



GEC KO

Genetics Education Canada - Knowledge Organization
Centre d'éducation en génétique canadien - Connaissances organisées

Personalized Cancer Genomic Medicine Resource Toolkit

Acknowledgements

This resource has been adapted with permission from the 2016 toolkit developed by CanImpact (The Canadian Team to Improve Community Based Cancer Care along the Continuum).

Table of Contents

Red flags to identify individuals who are at increased risk of a hereditary cancer syndrome	1
Resources for breast/ovarian cancer	
Resource describing hereditary breast/ovarian cancer	
Hereditary Breast and Ovarian Cancer GECKO on the Run	2-3
Resources for risk assessment and screening for breast/ovarian cancer & when to refer to genetics	
Hereditary breast and ovarian cancer patient-completed screening tool to identify patients for referral to genetics	4
Red flags for providers to identify patients at high risk of hereditary breast and ovarian cancer for referral to genetics (taken from Gecko on the Run-HBOC).....	5
Resources for colorectal cancer	
Resource describing hereditary colorectal cancer	
GECKO on the Run – Lynch Syndrome.....	6-8
Resources for risk assessment & screening for colorectal cancer & when to refer to genetics	
Colorectal cancer patient-completed risk assessment tool to identify patients for referral to genetics	9
Red flags for providers to identify patients at high risk of hereditary colorectal cancer for referral to genetics (taken from GECKO on the Run – Lynch Syndrome).....	10
Additional province-specific risk assessment resources for hereditary breast/ovarian cancer and colorectal cancer for healthcare providers	
Ontario	
Ontario Breast Screening Program Requisition for High Risk Screening.....	11
Alberta	
TOP Breast Cancer Screening Guideline.....	12-13
TOP Colorectal Cancer Screening Guideline.....	14-15
Patient tools:	
Province-specific resources	
Alberta.....	16
British Columbia.....	17
Manitoba.....	18
New Brunswick.....	19
Newfoundland and Labrador.....	20
Nova Scotia.....	21
Ontario.....	22
Prince Edward Island.....	23
Quebec.....	24
Saskatchewan.....	25

Red Flags to Identify Individuals Who Are at Increased Risk of a Hereditary Cancer Syndrome

Hereditary Cancer Red Flags

In general, suspicion of a hereditary cancer syndrome should be raised if:

- There are multiple family members with cancer
- Cancers occur on the same side of family
- Cancer diagnoses occur at a younger than expected age
- Several generations are affected (demonstrating an autosomal dominant pattern – typical of most hereditary cancer syndromes)
- Clustering of certain types of cancers is present
- Multiple primary cancers are diagnosed in same individual

HEREDITARY BREAST AND OVARIAN CANCER SYNDROME

Bottom line: Breast cancer is relatively common in the general population (12% lifetime risk) and the majority of cases occur sporadically. About 5-10% of breast cancer is due to an inherited gene change. Mutations in the genes *BRCA1* or *BRCA2* are the most common cause of hereditary breast and ovarian cancer (HBOC) and *BRCA1* and *BRCA2* mutation carriers have a significant increased lifetime risk for breast and ovarian cancer in addition to other cancers. Risk-reducing surgeries and, for some women, chemoprevention, can reduce mortality from breast and ovarian cancers in both *BRCA1* and *BRCA2* carriers. Individuals with family histories of breast or ovarian cancer that are at high risk (generally >10%) to carry a *BRCA1* or *BRCA2* gene mutation can be offered referral to genetics services for a discussion of the benefits, harms and limitations of genetic testing, while women whose family histories suggest a low risk of carrying a *BRCA1* or *BRCA2* gene mutation can be reassured and offered screening following provincial guidelines.

WHAT IS HEREDITARY BREAST AND OVARIAN CANCER SYNDROME?

Approximately 80% of breast cancer occurs sporadically. About 10-15% of breast cancer is familial (when shared familial risk factors e.g. genes, environment, cause a higher incidence of cancer) and **about 5-10% is hereditary** (due to a single gene mutation). Harmful mutations in *BRCA1* and *BRCA2* appear to account for ~30% of high-risk breast cancer families. HBOC is an autosomal dominant cancer predisposition syndrome. Individuals with HBOC have a high risk for breast and ovarian cancers and a moderate risk for other cancers (Table 1). Not all individuals who inherit a mutation in *BRCA1* or *BRCA2* will develop cancer (*reduced penetrance*) and the signs and symptoms, type, and age of onset of cancer will vary within families (*variable expressivity*).

