

POPULATION & PREVENTIVE ONCOLOGY

BC CANCER AGENCY

CANCER PREVENTION PROGRAMS (CPP)

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Vancouver, BC V5Z 1H5
Phone: 604-877-6227 toll-free within BC: 1-800-663-3333
Fax: 604-877-6212 toll-free within BC: 1-866-451-4567
www.bccancer.bc.ca/PPI/Prevention/

CERVICAL CANCER SCREENING PROGRAM (CCSP)

8th flr, 686 West Broadway, Vancouver, BC V5Z 1G1 4E6
Phone: (604) 877-6200 Fax : (604) 629-2510
www.bccancer.bc.ca/PPI/Screening/Cervical/

HEREDITARY CANCER PROGRAM (HCP)

Box 614 – 750 West Broadway, Vancouver, BC V5Z 1H5
Tel: (604)-877-6000 , ext. 2198 Fax: (604)-707-5931
www.bccancer.bc.ca/PPI/Prevention/Hereditary/

SCREENING MAMMOGRAPHY

PROGRAM OF BC (SMPBC)
8th Flr., 686 West Broadway, Vancouver, BC
V5Z 1G1
Phone: (604) 877-6200 Fax : (604) 660-3645
www.bccancer.bc.ca/PPI/Screening/Breast/

SURGICAL ONCOLOGY NETWORK (SON)

600 West 10th Avenue, Vancouver, BC V5Z 4E6
Phone: (604) 877-6000
www.bccancer.bc.ca/HPI/SON/

SURVEILLANCE & OUTCOMES UNIT (SOU)

8th Floor, 686 West Broadway, Vancouver,
BC V5Z 1G1
Phone: (604) 877-6200 Fax : (604) 660-3645

Our Research Focus:

Population and Preventative Oncology (PPO) provides a multidisciplinary environment for a range of distinct programs whose goals are to educate, prevent, and detect cancer earlier. PPO's research and outreach activities are driven by a commitment to serve the population of British Columbia better and to improve detection rates through services and partnerships offered in the most cost-effective manner. Much of the research conducted by PPO is carried out by scientists of the Cancer Control Research Department (See Cancer Control Research for more details).



Cervical Cancer Screening Program

Established in 1949, the BC Cancer Agency's Cervical Cancer Screening Program (CCSP) is the first organized population-based program in the world to screen for cervical cancer. Over time, the CCSP has succeeded in reducing incidence rates from cervical cancer by over 70 percent.

The program works as follows:

- Women go to their family doctor or health care provider to have a Pap test;
- The Pap specimen are then sent to the provincial laboratory;
- The laboratory uses a microscope to look for any abnormal cells;
- The results are provided back to the family doctor or health-care provider;
- The CCSP keeps track of Pap test results, and sends follow-up letters to remind family doctors about further testing recommended and/or regular screening for their patients.

The CCSP has recently initiated a 7-year CIHR funded randomized control trial to investigate if a screening test for the Human Papilloma Virus (HPV) with longer screening interval can provide greater protection than the current Pap test to women for cervical cancer. The HPV FOCAL Study is being conducted in collaboration with the BC Centre for Disease Control, the UBC Department of Family Medicine and the Faculty of Medicine, McGill University department of Epidemiology, and about 100 Family Practitioners in Greater Vancouver.

Screening Mammography Program of BC

The Screening Mammography Program of BC (SMPBC) of the BC Cancer Agency was established to reduce breast cancer mortality through early detection. Women between the ages of 40 to 79 are offered a screening mammogram at least every two years. Having regular screening mammograms has been shown to reduce breast cancer mortality in BC women by 25%. Early detection of breast cancer means more treatment options and a better chance for recovery. A number of research projects are being pursued to assess factors that may be important in the development of breast cancers and to assess the effectiveness of screening approaches for specific groups of women in British Columbia.



Surveillance and Outcomes Unit

The Surveillance and Outcomes Unit (SOU) provides a resource for analysis and interpretation of routinely collected cancer data in order to support BCCA programs and research. The unit consists of programmers who develop and maintain our integrated cancer data warehouses and develop tools to facilitate intelligent interrogation of the data, statisticians who use the developed tools and epidemiological statistical software to provide current cancer facts and project trends and data analysts who respond to data requests from various sources both internal within the BCCA and provincial and national reporting. All of these resources combined provide the evaluation to support the development of provincial cancer control strategies. The unit also provides support to the public, health authorities and cancer researchers by providing data and analysis of cancer in British Columbia.

Cancer Prevention Programs

The BC Cancer Agency currently has several Cancer Prevention Programs (CPP) in place, such as the Sun Safe Daycare/Pre-School Program and the Healthy Living Schools Program.

