard Center for Cancer Prevention. (1996). Causes of human cancer. *Cancer Causes Control* 7 (Suppl).
- 4 Statistics Canada. Canadian Community Health Survey (CCHS), 2007, 2005 and 2003. Available online at: (<http://cansim2.statcan.gc.ca/cgi-win/cnsmcgi.exe?LANG=e&ResultTemplate=CST&CORCMD=GETEXT&CORTYP=1&CORRELTYP=5&CORID=3226>)
- 5 World Health Organization. (1998). Manual on the prevention and control of common cancers. WHO Regional Publications, Western Pacific Series, No. 20. Office of Publications, World Health Organization, Geneva, Switzerland.
- 6 Shields M, Tremblay M, Lavoie M et al. (2010). Fitness of Canadian adults: Results from the 2007-2009 Canadian Health Measures Survey. Statistics Canada, no. 82-003-X Ottawa, Canada.
- 7 Health Canada, Smoking Attributable Mortality Data 1998. Available online at: <http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/research-recherche/mortal/1998-eng.php>.
- 8 MANTRA (Manitoba Tobacco Reduction Alliance). (2003). Tobacco Reduction: A Comprehensive Strategy. MANTRA. Manitoba, Canada.
- 9 US Department of Health and Human Services. (2004). The health consequences of smoking: a report of the Surgeon General. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Available online at: [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2004/chapters.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/chapters.htm). Accessed April 9, 2010.
- 10 US Department of Health and Human Services. (1990). The health benefits of smoking cessation: a report of the Surgeon General. Washington DC: US Government Printing Office.
- 11 Teyssen S, Singer MV. (2003). Alcohol-related diseases of the oesophagus and stomach. *Best Pract Res Clin Gastroenterol* 17: 557-573.
- 12 Boyle P, Bofetta P. (2009). Alcohol consumption and breast cancer. *Breast Cancer Research* 11 (suppl 3): 1-4.
- 13 Qasim A, O'Morain C. (2010). Primary prevention of colorectal cancer: are we closer to reality? *European Journal of Gastroenterology & Hepatology* 22(1): 9-17.
- 14 Allen NE, Beral V, Casabonne D et al. (2009). Moderate alcohol intake and cancer incidence in women. *J Natl Cancer Inst* 101:296-305.
- 15 World Cancer Research Fund/American Institute for Cancer Research. (2007). Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective. Washington DC: AICR.
- 16 Friedenreich CM, Orenstein MR. (2002). Physical activity and cancer prevention: etiologic evidence and biological mechanisms. *American Society for Nutritional Sciences Supp.* 3456S – 3464S.
- 17 Yun YH, Lim MK, Won Y et al. (2008). Dietary Preference, Physical Activity, And Cancer Risk In Men: National Health Insurance Corporation Study. *BMC Cancer* 8:366.
- 18 Huerta J, Navarro C, Chiralque M, Torno M. (2010) Prospective study of physical activity and risk of primary adenocarcinomas of the oesophagus and stomach in the EPIC (European Prospective Investigation into Cancer and nutrition) cohort. *Cancer Causes Control* Jan 6. Epub ahead of publication.
- 19 Tardon L, Lee W, Delago-Rodriguez M, Dosemici M et al. (2005). Leisure-time physical activity and lung cancer: a meta-analysis. *Cancer Causes Control.* 16(4): 389-397.



# Access




CancerCare Manitoba manages three provincial screening programs as part of a comprehensive strategy to find breast, cervical and colorectal cancer at the earliest, and most treatable, stage. Using evidence-based testing and approaches, the programs serve to educate the population about the benefits of regular screening.

For example, ColonCheck Manitoba encourages every eligible Manitoban to be screened for colorectal cancer. In partnership with Manitoba Health and the CancerCare Manitoba Foundation, the program continues to raise awareness about screening and its effectiveness through public information initiatives. Tej Bains was part of the *It Matters to You* campaign.

At her annual check-up, Bains was given a Fecal Occult Blood Test or FOBT, the same test ColonCheck Manitoba mails to eligible Manitobans, to do at home to screen for colorectal cancer. After receiving abnormal results, a colonoscopy was scheduled. During the procedure polyps were found and removed before they turned cancerous.

Often people will wait to see a doctor until there is problem, which is why Bains is glad ColonCheck Manitoba aims to help detect colorectal cancer early and reduce the number of Manitobans who die from the disease. “It is great that the program is there to offer screening tests to those who might not see a doctor regularly.”

# Screening

SCREENING RATES		Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>
	<p><b>Colorectal Cancer</b></p> <p><b>NEW</b> FOBT: percent of men and women (ages 50 – 74) who completed a FOBT in the last two years.<sup>b</sup></p>	N/A	36.3%	NEW	15.7% - 62.5%
	<p><b>Cervical Cancer</b></p> <p>percent of women (ages 18 – 69) who had a Pap test in the last three years.<sup>c</sup></p>	69.4%	64.6%	→	55.5% - 69.1%
	<p><b>Breast Cancer</b></p> <p>percent of women (ages 50 – 69) who had a mammogram within the last two years.<sup>d</sup></p>	61.7%	62.5%	→	50.4% - 68.1%
	<p>percent of women (ages 50 – 69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program.<sup>e</sup></p>	51.1%	52.1%	→	46.3% - 60.2%

Source: <sup>b</sup>Colorectal Cancer Screening: Results of a Survey of Manitobans 50 to 74. Supported by the Canadian Partnership Against Cancer and CancerCare Manitoba. PRA Inc., 2008.

<sup>c</sup>Manitoba Cervical Cancer Screening Program Database, women (ages 18 – 69) screened April 1, 2002 – March 31, 2005, April 1, 2006 – March 31, 2009.

<sup>d</sup>Manitoba Health fee for service billing data for mammography, women (ages 50 – 69) April 1, 2004 – March 31, 2006, April 1, 2006 – March 31, 2008.

<sup>e</sup>Manitoba Breast Screening Program Database, women (ages 50 – 69) screened April 1, 2004 – March 31, 2006, April 1, 2006 – March 31, 2008.

Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red).

RHA refers to Regional Health Authority.

## What does this tell us?

### Screening rates could be improved.

- ▶ Use of the Fecal Occult Blood Test or FOBT for colorectal cancer are expected to increase as the provincial screening program is implemented.
- ▶ Cervical cancer screening rates have dropped slightly in recent years.
- ▶ Breast cancer screening rates have remained about the same over the past few years.

## Why is this important?

### Colorectal, cervical and breast cancer screening aims to find cancers early in people without any symptoms.

#### By detecting cancer at an early stage, screening programs improve the likelihood of successful treatment ultimately saving lives.

- ▶ Screening using the FOBT, along with recommended follow-up, can reduce the chance of dying from colorectal cancer by up to 25% for men and women 50 to 74 years of age.<sup>1</sup>
- ▶ Regular screening with Pap tests can prevent up to 80% of cervical cancer.<sup>2</sup>
- ▶ Regular screening mammograms can lower deaths from breast cancer by up to 25% in women 50 to 69 years of age.<sup>3</sup>

---

## How do we compare?

### Cancer screening rates in Manitoba are as good as or higher than rates across the country.

- ✔ Based on self-report, Manitoba has the highest colorectal cancer screening rates in Canada.<sup>4</sup>
- ⊖ Recent data on cervical screening for the provinces is limited, but in 2005 Manitoba had a similar percentage of women having Pap tests compared to the national average.<sup>5</sup>
- ⊖ Breast screening rates are also similar to the national average.<sup>6</sup>

---

## What is CancerCare Manitoba doing to encourage screening?

### CancerCare Manitoba operates three screening programs (breast, cervical and colorectal) designed to detect cancer at its earliest stage.

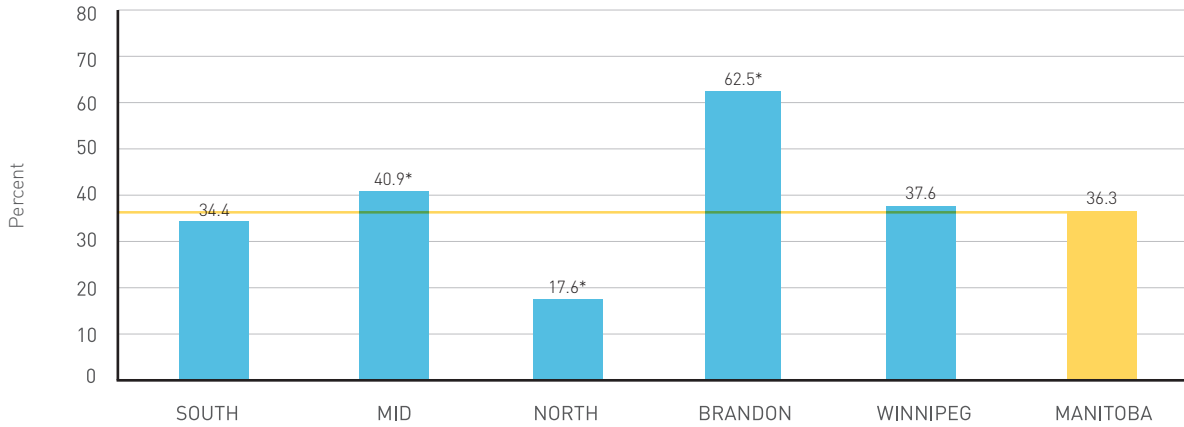
- ▶ Our provincial screening programs are helping to fulfill our commitment to provide public education and promote early detection.
- ▶ All these programs use a community-based approach to provide valuable links between CCMB, other organizations, and the public as we work together to achieve greater cancer control and cancer care excellence.
- ▶ In partnership with the CancerCare Manitoba Foundation, the programs developed the *It Matters to You* advertising campaign which outlines the importance of screening, the tests that are available and how to access screening services.



# Colorectal Cancer

Figure 2.1

Percent of men and women (ages 50 – 74) who completed a Fecal Occult Blood Test (FOBT) in the last two years, by regional groupings

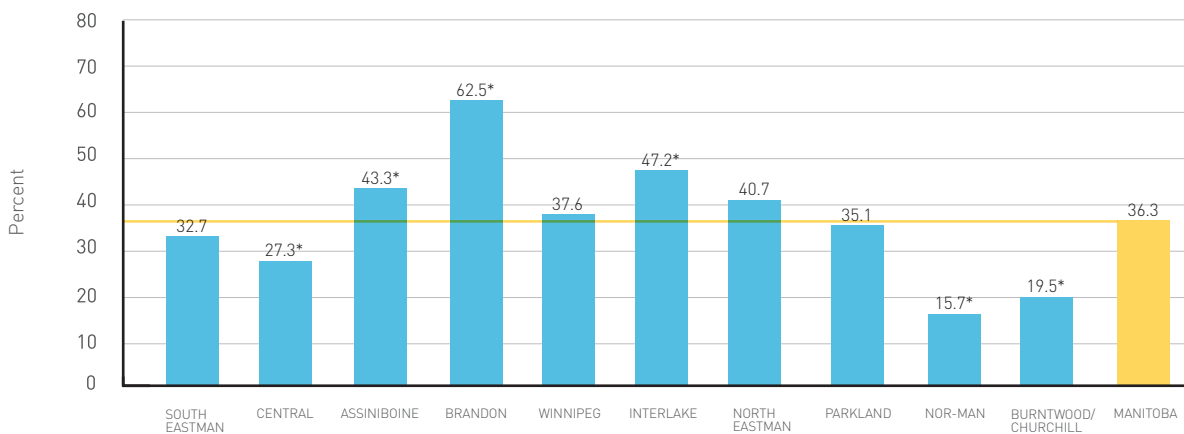


Source: Colorectal Cancer Screening: Results of a Survey of Manitobans 50 – 74. Supported by the Canadian Partnership Against Cancer and CancerCare Manitoba PRA Inc., 2008.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.2

Percent of men and women (ages 50 – 74) who completed a Fecal Occult Blood Test (FOBT) in the last two years, by Regional Health Authority



Source: Colorectal Cancer Screening: Results of a Survey of Manitobans 50 – 74. Supported by the Canadian Partnership Against Cancer and CancerCare Manitoba PRA Inc., 2008.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

Colorectal screening rates are much lower in some regions and could be improved in all regions.

- ▶ Figures 2.1 and 2.2 show that the use of the Fecal Occult Blood Test or FOBT varies across regions. The lowest rates are in the North (17.6%) and the highest rates are in Brandon (62.5%).

## What else do we know?

- ▶ Our survey data show that screening rates are slightly higher for females at 37.3% than males at 34.5%.
- ▶ Another survey, the Canadian Community Health Survey used three measures of colorectal cancer testing – an FOBT in the past two years or a sigmoidoscopy or colonoscopy in the past five years. Based on this definition, 39.8% of Canadians over the age of 50 have been tested compared to 53.5% in Manitoba.
- ▶ Recent analysis of physician billing data by ColonCheck Manitoba shows that using this broader definition of screening, 48.9% of Manitobans aged 50-74 have been tested.

## Why is this important?

Colorectal cancer is the second leading cause of cancer death.

- ▶ In Manitoba, it is estimated that over 800 men and women will be diagnosed with colorectal cancer and about 360 will die from colorectal cancer every year.<sup>7</sup>
- ▶ Screening using the FOBT, along with recommended follow-up can reduce the chance of dying from colorectal cancer up to 25%.<sup>1</sup>
- ▶ Colorectal cancer is treated successfully up to 90% of the time when detected early.<sup>8</sup>

## How do we compare?

- ✔ Manitoba has the highest level of testing for CRC compared to other provinces.<sup>4</sup>
- ✘ Colorectal cancer screening rates are lower than breast and cervical screening rates in Manitoba.

## What is CancerCare Manitoba doing to help improve FOBT screening rates?

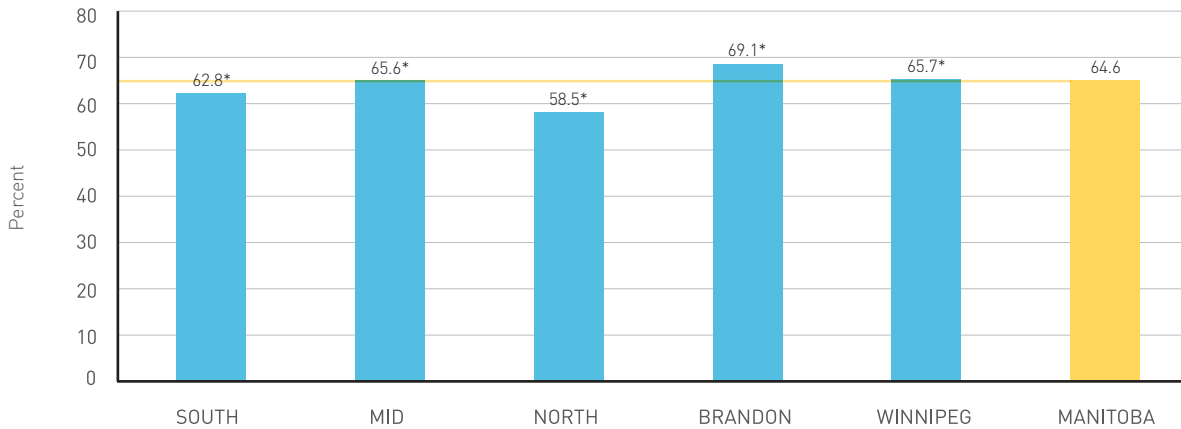
In April 2007, CCMB established one of the first provincial colorectal cancer screening programs in Canada.

- ▶ During the first phase, FOBTs and information packages were distributed to 25,000 people between the ages of 50 and 74 in the Winnipeg and Assiniboine Regional Health Authorities.
- ▶ In 2009, Manitoba Health increased funding to allow the program, now known as ColonCheck Manitoba, to expand province-wide.
- ▶ The program's key priorities are:
  - ▶ to help detect colorectal cancer early and reduce the number of Manitobans who die from the disease.
  - ▶ to work collaboratively with primary care providers (doctors, nurse practitioners) to encourage testing and increase screening rates.

# Cervical Cancer

Figure 2.3

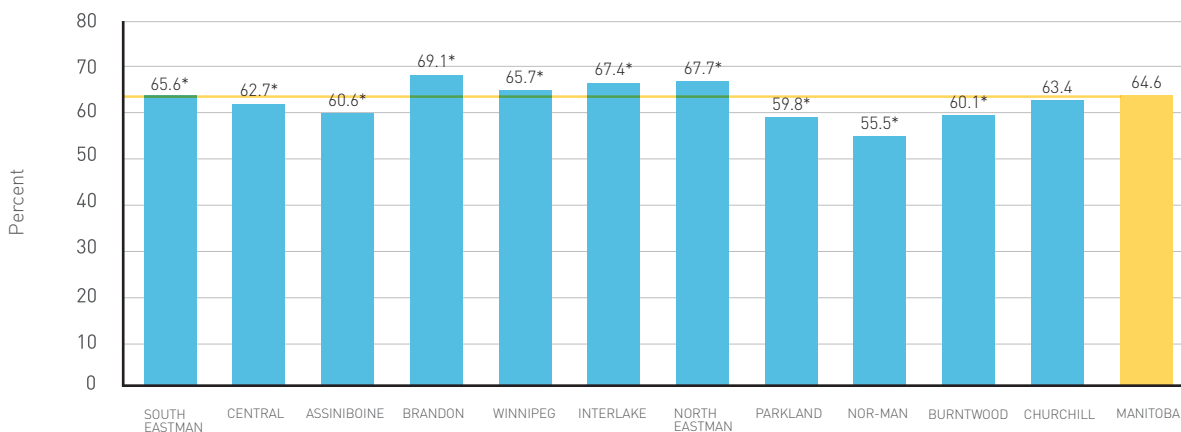
Percent of women (ages 18 – 69) who had a Pap test in the last three years, by regional groupings



Source: Manitoba Cervical Cancer Screening Program Database, women (ages 18 – 69) screened April 1, 2006 – March 31, 2009.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.4

Percent of women (ages 18 – 69) who had a Pap test in the last three years, by Regional Health Authority



Source: Manitoba Cervical Cancer Screening Program Database, women (ages 18 – 69) screened April 1, 2006 – March 31, 2009.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

Screening rates for cervical cancer vary across regions and can be improved.

- ▶ Figure 2.3 shows the lowest rate for cervical cancer screening is in the North at 58.5%.
- ▶ Figure 2.4 shows the lowest rate for cervical cancer screening was reported in the NOR-MAN region at 55.5% with the highest rate in Brandon at 69.1%.

## What else do we know?

- ▶ Cervical cancer screening rates have declined slightly over the most recent three-year period from 69.4% to 64.6%.
- ▶ Cervical cancer screening rates are highest among 20 to 29 year olds.
- ▶ Screening rates decrease with increasing age.
- ▶ About 8% of women who have Pap tests have an abnormal result and require follow-up testing.

## Why is this important?

Regular Pap tests reduce the risk of cervical cancer.

- ▶ Most women who are diagnosed with cervical cancer have never had a Pap test or haven't had one in over five years.<sup>9</sup>
- ▶ Regular screening can prevent up to 80% of cervical cancer.<sup>2</sup>
- ▶ Data from the Manitoba Cancer Registry shows that about 50 Manitoba women are diagnosed with invasive cervical cancer every year.

## How do we compare?

Women in Manitoba have similar cervical screening rates as women in other provinces.

- ⊖ Survey data shows that Manitoba's cervical screening rate is consistent with the national rate.<sup>5</sup>
- ⊖ For the period 2005-2007, British Columbia reported that 63% of women 20-69 years of age had a Pap test. Participation in Manitoba during this time period was 66%.<sup>10</sup>

## What is CancerCare Manitoba doing to help improve cervical screening rates?

CancerCare Manitoba operates the Manitoba Cervical Cancer Screening Program which aims to increase screening participation and reduce deaths from cervical cancer.

- ▶ To increase the number of unscreened women having Pap tests, the program works with health care providers to increase access to cervical cancer screening services and provides education about all aspects of cervical cancer screening including the importance of Pap tests for the prevention of cancer.
- ▶ The program also:
  - ▶ manages centralized collection of all Pap test and colposcopy results in Manitoba. This registry enables the program to notify health care providers and women when recommended follow-up has not occurred, allows health care providers and women to access screening histories and supports quality assurance activities.
  - ▶ developed a Pap Test Learning Module for health care providers. This module supports the development of local training initiatives to increase the number of health care providers able to perform Pap tests, thus increasing access.
  - ▶ will be sending letters to underscreened women to notify them of the importance of Pap testing and how to access services.
  - ▶ works with Manitoba Health to monitor and evaluate the human papilloma virus (HPV) vaccination program and newer methods of detecting cervical cancer.

# Breast Cancer

Figure 2.5

Percent of women (ages 50 – 69) receiving a mammogram in the past two years, by regional groupings

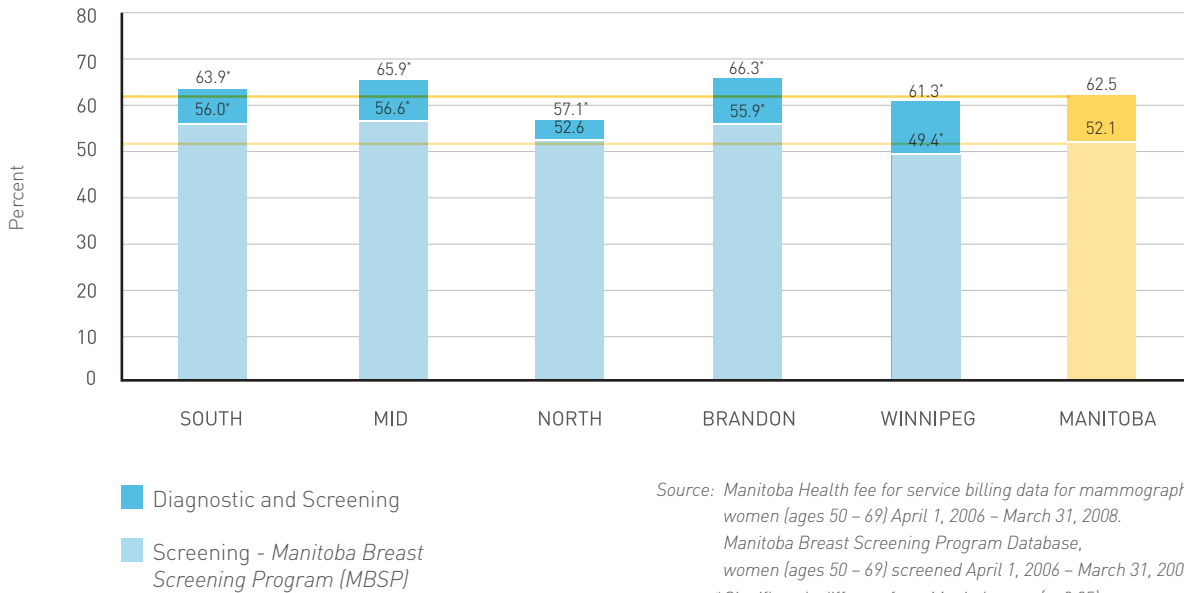
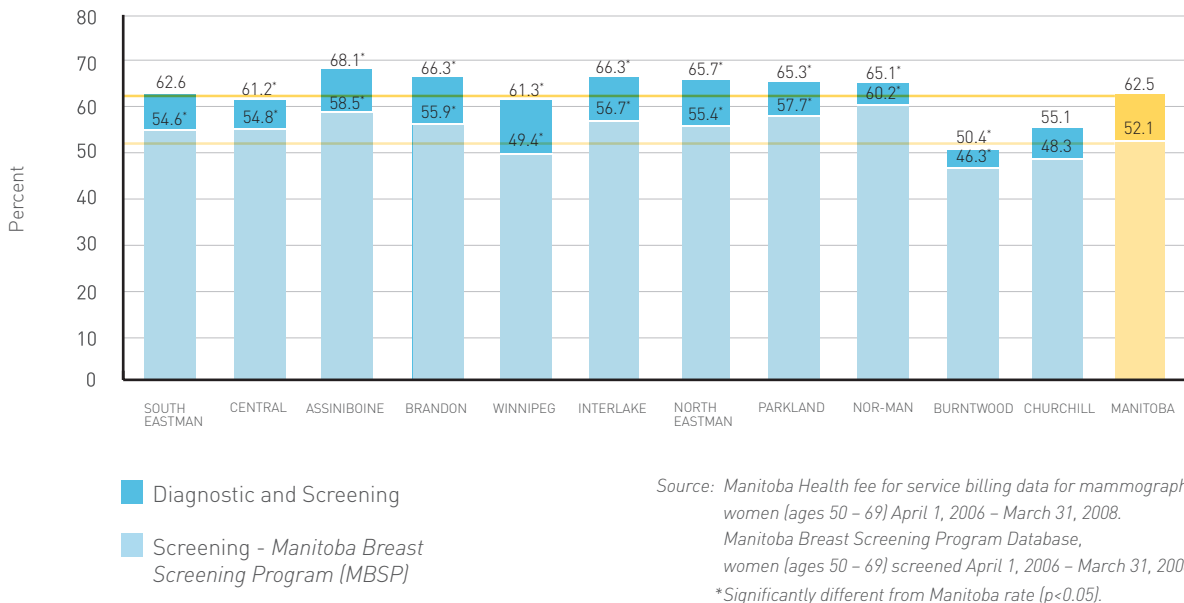


Figure 2.6

Percent of women (ages 50 – 69) receiving a mammogram in the past two years, by Regional Health Authority





## What does this tell us?

Breast screening rates are approaching the 70% target in many, but not all, RHAs.

- ▶ The majority of women aged 50 to 69 have a mammogram through the Manitoba Breast Screening Program. An additional 10% of women in this age group have a mammogram, either diagnostic or screening outside the program.
- ▶ Figure 2.5 shows mammography rates are lowest in the North at 57.1%.
- ▶ Figure 2.6 shows the lowest mammography rate is in the Burntwood region at 50.4% and the highest rate is in Assiniboine at 68.1%.

## What else do we know?

- ▶ Breast cancer screening rates have remained the same until recently. Additional funding and increased capacity for the Manitoba Breast Screening Program will increase the percentage of women screened starting in 2009/2010.
- ▶ The mortality rate for breast cancer was reduced by 24% for women 50 to 69 years of age who attended the Manitoba Breast Screening Program.<sup>11</sup>

## Why is this important?

Regular mammograms can reduce the risk of breast cancer.

- ▶ As women grow older, the chance of getting breast cancer increases.
- ▶ Research has shown that regular screening mammograms can lower breast cancer deaths in women 50 to 69 years of age by up to 25%.<sup>3</sup>

## How do we compare?

Manitoba's breast screening rates compare favourably to other provinces.



- ⊖ The mammography rate in Manitoba is similar to the national average and the majority of provinces.<sup>6</sup>
- ✔ Of all Canadian provinces, Manitoba has the third highest rate for women screened through an organized breast cancer screening program.<sup>12</sup>

## What is CancerCare Manitoba doing to help improve breast screening rates?

CancerCare Manitoba operates the Manitoba Breast Screening Program for women aged 50 and older with no symptoms and checks for early signs of breast cancer.

- ▶ Our goal is to continue to reduce mortality from breast cancer by screening 70% of women aged 50 – 69 every two years.
- ▶ To improve breast screening rates, the program:
  - ▶ provides mammograms and information on breast health through four sites located in Winnipeg, Brandon, Thompson and Morden/Winkler.
  - ▶ operates two mobile units that visit over 89 community sites throughout the province.
  - ▶ recently added 9,000 screening appointments to its yearly schedule, an increase of 23% to meet the needs of the growing population in the target age group.
  - ▶ enhances services in the North by providing transportation for women in ten remote, fly-in locations.
  - ▶ works with women from immigrant communities to address barriers to screening related to culture, access, transportation and language. Many breast health information products are available in a variety of languages.
  - ▶ partners with the colorectal and cervical screening programs to increase awareness about risk reduction and screening guidelines.

# Wait Times

WAIT TIMES		Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>
	<p><b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 – 69), from screening by mammogram to final diagnosis.<sup>f</sup></p>	28.0 days	26.0 days	→	22.0 - 41.5 days
	<p><b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment.<sup>g</sup></p> <p>percent of patients treated with radiation therapy, within four weeks, from ready to treat to start of treatment, by cancer type:<sup>g</sup></p>	86.0%	97.1%	↑	93.2% - 100.0%
	<b>lung</b>	85.5%	95.8%	↑	75.0% - 100.0%
	<b>rectal</b>	90.1%	98.5%	→	97.5% - 100.0%
	<b>breast (f)</b>	72.9%	96.8%	↑	87.0% - 100.0%
	<b>prostate</b>	57.9%	86.6%	↑	70.0% - 100.0%

Source: <sup>f</sup>Data from the Manitoba Breast Screening Program, women (ages 50 – 69) with an abnormal screen, April 1, 2004 – March 31, 2006, April 1, 2006 – March 31, 2008

<sup>g</sup>Data from CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2005 – March 31, 2006, April 1, 2007 – March 31, 2008.

Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red).

RHA refers to Regional Health Authority.

## What does this tell us?

Wait times for breast cancer assessment and radiation therapy are improving.

- ▶ Currently, these are the only two complete measures CCMB has for points along the cancer care journey.
  - ▶ One represents diagnostic workup and the other is treatment based.
  - ▶ These are not comprehensive, but provide a starting point as we continue to map the patient journey.

## What else do we know?

- ▶ Breast assessment waits vary by region and radiation therapy waits are consistent across the province.
- ▶ Both measures show improvement over time. Radiation therapy has achieved the national wait time guarantee of four weeks, as of April 1, 2008, though efforts are ongoing to work at shortening it even further. Manitoba wait times are among the shortest in the country.
- ▶ The majority of women who have an abnormal screening mammogram do not have cancer. They receive a diagnosis more quickly than women diagnosed with cancer because they require less additional testing.

## Why is this important?

Cancer services must be delivered in a timely way to reduce patient anxiety and ensure optimal treatment outcomes.

- ▶ Breast cancer assessment and radiation therapy treatment are only two of many components of the patient journey that require measurement.

## How do we compare?

- ⊖ The wait times from an abnormal mammogram to diagnosis for women attending the Manitoba Breast Screening Program are similar to those reported in other provinces.
- ✔ Wait times for radiation therapy are among the best in Canada.

## What is CancerCare Manitoba doing to improve wait times?

CancerCare Manitoba works with multiple partners across different organizations, a necessary approach due to the complexity of cancer diagnosis and treatment.

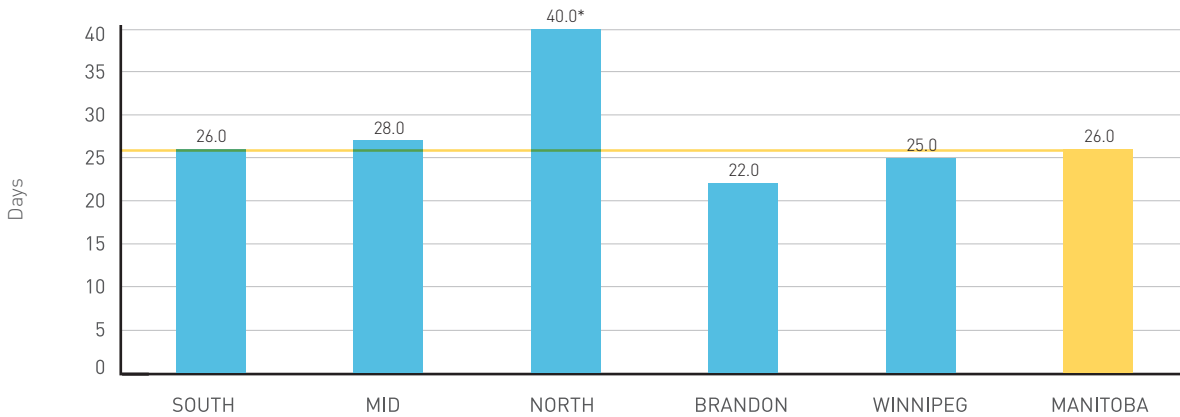
- ▶ The Manitoba Breast Screening Program coordinates the recommended testing following an abnormal mammogram which results in shorter wait times.
- ▶ The Radiation Therapy Program has implemented new software systems that help to identify delays in individual patients' progress through radiation therapy. These assist in finding and addressing bottlenecks in the process.
- ▶ The Patient Navigation Program is exploring ways to make the cancer diagnosis and treatment process more efficient and to make the care experience more positive for patients and their families. The program has already identified ways to make improvements, including the move to a centralized referral system, improved communication and tracking mechanisms as well as better alignment of services.
- ▶ Primary care providers have been engaged to assist in identifying wait times early in the patient journey from suspicion of cancer through the early stages of diagnostics to referral to a cancer specialist. The target is to cover the whole journey pathway from early suspicion to treatment across multiple care providers across the province.



# Breast Cancer Assessment Waits

Figure 2.7

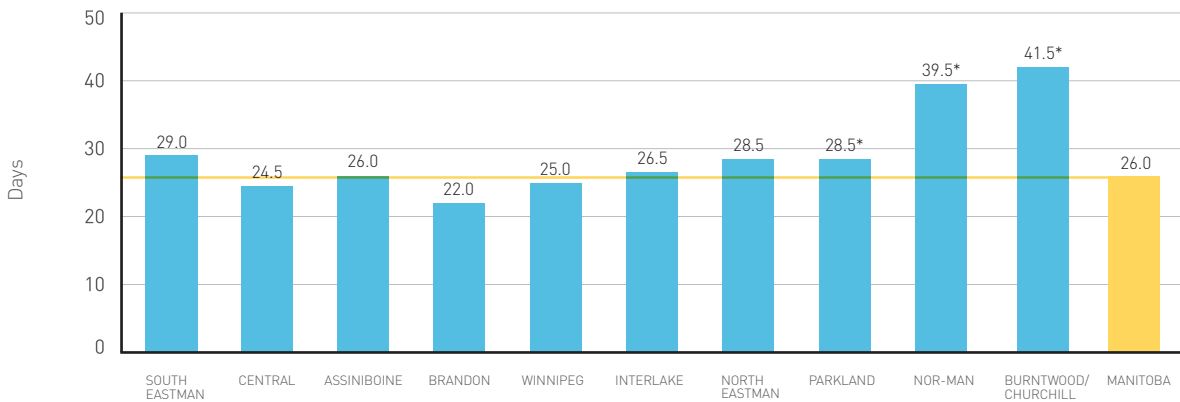
Median waiting time for women from screening by mammogram to final diagnosis in the last two years, by regional groupings



Source: Data from the Manitoba Breast Screening Program, women (ages 50 – 69) with an abnormal screen, April 1, 2006 – March 31, 2008.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.8

Median waiting time for women from screening by mammogram to final diagnosis in the last two years, by Regional Health Authority



Source: Data from the Manitoba Breast Screening Program, women (ages 50 – 69) with an abnormal screen, April 1, 2006 – March 31, 2008.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

- ▶ Figures 2.7 and 2.8 show the longest waits from breast screening by mammogram to diagnosis are in the North, where the median time was 14 days longer compared to provincial median.

## What else do we know?

- ▶ Data from the Manitoba Breast Screening Program show:
  - ▶ About 5% of women who undergo screening require referral for further testing. The majority require only a diagnostic mammogram or ultrasound.
  - ▶ Over 90% of women requiring further testing have a benign outcome. Ten percent will have a cancer diagnosis.
  - ▶ The median wait for the women diagnosed with cancer is 41 days compared to 22 for women with a benign outcome. The longer wait relates to additional tests including biopsies that need to be arranged which can result in delays.

## Why is this important?

Research has found that long waits following an abnormal breast screening result in anxiety.

- ▶ Women commonly experience acute anxiety following an abnormal breast screening result. Reducing the time that women have to wait to complete follow-up testing can reduce this anxiety.<sup>13</sup>

## How do we compare?

- ⊖ The wait times from an abnormal mammogram to diagnosis for women attending the Manitoba Breast Screening program are similar to those reported in other provinces.
- ⊖ The Canadian targets for these indicators are:
  - ▶ 90% of abnormal screens will be resolved within five weeks if no tissue biopsy is required.
  - ▶ 90% within seven weeks if tissue biopsy is required.
  - ▶ in Manitoba 76% of women who needed follow-up without a tissue biopsy had their diagnosis within five weeks of their screening date, similar to the rate of other Canadian provinces overall.
  - ▶ additionally, 41% of Manitoba women who required a tissue biopsy had a final diagnosis within seven weeks compared to 46% for all provincial programs.<sup>12</sup>
  - ▶ there is evidence of recent improvement in Manitoba.<sup>11</sup> In 2007/08, 63% of women requiring a tissue biopsy had a final diagnosis within seven weeks compared to 41% in the previous national report (2003-04).<sup>12</sup>

## What is CancerCare Manitoba doing to improve breast screening waits?

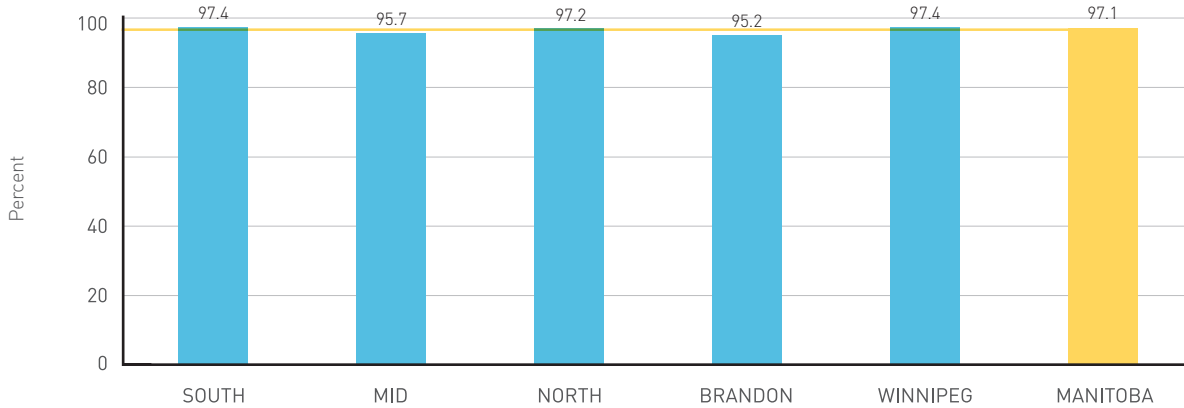
The Manitoba Breast Screening Program can coordinate diagnostic follow-up procedures for women following an abnormal screening mammogram.

- ▶ This process results in a shorter time compared to follow-up coordinated by referral back to a primary care provider.<sup>14</sup>
- ▶ The program also monitors wait times on a continuous basis and will alter referral patterns if necessary to shorten wait times.

# Radiation Therapy Waits

Figure 2.9

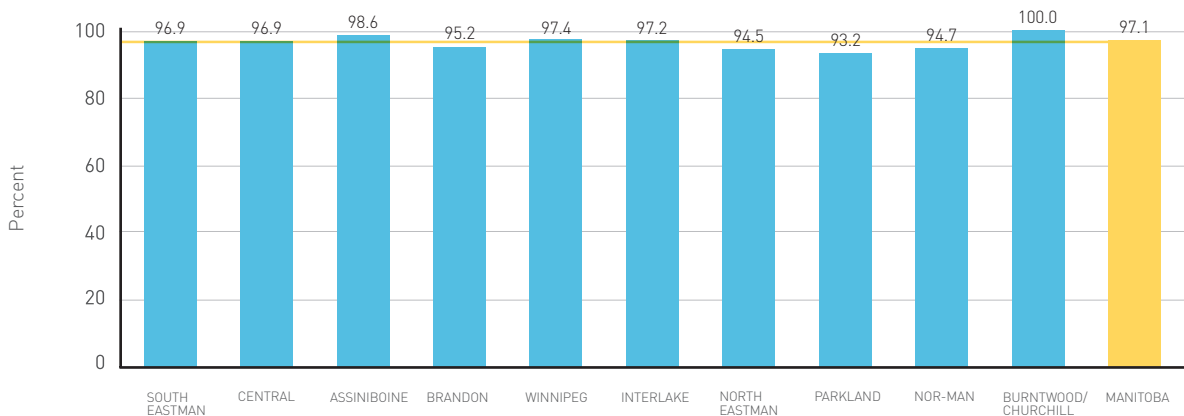
Percent of patients seen within four weeks from ready to treat to start of radiation therapy, by regional groupings



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.

Figure 2.10

Percent of patients seen within four weeks from ready to treat to start of radiation therapy, by Regional Health Authority



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.



## What does this tell us?

Manitobans receive radiation therapy in a timely manner.

- ▶ Figures 2.9 and 2.10 show that there is consistency in radiation therapy wait times across Manitoba, when looking at all the disease sites combined.
- ▶ Figures 2.11 to 2.18 show some variations still exist when the data are broken down by disease site (see following pages).

## What else do we know?

- ▶ Good results were seen in Manitoba even before the implementation of the national wait time guarantee (2008).
- ▶ More recent data (since the implementation of the national wait time guarantee) show rates of 100% across the province and by type of cancer.
- ▶ The development of the Western Manitoba Cancer Centre in Brandon will further address wait times and access in this region, as well as increasing overall capacity for radiation therapy in the province.

## Why is this important?

Wait times are now within the benchmark of four weeks from “ready to treat” to first treatment, and patients are triaged appropriately according to their disease site, stage and condition.

- ▶ However, it is important to continue to reduce wait times across the spectrum of cancer services to improve the overall experience.

## How do we compare?

Wait times for radiation therapy in Manitoba are among the best in Canada.

- ✔ Recent reports show that 99% of Manitoba’s radiation therapy patients begin treatment within the 28 day benchmark. This compares to 90% in Ontario and 95% in British Columbia.<sup>15</sup>

## What is CancerCare Manitoba doing to improve radiation therapy waits?

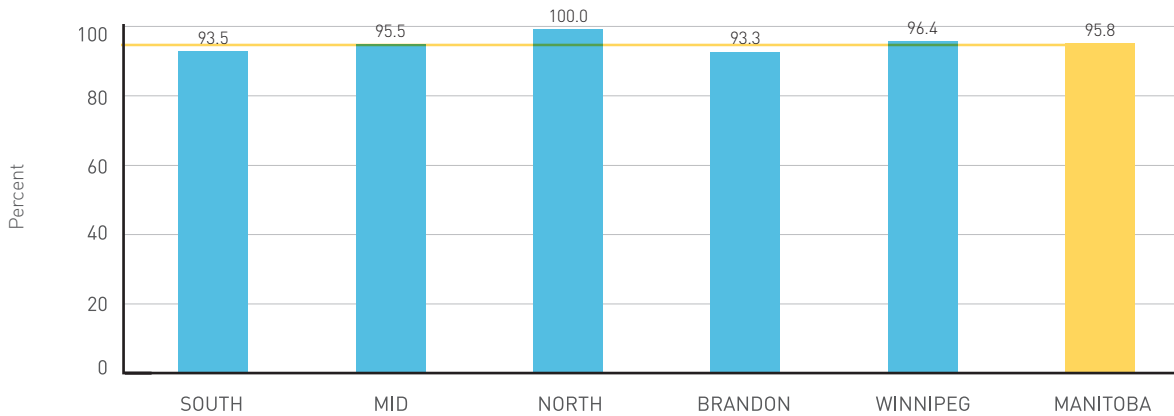
CancerCare Manitoba continually monitors and manages its radiation therapy services to meet the national wait time guarantee.

- ▶ Since April 2008, CCMB has been achieving the national wait time guarantee of four weeks.
- ▶ However, we still want to work at shortening the wait.
- ▶ As technology progresses, treatments get more complex. Planning these treatments requires more time and that affects the start of treatment.
- ▶ The Radiation Therapy Program has implemented new software systems that help to identify delays in individual patients’ progress through the steps in the radiation therapy process. These will assist us in finding and addressing bottlenecks in the process appropriately.

# Radiation Therapy Waits: Lung

Figure 2.11

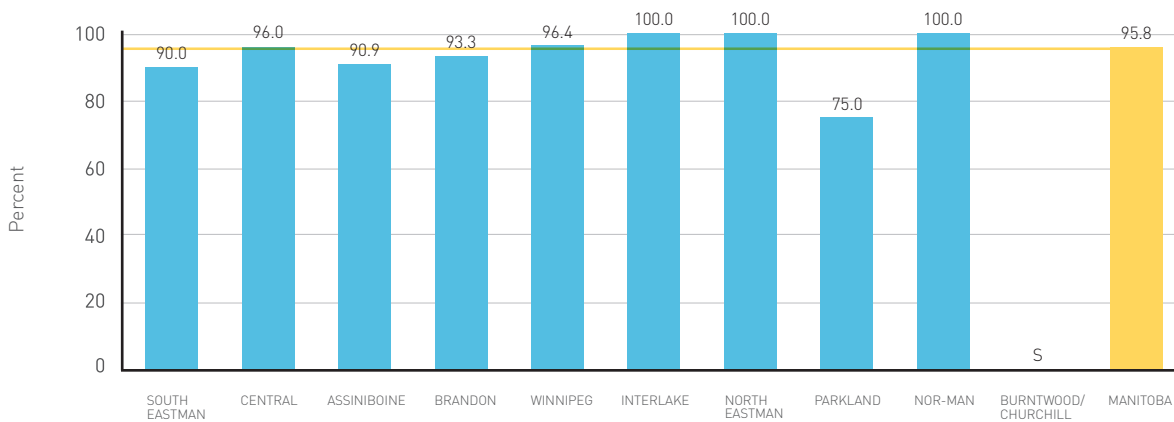
Percent of patients treated for lung cancer within four weeks from ready to treat to start of radiation therapy, by regional groupings



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 - March 31, 2008.