It is estimated that the general population prevalence of pathogenic mutations in the *BRCA1* and *BRCA2* genes is 1 in 300 to 1 in 500. Founder mutations are observed in individuals of Ashkenazi Jewish ethnicity occurring at an estimated frequency of about 1 in 50.

WHO SHOULD BE OFFERED GENETIC TESTING?

These are general guidelines to identify patients at **high risk** for HBOC. You should consider referring your patient to your [local genetics centre or hereditary cancer program](#) for further assessment if s/he has a family or personal history of:

- Breast cancer diagnosis at a young age (<35-45 years) [both invasive and ductal carcinoma *in situ*]
- Ovarian cancer at any age [epithelial]
- Male breast cancer
- Multiple primaries in the same individual e.g. bilateral breast cancer (particularly if the diagnosis was before age 50), breast and ovarian cancer
- Breast cancer diagnosis **AND** a family history of two or more additional HBOC- related cancers, including breast, ovarian, prostate (Gleason ≥7) and pancreatic cancer
- High risk ethnicity (Ashkenazi Jewish, Icelandic) and a personal and/or family history of breast, ovarian or pancreatic cancer
- Triple negative breast cancer diagnosed <age 60

OR if s/he has a personal

- Probability of 10% or higher to carry a *BRCA* mutation

Eligibility criteria for genetic testing vary among organizations. In general, criteria are based on clinical features that increase the likelihood of a hereditary cancer susceptibility syndrome.

If possible, testing is first offered to the **affected** individual in the family at **highest risk to carry a mutation** in order to maximize the likelihood of detecting a mutation. For example, this might be the youngest individual with breast cancer in a family with multiple cases of breast and ovarian cancer.

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

See the [*GEC-KO point of care tool*](#) which can be used in your practice to help identify patients that would benefit from referral to genetics or your local hereditary cancer program.

HOW WILL GENETIC TESTING HELP YOU AND YOUR PATIENT?

If a mutation is identified (a positive test result):

- Clinical intervention can improve outcomes. (See [*GECKO Messenger for Screening and Management*](#))
 - Risk-reducing mastectomy lessens the risk of breast cancer by at least 90%
 - Annual magnetic resonance imaging plus mammography increases detection rate for breast cancer
 - Risk-reducing salpingo-oophorectomy decreases the risk of ovarian cancer by at least 80% and, if performed prior to menopause, can reduce the risk of breast cancer by at least 50%
 - Chemoprevention, e.g. tamoxifen, may be considered for some women as a risk-reducing option.
- Other at-risk family members can be identified and given accurate risk assessments
- Positive health behaviours can be reinforced

If a mutation is not identified and testing was for a known familial mutation (true negative):

- Your patient is not considered to be at increased risk of developing hereditary cancer but may still be at increased risk of cancer depending on family history
- You can provide reassurance to your patient and their children

Table 1. Significant lifetime cancer risks for individuals who have inherited a mutation in the *BRCA1* or *BRCA2* gene as compared to the general population.

Cancer type	Cancer risk in a mutation carriers of:		General Population
	<i>BRCA1</i>	<i>BRCA2</i>	
Cumulative lifetime invasive breast cancer risk in women (by age 70)	57%	49%	~12%
Cumulative lifetime ovarian cancer risk (by age 70)	40%	18%	~1.3%
Cumulative lifetime breast cancer risk in men (by age 70)	Increased (controversial)	6-7%	0.1%
Lifetime prostate cancer risk (by age 70)	n/a	2-6x increased risk	~14%

NOTE: The literature suggests that there is also an increased lifetime risk for other cancers such as melanoma and pancreatic cancer in *BRCA* mutation carriers.

For a recent review article on HBOC see Moyer VA, U.S. Preventive Services Task Force. Risk assessment, genetic counselling, and genetic testing for *BRCA*-related cancer in women: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med* 2014; 160(4):271-81.

See www.geneticseducation.ca for the comprehensive [*GEC-KO Messenger*](#) with references and more on risks, benefits, limitations, screening and management, as well as for the made for practice [*point of care tool*](#).

Authors: S Morrison MS CGC, C Cremin MS CGC, E Tomiak MD FRCPC, JE Allanson MD FRCPC and JC Carroll MD CCFP
GEC-KO on the run is for educational purposes only and should not be used as a substitute for clinical judgement. GEC-KO aims to aid the practicing clinician by providing informed opinions regarding genetic services that have been developed in a rigorous and evidence-based manner. Physicians must use their own clinical judgement in addition to published articles and the information presented herein. GEC-KO assumes no responsibility or liability resulting from the use of information contained herein.



