



Canadian Cancer Statistics 2008

Childhood Cancer in Canada: Fast Facts

Canadian Cancer Statistics 2008 contains a special section on paediatric cancer (among children from birth to the age of 14).

Summary

- Every year, approximately 850 children (from birth to the age of 14) are diagnosed with cancer in Canada (234 in Quebec) and approximately 135 die of the disease (39 in Quebec).
- Research has led to major advances in the fight against paediatric cancer, resulting in significantly lower death rates.
- Thanks to advances in the treatment of childhood cancer, more than 82% of children with cancer survive at least 5 years after diagnosis (2003 figure), an increase of 11 per cent over 15 years.
- With childhood cancer survivor rates on the rise, it is important to monitor the late effects of treatment. Long-term monitoring and studies on the late effects of childhood cancer (i.e. long-term repercussions) are needed.
- The marked improvement in childhood cancer survival rates has been attributed to several factors: better diagnostic procedures, the development of multimodal treatment protocols, and the centralization of care and support services.

Overview

- The overall incidence of childhood cancer has remained relatively stable since 1984 (varying from 144 to 159 per million* children).
 - Cancer incidence rates are highest among young children (from birth to four years of age). Incidence rates are lower and comparable among children aged 5 to 9 and 10 to 14.
- Leukemia is the most common childhood cancer, accounting for 33% of new cases and 27% of deaths every year.
 - Cancers of the central nervous system are the second most common, accounting for about 20% of new cases and 30% of deaths.
 - Lymphomas are the third most common, accounting for 12% of new cases and five% of deaths.
- Since 1985, there has been a dramatic decline in childhood cancer death rates (dropping from approximately 40 to 20 per million children*).
- Overall, childhood cancers are more common among boys than girls.

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Prevention

- Little is known about what causes childhood cancer, which limits opportunities for prevention.
- Some genetic abnormalities and hereditary diseases (such as Down syndrome) are linked to an increased risk of developing cancer in childhood.
- Chemotherapeutic drugs, radiotherapy, or in utero exposure to ionizing radiation or diethylstilbestrol (DES) are a few of the better established risk factors. However, they only account for a small percentage of cases.

Screening

- Screening for childhood tumours has not proven effective. This is mainly due to the short latency period of the disease (amount of time from exposure to onset of cancer) and because these cancers are typically fast growing.
- With the exception of neuroblastoma (a type of tumour affecting young children, characterized by the abnormal growth of very young nervous system cells), there are no screening tests for childhood cancer.

Diagnosis and Treatment

- Accurate diagnosis and appropriate treatment are the most effective ways of controlling cancer among children.
- Definitive diagnosis and treatment for children with cancer can be obtained through one of 17 specialized childhood cancer centres in Canada.
- In Canada, children with cancer generally begin treatment soon after diagnosis. The median wait time is 17 days and is even faster for very young children.
- Collaborative clinical trials on childhood cancers have played a critical role in recent advances. About 80% of children with cancer take part in clinical trials or are treated following protocols established through clinical trials.

Palliative Care

- While the majority of children with cancer become long-term survivors, many children still die of the disease.
- Knowledge about palliative care in paediatric oncology remains underdeveloped.



Late Effects

- Thanks to advances in the treatment of childhood cancer, more than 82% of children with cancer survive at least 5 years after diagnosis. The increase in survivors had led to the need to monitor survivors of childhood cancer for the late effects of treatment.
- Late effects are health issues that develop after cancer treatment has ended. Late effects can appear months or even years later.
- The onset of late effects depends on various factors, including age, exposure to chemotherapy and radiation during treatment (including the dose and part of the body treated), biological predisposition and the severity of the initial disease.
- Some late effects occur early on and resolve without consequence; others only occur years later and may affect the progression of other, age-related, diseases (such as breast cancer and heart disease).
- About two thirds of child survivors have at least one chronic or late effect of their cancer therapy and in about one third, these are serious.
- The most common late effects among childhood cancer survivors involve hormone levels and metabolic function (e.g. delayed puberty or infertility). The ability to think and reason can also be affected, which can lead to challenges at school. Other late effects include organ dysfunction (heart, lungs, stomach, intestines) and an increased risk of developing a secondary cancer.
- Since childhood cancer survival rates were lower in prior decades, there are few studies on the long-term effects of cancer therapy on children. As treatments change, new studies will be needed to monitor the long-term impacts in this population.

Paediatric Oncology Centres in Canada

There are 17 paediatric oncology centres in Canada, including 4 in Quebec:

1. Sainte-Justine Hospital, Montreal
2. Montreal Children's Hospital, Montreal
3. Centre hospitalier universitaire de Québec, Quebec City
4. Centre hospitalier universitaire de Sherbrooke, Sherbrooke City



The *Council of Canadian Paediatric Hematology/Oncology Directors*, also known as C17, is comprised of paediatric oncology centre directors from across Canada. Its mission is to foster excellence in clinical care, education and research to support children and teens with cancer or serious blood conditions. The Council's research unit, the C17 Research Network, was created in 2004.

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The Canadian Cancer Society is a national community-based organization of volunteers whose mission is the eradication of cancer and the enhancement of the quality of life of people living with cancer. For more information on cancer, visit our website at www.cancer.ca or call our toll-free, bilingual Cancer Information Service at 1 888 939-3333.

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*Childhood cancer rates are expressed per million per year due to the rarity of the disease.

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