Figure 2.12

Percent of patients treated for lung cancer within four weeks from ready to treat to start of radiation therapy, by Regional Health Authority



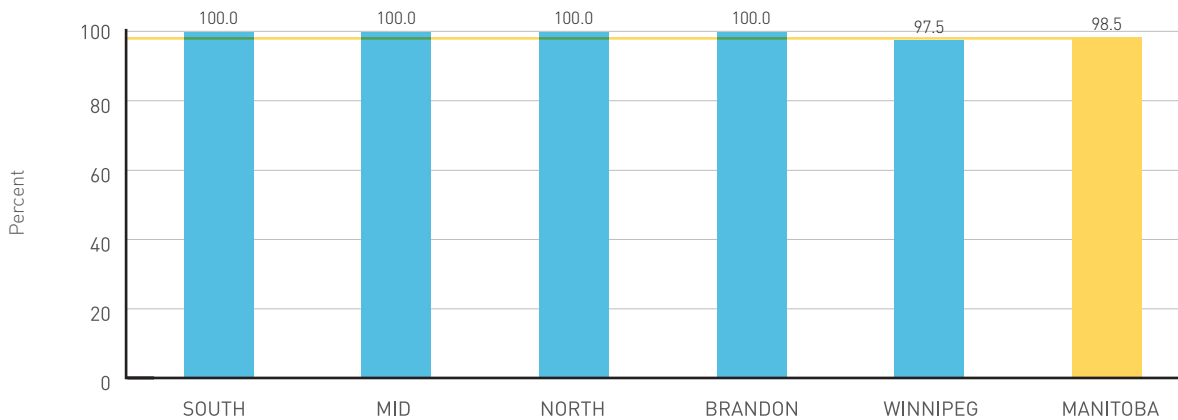
Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 - March 31, 2008.  
s = numbers suppressed where < 6



# Radiation Therapy Waits: Rectal

Figure 2.13

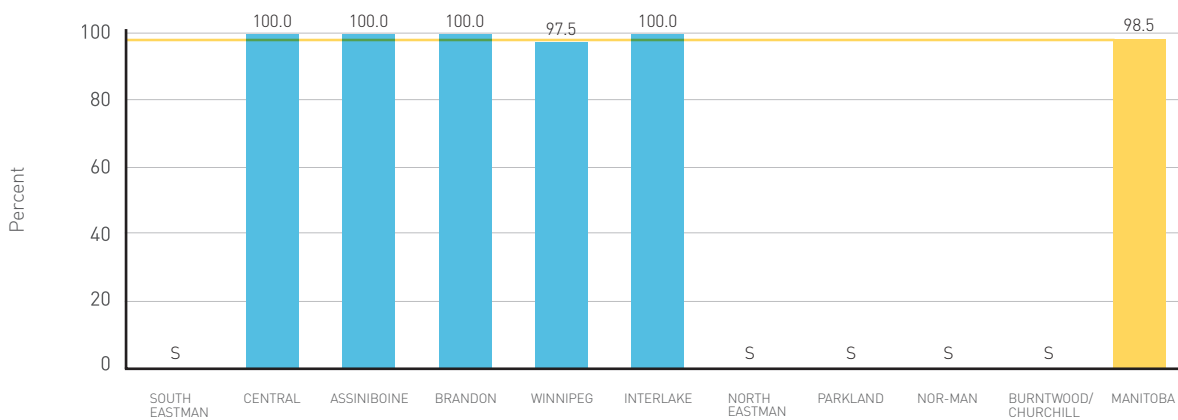
Percent of patients treated for rectal cancer within four weeks from ready to treat to start of radiation therapy, by regional groupings



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.

Figure 2.14

Percent of patients treated for rectal cancer within four weeks from ready to treat to start of radiation therapy, by Regional Health Authority

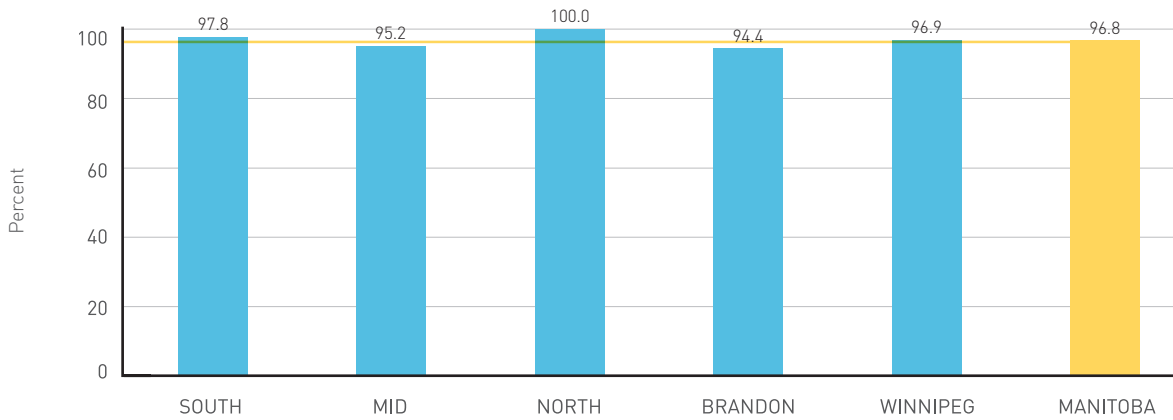


Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.  
s = numbers suppressed where < 6

# Radiation Therapy Waits: Breast

Figure 2.15

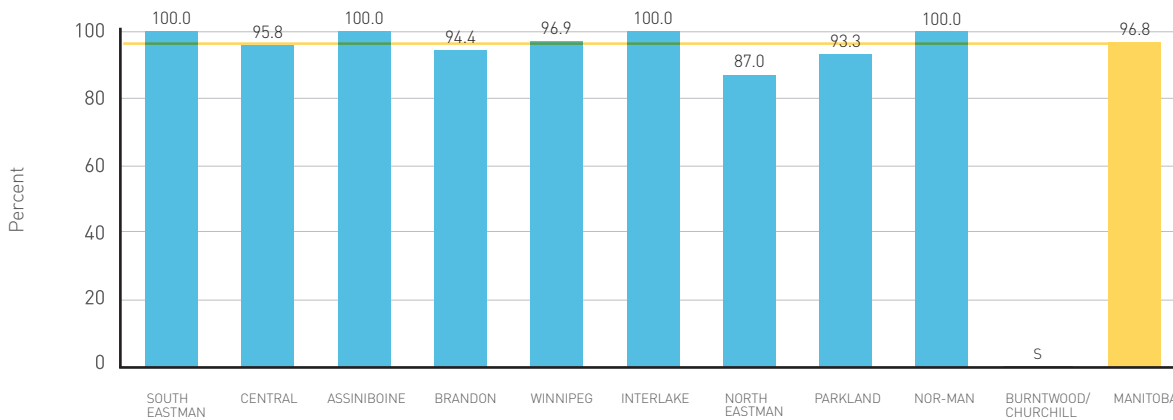
Percent of patients treated for breast cancer within four weeks from ready to treat to start of radiation therapy, by regional groupings



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.

Figure 2.16

Percent of patients treated for breast cancer within four weeks from ready to treat to start of radiation therapy, by Regional Health Authority



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.

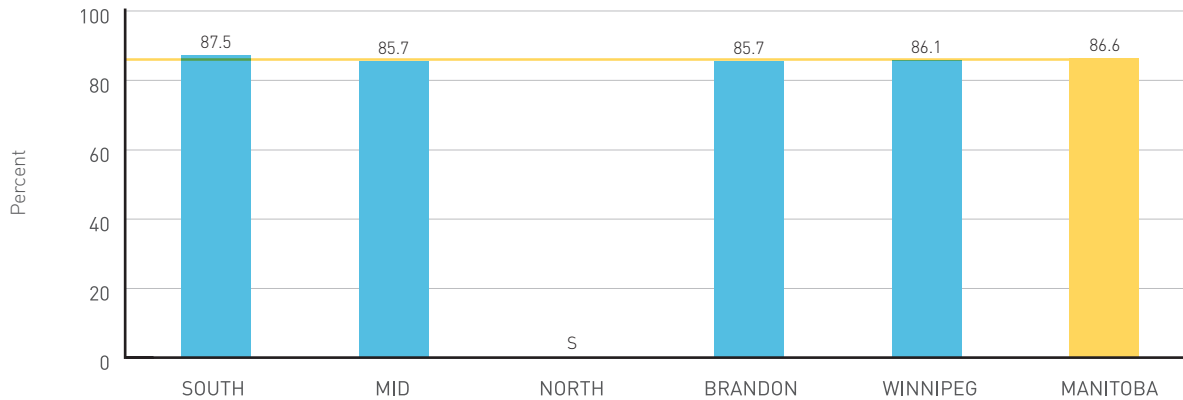
s = numbers suppressed where < 6



# Radiation Therapy Waits: Prostate

Figure 2.17

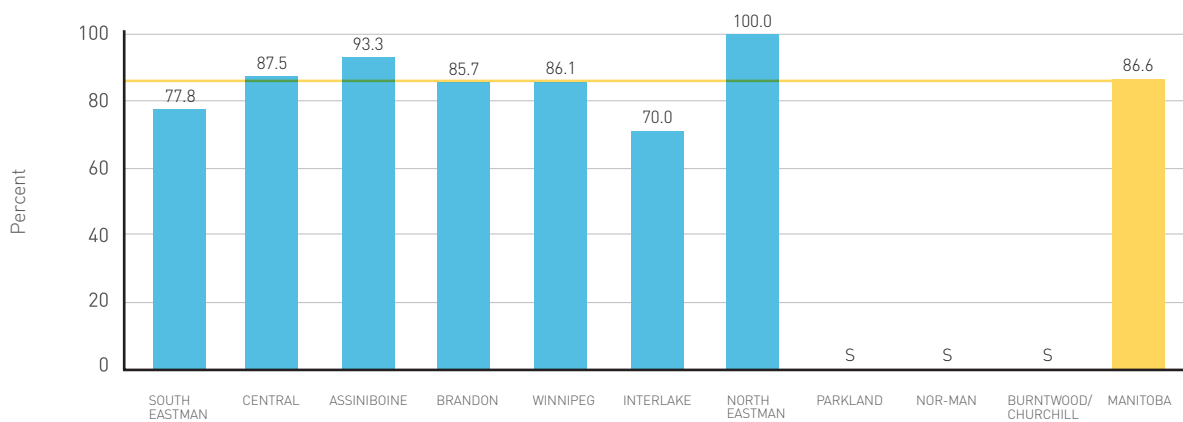
Percent of patients treated for prostate cancer within four weeks from ready to treat to start of radiation therapy, by regional groupings



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.  
s = numbers suppressed where < 6

Figure 2.18





Percentage of patients treated for prostate cancer within four weeks from ready to treat to start of radiation therapy, by Regional Health Authority (RHA)



Source: CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2007 – March 31, 2008.  
s = numbers suppressed where < 6



# Treatment

TREATMENT		Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>
 <b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup> percent of patients treated with surgery by cancer type <sup>h</sup> :	<b>lung</b>	56.6%	54.9%	→	44.1% - 57.9%
	<b>colorectal</b>	27.4%	24.4%	↓	19.4% - 28.7%
	<b>breast (f)</b>	84.4%	80.5%	→	55.0% - 87.7%
	<b>prostate</b>	93.2%	92.1%	→	89.1% - 96.9%
		50.8%	49.1%	→	33.3% - 67.4%
 <b>Radiation Therapy</b> percent of patients receiving radiation therapy, all cancers <sup>i</sup> percent of patients receiving radiation therapy by cancer type: <sup>i</sup>	<b>lung</b>	31.3%	30.3%	→	21.8% - 33.8%
	<b>rectal</b>	40.4%	42.5%	→	25.0% - 56.7%
	<b>breast (f)</b>	31.0%	42.0%	↑	26.5% - 56.4%
	<b>prostate</b>	56.9%	59.1%	→	44.6% - 65.5%
		34.4%	28.6%	↓	22.7% - 45.0%
 <b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>		70.7%	70.8%	→	48.8% - 85.7%
 <b>Systemic Therapy</b> percent of patients receiving systemic therapy (cancer drugs) <sup>h</sup> percent of patients receiving systemic therapy (cancer drugs) by cancer type: <sup>h</sup>	<b>lung</b>	35.0%	36.0%	→	29.6% - 39.8%
	<b>colon</b>	24.7%	25.4%	→	20.7% - 35.5%
	<b>breast (f)</b>	29.4%	30.1%	→	15.0% - 38.9%
	<b>prostate</b>	75.1%	74.6%	→	60.9% - 79.0%
		33.8%	30.1%	↓	21.2% - 57.1%

Source: <sup>h</sup> Manitoba Cancer Registry, patients diagnosed, 2000-2002, 2006-2007.

<sup>i</sup> Manitoba Cancer Registry, patients diagnosed, 2000-2002, 2005-2006.

Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red). Grey is used where interpretation of trend is not appropriate.

RHA refers to Regional Health Authority.

## What does this tell us?

### Treatment patterns vary by region and type of cancer.

- ▶ Overall, the percent of Manitoba cancer patients who have received surgery, radiation therapy or systemic therapy has remained stable compared to previous years.
- ▶ The percent of women with early stage breast cancer who received radiation treatment after breast conserving surgery (lumpectomy) has remained stable over time.

## What else do we know?

- ▶ A patient's treatment plan is based on several factors, including cancer diagnosis, stage of disease, the patient's medical fitness for treatment and the patient's preference.
- ▶ For most types of cancer, use of each kind of treatment has been steady over time except:
  - ▶ decreased surgery for lung cancer
  - ▶ increased use of radiation therapy for rectal cancer
  - ▶ decreased use of radiation and systemic therapy for prostate cancer

### Recent data tell us that:

- ▶ More than half of all cancer patients undergo surgery, almost a third have radiation therapy and a similar proportion undergo systemic therapy.
- ▶ 70% of early stage breast cancer patients received radiation following their breast conserving surgery as per guidelines.

## Why is this important?

### This information can be used to plan for services and use of resources by cancer patients.

- ▶ Treatment utilization rates do not necessarily indicate the appropriateness of care, but rather reflect the type and stage of disease, patients' medical fitness for treatment and patient choice. It is important to note that care received outside of Manitoba will not be captured in our data sources.
- ▶ Appropriateness of treatment is possible where evidence-based guidelines exist. Some treatments, such as radiation therapy for women with early stage breast cancer who undergo breast conserving surgery, are associated with clinical practice guidelines.
  - ▶ Patterns in these measures identify success and areas for improvement.

## How do we compare?

There are very few Canadian benchmarks because cancer treatment utilization data are not routinely reported.

## What is CancerCare Manitoba doing to improve access to treatment?

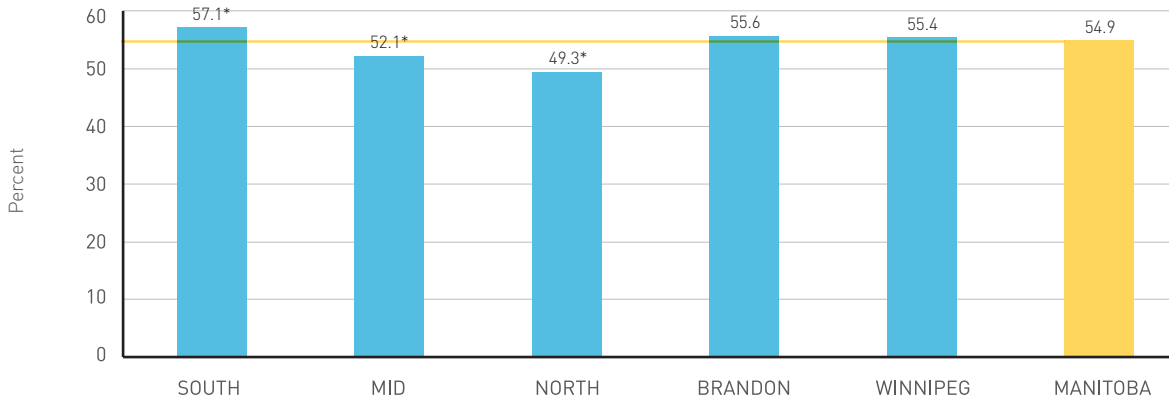
CancerCare Manitoba is involved in several programs to help ensure access to appropriate treatment.

- ▶ These include:
  - ▶ the Clinical Practice Guidelines Initiative involves reviewing the latest research and consensus statements of medical associations to develop standard evidence-based treatment guidelines for use in Manitoba.
  - ▶ CancerCare Manitoba's Disease Site Group structure enables specialists from different disciplines to interact on specific care plans.
  - ▶ the planned *Community Surgical Oncology Network* will share knowledge and standardize treatment protocols across all centres where cancer patients undergo surgery.
  - ▶ the Community Cancer Programs Network (CCPN) is a network of 16 Community Cancer Programs that allows patients to receive systemic therapy in or near their home communities.
  - ▶ Uniting Primary Care and Oncology Network (UPCON) supports the involvement of family physicians and primary health care providers in support and follow-up of cancer patients through networking, education and a help line.
  - ▶ development of the Western Manitoba Cancer Centre in Brandon (opening in 2011) will provide additional capacity for radiation therapy, chemotherapy and outpatient care.

# Surgery

Figure 2.19

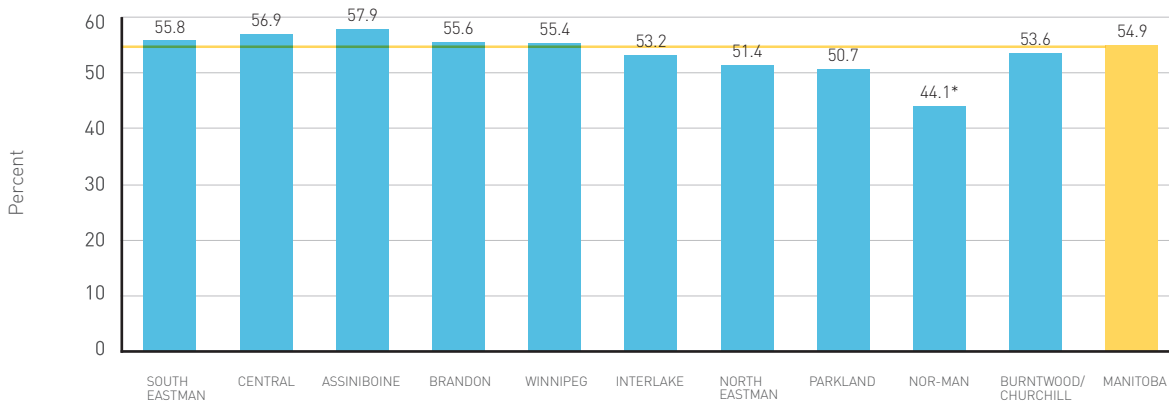
Percent of cancer patients who undergo surgery, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.20

Percent of cancer patients who undergo surgery, by Regional Health Authority



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

The percentage of all cancer patients receiving surgery varies by region and type of cancer.

- ▶ Figures 2.19 and 2.20 show similar use of surgery across regions with a slightly lower percentage in the North.
  - ▶ However, there are a number of contributing factors that have not been accounted for such as the type of cancer, cancer stage, or level of complexity.
- ▶ Figures 2.21 through 2.28 (see following pages) show a fair degree of consistency in use of surgery for each type of cancer, although the North has low rates for colorectal and prostate cancer and the rural south has higher rates for colorectal cancer.

## What else do we know?

Variations in surgery rates for any type of cancer may be due to clinical factors or patient choice.

- ▶ Advances in chemotherapy and radiation therapy have reduced the need for some surgeries.<sup>17</sup>
- ▶ Surgeons are often the first cancer specialist the patient meets.<sup>18</sup>
- ▶ Research has shown that surgical care and outcomes often correlate with the number of cancer operations a surgeon performs annually.<sup>19</sup>

## Why is this important?

Surgery has a major role in the treatment of cancer.

- ▶ Variations in cancer surgery rates may reflect the type and stage of the disease, the patient's medical fitness for treatment, patient choice, and use of treatment outside of Manitoba which may not be recorded in our data sources.
- ▶ Although there are good reasons for differences in surgery rates including clinical factors and patient choice, these variations may affect outcome.
- ▶ We need to better understand the reasons for variations in cancer surgery to ensure the delivery of quality cancer care.
- ▶ Integrating surgical services within provincially accessible multidisciplinary teams is key because variations in surgical oncology practices can be better analyzed and reduced by sharing best practices, and new technologies can be evaluated and promoted.

## How do we compare?

Canadian benchmarks for rates of cancer surgery are not yet available.

## What is CancerCare Manitoba doing to improve access to surgery?

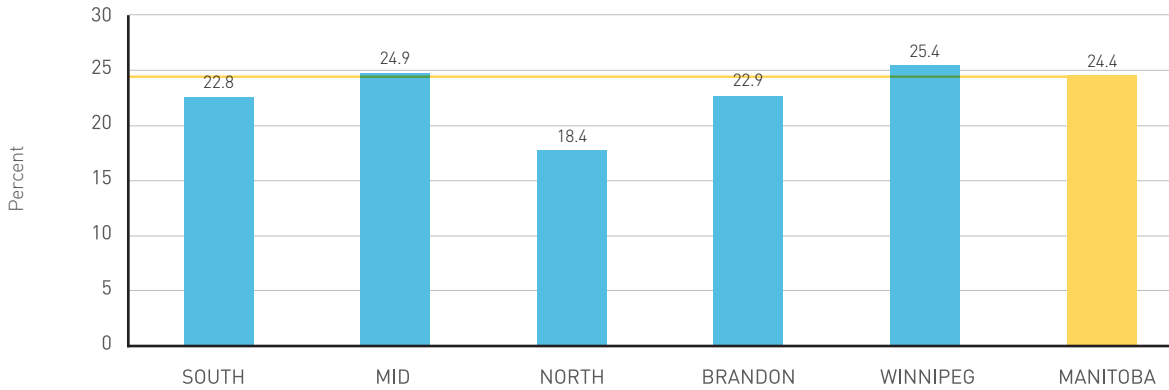
CancerCare Manitoba has plans for a *Community Surgical Oncology Network*.

- ▶ CancerCare Manitoba promotes the highest level of quality care in all aspects of surgical oncology, working to standardize practices to ensure equal care.
- ▶ The planned Network would share knowledge and standardize treatment protocols such that no matter where patients are first seen, they will receive appropriate care in a timely fashion whether they are treated within the community or referred to a larger, more central location.
- ▶ Studies show standard treatment protocols reduce unnecessary variations in care, eliminate duplication of procedures, establish clear lines of communication for all caregivers and reduce the costs of hospital stays.<sup>20-25</sup>

# Surgery: Lung

Figure 2.21.

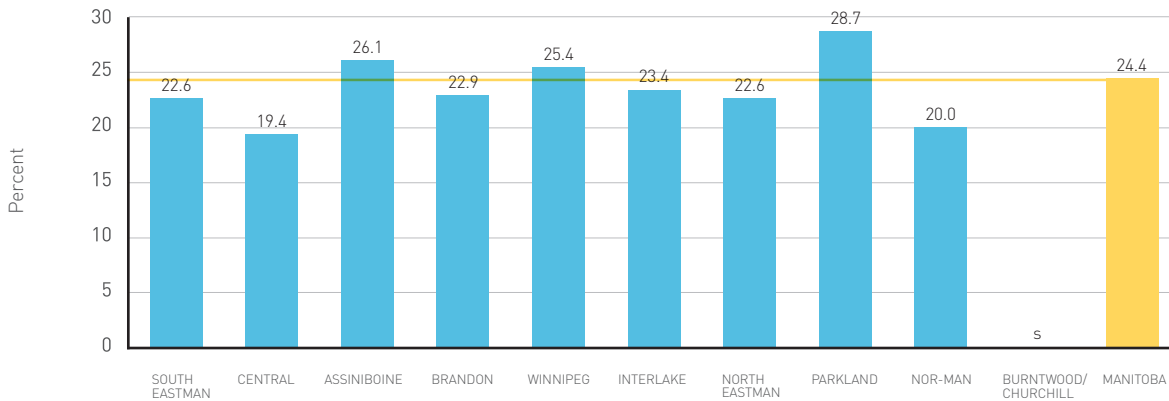
Percent of lung cancer patients who undergo surgery, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.

Figure 2.22.

Percent of lung cancer patients who undergo surgery, by Regional Health Authority



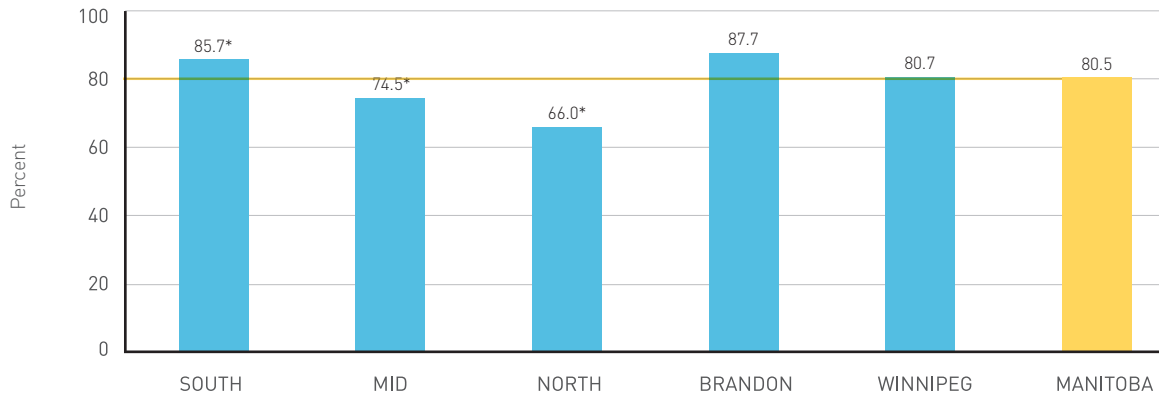
Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
s = numbers suppressed where < 6



# Surgery: Colorectal

Figure 2.23

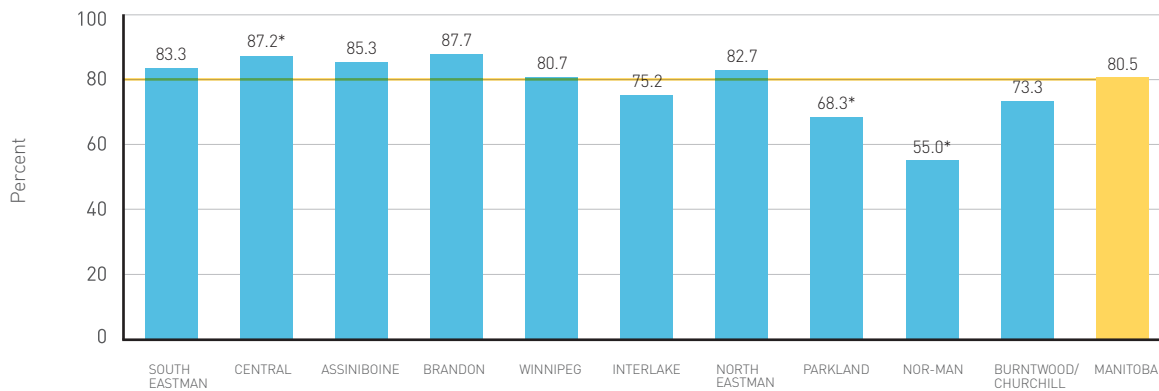
Percent of colorectal cancer patients who undergo surgery, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.24

Percent of colorectal cancer patients who undergo surgery, by Regional Health Authority

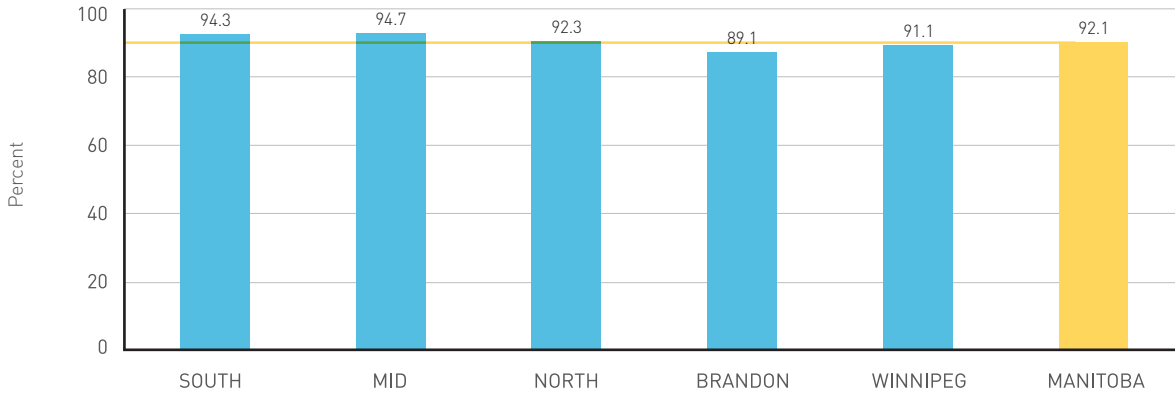


Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

# Surgery: Breast

Figure 2.25

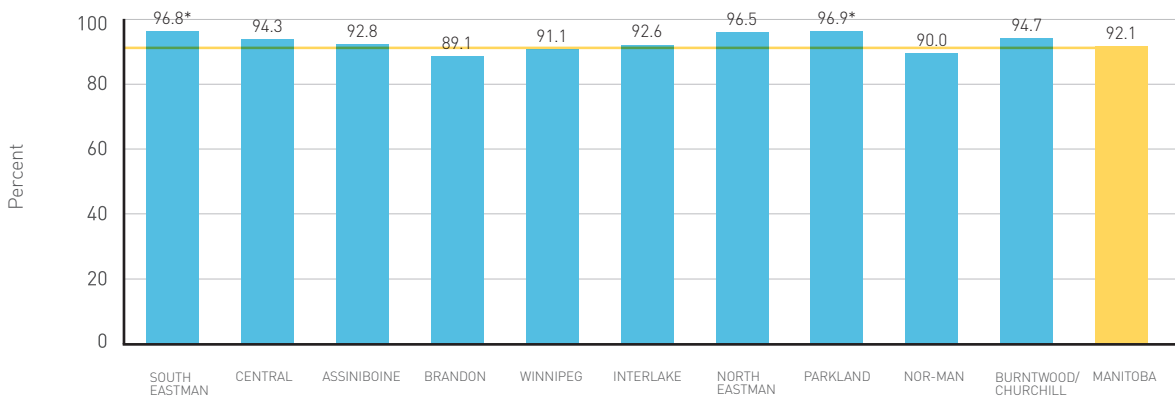
Percent of breast cancer patients who undergo surgery, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.

Figure 2.26

Percent of breast cancer patients who undergo surgery, by Regional Health Authority



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.

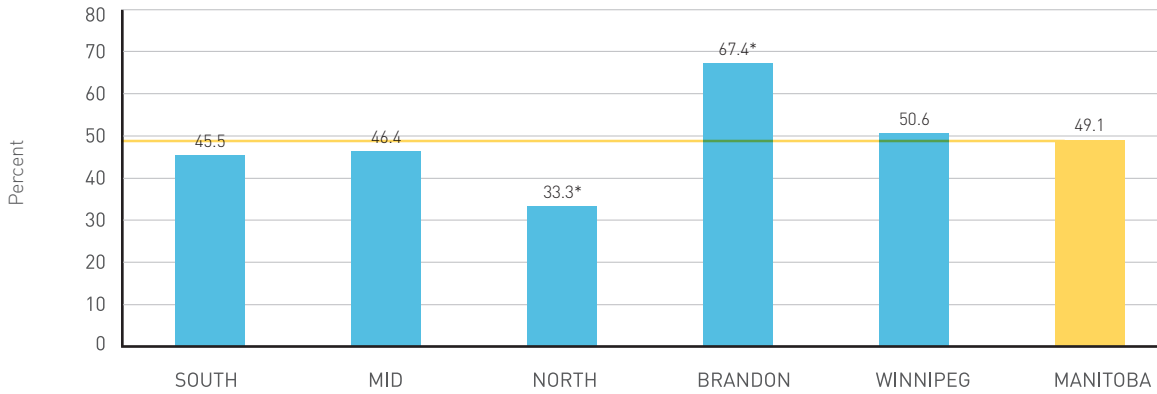
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



# Surgery: Prostate

Figure 2.27

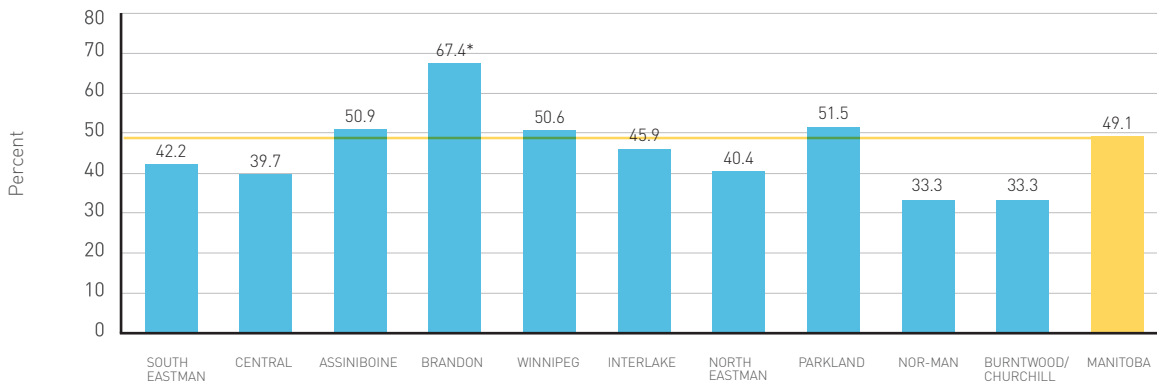
Percent of prostate cancer patients who undergo surgery, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.28

Percent of prostate cancer patients who undergo surgery, by Regional Health Authority



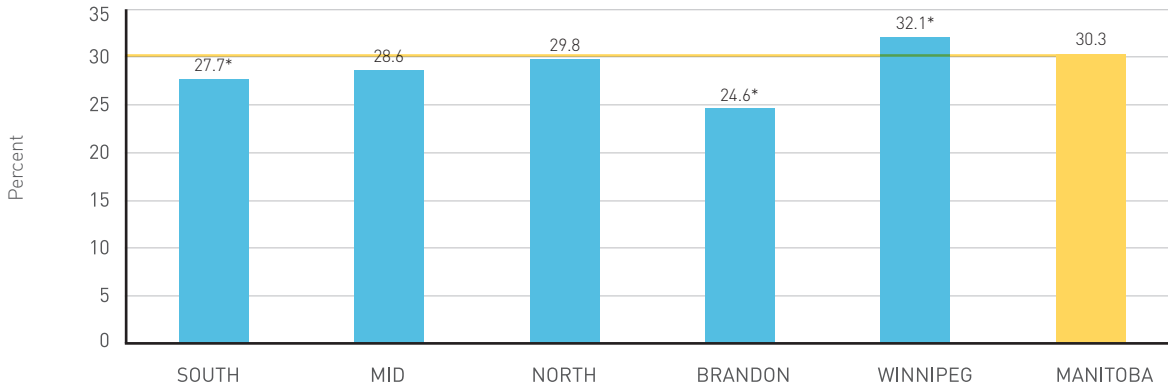
Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



# Radiation Therapy

Figure 2.29

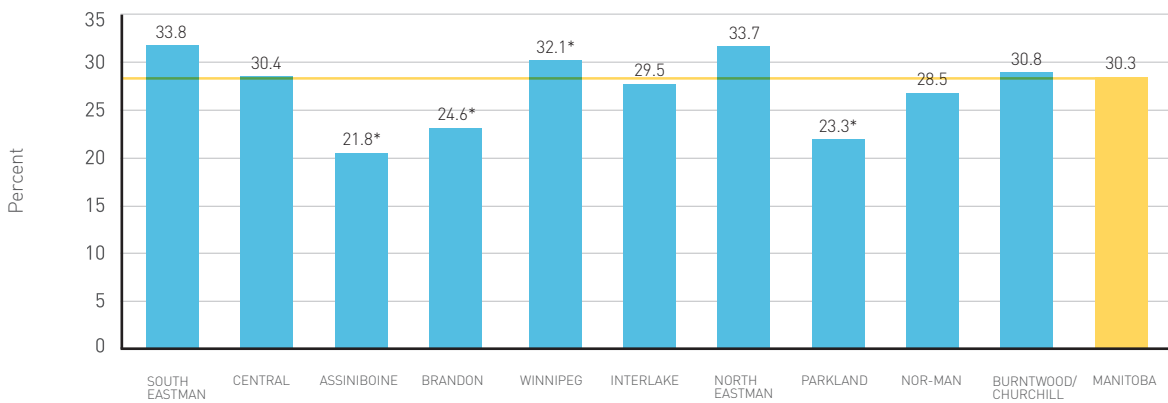
Percent of cancer patients receiving radiation therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.30

Percent of cancer patients receiving radiation therapy, by Regional Health Authority



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

The proportion of all cancer patients receiving radiation therapy varies by region and type of cancer.

- ▶ Figures 2.29 and 2.30 show that radiation therapy use is generally higher in Winnipeg and lowest in the southwest regions.
- ▶ Figures 2.31 to 2.38 (see following pages) show regional variations in radiation therapy use by cancer type.

## What else do we know?

Variations in use of radiation therapy may be due to clinical factors or patient choice.

- ▶ The choice to undergo radiation therapy is also affected by factors including the distance a patient lives from a treatment centre, the length of time away from home and family, and information provided by patients' primary care physicians or surgeons.
- ▶ Currently, Manitobans can only receive radiation therapy at CCMB in Winnipeg.

## Why is this important?

Radiation therapy has a major role in the treatment of some cancers.

- ▶ Variation in radiation therapy rates depend on the type and stage of the disease, the patient's medical fitness for treatment, patient choice and use of radiation therapy outside of Manitoba which may not be recorded in our data sources.
- ▶ Although there are good reasons for differences rates including patient choice and clinical factors, these variations in radiation therapy may affect outcomes.
- ▶ We need to better understand the reasons for variations in radiation therapy to ensure the delivery of quality cancer care.

## How do we compare?

Canadian benchmarks for rates of radiation therapy are not yet available.

- ⊖ Little information on this indicator is available from across the country, but it is expected that the Manitoba experience is similar to provinces with the same geographic challenges (Saskatchewan for example), but may differ from others where there are more cancer centres spread throughout the province (Ontario).
- ⊖ Ontario reports 35% overall for patients receiving radiation treatment at any time during the course of their illness. This varies by region in the province from 32 to 40%.<sup>26</sup>

## What is CancerCare Manitoba doing to improve access to radiation therapy?

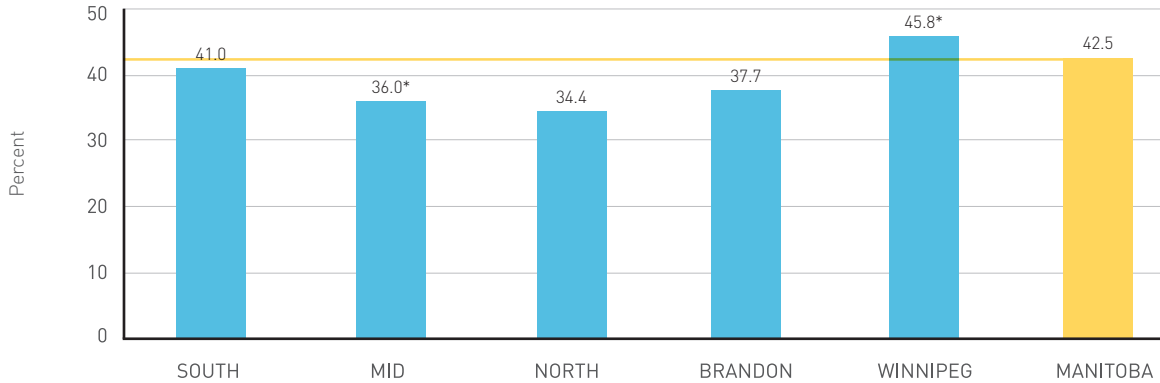
CancerCare Manitoba aims to provide all Manitobans with equal options for treatment, including use of radiation therapy.

- ▶ The opening of the Western Manitoba Cancer Centre in Brandon in 2011 will offer improved access to radiation therapy for Manitobans living in the southwest region of the province.
- ▶ By providing more information to primary care providers and surgeons, we can improve communication and keep people up-to-date on advances in cancer care and treatment. For example, the Uniting Primary Care and Oncology Network (UPCON) provides educational sessions specifically designed for health care providers where radiation therapy experts share information.
- ▶ We are continuing to analyze our data to find ways of making treatment more accessible and have patients making informed choices.

# Radiation Therapy: Lung

Figure 2.31

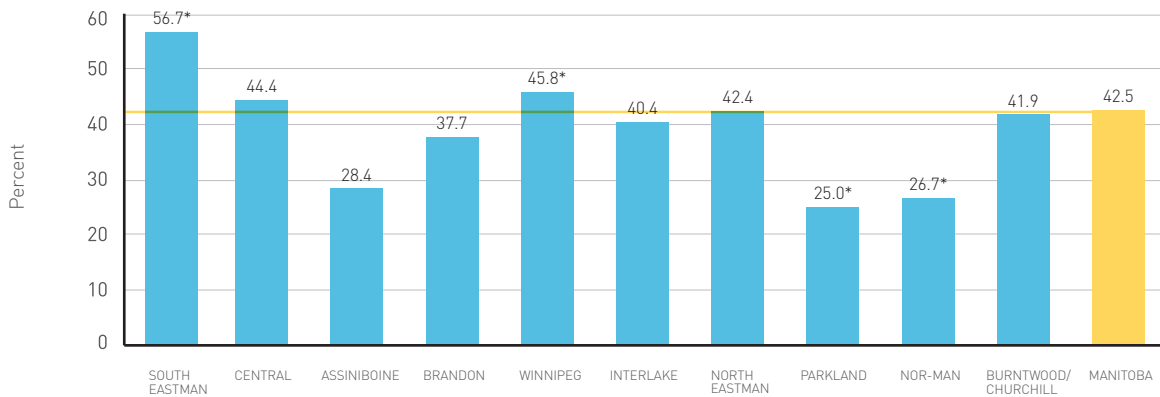
Percent of lung cancer patients receiving radiation therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.32

Percent of lung cancer patients receiving radiation therapy, by Regional Health Authority



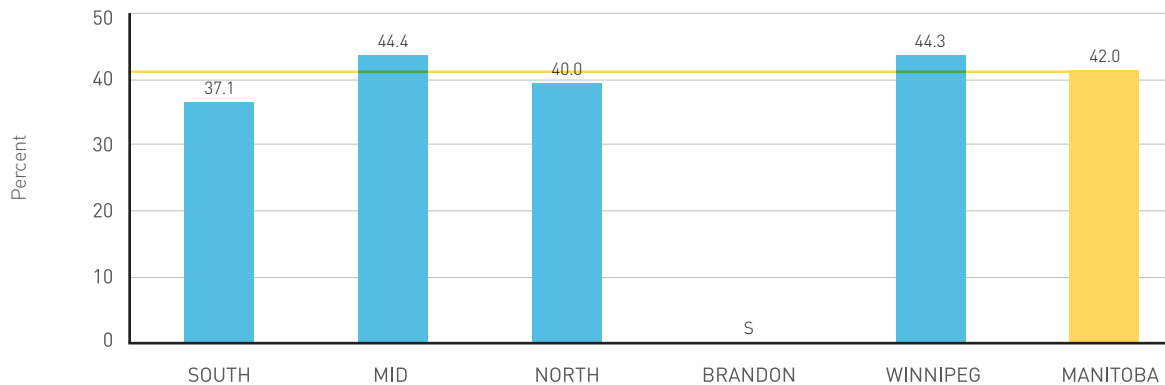
Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



# Radiation Therapy: Rectal

Figure 2.33

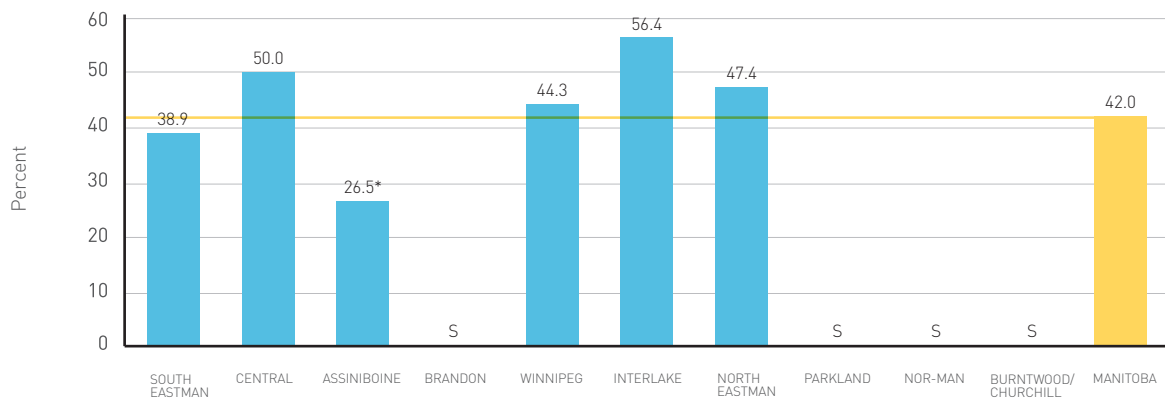
Percent of rectal cancer patients receiving radiation therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
s = numbers suppressed where < 6

Figure 2.34

Percent of rectal cancer patients receiving radiation therapy, by Regional Health Authority

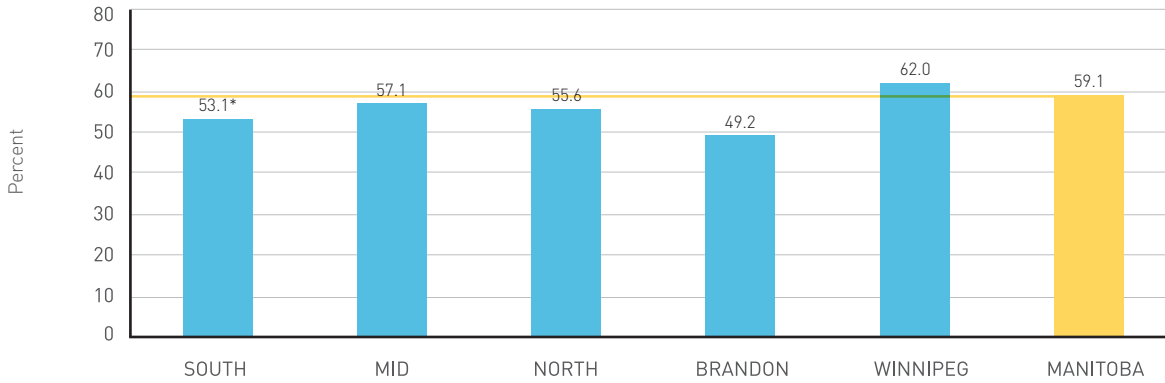


Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).  
s = numbers suppressed where < 6

# Radiation Therapy: Breast

Figure 2.35

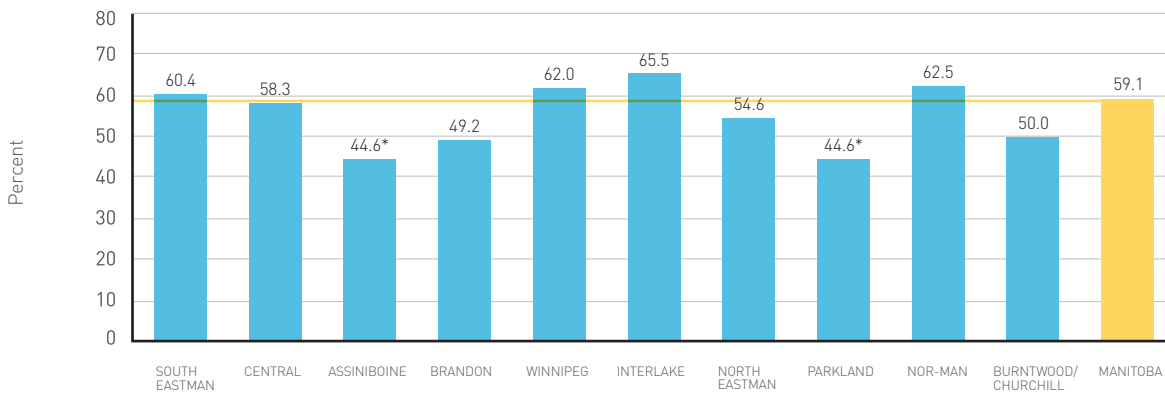
Percent of breast cancer patients receiving radiation therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.36

Percent of breast cancer patients receiving radiation therapy, by Regional Health Authority



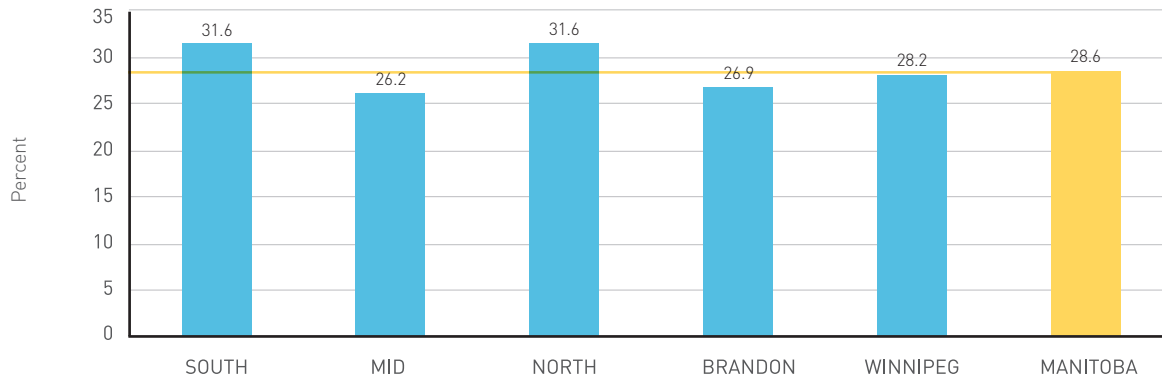
Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



# Radiation Therapy: Prostate

Figure 2.37

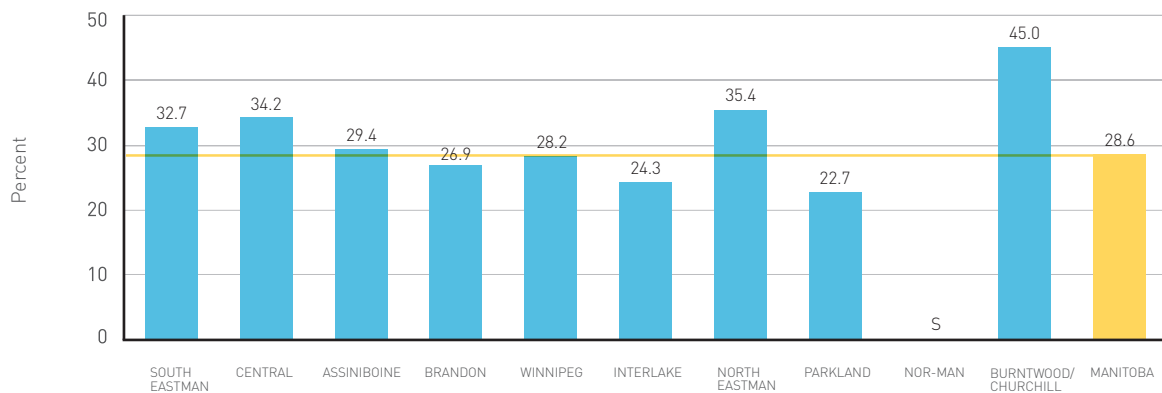
Percent of prostate cancer patients receiving radiation therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.