Part 1: Hereditary Breast and Ovarian Cancer Patient-Completed Screening Tool to Identify Patients for [Referral to Genetics](#)

Part I of this tool is to be used with patients to predict who should be referred for genetic counselling due to increased risk for a hereditary breast cancer syndrome including but not limited to hereditary breast and ovarian cancer (HBOC) syndrome caused by mutations in *BRCA1* and *BRCA2* genes. Part II of this tool is used to identify individuals who are at high risk to carry a mutation in *BRCA1* or *BRCA2* genes.

1. Did any of your first degree relatives (parent, sibling, child) have breast <i>or</i> ovarian cancer?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2. Did any of your relatives have bilateral breast cancer?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
3. Did any man in your family have breast cancer?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4. Did any woman in your family have breast <i>and</i> ovarian cancer?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
5. Did any woman in your family have breast cancer before the age of 50 years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
6. Do you have 2 or more relatives with breast <i>and/or</i> ovarian cancer?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
7. Do you have 2 or more relatives with breast <i>and/or</i> bowel cancer?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Management: **With 1 or more** positive responses, discuss referral to genetics

This POC tool is based on the Family History Screening-7 (FHS-7) (Ashton-Prolla *et al* 2009), which was designed for use in primary care settings and demonstrated an overall sensitivity of 97.0% and a specificity of 53.0% for HBOC syndrome. Overall, **using as cut point one positive answer**, the sensitivity and specificity of the instrument were 87.6% and 56.4%, respectively for hereditary breast cancer syndromes.

(Reference: Ashton-Prolla P, Giacomazzi J, Schmidt AV, *et al*. Development and validation of a simple questionnaire for the identification of hereditary breast cancer in primary care. *BMC Cancer* 2009; 9:283 Licence: <http://creativecommons.org/licenses/by/2.0/>)

On-line tool: Breast Cancer Genetics Referral Screening Tool (B-RST™)

This is an on-line screening tool for health care providers and the general public to enter family history information to determine who should be referred for cancer genetic counselling for Hereditary Breast and Ovarian Cancer. www.breastcancergenescreeen.org



Part II: Red Flags for Providers to Identify Individuals Who Are at **Increased Risk** of Hereditary Breast and Ovarian Cancer Syndrome for Referral to Genetics

(TAKEN DIRECTLY from GECKO On the Run on Hereditary Breast/Ovarian Cancer)

These are general guidelines to identify patients at **high risk** for hereditary breast and ovarian cancer (HBOC) syndrome. You should consider referring your patient to your local genetics centre or hereditary cancer program for further assessment if s/he has a family or personal history of:

- 🚩 Breast cancer diagnosis at a young age (<35-45 years) [both invasive and ductal carcinoma *in situ*]
 - 🚩 Ovarian cancer at any age [epithelial]
 - 🚩 Male breast cancer
 - 🚩 Multiple primaries in the same individual e.g. bilateral breast cancer (particularly if the diagnosis was before age 50), breast and ovarian cancer
 - 🚩 Breast cancer diagnosis **AND** a family history of two or more additional HBOC- related cancers, including breast, ovarian, prostate (Gleason ≥ 7) and pancreatic cancer
 - 🚩 High risk ethnicity (e.g., Ashkenazi Jewish, Icelandic) and a personal and/or family history of breast, ovarian or pancreatic cancer
 - 🚩 Triple negative breast cancer diagnosed <age 60
- OR** if s/he has a personal
- 🚩 Probability of 10% or higher to carry a *BRCA* mutation

Eligibility criteria for genetic testing vary among organizations. In general, criteria are based on clinical features that increase the likelihood of a hereditary cancer susceptibility syndrome.

If possible, the affected individual in the family at highest risk to carry a mutation is offered testing first in order to maximize the likelihood of detecting a mutation.

Testing an unaffected individual should only be considered if an affected individual is not available for testing. There are significant limitations to interpretation of test results in an unaffected individual. Unaffected individuals can be referred for genetic counselling, risk assessment and information. It is important to note that any individual of Ashkenazi Jewish ethnicity or French Canadian ethnicities can be offered genetic testing for the mutations commonly found in these ethnic groups (e.g. three common mutations in those of Ashkenazi Jewish ethnicity). A negative result in this situation only rules out those ethnic-specific mutations.

For more information on Hereditary Breast and Ovarian Cancer such as screening recommendations and references see the complete *GEC-KO Messenger* at www.geneticseducation.ca.

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

5

LYNCH SYNDROME

Bottom line: Lynch syndrome (LS), also known as Hereditary Non-Polyposis Colorectal Cancer (HNPCC), is the most common hereditary colorectal (CRC) cancer predisposition syndrome. It is an autosomal dominant condition that causes a significant increased lifetime risk of CRC and endometrial (uterine) cancer in addition to other cancers. Individuals suspected of having LS should be referred for a genetic consultation for consideration of genetic testing. Screening, surveillance and management of CRC and other cancers should be guided by genetic test results and/or family/ personal history. Studies show that conversations between patients and their healthcare providers are the strongest driver of screening participation.

