



Institute of Cancer Research | Institut du Cancer

The Canadian Institutes of Health Research

The Institute of Cancer Research

Strategic Plan 2002

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CIHR INSTITUTE OF CANCER RESEARCH STRATEGIC PLAN

I. PREAMBLE

The Institute of Cancer Research (ICR) is one of thirteen virtual institutes of the newly created Canadian Institutes of Health Research (CIHR). CIHR is Canada's premier federal agency for health research. CIHR supports world-class health research to increase knowledge and to ultimately improve the health of Canadians. It builds on the legacy of excellence in health research already established in Canada through contributions of the Medical Research Council (MRC) and the National Health Research and Development Program (NHRDP). The CIHR Act that created the Institutes received royal assent on April 13, 2000; CIHR came into existence on June 7, 2000. The Institutes were created on December 5, 2000 when their inaugural Scientific Directors were appointed. Members of the Institute Advisory Board (IAB) were named in early 2001.

The work of the institutes embraces the four themes of health research: 1) biomedical; 2) clinical; 3) research respecting health systems and services; and 4) the social, cultural and environmental factors that affect the health of populations. A major challenge for the institutes is to forge relationships across disciplines to stimulate integrative, multifaceted research agendas that respond to society's health priorities while adhering to the highest ethical standards.

Accelerating the use of health research findings for the benefit of Canadians is another of CIHR's major challenges. Innovative strategies for knowledge translation are the key to fostering the change in behaviour, systems and policy required to translate research into action.

Cancer research in Canada is funded by the National Cancer Institute of Canada, the federal government, and provincial cancer agencies. For close to 40 years, the MRC had been funding cancer research through its open (investigator-initiated) competitions and awards programmes. CIHR will continue to fund cancer research through its open competitions; it will also use new ICR-generated initiatives to fund **strategic or targeted** cancer research.

In 1999, the Canadian cancer community felt it was time to establish a coherent and comprehensive national cancer control strategy. To this

end, Health Canada, in collaboration with the Canadian Cancer Society (CCS), the National Cancer Institute of Canada (NCIC), and the Canadian Association of Provincial Cancer Agencies (CAPCA), established the Canadian Strategy on Cancer Control (CSCC). The working group on research priorities of CSCC recommended that research priorities be set for cancer control. CIHR is a partner in CSCC; ICR with other CSCC collaborators is therefore in a position to identify priorities in cancer research and to fund initiatives in these priority areas.

II. MISSION – VISION – VALUES

Mission

The mission of the CIHR Institute of Cancer Research is to foster research based on internationally accepted standards of excellence, which bear on preventing and treating cancer, and improving the health and quality of life of cancer patients.

To achieve this, ICR will:

- collaborate in the development of Canada's cancer research agenda
- develop and support strategic initiatives that foster high quality cancer research
- fund research programmes and initiatives in etiology, fundamental mechanisms, prevention, screening, diagnosis, treatment of cancer, including studies on psycho-social issues and palliative care
- promote translation of results of cancer research into practice, which will improve cancer prevention and care

Vision

In the long-term, ICR will become and be recognised as a dynamic research organisation that:

- takes a lead role in the establishment of a national strategic cancer research agenda
- interacts with other agencies—federal, provincial, and non-governmental organisations—to fund research that supports cancer control priorities as established through national consultation
- creates and maintains a robust cancer research environment in Canada that attracts and sustains excellent young researchers, established world-class investigators and research teams
- develops initiatives that build on the creativity of individual researchers
- improves the health of Canadians by supporting cross-cutting research initiatives that lead to enhanced cancer prevention, diagnosis, and treatment

- leverages its research funds and disseminates its research findings through partnerships with federal, provincial and non-governmental organisations responsible for cancer prevention and cancer care
- accelerates acquisition of knowledge necessary to bridge the gap between fundamental research findings and their practical application by the public, clinicians, public health professionals and policy-makers

Values

The following fundamental and core values will be promoted by ICR and will influence its strategic and operational decisions including funding of workshops, development of programs and request for applications (RFAs), partnership agreements and memoranda of understanding, etc.

- Contribution to improved health of Canadians
- Assurance of excellence in research through high quality and appropriate peer review
- Multidisciplinary research when possible and appropriate—integration of disciplines, sectors, and types of research
- Balance across biomedical, clinical, health services, and population health research as championed by CIHR
- Innovation in research areas and in approaches to research
- National and international collaborations in cancer research
- Visibility, accessibility and open communication with all stakeholders (transparency)

III. STRATEGIC ORIENTATIONS

To carry out its mission, the Institute of Cancer Research has adopted six strategic orientations.

Strategic Orientation # 1: Play a leadership role in setting the Canadian strategic cancer research agenda.

Strategic Orientation # 2: Support and develop cancer research initiatives, programmes and projects that respond to that agenda.

Strategic Orientation # 3: Develop and support capacity building in cancer research.

Strategic Orientation # 4: Lead in co-ordinating funding of cancer research by all national, provincial and local organisations in Canada.

Strategic Orientation # 5: Seek collaboration/partnership with other cancer agencies and stakeholders.

