



British Columbia 2011 Regional Cancer Report

**Section 5 » Screening and Diagnosis**

As a part of the overall commitment to cancer control, the BCCA has established several provincial cancer screening programs to help reduce mortality for selected cancers; 1) Cervical Cancer Screening Program (CCSP), 2) Screening Mammography Program (SMPBC) and 3) Colon Check. Colon Check is in development and currently operates in 3 BC communities (Penticton, Powell River and Vancouver). In addition, the Hereditary Cancer Program (HCP), a program to provide counselling and testing to individuals suspected to be at high risk of a predisposition to cancer is also available province wide through the BCCA. In addition to the provincially organized screening programs, self reported data on colorectal screening, available through the Canadian Community Health Survey, enables us to monitor and report on individual screening behaviours that are related to nearly 6000 new cancer cases (breast, colorectal and cervical) every year. Screening for cancer has attracted considerable controversy over the past few years. Reappraisal of the risks and benefits associated with screening for different cancers has generally resulted in recommendations being more conservative than in the past. This reappraisal has shifted the health system frame of reference from one of simple promotion of screening to one of informed decision making. Instruments to support informed decision making have been developed in Canada [9].

**5.1. Screening Mammography Program (SMP)**

In 2009, 3019 British Columbian women were diagnosed with breast cancer with 12,130 women alive and had breast cancer diagnosed since 2004. The 1-year provincial survival rate for breast cancer in 2008/09 was 97.2%. Screening mammograms are recommended in Canada for the early detection of breast cancer. A mammogram is a test that uses low-dose X-rays to look for changes in the breasts that may indicate early signs of breast cancer even when the changes are too small for a woman or her doctor to feel or see.

The breast cancer screening participation rate measures the percentage of eligible women aged 50-69 who participated in a 30 month period. Over the past 4 years, SMPBC participation, at 54%, has not achieved the national target of 70%. When bilateral mammography provided outside of the SMPBC is added, utilization is 64%. More than 70% of eligible women in the province have had at least one mammogram with SMPBC but approximately one quarter of those women do not return within 5 years. Overall, participation rates have been lower in the NH with barely 50% of eligible females being screened by SMPBC. The opening of a new SMPBC centre in Cranbrook in 2008 increased the participation rate in the East Kootenay from 32% in 2007 to 48.3% in 2010. Although there is some regional variation in participation rates the magnitude of variation is substantially smaller than that seen for the risk factors discussed in the previous chapter.





British Columbia 2011 Regional Cancer Report

Section 5 » Screening and Diagnosis (cont.)