WHAT IS LYNCH SYNDROME?

Lynch syndrome (LS) is an autosomal dominant cancer predisposition syndrome caused by inherited mutations in genes responsible for correcting DNA replication errors, called mismatch repair (MMR) genes. **Individuals with LS have a high risk for colorectal and endometrial cancers** and a moderate risk for other cancers (Box 1 and Table 1). Not all individuals who inherit a mutation in a LS gene will develop cancer (*reduced penetrance*) and the signs and symptoms, type and age of onset of cancer will vary within families (*variable expressivity*).

BOX 1: LYNCH SYNDROME-RELATED CANCERS

- | | | | | | |
|---------------|------------------------------------|--------------|-----------|-----------|----------|
| ✓ Colorectal | ✓ Endometrial | ✓ Kidney | ✓ Gastric | ✓ Ovarian | ✓ Ureter |
| ✓ Small bowel | ✓ Hepatobiliary | ✓ Pancreatic | | | |
| ✓ Brain | ✓ Sebaceous (adenoma or carcinoma) | | | | |

PREVALENCE

LS accounts for about 0.7-3.6% of cases of CRC. Research on LS-related endometrial cancer is still emerging; current data suggest that in North America between 1.8% and 4.5% of cases are attributed to LS.

PERSONAL HISTORY RED FLAGS TO CONSIDER GENETIC TESTING OR GENETIC CONSULTATION

These are general guidelines to identify patients at **high risk** for LS. You should check with your [local genetics centre or hereditary cancer program](#) for more specific details. Consider referring your patient if he/she has:

- An early age of CRC diagnosis (<50 years). Patients diagnosed <35 years are much more likely to have LS.
- An early age of endometrial cancer diagnosis (<50 years)
- Multiple primary LS-related cancer diagnoses, regardless of age
- A CRC diagnosis and one or more 1st degree relatives with a LS-related cancer, with one of the cancers being diagnosed <50 years
- A CRC diagnosis and two or more 1st or 2nd degree relatives with LS- related cancers regardless of age
- A CRC diagnosis <60 years with histological features suspicious for LS (excess infiltrating lymphocytes, mucinous/signet cell features, Crohn's-like reaction), particularly when primary tumour is right-sided

FAMILY HISTORY RED FLAGS TO CONSIDER GENETIC CONSULTATION

You should consider referring your patient to [your local genetics centre or hereditary cancer program](#) for further assessment if he/she is at **high risk** for hereditary CRC syndrome.

A patient is considered to be at **high risk** for LS syndrome if he/she

- ✦ Has a known LS causing mutation in the family

Or if he/she meets the revised Amsterdam criteria, meaning he/she:

- ✦ Has **at least three relatives** with a cancer associated with LS (Box 1); the following criteria should also be present:
 - ✦ One must be a first degree relative of the other two;
 - ✦ At least two successive generations must be affected (autosomal dominant inheritance);
 - ✦ At least one relative with LS-related cancer should be diagnosed before age 50;
- Tumours should be verified when possible and other CRC syndromes should be ruled out*

If your patient does not have cancer, genetic testing of a relative with cancer may be recommended as a first step.

If your patient does not meet any of the criteria above, but you are suspicious of a hereditary cancer syndrome, consult [your local genetics centre or hereditary cancer program](#). In general, suspicion of a hereditary cancer syndrome should be raised if:

- ✦ There are multiple family members with cancer
- ✦ Cancers occur on the same side of family
- ✦ Cancer diagnoses occur at a younger than expected age
- ✦ Several generations are affected (demonstrating an autosomal dominant pattern – typical of most hereditary cancer syndromes)
- ✦ Clustering of certain types of cancers is present (for LS, see Box 1)
- ✦ Multiple primary cancers are diagnosed in same individual

HOW IS GENETIC TESTING DONE?

Ideally testing begins with immunohistochemical (IHC) analysis of a CRC tumour for the proteins associated with the LS genes (*MLH1*, *MSH2*, *MSH6*, *PMS2* and *EPCAM*). IHC analysis looks at the protein products of the LS genes. If IHC analysis reveals a protein to be deficient, genetic testing can be offered to the affected individual and performed on a blood sample. If IHC analysis does not clearly show protein deficiency, the next step is often microsatellite instability (MSI) testing of the tumour sample. If MSI is stable or low, no further testing is indicated. If MSI is high, genetic testing can be offered to the affected individual and performed on a blood sample. Some centres will arrange IHC or MSI alone; others will carry out both tests at the same time.