Figure 2.38

Percent of prostate cancer patients receiving radiation therapy, by Regional Health Authority

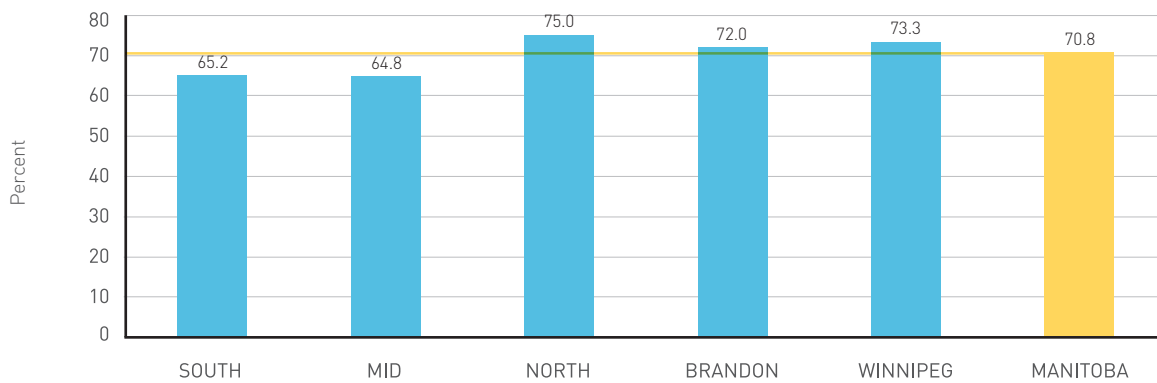


Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.  
s = numbers suppressed where < 6

# Radiation After Breast Conserving Surgery

Figure 2.39

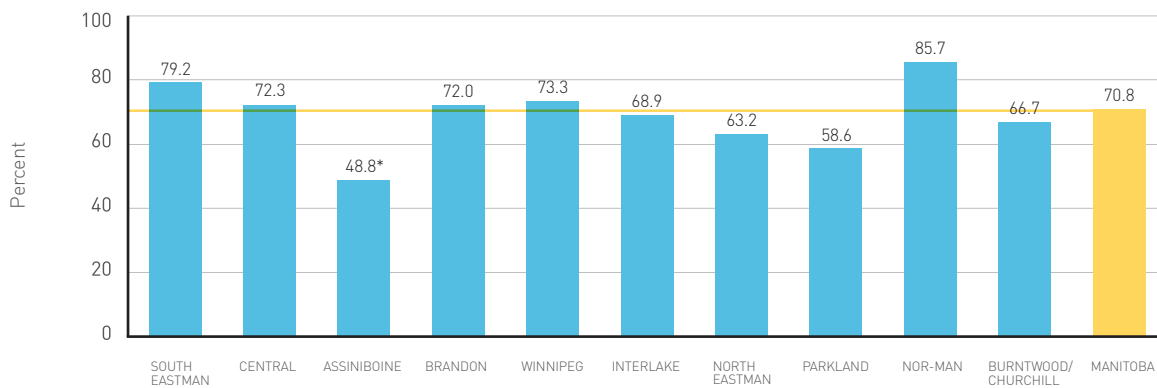
Percent of early stage breast cancer patients treated with radiation within a year of breast conserving surgery, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.

Figure 2.40

Percent of early stage breast cancer patients treated with radiation within a year of breast conserving surgery, by Regional Health Authority



Source: Manitoba Cancer Registry, patients diagnosed 2005-2006.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

Use of radiation therapy after breast conserving surgery (lumpectomy) varies by region.

- ▶ Figure 2.39 shows lower use of radiation therapy in early stage breast cancer patients after breast conserving surgery (BCS) in the south and mid (rural) regions of the province.
- ▶ Figure 2.40 shows the lowest use of radiation therapy after BCS in early stage breast cancer patients is in the Assiniboine RHA.

## What else do we know?

Variations in use of radiation therapy may be due to clinical factors or patient choice.

- ▶ Women undergoing BCS for stage I and II breast cancer who do not receive radiation therapy may still be receiving appropriate care. As noted by Cancer Care Ontario<sup>26</sup>, not having radiation therapy after BCS may be due to factors such as:
  - ▶ patients not medically fit for radiation therapy due to factors not recorded in available data sources
  - ▶ patients with very good prognosis (older age, smaller tumour size, low stage) receiving anti-estrogens as a substitute for radiation
  - ▶ patients' refusal of treatment
  - ▶ patients may get radiation therapy outside the province which may not be recorded in available data sources

## Why is this important?

Women with early stage breast cancer who have BCS without radiation therapy have an increased risk of cancer recurrence.

- ▶ Variation may be due to medical factors, patient choice or use of treatment outside Manitoba.
- ▶ Although there may be good reasons for differences in these treatment rates, these variations may affect outcomes.
- ▶ We need to better understand the reasons for variations in radiation therapy use after BCS to ensure the delivery of quality cancer care.
- ▶ Research has shown that geographic barriers (distance to radiation therapy facilities) are a significant factor in lower rates of radiation therapy after BCS.<sup>27-29</sup>

## How do we compare?

Canadian benchmarks for rate of radiation therapy after BCS are not yet available.

- ✘ Very little data are available on this measure, but the Manitoba experience is somewhat lower than Ontario.<sup>30</sup>
- ✘ Ontario reports that 80% of patients receiving radiation therapy following breast conserving surgery overall (between April 2005 and March 2008). This ranges from 65 to 88% depending on the region within the province.<sup>30</sup>

## What is CancerCare Manitoba doing to improve access to radiation therapy after breast conserving surgery?

CancerCare Manitoba aims to provide equal access to treatment options including breast conserving surgery combined with radiation therapy.

- ▶ The opening of the Western Manitoba Cancer Centre in Brandon in 2011 should greatly increase the convenience and use of radiation therapy for patients in southwest Manitoba with all types of cancer, including breast cancer.
- ▶ Continued work on developing and communicating clinical practice guidelines will ensure equitable access to quality cancer care.

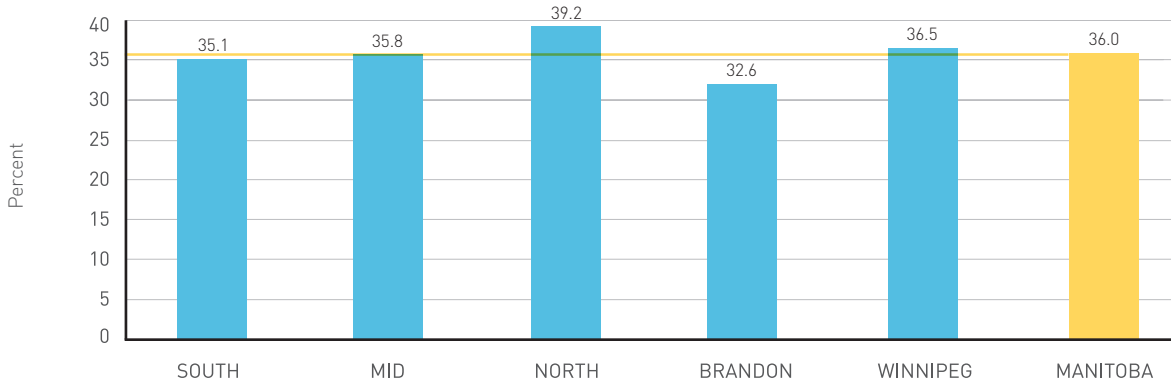


# Systemic Therapy

(Chemotherapy, Hormone Therapy)

Figure 2.41

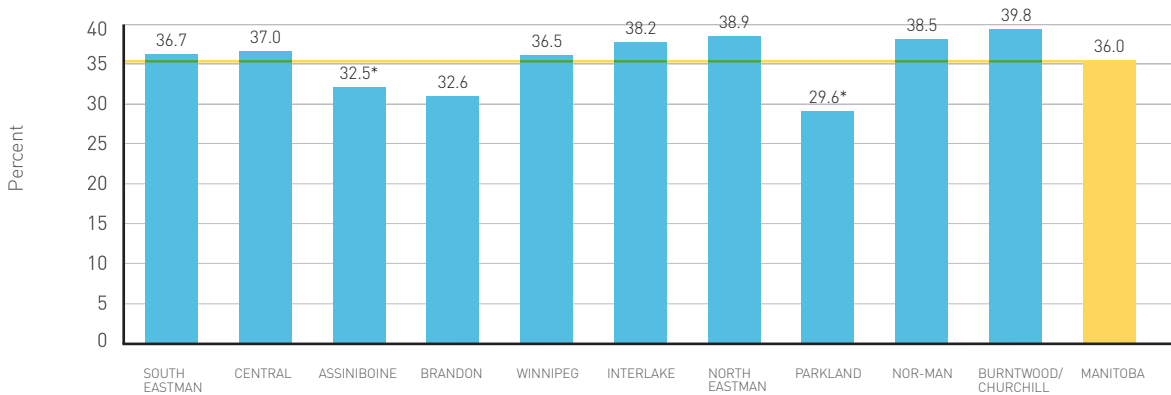
Percent of cancer patients receiving systemic therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.

Figure 2.42

Percent of cancer patients receiving systemic therapy, by Regional Health Authority



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

The proportion of all cancer patients receiving systemic therapy (cancer drugs) vary by region and type of cancer.

- ▶ Figures 2.41 and 2.42 show that the highest systemic therapy rates are in the North, while some of the RHAs in the southwest have relatively low rates. These low rates may be due to treatments occurring outside the province, which would not be included in our data sources.
- ▶ Figures 2.43 to 2.50 (see following pages) show variation in systemic therapy occurs by type of cancer as well as geography.

## What else do we know?

- ▶ The more advanced the stage of cancer, the greater the chances of needing chemotherapy. Surgery and radiation therapy may not be appropriate for advanced cases.
- ▶ Advances in chemotherapy have improved outcomes for patients by tailoring the treatment to the patient's disease, but this has also increased the complexity of preparing and delivering these treatments.

## Why is this important?

Systemic therapy has a major role in the treatment of some cancers.

- ▶ Variations in systemic therapy rates depend on the type and stage of cancer, the patient's medical fitness for treatment, patient choice, and use of treatment outside of Manitoba which may not be recorded in our data sources.
- ▶ Variations in systemic therapy may affect outcomes.
- ▶ We need more indepth studies to understand the reasons for variations in systemic therapy to ensure the delivery of quality cancer care.

## How do we compare?

Canadian benchmarks for rates of systemic therapy are not yet available.

## What is CancerCare Manitoba doing to improve systemic therapy?

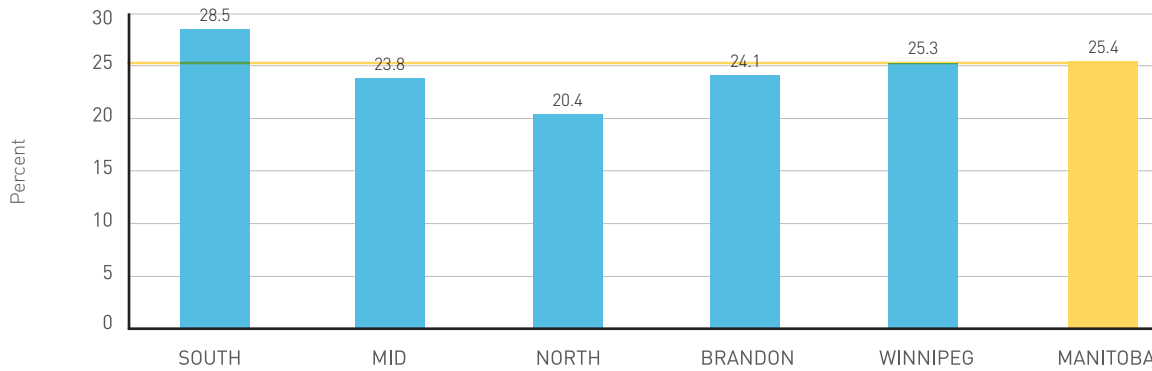
CCMB has launched several initiatives to improve the delivery of chemotherapy in Manitoba.

- ▶ The development of the Provincial Oncology Drug Program (PODP) in 2006 ensures patients in all regions have equal access to new and existing cancer therapies. It has effectively taken the pressure off the budgets of smaller facilities and is managing the use and distribution of oncology drugs as well as planning ahead for future new drug expenses.
- ▶ CancerCare Manitoba is able to capture all chemotherapy treatment data in the province and can study it to determine how well the system is working. For example, a team of clinicians and pharmacy staff is reviewing patient outcomes to ensure there is no over use or under use of chemotherapy drugs.
- ▶ Renovations in 2007 expanded the pharmacy space allowing for centralization and standardization of the preparation of intravenous drug treatments.
- ▶ Physicians can now enter their chemotherapy orders electronically which has been shown to decrease prescription errors.
- ▶ Drug preparation and labeling procedures have been improved to increase safety.
- ▶ A comprehensive training program for nurses and pharmacy staff on the use of ambulatory infusion pumps (devices that allow patients to get chemotherapy at home) is mandatory every two years to ensure the right medications and the right dose are being administered.

# Systemic Therapy: Lung

Figure 2.43

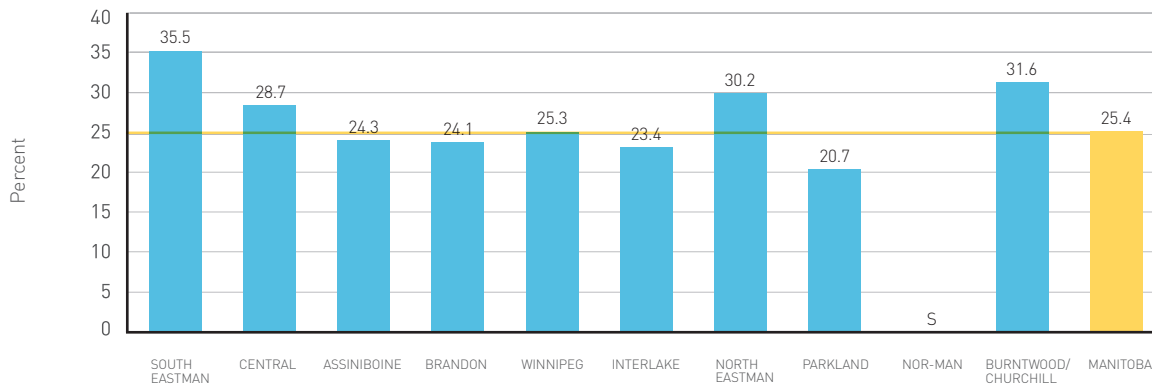
Percent of lung cancer patients receiving systemic therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.

Figure 2.44

Percent of lung cancer patients receiving systemic therapy, by Regional Health Authority



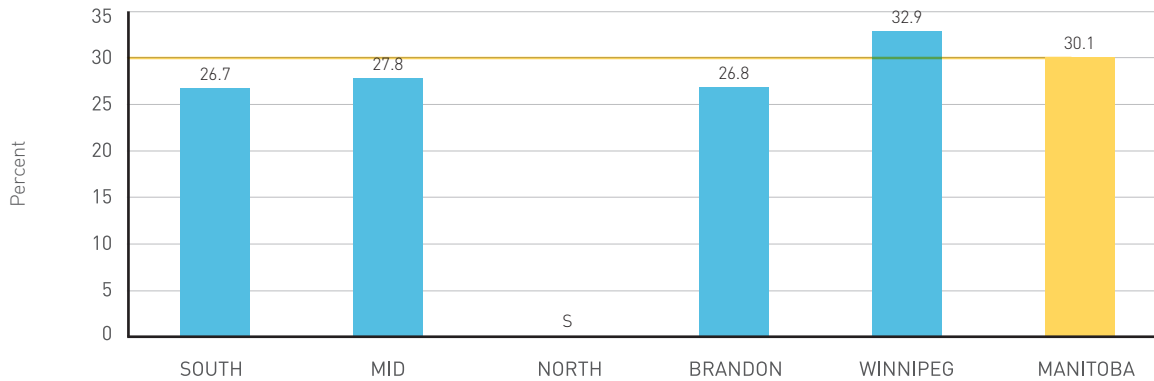
Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
s = numbers suppressed where < 6



# Systemic Therapy: Colon

Figure 2.45

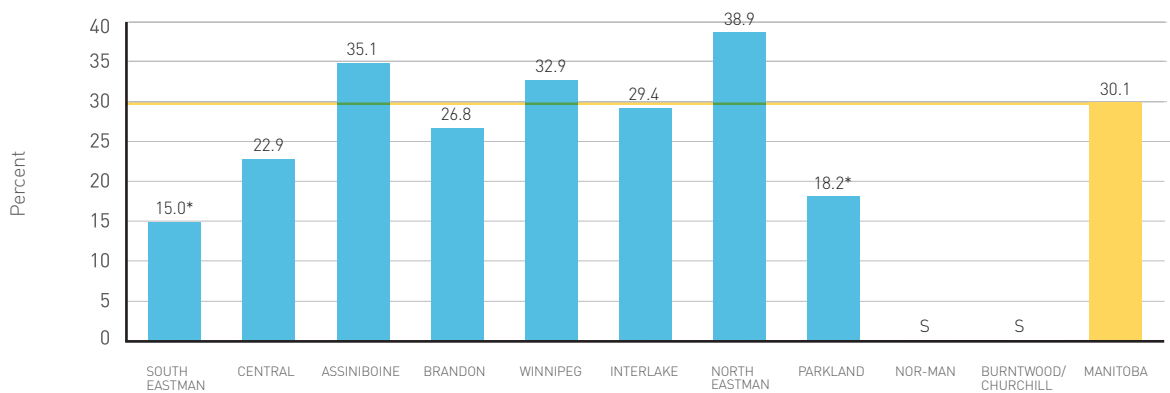
Percent of colon cancer patients receiving systemic therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
s = numbers suppressed where < 6

Figure 2.46

Percent of colon cancer patients receiving systemic therapy, by Regional Health Authority

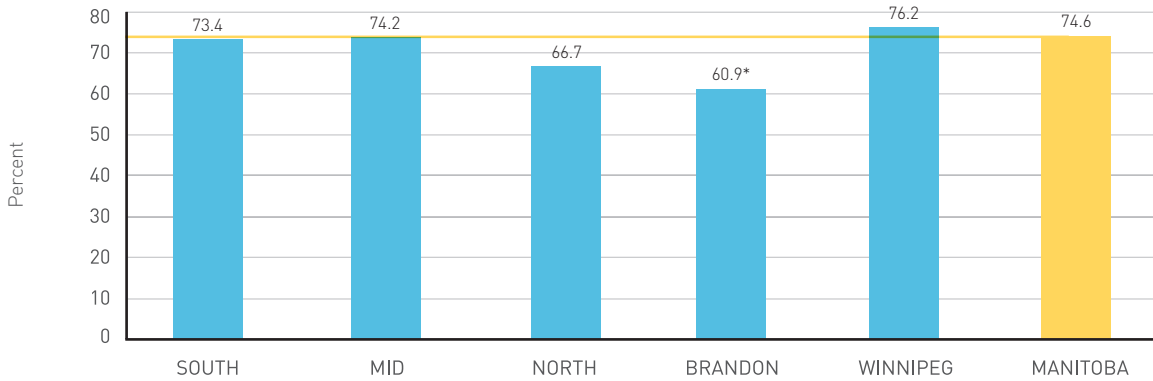


Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).  
s = numbers suppressed where < 6

# Systemic Therapy: Breast

Figure 2.47

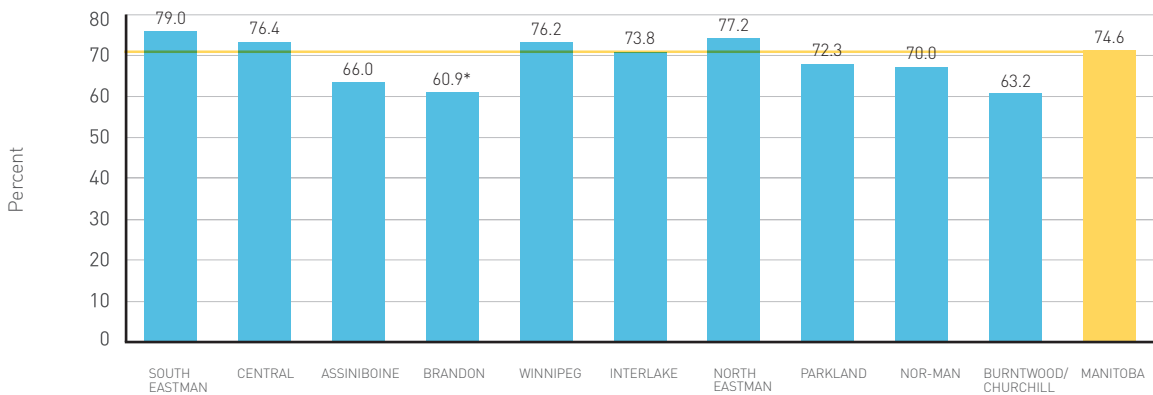
Percent of breast cancer patients receiving systemic therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 2.48

Percent of breast cancer patients receiving systemic therapy, by Regional Health Authority



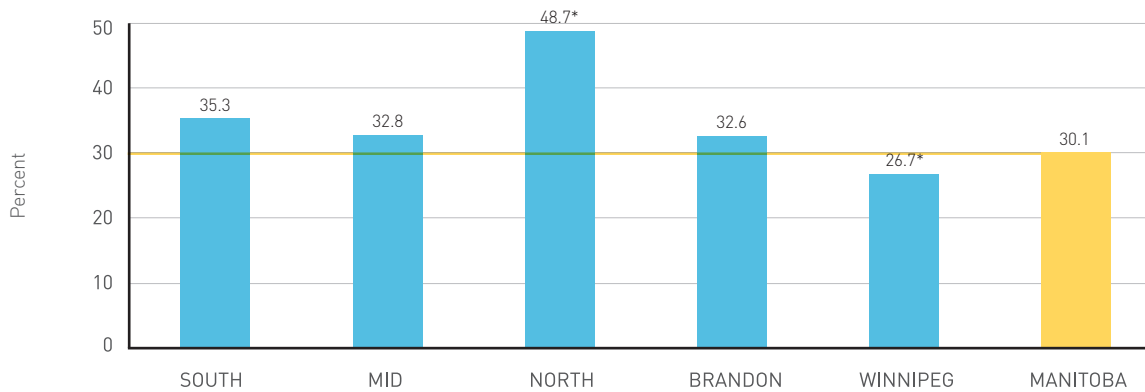
Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



# Systemic Therapy: Prostate

Figure 2.49

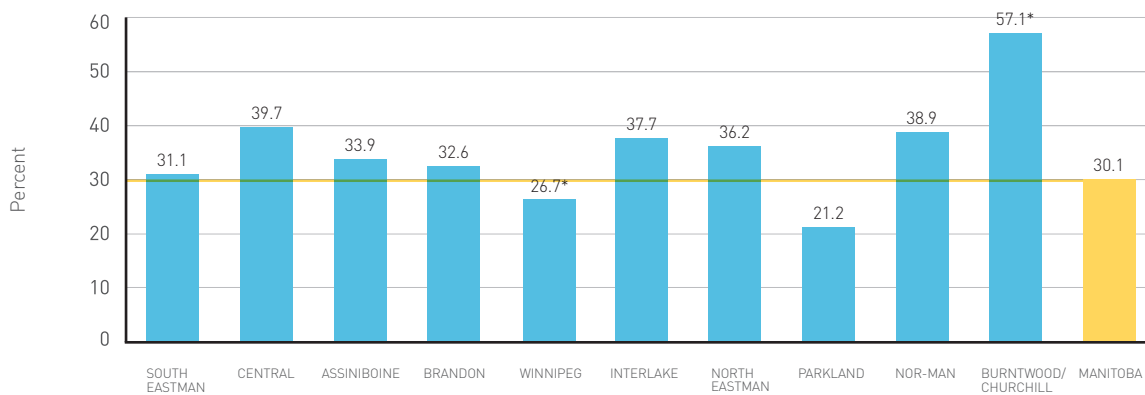
Percent of prostate cancer patients receiving systemic therapy, by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).




Figure 2.50

Percent of prostate cancer patients receiving systemic therapy, by Regional Health Authority



Source: Manitoba Cancer Registry, patients diagnosed 2006-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

# Additional Access Indicators

ADDITIONAL ACCESS INDICATORS	Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>
 <p><b>Accessing the Cancer System</b>  <i>NEW</i> percent of cancer patients diagnosed at late stage (IV), all cancers  <i>NEW</i> percent of cancer patients diagnosed at late stage (IV), by cancer type:</p> <p><b>lung</b>  <b>colorectal</b>  <b>breast (f)</b>  <b>prostate</b></p>	<p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	<p>19.7%</p> <p>41.7%</p> <p>20.5%</p> <p>5.6%</p> <p>11.8%</p>	<p>NEW</p> <p>NEW</p> <p>NEW</p> <p>NEW</p>	<p>17.5% - 29.2%</p> <p>38.5% - 48.9%</p> <p>13.2% - 48.4%</p> <p>4.3% - 8.0%</p> <p>10.2% - 32.3%</p>
 <p><b>End-of-Life Care</b>                      percent of patients who die of cancer with an acute care hospital stay in the last two weeks of life</p>	<p>80.4%</p>	<p>77.5%</p>		<p>70.1% - 81.0%</p>

Source: <sup>i</sup>Manitoba Cancer Registry, patient diagnosed 2005-2007.

<sup>k</sup>Manitoba Cancer Registry, cancer deaths 2000-2002, 2005-2007; combined with hospital data from Manitoba Health.

Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red). Grey is used where interpretation of trend is not appropriate.

RHA refers to Regional Health Authority.

## What does this tell us?

Some patients enter the system when their disease is advanced and outcomes are poorer; most are hospitalized at end-of-life.

- ▶ Breast cancer is often found early due to screening and an awareness of symptoms; at the other extreme, lung cancer is often found late when the disease has spread to other parts of the body (metastasized).
- ▶ Most patients who are dying of cancer are admitted to acute care hospitals for end-of-life care.

## Why is this important?

The stage at which the cancer is diagnosed can have an impact on survival.

- ▶ Patients with late-stage cancers have the poorest prognosis (chance of survival); the disease is widespread and treatment is least effective.

End-of-life care requires special consideration.

- ▶ By tracking hospital utilization near end-of-life, plans can be made to ensure proper care can be made available to those patients and their families.

---

## How do we compare?

Canadian benchmarks for these indicators are not available yet.

---

## What is CancerCare Manitoba doing to decrease late-stage diagnoses and improve End-of-life care?

With our partners, CancerCare Manitoba is working to provide services across the cancer spectrum – prevent what we can, find it early if we cannot prevent it, and treat using the most appropriate therapies.

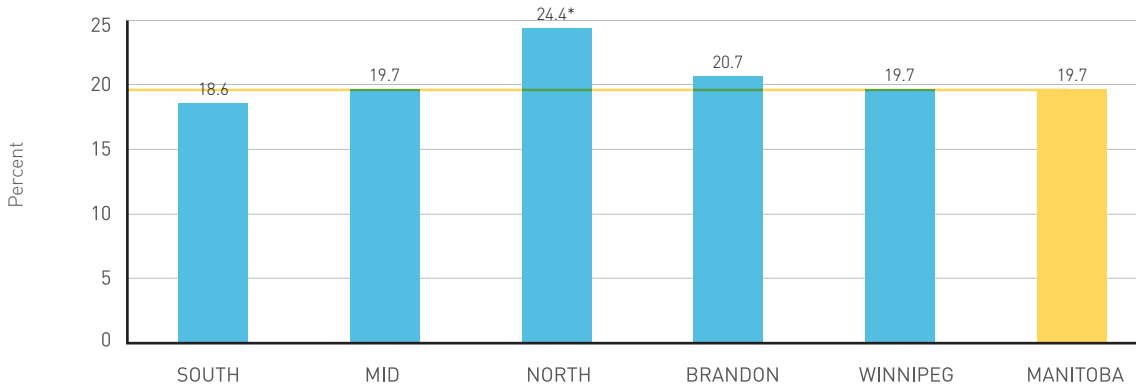
- ▶ Late-stage diagnosis:
  - ▶ CancerCare Manitoba promotes early detection through three provincial screening programs.
  - ▶ the Patient Navigation Program is investigating the patient journey to understand and address system delays.
  - ▶ through Uniting Primary Care and Oncology Network (UPCON), CCMB is educating family physicians and nurse practitioners about early diagnosis and responds to questions regarding efficient work-up of suspected cancer.
- ▶ End-of-life care:
  - ▶ by working together with partners such as the Winnipeg Regional Health Authority Palliative Care Program and the regions, CCMB is furthering our understanding about how services are used and which services could be used as patients approach end-of-life.



# Accessing the Cancer System

Figure 2.51

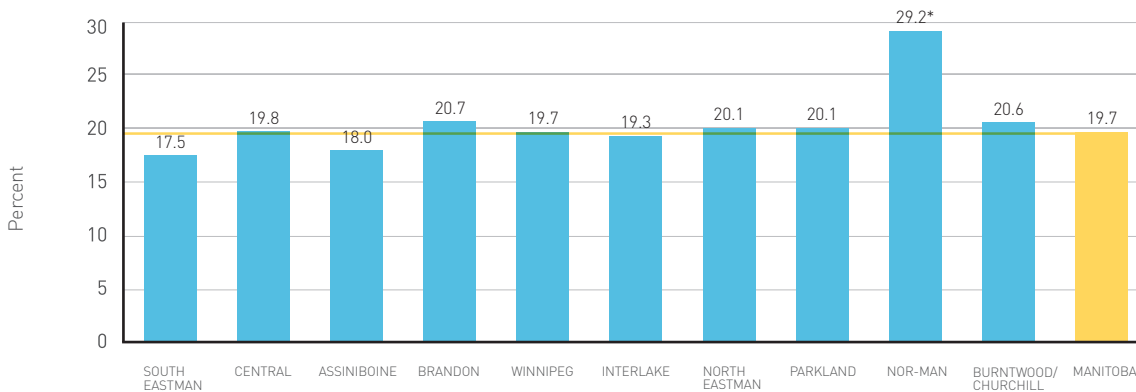
Percent of cancer patients diagnosed at late stage (IV), by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 2.52

Percent of cancer patients diagnosed at late stage (IV), by Regional Health Authority



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

### Late stage diagnosis varies by region and type of cancer.

- ▶ Figure 2.51 shows the North has the highest percentage of cancer patients diagnosed at a late stage at 24.4%, while the other regions are relatively similar.
- ▶ Figure 2.52 shows NOR-MAN has the highest percentage of cancer patients diagnosed at late stage at 29.2%, and Assiniboine has the lowest rate at 17.5%.
- ▶ Figures 2.53 to 2.60 (see following pages) show that stage at diagnosis varies by type of cancer:
  - ▶ lung cancer is frequently diagnosed at a late stage (41.7%)
  - ▶ breast cancer is rarely diagnosed at a late stage (5.6%)
  - ▶ colorectal cancer and prostate cancer are diagnosed at a late stage more often in the North

## Why is this important?

### Diagnosing a cancer late can lead to poorer survival.

- ▶ Recognizing symptoms and seeking medical help is key to early cancer diagnosis.
- ▶ The health care system’s response to suspected cancers is also critical to timely diagnosis.
- ▶ For some cancers there is scientific evidence supporting screening the population so that cancers are found before symptoms are present. But, not all cancers have scientifically proven screening tests.

## How do we compare?

### Canadian benchmarks for stage at diagnosis are not available yet.

## What is CancerCare Manitoba doing to decrease late stage diagnosis?

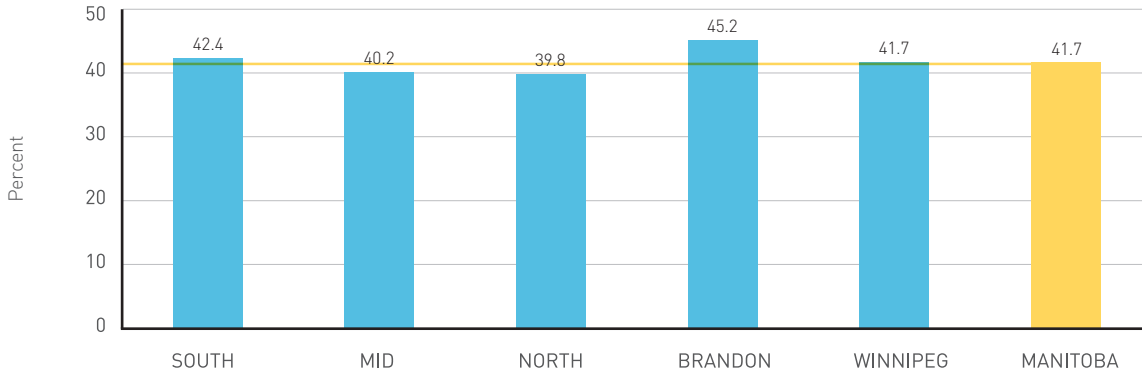
### Longstanding screening programs such as the Manitoba Breast Screening Program have led to more patients being diagnosed early when expected outcomes are good and treatment is most effective.

- ▶ The introduction of ColonCheck Manitoba is expected to have the same effect for colorectal cancer.
- ▶ The Patient Navigation Program is working to ensure rapid system response for cancer diagnosis as well as cancer treatment.

# Accessing the Cancer System: Lung

Figure 2.53

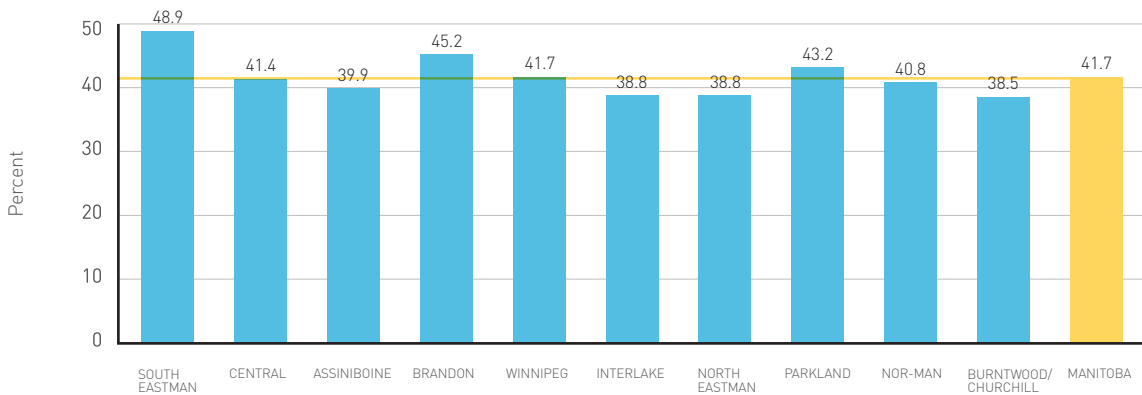
Percent of lung cancer patients diagnosed at late stage (IV), by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

Figure 2.54

Percent of lung cancer patients diagnosed at late stage (IV), by Regional Health Authority



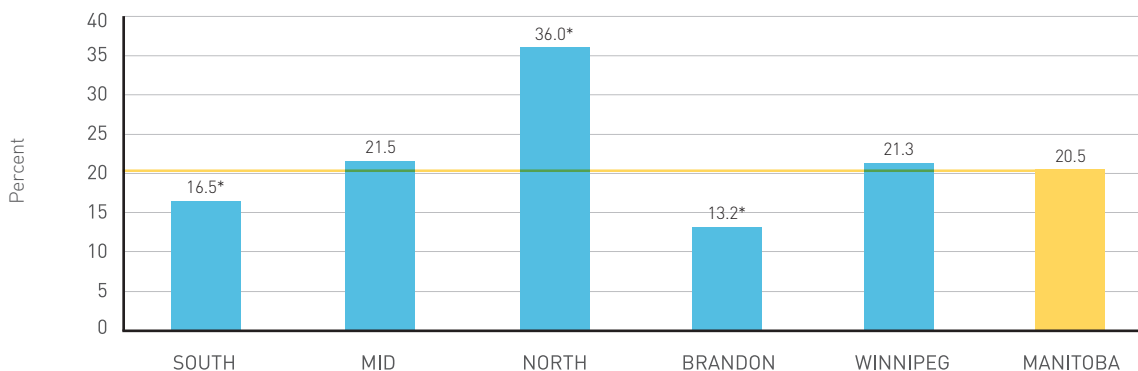
Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.



# Accessing the Cancer System: Colorectal

Figure 2.55

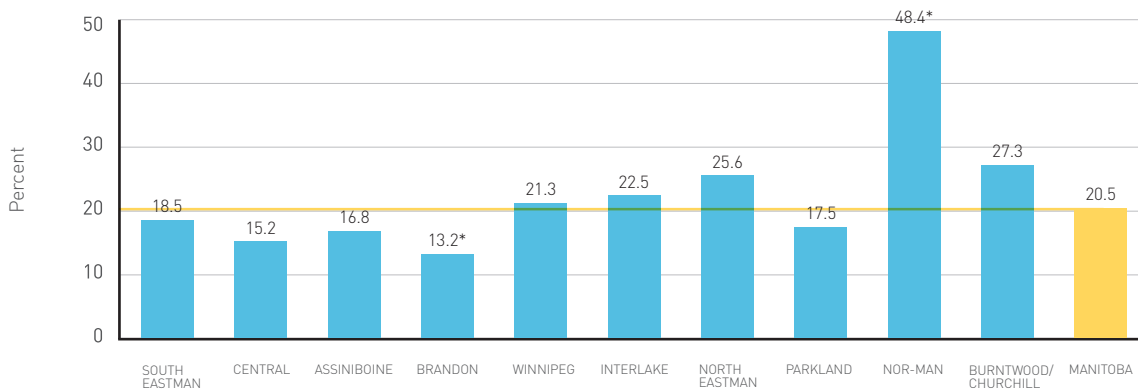
Percent of colorectal cancer patients diagnosed at late stage (IV), by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 2.56

Percent of colorectal cancer patients diagnosed at late stage (IV), by Regional Health Authority

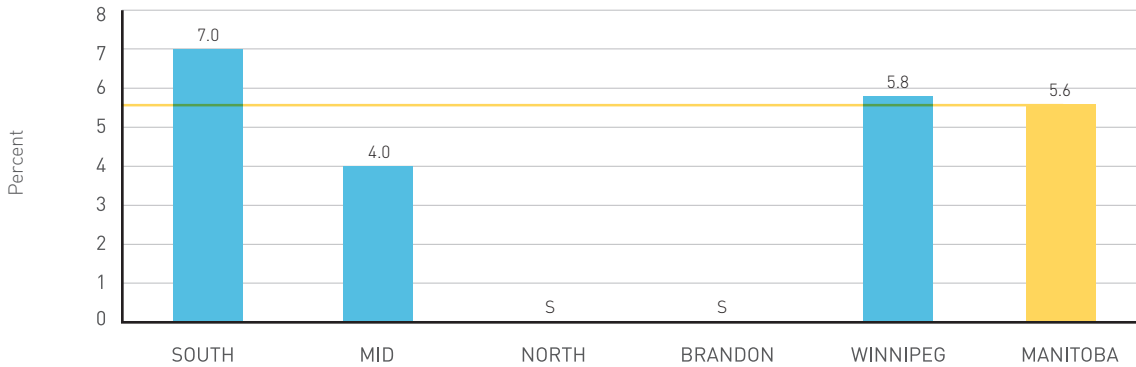


Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).

# Accessing the Cancer System: Breast

Figure 2.57

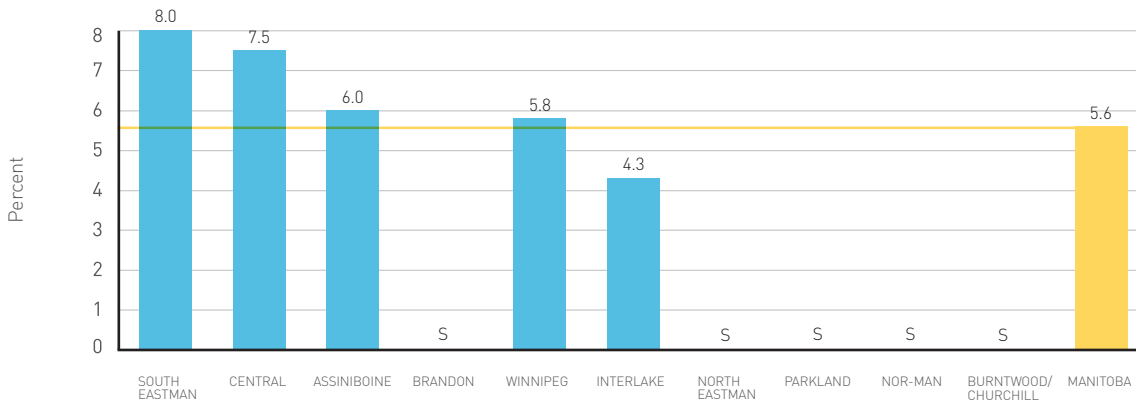
Percent of breast cancer patients diagnosed at late stage (IV), by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
s = numbers suppressed where < 6

Figure 2.58

Percent of breast cancer patients diagnosed at late stage (IV), by Regional Health Authority



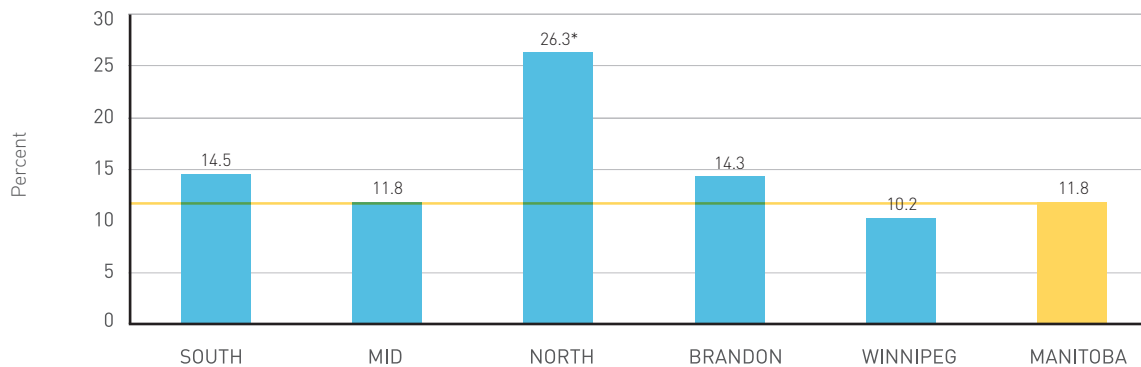
Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).  
s = numbers suppressed where < 6



# Accessing the Cancer System: Prostate

Figure 2.59

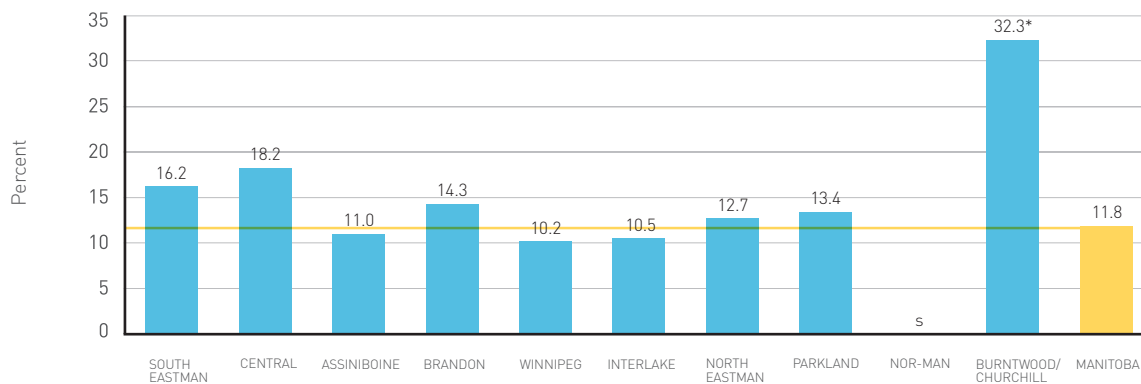
Percent of prostate cancer patients diagnosed at late stage (IV), by regional groupings



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 2.60

Percent of prostate cancer patients diagnosed at late stage (IV), by Regional Health Authority

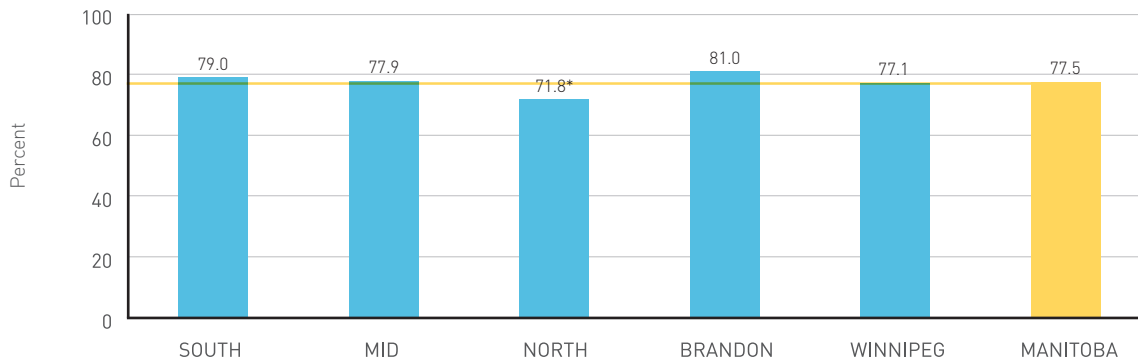


Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).  
s = numbers suppressed where  $< 6$

# End-of-Life Care

Figure 2.61

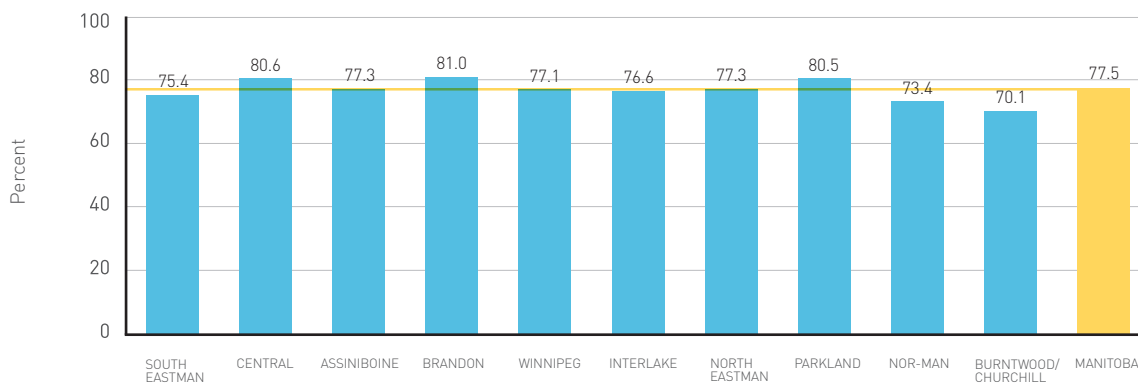
Percent of patients who die of cancer with an acute care hospital stay in the last two weeks of life, by regional groupings



Source: Manitoba Cancer Registry, cancer deaths 2005–2007; combined with hospital data from Manitoba Health.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 2.62

Percent of patients who die of cancer with an acute care hospital stay in the last two weeks of life, by Regional Health Authority



Source: Manitoba Cancer Registry, cancer deaths 2005–2007; combined with hospital data from Manitoba Health.