5.1. Screening Mammography Program (SMP) (cont.)

Figure 5-1: SMP Participation Rates (2007-2010) for Women Aged 50-69, by HA

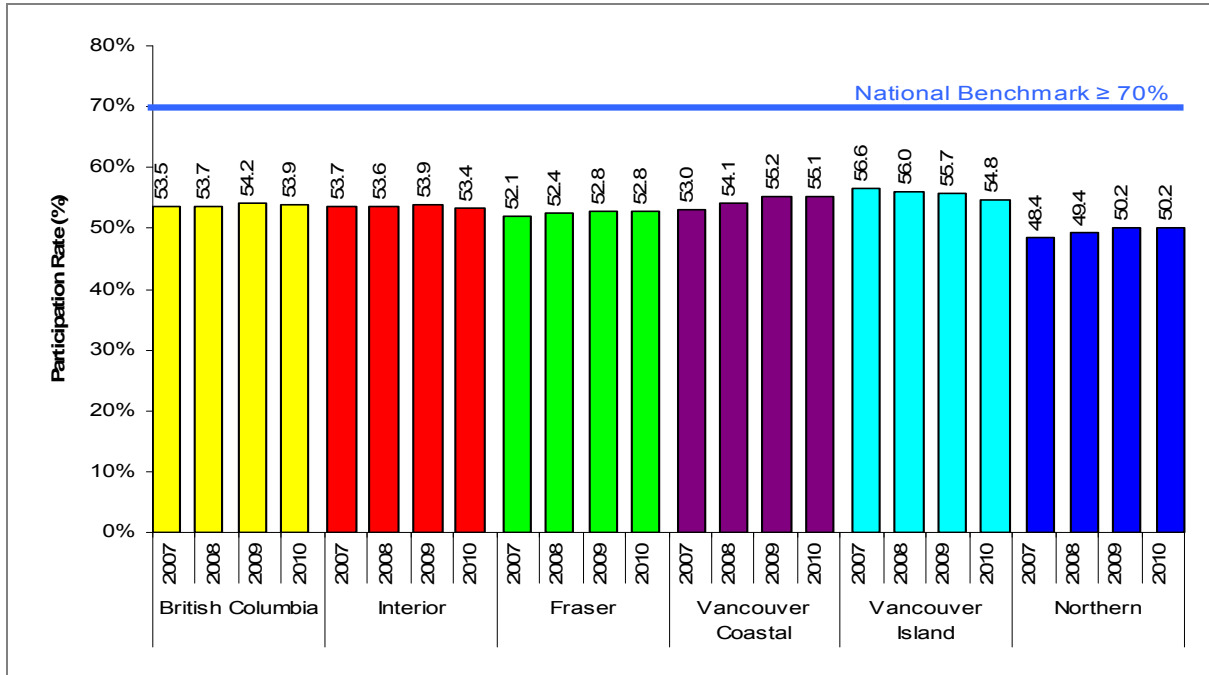
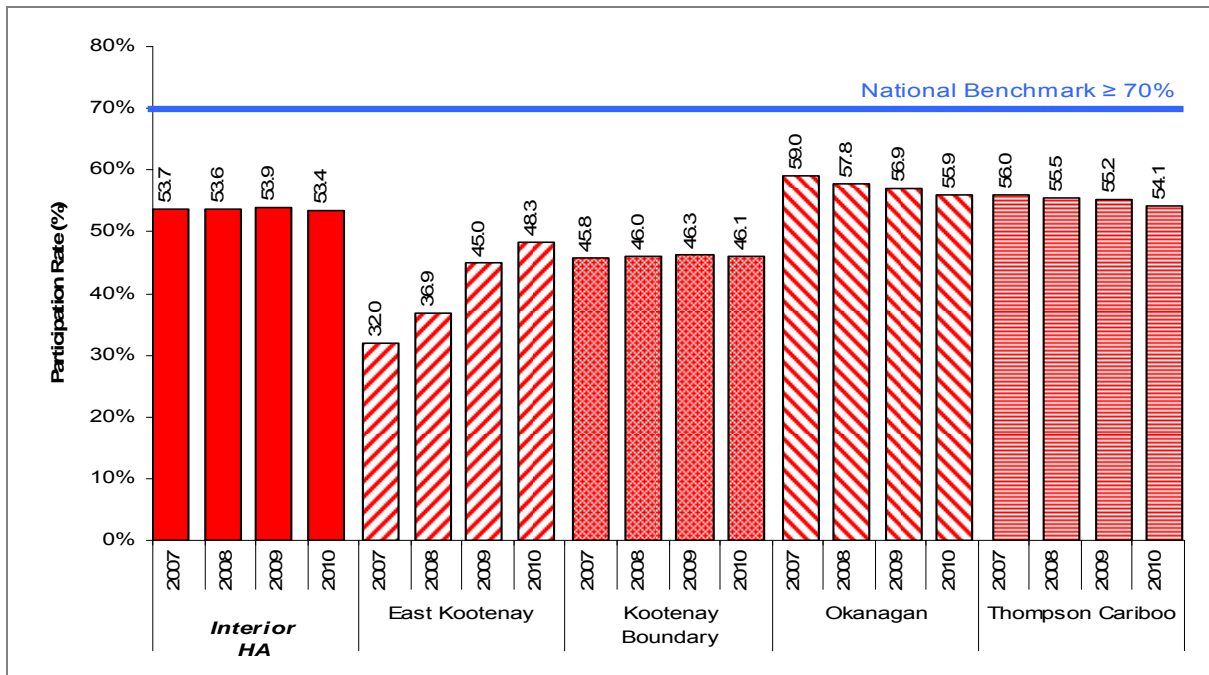


Figure 5-2: SMP Participation Rates (2007-2010) for Women Aged 50-69, by HSDA - IH





British Columbia 2011 Regional Cancer Report

Section 5 » Screening and Diagnosis (cont.)

