



Canadian  
Cancer  
Society

## Media backgrounder #1: Predictions of the future burden of cancer in Canada

27 May 2015

TORONTO -

*Canadian Cancer Statistics 2015* was released today by the Canadian Cancer Society, in collaboration with the Public Health Agency of Canada and Statistics Canada. The report includes a special topic chapter on predictions of the future burden of cancer in Canada.

### **Overview**

The aging and growth of the Canadian population are expected to cause a large increase in the number of cancer cases by 2030 (about a 40% increase from 2015). These long-term projections are useful for planning purposes, whether for prevention, early detection, treatment, psychosocial, palliative and medical care, and for research.

Also, regional information on future cancer incidence can help in developing priorities for health at both the national and provincial and territorial levels.

### **Methodology**

The special topic chapter is partly based on a study done by the Public Health Agency of Canada on projected incidence counts and rates up to 2028-2032, for 25 types of cancer using Canadian cancer data. (Cancer incidence in Canada: trends and projections (1983–2032) published in *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice* journal, Volume 35, Spring 2015).

At the time of writing of that study, the most current available national data were for cancer diagnoses up to 2007. As a result, 5-year periods up to 2003-2007 are used as the baseline periods for long-term projections in the chapter.

Because the data and estimates are averaged over 5 year periods, for simplicity throughout the materials we refer to the midpoint year of each range. For example, for 2003-2007, we say '2005'.



Future predictions depend on several assumptions. For example, that past trends will continue into the future, and that the prevalence of most risk factors is relatively stable during the projection period. Trends may vary over time but it is expected these predictions will be shown to be accurate.

The chapter also used the Canadian Partnership Against Cancer's Cancer Risk Management Model (CRMM) to develop a series of scenarios that show the impact of selected cancer control interventions. These scenarios allow health system leaders, researchers and policy makers to test "what-if" scenarios related to potential cancer control interventions.

The CRMM scenarios were conducted for several types of cancer to assess, for example, the potential impacts of:

- lung cancer screening of current and former heavy smokers on future lung cancer incidence, mortality and the costs associated with screening
- stool tests for colorectal cancer screening on future colorectal cancer incidence, mortality and the costs associated with screening

## Highlights

### New cancer cases in the future

- By 2030 the average annual number of new cancer cases is estimated to increase almost 80% compared to 2005. This translates to about 277,000 new cases in 2030, up from about 200,000 in 2015 and about 155,000 cases in 2005.
- In just over two decades, between 2005 and 2030:
  - Lung cancer cases will increase 46%
  - Prostate cancer cases will increase 97%. By 2030 this will be the most commonly diagnosed cancer.
  - Female breast cancer cases will increase 55%
  - Colorectal cancers will increase 79%
- The expected increase in the number of new cancer cases in both men and women will primarily be due to the aging of the Canadian population and, to a lesser extent, population growth.
- Between 2005 and 2030, it is estimated that the population of Canada will grow almost 30%, or about 9.5 million residents. Over this period, the proportion of Canadians aged 65 and older will also grow from approximately 1 in 8 to 1 in 4.



- During the same period, the number of new cancer cases is expected to more than double in those aged 65 and over. The greatest number of new cancer cases is expected in this age group.
- The 4 most commonly diagnosed cancers in 2015 will also be the most commonly diagnosed in 2030. Prostate cancer will be the most commonly diagnosed cancer, followed by colorectal, then lung, then breast.
- Colorectal cancer is projected to overtake lung cancer as the second most frequently diagnosed cancer in males by 2030. This change is explained in part by the decreasing incidence of lung cancer due to declining smoking rates.
- If 80% of Canadians aged 50+ were screened for colorectal cancer using the stool test, this could lead to 40,000 lives saved over the next 15 years.
- The percentage increase in new cases compared to 2005 is expected to be greatest for many of the less common cancer types such as liver (162% increase) and thyroid (144%).

### **The risk of getting cancer in the future**

- The age-standardized incidence rate – an indicator of individual risk – will not change substantially.
  - Incidence rate is the number of new cases of cancer per 100,000 people
  - The incidence rate for men will decline slightly (from 465 to 443 cases per 100,000 men) and increase slightly for women (from 358 to 371 cases per 100,000 women).
- The incidence rates for various cancer types are expected to change to varying degrees up to 2030 when examined by their main risk factors:
  - Incidence rates for most smoking-related cancers will decrease over time
  - Other major cancer risk factors, such as excess weight, physical inactivity, poor diet, alcohol consumption and infection are expected to affect different cancers to varying degrees.

### **The influence of risk factors on the future burden of cancer**

- Major modifiable cancer risk factors include: smoking, being overweight or obese, physical inactivity, diet/nutrition, UV exposure, alcohol consumption, certain infections, medicinal drugs, and occupational and environmental contaminants.



- The proportion of new cancer cases attributed to each risk factor varies by cancer type.
- In addition, non-modifiable risk factors, such as genetics and older age, also affect the risk of developing cancer.

### **The implications of these predictions**

- Projection of cancer incidence can provide an evidence base for planning strategies for resources and infrastructure for sustainable cancer care.
- Reducing risk of cancer will play an important role in the future burden of cancer. As a result, there will be a need for continued strengthening of cancer prevention and early detection to reduce the future incidence of cancer.

### **Preparing for the surge in cancer cases**

- Education and training for medical specialists needed to care for the growing number of Canadians diagnosed with cancer, such as oncologists, family doctors, nurses, technicians, and personal support workers
- Infrastructure, such as diagnostic and treatment facilities, cancer care centres, and infrastructure to support community-based care
- Research into cancer care planning and effective public policy development, including human resources planning
- Improved support for family caregivers and better support for cancer survivors

### **What the Canadian Cancer Society is doing to address the problem**

The Society will play a key role in preparing for the rising number of cancer cases by:

- Funding excellent research across Canada to find more answers about cancer. Last year, the Society funded about \$44 million in world-class research to fight all cancers. We fund research on understanding the biology of cancer, as well as cancer prevention, treatment and clinical trials, psychosocial, quality of life and palliative care research.
- Delivering a wide variety of programs and services to prevent cancer and to support people living with cancer. Last year, we helped more than 85,000 Canadians through our information and support services, including telephone and online support, peer support, drive-to-treatment programs, smoking cessation programs, wigs, camps and lodges and much more.



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- Advocating to governments on behalf of Canadians on prevention and cancer care issues. For example, we are active in all aspects of tobacco control, radon awareness, asbestos, indoor tanning, as well as better support for family caregivers and equal access to cancer drugs for all Canadians.

*Canadian Cancer Statistics 2015* was prepared through a partnership of the Canadian Cancer Society, the Public Health Agency of Canada, Statistics Canada and provincial and territorial cancer registries.

### **About the Canadian Cancer Society**

The Canadian Cancer Society (CCS) is the only national charity that supports Canadians with all cancers in communities across the country. No other organization does what we do; we are the voice for Canadians who care about cancer. We fund groundbreaking research, provide a support system for all those affected by cancer and advocate to governments for important social change.

Help us make a difference. Call 1-888-939-3333 or visit [cancer.ca](http://cancer.ca) today.