## What does this tell us?

Overall, a high percentage of patients dying of cancer are spending their final days in a hospital setting.

- ▶ Figure 2.61 shows that patients in the North have a hospital stay at end-of-life less often than other Manitobans (71.8%); Brandon has the highest rate at 81.0%.
- ▶ Figure 2.62 shows the highest percent of patients dying of cancer with an acute care hospital stay at end-of-life is in Brandon at 81.0% and the lowest percentage is in Burntwood/Churchill at 70.1%.

## What else do we know?

- ▶ Research suggests many people approaching end-of-life want to die at home, but only a handful do so.<sup>31-36</sup>
- ▶ Factors associated with dying at home include patient preference, family support and caregiver resources, and a health care system that supports home-based and community palliative services.<sup>31-33, 37-40</sup>

## Why is this important?

Providing options for end-of-life care gives patients and families more choice.

- ▶ Palliative care programs try to facilitate home deaths by way of extending care in the home as long as possible. This can help avoid crisis emergency department visits or patients being transferred to acute care facilities during their final days and often, should the patient and family so desire, enables the patient to die at home.

## How do we compare?

Canadian benchmarks for this measure are not available yet.

## What is CancerCare Manitoba doing to improve access to end-of-life care?

With our partners, CancerCare Manitoba aims to provide support to patients who are dying of cancer and their families.

- ▶ The WHRA Palliative Care Program is a community-based program that provides care at home, in palliative care units or hospices, and supports palliative care in other health care facilities. The program is based on the belief that quality end-of-life care can be provided in a variety of settings.
- ▶ CancerCare Manitoba supports the internationally-recognized Manitoba Palliative Care Research Unit where more is being learned about how to help patients and their families with the end-of-life stage of the cancer journey.



# References

- 1 Hewitson P, Glasziou P, Irwig L, Watson E. (2007). Screening for colorectal cancer using the fecal occult blood test, Hemoccult. *Cochrane Database of Systematic Reviews* 2007, Issue 1. Art. No.: CD001216. DOI: 10.1002/14651858.CD001216.pub2.
- 2 International Association for Research in Cancer (2005). *Handbooks of cancer prevention: Cervical cancer screening*. Lyon: IARC Press.
- 3 International Association for Research in Cancer (2002). *Handbooks of cancer prevention: Breast cancer screening*. Lyon: IARC Press.
- 4 Wilkins K, Shields M. (2009). Colorectal cancer testing in Canada – 2008. *Statistics Canada. Health Reports, Vol 20, no.3, September*.
- 5 Canadian Community Health Survey 2005. CANSIM Table 105-4042
- 6 Shields M, Wilkins K. (2009). An update on mammography use in Canada – 2008. *Statistics Canada Health Reports, Vol 20, no.3*.
- 7 Canadian Cancer Society's Steering Committee. *Canadian Cancer Statistics 2009*. Toronto: Canadian Cancer Society, 2009.
- 8 See the Surveillance Epidemiology and End Results website at: <http://seer.cancer.gov/statfacts/html/colorect.html#survival>. Accessed April 2, 2010.
- 9 Decker K, Demers A, Chateau et al. (2009). Papanicolaou test utilization and frequency of screening opportunities among women diagnosed with cervical cancer. *Open Medicine* 3(3): 140-7.
- 10 British Columbia Cancer Agency. *Cervical Cancer Screening Program. Annual report 2008*.
- 11 Manitoba Breast Screening Program (2009). *Biennial report 2006-2008*. Winnipeg, MB.
- 12 Public Health Agency of Canada. (2008). *Organized Breast Cancer Screening Programs in Canada. Report on Program Performance in 2003 and 2004*. Ottawa.
- 13 Olivetto IA, Bancej C, Goel V et al. (2001). Waiting times from abnormal screen to breast cancer diagnosis in seven Canadian provinces. *CMAJ* 165(3): 277-83.
- 14 Decker KM, Harrison M, Chateau D. (2004). Influence of direct referral on time to diagnosis after an abnormal breast screening result. *Cancer Detection and Prevention* 28: 361-367.
- 15 See the Canadian Institute for Health Information website at: [http://secure.cihi.ca/cihiweb/products/wait\\_times\\_tables\\_aib\\_e.pdf](http://secure.cihi.ca/cihiweb/products/wait_times_tables_aib_e.pdf). Accessed March 2, 2010.
- 16 See the Cancer Care Ontario website at: <http://csqi.cancercare.on.ca/cms/One.aspx?portalId=40955&pageId=41107> Accessed March 15, 2010.
- 17 Olivetto I, Coldman A, Hislop G et al. (1997). Compliance with practice guidelines for node-negative breast cancer. *J Clin Oncol*, 15(1): 216-222.
- 18 Hislop G, Olivetto I, Coldman A et al. (1996). Variations in breast conservation surgery for women with axillary lymph node negative breast cancer in British Columbia. *Canadian Journal of Public Health* 87(6): 390-394.
- 19 Grill R, Repetto F. (1995). Variation in use of breast conservation in Lombardia, Italy. *International Journal of Technology Assessment in Health Care*. 11(4): 733-740.
- 20 Junor EE, Hole DJ, Gillis CR. (1994). Management of ovarian cancer: Referral to a multidisciplinary team matters. *British Journal of Cancer* 70: 363-370.
- 21 Hilner B, Smith T, Desch C. (2000). Hospital and physician volume or specialization and outcomes in cancer treatment: Importance in quality of cancer care. *J Clin Oncol* 18: 2327-2340.
- 22 Lee-Feldstein A, Anton-Culver H, Feldstein P. (1994). Treatment differences and other prognostic factors related to breast cancer survival. Delivery systems and medical outcomes. *JAMA* 271(5): 1163-1167.
- 23 Chaudhury R, Goel V, Sawka C. (2001). Breast cancer survival by teaching status of the initial treating hospital. *CMAJ* 164(2): 183-211.
- 24 Hand R. (1991). Hospital variables associated with quality of care for breast cancer patients. *JAMA* 266: 3429-3432.
- 25 Meyer J, Feingold M. (1993). Using standard treatment protocols to manage costs and quality of hospital services. *Hospital Technology Series* 12(7): 1-23.
- 26 See the Cancer Care Ontario website at: <http://csqi.cancercare.on.ca/cms/One.aspx?portalId=40955&pageId=41095> Accessed March 15, 2010.
- 27 Celaya MO, Rees JR, Gibson JJ, Riddle BL, Greenberg ER. (2006). Travel distance and season of diagnosis affect treatment choices for women with early-stage breast cancer in a predominantly rural population (United States). *Cancer Causes Control* Aug 17 (6) 851-6.
- 28 Roberts GH, Dunscombe PB, Samant RS. (2002). Geographic delivery models for radiotherapy services. *Australas Radiol* Sep 46 (3) 290-4.
- 29 Dunscombe P, Roberts G. (2001). Radiotherapy service delivery models for a dispersed patient population. *Clin Oncol (R Coll Radiol)* 13 (1) 29-37.
- 30 QMonitor (2009). *Report on Ontario's Health System – Ontario Health Quality Council*, p. 55.
- 31 Bruera E, Sweeney C, Russell N, Willey JS, Palmer JL. (2003). Place of death of Houston area residents with cancer over a two-year period. *J Pain Symptom Manage* 26: 637-643.
- 32 Grande GE, Addington-Hall JM, Todd CJ. (1998). Place of death and access to home care services: Are certain patient groups at a disadvantage? *Soc Sci Med* 47: 565-579.
- 33 McWhinney IR, Bass MJ, Orr V. (2000). Factors associated with location of death (home or hospital) of patients referred to a palliative care team. *J Palliative Care* 16: 16-21.
- 34 Thorpe G. (1993). Enabling more dying people to remain at home. *BMJ* 307: 915-918.
- 35 Tiernan M, O'Connor M, O'Siorain L, Kearney M. (2002). A prospective study of preferred versus actual place of death among patients referred to a palliative care home-care service. *Irish Medical J* 95: 232-235.
- 36 Davies E, Linklater KM, Jack RH, Clark L, Møller H. (2006). How is place of death from cancer changing and what affects it? Analysis of cancer registration and service data. *Br J Cancer* 95: 593-600.
- 37 Gomes B, Higginson IJ. (2006). Factors influencing death at home in terminally ill patients with cancer: Systematic review. *BMJ* 332: 515-521.
- 38 Cantwell P, Turco S, Brenneis C, Hanson J, Neumann CM, Bruera E. (2000). Predictors of home death in palliative care cancer patients. *J Palliat Care* 16: 23-28.
- 39 Karlson S, Addington-Hall J. (1998). How do cancer patients who die at home differ from those who die elsewhere? *Palliat Med* 12: 279-286.
- 40 Pooler, J, McCrory F, Steadman Y, Westwell H, Peers S. (2003). Dying at home: A care pathway for the last days of life in a community setting. *Int J Palliat Nurs* 9: 258-264.



# Outcomes

As a former athlete, Joanne is familiar with the pain of injuries, bumps and bruises. However, as chemotherapy and radiation treatments for her cancer began to take their toll, her high pain tolerance started to fade. That's when she visited CancerCare Manitoba's Pain and Symptom Management Clinic.

The clinic is for patients experiencing symptoms, such as pain, nausea, fatigue or depression and can be related to the cancer or to its treatment. A multidisciplinary team seeks to discover the cause of the discomfort and create a plan to solve it.




"The staff took the time and energy to listen to me. I know more about pain now and how it works as well as methods to manage it," said Joanne and she reports that her pain is now only a minor aggravation and no longer affects her mood or outlook.

Clinic physician Dr. Paul Daeninck knows that some patients think pain is an inevitable part of cancer and treatment. "It's important for patients to know that pain can be alleviated and that most times we can help."



# Outcomes

## INCIDENCE, MORTALITY, AND SURVIVAL

	Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>	
 <b>Cancer Incidence</b> age-standardized incidence rates (per 100,000 people), all cancers <sup>l</sup> age-standardized incidence rates (per 100,000 people), by cancer type: <sup>l</sup>	484.3	457.8	→	397.2 – 519.9	
	<b>lung</b>	70.9	68.8	→	56.1 – 102.9
	<b>colorectal</b>	67.2	64.4	→	52.2 – 84.7
	<b>breast (f)</b>	122.0	121.3	→	87.8 – 139.8
	<b>prostate</b>	148.3	117.9	↓	88.3 – 154.1
 <b>Cancer Mortality</b> age-standardized mortality rates (per 100,000 people), all cancers <sup>m</sup> age-standardized mortality rates (per 100,000 people), by cancer type: <sup>m</sup>	220.6	209.1	→	182.8 – 278.1	
	<b>lung</b>	53.1	50.4	→	42.5 – 71.4
	<b>colorectal</b>	29.1	26.2	→	18.2 – 36.4
	<b>breast (f)</b>	29.7	28.9	→	14.8 – 36.9
	<b>prostate</b>	38.4	38.5	→	29.5 – 90.4
 <b>Cancer Survival</b> age-standardized five-year relative survival ratios, all cancers <sup>n</sup> age-standardized five-year relative survival ratios, by cancer type: <sup>n</sup>	53.4%	56.4%	→	53.4% - 62.6%	
	<b>lung</b>	13.9%	18.9%	↑	12.6% – 29.9%
	<b>colorectal</b>	53.0%	56.9%	→	51.1% – 68.1%
	<b>breast (f)</b>	82.9%	83.6%	→	73.2% – 87.4%
	<b>prostate</b>	83.3%	91.1%	→	69.9% – 96.5%

Source: <sup>l</sup>Manitoba Cancer Registry, patients diagnosed 2000-2002, 2005-2007.

<sup>m</sup>Manitoba Cancer Registry, cancer deaths 2000-2002, 2005-2007.

<sup>n</sup>Manitoba Cancer Registry, patients diagnosed 1997-1999, 2000-2002

Note: Trend arrow is based on + or - 10% of the past value.  
 Colour indicates if the trend is good (green), neutral (yellow)  
 or needs to improve (red).

RHA refers to Regional Health Authority.

## What does this tell us?

### Cancer is a significant health issue for Manitobans.

- ▶ In Manitoba, the incidence or number of new cancer diagnoses has remained fairly stable over time.
  - ▶ Looking at the four most common cancers:
    - the incidence rates of lung, colorectal and breast cancers have stayed about the same
    - only the incidence rate of prostate cancer has decreased significantly
- ▶ Cancer mortality or death rates have also been quite steady over time.
- ▶ Cancer survival rates have remained fairly stable.
  - ▶ Five-year relative survival following a diagnosis of lung cancer is poor, but it has increased over time.
  - ▶ Five-year relative survival following a diagnosis of colorectal cancer is fair, but it has increased slightly.
  - ▶ Five-year relative survival following a diagnosis of breast cancer is very good and it has stayed about the same.
  - ▶ Five-year relative survival following a diagnosis of prostate cancer is very good and has increased slightly over time.

## Why is this important?

### Incidence, mortality and survival are often used to understand how well we are doing to reduce the burden of cancer in our population.

- ▶ Cancer incidence and mortality rates are not increasing over time, but they are not decreasing either.
- ▶ Lung cancer contributes significantly to the burden of cancer in Manitoba, despite being highly preventable. It also has the poorest survival.
- ▶ Although frequently diagnosed, prostate and breast cancers have the highest five-year survival rates.

## How do we compare?

### Manitoba's cancer rates are similar to the national experience.

- ⊖ Manitoba's rates of cancer incidence and mortality are generally similar to other provincial rates as well as the Canadian national rate.<sup>1,2</sup>
- ⊖ British Columbia consistently reports the lowest cancer incidence rates.
- ⊖ Survival patterns observed for Manitoba are consistent with other provinces.<sup>2,3</sup>

## What is CancerCare Manitoba doing to improve cancer outcomes?

### With our partners, CancerCare Manitoba is working to decrease the impact of cancer by preventing the disease, detecting it sooner, and treating it more effectively.

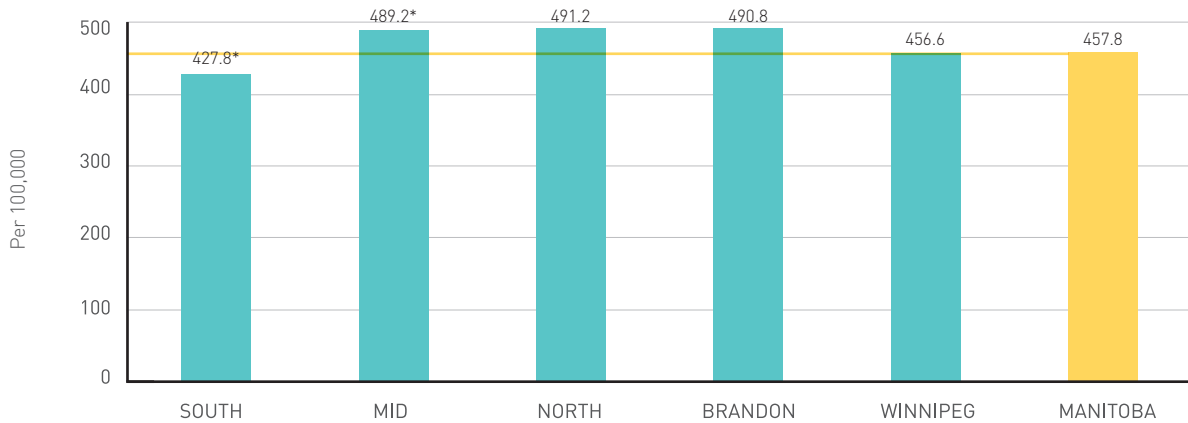
- ▶ These efforts are reflected throughout this report.

# Cancer Incidence: Rates

Figure 3.1

## Cancer incidence, by regional groupings

Age-standardized incidence rates per 100,000 people

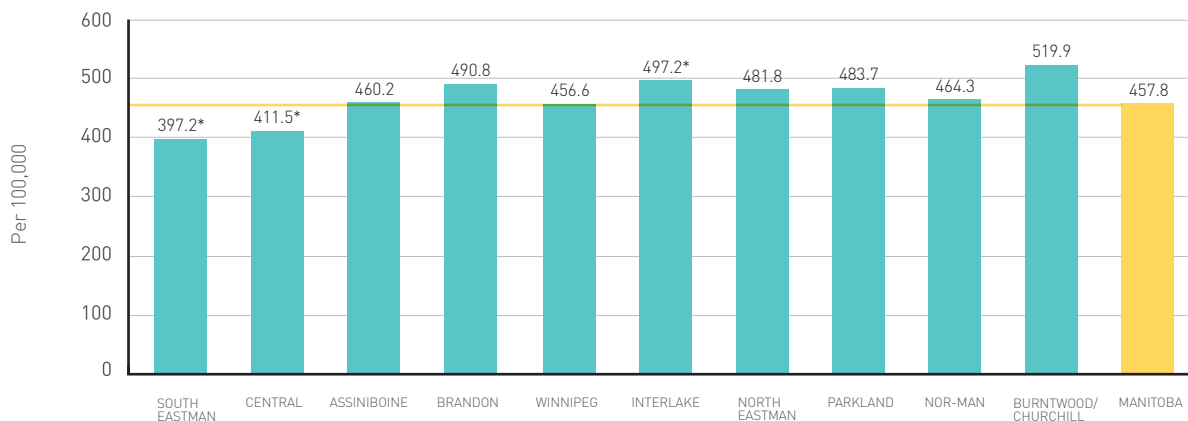


Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 3.2

## Cancer incidence, by Regional Health Authority

Age-standardized incidence rates per 100,000 people



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.  
\*Statistically different from Manitoba rate ( $p < 0.05$ ).



## What does this tell us?

### Cancer incidence varies by region.

- ▶ Figure 3.1 shows that the highest age-standardized cancer incidence rate is in the North (491.2 per 100,000 people) and the lowest is in the Rural South (427.8 per 100,000).
- ▶ Figure 3.2 shows that the highest cancer incidence rate is in the Burntwood/Churchill regions (519.9 per 100,000 people) and the lowest is in the South Eastman region (397.2 per 100,000).

## What else do we know?

### Cancer incidence for specific types of cancer also varies by region.

- ▶ Figures 3.3 to 3.10 (see following pages) show:
  - ▶ lung cancer incidence is higher in the North (91.9 per 100,000 people) and lowest in the Rural South (58.0 per 100,000).
  - ▶ colorectal cancer incidence is similar across the regions with some slightly higher than average rates in Assiniboine (77.4 per 100,000 people) and Burntwood/Churchill (84.7 per 100,000).
  - ▶ breast cancer incidence is similar across the province although the North has lower than average rates (89.9 per 100,000 women).
  - ▶ prostate cancer incidence is similar across the province although the Rural South has lower than average rates (104.1 per 100,000 men).

## Why is this important?

### Reporting region-specific incidence can help focus efforts to prevent and reduce the burden of cancer in Manitoba.

- ▶ Ideally, cancer incidence should be reduced in all regions across the province.

## What is CancerCare Manitoba doing to reduce incidence rates?

### With our partners, CancerCare Manitoba is working to decrease the impact of cancer by preventing the disease.

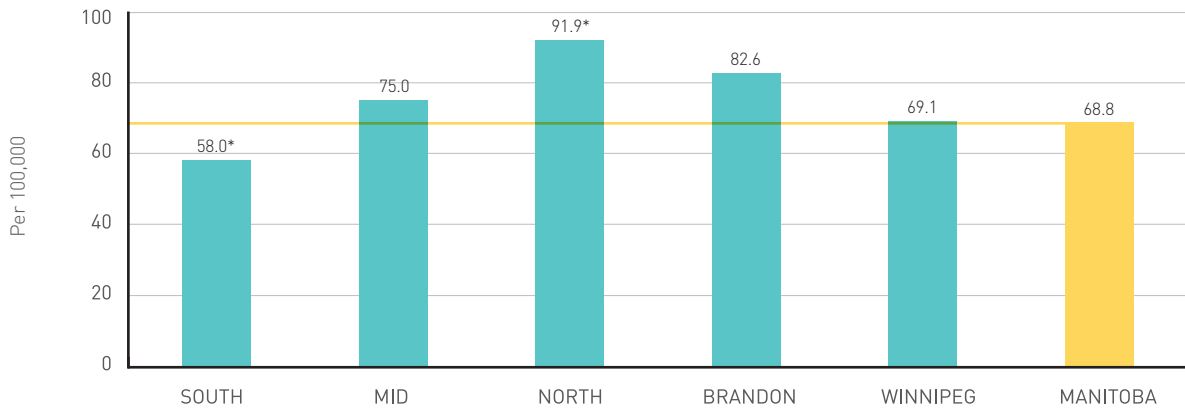
- ▶ With our chronic disease prevention partners such as the CancerCare Manitoba Foundation and the Alliance for the Prevention of Chronic Disease, CCMB promotes healthy living behaviours for all Manitobans through campaigns that encourage sun safety, tobacco reduction, healthy eating and physical activity.
- ▶ A partnership between CCMB's colorectal, cervical and breast screening programs and the CancerCare Manitoba Foundation led to the production of the *Reduce Your Risk* DVD.
- ▶ In some cases, pre-cancerous conditions can be detected and treated early so that they never become cancer. Two of CCMB's screening programs, the Manitoba Cervical Cancer Screening Program and ColonCheck Manitoba, contribute to the prevention of cervical and colorectal cancers because screening for these cancers often finds such pre-cancerous conditions.

# Cancer Incidence: Lung

Figure 3.3

## Lung cancer incidence, by regional groupings

Age-standardized rates per 100,000 people



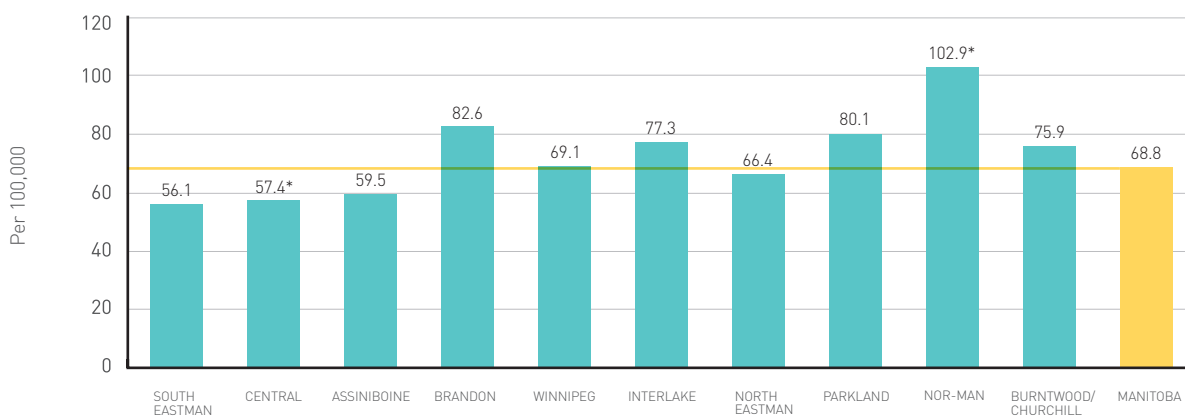
Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 3.4

## Lung cancer incidence, by Regional Health Authority

Age-standardized rates per 100,000 people



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

\*Statistically different from Manitoba rate ( $p < 0.05$ ).

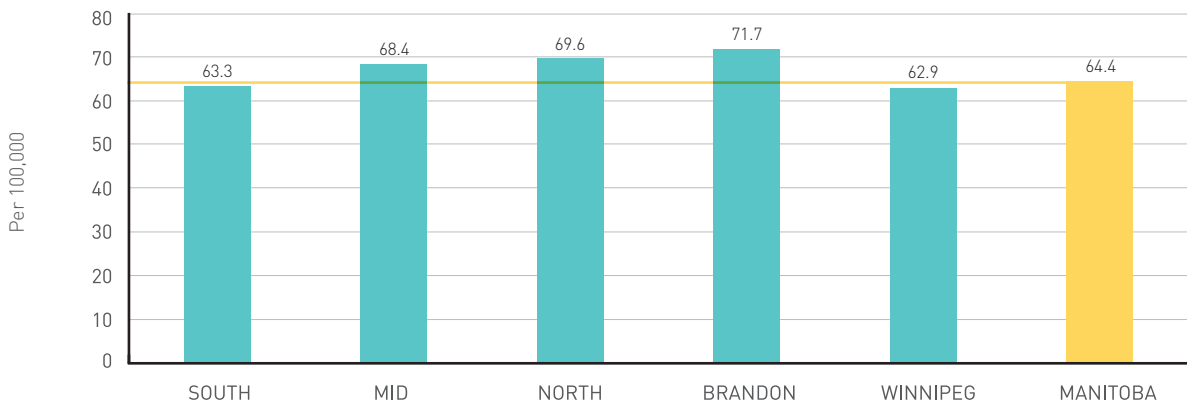


# Cancer Incidence: Colorectal

Figure 3.5

## Colorectal cancer incidence, by regional groupings

Age-standardized rates per 100,000 people

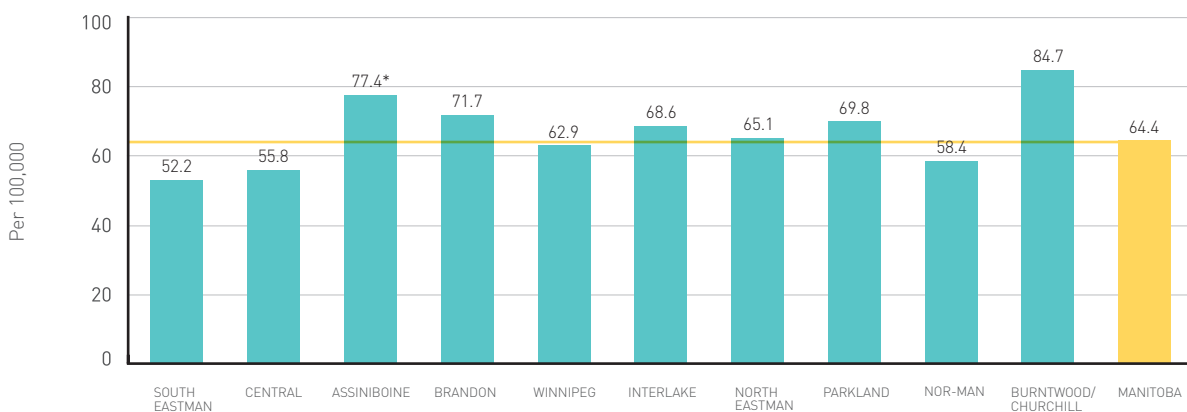


Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

Figure 3.6

## Colorectal cancer incidence, by Regional Health Authority

Age-standardized rates per 100,000 people



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

\*Statistically different from Manitoba rate ( $p < 0.05$ ).

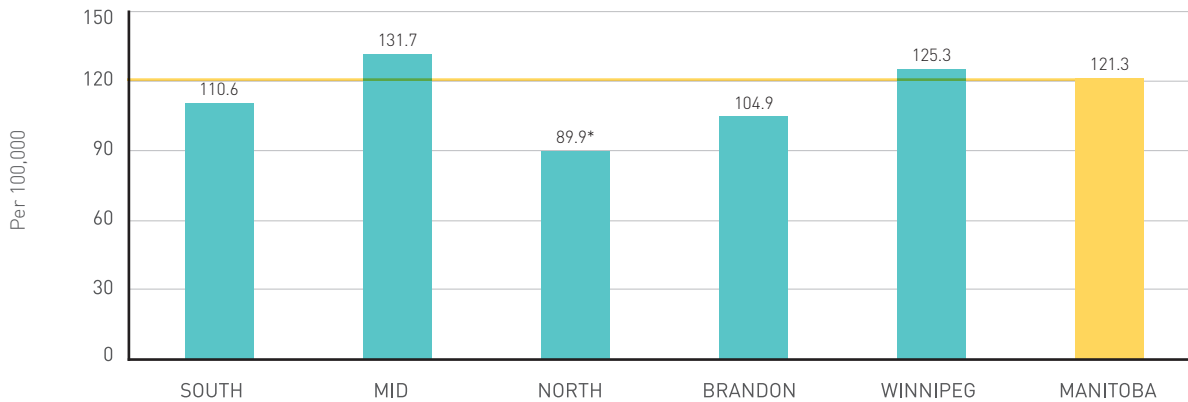


# Cancer Incidence: Breast

Figure 3.7

## Breast cancer incidence, by regional groupings

Age-standardized rates per 100,000 women



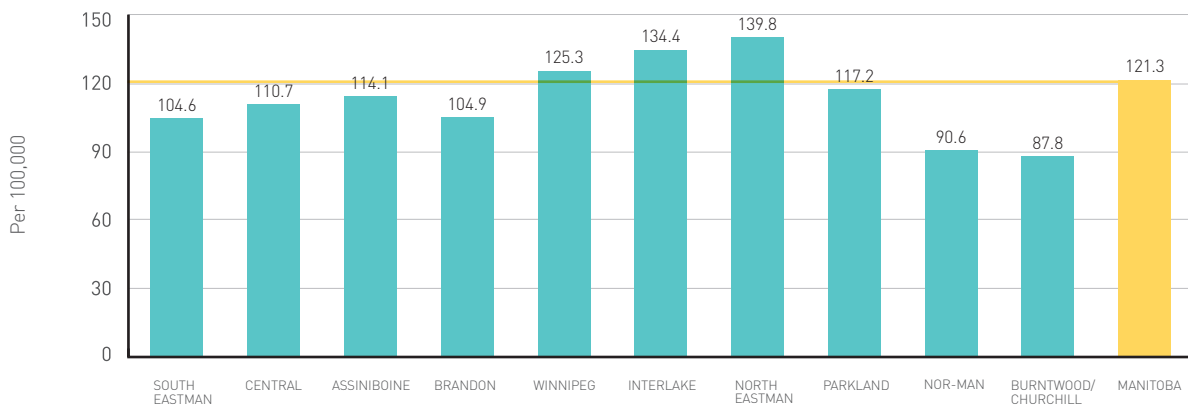
Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 3.8

## Breast cancer incidence, by Regional Health Authority

Age-standardized rates per 100,000 women



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

\*Statistically different from Manitoba rate ( $p < 0.05$ ).

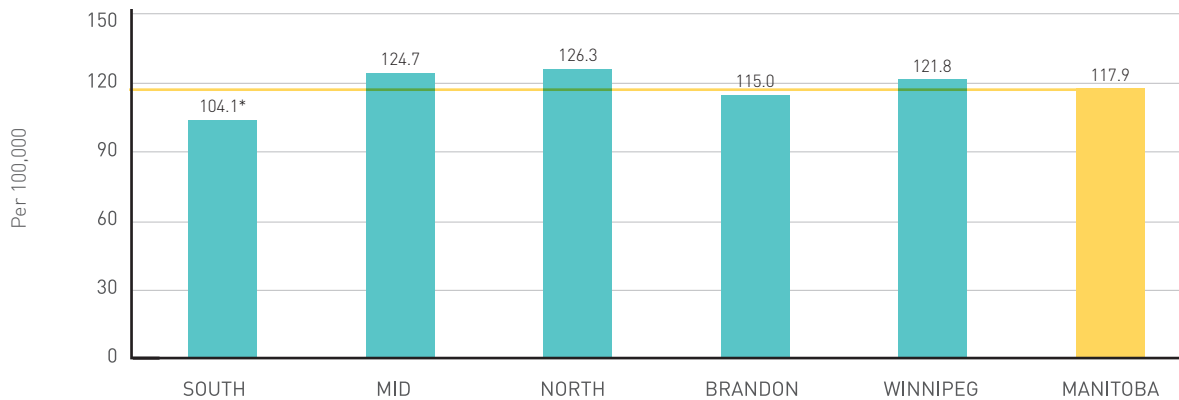


# Cancer Incidence: Prostate

Figure 3.9

## Prostate cancer incidence, by regional groupings

Age-standardized rates per 100,000 men



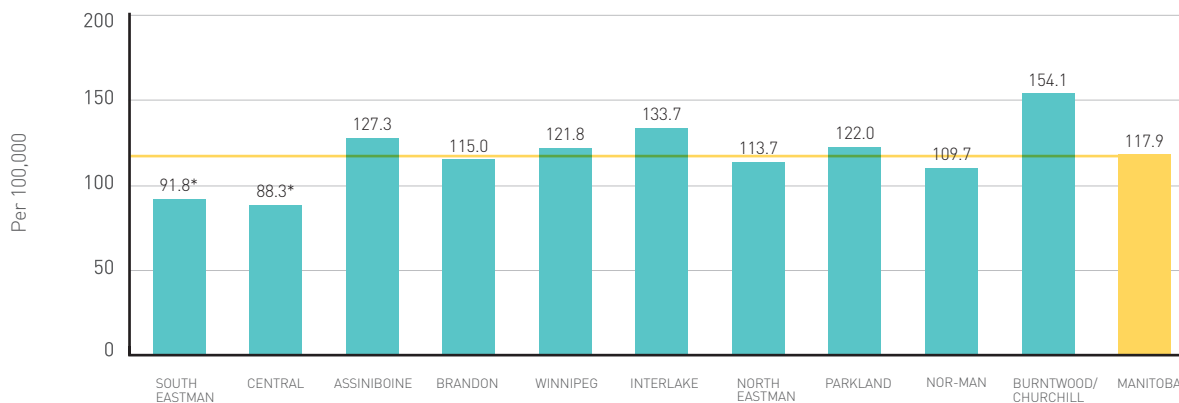
Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

\*Statistically different from Manitoba rate ( $p < 0.05$ ).

Figure 3.10

## Prostate cancer incidence, by Regional Health Authority

Age-standardized rates per 100,000 men



Source: Manitoba Cancer Registry, patients diagnosed 2005-2007.

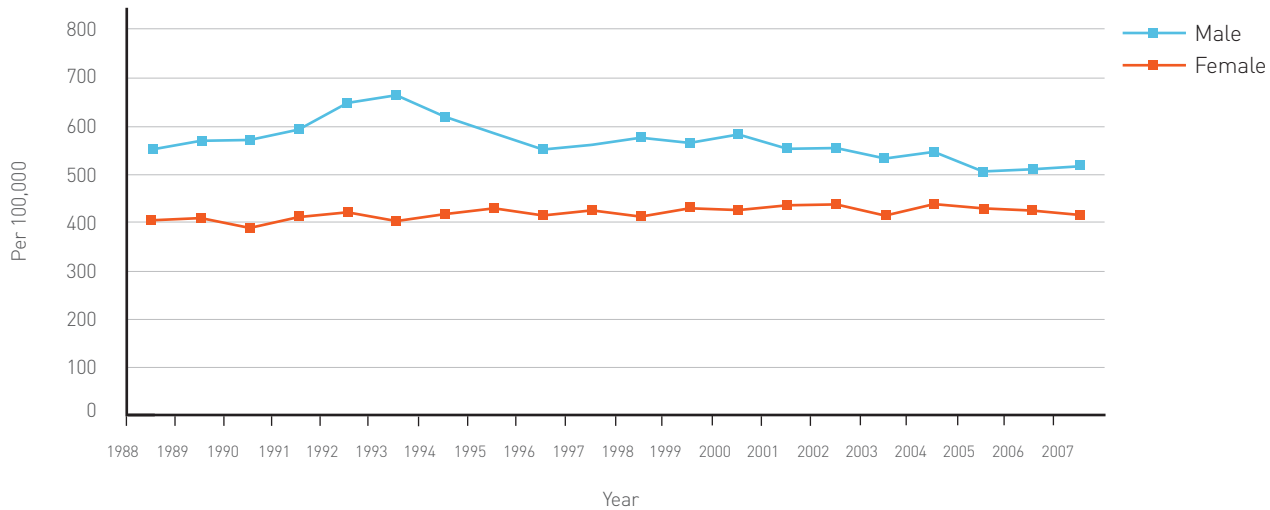
\*Statistically different from Manitoba rate ( $p < 0.05$ ).

# Cancer Incidence: Trends

Figure 3.11

## Cancer incidence trends by sex, 1988 – 2007

Age-standardized rates per 100,000 people

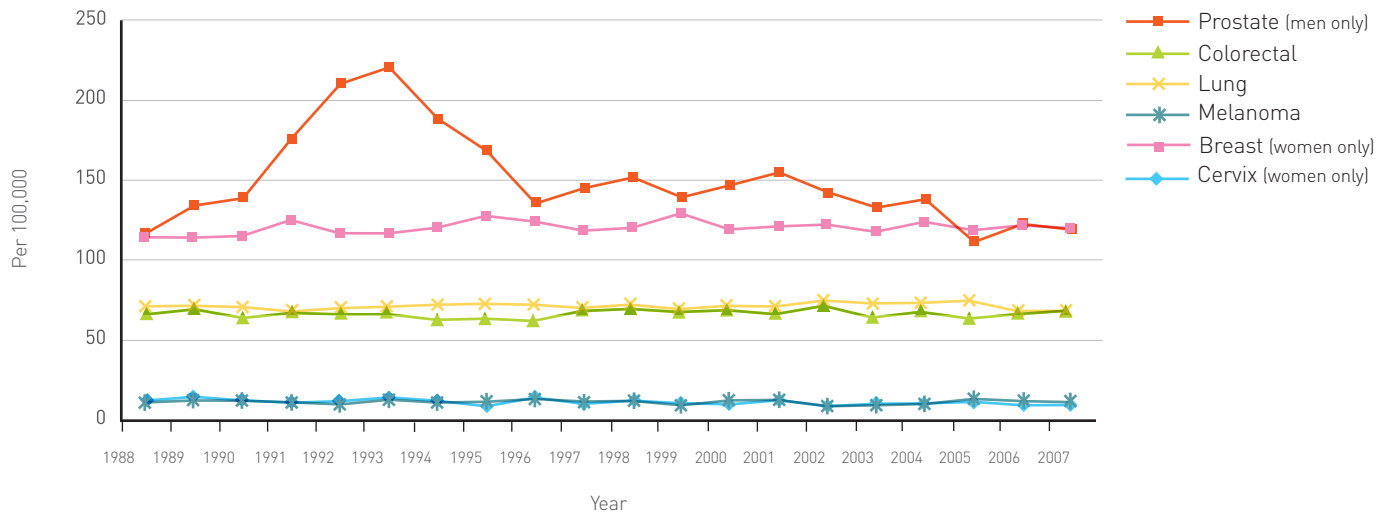


Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

Figure 3.12

## Cancer incidence trends by cancer type, 1988 – 2007

Age-standardized rates per 100,000 people



Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.



## What does this tell us?

### Cancer incidence is not declining rapidly over time.

- ▶ Figure 3.11 shows that although the incidence of cancer in men has declined slightly since 1988, but the incidence of cancer in women has risen slightly.
- ▶ Figure 3.12 shows that the rate of prostate cancer rose quickly in the early 1990s due to the introduction of prostate specific antigen (PSA) testing, a blood test used to diagnose prostate cancer. Using the PSA test to screen men for prostate cancer is controversial because it is not yet known for certain whether this test actually saves lives. The benefits of screening for prostate cancer are still being studied.<sup>4</sup>
- ▶ Figure 3.12 shows that the incidence for other types of cancers has been quite stable.
- ▶ Figures 3.13 and 3.14 (see following pages) show incidence trends for men and women separately.
  - ▶ Figure 3.13 shows that the rate of lung cancer in men decreased between 1988-2007, while the rate of colorectal cancer remained stable and the rate of melanoma skin cancer slightly increased.
  - ▶ Figure 3.14 shows that the rate of breast cancer in women has remained stable between 1988-2007, while the rate of lung cancer has increased. The rates of cervical, colorectal, and melanoma skin cancer have remained stable.

## Why is this important?

### Different types of cancers have different risk factors so prevention strategies may vary.

- ▶ In Manitoba, the increase in lung cancer incidence in women is a concern, but the pattern is attributable to smoking rates several decades ago.
- ▶ The incidence of both prostate cancer and breast cancer are relatively high compared to other cancers, yet prevention strategies for these cancers are less obvious than for lung cancer (smoking), melanoma (sun exposure) and cervical cancer (HPV infection).

## How do we compare?

### Manitoba's cancer incidence is similar to the national average.

- ⊖ Manitoba's patterns of incidence by type of cancer are comparable to other Canadian provinces.<sup>1,2</sup>
- ⊖ The trends observed over time for each type of cancer in Manitoba are comparable to other Canadian provinces.<sup>1,2</sup>
- ⊖ Cancer rates are often highest in eastern Canada and lowest in the west; Manitoba is geographically and statistically in the middle.<sup>1,2</sup>

## What is CancerCare Manitoba doing to reduce the incidence of cancer?

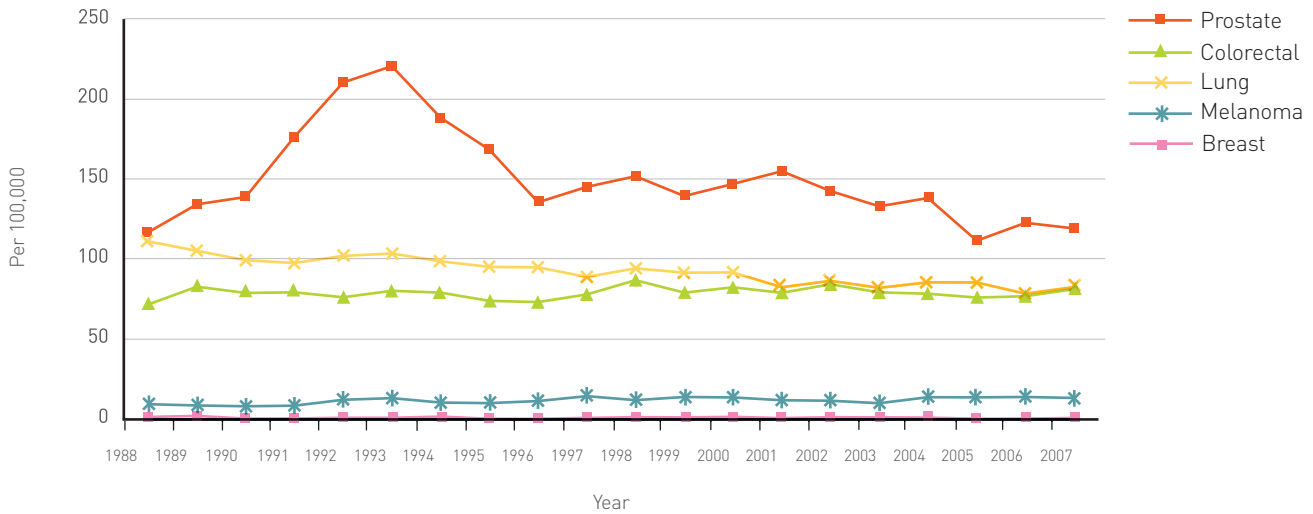
### With our partners, CancerCare Manitoba is working to decrease the impact of cancer by preventing the disease using various strategies.

- ▶ With our chronic disease prevention partners such as the CancerCare Manitoba Foundation and the Alliance for the Prevention of Chronic Disease, CCMB promotes healthy living behaviours for all Manitobans through campaigns that encourage sun safety, tobacco reduction, healthy eating and physical activity.
- ▶ A partnership between CCMB's colorectal, cervical and breast screening programs and the CancerCare Manitoba Foundation led to the production of the *Reduce Your Risk* DVD.