5.1. Screening Mammography Program (SMP) (cont.)

Figure 5-3: SMP Participation Rates (2007-2010) for Women Aged 50-69, by HSDA - FH

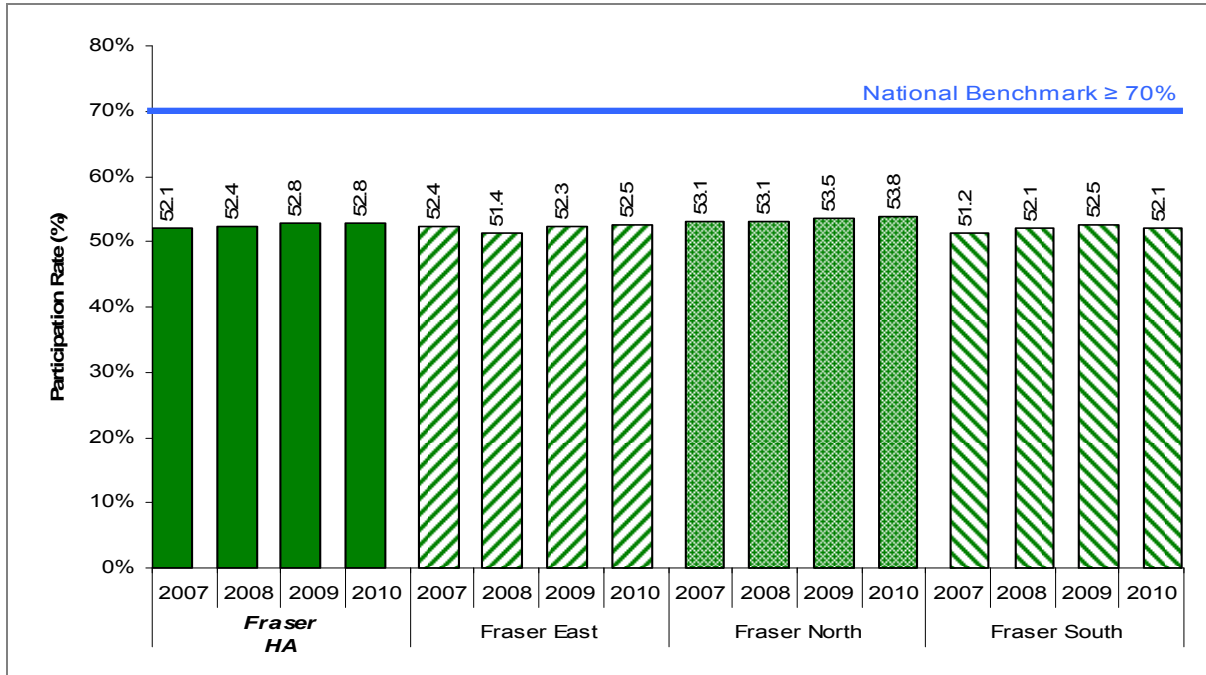
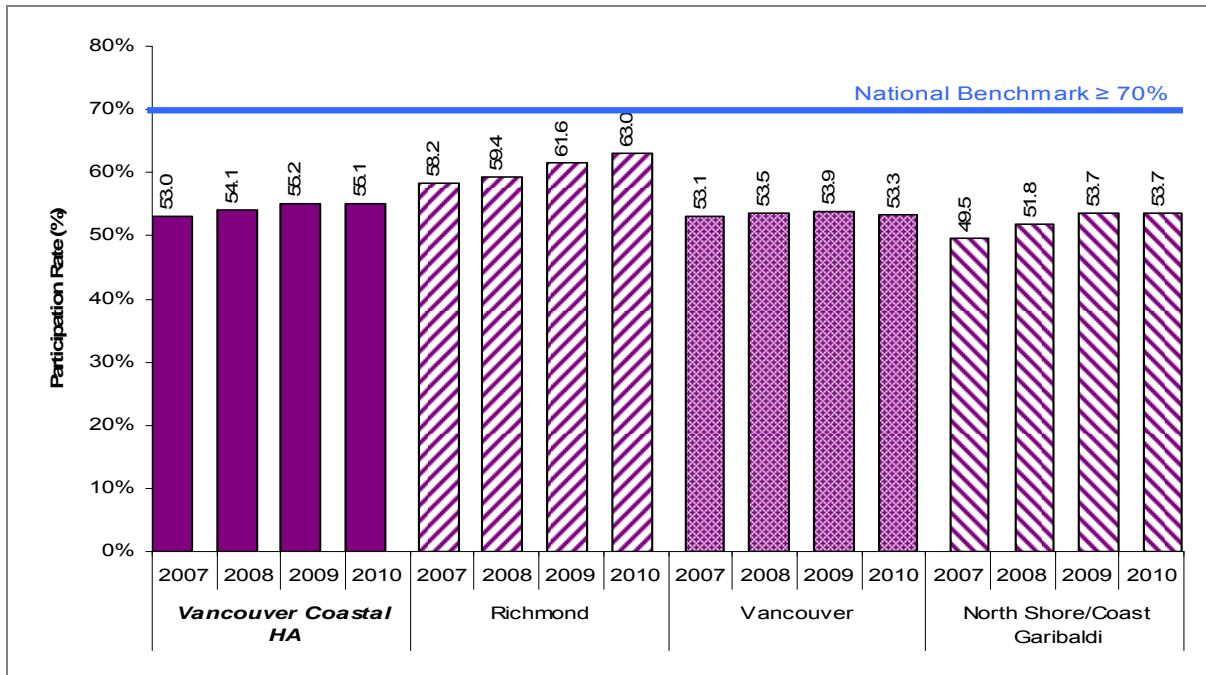