WHAT DOES THE GENETIC TEST RESULT MEAN?

If your patient has been found to carry a mutation in a LS gene, a **positive result**, he/she has an increased lifetime risk to develop certain cancers (Table 1 and Box 1). This also means that family members are at risk of carrying the same mutation and of having similar cancer risks.

If a mutation is not identified in someone from a family with a known mutation, this is a **true negative result**. You can provide reassurance to your patient. These individuals may still have modified screening recommendations based on their family history. Consult [your local genetics centre or hereditary cancer program](#).

If a mutation is not identified in an affected patient who has no known familial mutation this result is **uninformative**. A **variant of uncertain significance (VUS)** could be identified, which is a gene change that has not yet been categorized as benign or as pathogenic. In both of these cases, the diagnosis of LS is not confirmed or ruled out, especially in families with a strong history of CRC.

Table 1. Significant lifetime cancer risks for individuals who have inherited a mutation in the LS genes, *MLH1* and *MSH2*, as compared to the general population. *Risks for other LS genes are lower.*

Cancer type	LS lifetime cancer risk in a carrier of a <i>MLH1</i> or <i>MSH2</i> gene mutation		General Population lifetime cancer risk < 70 years
	Risk	Mean age of diagnosis	Risk
Colon	52-82%	44-61 years	5.5%
Endometrium	25-60%	48-62 years	2.7%

SCREENING AND SURVEILLANCE

In general, for **high risk** individuals (*carriers of a mutation in a LS gene and their first degree relatives who have not yet had genetic testing*) screening recommendations are as follows:

Colorectal Cancer: Colonoscopy every 1-2 years beginning between ages 20 and 25 or 2-5 years prior to the earliest diagnosis *if* that diagnosis was made before age 25 years, whichever is earlier.

Endometrial and Ovarian cancer: Screening for endometrial or ovarian cancer may include annual transvaginal ultrasound and endometrial biopsy, however, there is little evidence of the effectiveness of these tests. Most importantly, women should be educated about the symptoms of endometrial cancer. Prophylactic hysterectomy and bilateral salpingo-oophorectomy is a risk-reducing option that LS women who have completed childbearing can consider.

Individuals who have tested negative for a known familial LS gene should follow provincial guidelines for population risk CRC screening, i.e. Fecal Occult Blood Test every two years from age 50. For those individuals who have a family history of CRC unrelated to the mutation in their family (i.e. on the other side of the family), screening recommendations would be based on the family history. Consult [your local genetics centre or hereditary cancer program](#).

For individuals where no mutation was identified and there was no known familial mutation (*uninformative result*) or when a variant of uncertain significance (VUS) was identified, screening recommendations will be based on a combination of factors, such as family history and in cases where a VUS was identified, information about the VUS.

CRC screening for **intermediate risk** individuals is dependent on family history. For a person with a:

- 1st degree relative with CRC diagnosis <50 years or two 1st degree relatives with CRC at any age → Colonoscopy at age 40 or 10 years younger than the youngest CRC diagnosis, repeat 3-5 yearly
- 1st degree relative with CRC diagnosis ≥50 years → Colonoscopy at age 50 or 10 years younger than the youngest CRC diagnosis, repeat 5 yearly
- 2nd degree relative with CRC diagnosis <50 years → Colonoscopy at age 50, repeat dictated by findings

See www.geneticseducation.ca for the full GEC-KO *Messenger* on LS for more details. For general guidelines on CRC management: National Comprehensive Cancer Network (NCCN) Guidelines for colorectal cancer screening V.2.2013 [Login required – no fee]

Authors: S Morrison MS CGC, JE Allanson MD FRCPC, E Tomiak MD FRCPC, K Semotiuk MS (C)CGC and JC Carroll MD CCFP

GEC-KO on the run is for educational purposes only and should not be used as a substitute for clinical judgement. GEC-KO aims to aid the practicing clinician by providing informed opinions regarding genetic services that have been developed in a rigorous and evidence-based manner. Physicians must use their own clinical judgement in addition to published articles and the information presented herein. GEC-KO assumes no responsibility or liability resulting from the use of information contained herein.



