



## Breast cancer

### The facts

- Breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer-related death among Canadian women.
- An estimated 26,900 women will be diagnosed with breast cancer in Canada in 2019 and approximately 5,000 women are expected to die from the disease. More than 80% of breast cancers occur in women who are 50 and over.
- 1 in 8 Canadian women are expected to be diagnosed with breast cancer in her lifetime and 1 in 33 are expected to die from breast cancer.
- The breast cancer death rate in women has been nearly cut in half, decreasing approximately 48% since it peaked in 1986. This reduction likely reflects the impact of research that has led to improvements in screening and treatment for breast cancer.
- 5-year breast cancer survival is 88%, up from 82% in the early 1990s.
- A recent study, called ComPARE, found about 28% of breast cancer cases in females can be prevented.

2019	Females	Males
Incidence (new cases)	26,900	230
Incidence rank	1st	–
Deaths	5,000	55
Death rank	2nd	–
5-year survival (2012–2014)	88%	80%

### What we're doing

The Canadian Cancer Society (CCS) is working to create a world where no Canadian fears cancer. As Canada's leading cancer charity, we:

- Support high-quality breast cancer research.
- Educate women about early detection.
- Provide information and support to women and men living with breast cancer, as well as their families and caregivers.



Canadian  
Cancer  
Society

## **Breast cancer research**

CCS is now the largest national charitable funder of breast cancer research in Canada. CCS dedicated \$11.5 million in 2018 to fund a wide range of Canadian research projects related to breast cancer. These projects include:

- Dr Claude Perreault and his team are trying to develop a vaccine to treat breast cancer. In order for a vaccine to be successful, it must be able to tell breast cancer cells apart from healthy, non-cancerous cells. As a first step towards creating a vaccine, Dr Perreault is searching for unique markers present only on breast cancer cells that can be recognized by the immune system. These breast cancer-specific markers have never been discovered in humans before and would represent a significant step forward in the creation of a therapeutic vaccine.
- Immunotherapy is arguably the most promising new cancer treatment in recent years. While immunotherapy drugs have shown tremendous success against some cancers, they are much less effective in others. Dr Pamela Ohashi and her team will try to understand why breast cancer responds poorly to immunotherapy by looking at the different kinds of immune cells in breast tumours. The goal of this project is to uncover the ways in which breast tumours resist immunotherapy treatment so that new combination therapies can be developed to boost treatment response for this promising class of drugs.
- Many women with breast cancer who receive chemotherapy experience mental fatigue or “chemo brain” as a long-term side effect, changing their ability to think, concentrate and remember. While common, its cause is unclear and there is no standard treatment. Dr Kristin Campbell will perform a clinical trial to test whether participating in an aerobic exercise program during chemotherapy can improve cognitive symptoms and quality of life for breast cancer survivors. This could offer an easy and inexpensive way to improve survivors’ everyday lives.

## **The impact of our research**

Our research in breast cancer is making a difference. Some of our recent noteworthy findings in breast cancer research include the following:

---



Canadian  
Cancer  
Society

- A new triple combination treatment approach could help improve outcomes for people with triple negative breast cancer, the deadliest form of the disease. The strategy combines cancer-killing viruses, surgery and immunotherapy drugs called immune checkpoint inhibitors to provide long-term benefits and prevent relapse. With support from the Canadian Cancer Society, Drs Marie-Claude Bourgeois-Daigneault, Jean-Simon Diallo, and John Bell found that giving cancer-killing viruses before surgery led to a strong anti-tumour immune response that significantly improved the effectiveness of immunotherapy drugs given after surgery. If this promising new approach is validated in clinical trials, it could significantly change the treatment landscape for people with this aggressive cancer and help them live longer.
- A clinical trial funded in part by CCS through the Canadian Cancer Trials Group found that 7 in 10 women diagnosed with a specific and common type of early stage breast cancer do not need chemotherapy in addition to hormone therapy. Using a genetic test, researchers identified women who were at medium risk of cancer relapse. Until now, it wasn't clear whether chemotherapy offered any added benefit for these women. This study showed that women who received both hormone therapy and chemotherapy had very similar rates of survival, cancer recurrence and spread compared to women who received hormone therapy only. The results of this trial are expected to spare tens of thousands of women each year from chemotherapy's side effects and enable them to live more fully without affecting their chances of staying cancer-free.

For more information on breast cancer and to find support programs in your area, visit **cancer.ca**, call us at **1-888-939-3333 (TTY 1-866-786-3934)** or email [info@cis.cancer.ca](mailto:info@cis.cancer.ca). You can also contact your local Canadian Cancer Society office.

---