Figure 5-4: SMP Participation Rates (2007-2010) for Women Aged 50-69, by HSDA - VCH





British Columbia 2011 Regional Cancer Report

Section 5 » Screening and Diagnosis (cont.)

5.1. Screening Mammography Program (SMP) (cont.)

Figure 5-5: SMP Participation Rates (2007-2010) for Women Aged 50-69, by HSDA - VIHA

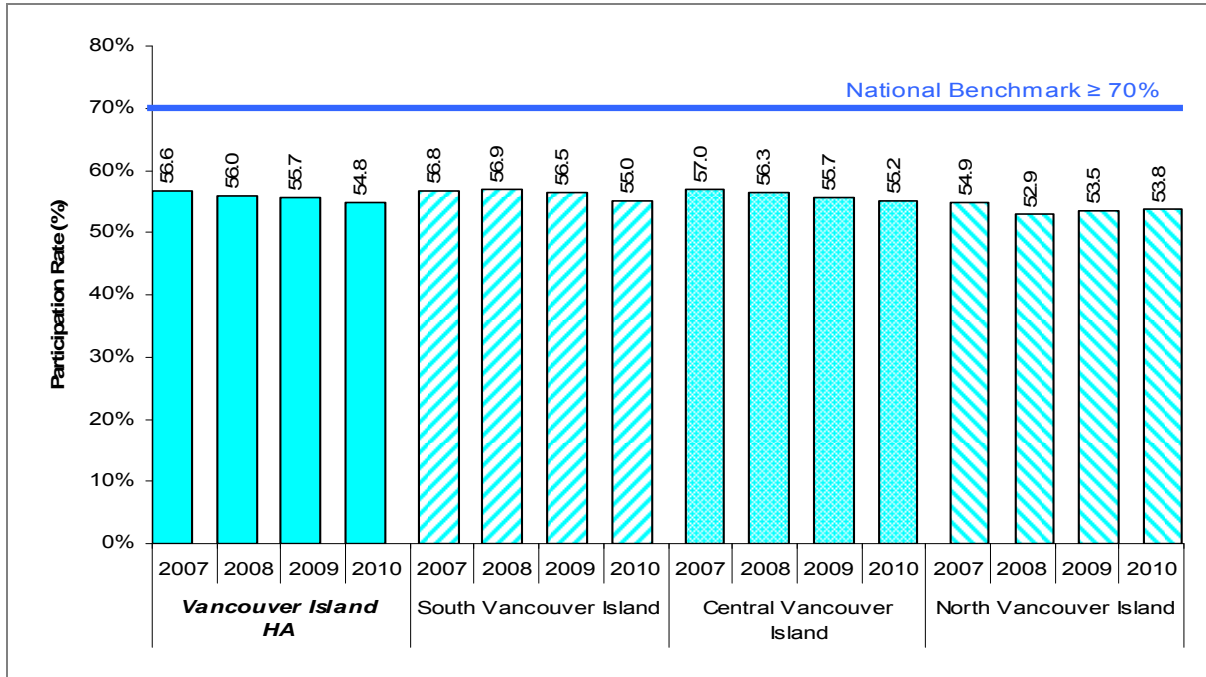
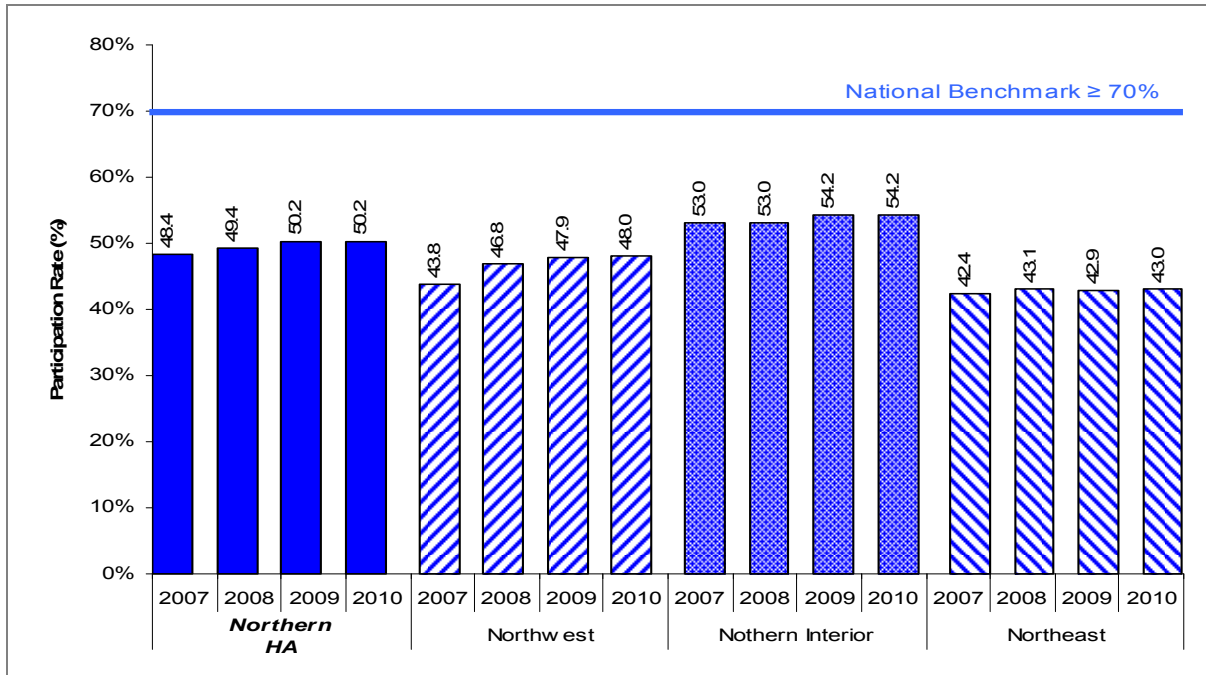


Figure 5-6: SMP Participation Rates (2007-2010) for Women Aged 50-69, by HSDA - NH