Part I: Colorectal Cancer Risk Assessment Tool to Identify Patients Most Likely to Benefit From [Referral to Genetics](#)

- | | YES | NO |
|---|--------------------------|--------------------------|
| 1) Do you have a first-degree relative (mother, father, brother, sister, or child) with any of the following conditions diagnosed before age 50? | | |
| Colon or rectal cancer _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| Cancer of the uterus, ovary, stomach, small intestine, urinary tract (kidney, ureter, bladder), bile ducts, pancreas, or brain _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| 2) Have you had any of the following conditions diagnosed before age 50? | | |
| Colon or rectal cancer _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| Colon or rectal polyps _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| 3) Do you have three or more relatives with a history of colon or rectal cancer?
(this includes parents, brothers, sister, children, grandparents, aunts, uncles, and cousins) _____ | <input type="checkbox"/> | <input type="checkbox"/> |

The cumulative sensitivity of these three questions to identify patients with characteristics suggestive of hereditary colorectal and who should undergo a more extensive risk assessment is 77%. When all 3 questions were answered “yes”, the tool correctly identified 95% of individuals with germline mutations causing Lynch syndrome. **If a patient answers “yes” to all of these questions a referral to genetics should be offered. If a patient answers “yes” to any of these questions, consider further assessment using the criteria in Part II.**

Reprinted with permission from Macmillan Publishers Ltd: [Am J Gastroenterol] Kastrinos F, Allen JJ, Stockwell DH, et al., Development and validation of a colon cancer risk assessment tool for patients undergoing colonoscopy 104:1508–1518, copyright (2009)



Part II: Red Flags to Identify Patients **at High Risk** of Lynch Syndrome Most Likely to Benefit From Referral to Genetics

Personal History LS Red Flags	Family History LS Red Flags
<p>Consider referring your patient if he/she has:</p> <ul style="list-style-type: none"> Colorectal cancer (CRC) diagnosis at an early age (<50 years). Higher suspicion of LS if diagnosed <35 years. Endometrial cancer diagnosis at an early age (<50 years) Multiple primary LS-related cancer diagnoses, regardless of age A CRC diagnosis <u>and</u> one or more 1st degree relatives with a LS-related cancer, with one of the cancers diagnosed <50 years A CRC diagnosis <u>and</u> two or more 1st or 2nd degree relatives with LS- related cancers regardless of age A CRC diagnosis <60 years <u>and</u> histological features suspicious for LS* (excess infiltrating lymphocytes, mucinous/signet cell features, Crohn's-like reaction), particularly when primary tumour is right sided 	<p>Consider referring your patient if he/she:</p> <ul style="list-style-type: none"> Has a known LS causing mutation in the family Meets the revised Amsterdam criteria, meaning he/she has at least three relatives with a cancer associated with LS (Box 1). The following criteria should also be present: <ul style="list-style-type: none"> One must be a first degree relative of the other two; At least two successive generations must be affected (autosomal dominant inheritance); At least one relative with LS-related cancer should be diagnosed before age 50; <p><i>Tumour pathology should be verified when possible and other CRC syndromes should be ruled out</i></p>

*LS is the abbreviation for Lynch syndrome

BOX 1: LYNCH SYNDROME-RELATED CANCERS

- | | | | | | |
|---------------|------------------|--------------|-----------|-------------|------------------------|
| ✓ Colorectal | ✓ Endometrial | ✓ Kidney | ✓ Gastric | ✓ Ovarian | ✓ Ureter |
| ✓ Small bowel | ✓ Hepato-biliary | ✓ Pancreatic | ✓ Brain | ✓ Sebaceous | (adenoma or carcinoma) |

For more information on Lynch Syndrome such as screening recommendations see the complete [GEC-KO Messenger](http://www.geneticseducation.ca) at www.geneticseducation.ca

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

OBSP Requisition for High Risk Screening

1. Client Information (or affix label)

First name	Last name	
Date of birth (dd/mmm/yyyy)	OHIP number	
Telephone number	Secondary telephone number	Address (including postal code)

To receive high risk breast screening (i.e.: annual MRI and mammogram), women must be **between 30 and 69** and be at high risk for breast cancer as identified through **Category A** or **Category B**, after genetic assessment. **Women with bilateral mastectomies are not eligible.**

Category A: eligible for direct entry into the program. To fall under this category, **at least one** of the following criteria must be met:

- ☐ Known carrier of a gene mutation (e.g. BRCA1, BRCA2 - **fax results with form**)
- ☐ First degree relative of a carrier of a gene mutation (e.g. BRCA1, BRCA2), has previously **had** genetic counselling, and has **declined** genetic testing
- ☐ Previously assessed as having a $\geq 25\%$ lifetime risk of breast cancer on basis of family history (a genetic clinic must have used **at least one** of the tools below to complete this assessment – **fax results with form**)

