

Canada's Research Investment in Palliative and End-of-Life Cancer Care, 2005–2021

CANADIAN CANCER RESEARCH SURVEY

Since 2005, CCRA members have prioritized the quantification of Canada's cancer research funding. To that end, the CCRA's Canadian Cancer Research Survey (CCRS) was created, a database that has evolved over time to track the research investments made by over 40 organizations.

The CCRS is estimated to cover about 60–80% of the research investments made in Canada through peer-reviewed processes. For the area of palliative and end-of-life cancer care, there may be funding from other organizations not captured in the CCRS that could affect the overall investment picture.

Data are updated and corrected annually and will vary from previously published reports. Investment numbers may differ from those reported by contributing organizations because of methodological conventions like prorating of budgets.

Access interactive visualizations and a related slide deck at www.ccra-acrc.ca.

THIS REPORT

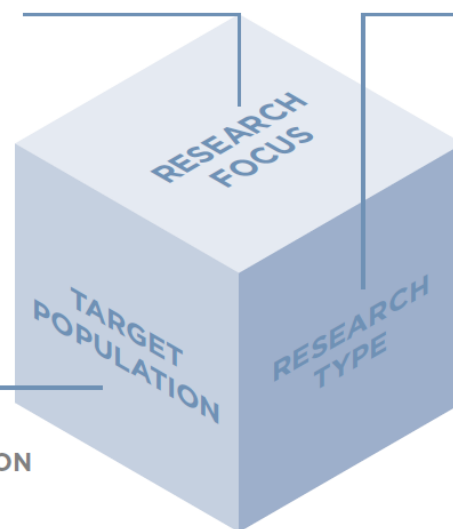
This brief report provides an overview of the level and nature of research investment in palliative and end-of-life cancer care made by Canadian research funding organizations. Page 3 of this report presents annual investment data, while page 4 shows the proportion of the investment by key attributes for 2021 (graphs) and for the three five-year periods (tables). Data were coded to the classification below. Full definitions of the dimensions in this classification can be found on the CCRA website.¹

RESEARCH FOCUS

- Physiological effects
- Psychological effects
- Quality of life
- Social needs/social support
- Economic sequelae
- Care delivery, access and quality
- Thanatological issues

TARGET POPULATION

- Patients
- Family/caregivers



RESEARCH TYPE

- Model systems
- Descriptive
- Intervention
- Prediction/assessment
- Knowledge synthesis
- Other support

Understanding the amount and nature of the research investment in palliative and end-of-life cancer care has been important to many of the CCRA members and targeted funding has been allocated to address the need to enhance research capacity. A pan-Canadian research framework for palliative and end-of-life care research was released in 2017 to help prioritize research investment in this area.

¹ The CCRS technical manual is available at <https://www.ccra-acrc.ca/reports/>



Investment Trend

From 2005 to 2021, the investment in palliative and end-of-life cancer care research was variable, with a significant and sustained drop from 2015 on. Over the 17 years, \$102M was invested in this area of research and this represented 1.2% of the overall cancer research investment.



Major Funders

Of the organizations tracked in the CCRS, 33 had some investment in palliative and end-of-life cancer care research. The investments by 12 organizations, however, accounted for 93% of the 17-year investment. Canadian Institutes of Health Research (CIHR) had the highest level, with a cumulative total of \$51M. The Canadian Cancer Society (CCS), the next major funder, had a 17-year investment of \$21M.



Research Focus

The most pronounced change in the distribution of the investment over time was an increase in research focused on care delivery, access, and quality. CIHR accounted for 53% of the 17-year investment in research on care delivery, access, and quality.



Researchers

There were 215 nominated principal investigators who had one or more active award/grant focused on palliative and end-of-life cancer care over the 17 years. Of these, 40% (N=86) had received funding in 2017–2021 and worked at institutions located in eight provinces.



Investment Focused on Children/Adolescents

The investment in palliative and end-of-life cancer care research focused on children and adolescents and/or their caregivers represented 5% of the overall investment in palliative and end-of-life cancer care research over the three five-year periods combined.



Targeted Investment

The investment from targeted programs represented 17% of the 17-year investment, with most of this occurring in the 2005 to 2010 period. Targeted programs appear to be important to sustaining this area of research.