British Columbia 2011 Regional Cancer Report

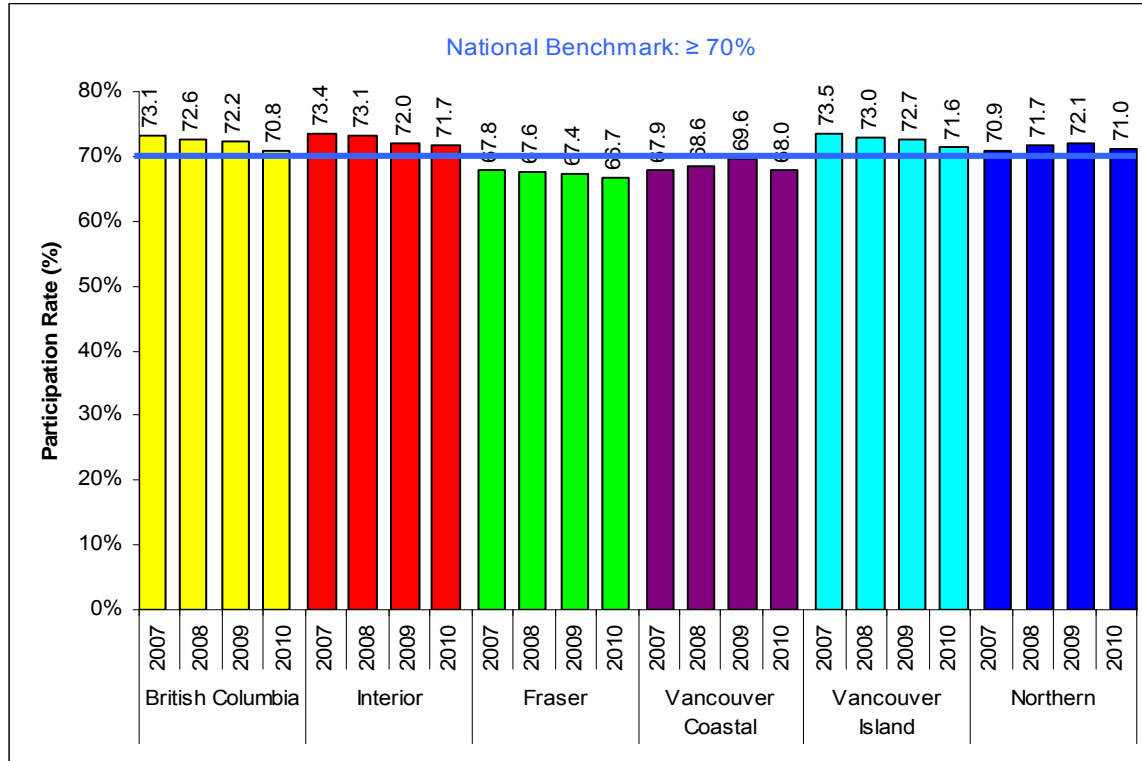
Section 5 » Screening and Diagnosis (cont.)

5.2. Cervical Cancer Screening

The cervical cancer screening participation rate measures the percentage of women between the ages of 20 and 69 that have had a Pap test in the three years between January 01, 2007 and December 31, 2009 in the province of BC. The Pap smear has the potential to prevent the majority of cervical cancers, through the identification of cancer precursors which can be successfully treated, and to identify cervical cancer at an early stage. Research indicates that around 90 % of cervical cancers can be prevented using the Pap smear [10]. Widespread Pap testing in BC over the past 40 years has resulted in a significant reduction in cervical cancer mortality. Nevertheless, inadequate screening remains the most important contributor to cervical cancer risk in BC women. In 2009 there were 171 new cases of invasive cervical cancers (all cell types) in the province of BC, 33 deaths from cervical cancer and 646 women had a diagnosis in the previous five years. Given the current level of screening it is estimated that two cases are prevented for every case diagnosed. It is expected that by 2019, there will be roughly 200 new cases, 30 deaths and 760 women living with cervical cancer.

Figure 5.7 indicates some regional variation in Pap smear use but it is quite modest with most regions attaining the stated benchmark.