Strategic Orientation # 6: Stimulate research required to facilitate dissemination, transfer and translation of knowledge from research findings into policies, interventions, services and products.

IV. MAIN OBJECTIVES

The strategic orientations guide the Institute in selecting and designing activities to carry out its mission. For each orientation, ICR has identified three main objectives.

(1) Play a leadership role in setting the Canadian strategic cancer research agenda

- (1.1) Consult regularly, and in collaboration with major stakeholders, with the Canadian cancer community to identify key topics or areas for targeted research support.
- (1.2) Prioritise cancer research areas and topics using broad base consultations.
- (1.3) Establish the Canadian strategic cancer research agenda, in collaboration with major stakeholders.

(2) Support and develop cancer research initiatives, programmes and projects that respond to that agenda

- (2.1) Select priorities for funding by ICR alone or in partnership with other CIHR Institutes or other stakeholders.
- (2.2) Identify, develop and support new or existing cancer research initiatives, programmes and projects that address the research agenda's priorities.
- (2.3) Proactively engage in increasing awareness and support for emerging programmes and approaches.

(3) Develop and support capacity building in cancer research

- (3.1) Attract students at all levels and postdoctoral fellows to programmes and disciplines required for high quality cancer research.

- (3.2) Develop and support cancer research training programmes in multidisciplinary and collaborative settings.
- (3.3) Support new and existing infrastructures that support cancer research in Canada, including tumour banks and clinical information databases.

(4) Lead in co-ordinating funding of cancer research by all national, provincial and local organisations in Canada

- (4.1) Consolidate information on all Canadian cancer research funders and the programmes they support.
- (4.2) Create a forum where Canadian cancer research funders from all levels meet to discuss issues specific to cancer research funding.
- (4.3) Co-ordinate with other funders the allocation of funds to maximise the effectiveness of Canadian research dollars.

(5) Seek collaboration/partnership with other cancer agencies and stakeholders

- (5.1) Establish, formalise and maintain a working relationship between ICR and NCIC, CBCRI, CRS and other cancer research agencies, both at the board and executive levels.
- (5.2) Establish working relationships with Health Canada, provincial cancer agencies, and Canadian non-governmental organisations with an interest in cancer.
- (5.3) Establish a dialogue with international cancer agencies including the National Cancer Institute (NCI), initially with the aim of co-funding specific strategic cancer research RFAs, ultimately with the hope of developing joint programmes

(6) Stimulate research required to facilitate dissemination, transfer and translation of knowledge from research findings into policies, interventions, services and products

- (6.1) Establish and maintain ongoing communications with cancer researchers, health professionals, public decision-makers and representatives of various professional, scientific and community organizations (including NGOs and Charities) involved in cancer control¹.
- (6.2) Facilitate the transfer and translation of knowledge resulting from cancer research to the research community, health care professionals, public decision-makers, and the health care industry.
- (6.3) Facilitate the dissemination of plain language information on cancer research, its findings and potential applications to the general public and groups interested in cancer research.

¹ Cancer control aims to prevent cancer, cure cancer, and to increase survival rates and quality of life for those who develop cancer by converting the cumulative knowledge gained through research, surveillance and outcome evaluation into strategies and actions. This encompasses all aspects of cancer related interventions, at the individual and the population-based level, in healthy populations and in populations affected by cancer. (Canadian Strategy for Cancer Control, Priorities for Action..., p. 4, 2002)

V. ICR'S SUPPORT FOR CANCER RESEARCH

Cancer Research Supported by ICR

The Institute of Cancer Research funds all types of cancer research (biomedical, clinical, health services and population) in Canada through CIHR open grants and awards competitions, and through the Institute's strategic initiatives. Research areas include but are not limited to:

- cell function and regulation (e.g. molecular, genetic, and cellular aspects of cell division, cell adhesion, signal transduction and differentiation)
- biological mechanisms and pathogenesis of cancer
- development and implementation of health technologies and tools (e.g. drug design, drug delivery systems, imaging, diagnostic technologies)
- evaluation of interventions including screening, diagnosis, treatments, technologies and care delivery methods (including complementary and alternative therapeutic approaches)
- palliative care and end of life research
- cancer prevention strategies at the individual and population levels
- health determinants - to elucidate the multi-dimensional factors that affect the health of populations and lead to a differential prevalence of cancer
- identification of health advantage and health risk factors related to the interaction of environments (cultural, social, psychological, behavioural, physical, genetic)
- incidence and prevalence of different types of cancers and differential reaction to treatment
- clinical, epidemiological, socio-behavioural and cultural research in areas such as tobacco use, diet and exercise, stress management, consumer decision-making, environmental risk factors exposure, etc.
- health promotion policies and strategies (individual, community, and population levels)
- health services research - the where, how and by whom of care delivery and the efficient/effective use of technological advances in screening, diagnosis and treatment of cancer
- ethics issues related to research, care strategies, and access to care (e.g. cell line origins and informed consent, predictive testing,

screening criteria, removal of healthy organs or tissue as preventative strategies, cancer risk and prevalence in populations, end of life issues)

Strategic Initiatives in Cancer Research

In February 2001, the Canadian Strategy for Cancer Control announced that one of its five Action Priorities² was the establishment of cancer research priorities. In response to this, the two largest cancer research funding organisations in Canada, the CIHR Institute of Cancer Research and the National Cancer Institute of Canada (NCIC), along with the Canadian Association of Provincial Cancer Agencies (CAPCA) and Health Canada, formed the Research Alliance to jointly identify cancer research priorities. Rather than individually launching research initiatives, members of the Alliance are planning a coordinated approach for supporting strategic cancer research.