IBIS 10 Year Risk:	BOADICEA 5 Year Risk:
IBIS Lifetime Risk:	BOADICEA Lifetime Risk:
- ☐ Received chest radiation (not chest x-ray) before age 30 and at least 8 years previously (e.g. as treatment for Hodgkin's Lymphoma)

OR

Category B: genetic assessment required (i.e. counselling and/or testing) to determine eligibility for the program. To fall under this category, **at least one** of the following criteria must be met:

- ☐ First degree relative of a carrier of a gene mutation (e.g. BRCA1, BRCA2) and has **not** had genetic counselling or testing
- ☐ A personal or family history of **at least one** of the following (please check all that apply):

<input type="checkbox"/> Two or more cases of breast cancer and/or ovarian* cancer in closely related blood relatives†	<input type="checkbox"/> Invasive serous* ovarian cancer
<input type="checkbox"/> Bilateral breast cancers	<input type="checkbox"/> Breast and/or ovarian* cancer in Ashkenazi Jewish families
<input type="checkbox"/> Both breast and ovarian* cancer in the same woman	<input type="checkbox"/> An identified gene mutation (e.g. BRCA1, BRCA2) in any blood relatives
<input type="checkbox"/> Breast cancer at ≤ 35 years of age	<input type="checkbox"/> Male breast cancer

* Includes cancer of the fallopian tubes and primary peritoneal cancer

† Closely related blood relative: 1st degree = parent, sibling, or child; 2nd degree = grandparent, aunt, uncle, niece, or nephew

2. Clinical History

Date and location of most recent mammogram	Previous breast cancer? <input type="radio"/> Yes <input type="radio"/> No
Date and location of most recent MRI (if done)	Breast implants? <input type="radio"/> Yes <input type="radio"/> No
Previous genetic assessment for inherited breast cancer risk? <input type="radio"/> Yes (attach results) <input type="radio"/> No	Specify genetic assessment centre

3. Referring Physician

First and last name	CPSO Number
Address (including postal code)	Telephone number
Signature	Date (dd/mmm/yyyy) Fax number

By signing this form, you authorize your client to receive screening mammography and MRI (or, if appropriate, screening ultrasound). You also authorize the OBSP to book these screens, additional screens, as well as any follow-up appointments, including imaging tests and biopsies for evaluation of abnormal results. **Fax completed form to the OBSP High Risk Screening Referral Contact in your area (cancerca.on.ca/obsphighrisk).**

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

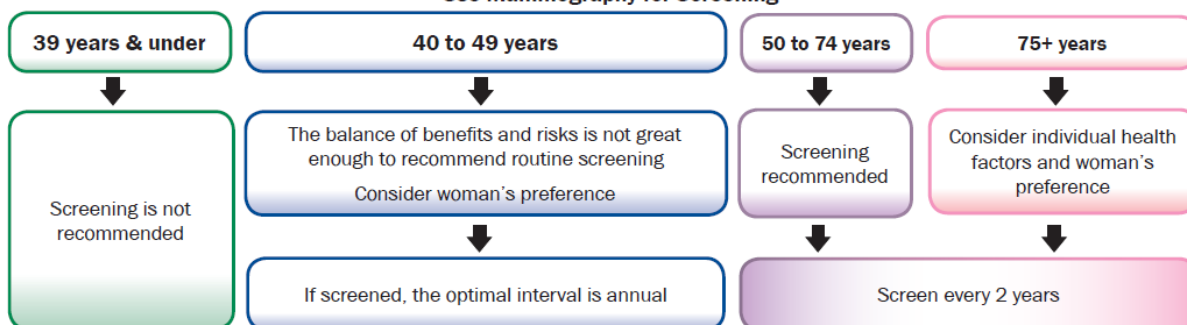


Breast Cancer Screening

Summary of the Clinical Practice Guideline | September 2013

AVERAGE RISK POPULATION: RECOMMENDATIONS

Use Mammography for Screening



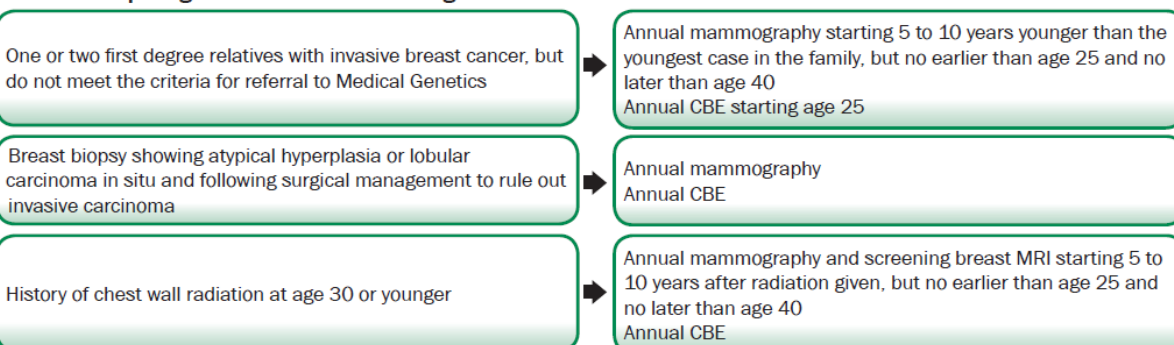
Breast augmentation, breast reduction, sex-reassignment: As above
Note presence of implants in history section of mammography requisition form