Figure 5-7: CCSP Participation Rates (2007-2010) for Women Aged 20-69, by HA





British Columbia 2011 Regional Cancer Report

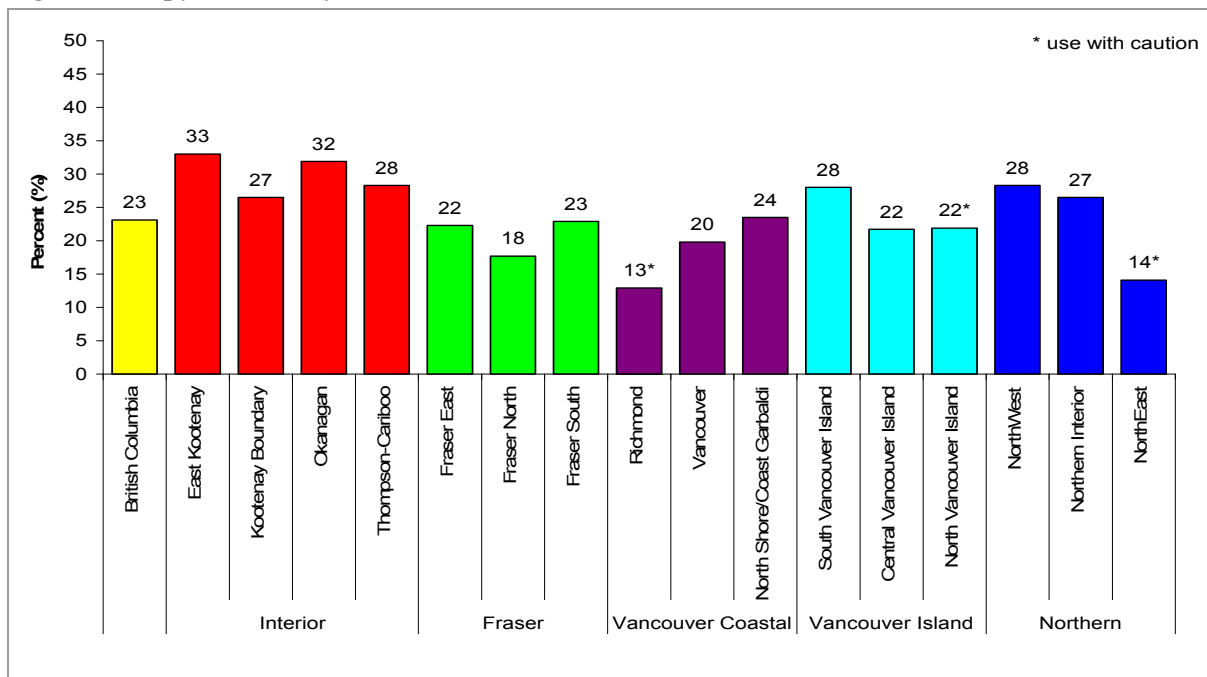
Section 5 » Screening and Diagnosis (cont.)

5.3. Colorectal Cancer Screening

Screening for colorectal cancer can be performed in a number of ways. Tests which detect trace amount of blood in feces (Fecal Occult Blood Test – FOBT) are used in a number of jurisdictions and are available in BC. Other tests which are also available employ visualization of the rectum and colon and may be performed by either sigmoidoscopy or colonoscopy. There is scientific evidence that all these approaches can reduce the risk of cancer development, by facilitating the identification and treatment of abnormalities which may lead to cancer.

In 2009, 2,702 British Columbians were diagnosed with colorectal cancer and 1,057 died from the disease. By 2019, 10,098 are projected to be alive and have had a colorectal cancer diagnosed in the previous 5 years. It has been reported that the 5-year survival rate can be as high as 90% if colorectal cancer is detected early [11]. As is the case with many cancers, later stage diagnosis means more complex care and reduced chances of survival. In BC the average 5-year survival rate, providing the person survives one year post-diagnosis, is 66.5% and ranges between the HAs from 62.9% to 67.6% (see Section 8). By screening adult women and men who are asymptomatic more cases of colorectal cancer can be prevented and those not prevented may be caught early and treated. Currently, 23% of British Columbians over the age of 35 reported having a colonoscopy.

Figure 5-8: Percentage of Population (age ≥ 35) who Reported Ever Having a Colonoscopy or Sigmoidoscopy in 2008, by HSDA