Physiological Effects

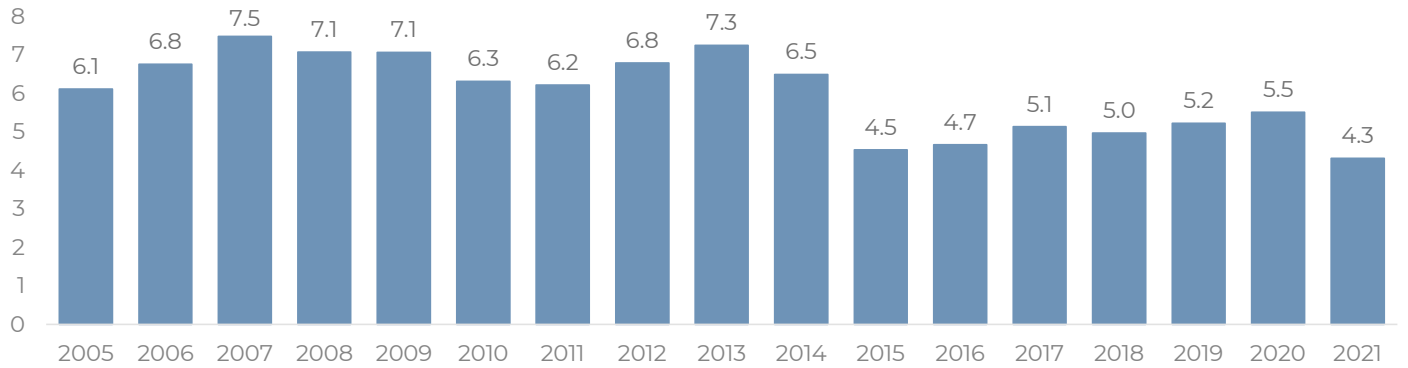
Research on cachexia/anorexia/chemosensory disturbance (grouped into one group) and pain were the physiological effects that had the highest investments regardless of time period.



Trainees

Although most trainees are supported from diverse sources like provincial or institutional programs, internships or operating grants, a small group of trainees receive awards through the grant peer-review process. There were 131 trainees who had one or more awards for palliative and end-of-life cancer care research within the 17 years tracked. The investment in trainee awards (all levels combined) was at its lowest level in the 2017–2021 period.

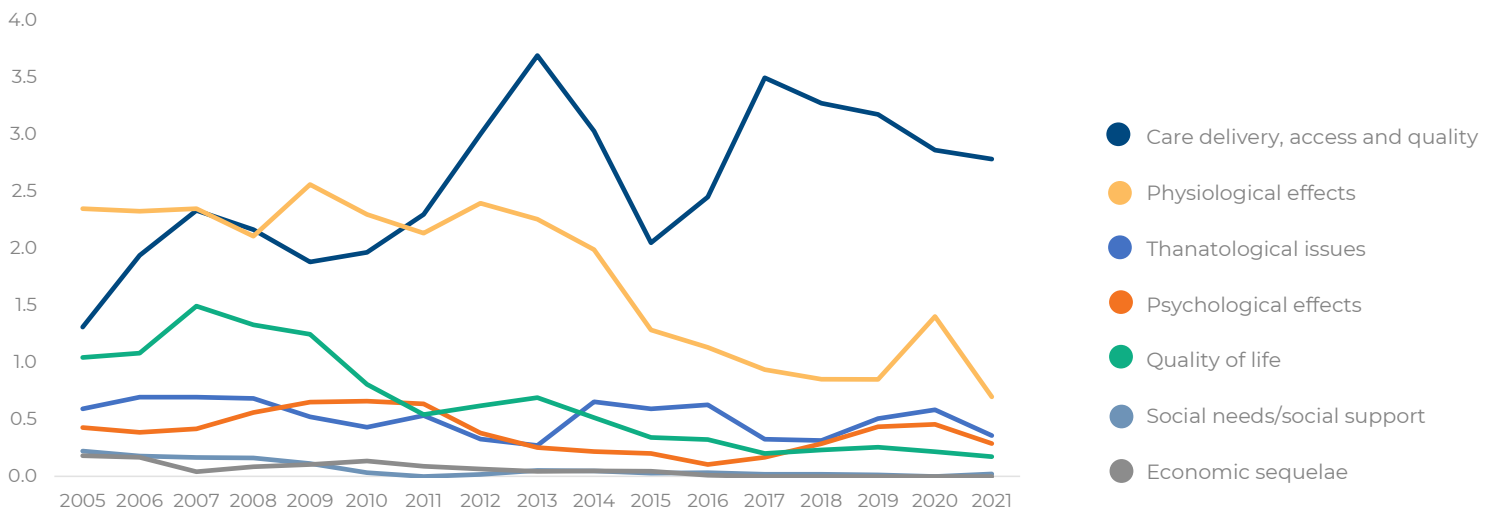
Annual Investment (\$M)