Figure 3.13

**Cancer incidence trends for men by cancer type, 1988 – 2007**

Age-standardized rates per 100,000 men

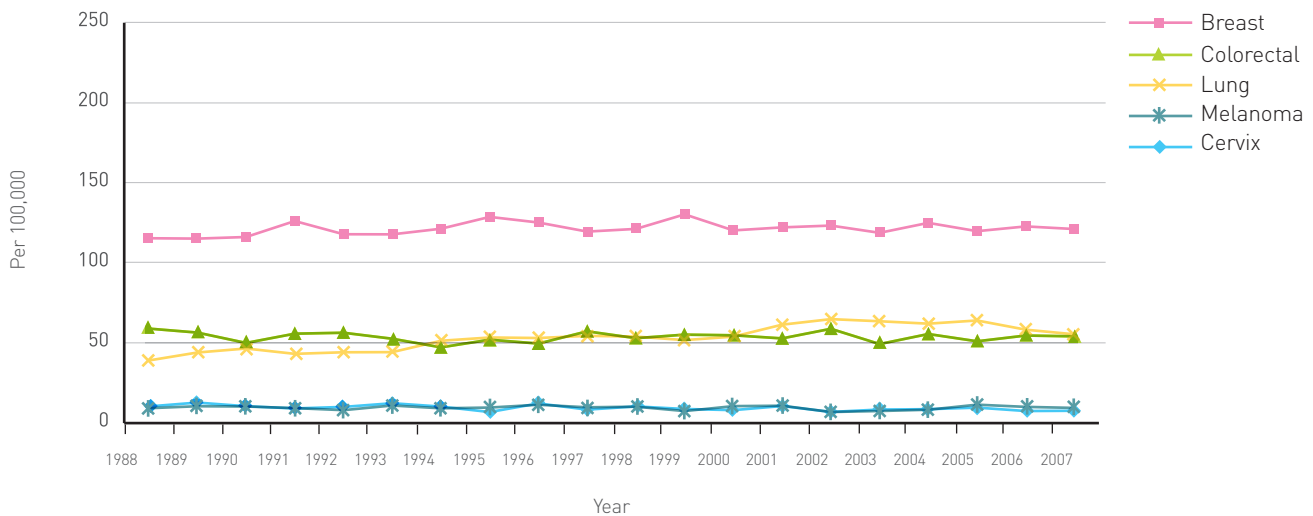


Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

Figure 3.14

**Cancer incidence trends for women by cancer type, 1988 – 2007**

Age-standardized rates per 100,000 women



Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

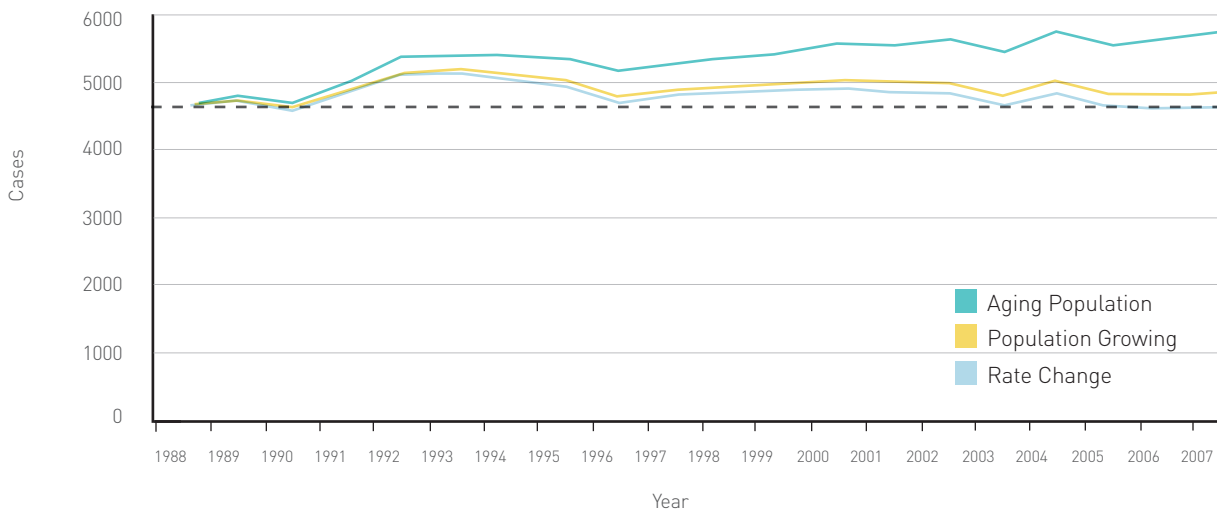


# Cancer Incidence: Factors Influencing Trends

Figure 3.15

## Factors influencing cancer incidence

*Influence of population aging, population growth and underlying cancer rate (risk) on the number of cancers diagnosed since 1988*



Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

### What does this tell us?

The number of cancer cases in Manitoba is influenced by three factors - the age of the population, its size, and risk factors such as unhealthy living including smoking, poor diet, inactivity, sun exposure and not being screened.

- ▶ In each figure (Figure 3.15 (above) Figures 3.16 to 3.21, see following pages):
  - ▶ the horizontal, dotted line acts as a reference point showing the number of newly diagnosed cancer cases in 1988.
  - ▶ the gap between the dotted line and the light blue line shows how many cancers were due to changes in cancer risk. Risk includes anything unrelated to aging or population growth that can influence the number of cancer diagnoses in Manitoba.
  - ▶ the gap between the light blue line and the yellow line represents the effect of the growing population of Manitoba on the incident number of cancer cases.

- ▶ the gap between the yellow line and the teal line indicates how much the aging of the Manitoba population affected the number of new cases of cancer in the province.

### What else do we know?

**Our aging population leads to more people being diagnosed with cancer.**

- ▶ As a result of this analysis, we know that:
  - ▶ the greatest influence on the increase in number of cancer cases overall in Manitoba between 1988 and 2007 (Figure 3.15) was aging. Change in risk was the second most influential factor for the increase and population growth was third.
  - ▶ for lung cancer, aging of the population was the main influence on the increase in newly diagnosed cases, although there was clearly some change in risk and population growth (Figure 3.16).

- ▶ for colorectal cancer, there was no change in risk and very little impact due to population growth (Figure 3.17). The change in number of cancer cases is because of the aging population.
- ▶ for breast cancer, the change in risk and the aging of the population were both very influential factors in the increased number of cases (Figure 3.18). Growth of the population had a much smaller effect on the number of breast cancer cases during this time period.
- ▶ for prostate cancer, change in risk explains the majority of the variation in the number of cases between 1988 and 2007 (Figure 3.19). The increase in the use of PSA testing is the likely cause of these variations. Population growth and aging of the population had a much smaller impact on the number of cases.
- ▶ for melanoma of the skin, change in risk was the main factor driving the increased number of cases (Figure 3.20). Indeed, sun exposure is the major risk factor for this type of cancer.
- ▶ for cervical cancer, decreasing risk factors had the biggest effect on the number of new cases of cervical cancer (Figure 3.21). This may reflect the success of the province at early detection and removal of non-cancerous lesions on the cervix. Population growth and aging of the population had a much lower impact on the number of new cases for this type of cancer.

## Why is this important?

**More needs to be done to reduce cancer to counteract the effects of our aging population.**

- ▶ Even though we are making progress in reducing cancer risk, because our population is aging, the number of new cases of cancer has increased.
- ▶ Aging and population growth are significant factors affecting the increase in newly diagnosed cancer cases. These are unmodifiable factors – elements we can't change through prevention strategies – but they are important for health care planners to note, as an aging, growing population will result in the use of more cancer-related health services.
- ▶ Other risk factors also affect the number of cancer cases in Manitoba. These factors vary for different types of cancers and make a strong case for prevention activities.

---

## How do we compare?

**Most of the increase in the number of people diagnosed with cancer is tied to the aging population.**

- ▶ The role of the aging population is a significant driver of new cases in Canada as it is for Manitoba.<sup>2</sup>
- ▶ However, population growth is a more influential factor in the rest of Canada than it is in Manitoba, where population growth is slower than the national average.<sup>2</sup>

---

## What is CancerCare Manitoba doing to reduce the number of cases of cancer?

**CancerCare Manitoba works with partners to plan for an increasing number of cancer cases as the population ages and grows.**

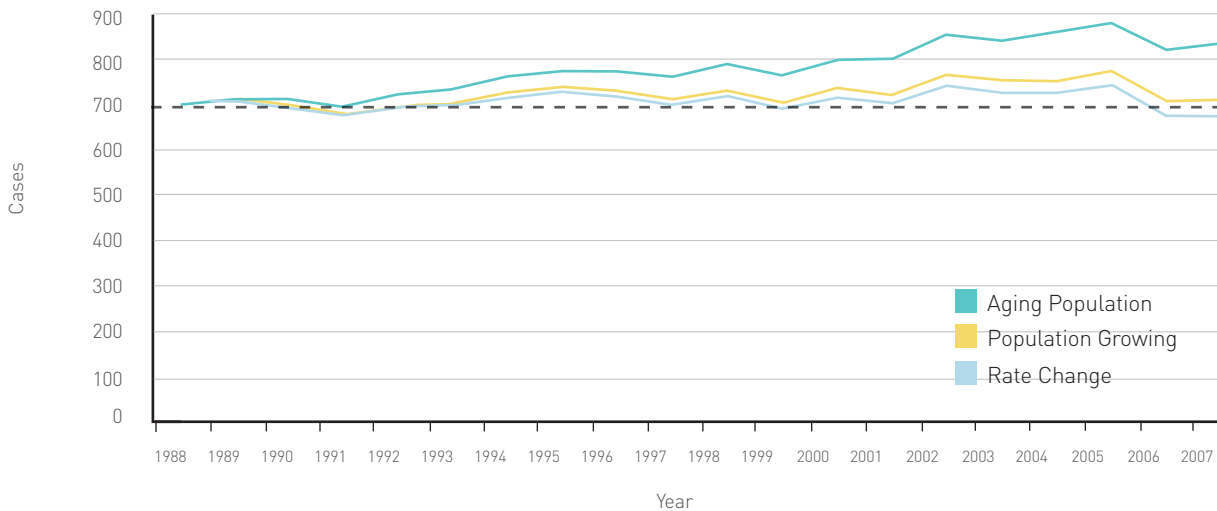
- ▶ With our chronic disease prevention partners such as the CancerCare Manitoba Foundation and the Alliance for the Prevention of Chronic Disease, CCMB promotes healthy living behaviours for all Manitobans through campaigns that encourage sun safety, tobacco reduction, healthy eating and physical activity.
- ▶ CancerCare Manitoba works with partners to plan for the cancer services expected in the future, given the aging and growing population.



Figure 3.16

### Factors influencing lung cancer incidence

*Influence of population aging, population growth and underlying cancer rate (risk) on the number of lung cancers diagnosed since 1988*

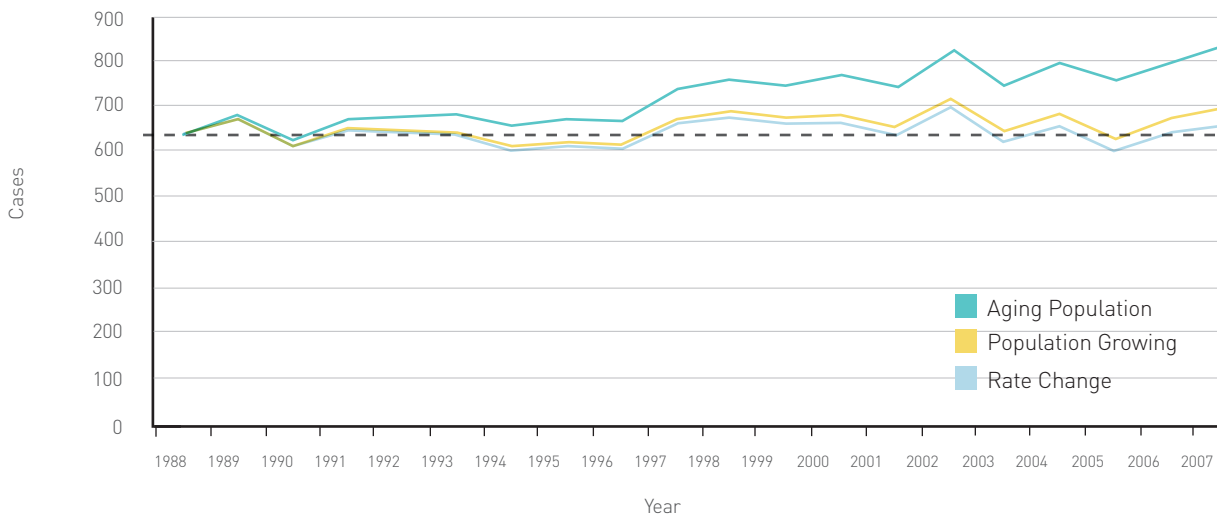


Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

Figure 3.17

### Factors influencing colorectal cancer incidence

*Influence of population aging, population growth and underlying cancer rate (risk) on the number of colorectal cancers diagnosed since 1988*



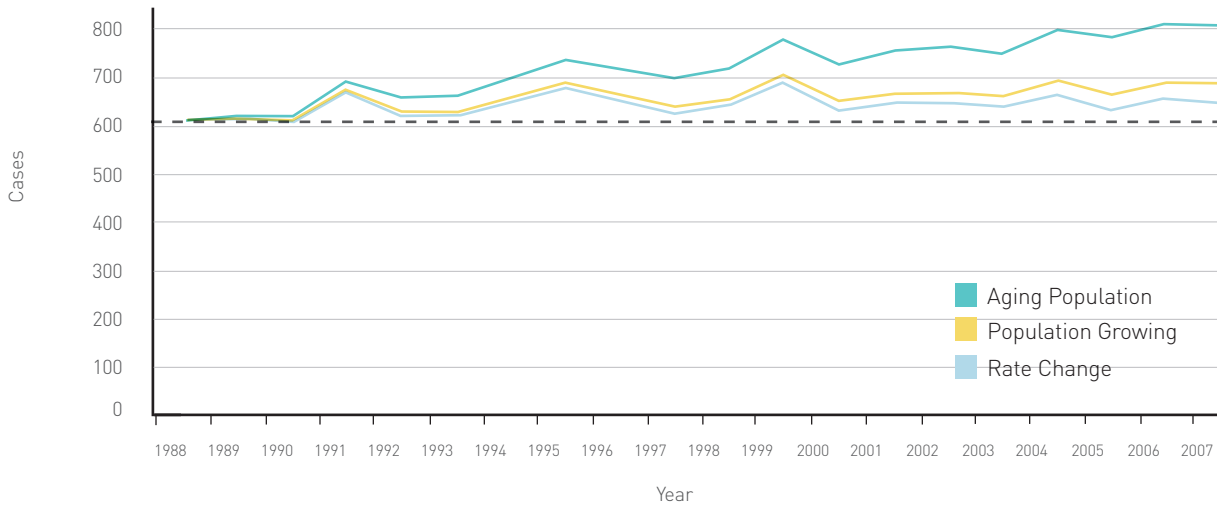
Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.



Figure 3.18

**Factors influencing breast cancer incidence in women**

*Influence of population aging, population growth and underlying cancer rate (risk) on the number of breast cancers diagnosed since 1988*

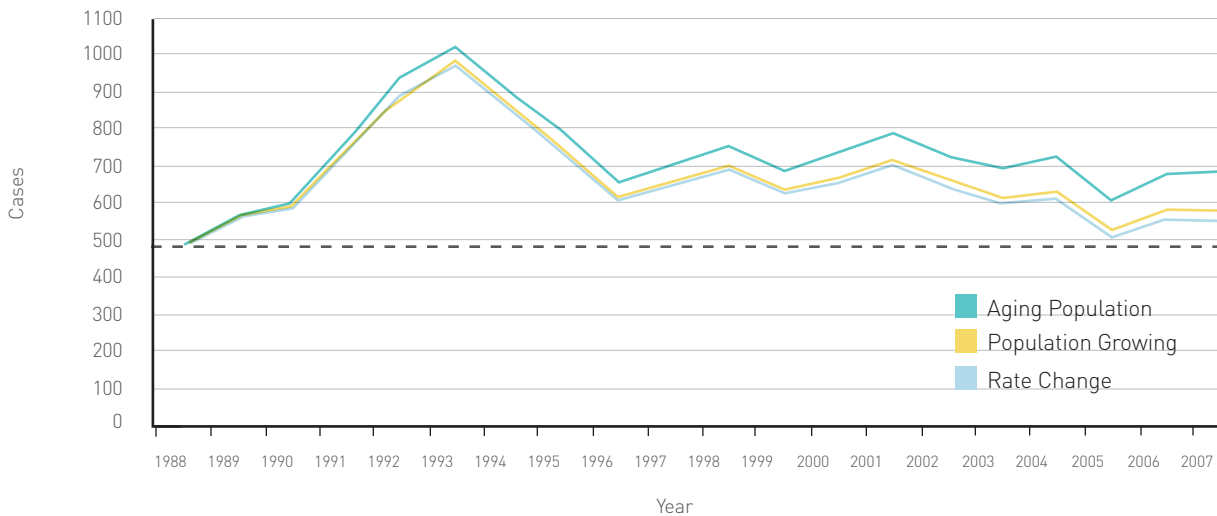


Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

Figure 3.19

**Factors influencing prostate cancer incidence in men**

*Influence of population aging, population growth and underlying cancer rate (risk) on the number of prostate cancers diagnosed since 1988*



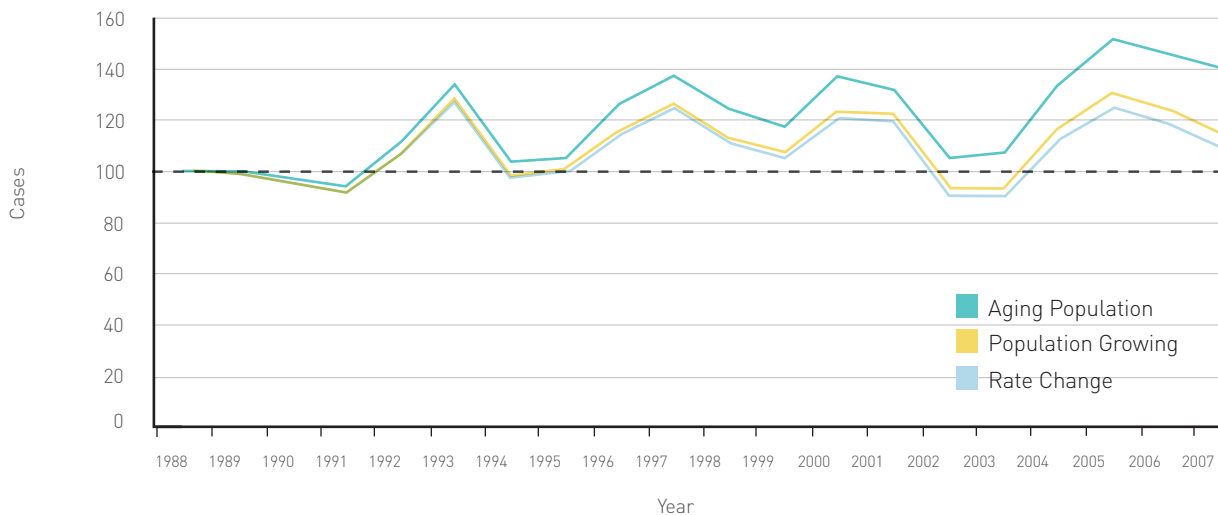
Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.



Figure 3.20

### Factors influencing melanoma incidence

*Influence of population aging, population growth and underlying cancer rate (risk) on the number of melanoma cancers diagnosed since 1988*



Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

Figure 3.21

### Factors influencing cervical cancer incidence in women

*Influence of population aging, population growth and underlying cancer rate (risk) on the number of cervical cancers diagnosed since 1988*



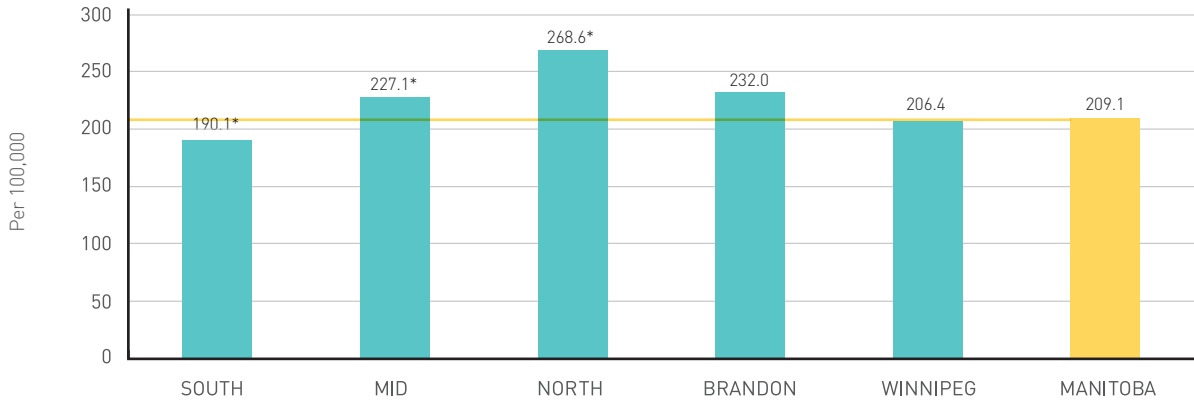
Source: Manitoba Cancer Registry, patients diagnosed 1988-2007.

# Cancer Mortality: Rates

Figure 3.22

## Cancer mortality, by regional groupings

Age-standardized rates per 100,000 people



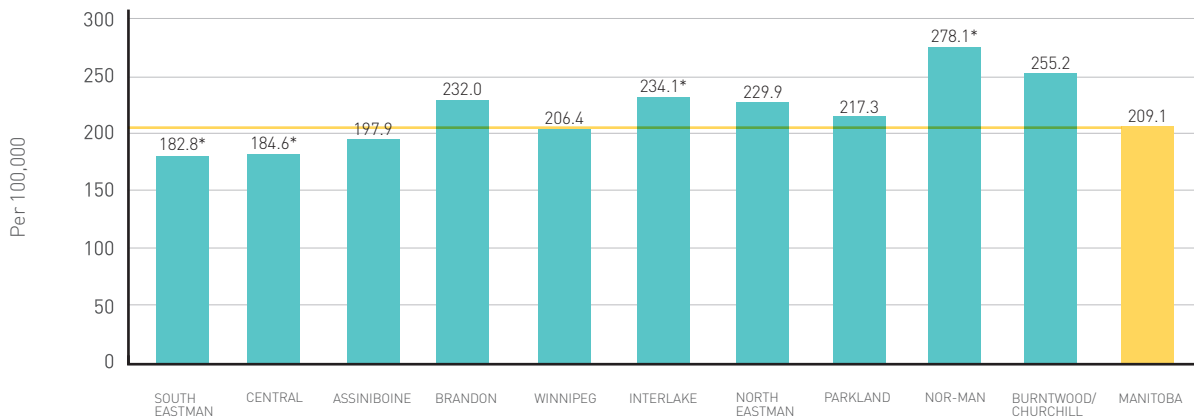
Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 3.23

## Cancer mortality, by Regional Health Authority

Age-standardized rates per 100,000 people



Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



### What does this tell us?

Cancer mortality varies by region.

- ▶ Figure 3.22 shows that cancer highest in the North (268.6 per 100,000 people) and lowest in the Rural South (190.1 per 100,000).
- ▶ Figure 3.23 shows that among the RHAs, the highest cancer mortality rate was in NOR-MAN (278.1 per 100,000 people) and the lowest was in South Eastman (182.8 per 100,000 people).

### What else do we know?

Cancer mortality varies by type of cancer, yet rates have declined over time for almost all types of cancers.

- ▶ Figures 3.24 to 3.31 show:
  - ▶ cancer mortality rates vary by type of cancer, as well as by region
  - ▶ cancer mortality correlates with the premature mortality of a region (reflected in the ordering of the RHAs), except for breast cancer which shows the opposite trend (Figure 3.29)
- ▶ Figures 3.32 and 3.33 show that cancer mortality rates have declined overall and for the four main types of cancer since 1988.

### Why is this important?

Mortality is an important indicator of success in reducing the impact of cancer overall.

- ▶ Reduced mortality rates combine successes in risk factor reduction, early detection and effective treatment.
- ▶ Cancer mortality is highest when the disease is found at a late stage when treatment is less effective.

### How do we compare?

Manitobans' cancer mortality rate is similar to the overall Canadian experience.

- ✔ Cancer mortality has decreased over time for Manitobans and for all Canadians.<sup>1,2</sup>
- ⊖ Manitobans have a comparable mortality rate for the most common cancers (for example, lung, colorectal, breast, and prostate), compared to other Canadians diagnosed with these types of cancers.<sup>1,2</sup>

### What is CancerCare Manitoba doing to decrease cancer mortality?

With our many partners, CancerCare Manitoba is working to prevent cancer whenever possible and to ensure access to early detection and treatment services.

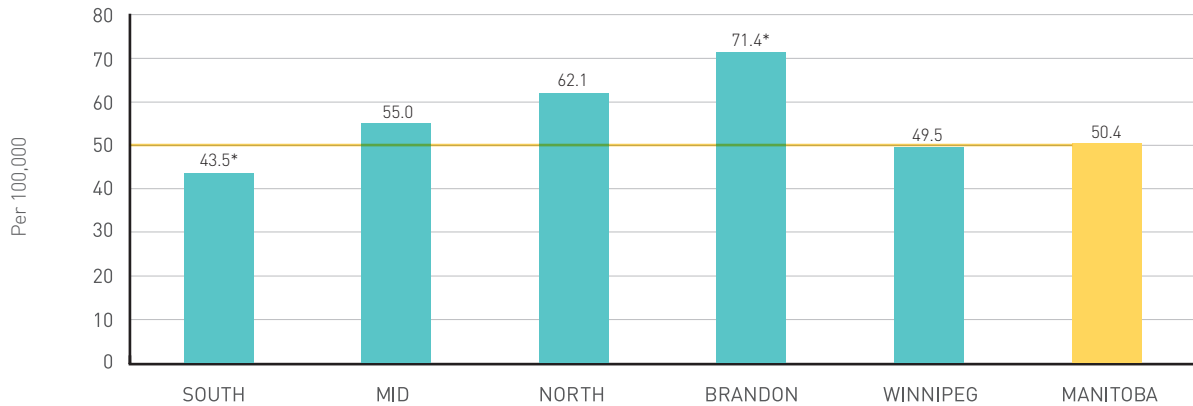
- ▶ Working with many partners, CCMB is encouraging Manitobans to live a more healthy lifestyle to reduce their risk of developing cancer.
- ▶ CancerCare Manitoba manages three screening programs for early detection of breast, cervical and colorectal cancers aiming to find cancers early, even before symptoms are found, in order to improve cancer outcomes.
- ▶ CancerCare Manitoba is working to ensure equal access to good, standard care by improving patient navigation as well as developing and implementing standard practice guidelines.

# Cancer Mortality: Lung

Figure 3.24

## Lung cancer mortality, by regional groupings

Age-standardized rates per 100,000 people



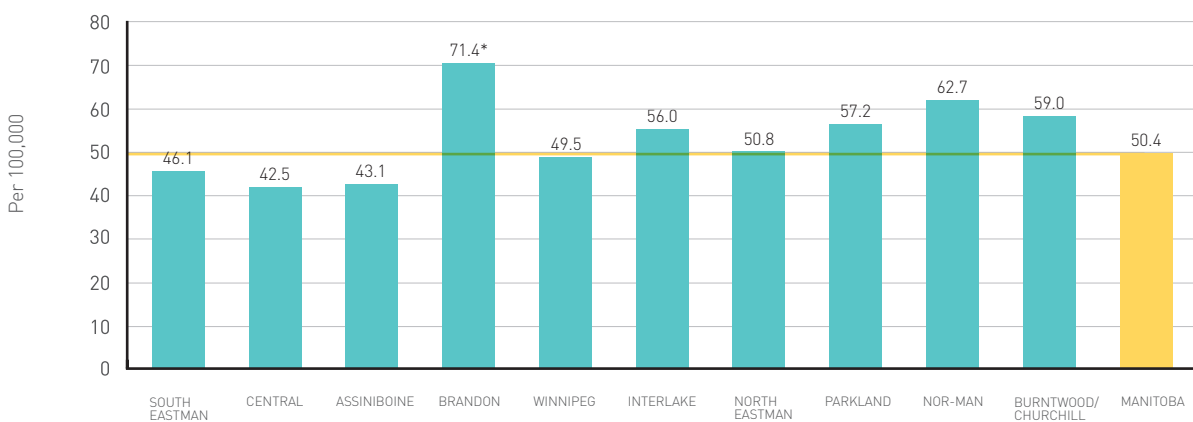
Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 3.25

## Lung cancer mortality, by Regional Health Authority

Age-standardized rates per 100,000 people



Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

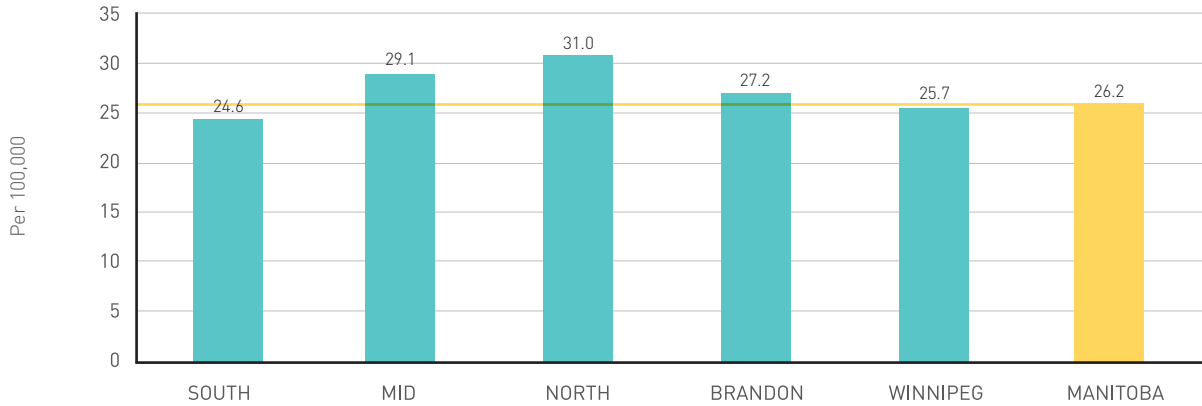


# Cancer Mortality: Colorectal

Figure 3.26

## Colorectal cancer mortality, by regional groupings

Age-standardized rates per 100,000 people

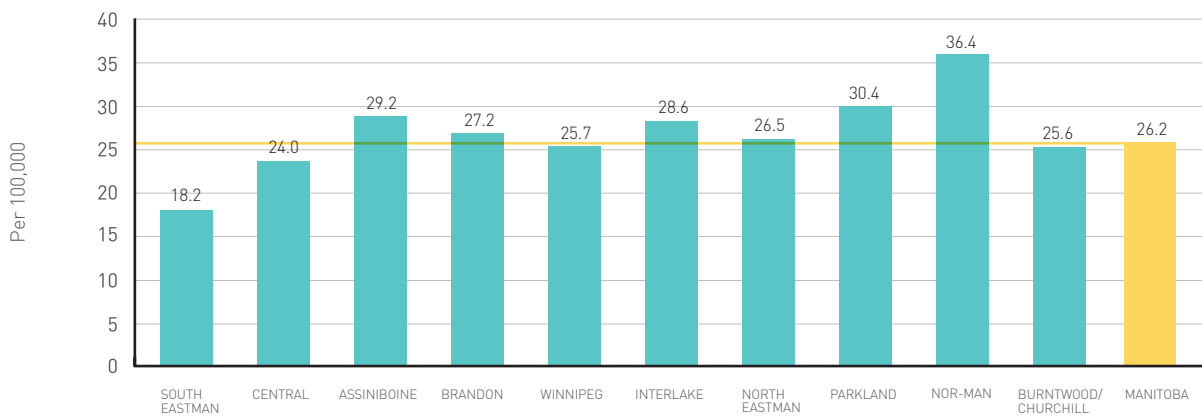


Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

Figure 3.27

## Colorectal cancer mortality, by Regional Health Authority

Age-standardized rates per 100,000 people



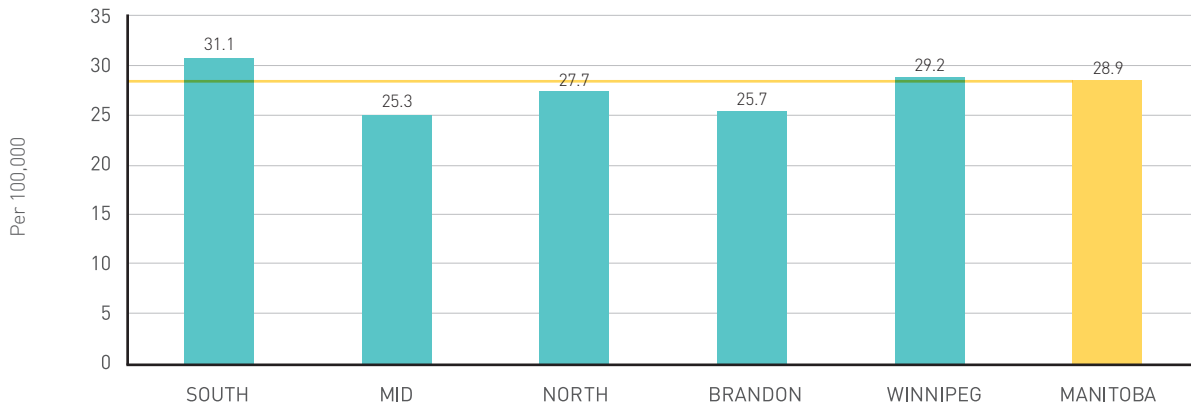
Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

# Cancer Mortality: Breast

Figure 3.28

## Breast cancer mortality, by regional groupings

Age-standardized rates per 100,000 women

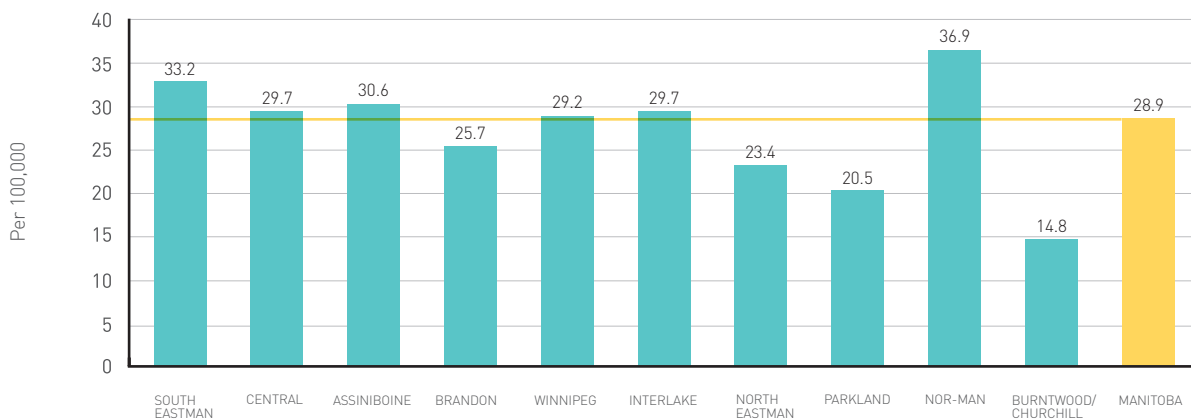


Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

Figure 3.29

## Breast cancer mortality, by Regional Health Authority

Age-standardized rates per 100,000 women



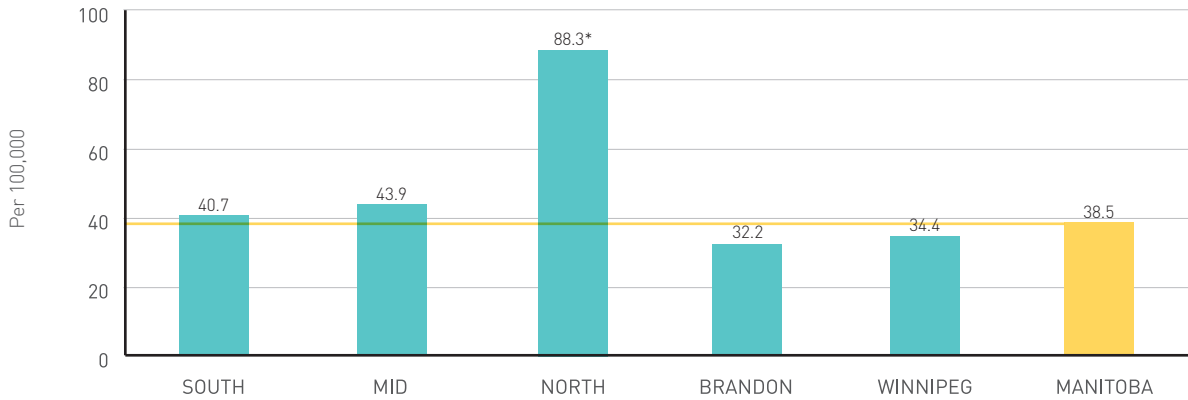
Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

# Cancer Mortality: Prostate

Figure 3.30

## Prostate cancer mortality, by regional groupings

Age-standardized rates per 100,000 men



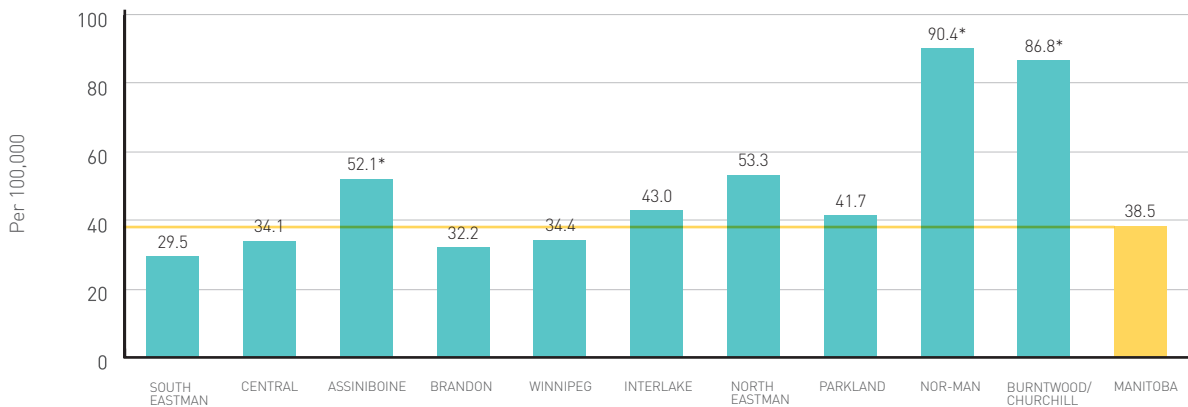
Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 3.31

## Prostate cancer mortality, by Regional Health Authority

Age-standardized rates per 100,000 men



Source: Manitoba Cancer Registry, cancer deaths 2005-2007.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

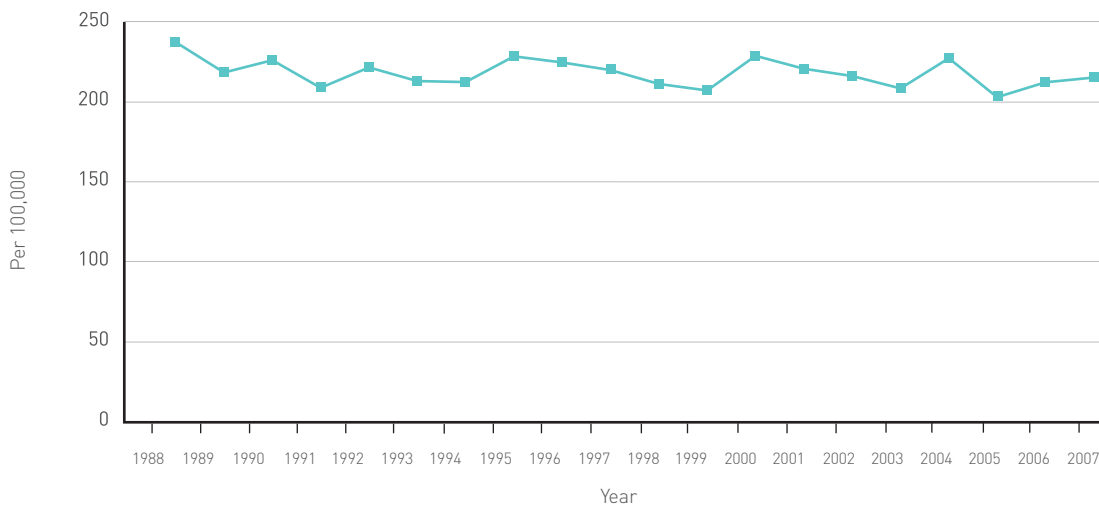


# Cancer Mortality: Trends

Figure 3.32

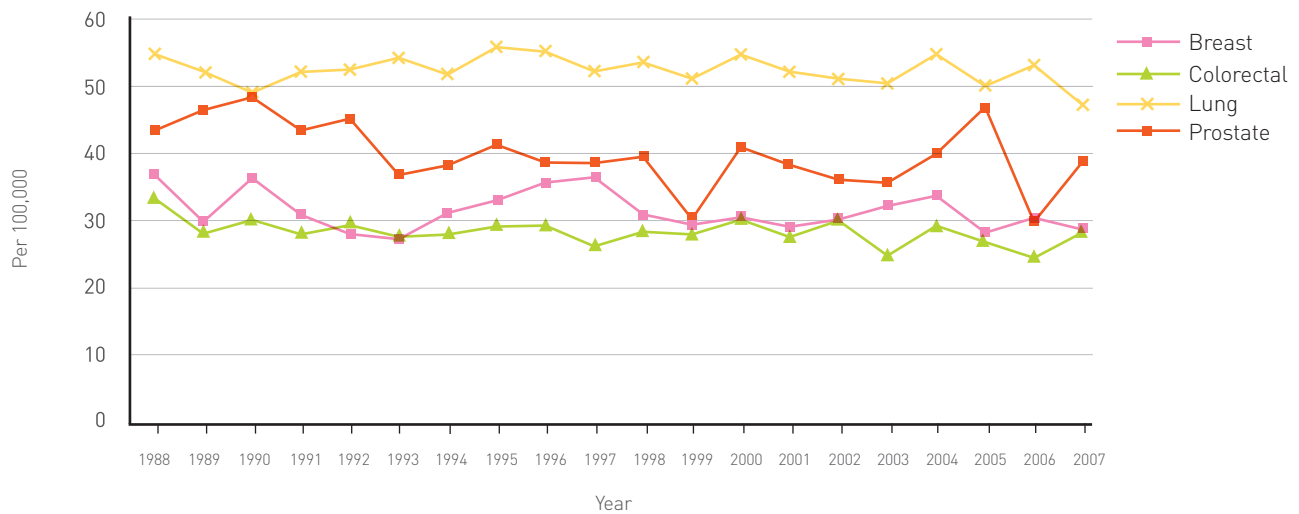
## Cancer mortality trends, 1988 – 2007

Age-standardized rates per 100,000 people



Source: Manitoba Cancer Registry, cancer deaths 2005-2007.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 3.33  
**Cancer mortality trends by cancer types, 1988 – 2007**  
*Age-standardized rates per 100,000 people*



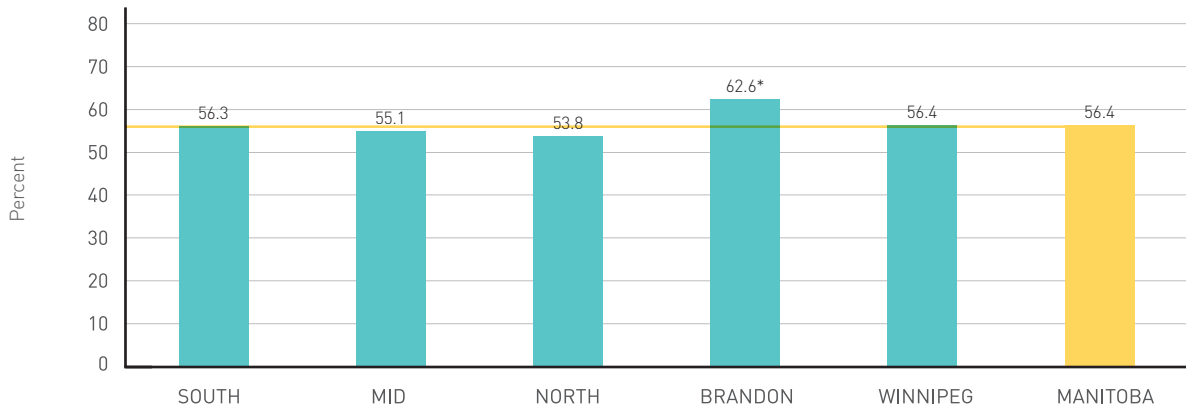
Source: Manitoba Cancer Registry, cancer deaths 2005-2007.  
 \*Significantly different from Manitoba rate ( $p < 0.05$ ).

# Cancer Survival

Figure 3.34

## Cancer survival, by regional groupings

Age-standardized five-year relative survival (%)

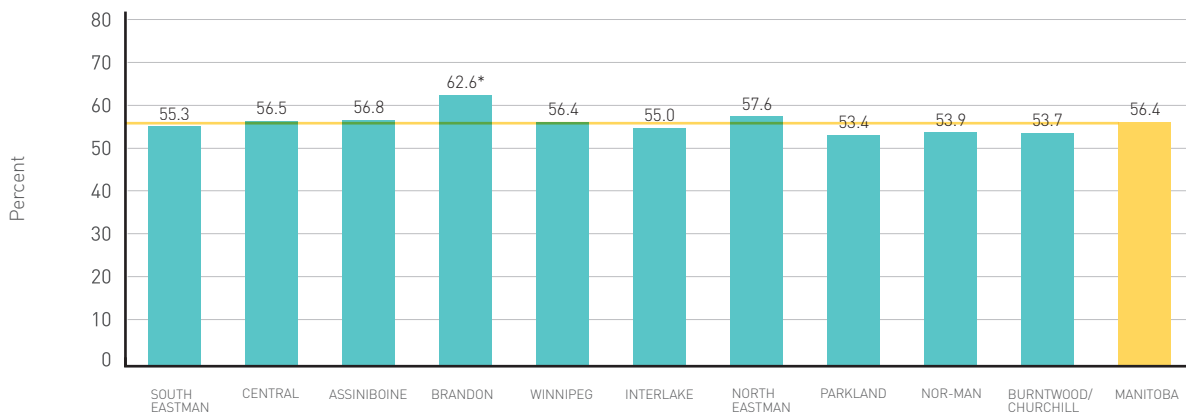


Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 3.35

## Cancer survival, by Regional Health Authority

Age-standardized five-year relative survival (%)



Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).



### What does this tell us?

Survival after a diagnosis of cancer is similar among regions.

- ▶ Figures 3.34 and 3.35 show slightly poorer cancer survival rates in the North (53.8%) and the highest in Brandon (62.6%).

### What else do we know?

Survival varies more by type of cancer than by region.

- ▶ Figures 3.36 to 3.43 show survival by region for different types of cancer.
- ▶ Survival varies, but not significantly, for lung, colorectal and breast cancers.
- ▶ Only prostate cancer shows significant variation with lower survival in some rural and northern RHAs.

### Why is this important?

Survival is an important indicator of our success in finding and treating cancer early.

- ▶ Cancer survival is poorest when the disease is found at its latest stages. Finding cancer early, when treatment works best, is important.
- ▶ Good survival is often an indication of better access to screening and diagnostic testing as well as effective treatment.

### How do we compare?

Manitobans' survival after a diagnosis of cancer is similar to the overall Canadian experience.

- ✔ Survival after a cancer diagnosis is gradually improving over time for Manitobans and for all Canadians.<sup>3</sup>
- ⊖ Manitobans who are diagnosed with particular cancers (for example, breast, prostate and colorectal) have similar outcomes to other Canadians diagnosed with these types of cancers.<sup>2,3</sup>
- ✔ Manitobans have the best lung cancer survival rates in Canada.<sup>2,3</sup>

### What is CancerCare Manitoba doing to improve cancer survival?

With our partners, CancerCare Manitoba is working to improve cancer survival by detecting the disease sooner and treating it more effectively.