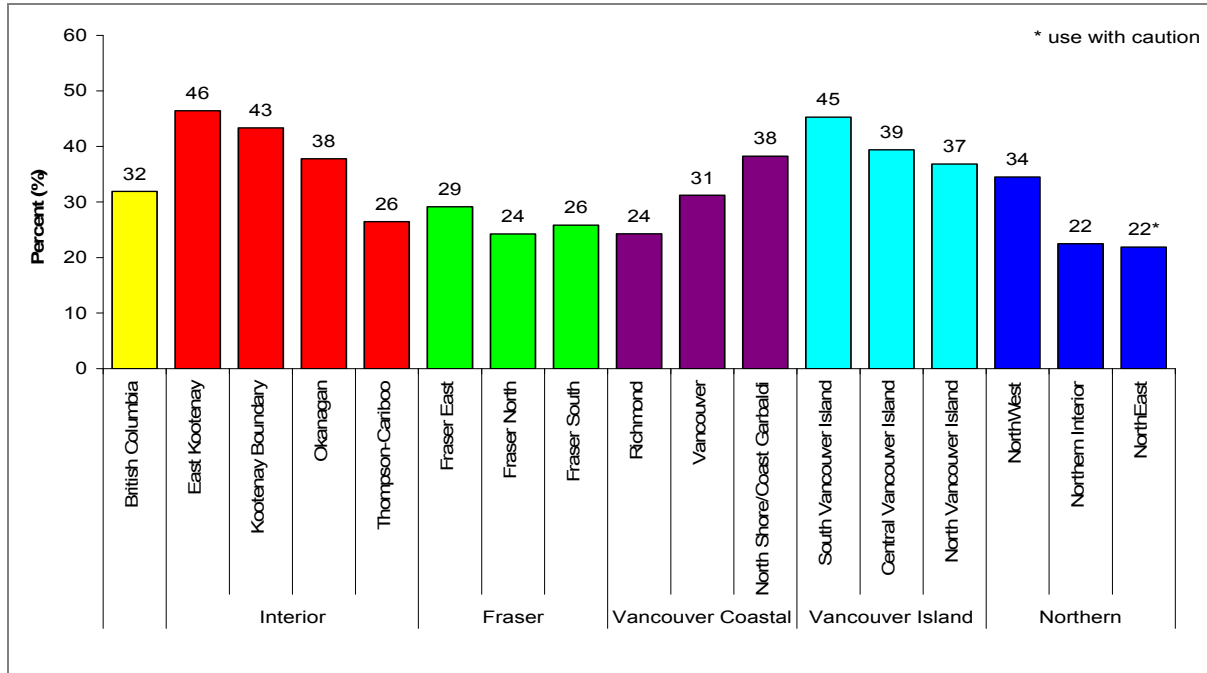


British Columbia 2011 Regional Cancer Report

Section 5 » Screening and Diagnosis (cont.)

5.3. Colorectal Cancer Screening (cont.)

Figure 5-9: Percentage of Population (age ≥ 35) who Reported Ever Having a FOBT in 2008, by HSDA



5.4. Hereditary Cancer

A small proportion of the population are at greatly elevated risk of specific cancers because of an inherited genetic predisposition. Identification of individuals likely to have such a predisposition is primarily through the occurrence of marked patterns of cancers within members of their family to whom they are genetically related. Even in such high-risk families most members will not inherit a genetic predisposition. By the identification of the specific genetic changes leading to predisposition, testing is able to identify individuals who have inherited the changes and those who have not. Those with the changes can be counselled and provided with appropriate screening recommendations and services and those without can be reassured that they are not at excess risk. Eligibility criteria are in place to ensure that the likelihood of a genetic change in the family is significant. Because of the implications and complexity of testing all individuals are required to participate in counselling aimed at informing them of the issues before any testing is performed.



British Columbia 2011 Regional Cancer Report

**Section 5 » Screening and Diagnosis (cont.)**

**5.4. Hereditary Cancer (cont.)**

The Hereditary Cancer Program (HCP) is a referral-based clinical consultation service that provides hereditary cancer genetic counselling and testing services in BC and the Yukon. The program’s mission is to reduce morbidity and mortality and enhance quality of life for individuals and families with hereditary cancer by clarifying risk and applying evidence-based cancer risk management strategies. The program aims to provide equitable and accessible care to people throughout BC and the Yukon through the utilization of in-person and videoconference consultations. The program continues to strive towards appropriately increasing awareness and referrals for the parts of the population that appear to be underserved. Table 5-1 shows the frequencies of referrals and consultation to the HCP program since 2009.

**Table 5-1: Hereditary Counselling Program (HCP) Utilization, by HA**

Health Authority	Referrals to HCP (% of Total)		Consultations (% of Total)	
	Fiscal 2009/2010	Fiscal 2010/2011	Fiscal 2009/2010	Fiscal 2010/2011
Interior Health	299 (14.9)	381 (16.8)	207 (17.3)	208 (16.0)
Fraser	471 (23.4)	568 (25.0)	296 (24.7)	323 (24.8)
Vancouver Coastal	714 (35.5)	811 (35.7)	472 (39.4)	444 (34.0)
Vancouver Island	419 (20.8)	421 (18.5)	152 (12.7)	271 (20.8)
Northern	108 (5.4)	91 (4.0)	72 (6.0)	57 (4.4)
<b>Total</b>	2011	2272	1199	1303