The Sun Safe Program, which currently involves over 700 certified facilities, ensures that daycares and pre-schools provide access to shade in outdoor play areas, in addition to educating younger children on the importance of wearing hats and using sunscreen when outdoors.

The Healthy Living Schools Program focuses on educating youth of all ages on tobacco use, diet, exercise and obesity, and the risks of prolonged sun exposure. The program also encourages schools to provide nutritional choices in their lunch programs and cafeteria menus.

Hereditary Cancer Programs

The Hereditary Cancer Program (HCP) provides clinical services for people who may have a predisposition to hereditary breast, ovarian, colorectal or other cancers. Most cancers occur sporadically and the cause is either unknown or associated with one or more risk factors. In 5-10% of cases, cancer is associated with a strong hereditary factor, which greatly increases the risk of a malignancy. Services such as genetic counselling, risk assessment, education and surveillance recommendations are available to individuals and families. Genetic testing is available to some families, usually starting with an affected index case.

Educating doctors, nurses and other health-care providers in BC about hereditary cancer is an important part of the HCP. As a relatively new component of cancer care, research about all aspects of hereditary cancer is another key aspect of the HCP. Current areas of research include:

- improving access to provide hereditary cancer genetic counselling for people living in rural BC
- ongoing national collaborations to study risk factors and treatment outcomes for women with *BRCA1/2* gene mutations
- contribution to a California-based study of *BRCA1/2* mutation epidemiology in Asian women

Surgical Oncology Network

The Surgical Oncology Network (SON) includes all providers of surgical oncology services from surgeons in remote areas to sub-specialists. Its purpose is to provide strong linkages with surgeons and hospitals across the province, including the BC Cancer Agency's four cancer centres and 17 clinics. The Network's goal is to establish a structure and a system to enable the integration of quality surgical oncology services into the formal cancer care system.

Its four main functions include:

1. Developing communications tools to enhance surgical decision making provincially;
2. Participating in the identification and/or development of peer- reviewed, evidence-based guidelines based on 'best practice' principles;
3. Developing a high quality continuing education program that meets standards of the Royal College of Physicians and Surgeons; and
4. Conducting regionally based research and outcome analyses to provide vital information for Network initiatives.

Key Research Staff

<i>Researcher name</i>		<i>Position & Cross-Appointments</i>
Andrew J Coldman	PhD	Vice President, Population Oncology Adjunct Professor, Dept. of Statistics, Faculty of Science, UBC Associate Member, Dept. of Health Care and Epidemiology, Faculty of Medicine, UBC
Linlea Armstrong	MD	Medical Geneticist, Hereditary Cancer Program Clinical Assistant Professor, Medical Genetics UBC
Marilyn Borugian	PhD	Senior Scientist, Screening Mammography Program Senior Scientist, Cancer Control Research
Christina Chu	MSc	Biostatistician, Surveillance and Outcomes Unit
Lorraine d'Agincourt – Canning	PhD	Postdoctoral Research Fellow, Hereditary Cancer Program
Tom Ehlen	MD	Director, Provincial Colposcopy Program, CCSP
Paula Gordon	MD	Radiologist Screener, Screening Mammography Program
Lisa Kan	MSc	Screening Operations Leader, CCSP Screening Operations Leader, SMP
Jasenska Maticic	MD	Medical Leader, Cervical Cancer Screening Program Pathologist, Laboratory Medicine
Mary McCullum	MSN, RN	Nurse Educator, Hereditary Cancer Program Adjunct Professor, Nursing, UBC
Barbara McGillivray	MD	Medical Geneticist, Hereditary Cancer Program Professor, Medical Genetics, UBC
David I McLean	MD	Head, Cancer Prevention, BCCA Dermatologist, UBC Dermatology Professor, Faculty of Medicine, UBC
Veronika Moravan	MSc	Biostatistician, Surveillance and Outcomes Unit
Chuck Paltiel	MSc	Biostatistician, Surveillance and Outcomes Unit
Karen Panabaker	MSc	Clinical Coordinator/Genetic Counsellor, HCP Clinical Assistant Professor, Medical Genetics, UBC
Norm Phillips	MSc	Biostatistician, Surveillance and Outcomes Unit
Barbara Poole	MSc	Director, Surgical Oncology
Rasika Rajakapashe	PhD	Physicist, Screening Mammography Program
Yolanda Ridge	MSc	Genetic Counsellor, Hereditary Cancer Program Clinical Assistant Professor, Medical Genetics, UBC
Jenna Scott	MSc	Genetic Counsellor, Hereditary Cancer Program Clinical Instructor, Medical Genetics, UBC

Dirk Van Niekerk	MD	Medical Leader, Cervical Cancer Screening Program Interim Director, Dept of Pathology & Lab Medicine Interim Provincial Leader – Cancer Pathology
Linda J Warren	MD	Provincial Chief Radiologist, Screening Mammography Program

Training

A.) Trainee Awards

<i>Name</i>	<i>Award Received</i>
L d'Agincourt-Canning	CIHR Post-Doctoral Training Award (2003-2006)

Current Research Projects²

CERVICAL CANCER SCREENING PROGRAM (CCSP)	
1. A randomised controlled evaluation of HPV testing for cervical cancer screening	
<i>PI: Coldman AJ</i> CIHR \$6,268,935 (2006–2013)	A large scale randomised controlled trial to establish the efficacy and cost-effectiveness of HPV testing as a stand-alone screening test when used within the context of an organised Canadian CCSP.