Investment by Funder (\$M)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Canadian Institutes of Health Research	3.19	3.71	4.13	3.82	3.17	2.55	2.85	3.04	3.30	2.98	1.90	1.85	2.18	2.64	3.26	2.99	2.99
Canadian Cancer Society	1.56	1.61	1.65	1.43	1.28	1.16	1.24	1.60	1.61	1.41	0.97	1.11	1.10	0.83	0.51	1.20	0.57
Canada Research Chairs Program	0.19	0.19	0.19	0.19	0.19	0.23	0.27	0.27	0.27	0.27	0.27	0.37	0.27	0.23	0.26	0.28	0.25
Alberta Innovates	0.23	0.23	0.35	0.28	0.16	0.09	0.21	0.16	0.41	0.43	0.41	0.43	0.42	0.14	0.03	0.00	0.00
Social Sciences and Humanities Research Council	0.01	0.05	0.12	0.22	0.35	0.34	0.27	0.20	0.17	0.05	0.14	0.11	0.21	0.17	0.22	0.25	0.16
Michael Smith Health Research BC	0.01	0.11	0.21	0.23	0.19	0.13	0.27	0.37	0.43	0.29	0.00	0.00	0.00	0.00	0.01	0.02	0.01
Natural Sciences and Engineering Research Council	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.26	0.20	0.10	0.02	0.00	0.43	0.40	0.16	0.10	0.13
CancerCare Manitoba	0.06	0.05	0.05	0.06	0.08	0.08	0.09	0.02	0.00	0.01	0.02	0.01	0.18	0.39	0.43	0.22	0.00
Fonds de recherche du Québec - Santé	0.13	0.11	0.11	0.14	0.15	0.10	0.05	0.11	0.17	0.24	0.11	0.12	0.07	0.01	0.05	0.03	0.03
Alberta Cancer Foundation	0.12	0.13	0.18	0.16	0.08	0.08	0.09	0.08	0.10	0.16	0.15	0.10	0.00	0.00	0.08	0.12	0.05
Ontario Institute for Cancer Research	0.15	0.22	0.21	0.10	0.09	0.16	0.19	0.16	0.14	0.03	0.00	0.00	0.00	0.00	0.10	0.11	0.03
Canadian Partnership Against Cancer				0.19	0.78	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.45	0.36	0.29	0.26	0.54	0.72	0.70	0.54	0.46	0.52	0.54	0.58	0.28	0.16	0.15	0.18	0.10

Investment by Research Focus (\$M)



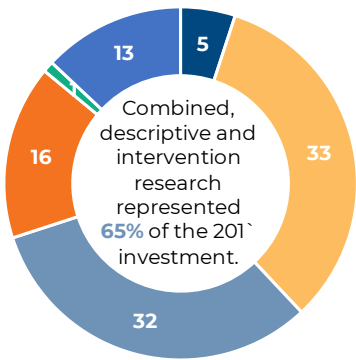
Program Type (%)



- Targeted Program
- Other

	2017–21	2012–16	2007–11
Targeted Program	10	7	22
Other	90	93	78

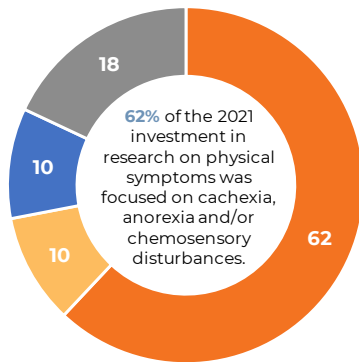
Research Type (%)



- Model systems
- Descriptive
- Intervention
- Prediction/assessment
- Knowledge synthesis
- Other support

	2017–21	2012–16	2007–11
Model systems	4	14	16
Descriptive	33	40	38
Intervention	28	23	14
Prediction/assessment	11	6	7
Knowledge synthesis	2	3	1
Other support	22	15	24

Physical Symptoms (%)



- Cachexia/anorexia/chemosensory disturbance
- Pain
- Delirium
- Other

	2017–21	2012–16	2007–11
Cachexia/anorexia/chemosensory disturbance	42	43	53
Pain	32	44	25
Delirium	1	0	4
Other	25	23	17