The Alliance held a Research Priority Setting Workshop in May 2001. The outcome of which was the identification of two overriding thematic areas and 12 priorities themes in cancer research.

Overriding Thematic Areas:

- Infrastructure
- Human Resources

Priority Themes

- Etiologic Factors
- Surveillance
- Population Based Prevention
- Experimental Therapeutics
- Clinical Research
- Palliative Care/Quality of Life
- Health Services and Policy Research
- Genome Science and Cancer
- Screening
- Cancer Biomarkers and Imaging
- Pediatric Cancer
- Sociobehavioural Cancer Research

In the fall of 2001, to develop a national consensus on cancer research priority, the Alliance launched a broad-based Delphi process to first

² The Canadian Strategy on Cancer Control, Priorities for Action ... p.12, 2002

prioritise topics within each theme and then to prioritise research themes. The process will be completed at the end of May 2002.

In the second half of 2002, the Institute of Cancer Research, in association with the Research Alliance, will announce its research priorities for the next five years. However, the Institute has identified priority areas that require immediate attention. ICR will support these initiatives to some degree, even though they may not be part of the Institute's major research priorities once the consultation process is completed.

Training and Human Resources for Cancer Research

Canada faces the need to replace over 16,000 researchers during the next decade because of aging faculties in Canadian universities and research institutes. The 1990's saw a decline in the number of Canadian graduate and postgraduate students training in disciplines critical to the future of cancer research. The Institute will put forward initiatives designed to attract more scientists, as well as medical and allied health professionals, into postgraduate and postdoctoral training programs in cancer research in order to maintain a critical mass of excellent Canadian cancer researchers.

Cancer Databases

Although there is recognition of the potential for data analysis involving cancer registry data, combined with other administrative data sources to assess outcomes, cancer care and support, very little work is being done. There is a need for national guidelines for the ethical use of secondary data for research. Tumour banks constitute a specialized form of databases that allow the use of clinical material to advance the basic understanding of cancer. Many aspects of cancer research will require an increased use and development of sophisticated mathematical and computational techniques to benefit from the explosion of genomics information. Initiatives supported by the Institute will favour the expansion of existing cancer databases (including tumour banks), or combining registries and administrative data, or the linkage of population exposure data to current cancer databases to assess outcomes, and generate new causal hypotheses for cancer.

ICR will put forward research initiatives that develop informatics infrastructures that capture patient data for research and/or offer bio-informatics tools for functional genomics analysis to support basic biomedical, health services and epidemiologic cancer studies.

Primary Prevention for Cancer

Primary prevention research helps identify strategies and interventions that can reduce the numbers of new cases of cancer. It is estimated that up to 50% of cancers could be avoided if we could implement changes early in the pathway of cancer development. Preventing cancer is a complex process, which involves interaction among inherited factors, biologic processes, personal behaviours and a variety of exposures in home, work and community environments. ICR will develop multidisciplinary initiatives that identify and evaluate research-based strategies for primary cancer prevention.

Cancer-Related Palliative Care

Palliative care aims to improve the life of patients and families through early identification and impeccable management of suffering associated with cancer and emphasis on the positive aspects of life inclusive of physical, psychosocial and spiritual sources. Palliative care is an exercise in prevention – prevention of suffering through prioritizing the diagnosis and skilful care of sources of distress throughout the course of cancer and for the family into the bereavement period. The Institute will support initiatives that increase the number of, and the support to, Canadian investigators carrying out cancer-related palliative care research with the expectation that patients and their families will consequently experience an improved quality of life and relief of suffering. Related benefits may include the reduction in health cost and health services utilization.

Early Detection of Cancer

Screening has been shown to reduce mortality of some cancers (breast, cervix and colorectal). Early detection of cancer allows for effective interventions that both save lives and reduce the costs of health services delivery. However, research on cost effective implementation of screening programs within the context of the Canadian health system is limited. ICR will develop initiatives that will lead to the establishment of end point-validated markers of early biological pre-cancerous changes in order to detect cancer very early in development with the potential for treatment with minimal morbidity and incorporate these techniques into Canadian screening programs.

Translational Research in Cancer

The design of novel therapeutic agents and protocols for the treatment of cancer increasingly relies on a continually expanding body of biological

knowledge. Translational research is interdisciplinary in nature and requires an adequate and specialised infrastructure. ICR will develop and support initiatives aimed at facilitating drug discovery, validation of biologically-targeted agents, pre-clinical testing, and timely efficient conduct of clinical trials on promising new therapies.