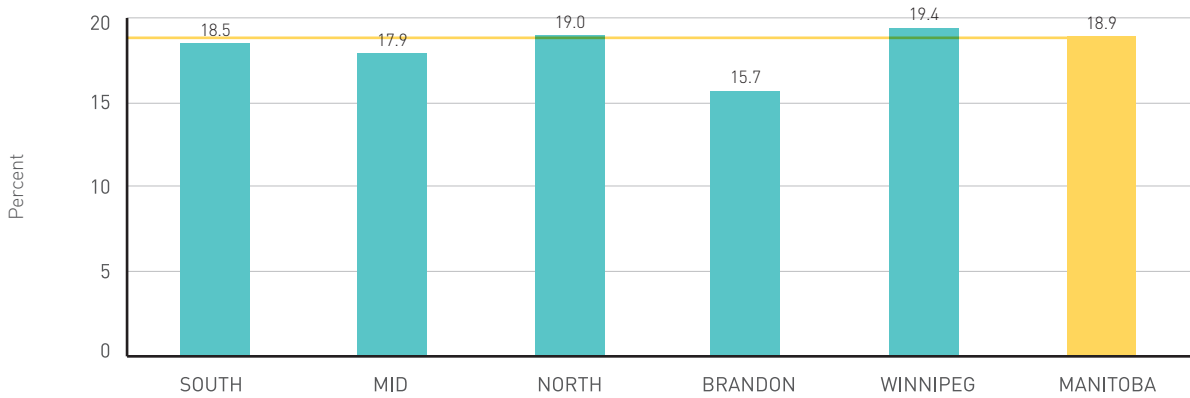
- ▶ CancerCare Manitoba's colorectal, cervical and breast screening programs contribute to improved cancer survival because regular screening can detect early signs of the disease, when it is the most treatable.
- ▶ CancerCare Manitoba is working to ensure equal access to quality, standard care by improving patient navigation and practice guidelines.

# Cancer Survival: Lung

Figure 3.36

## Lung cancer survival, by regional groupings

Age-standardized five-year relative survival (%)

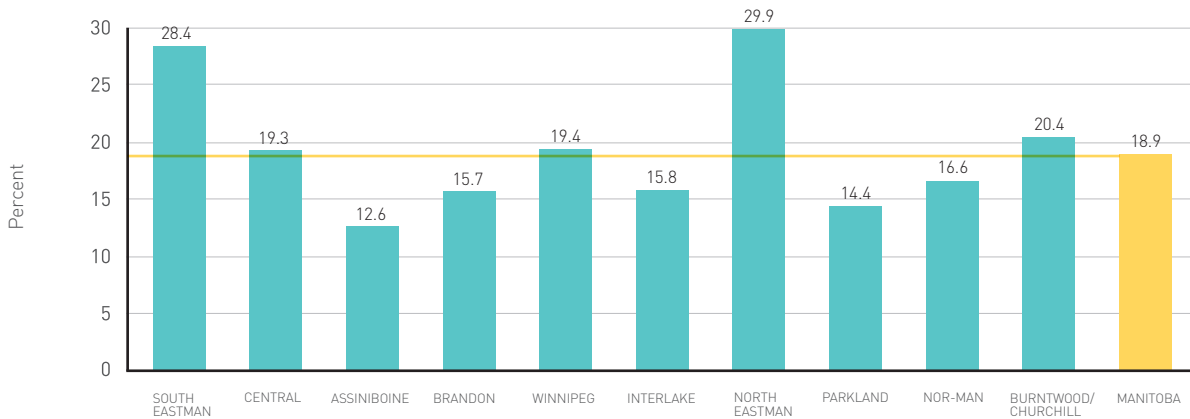


Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

Figure 3.37

## Lung cancer survival, by Regional Health Authority

Age-standardized five-year relative survival (%)



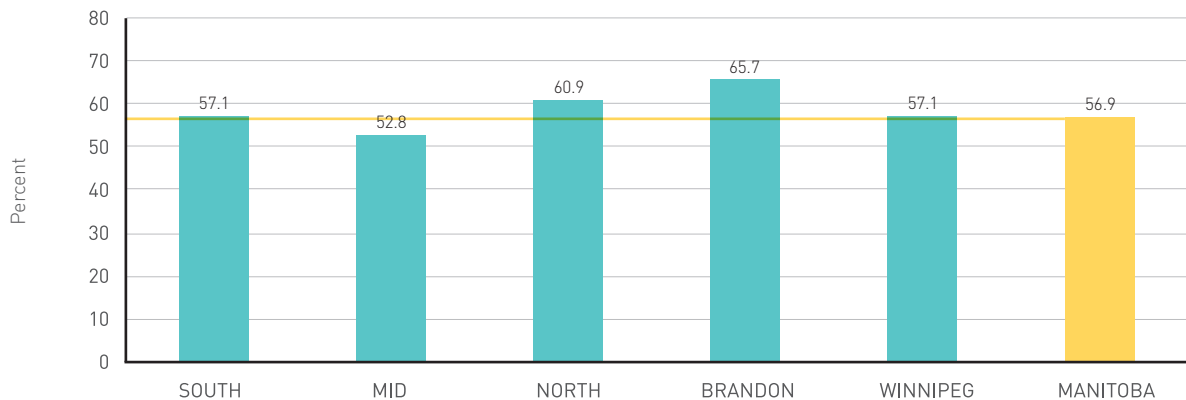
Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

# Cancer Survival: Colorectal

Figure 3.38

## Colorectal cancer survival, by regional groupings

Age-standardized five-year relative survival (%)

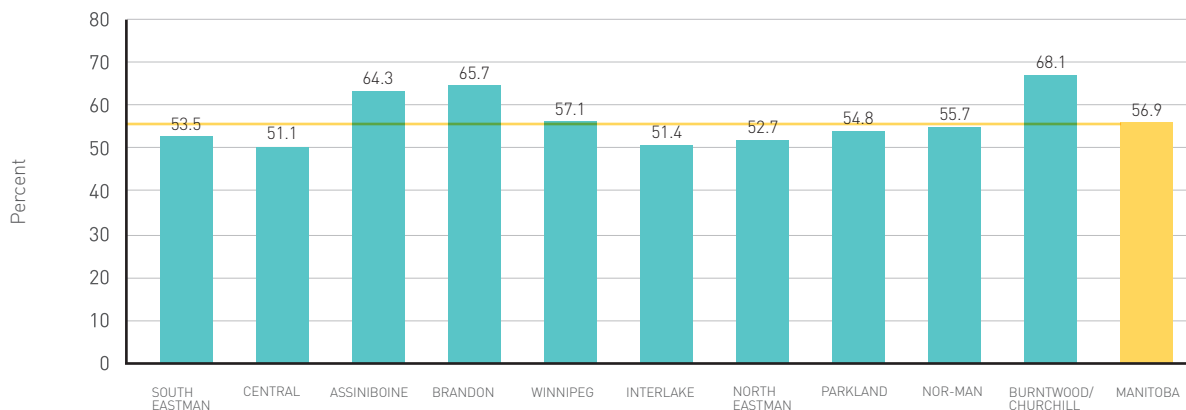


Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

Figure 3.39

## Colorectal cancer survival, by Regional Health Authority

Age-standardized five-year relative survival (%)



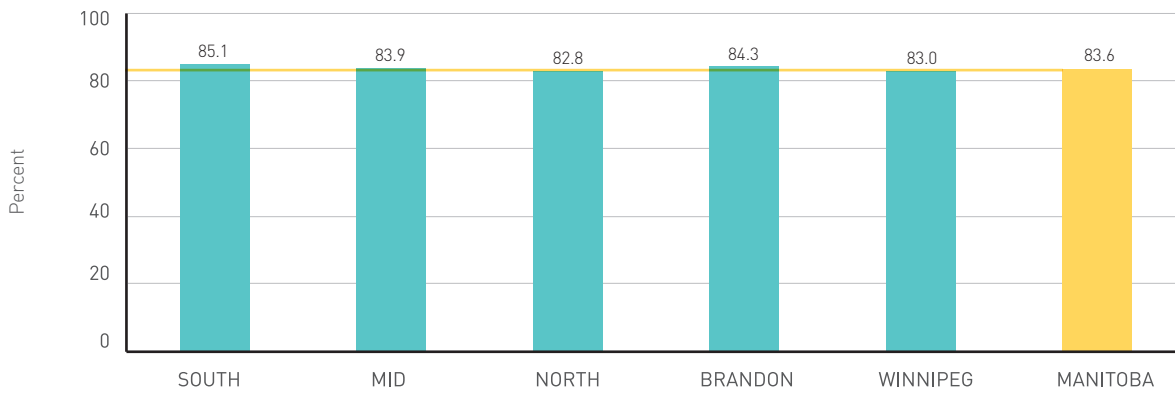
Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

# Cancer Survival: Breast

Figure 3.40

## Breast cancer survival, by regional groupings

Age-standardized five-year relative survival (%)

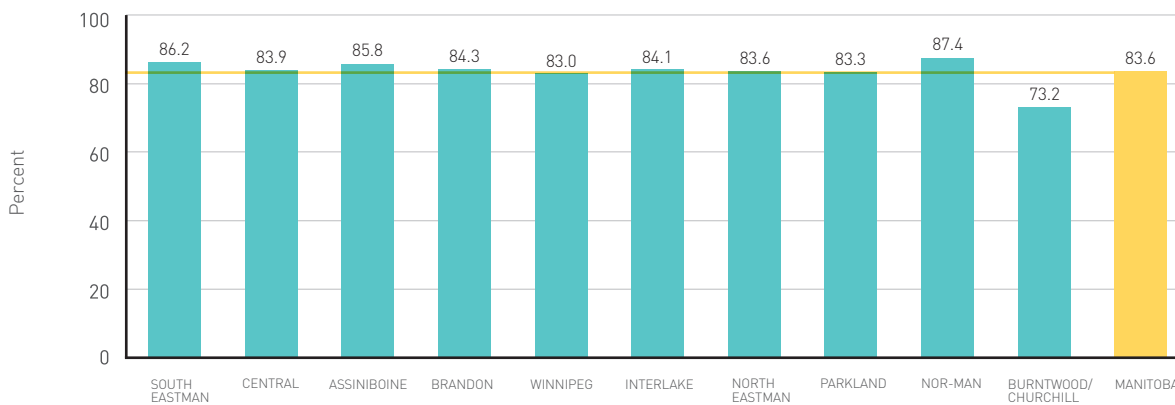


Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

Figure 3.41

## Breast cancer survival, by Regional Health Authority

Age-standardized five-year relative survival (%)



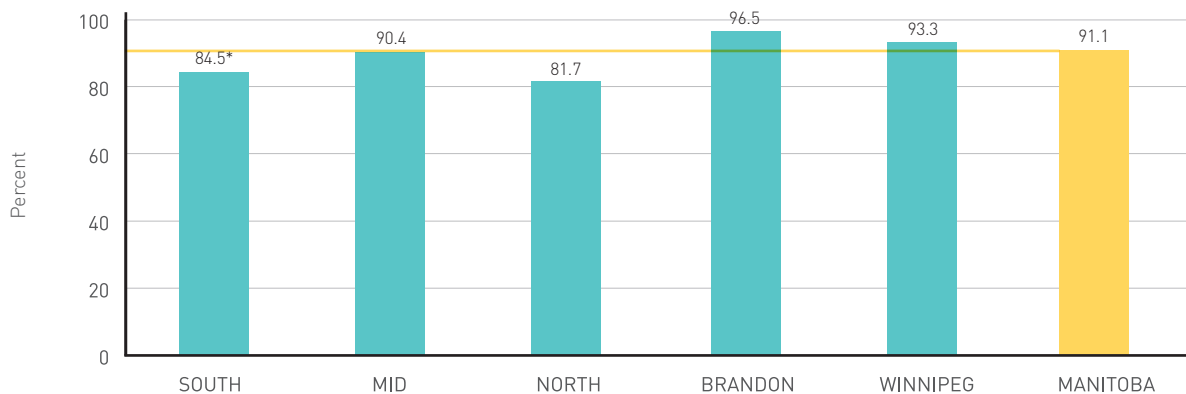
Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

# Cancer Survival: Prostate

Figure 3.42

## Prostate cancer survival, by regional groupings

Age-standardized five-year relative survival (%)



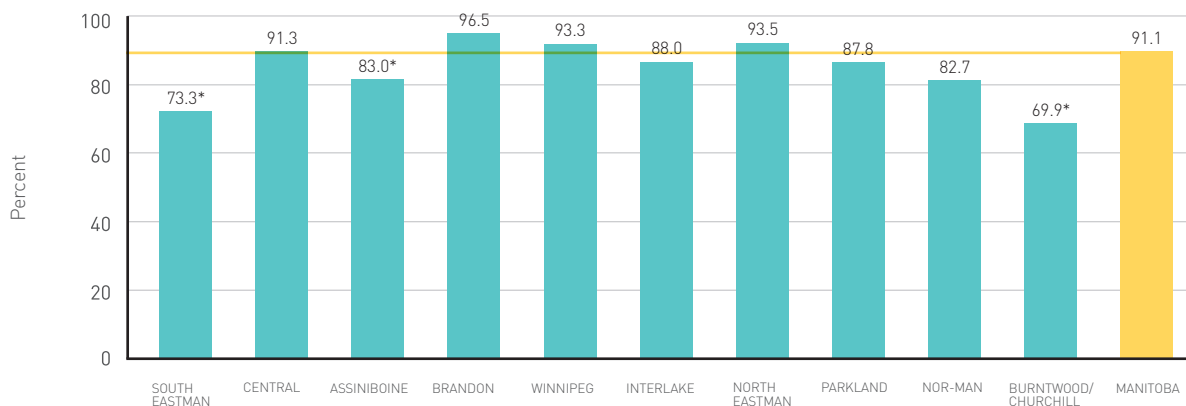
Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 3.43

## Prostate cancer survival, by Regional Health Authority

Age-standardized five-year relative survival (%)





Source: Manitoba Cancer Registry, patients diagnosed 2000-2002.

\*Significantly different from Manitoba rate ( $p < 0.05$ ).



# Outcomes

THE PATIENT EXPERIENCE		Past Estimate	Current Estimate	Time Trend	Range of Current Estimates <i>(Lowest RHA - Highest RHA)</i>
 <b>Patient Satisfaction</b> overall average satisfaction score for outpatient care based on patient satisfaction survey (% positive responses) <sup>o</sup>  average satisfaction score for emotional support based on patient satisfaction survey (% positive responses) <sup>o</sup>		97.3%	95.4%	→	90.6%-100.0%
		49.6%	46.9%	→	35.9%-53.3%
 <b>Pain Management</b> for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort based on patient satisfaction survey (% positive responses) <sup>o</sup>		71.9%	69.7%	→	61.4%-93.8%

Source: <sup>o</sup>NRC Picker, Ambulatory Oncology Survey, 2004 and 2008

Note: Trend arrow is based on + or - 10% of the past value. Colour indicates if the trend is good (green), neutral (yellow) or needs to improve (red).

RHA refers to Regional Health Authority.

## What does this tell us?

Patient satisfaction is high, but more can be done in the area of emotional support.

- ▶ Overall patient satisfaction scores have remained high over the past four years.
- ▶ Emotional support scores are lower than overall satisfaction scores.
- ▶ Patients experiencing pain are confident that staff are doing everything they can to control pain or discomfort.

## Why is this important?

Patient feedback helps CancerCare Manitoba to provide better care.

- ▶ These survey results show that overall care is excellent, but more could be done in certain areas, such as emotional support.

---

## How do we compare?

- ☺ On many areas measured, Manitoba is similar to national rates.<sup>5</sup>
- ✖ Manitoba patient satisfaction scores are lower than some other provinces (anonymized data).<sup>5</sup>

---

## What is CancerCare Manitoba doing to improve the patient experience?

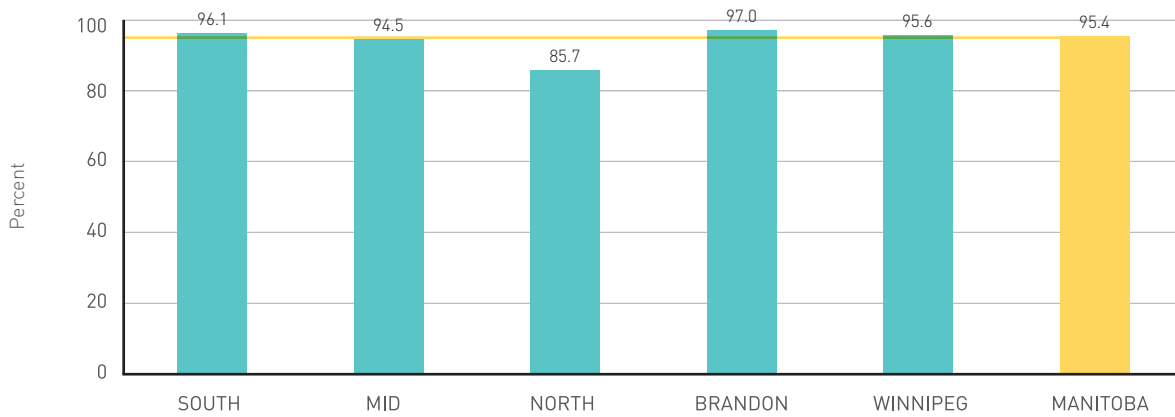
With our partners, CancerCare Manitoba is dedicated to providing exceptional care to our patients and their families.

- ▶ Patients and families frequently acknowledge the warmth and dedication of cancer clinic staff.
- ▶ Other examples of CCMB's commitment to a quality patient experience include:
  - ▶ The Patient Navigation Program is reviewing the entire patient journey from suspicion of cancer to the transition of care to other health care providers/end-of-life care to find ways of improving the cancer experience.
  - ▶ The Community Cancer Programs Network (CCPN) is network of 16 Community Cancer Programs that allows patients to receive cancer care in or near their home communities.
  - ▶ Uniting Primary Care and Oncology Network (UPCON) supports family physicians and primary health care providers in communicating more easily with cancer care specialists, and ensures that people with cancer in our partner clinics experience better coordination of their care between their different care providers.
  - ▶ Patient and Family Support Services supports a multidisciplinary team of skilled professionals with many years of experience to help and support patients and their families. This includes increasing patients' knowledge about cancer and its treatment and providing support for emotional and practical issues.
  - ▶ The Quality, Patient Safety and Risk Program supports programs and clinicians in their efforts to deliver safe, effective care by maintaining a culture that strives for open communication about concerns.

# Patient Satisfaction

Figure 3.44

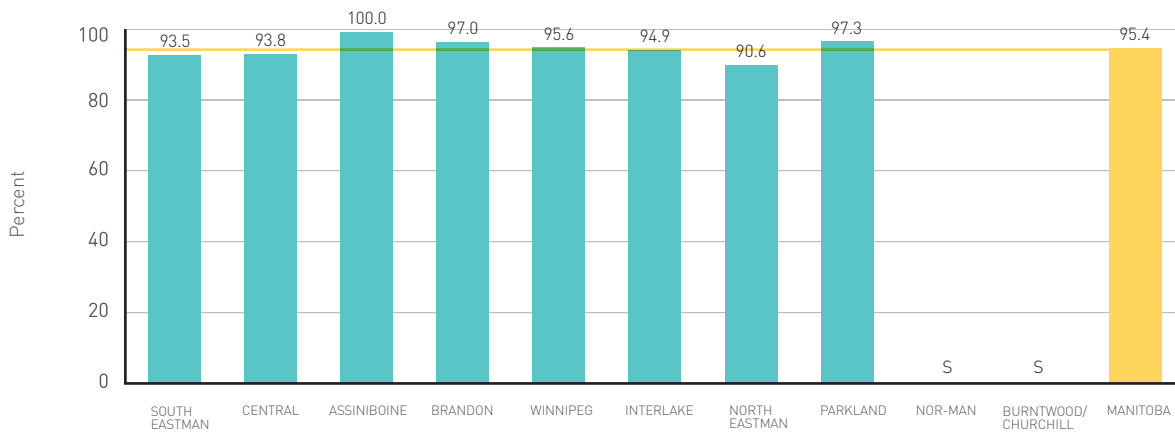
Percent of patients satisfied with care overall, by regional grouping



Source: NRC Picker, Ambulatory Oncology Survey, 2008.

Figure 3.45

Percent of patients satisfied with care overall, by Regional Health Authority



Source: NRC Picker, Ambulatory Oncology Survey, 2008.  
s = data suppressed (insufficient cases).



## What does this tell us?

Overall, patient satisfaction for outpatient cancer care is high.

- ▶ Figure 3.44 shows the average satisfaction score for outpatient care is somewhat lower in the North.
- ▶ Figure 3.45 shows the highest average satisfaction score for outpatient care is in Assiniboine at 100.0%, with the lowest in North Eastman at 90.6%.

## Why is this important?

Patient satisfaction is a key measure of quality in cancer care.

- ▶ Quality and supportive communication between cancer patients and care providers is linked to better feeling of well-being, reducing stress and lowering blood pressure.<sup>6</sup>
- ▶ Good patient and health provider communication also enhances treatment compliance and therefore, outcomes.<sup>6</sup>

## How do we compare?

Manitoba's patient satisfaction scores for outpatient cancer care are similar to the national average.

- ⊖ The national satisfaction rate is 97.0%.<sup>5</sup>

## What is CancerCare Manitoba doing to increase patient satisfaction?

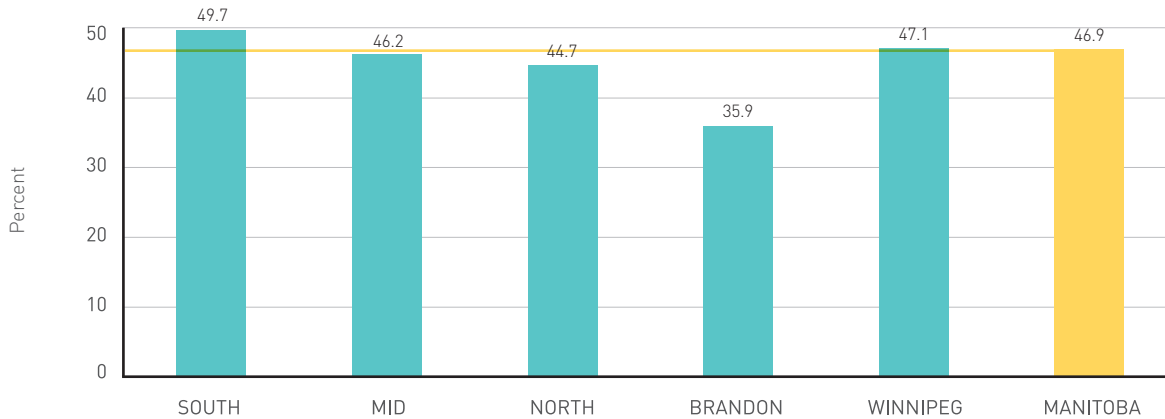
With our partners, CancerCare Manitoba is working to reduce the anxiety and fear related to the cancer journey.

- ▶ To achieve this, we need ongoing feedback from patients.
- ▶ CancerCare Manitoba seeks feedback through surveys, focus groups and patient comment boxes.
- ▶ The Patient Navigation Program surveys patients while they are in clinic to obtain real time feedback about services, organizes focus groups, tracks referrals, and is implementing wireless technology to track patient flow within CCMB. The Patient Navigation Program team is also expanding its reach into rural Manitoba.
- ▶ A centralized referral system has been implemented to improve a patient's first entry into CCMB ensuring all information is collected, collated and reviewed by a physician to ensure a smooth journey through cancer diagnosis and treatment.
- ▶ The centralized referral office also provides a contact point for patients to obtain information on their referral's progress. A nurse or clerk will call with an appointment date and provide the patient with the CCMB *Patient and Family Information Guide*.

# Patient Satisfaction: Emotional Support

Figure 3.46

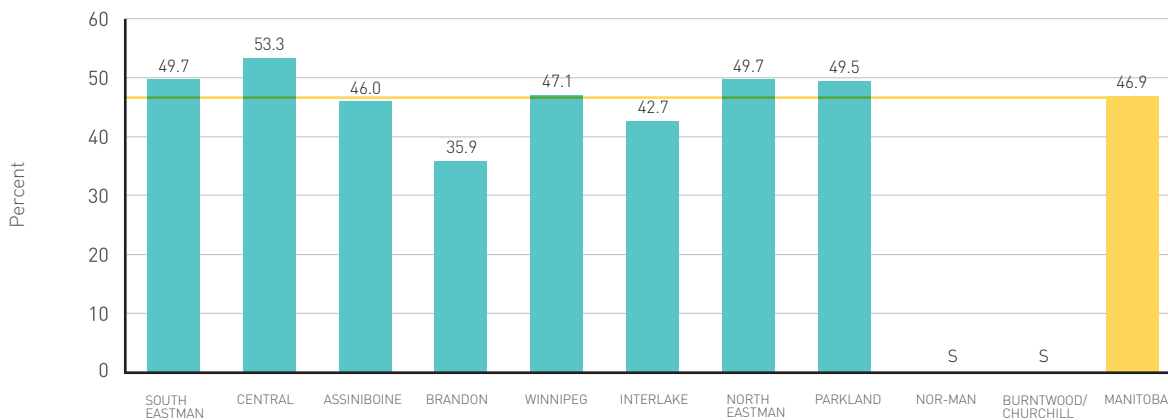
Percent of patients satisfied with emotional support, by regional groupings



Source: NRC Picker, Ambulatory Oncology Survey, 2008.

Figure 3.47

Percent of patients satisfied with emotional support, by Regional Health Authority



Source: NRC Picker, Ambulatory Oncology Survey, 2008.  
s = data suppressed (insufficient cases).



## What does this tell us?

### Patient satisfaction with emotional support is low.

- ▶ Figure 3.46 shows the average score for emotional support is less than 50% across the province.
- ▶ Figure 3.47 shows the highest average satisfaction score for emotional support is in the Central region at 53.3% and the lowest is in Brandon at 35.9%.

## Why is this important?

### Emotional well-being is linked to a number of health benefits.

- ▶ The World Health Organization defines health as "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."<sup>7</sup>
- ▶ Good patient support and education can significantly reduce patient anxiety and depression.<sup>6,8</sup>
- ▶ Improved patient and cancer care provider communication is related to better patient quality of life and overall patient satisfaction.<sup>9</sup>
- ▶ A diagnosis of cancer affects more than the physical body. There are emotional, social, spiritual, functional, cognitive, and practical issues that arise for both patients and families. Extensive research reveals that a significant number of people with cancer, no matter at what point in the cancer trajectory, experience distress in these domains.<sup>10</sup>

## How do we compare?

### Manitoba's patient satisfaction scores for emotional support are similar to the national average.

- ⊖ The national satisfaction score for emotional support is 50.1%.<sup>5</sup>

## What is CancerCare Manitoba doing to improve emotional support?

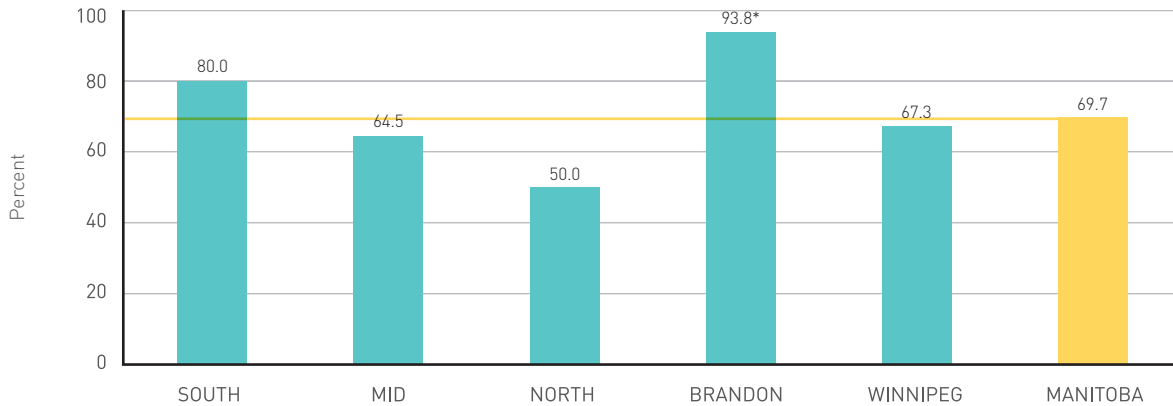
### With our partners, CancerCare Manitoba provides personal support and information for patients.

- ▶ A spiritual health specialist has been added to the psychosocial oncology team within Patient and Family Support Services. The goal of the spiritual health specialist is to be a compassionate presence for patients and to help them draw on existing strengths to cope with life's challenges. In addition to seeing individuals and families, the specialist is also involved in existing support groups.
- ▶ Professional counselling services are available for individuals, couples and families. CancerCare Manitoba's social workers, psychologists and psychiatrists have the necessary experience, training and knowledge to help patients and families cope with cancer and its treatments. They provide a safe and confidential place to talk and can help turn a personal health crisis into a chance for hope and healing. They also provide evidence based group interventions and programs, some focused on the unique issues of a particular type of cancer.
- ▶ Physicians, nurses, dietitians, social workers and others work together to provide monthly disease site specific information and support sessions for patients and families.
- ▶ A new supportive care coordinator position was created within the Community Cancer Program Network in 2008 to focus on the access to supportive cancer care for rural Manitobans. CancerCare Manitoba is also working collaboratively with others across Canada to address the access needs of those living in remote areas of the country.
- ▶ CancerCare Manitoba has used the Edmonton Symptom Assessment Scale (ESAS) in almost all clinics since 1999. This self-assessment tool helps identify the degree of anxiety, depression, pain, fatigue the patient is experiencing. CancerCare Manitoba is exploring the use of Screening for Distress, which builds on the ESAS tool.

# Pain Management

Figure 3.48

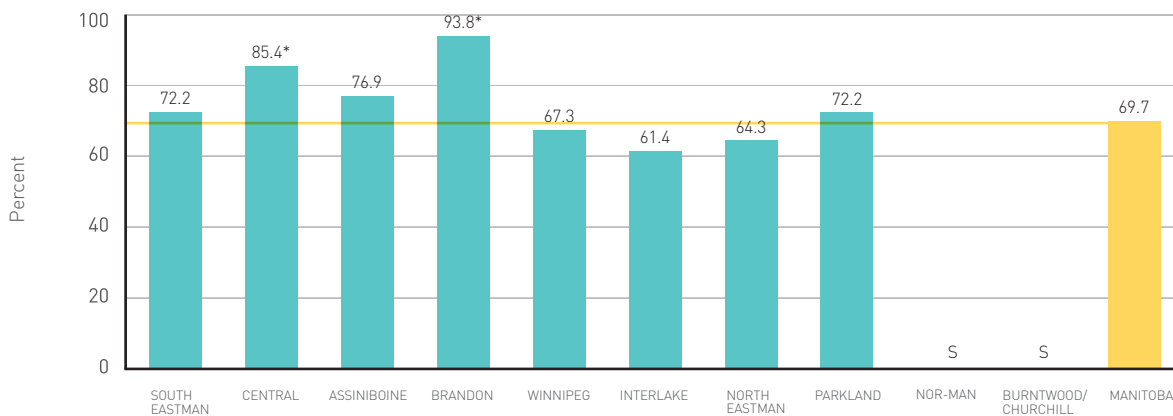
Percent of patients who felt staff did everything they could to control pain or discomfort, by regional groupings



Source: NRC Picker, Ambulatory Oncology Survey, 2008.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).

Figure 3.49

Percent of patients who felt staff did everything they could to control pain or discomfort by, Regional Health Authority



Source: NRC Picker, Ambulatory Oncology Survey, 2008.  
\*Significantly different from Manitoba rate ( $p < 0.05$ ).  
s = data suppressed (insufficient cases).



## What does this tell us?

Successful pain management varies considerably by region.

- ▶ Figure 3.48 shows the percent of patients who felt staff did everything they could to control pain or discomfort was highest in Brandon at 93.8% and lowest in the North at 50.0%.
- ▶ Figure 3.49 shows the percent of patients who felt staff did everything they could to control pain or discomfort was highest in Brandon at 93.8% and lowest in the Interlake at 61.4%.

## Why is this important?

Pain is one of the most common symptoms that patients with advanced cancer develop, but effective treatments are available.

- ▶ Understanding patient pain and clearly explaining treatment options is key to a successful program.
- ▶ Research shows a patient pain experience depends on a number of factors including the quality of relationship with their health care provider.<sup>11</sup>

---

## How do we compare?

Pain management scores are similar to the national average.

- ⊖ The national pain management score is 70.4%.<sup>5</sup>

---

## What is CancerCare Manitoba doing to improve pain management?

With our partners, CancerCare Manitoba is working to manage patients' pain.

- ▶ In partnership with the Winnipeg Regional Health Authority Palliative Care Program, CCMB implemented Pain and Symptom Management Clinics to provide a multidisciplinary assessment of patients/clients. These clinics include:
  - ▶ consultation and immediate follow-up for evaluation of treatment interventions
  - ▶ access to many different health providers including physicians, nurses, pharmacists, counsellors and a dietitian
- ▶ Pain management occurs as a function of other health service programs through the RHAs.



# References

- 1 Public Health Agency of Canada. (2009). Cancer Surveillance On-Line. [http://dsol-smed.hc-sc.gc.ca/dsol-smed/cancer/index\\_e.html](http://dsol-smed.hc-sc.gc.ca/dsol-smed/cancer/index_e.html). Accessed March 15, 2010.
- 2 Canadian Cancer Society's Steering Committee. Canadian Cancer Statistics 2009. Toronto: Canadian Cancer Society, 2009.
- 3 Statistics Canada. Cancer survival statistics 1992-2000. Statistics Canada Catalogue no. 82-226-X. <http://www.statcan.gc.ca/pub/82-226-x/2009001/tablesectlist-listetableauxsect-eng.htm>. Accessed March 15, 2010.
- 4 National Cancer Institute (2010). National Cancer Institute Fact Sheet: Prostate-Specific Antigen (PSA) Test. Available online at: <http://www.cancer.gov/cancertopics/factsheet/Detection/PSA>. Accessed April 8, 2010.
- 5 NRC Picker (2008). Ambulatory Oncology Survey conducted for CancerCare Manitoba.
- 6 Zachariae R, Pedersen CG, Jensen AB et al. (2003). Association of perceived physician communication style with patient satisfaction, distress, cancer-related self-efficacy, and perceived control over the disease. *British Journal of Cancer* 88: 658 – 665.
- 7 World Health Organization (1946). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.)
- 8 Poroch D. (1995). The effect of preparatory patient education on the anxiety and satisfaction of cancer patients receiving radiation therapy. *Cancer Nursing* 18: 206-214.
- 9 Ong LM, Visser MR, Lammes FB et al. (2000). Doctor-patient communication and cancer patients' quality of life and satisfaction. *Patient Education and Counseling* 41: 145-156.
- 10 Carlson L, Angen M, Cullum J et al. (2004). High levels of untreated distress and fatigue in cancer patients. *Br J Cancer* 90: 2297-2304.
- 11 Dawson R, Spross J, Jablonski E et al. (2002). Probing the paradox of patients' satisfaction with inadequate pain management. *Journal of Pain and Symptom Management* 23: 211-220.



# Projections

Predicting the future burden of cancer provides valuable insight into how CancerCare Manitoba plans for the expected number of new patients and the resources they will require.

“Future cancer incidence and mortality are affected by many factors, including changes to the size and composition of a population,” said Dr. Donna Turner, Provincial Director, Population Oncology, CancerCare Manitoba (CCMB). “In Manitoba, we know that the increase in the number of people diagnosed with cancer is tied to our aging population. We also know that there is great potential to reduce the number of cases through prevention.”

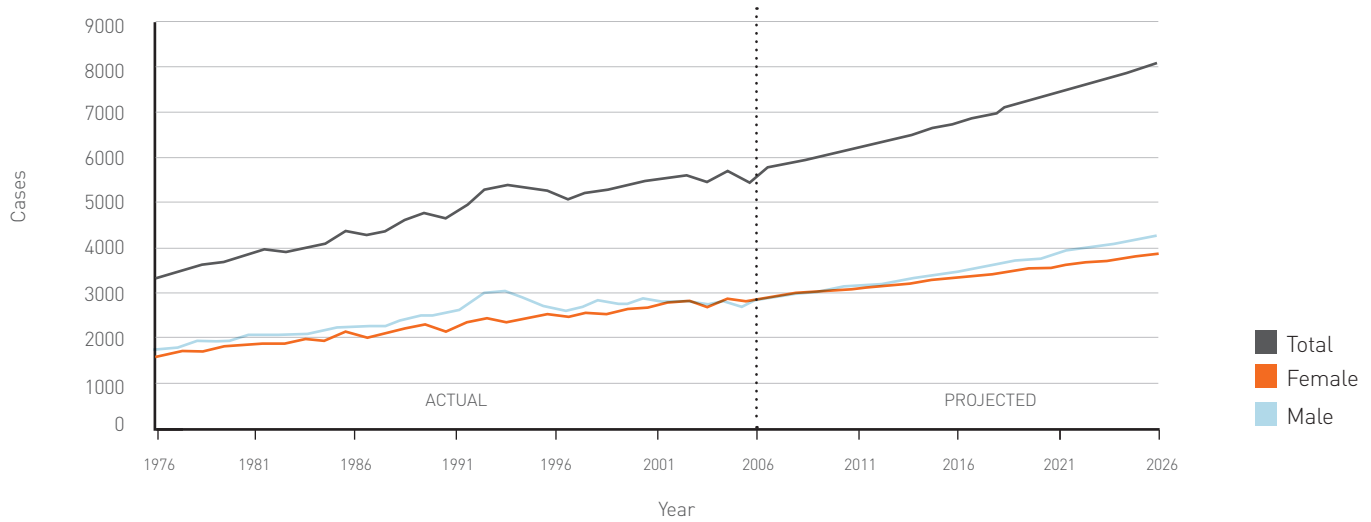
In fact, without significant intervention Manitoba is on pace to experience a rise in the number of people facing the disease each year. By 2026, there will be at least 50% more cases of cancer being diagnosed every year than we see today. This demand will tax CCMB’s existing clinical capacity and research space. To cope, CCMB will have to consider expanding its facilities and continue to explore different ways of providing cancer treatment. Manitoba is well-known for investing in novel approaches to providing cancer services, such as the Community Cancer Programs Network (CCPN) and Uniting Primary Care and Oncology Network (UPCON).

“These programs have improved communication and coordination of care for all our patients,” said Dr. Dhali Dhaliwal, CCMB’s President and CEO. “Through efforts like these, we are providing superlative care to our patients and families, still recognizing the need to aggressively address the concerns of lack of space.”

CancerCare Manitoba and its partners are already planning for the future of cancer in Manitoba, as outlined in the upcoming CCMB Strategic Plan.

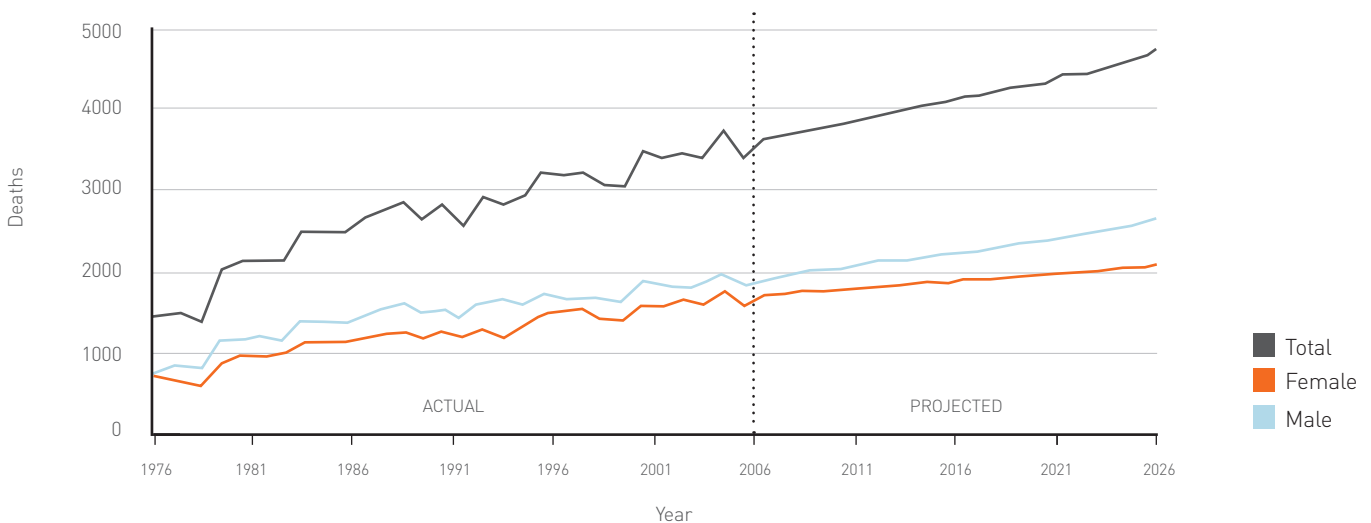
# Projections: New cases and deaths

Figure 4.1  
Actual and projected cancer cases, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.

Figure 4.2  
Actual and projected cancer deaths, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.



## What does this tell us?

### Cancer projections show continued increases in the number of cancer diagnoses and deaths.

- ▶ Figure 4.1 shows that about 3,300 Manitobans were diagnosed with cancer in 1976 and the number rose to about 5,500 in 2005.
  - ▶ This increasing trend is expected to continue in the future, with just over 8,000 new cases expected in 2026 – about 50% more cases than diagnosed in 2006.
  - ▶ These increasing trends are evident for each of the major cancers (lung, colorectal, breast and prostate cancers), as shown in Figures 4.3, 4.5, 4.7 and 4.9.
- ▶ Figure 4.2 shows that more Manitobans are dying from cancer each year. The number of cancer deaths has risen from about 1,500 in 1976 to more than doubling to 3,500 in 2006.
  - ▶ Again, this increasing trend is expected to continue in the future, with a projected number of almost 5,000 deaths in 2026 – about 40% more deaths compared to 2006.
  - ▶ The increasing trends are evident for each of the major cancers (lung, colorectal, breast and prostate cancers), as shown in Figures 4.4, 4.6, 4.8 and 4.10.

## What else do we know?

- ▶ The expected increases in cancer incidence are almost entirely due to the aging of the population of Manitoba. As described throughout this report, population growth and changing risk also influences cancer incidence. For example, the stable number of lung cancer cases projected for men is because of the decreasing risk for lung cancer in men.
- ▶ For the major cancers:
  - ▶ The number of new lung cancer cases in men per year has remained relatively stable, and this trend is expected to continue. However, the number of new lung cancer cases per year in women has been steadily increasing and is expected to surpass the annual number of new lung cancer cases in men soon.
  - ▶ There are currently more new cases of colorectal cancer diagnosed every year in men than in women, and this gap is expected to widen over the next 20 years.
  - ▶ Prostate cancer incidence is difficult to project given the statistical 'bump' resulting from the introduction of the prostate specific antigen (PSA) test in the early 1990s.

- ▶ The number of cancer deaths is driven by the same factors as the number of incident cancers (the aging and growth of the population, and the rate of risk), as well as the success of treatment. Treatment is more successful if more people are diagnosed at an earlier stage.

## Why is this important?

### By understanding how cancer will affect our population, we can work to develop a plan of action for future care and treatment.

- ▶ Cancer projections aid in health services planning by providing a guide for resource allocation including future staffing and facility needs.
- ▶ By comparing projected numbers to actual cancer outcomes, cancer projections may also be used as a benchmark to evaluate prevention and treatment strategies.

## How do we compare?

### Canadian benchmarks are not yet available for cancer projections.

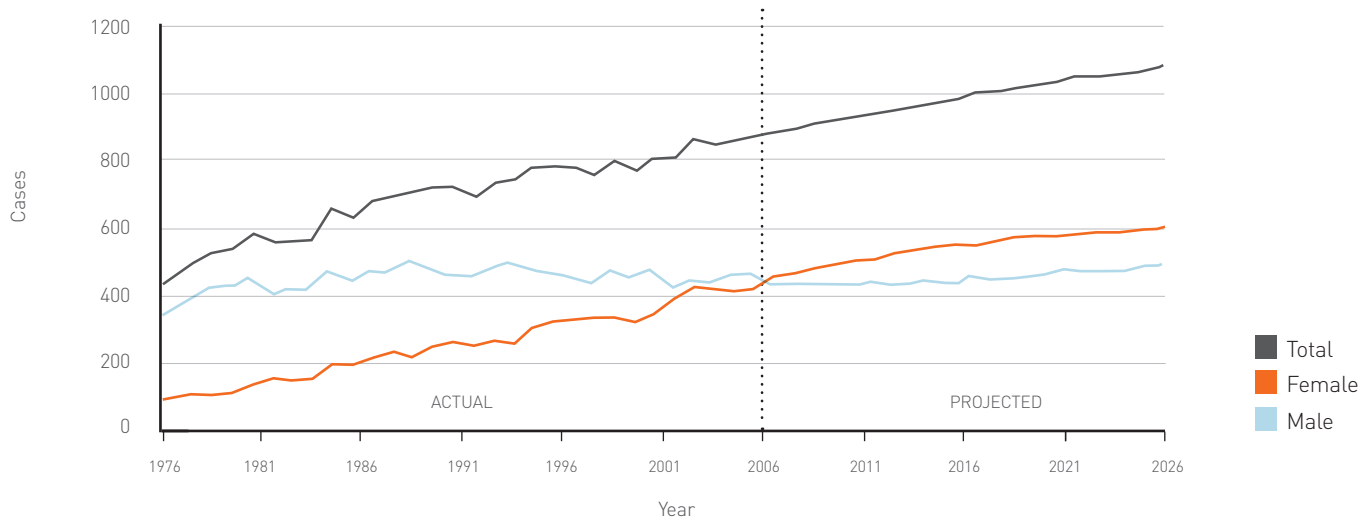
- ⊖ However, reports from other jurisdictions indicate similar trends.<sup>1,2</sup>

## What is CancerCare Manitoba doing to plan for the increased number of cancer cases?

### With our many partners, CancerCare Manitoba continually monitors and adjusts for the future picture of cancer in Manitoba.