SCREENING MAMMOGRAPHY PROGRAM OF BC (SMPBC)	
2. The SMPBC program regularly contributes to a number of collaborative research studies providing BC data and evaluations. These include:	
2005 studies: <ul style="list-style-type: none"> ▪ American Cancer Society (ACS) Calcification Study ▪ ACS Radiation Study ▪ ACS Mortality Study ▪ Density Pilot Study 2006 studies: <ul style="list-style-type: none"> ▪ BC Cohort ▪ Breast cancer among participants in a dietary intervention trial 	<ul style="list-style-type: none"> ▪ Breast density and ovarian cancer ▪ CAD ▪ Communication of trial results ▪ GP recommendation study ▪ Immigrant database study ▪ Optical measures of breast density ▪ Patient Info Kit Evaluation ▪ Probability tree ▪ Tissue linkage study ▪ Wait times study
3. Mammographic density, insulin resistance and breast cancer prevention	
<i>PI: Borugian M</i> <i>Co-I: Hislop TG, Coldman AJ</i>	See Cancer Control Research for project description.
4. A methodology to understand cancer screening behavior of culturally diverse populations: a feasibility study using administrative data	
<i>PI: Kazanjian A (UBC)</i> <i>Co-I: Borugian M, Barroetavena MC, Hislop TG, Chen AW, Desmeules M, McDermott SL</i>	See Sociobehavioural Research for project description.

² Key to abbreviations: PI = Principal Investigator, Co-I = Co-investigator; CIHR* = Funding Institution; \$150,000 (2005-2007) = Total Project Funding for Given Years (* For Acronyms see pages 16 -17)

SURVEILLANCE & OUTCOMES UNIT (SOU)	
5. Surveillance strategies following treatment for CIN and their cost-effectiveness.	
PI: J Melnikow, A Coldman NCI \$108,539 (2005-2007)	The goal of this study is to evaluate alternative strategies for post-treatment surveillance using a comprehensive population-based data set.
6. Cancer and health economics research program	
PI: A Coldman AstraZeneca \$60,000 (2005 – 2009)	To purchase specific hardware and software components that are required to support Clinical Outcomes and Costs research.
7. BC analysis of CCS outcomes & health resource utilization	
PI: A Coldman Merck Frosst \$93,125 (2005 – 2007)	To describe cervical cancer screening outcomes and health resource utilization in a cohort of women participating in the cervical screening program in BC.
8. Analysis of survival trends in screened and unscreened women in BC	
PI: A Coldman Public Health Agency of Canada \$8,625 (2006)	The goal is to examine the survival trends in women screened and unscreened for breast cancer and explore screening use as a first step to predict the relative impact of screening and treatment modalities.

HEREDITARY CANCER PROGRAM (HCP)	
9. Evaluation of telemedicine as a tool in the provision of genetic counselling	
PI: L d'Agincourt-Canning Co-I: J Scott, Y Ridge, M McCullum, K Panabaker, B McGillivray Vancouver Foundation \$ 47,000 (2004-2007)	The purpose of this study is to learn whether hereditary cancer genetic counselling can be provided effectively by videoconference for people living in rural BC, and to assess the social and ethical implications of this model of care.
10. Complementary therapy use by individuals at high risk for hereditary cancer: A pilot study	
PI: LG Balneaves (UBC) Co-I: JL Bottorff, M McCullum, M Verhoef, H Boon NCIC-SCRN CAT Research Team	For project description see Sociobehavioural Research Centre (Psychosocial).
11. The Hereditary Cancer Program also contributes to a number of collaborative research studies by providing BC data. These include:	
<ul style="list-style-type: none"> ▪ Risk factor study of female <i>BRCA1/2</i> gene mutation carriers (PI: S Narod, Toronto) ▪ Prospective study of familial breast cancer risk in women with uninformative <i>BRCA1/2</i> mutation results (PI: S Narod, Toronto) ▪ Treatment of hereditary breast cancer – Phase II (PI: K Metcalfe, S Narod, Toronto) ▪ A clinic-based study of <i>BRCA1/2</i> mutation epidemiology in Asian women (PI A Kurian, Stanford) 	