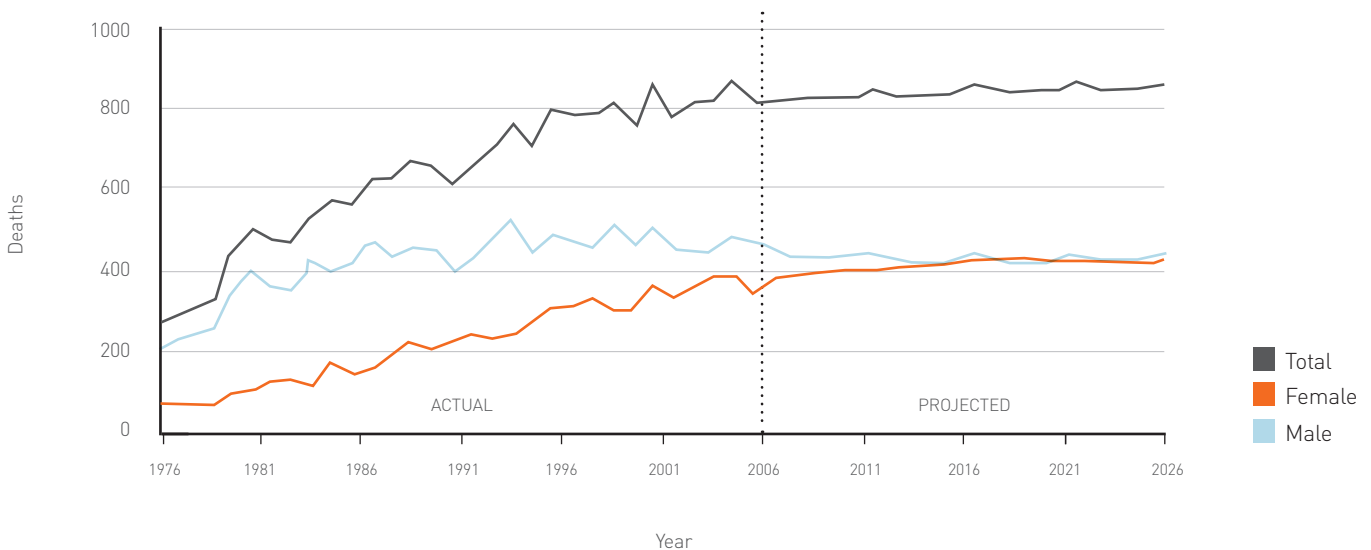
- ▶ The opening of the Western Manitoba Cancer Centre in Brandon in 2011 will provide additional capacity for radiation therapy and other cancer services into the future.
- ▶ The role of the Community Cancer Programs Network (CCPN) will continue to be an important part of cancer service delivery.
- ▶ Efforts in prevention and early detection are aimed at changing the predicted trends of increased numbers of cancer diagnoses and death.

Figure 4.3  
Actual and projected lung cancer cases, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.

Figure 4.4  
Actual and projected lung cancer deaths, Manitoba, 1976-2026

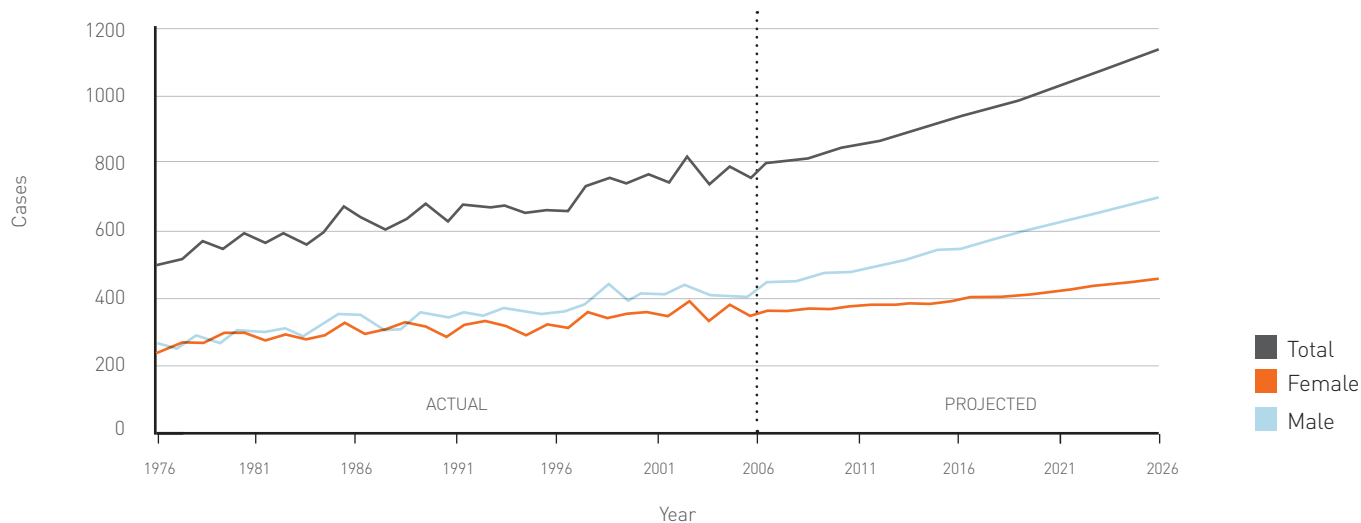


Source: Epidemiology Unit, CancerCare Manitoba.



Figure 4.5

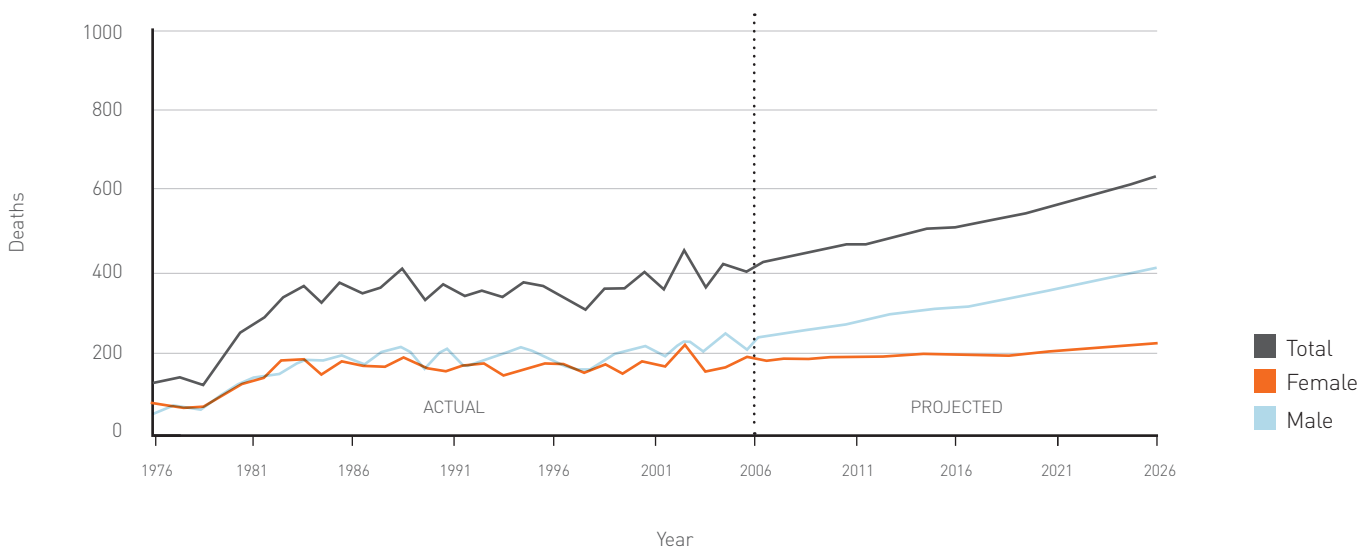
Actual and projected colorectal cancer cases, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.

Figure 4.6

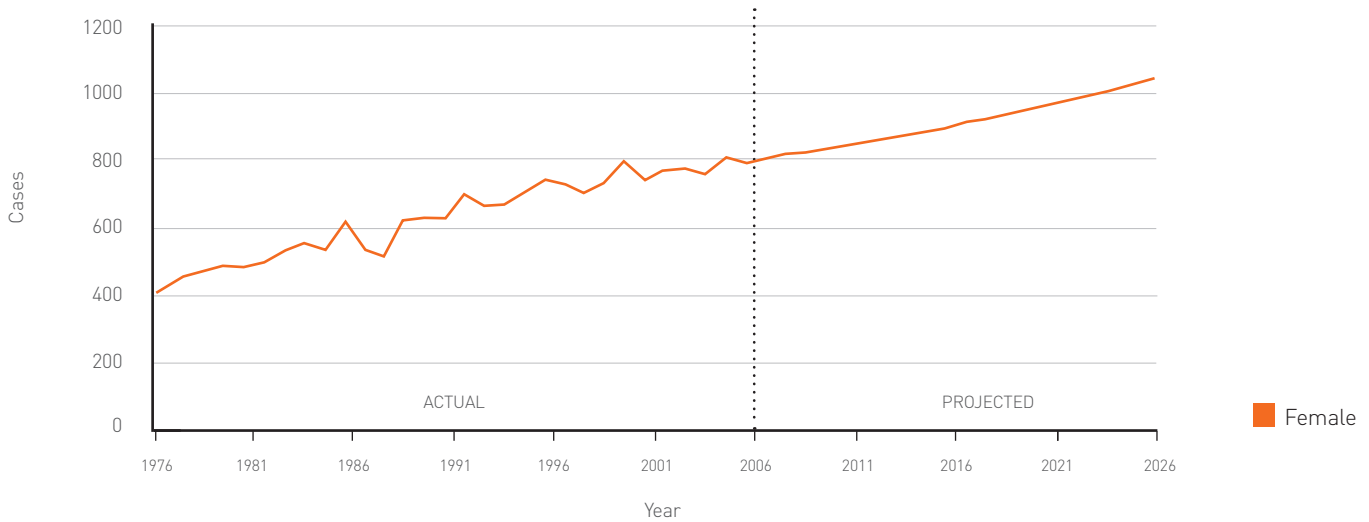
Actual and projected colorectal cancer deaths, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.

Figure 4.7

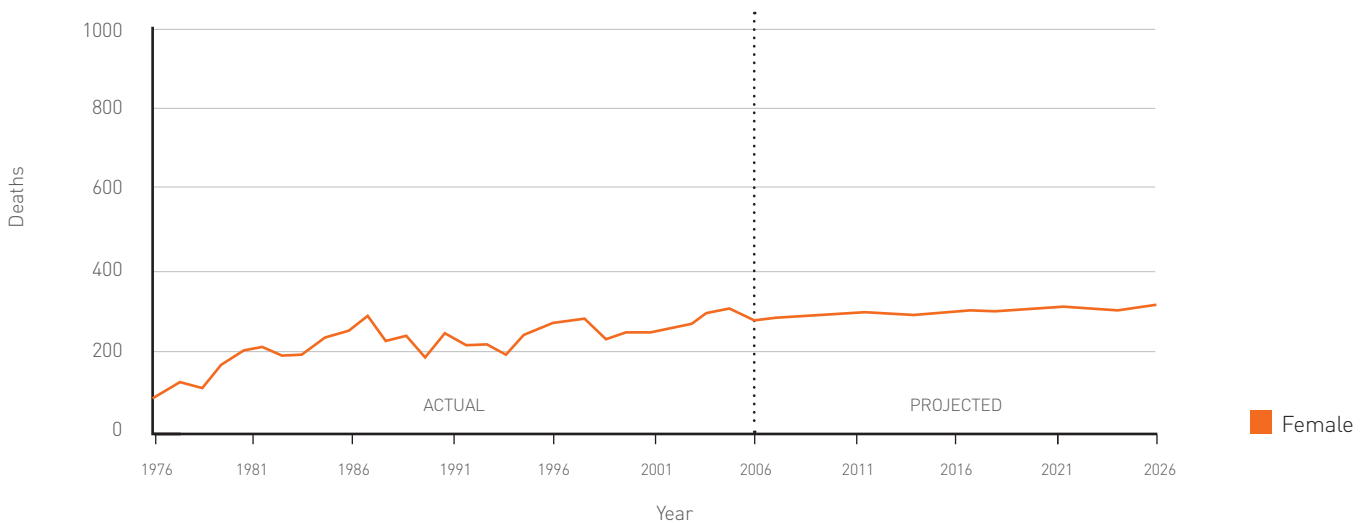
Actual and projected breast cancer cases, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.

Figure 4.8

Actual and projected breast cancer deaths, Manitoba, 1976-2026

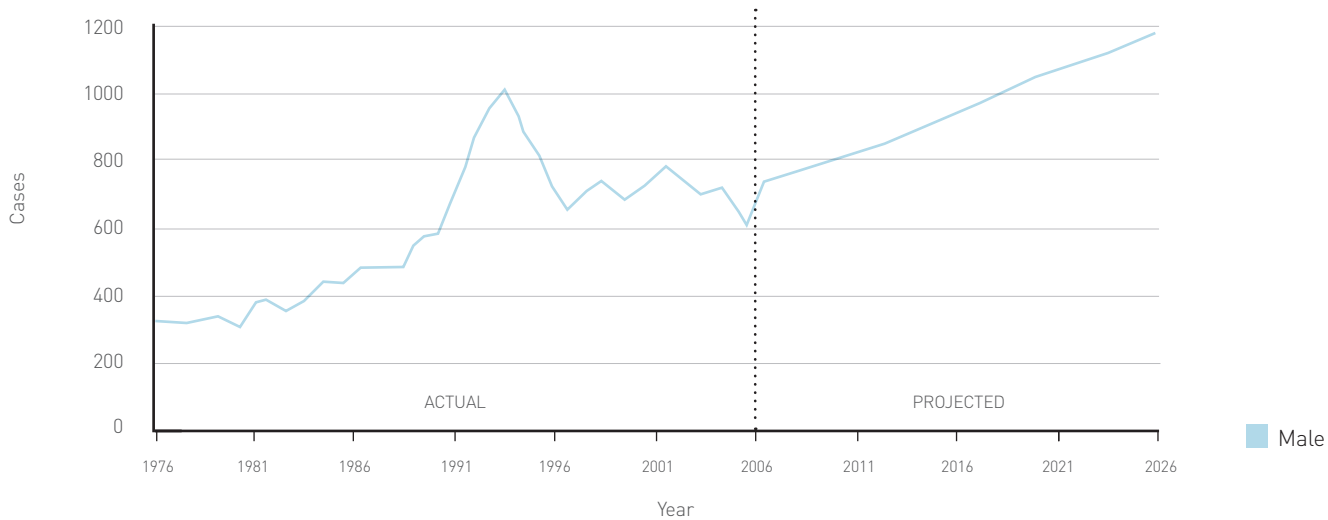


Source: Epidemiology Unit, CancerCare Manitoba.



Figure 4.9

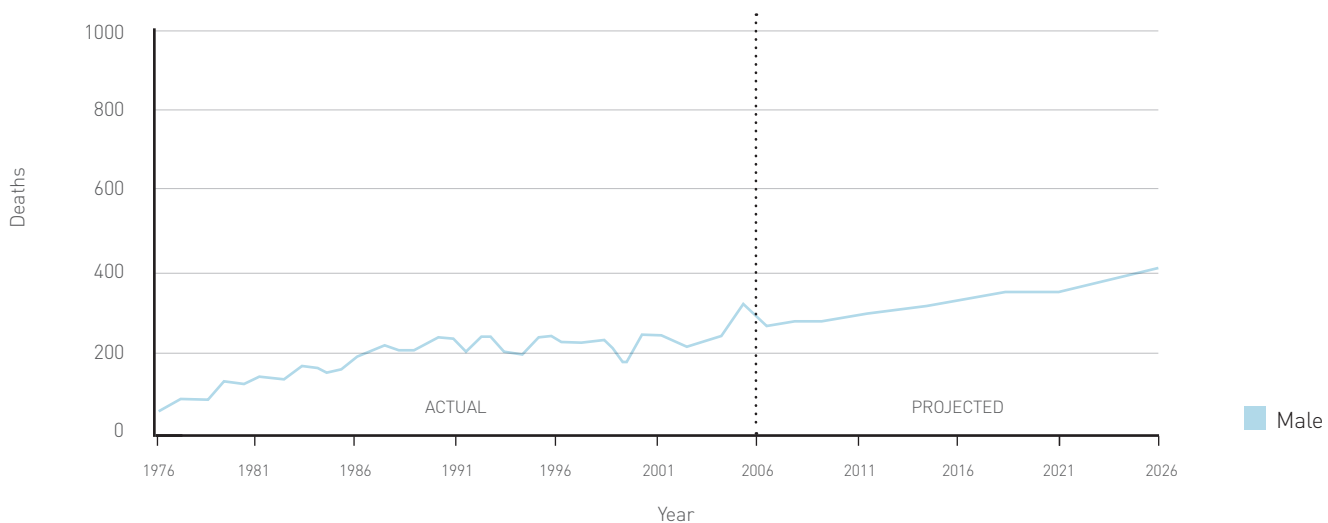
Actual and projected prostate cancer cases, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.

Figure 4.10

Actual and projected prostate cancer deaths, Manitoba, 1976-2026



Source: Epidemiology Unit, CancerCare Manitoba.



# References

- 1 Alberta Cancer Board (2007). Cancer in Alberta: Regional Picture. Calgary, 2007.
- 2 Cancer Care Ontario (2009). Outlook for cancer in Ontario. <http://www.cancercare.on.ca/cms/one.aspx?pagelid=14537>. Accessed April 8, 2010.



# Regional Profiles

# Assiniboine

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	19.8%	<b>22.7%</b>	21.4%	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	19.7%	<b>14.2%*</b>	18.2%	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	18.0%	<b>18.6%</b>	16.2%	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	34.2%	<b>37.8%</b>	32.2%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	68.6%	<b>77.6%*</b>	70.0%	67.2%
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>43.3%*</b>	34.4%	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	64.7%	<b>60.6%*</b>	62.8%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	65.5%	<b>68.1%*</b>	63.9%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	55.5%	<b>58.5%*</b>	56.0%*	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).  
s = numbers suppressed where < 6.  
Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	24.0 days	<b>26.0 days</b>	26.0 days	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	90.9%	<b>98.6%</b>	97.4%	97.1%
<b>lung</b>	76.9%	<b>90.9%</b>	93.5%	95.8%
<b>rectal</b>	87.5%	<b>100.0%</b>	100.0%	98.5%
<b>breast (f)</b>	87.5%	<b>100.0%</b>	97.8%	96.8%
<b>prostate</b>	s	<b>93.3%</b>	87.5%	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	55.5%	<b>57.9%</b>	57.1%*	54.9%
<b>lung</b>	21.8%	<b>26.1%</b>	22.8%	24.4%
<b>colorectal</b>	87.6%	<b>85.3%</b>	85.7%*	80.5%
<b>breast (f)</b>	93.0%	<b>92.8%</b>	94.3%	92.1%
<b>prostate</b>	37.6%	<b>50.9%</b>	45.5%	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	23.6%	<b>21.8%*</b>	27.7%*	30.3%
<b>lung</b>	27.1%	<b>28.4%*</b>	41.0%	42.5%
<b>rectal</b>	26.2%	<b>26.5%*</b>	37.1%	42.0%
<b>breast (f)</b>	36.5%	<b>44.6%*</b>	53.1%*	59.1%
<b>prostate</b>	36.2%	<b>29.4%</b>	31.6%	28.6%

Regional Profile

# Assiniboine

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>j</sup>	59.0%	<b>48.8%*</b>	65.2%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	30.7%	<b>32.5%*</b>	35.1%	36.0%
lung	20.6%	<b>24.3%</b>	28.5%	25.4%
colon	23.5%	<b>35.1%</b>	26.7%	30.1%
breast (f)	53.2%	<b>66.0%</b>	73.4%	74.6%
prostate	44.3%	<b>33.9%</b>	35.3%	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>18.0%</b>	18.6%	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>39.9%</b>	42.4%	41.7%
colorectal	NEW	<b>16.8%</b>	16.5%*	20.5%
breast (f)	NEW	<b>6.0%</b>	7.0%	5.6%
prostate	NEW	<b>11.0%</b>	14.5%	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	82.0%	<b>77.3%</b>	79.0%	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	497.1	<b>460.2</b>	427.8*	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	61.7	<b>59.5</b>	58.0*	68.8
rectal	82.2	<b>77.4*</b>	63.3	64.4
breast (f)	115.9	<b>114.1</b>	110.6	121.3
prostate	173.2	<b>127.3</b>	104.1*	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	224.2	<b>197.9</b>	190.1*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	50.9	<b>43.1</b>	43.5*	50.4
<b>colorectal</b>	33.6	<b>29.2</b>	24.6	26.2
<b>breast (f)</b>	27.0	<b>30.6</b>	31.1	28.9
<b>prostate</b>	45.7	<b>52.1*</b>	40.7	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	54.7%	<b>56.8%</b>	56.3%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	12.1%	<b>12.6%</b>	18.5%	18.9%
<b>colorectal</b>	55.8%	<b>64.3%</b>	57.1%	56.9%
<b>breast (f)</b>	83.2%	<b>85.8%</b>	85.1%	83.6%
<b>prostate</b>	81.5%	<b>83.0%*</b>	84.5%*	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	96.2%	<b>100.0%</b>	96.1%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	50.0%	<b>46.0%</b>	49.7%	46.9%
<b>Pain Management</b>	71.4%	<b>76.9%</b>	80.0%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

Regional Profile

# Brandon

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	17.5%	<b>18.4%</b>	21.4%	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	25.6%	<b>24.0%</b>	18.2%	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	24.5%	<b>23.7%</b>	16.2%	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	34.5%	<b>29.9%</b>	32.2%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	64.6%	<b>72.0%</b>	70.0%	67.2%
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>62.5%*</b>	34.4%	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	72.9%	<b>69.1%*</b>	62.8%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	66.6%	<b>66.3%*</b>	63.9%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	57.5%	<b>55.9%*</b>	56.0%*	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	27.0 days	<b>22.0 days</b>	26.0 days	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	89.7%	<b>95.2%</b>	97.4%	97.1%
<b>lung</b>	70.0%	<b>93.3%</b>	93.5%	95.8%
<b>rectal</b>		<b>100.0%</b>	100.0%	98.5%
<b>breast (f)</b>	76.5%	<b>94.4%</b>	97.8%	96.8%
<b>prostate</b>		<b>85.7%</b>	87.5%	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	58.2%	<b>55.6%</b>	57.1%*	54.9%
<b>lung</b>	34.6%	<b>22.9%</b>	22.8%	24.4%
<b>colorectal</b>	85.2%	<b>87.7%</b>	85.7%*	80.5%
<b>breast (f)</b>	91.1%	<b>89.1%</b>	94.3%	92.1%
<b>prostate</b>	30.9%	<b>67.4%*</b>	45.5%	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	27.9%	<b>24.6%*</b>	27.7%*	30.3%
<b>lung</b>	24.6%	<b>37.7%</b>	41.0%	42.5%
<b>rectal</b>	31.6%	<b>s</b>	37.1%	42.0%
<b>breast (f)</b>	40.2%	<b>49.2%</b>	53.1%*	59.1%
<b>prostate</b>	43.6%	<b>26.9%</b>	31.6%	28.6%



# Brandon

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>	63.9%	<b>72.0%</b>	65.2%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	34.4%	<b>32.6%</b>	35.1%	36.0%
lung	19.1%	<b>24.1%</b>	28.5%	25.4%
colon	30.2%	<b>26.8%</b>	26.7%	30.1%
breast (f)	62.5%	<b>60.9%*</b>	73.4%	74.6%
prostate	49.1%	<b>32.6%</b>	35.3%	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>20.7%</b>	18.6%	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>45.2%</b>	42.4%	41.7%
colorectal	NEW	<b>13.2%*</b>	16.5%*	20.5%
breast (f)	NEW	<b>s</b>	7.0%	5.6%
prostate	NEW	<b>14.3%</b>	14.5%	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	78.2%	<b>81.0%</b>	79.0%	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	510.6	<b>490.8</b>	427.8*	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	74.9	<b>82.6</b>	58.0*	68.8
rectal	69.6	<b>71.7</b>	63.3	64.4
breast (f)	142.0	<b>104.9</b>	110.6	121.3
prostate	175.3	<b>115.0</b>	104.1*	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	208.8	<b>232.0</b>	190.1*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	46.5	<b>71.4*</b>	43.5*	50.4
<b>colorectal</b>	26.0	<b>27.2</b>	24.6	26.2
<b>breast (f)</b>	36.2	<b>25.7</b>	31.1	28.9
<b>prostate</b>	28.8	<b>32.2</b>	40.7	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	57.2%	<b>62.6%*</b>	56.3%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	15.2%	<b>15.7%</b>	18.5%	18.9%
<b>colorectal</b>	62.9%	<b>65.7%</b>	57.1%	56.9%
<b>breast (f)</b>	77.1%	<b>84.3%</b>	85.1%	83.6%
<b>prostate</b>	81.0%	<b>96.5%</b>	84.5%*	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	97.5%	<b>97.0%</b>	96.1%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	42.5%	<b>35.9%</b>	49.7%	46.9%
<b>Pain Management</b>	52.4%	<b>93.8%*</b>	80.0%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

# Burntwood & Churchill

NOTE: when possible, Burntwood and Churchill shown separately (B, C respectively)

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	28.4%	<b>23.1%</b>	25.1%*	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	40.8%	<b>37.1%*</b>	33.2%*	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	25.5%	<b>27.9%*</b>	23.6%*	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	31.3%	<b>27.8%</b>	33.4%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	63.6%	<b>72.2%</b>	72.1%	67.2%
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>19.5%*</b>	17.6%*	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	B 65.7% C 65.4% B&C 65.7%	<b>B 60.1%*</b> <b>C 63.4%*</b> <b>B&amp;C 60.2%*</b>	58.5%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	B 49.7 C 64.9 B&C 50.2	<b>B 50.4*</b> <b>C 55.1</b> <b>B&amp;C 50.5*</b>	57.1%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	B 44.3 C 53.2 B&C 44.6	<b>B 46.3*</b> <b>C 48.3</b> <b>B&amp;C 46.4*</b>	52.6%	52.1%

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	42.5 days	<b>41.5 days*</b>	40.0 days*	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	86.0%	<b>100.0%</b>	97.2%	97.1%
<b>lung</b>	100.0%	<b>s</b>	100.0%	95.8%
<b>rectal</b>	s	<b>s</b>	100.0%	98.5%
<b>breast (f)</b>	77.8%	<b>s</b>	100.0%	96.8%
<b>prostate</b>	s	<b>s</b>	s	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	62.8%	<b>53.6%</b>	49.3%*	54.9%
<b>lung</b>	34.9%	<b>s</b>	18.4%	24.4%
<b>colorectal</b>	92.6%	<b>73.3%</b>	66.0%*	80.5%
<b>breast (f)</b>	92.3%	<b>94.7%</b>	92.3%	92.1%
<b>prostate</b>	63.6%	<b>33.3%</b>	33.3%*	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	32.2%	<b>30.8%</b>	29.8%	30.3%
<b>lung</b>	41.9%	<b>41.9%</b>	34.4%	42.5%
<b>rectal</b>	s	<b>s</b>	40.0%	42.0%
<b>breast (f)</b>	50.0%	<b>50.0%</b>	55.6%	59.1%
<b>prostate</b>	s	<b>45.0%</b>	31.6%	28.6%

Regional Profile

# Burntwood & Churchill

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>	s	<b>66.7%</b>	75.0%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	32.6%	<b>39.8%</b>	39.2%	36.0%
lung	34.9%	<b>31.6%</b>	20.4%	25.4%
colon	s	<b>s</b>	s	30.1%
breast (f)	73.1%	<b>63.2%</b>	66.7%	74.6%
prostate	s	<b>57.1%*</b>	48.7%*	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>20.6%</b>	24.4%*	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>38.5%</b>	39.8%	41.7%
colorectal	NEW	<b>27.3%</b>	36.0%*	20.5%
breast (f)	NEW	<b>s</b>	s	5.6%
prostate	NEW	<b>32.3%*</b>	26.3%*	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	<b>65.1%</b>	<b>70.1%</b>	71.8%*	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	B 399.6 C 445.3 B&C 402.4	<b>B 523.1</b> <b>C 439.4</b> <b>B&amp;C 519.9</b>	491.2	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	80.8	<b>75.9</b>	91.9*	68.8
rectal	48.3	<b>84.7</b>	69.6	64.4
breast (f)	64.0	<b>87.8</b>	89.9*	121.3
prostate	96.2	<b>154.1</b>	126.3	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).  
 s = numbers suppressed where < 6.  
 Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	170.3	<b>255.2</b>	268.6*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	44.6	<b>59.0</b>	62.1	50.4
<b>colorectal</b>	17.4	<b>25.6</b>	31.0	26.2
<b>breast (f)</b>	27.3	<b>14.8</b>	27.7	28.9
<b>prostate</b>	24.1	<b>86.8*</b>	88.3*	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	53.5%	<b>53.7%</b>	53.8%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	18.5%	<b>20.4%</b>	19.0%	18.9%
<b>colorectal</b>	45.8%	<b>68.1%</b>	60.9%	56.9%
<b>breast (f)</b>	70.3%	<b>73.2%</b>	82.8%	83.6%
<b>prostate</b>	69.8%	<b>69.9%*</b>	81.7%	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	s	<b>s</b>	85.7%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	s	<b>s</b>	44.7%	46.9%
<b>Pain Management</b>	s	<b>s</b>	50.0%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

Regional Profile

# Central Manitoba

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	19.0%	<b>22.9%</b>	21.4%	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	22.4%	<b>20.5%</b>	18.2%	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	12.4%	<b>15.1%</b>	16.2%	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	31.0%	<b>32.5%</b>	32.2%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	63.3%	<b>67.3%</b>	70.0%	67.2%
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>27.3%*</b>	34.4%	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	64.9%	<b>62.7%*</b>	62.8%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	60.5%	<b>61.2%*</b>	63.9%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	55.5%	<b>54.8%*</b>	56.0%*	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	27.0 days	<b>24.5 days</b>	26.0 days	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	81.3%	<b>96.9%</b>	97.4%	97.1%
<b>lung</b>	76.9%	<b>96.0%</b>	93.5%	95.8%
<b>rectal</b>	75.0%	<b>100.0%</b>	100.0%	98.5%
<b>breast (f)</b>	73.1%	<b>95.8%</b>	97.8%	96.8%
<b>prostate</b>	5	<b>87.5%</b>	87.5%	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	58.4%	<b>56.9%</b>	57.1%*	54.9%
<b>lung</b>	26.5%	<b>19.4%</b>	22.8%	24.4%
<b>colorectal</b>	84.7%	<b>87.2%*</b>	85.7%*	80.5%
<b>breast (f)</b>	92.5%	<b>94.3%</b>	94.3%	92.1%
<b>prostate</b>	51.8%	<b>39.7%</b>	45.5%	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	28.4%	<b>30.4%</b>	27.7%*	30.3%
<b>lung</b>	40.8%	<b>44.4%</b>	41.0%	42.5%
<b>rectal</b>	24.2%	<b>50.0%</b>	37.1%	42.0%
<b>breast (f)</b>	51.5%	<b>58.3%</b>	53.1%*	59.1%
<b>prostate</b>	37.8%	<b>34.2%</b>	31.6%	28.6%

Regional Profile



# Central Manitoba

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>	56.9%	<b>72.3%</b>	65.2%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	33.5%	<b>37.0%</b>	35.1%	36.0%
lung	21.8%	<b>28.7%</b>	28.5%	25.4%
colon	32.1%	<b>22.9%</b>	26.7%	30.1%
breast (f)	69.9%	<b>76.4%</b>	73.4%	74.6%
prostate	42.1%	<b>39.7%</b>	35.3%	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>19.8%</b>	18.6%	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>41.4%</b>	42.4%	41.7%
colorectal	NEW	<b>15.2%</b>	16.5%*	20.5%
breast (f)	NEW	<b>7.5%</b>	7.0%	5.6%
prostate	NEW	<b>18.2%</b>	14.5%	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	81.3%	<b>80.6%</b>	79.0%	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	447.0	<b>411.5*</b>	427.8*	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	51.3	<b>57.4*</b>	58.0*	68.8
rectal	70.2	<b>55.8</b>	63.3	64.4
breast (f)	114.1	<b>110.7</b>	110.6	121.3
prostate	126.6	<b>88.3*</b>	104.1*	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	209.3	<b>184.6*</b>	190.1*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	39.8	<b>42.5</b>	43.5*	50.4
<b>colorectal</b>	30.7	<b>24.0</b>	24.6	26.2
<b>breast (f)</b>	31.0	<b>29.7</b>	31.1	28.9
<b>prostate</b>	30.7	<b>34.1</b>	40.7	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	54.7%	<b>56.5%</b>	56.3%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	22.0%	<b>19.3%</b>	18.5%	18.9%
<b>colorectal</b>	56.0%	<b>51.1%</b>	57.1%	56.9%
<b>breast (f)</b>	90.1%	<b>83.9%</b>	85.1%	83.6%
<b>prostate</b>	83.8%	<b>91.3%</b>	84.5%*	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	98.4%	<b>93.8%</b>	96.1%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	55.5%	<b>53.3%</b>	49.7%	46.9%
<b>Pain Management</b>	89.7%	<b>85.4%*</b>	80.0%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

Regional Profile

# Interlake

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	24.8%	<b>25.6%*</b>	23.5%*	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	29.9%	<b>20.0%</b>	21.5%	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	22.9%	<b>16.8%</b>	17.4%	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	27.1%	<b>35.4%</b>	36.1%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	70.4%	<b>68.3%</b>	71.5%	67.2%
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>47.2%*</b>	40.9%*	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	70.5%	<b>67.4%*</b>	65.6%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	64.9%	<b>66.3%*</b>	65.9%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	54.8%	<b>56.7%*</b>	56.6%*	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	29.0 days	<b>26.5 days</b>	28.0 days	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	86.8%	<b>97.2%</b>	95.7%	97.1%
<b>lung</b>	100.0%	<b>100.0%</b>	95.5%	95.8%
<b>rectal</b>	100.0%	<b>100.0%</b>	100.0%	98.5%
<b>breast (f)</b>	71.2%	<b>100.0%</b>	95.2%	96.8%
<b>prostate</b>	60.0%	<b>70.0%</b>	85.7%	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	56.0%	<b>53.2%</b>	52.1%*	54.9%
<b>lung</b>	27.2%	<b>23.4%</b>	24.9%	24.4%
<b>colorectal</b>	83.1%	<b>75.2%</b>	74.5%*	80.5%
<b>breast (f)</b>	94.6%	<b>92.6%</b>	94.7%	92.1%
<b>prostate</b>	56.8%	<b>45.9%</b>	46.4%	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	31.1%	<b>29.5%</b>	28.6%	30.3%
<b>lung</b>	37.7%	<b>40.4%</b>	36.0%*	42.5%
<b>rectal</b>	37.8%	<b>56.4%</b>	44.4%	42.0%
<b>breast (f)</b>	54.8%	<b>65.5%</b>	57.1%	59.1%
<b>prostate</b>	31.9%	<b>24.3%</b>	26.2%	28.6%

Regional Profile

# Interlake

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>	58.1%	<b>68.9%</b>	64.8%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	39.6%	<b>38.2%</b>	35.8%	36.0%
lung	26.7%	<b>23.4%</b>	23.8%	25.4%
colon	43.1%	<b>29.4%</b>	27.8%	30.1%
breast (f)	79.5%	<b>73.8%</b>	74.2%	74.6%
prostate	33.0%	<b>37.7%</b>	32.8%	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>19.3%</b>	19.7%	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>38.8%</b>	40.2%	41.7%
colorectal	NEW	<b>22.5%</b>	21.5%	20.5%
breast (f)	NEW	<b>4.3%</b>	4.0%	5.6%
prostate	NEW	<b>10.5%</b>	11.8%	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	<b>79.0%</b>	<b>76.6%</b>	77.9%	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	524.1	<b>497.2*</b>	489.2*	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	79.9	<b>77.3</b>	75.0	68.8
rectal	66.6	<b>68.6</b>	68.4	64.4
breast (f)	135.9	<b>134.4</b>	131.7	121.3
prostate	168.7	<b>133.7</b>	124.7	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	247.0	<b>234.1*</b>	227.1*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	68.0	<b>56.0</b>	55.0	50.4
<b>colorectal</b>	31.6	<b>28.6</b>	29.1	26.2
<b>breast (f)</b>	37.2	<b>29.7</b>	25.3	28.9
<b>prostate</b>	40.6	<b>43.0</b>	43.9	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	51.8%	<b>55.0%</b>	55.1%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	18.0%	<b>15.8%</b>	17.9%	18.9%
<b>colorectal</b>	49.3%	<b>51.4%</b>	52.8%	56.9%
<b>breast (f)</b>	81.4%	<b>84.1%</b>	83.9%	83.6%
<b>prostate</b>	81.2%	<b>88.0%</b>	90.4%	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	98.4%	<b>94.9%</b>	94.5%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	56.8%	<b>42.7%</b>	46.2%	46.9%
<b>Pain Management</b>	78.6%	<b>61.4%</b>	64.5%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

Regional Profile

# NOR-MAN

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	26.1%	<b>27.2%</b>	25.1%*	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	26.1%	<b>29.1%</b>	33.2%*	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	30.5%	<b>19.2%</b>	23.6%*	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	31.5%	<b>38.8%</b>	33.4%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	68.8%	<b>72.0%</b>	72.1%	67.2%
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>15.7%*</b>	17.6%*	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	60.4%	<b>55.5%*</b>	58.5%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	60.9%	<b>65.1%*</b>	57.1%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	55.3%	<b>60.2%*</b>	52.6%*	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	35.0 days	<b>39.5 days*</b>	40.0 days*	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	96.7%	<b>94.7%</b>	97.2%	97.1%
<b>lung</b>	s	<b>100.0%</b>	100.0%	95.8%
<b>rectal</b>	s	<b>s</b>	100.0%	98.5%
<b>breast (f)</b>	100.0%	<b>100.0%</b>	100.0%	96.8%
<b>prostate</b>	s	<b>s</b>	s	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	52.9%	<b>44.1%*</b>	49.3%*	54.9%
<b>lung</b>	22.0%	<b>20.0%</b>	18.4%	24.4%
<b>colorectal</b>	77.3%	<b>55.0%*</b>	66.0%*	80.5%
<b>breast (f)</b>	97.5%	<b>90.0%</b>	92.3%	92.1%
<b>prostate</b>	39.0%	<b>33.3%</b>	33.3%*	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	24.1%	<b>28.5%</b>	29.8%	30.3%
<b>lung</b>	40.0%	<b>26.7%*</b>	34.4%	42.5%
<b>rectal</b>	s	<b>s</b>	40.0%	42.0%
<b>breast (f)</b>	42.5%	<b>62.5%</b>	55.6%	59.1%
<b>prostate</b>	26.8%	<b>s</b>	31.6%	28.6%

Regional Profile



# NOR-MAN

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>j</sup>	60.0%	<b>85.7%</b>	75.0%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	32.2%	<b>38.5%</b>	39.2%	36.0%
lung	24.0%	s	20.4%	25.4%
colon	39.4%	s	s	30.1%
breast (f)	75.0%	<b>70.0%</b>	66.7%	74.6%
prostate	24.4%	<b>38.9%</b>	48.7%*	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>29.2%*</b>	24.4%*	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>40.8%</b>	39.8%	41.7%
colorectal	NEW	<b>48.4%*</b>	36.0%*	20.5%
breast (f)	NEW	s	s	5.6%
prostate	NEW	s	26.3%*	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	<b>72.9%</b>	<b>73.4%</b>	71.8%*	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	574.7	<b>464.3</b>	491.2	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	104.2	<b>102.9*</b>	91.9*	68.8
rectal	84.3	<b>58.4</b>	69.6	64.4
breast (f)	136.0	<b>90.6</b>	89.9*	121.3
prostate	183.9	<b>109.7</b>	126.3	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).  
 s = numbers suppressed where < 6.  
 Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping-North Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	276.9	<b>278.1*</b>	268.6*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	88.3	<b>62.7</b>	62.1	50.4
<b>colorectal</b>	40.9	<b>36.4</b>	31.0	26.2
<b>breast (f)</b>	34.8	<b>36.9</b>	27.7	28.9
<b>prostate</b>	56.3	<b>90.4*</b>	88.3*	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	50.5%	<b>53.9%</b>	53.8%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	15.1%	<b>16.6%</b>	19.0%	18.9%
<b>colorectal</b>	46.1%	<b>55.7%</b>	60.9%	56.9%
<b>breast (f)</b>	70.4%	<b>87.4%</b>	82.8%	83.6%
<b>prostate</b>	74.5%	<b>82.7%</b>	81.7%	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	s	<b>s</b>	85.7%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	s	<b>s</b>	44.7%	46.9%
<b>Pain Management</b>	s	<b>s</b>	50.0%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

Regional Profile

# North Eastman

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	17.7%	<b>21.9%</b>	23.5%*	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	23.3%	<b>20.6%</b>	21.5%	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	16.4%	<b>22.8%</b>	17.4%	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	33.1%	<b>40.3%</b>	36.1%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	66.4%	<b>76.4%</b>	71.5%	67.2 %
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>40.7%</b>	40.9%*	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	73.3%	<b>67.7%*</b>	65.6%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	65.0%	<b>65.7%*</b>	65.9%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	55.5%	<b>55.4%*</b>	56.6%*	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	29.0 days	<b>28.5 days</b>	28.0 days	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	85.2%	<b>94.5%</b>	95.7%	97.1%
<b>lung</b>	81.8%	<b>100.0%</b>	95.5%	95.8%
<b>rectal</b>	100.0%	<b>100.0%</b>	100.0%	98.5%
<b>breast (f)</b>	87.0%	<b>87.0%</b>	95.2%	96.8%
<b>prostate</b>	100.0%	<b>100.0%</b>	85.7%	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	55.8%	<b>51.4%</b>	52.1%*	54.9%
<b>lung</b>	38.1%	<b>22.6%</b>	24.9%	24.4%
<b>colorectal</b>	73.6%	<b>82.7%</b>	74.5%*	80.5%
<b>breast (f)</b>	94.9%	<b>96.5%</b>	94.7%	92.1%
<b>prostate</b>	45.1%	<b>40.4%</b>	46.4%	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	29.8%	<b>33.7%</b>	28.6%	30.3%
<b>lung</b>	33.3%	<b>42.4%</b>	36.0%*	42.5%
<b>rectal</b>	31.0%	<b>47.4%</b>	44.4%	42.0%
<b>breast (f)</b>	57.6%	<b>54.6%</b>	57.1%	59.1%
<b>prostate</b>	31.7%	<b>35.4%</b>	26.2%	28.6%

Regional Profile

# North Eastman

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>	75.8%	<b>63.2%</b>	64.8%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	33.5%	<b>38.9%</b>	35.8%	36.0%
lung	23.8%	<b>30.2%</b>	23.8%	25.4%
colon	30.2%	<b>38.9%</b>	27.8%	30.1%
breast (f)	71.2%	<b>77.2%</b>	74.2%	74.6%
prostate	34.2%	<b>36.2%</b>	32.8%	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>20.1%</b>	19.7%	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>38.8%</b>	40.2%	41.7%
colorectal	NEW	<b>25.6%</b>	21.5%	20.5%
breast (f)	NEW	<b>s</b>	4.0%	5.6%
prostate	NEW	<b>12.7%</b>	11.8%	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	<b>86.0</b>	<b>77.3%</b>	77.9%	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	478.5	<b>481.8</b>	489.2*	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	57.5	<b>66.4</b>	75.0	68.8
rectal	66.7	<b>65.1</b>	68.4	64.4
breast (f)	103.1	<b>139.8</b>	131.7	121.3
prostate	151.8	<b>113.7</b>	124.7	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	221.6	<b>229.9</b>	227.1*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	41.8	<b>50.8</b>	55.0	50.4
<b>colorectal</b>	33.4	<b>26.5</b>	29.1	26.2
<b>breast (f)</b>	21.2	<b>23.4</b>	25.3	28.9
<b>prostate</b>	36.3	<b>53.3</b>	43.9	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	52.6%	<b>57.6%</b>	55.1%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	8.0%	<b>29.9%</b>	17.9%	18.9%
<b>colorectal</b>	54.1%	<b>52.7%</b>	52.8%	56.9%
<b>breast (f)</b>	84.8%	<b>83.6%</b>	83.9%	83.6%
<b>prostate</b>	89.5%	<b>93.5%</b>	90.4%	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	100.0%	<b>90.6%</b>	94.5%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	49.4%	<b>49.7%</b>	46.2%	46.9%
<b>Pain Management</b>	66.7%	<b>64.3%</b>	64.5%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

Regional Profile

# Parkland

## REGIONAL PROFILE

### PREVENTION

**Obesity:** 24.9% **20.4%** 23.5%\* 18.4%  
percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight)<sup>a</sup>

**Smoking:** 28.4% **26.1%** 21.5% 20.6%  
percent of current daily or occasional smokers (ages 12+)<sup>a</sup>

**Alcohol:** 19.3% **12.1%** 17.4% 17.1%  
percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+)<sup>a</sup>

**Fruits and Vegetables:** 30.4% **32.9%** 36.1% 36.1%  
percent consuming fruits and vegetables five or more times a day (ages 12+)<sup>a</sup>

**Physical Activity:** 67.4% **73.4%** 71.5% 67.2%  
percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity)<sup>a</sup>

### ACCESS - SCREENING

**Colorectal Cancer:** NEW **35.1%** 40.9%\* 36.3%  
**NEW** FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years<sup>b</sup>

**Cervical Cancer:** 63.1% **59.8%\*** 65.6%\* 64.6%  
percent of women (ages 18 - 69) who had a Pap test in the last three years<sup>c</sup>

**Breast Cancer:** 65.7% **65.3%\*** 65.9%\* 62.5%  
percent of women (ages 50-69) who had a mammogram within the last two years<sup>d</sup>

percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program<sup>e</sup> 57.2% **57.7%\*** 56.6%\* 52.1%

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	33.0 days	<b>28.5 days*</b>	28.0 days	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	84.3%	<b>93.2%</b>	95.7%	97.1%
<b>lung</b>	75.0%	<b>75.0%</b>	95.5%	95.8%
<b>rectal</b>	s	<b>s</b>	100.0%	98.5%
<b>breast (f)</b>	85.7%	<b>93.3%</b>	95.2%	96.8%
<b>prostate</b>	s	<b>s</b>	85.7%	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	54.3%	<b>50.7%</b>	52.1%*	54.9%
<b>lung</b>	23.9%	<b>28.7%</b>	24.9%	24.4%
<b>colorectal</b>	87.2%	<b>68.3%*</b>	74.5%*	80.5%
<b>breast (f)</b>	94.3%	<b>96.9%*</b>	94.7%	92.1%
<b>prostate</b>	32.0%	<b>51.5%</b>	46.4%	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	22.3%	<b>23.3%*</b>	28.6%	30.3%
<b>lung</b>	26.6%	<b>25.0%*</b>	36.0%*	42.5%
<b>rectal</b>	28.9%	<b>s</b>	44.4%	42.0%
<b>breast (f)</b>	26.1%	<b>44.6%*</b>	57.1%	59.1%
<b>prostate</b>	39.0%	<b>22.7%</b>	26.2%	28.6%

Regional Profile



# Parkland

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>	31.6%	<b>58.6%</b>	64.8%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	29.4%	<b>29.6%*</b>	35.8%	36.0%
lung	17.4%	<b>20.7%</b>	23.8%	25.4%
colon	25.0%	<b>18.2%*</b>	27.8%	30.1%
breast (f)	64.8%	<b>72.3%</b>	74.2%	74.6%
prostate	43.0%	<b>21.2%</b>	32.8%	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>20.1%</b>	19.7%	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>43.2%</b>	40.2%	41.7%
colorectal	NEW	<b>17.5%</b>	21.5%	20.5%
breast (f)	NEW	<b>s</b>	4.0%	5.6%
prostate	NEW	<b>13.4%</b>	11.8%	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	<b>78.2%</b>	<b>80.5%</b>	77.9%	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	506.5	<b>483.7</b>	489.2*	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	65.2	<b>80.1</b>	75.0	68.8
rectal	75.7	<b>69.8</b>	68.4	64.4
breast (f)	110.7	<b>117.2</b>	131.7	121.3
prostate	124.5	<b>122.0</b>	124.7	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural Mid Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	244.5	<b>217.3</b>	227.1*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	59.3	<b>57.2</b>	55.0	50.4
<b>colorectal</b>	36.2	<b>30.4</b>	29.1	26.2
<b>breast (f)</b>	30.5	<b>20.5</b>	25.3	28.9
<b>prostate</b>	53.6	<b>41.7</b>	43.9	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	53.4%	<b>53.4%</b>	55.1%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	12.4%	<b>14.4%</b>	17.9%	18.9%
<b>colorectal</b>	44.9%	<b>54.8%</b>	52.8%	56.9%
<b>breast (f)</b>	84.8%	<b>83.3%</b>	83.9%	83.6%
<b>prostate</b>	80.7%	<b>87.8%</b>	90.4%	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	94.7%	<b>97.3%</b>	94.5%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	46.9%	<b>49.5%</b>	46.2%	46.9%
<b>Pain Management</b>				
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>	75.0%	<b>72.2%</b>	64.5%	69.7%

Regional Profile

# South Eastman

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>				
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese"(based on self-reported height and weight) <sup>a</sup>	18.5%	<b>17.3%</b>	21.4%	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	21.9%	<b>19.0%</b>	18.2%	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	10.5%	<b>15.4%</b>	16.2%	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	29.2%	<b>25.5%*</b>	32.2%	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	67.1%	<b>66.0%</b>	70.0%	67.2%
<b>ACCESS - SCREENING</b>				
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>32.7%</b>	34.4%	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 – 69) who had a Pap test in the last three years <sup>c</sup>	69.7%	<b>65.6%*</b>	62.8%*	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	63.5%	<b>62.6%</b>	63.9%*	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	55.3%	<b>54.6%*</b>	56.0%*	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>				
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	33.5 days	<b>29.0 days</b>	26.0 days	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	81.8%	<b>96.9%</b>	97.4%	97.1%
<b>lung</b>	92.3%	<b>90.0%</b>	93.5%	95.8%
<b>rectal</b>	81.8%	<b>96.9%</b>	97.4%	97.1%
<b>breast (f)</b>	52.9%	<b>100.0%</b>	97.8%	96.8%
<b>prostate</b>	52.9%	<b>77.8%</b>	87.5%	86.6%
<b>ACCESS - TREATMENT</b>				
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	60.0%	<b>55.8%</b>	57.1%*	54.9%
<b>lung</b>	37.4%	<b>22.6%</b>	22.8%	24.4%
<b>colorectal</b>	90.1%	<b>83.3%</b>	85.7%*	80.5%
<b>breast (f)</b>	93.0%	<b>96.8%*</b>	94.3%	92.1%
<b>prostate</b>	49.2%	<b>42.2%</b>	45.5%	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	35.4%	<b>33.8%</b>	27.7%*	30.3%
<b>lung</b>	47.0%	<b>56.7%*</b>	41.0%	42.5%
<b>rectal</b>	26.9%	<b>38.9%</b>	37.1%	42.0%
<b>breast (f)</b>	64.0%	<b>60.4%</b>	53.1%*	59.1%
<b>prostate</b>	47.7%	<b>32.7%</b>	31.6%	28.6%

Regional Profile

# South Eastman

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>i</sup>	75.0%	<b>79.2%</b>	65.2%	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	38.8%	<b>36.7%</b>	35.1%	36.0%
lung	32.5%	<b>35.5%</b>	28.5%	25.4%
colon	38.5%	<b>15.0%*</b>	26.7%	30.1%
breast (f)	80.2%	<b>79.0%</b>	73.4%	74.6%
prostate	41.5%	<b>31.1%</b>	35.3%	30.1%
<b>ACCESS - OTHER</b>				
<b>Accessing the Cancer System</b>				
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>17.5%</b>	18.6%	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>				
lung	NEW	<b>48.9%</b>	42.4%	41.7%
colorectal	NEW	<b>18.5%</b>	16.5%*	20.5%
breast (f)	NEW	<b>8.0%</b>	7.0%	5.6%
prostate	NEW	<b>16.2%</b>	14.5%	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	77.0%	<b>75.4%</b>	79.0%	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>				
<b>Cancer Incidence</b>				
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	456.9	<b>397.2*</b>	427.8*	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>				
lung	61.9	<b>56.1</b>	58.0*	68.8
rectal	67.8	<b>52.2</b>	63.3	64.4
breast (f)	118.8	<b>104.6</b>	110.6	121.3
prostate	106.1	<b>91.8*</b>	104.1*	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).

s = numbers suppressed where < 6.

Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Regional Grouping- Rural South Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>				
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	196.8	<b>182.8*</b>	190.1*	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>				
<b>lung</b>	36.3	<b>46.1</b>	43.5*	50.4
<b>colorectal</b>	31.3	<b>18.2</b>	24.6	26.2
<b>breast (f)</b>	22.5	<b>33.2</b>	31.1	28.9
<b>prostate</b>	28.8	<b>29.5</b>	40.7	38.5
<b>Cancer Survival</b>				
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	55.7%	<b>55.3%</b>	56.3%	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>				
<b>lung</b>	18.5%	<b>28.4%</b>	18.5%	18.9%
<b>colorectal</b>	64.6%	<b>53.5%</b>	57.1%	56.9%
<b>breast (f)</b>	79.9%	<b>86.2%</b>	85.1%	83.6%
<b>prostate</b>	73.3%	<b>73.3%*</b>	84.5%*	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>				
<b>Patient Satisfaction</b>				
percent of patients satisfied with outpatient cancer care <sup>o</sup>	100.0%	<b>93.5%</b>	96.1%	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	52.8%	<b>49.7%</b>	49.7%	46.9%
<b>Pain Management</b>	85.0%	<b>72.2%</b>	80.0%	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>				

Regional Profile

# Winnipeg

## REGIONAL PROFILE

	RHA Past Estimate	RHA Current Estimate	Manitoba Current Estimate
<b>PREVENTION</b>			
<b>Obesity:</b> percent of adults (ages 18+) with Body Mass Index classified as "obese" (based on self-reported height and weight) <sup>a</sup>	16.2%	<b>16.0%</b>	18.4%
<b>Smoking:</b> percent of current daily or occasional smokers (ages 12+) <sup>a</sup>	24.8%	<b>20.2%</b>	20.6%
<b>Alcohol:</b> percent consuming five or more drinks on one occasion, at least once a month in the past year (ages 12+) <sup>a</sup>	17.7%	<b>16.6%</b>	17.1%
<b>Fruits and Vegetables:</b> percent consuming fruits and vegetables five or more times a day (ages 12+) <sup>a</sup>	30.4%	<b>37.9%</b>	36.1%
<b>Physical Activity:</b> percent of residents reporting moderate or active physical activity (ages 15 to 75) (includes work, travel and leisure time activity) <sup>a</sup>	57.5%	<b>64.8%</b>	67.2%
<b>ACCESS - SCREENING</b>			
<b>Colorectal Cancer:</b> <b>NEW</b> FOBT: the percent of men and women (ages 50 - 74) who completed a Fecal Occult Blood Test in the last two years <sup>b</sup>	NEW	<b>37.6%</b>	36.3%
<b>Cervical Cancer:</b> percent of women (ages 18 - 69) who had a Pap test in the last three years <sup>c</sup>	70.0%	<b>65.7%*</b>	64.6%
<b>Breast Cancer:</b> percent of women (ages 50-69) who had a mammogram within the last two years <sup>d</sup>	60.6%	<b>61.3%*</b>	62.5%
percent of women (ages 50-69) who had a routine screening mammogram within the last two years through the Manitoba Breast Screening Program <sup>e</sup>	48.2%	<b>49.4%*</b>	52.1%

Notes: \*Significantly different from Manitoba rate (p<0.05).  
s = numbers suppressed where < 6.  
Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Manitoba Current Estimate
<b>ACCESS - WAIT TIMES</b>			
<b>Breast Assessment Waits</b> median waiting time (in days) for women (ages 50 to 69) from screening by mammogram to final diagnosis <sup>f</sup>	28.0 days	<b>25.0 days</b>	26.0 days
<b>Radiation Therapy Waits</b> percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment <sup>g</sup>  percent of patients treated with radiation therapy, within four weeks from ready to treat to start of treatment, by cancer type <sup>g</sup>	86.1%	<b>97.4%</b>	97.1%
<b>lung</b>	86.5%	<b>96.4%</b>	95.8%
<b>rectal</b>	89.3%	<b>97.5%</b>	98.5%
<b>breast (f)</b>	70.8%	<b>96.9%</b>	96.8%
<b>prostate</b>	64.4%	<b>86.1%</b>	86.6%
<b>ACCESS - TREATMENT</b>			
<b>Surgery</b> percent of patients treated with surgery, all cancers <sup>h</sup>  percent of patients treated with surgery, by cancer type <sup>h</sup>	56.5%	<b>55.4%</b>	54.9%
<b>lung</b>	26.9%	<b>25.4%</b>	24.4%
<b>colorectal</b>	83.8%	<b>80.7%</b>	80.5%
<b>breast (f)</b>	93.0%	<b>91.1%</b>	92.1%
<b>prostate</b>	55.9%	<b>50.6%</b>	49.1%
<b>Radiation Therapy</b> percent of cancer cases receiving radiation treatment, all cancers <sup>i</sup>  percent of cancer cases that will receive radiation treatment, by cancer type <sup>i</sup>	33.8%	<b>32.1%*</b>	30.3%
<b>lung</b>	44.3%	<b>45.8%*</b>	42.5%
<b>rectal</b>	32.8%	<b>44.3%</b>	42.0%
<b>breast (f)</b>	63.6%	<b>62.0%</b>	59.1%
<b>prostate</b>	32.7%	<b>28.2%</b>	28.6%



# Winnipeg

REGIONAL PROFILE	RHA Past Estimate	RHA Current Estimate	Manitoba Current Estimate
<b>Radiation After Breast Conserving Surgery</b> percent of stage I and II breast cancer patients treated with radiation following breast conserving surgery <sup>j</sup>	77.4%	<b>73.3%</b>	70.8%
<b>Systemic Therapy</b> percent of cancer patients that receiving systemic therapy (cancer drugs), all cancers <sup>h</sup> percent of cancer patients that receive systemic therapy (cancer drugs), by cancer type <sup>h</sup>	35.7%	<b>36.5%</b>	36.0%
lung	25.6%	<b>25.3%</b>	25.4%
colon	27.4%	<b>32.9%</b>	30.1%
breast (f)	79.2%	<b>76.2%</b>	74.6%
prostate	29.1%	<b>26.7%*</b>	30.1%
<b>ACCESS - OTHER</b>			
<b>Accessing the Cancer System</b>			
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), all cancers <sup>i</sup>	NEW	<b>19.7%</b>	19.7%
<b>NEW</b> percent of cancer patients diagnosed at late stage (IV), by cancer type <sup>i</sup>			
lung	NEW	<b>41.7%</b>	41.7%
colorectal	NEW	<b>21.3%</b>	20.5%
breast (f)	NEW	<b>5.8%</b>	5.6%
prostate	NEW	<b>10.2%</b>	11.8%
<b>End-of-Life Care</b> percent of patients who die of cancer with an acute hospital stay in the last two weeks of life <sup>k</sup>	<b>81.0%</b>	<b>77.1%</b>	77.5%
<b>OUTCOMES - INCIDENCE, MORTALITY, SURVIVAL</b>			
<b>Cancer Incidence</b>			
age-standardized cancer incidence rates per 100,000 people, all cancers <sup>l</sup>	482.4	<b>456.6</b>	457.8
age-standardized cancer incidence rates per 100,000 people, by cancer type <sup>l</sup>			
lung	74.5	<b>69.1</b>	68.8
rectal	63.8	<b>62.9</b>	64.4
breast (f)	123.6	<b>125.3</b>	121.3
prostate	149.2	<b>121.8</b>	117.9

Notes: \*Significantly different from Manitoba rate (p<0.05).  
s = numbers suppressed where < 6.  
Data source symbols reference: see back of report.

<b>REGIONAL PROFILE</b>	RHA Past Estimate	RHA Current Estimate	Manitoba Current Estimate
<b>Cancer Mortality</b>			
age-standardized cancer mortality rates per 100,000 people, all cancers <sup>m</sup>	219.2	<b>206.4</b>	209.1
age-standardized cancer mortality rates per 100,000 people, by cancer type <sup>m</sup>			
<b>lung</b>	54.8	<b>49.5</b>	50.4
<b>colorectal</b>	27.1	<b>25.7</b>	26.2
<b>breast (f)</b>	29.4	<b>29.2</b>	28.9
<b>prostate</b>	38.2	<b>34.4</b>	38.5
<b>Cancer Survival</b>			
age-standardized five-year relative survival ratios, all cancers <sup>n</sup>	53.0%	<b>56.4%</b>	56.4%
age-standardized five-year relative survival ratios, by cancer type <sup>n</sup>			
<b>lung</b>	12.7%	<b>19.4%</b>	18.9%
<b>colorectal</b>	51.7%	<b>57.1%</b>	56.9%
<b>breast (f)</b>	83.2%	<b>83.0%</b>	83.6%
<b>prostate</b>	85.1%	<b>93.3%</b>	91.1%
<b>OUTCOMES - THE PATIENT EXPERIENCE</b>			
<b>Patient Satisfaction</b>			
percent of patients satisfied with outpatient cancer care <sup>o</sup>	97.1%	<b>95.6%</b>	95.4%
percent of patients satisfied with emotional support <sup>o</sup>	48.8%	<b>47.1%</b>	46.9%
<b>Pain Management</b>	70.6%	<b>67.3%</b>	69.7%
for those experiencing pain, percent of patients who felt staff did everything they could to control pain or discomfort <sup>o</sup>			

# Acknowledgements

Led by the Community Health Assessment Team, our dedicated staff and partners made the 2010 Community Health Assessment the most comprehensive report possible.

## Community Health Assessment Team

**Sue Bates**

Director,  
Patient Navigation

**Tanya Benoit**

Chief Nursing Officer,  
Professional Practice

**Alison Bertram  
Farough**

Director, Quality, Patient  
Safety & Risk Program

**Venetia Bourrier**

Director, Provincial  
Oncology Drug Program

**Dr. Alain Demers**

Epidemiologist, Leader  
Epidemiology and  
Cancer Registry

**Katherine Fradette**

Health Outcomes Analyst,  
Epidemiology and  
Cancer Registry

**Dr. Jane Griffith**

Epidemiologist,  
Epidemiology and  
Cancer Registry

**Marion Harrison**

Director, Screening  
Programs

**Ruth Loewen**

Director, Community  
Cancer Programs Network

**Dr. Rick Nason**

Professor & Head,  
Department of Surgery,  
University of Manitoba

**Dr. Jeff Sisler**

Director, Primary Care  
Oncology

**Kathy Suderman**

Provincial Director,  
Radiation Therapy

**Jill Taylor-Brown**

Director, Patient and  
Family Support Services

---

## Executive Steering Committee

**Dr. Dhali Dhaliwal**

President and CEO,  
CancerCare Manitoba

**Jeff Peitsch**

Chief Operating Officer,  
CancerCare Manitoba

**Dr. Donna Turner**

Provincial Director, Population Oncology  
CancerCare Manitoba

---

The team is grateful for analysis, advice and clinical interpretation provided by CancerCare Manitoba department staff, plus those of our contributors:

## Clinical and Program Staff

**Sue Bates**

Director, Patient Navigation

**Venetia Bourrier**

Director, Provincial  
Oncology Drug Program

**Dr. Eric Bow**

Medical Director, CCMB  
Clinical and Academic  
Services

**Dr. Harvey Chochinov**

Director, Manitoba Palliative  
Care Research Unit

**Dr. Andrew Cooke**

Radiation Oncologist

**Dr. Piotr Czaykowski**

Medical Oncologist

**Dr. Paul Daeninck**

Medical Oncologist

**Kathleen Decker**

Research and Evaluation  
Coordinator, Manitoba  
Breast Screening Program

**Dr. Alain Demers**

Epidemiologist, Leader  
Epidemiology and  
Cancer Registry

**Dr. Dhali Dhaliwal**

President and CEO

**Kathryn Dyck**

Manager, Clinical  
Investigations Office

**Katherine Fradette**

Health Outcomes Analyst,  
Epidemiology and  
Cancer Registry

**Sheila Fukumura**

Senior Cancer Registrar,  
Manitoba Cancer Registry

**Bill Funk**

Business Leader,  
Planning and Innovation

**Dr. Joel Gingerich**

Medical Oncologist

**Dr. Debjani Grenier**

Medical Oncologist

**Dr. Jane Griffith**

Epidemiologist,  
Epidemiology and  
Cancer Registry

**Marion Harrison**

Director, Screening  
Programs

**Coreen Hildebrand**

Quality Control Coordinator,  
Manitoba Cancer Registry

**JoAnne Janzen**

Senior Cancer Registrar,  
Manitoba Cancer Registry

**Humaira Khair**

Programmer, Epidemiology  
and Cancer Registry

**Cheryl Kilburn**

Office Manager,  
Radiation Therapy

**Carly Leggett**

Cancer Prevention Project  
Coordinator, Epidemiology  
and Cancer Registry

*(continued top right)*

### Clinical and Program Staff *(continued)*

**Ruth Loewen**

Director, Community Cancer Programs Network

**Dr. Ethan Lyn**

Radiation Oncologist

**Kate McGarry**

Cancer Prevention Project Coordinator, Epidemiology and Cancer Registry

**Ryan Melnyk**

Data Manager and Policy Analyst, Patient Navigation

**Rebekah Morrison**

Clinical Research Associate, Clinical Investigations Office

**Grace Musto**

Programmer Analyst, Epidemiology and Cancer Registry

**Dr. Sri Navaratnam**

Medical Oncologist

**Gail Noonan**

Manager, Manitoba Cancer Registry

**Janet Nowatzki**

Health Outcomes Analyst, Epidemiology and Cancer Registry

**Jeff Peitsch**

Chief Operating Officer

**Dr. Jeff Saranchuk**

Medical Director, Dr. Ernest W. Ramsey Manitoba Prostate Centre

**Dr. Jeff Sisler**

Director, Primary Care Oncology

**Kathy Suderman**

Provincial Director, Radiation Therapy

**Jill Taylor-Brown**

Director, Patient and Family Support Services

**Kimberly Templeton**

Program Manager, Manitoba Cervical Cancer Screening Program

**Jean Sander**

Program Manager, ColonCheck Manitoba

**Katie Watters**

Program Development and Education Manager, Manitoba Breast Screening Program

**Dr. Debrah Wirtzfeld**

Surgical Oncologist

**Dr. Ralph Wong**

Medical Oncologist

**Manitoba Centre for Health Policy****Dr. Randy Fransoo**

Research Associate

**Heather Prior**

Computer Programmer

**NRC Picker****Melanie Jameson**

Analyst

**Mary Fraser**

Account Director

**Phoebe Lawton**

Product Delivery Manager

**Dr. Mike Harlos**

Medical Director  
Winnipeg Regional Health Authority  
Palliative Care Program

**Dr. Helmut Unruh**

Professor & Section Head,  
Thoracic Surgery, University of Manitoba

### A very special thanks goes to:

**Manitobans who shared their stories and images****All the people who collect and manage cancer-related data,**

including our staff in:

- ▶ Epidemiology and Cancer Registry
- ▶ Screening Programs
- ▶ Radiation Therapy Program

and our provincial and national partners (Manitoba Health, Manitoba Vital Statistics and Statistics Canada)

**Madeline Kells**

Administrative Assistant, Population Oncology

**Nicole Choptain**

Consultant

**Roberta Koscielny**

Communications Coordinator, Population Oncology

**Tétro Design**

# Glossary → Indicators: Terms and Definitions

## PREVENTION SECTION

### Indicator: Obesity

**Definition:** The percent of adults (ages 18+) with Body Mass Index (BMI) classified as “obese” (30+). Based on self-reported height and weight.

BMI is a common (and international standard) statistical measure used to determine if an individual’s weight is in a healthy range based on their height. BMI is calculated as follows:

$$\text{BMI} = \frac{(\text{weight in kilograms})^2}{(\text{height in metres})^2}$$

The index is: under 18.5 (underweight), 18.5-24.9 (acceptable weight), 25-29.9 (overweight) and 30 or higher (obese).

**Numerator:** Number of adults who are obese based on height and weight responses in survey data.

**Denominator:** Total number of adults with valid height and weight responses in the survey, aged 18 and over excluding pregnant women.

**Data source:** Canadian Community Health Survey (CCHS) as analyzed by the Manitoba Centre for Health Policy.

**Timeframe:** 2001 (CCHS Cycle 1.1); 2005 (CCHS Cycle 3.1).

**Additional notes:** Stratified by region. Crude rate of obesity (not age-adjusted) shown; age-adjustment made no substantial effect on these statistics or the associated RHA rankings.

### Indicator: Smoking

**Definition:** The percent of teens and adults who are current daily or occasional smokers. Based on self-reported current smoking habits

**Numerator:** Number of current daily or occasional smokers, ages 12+, based on survey data.

**Denominator:** Total population, aged 12+, who participate in the survey.

**Data source:** Canadian Community Health Survey (CCHS) as analyzed by the Manitoba Centre for Health Policy.

**Timeframe:** 2001 (CCHS Cycle 1.1); 2005 (CCHS Cycle 3.1)

**Additional notes:** Stratified by region. Crude rate of smoking (not age-adjusted) shown; age-adjustment made no substantial effect on these statistics or the associated RHA rankings.

### Indicator: Alcohol Use

**Definition:** The percent of teens and adults who consume five or more alcoholic drinks on one occasion, at least once a month in the past year. Standard “binge-drinking” measure based on self-reported drinking habits.

**Numerator:** Number of individuals consuming five or more drinks on one occasion, at least once a month in the past year, ages 12+, based on survey data.

**Denominator:** Total survey participants, aged 12+, including non-drinkers.

**Data source:** Canadian Community Health Survey (CCHS) as analyzed by the Manitoba Centre for Health Policy.

**Timeframe:** 2001 (CCHS Cycle 1.1); 2005 (CCHS Cycle 3.1)

**Additional notes:** Stratified by region. Crude rate of alcohol use (not age-adjusted) shown; age-adjustment made no substantial effect on these statistics or the associated RHA rankings.

### Indicator: Fruit and Vegetable Consumption

**Definition:** The percent of teens and adults who on average consume fruits or vegetables at least five times per day. Based on self-reported dietary habits.

**Numerator:** Number of individuals consuming vegetables and fruit at least five times per day, ages 12+, based on survey data.

**Denominator:** Total survey participants, aged 12+.

**Data source:** Canadian Community Health Survey (CCHS) as analyzed by the Manitoba Centre for Health Policy.

**Timeframe:** 2001 (CCHS Cycle 1.1); 2003 (CCHS Cycle 2.1).

**Additional notes:** Stratified by region. Crude rate of fruit and vegetable consumption (not age-adjusted) shown; age-adjustment made no substantial effect on these statistics or the associated RHA rankings.

### Indicator: Physical Activity

**Definition:** The percent of teens and adults with moderate or active levels of physical activity (including work-based activity, leisure-time activity and travel). Based on self-reported activity levels in the past three months.

**Numerator:** Number of employed residents reporting moderate or active physical activity, ages 15-75, based on survey data.

**Denominator:** Total employed survey participants, ages 15-75.

**Data source:** Canadian Community Health Survey (CCHS) as analyzed by the Manitoba Centre for Health Policy.

**Timeframe:** 2001 (CCHS Cycle 1.1); 2005 (CCHS Cycle 3.1).

**Additional notes:** Stratified by region. Crude rate of total physical activity (not age-adjusted) shown; age-adjustment made no substantial effect on these statistics or the associated RHA rankings. Excludes unemployed participants.

**ACCESS SECTION**

**SCREENING**

**Indicator: Colorectal Cancer Screening**

**Definition:** The percent of the population ages 50-74, who completed a Fecal Occult Blood Test (FOBT) test in the last two years. Based on self-reported FOBT completion.

**Numerator:** The number of individuals reporting completion of an FOBT in the last two years, ages 50-74, based on survey data.

**Denominator:** Total survey participants, ages 50-74.

**Data source:** Survey by Prairie Research Associates on behalf of CancerCare Manitoba's Screening Program, funded by the Canadian Partnership Against Cancer.

**Timeframe:** December 2007 to January 2008 (survey) (i.e., FOBT completed 2006-2007).

**Additional notes:** Stratified by region.

**Indicator: Cervical Cancer Screening**

**Definition:** Percent of women ages 18-69, who had a Papanicolaou (Pap) test in the last three years.

**Numerator:** Number of women ages 18-69 with a Pap test in the past three years, based on information in the Manitoba Cervical Cancer Screening Program Registry.

**Denominator:** All women ages 18-69 in the Manitoba Cervical Cancer Screening Program Registry.

**Data source:** Manitoba Cervical Cancer Screening Program Registry (note: Manitoba Health's population registry data contribute to the maintenance of this database, in addition to clinical/lab information captured directly by the Program).

**Timeframe:** April 1, 2002- March 31, 2005; April 1, 2006- March 31, 2009.

**Additional notes:** Stratified by region.

**Indicator: Breast Cancer Screening (All Mammograms)**

**Definition:** Percent of women ages 50-69, who had a mammogram (screening or diagnostic) in the last two years.

**Numerator:** Number of women ages 50-69 with a mammogram in the past two years, based on physician billing data from Manitoba Health; includes diagnostic and screening mammograms.

**Denominator:** All women ages 50-69, from Manitoba Health's population database.

**Data source:** Manitoba Health (using physician billings, population registry); data provided to/analyzed by the Manitoba Breast Screening Program.

**Timeframe:** April 1, 2004-March 31, 2006; April 1, 2006-March 31, 2008.

**Additional notes:** Stratified by region. Two forms of this indicator are provided, consistent with national reporting, demonstrating mammography utilization overall as well as the proportion delivered through organized programs.

**Indicator: Breast Cancer Screening (Mammography through Manitoba Breast Screening Program)**

**Definition:** Percent of women ages 50-69, who had a screening mammogram through the Manitoba Breast Screening Program in the last two years.

**Numerator:** Number of women ages 50-69 with a mammogram in the past two years, based on data from the Manitoba Breast Screening Program database (mammograms provided by the Manitoba Breast Screening Program only).

**Denominator:** All women ages 50-69, from Manitoba Health's population database.

**Data source:** Manitoba Breast Screening Program (note: Manitoba Health's population registry data contribute to the maintenance of this database, in addition to clinical information captured directly by the Program).

**Timeframe:** April 1, 2004-March 31, 2006; April 1, 2006-March 31, 2008.

**Additional notes:** Stratified by region. Two forms of this indicator are provided, consistent with national reporting, demonstrating mammography utilization overall as well as the proportion delivered through organized programs.

**WAIT TIMES**

**Indicator: Wait Times, Breast Assessment**

**Definition:** Median waiting time (in days) from screening by mammogram to final diagnosis, for participants of the Manitoba Breast Screening Program.

**Population:** Women ages 50-69 participating in the Manitoba Breast Screening Program with an abnormal breast screen result.

**Data source:** Manitoba Breast Screening Program.

**Timeframe:** April 1, 2004-March 31, 2006; April 1, 2006-March 31, 2008.

**Additional notes:** Stratified by region. Indicator defined as per national standards for reporting.

**Indicator: Wait Times, Radiation Therapy**

**Definition:** Percent of patients treated with radiation therapy within four weeks from ready to treat to start of treatment.

**Numerator:** Number of patients who receive their radiation therapy within four weeks of being ready for treatment.

**Denominator:** All patients receiving radiation therapy.

**Data source:** Radiation Therapy Program, CancerCare Manitoba.

**Timeframe:** April 1, 2005-March 31, 2006; April 1, 2007-March 31, 2008.

**Additional notes:** Stratified by type of cancer (lung, rectal, breast, prostate) and region. Indicator defined as per national standards for reporting.

### TREATMENT

#### Indicator: Surgery (Utilization)

**Definition:** Percent of patients treated with surgery.

**Numerator:** Number of cancer patients who undergo surgery for their malignancy.

**Denominator:** All patients diagnosed with invasive cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Data source:** Manitoba Cancer Registry.

**Timeframe:** 2000-2002; 2006-2007. (Diagnosis years)

**Additional notes:** Stratified by type of cancer (lung, colorectal, breast, prostate) and region. Change in treatment coding in 2005 led to incomplete surgery data capture that year, therefore that year's data are excluded.

This indicator is useful for planning purposes but should not be used as a measure of appropriateness of treatment. Use of cancer surgery varies depending on specific cancer diagnosis, stage of disease, the patient's medical fitness for treatment and the patient's preference. As a result of these factors, patients who do not receive surgery for their cancer may still be receiving appropriate care. Also surgery performed outside of Manitoba may not be captured in our data sources.

#### Indicator: Radiation Therapy (Utilization)

**Definition:** Percent of patients treated with radiation therapy.

**Numerator:** Number of cancer patients who undergo radiation therapy for their malignancy.

**Denominator:** All patients diagnosed with invasive cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Data source:** Manitoba Cancer Registry.

**Timeframe:** 2000-2002; 2005-2006. (Diagnosis years)

**Additional notes:** Stratified by type of

cancer (lung, rectal, breast, prostate) and region. Radiation treatment data entry for patients diagnosed in 2007 was not complete at the time of analysis, therefore that year's data are excluded.

This indicator is useful for planning purposes but should not be used as a measure of appropriateness of treatment. Use of radiation therapy varies depending on specific cancer diagnosis, stage of disease, the patient's medical fitness for treatment and the patient's preference. As a result of these factors, patients who do not receive radiation therapy for their cancer may still be receiving appropriate care. Also radiation therapy provided outside of Manitoba may not be captured in our data sources.

#### Indicator: Radiation after Breast Conserving Surgery

**Definition:** Percent of stage I and stage II breast cancer patients treated with radiation therapy within one year of breast conserving surgery (lumpectomy).

**Numerator:** Number of early stage (I/II) breast cancer patients who undergo radiation therapy within a year of breast conserving surgery.

**Denominator:** All patients diagnosed with early stage (I/II) breast cancer who undergo breast conserving surgery.

**Data source:** Manitoba Cancer Registry.

**Timeframe:** 2000-2002; 2005-2006. (Diagnosis years)

**Additional notes:** Stratified by region. Radiation treatment data entry for patients diagnosed in 2007 was not complete at the time of analysis, therefore that year's data are excluded.

Women with early stage breast cancer have a treatment choice with equivalent outcomes: mastectomy (which requires no radiation therapy), or breast conserving surgery followed by radiation therapy. However, ultimate use of radiation therapy after breast conserving surgery may or may not occur depending on specific features of the cancer, the use of other treatments such as anti-estrogens in cancer patients with very good prognosis (e.g., older age, small

tumour size, low stage), the patient's medical fitness for treatment and the patient's preference. As a result of these factors, women with early stage breast cancer who do not receive radiation therapy after breast conserving surgery may still be receiving appropriate care. Also radiation therapy provided outside of Manitoba may not be captured in our data sources.

#### Indicator: Systemic Therapy (Utilization)

**Definition:** Percent of patients treated with systemic therapy (chemotherapy or hormone therapy).

**Numerator:** Number of cancer patients who undergo systemic therapy for their malignancy.

**Denominator:** All patients diagnosed with invasive cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Data source:** Manitoba Cancer Registry.

**Timeframe:** 2000-2002; 2006-2007. (Diagnosis years)

**Additional notes:** Stratified by type of cancer (lung, colon, breast, prostate) and region. Change in treatment coding in 2005 led to incomplete systemic therapy data capture that year, therefore that year's data are excluded.

This indicator is useful for planning purposes but should not be used as a measure of appropriateness of treatment. Use of systemic therapy varies depending on specific cancer diagnosis, stage of disease, the patient's medical fitness for treatment and the patient's preference. As a result of these factors, patients who do not receive systemic therapy for their cancer may still be receiving appropriate care. Also systemic therapy provided outside of Manitoba may not be captured in our data sources; similarly, oral systemic therapy provided outside of cancer clinics (i.e., by prescription) may also not be captured in our data sources. Thus this indicator relates primarily to "intense" systemic therapy that requires cancer clinic admission.

### ACCESSING THE CANCER SYSTEM

#### Indicator: Late-Stage Diagnosis

**Definition:** Percent of patients diagnosed at late stage (IV), indicating advanced cancer with distant spread (metastases) at diagnosis.

**Numerator:** Number of patients who are diagnosed with stage IV cancer.

**Denominator:** All patients diagnosed with invasive cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Data source:** Manitoba Cancer Registry.

**Timeframe:** 2005-2007. (Diagnosis years)

**Additional notes:** Stratified by type of cancer (lung, colorectal, breast, prostate) and region. Stage has been captured by the Manitoba Cancer Registry for all patients diagnosed since 2004.

Stage IV cancers have the poorest prognosis (chance of survival): the disease is wide spread and treatment is least effective. The level of this indicator varies by specific cancer diagnosis. Existence and availability of technology to detect cancer early, uptake of effective cancer screening, and rapid response (by patients and the health care system) to symptoms may reduce the proportion of patients who are diagnosed with stage IV cancer.

#### Indicator: End-of-Life Care (Utilization)

**Definition:** Percent of patients who die of cancer with an acute care stay during the last two weeks of life.

**Numerator:** Number of patients who die of cancer with an acute care stay in the last two weeks of life.

**Denominator:** All patients who die of (invasive) cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Data source:** Manitoba Cancer Registry (note: death information is reported routinely to the Manitoba Cancer Registry by Manitoba's Vital Statistics Agency); Manitoba Health Hospital Discharge Database.

**Timeframe:** 2000-2002; 2005-2007. (Years of death)

**Additional notes:** Stratified by type of cancer (lung, colorectal, breast, prostate) and region.

This indicator is useful for planning purposes but should not be used as a measure of appropriateness of treatment. Use of acute care hospitals in the last two weeks of life varies depending on the specific cancer diagnosis, patient (and family or personal caregiver) preference, the availability of community and home-based palliative care, and the level of medical intervention required. As a result of these factors, patients who stay in an acute care facility in the last two weeks of life may be receiving appropriate care, although other care options (including dying at home) may also be appropriate. Acute care stays outside of Manitoba may not be captured in our data sources.

We also note that some palliative care units exist within acute care facilities, and are currently identified in the "acute care" category in our data. Efforts to identify palliative care units as a place of death, as distinct from the host acute care facility, will refine this measure in the future.

### OUTCOMES SECTION

#### Indicator: Incidence

**Definition:** Annual age-standardized cancer incidence rate per 100,000 people. Allows the reader to compare cancer incidence rates in different regions with different age structures (the rates are "adjusted" or "standardized" so that age differences are taken into account).

**Numerator:** All patients diagnosed with invasive cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Denominator:** All residents, from Manitoba Health's population database.

**Data source:** Manitoba Cancer Registry; Manitoba Health population registry (for denominator).

**Timeframe:** 2000-2002; 2005-2007. (Diagnosis years)

**Additional notes:** Stratified by type of cancer (lung, colorectal, breast, prostate, melanoma, cervix) and region. Age-standardized (using the direct method) to the 2001 Manitoba Health population. Trend information provided for diagnosis years 1988-2007.

#### Indicator: Mortality

**Definition:** Annual age-standardized cancer mortality rate per 100,000 people. Allows the reader to compare cancer mortality rates in different regions with different age structures (the rates are "adjusted" or "standardized" so that age differences are taken into account).

**Numerator:** All patients dying of invasive cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Denominator:** All Manitoba residents, from Manitoba Health's population database.

**Data source:** Manitoba Cancer Registry (note: death information is reported routinely to the Manitoba Cancer Registry by Manitoba's Vital Statistics Agency); Manitoba Health population registry (for denominator).



**Timeframe:** 2000-2002; 2005-2007.  
(Years of death)

**Additional notes:** Stratified by type of cancer (lung, colorectal, breast, prostate) and region. Age-standardized (using the direct method) to the 2001 Manitoba Health population. Trend information provided for cancer deaths occurring in 1988-2007.

### Indicator: Survival

**Definition:** Age-standardized five-year relative survival for cancer. Relative survival compares the survival experience of individuals with cancer to individuals without cancer (of the same age). It is “a way of comparing survival of people who have cancer with those who don’t – it shows how much cancer shortens life” (see the National Cancer Institute’s online dictionary of terms, [www.cancer.gov/dictionary/](http://www.cancer.gov/dictionary/)).

**Numerator:** Observed survival (five years after diagnosis) for all patients who are diagnosed with invasive cancer (excludes non-melanoma skin cancers as per standard national/international protocols).

**Denominator:** Expected survival of Manitobans of a similar age, based on the lifetables, from Manitoba Health’s population database.

**Data source:** Manitoba Cancer Registry (note: death information is reported routinely to the Manitoba Cancer Registry by Manitoba’s Vital Statistics Agency); Manitoba Health population registry (for denominator).

**Timeframe:** 1997-1999; 2000-2002.  
(Diagnosis years)

**Additional notes:** Stratified by type of cancer (lung, colorectal, breast, prostate) and region. Age-standardized (using the direct method) to the 2001 Manitoba Health population.

## PATIENT EXPERIENCE

### Indicator: Patient Satisfaction

**Definition:** Overall patient satisfaction score for outpatient cancer care.

**Numerator:** Number of patients who are satisfied with outpatient cancer care (composite measure); based on survey data.

**Denominator:** All patients who participate in the survey (sample of all patients still living six months after diagnosis).

**Data source:** NRC Picker Ambulatory Oncology Survey.

**Timeframe:** 2004; 2008.

**Additional notes:** Stratified by region. Sample was too small to display information for Burntwood, Churchill and NOR-MAN RHAs separately; see “North” regional aggregate.

### Indicator: Patient Satisfaction: Emotional Support

**Definition:** Overall patient satisfaction score for emotional support.

**Numerator:** Number of patients who are satisfied with emotional support (composite measure); based on survey data.

**Denominator:** All patients who participate in the survey (sample of all patients still living six months after diagnosis).

**Data source:** NRC Picker Ambulatory Oncology Survey.

**Timeframe:** 2004; 2008.

**Additional notes:** Stratified by region. Sample was too small to display information for Burntwood, Churchill and NOR-MAN RHAs separately; see “North” regional aggregate.

Emotional support question list changed over time; NRC Picker specially analyzed the data with a comparable question list for this report.

### Indicator: Pain Management

**Definition:** Percent of patients experiencing pain, who felt staff did everything they could to control pain or discomfort.

**Numerator:** Number of patients with positive responses to the question, “Do you think the staff did everything they could to control your pain or discomfort?”; based on survey data.

**Denominator:** All patients who participate in the survey (sample of all patients still living 6 months after diagnosis) who experienced pain in the past 6 months.

**Data source:** NRC Picker Ambulatory Oncology Survey.

**Timeframe:** 2004; 2008.

**Additional notes:** Stratified by region. Sample was too small to display information for Burntwood, Churchill and NOR-MAN RHAs separately; see “North” regional aggregate.

### PROJECTIONS SECTION

.....

#### Indicator: Projected Cancer Counts (Incidence)

**Definition:** The expected number of Manitobans that will be diagnosed with cancer to 2026 (excludes non-melanoma skin cancers as per standard national/international protocols).

**Denominator:** Based on the patterns of cancer incidence in Manitoba from 1976 to 2005, applied to population projections from the Manitoba Bureau of Statistics.

**Data source:** Manitoba Cancer Registry; Manitoba Bureau of Statistics.

**Timeframe:** 1976-2005 (actual); 2006-2026 (projected). (Diagnosis years)

**Additional notes:**

Stratified by type of cancer (lung, colorectal, breast, prostate). Uses age-period-cohort model by Møller et al

*\*Møller B, Fekjaer H, Hakulinen T, Sigvaldason H, Storm HH, Talback M, Haldorsen T (2003). Prediction of cancer incidence in the Nordic countries: empirical comparison of different approaches. Stat Med 22(17): 2751 – 2766.*

*† Møller B, Fekjaer H, Hakulinen T, Tryggvadottir L, Storm HH, Talback M, Haldorsen T (2002). Prediction of cancer incidence in the Nordic countries up to the year 2020. Eur J Cancer Prev Suppl 1: S1 – S96.*

#### Indicator: Projected Cancer Deaths (Mortality)

**Definition:** The expected number of Manitobans who will die from cancer to 2026 (excludes non-melanoma skin cancers as per standard national/international protocols).

**Denominator:** Based on the patterns of cancer mortality in Manitoba from 1976 to 2005, applied to population projections from the Manitoba Bureau of Statistics.

**Data source:** Manitoba Cancer Registry (note: death information is reported routinely to the Manitoba Cancer Registry by Manitoba's Vital Statistics Agency); Manitoba Bureau of Statistics.

**Timeframe:** 1976-2005 (actual); 2006-2026 (projected). (Death years)

**Additional notes:** Stratified by type of cancer (lung, colorectal, breast, prostate). Uses age-period-cohort model by Møller et al (see references for Projected Cancer Counts: Incidence, above).<sup>†</sup>

# General Terms & Definitions

## Cancer: Codes, Classifications and Categories

Cancer is a term used to describe a group of 200+ diseases. The common feature of these diseases is that abnormal cells divide without (i.e., not responding to) our bodies' usual biological growth control mechanisms. They are then able to invade surrounding tissue and spread to other parts of the body (metastasize) through our blood and lymph systems. Most types of cancer are named for the organ they start in, and/or the type of cell that is involved. For example, if a cancer starts in the breast it is called "breast cancer" even though it may have spread to other organs such as the liver, bone or brain – these are secondary or metastatic sites.

In this report, we have used national standards for coding and classifying cancer information. The Manitoba Cancer Registry uses the International Classification of Diseases for Oncology, 3rd edition (ICDO-3), which includes the anatomic location of the tumour as well as a pathologic classification (known as "morphology"); deaths are coded in the International Classification of Diseases, 9th edition (ICD-9) up to 2001 and the 10th edition (ICD-10) from 2002 to present. Specifically, the following codes are used:

Cancer Category	Incidence (ICDO-3)	Mortality (ICD-9) (up to 2001)	Mortality (ICD-10) (from 2002 to present)
<b>All invasive cancers</b>	C00-C97 with invasive morphology (/3), excluding non-melanoma skin cancers (C44 with morphology outside of 8720-8790)	140-208, excluding non-melanoma skin cancers (173)	C00-C97, excluding non-melanoma skin cancers (C44)
<b>Lung</b>	C34 with invasive morphology (/3)	162	C34
<b>Colorectal</b>	C18-C20, C26.0 with invasive morphology (/3)	153, 154.0-154.1, 159	C18-C20, C26.0
<b>Breast (females only)</b>	C50 with invasive morphology (/3)	174	C50
<b>Prostate</b>	C61 with invasive morphology (/3)	185	C61
<b>Melanoma (of skin)</b>	C44 (morphology 8720-8790) with invasive morphology (/3)	172	C43
<b>Cervix</b>	C53 with invasive morphology (/3)	180	C53

## General Terms & Definitions

Lymphomas, which may be found in various organs (but with morphology code 9590-9989), are assigned to the lymphoma category instead of the anatomic site where they arise.

Stage at diagnosis was assigned using the collaborative staging system (CS, version 1), which can be translated to American Joint Commission on Cancer (AJCC) TNM categories.

Please see the National Cancer Institute's online dictionary of terms, [www.cancer.gov/dictionary](http://www.cancer.gov/dictionary), for more information on other cancer terms.

## Geography: Categories

**Only Manitoba residents are included in our analyses.**

**Regional Health Authorities (RHAs)** are defined by the Manitoba government, and are responsible within the context of broad provincial policy direction, for assessing and prioritizing needs and health goals, and developing and managing an integrated approach to their own health care system. Assignment of RHA is based on postal code information in our data sources, using the standard grouping algorithms (i.e., for postal code alone, without municipal code) used by Manitoba Health, the Manitoba Centre for Health Policy, the Winnipeg Regional Health Authority and CancerCare Manitoba.

**Regional Groupings** have been defined by the Manitoba Centre for Health Policy as:

- ▶ North: NOR-MAN, Burntwood, and Churchill Regional Health Authorities
- ▶ Mid: North Eastman, Interlake, and Parkland Regional Health Authorities
- ▶ Rural South: South Eastman, Central, and Assiniboine Regional Health Authorities
- ▶ Brandon and Winnipeg RHAs are shown separately, as the province's major urban areas. For RHA specific reports, the Rural South was used as a comparison group for Brandon. However, there was no suitable comparison group for Winnipeg other than the province as a whole.

# Data Source Symbols Reference

## Prevention

- a* Canadian Community Health Survey Cycles 1.1 (2001), 2.1 (2003), and 3.1 (2005) analyzed by the Manitoba Centre for Health Policy, 2009.

## Access

### Screening

- b* Colorectal Cancer Screening: Results of a Survey of Manitobans 50 to 74. Supported by the Canadian Partnership Against Cancer and CancerCare Manitoba. PRA Inc., 2008.
- c* Manitoba Cervical Cancer Screening Program Database, women (ages 18 – 69) screened April 1, 2002 – March 31, 2005, April 1, 2006 – March 31, 2009.
- d* Manitoba Health fee for service billing data for mammography, women (ages 50 – 69), April 1, 2004 – March 31, 2006, April 1, 2006 – March 31, 2008.
- e* Manitoba Breast Screening Program Database, women (ages 50 – 69) screened April 1, 2004 – March 31, 2006, April 1, 2006 – March 31, 2008.

### Wait Times

- f* Data from the Manitoba Breast Screening Program, women (ages 50 – 69) with an abnormal screen, April 1, 2004 – March 31, 2006, April 1, 2006 – March 31, 2008.
- g* Data from CancerCare Manitoba, Radiation Therapy Program, patients seen April 1, 2005 - March 31, 2006, April 1, 2007 - March 31, 2008.

### Treatment

- h* Manitoba Cancer Registry, patients diagnosed 2000-2002, 2006-2007.
- i* Manitoba Cancer Registry, patients diagnosed 2000-2002, 2005-2006.

### Additional Indicators

- j* Manitoba Cancer Registry, patients diagnosed 2005-2007.
- k* Manitoba Cancer Registry, cancer deaths 2000-2002, 2005-2007; combined with hospital data from Manitoba Health.

## Outcomes

- l* Manitoba Cancer Registry, patients diagnosed 2000-2002, 2005-2007.
- m* Manitoba Cancer Registry, cancer deaths 2000-2002, 2005-2007.
- n* Manitoba Cancer Registry, patients diagnosed 1997-1999, 2000-2002.
- o* NRC Picker, Ambulatory Oncology Survey, 2004 and 2008.



CancerCare Manitoba  
Community Health Assessment 2010

---

**Questions?**

Email: [Communications.PublicAffairs@cancercare.mb.ca](mailto:Communications.PublicAffairs@cancercare.mb.ca)

Visit: [www.cancercare.mb.ca](http://www.cancercare.mb.ca)