Clinical Breast Exam (CBE): Do not use for screening. Consider as part of physical exam

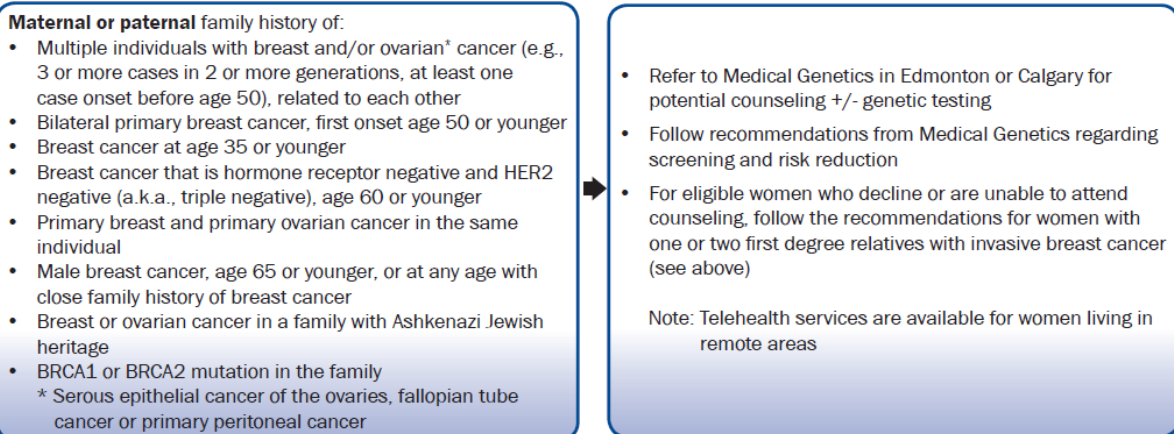
Not recommended for routine screening: MRI, ultrasound, tomosynthesis, thermography, breast self-examination

HIGH RISK POPULATION: RECOMMENDATIONS

Women Requiring More Intensive Screening



Women Requiring Referral to Medical Genetics



These recommendations are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. They should be used as an adjunct to sound clinical decision making.

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

KEY DISCUSSION POINTS FOR HEALTH CARE PROVIDERS AND WOMEN

1. Initiate discussion about screening mammography with women of the appropriate age, including potential benefits and risks of mammography

Health care providers should remind women of the possibility of additional tests in order to reduce anxiety. For age-specific benefits and risks, refer to *Information on Mammography for Women Aged 40 and Older: A Decision Aid for Breast Cancer Screening in Canada*, Public Health Agency of Canada, 2009. Available at: www.phac-aspc.gc.ca/cd-mc/mammography-mammographie-eng.php.

2. Encourage breast awareness

Women should report changes in their breasts, in particular: nipple discharge, rash on nipples, inversion, dimpling or new mass in the breast or axilla.

3. Discuss modifiable risk factor(s)

While some risk factors for breast cancer are not modifiable (e.g., gene mutation, breast density), the ones more amenable to modification include: alcohol consumption, physical activity, weight management, and smoking. These should be addressed in the context of overall disease prevention, as should appropriate use of hormone replacement therapy.

IMPLEMENTATION STRATEGIES

Use outreach, opportunistic screening and checklists to increase the likelihood of engaging women to make informed decisions about screening.

GENERAL RESOURCES

- Breast Cancer Screening. Information available at: www.ScreeningforLife.ca/breastcancer.
- Information on Mammography for Women Aged 40 and Older: A Decision Aid for Breast Cancer Screening in Canada, Public Health Agency of Canada, 2009. Available at: www.phac-aspc.gc.ca/cd-mc/mammography-mammographie-eng.php

RESOURCES FOR HIGH RISK POPULATION

- Calgary Cancer Genetics Clinic: Dr. R.B. Lowry Genetics Clinic, Alberta Children's Hospital, 2888 Shaganappi Trail NW, Calgary, AB T3B 6A8. Phone: (403) 955-7137. Fax (403) 955-2701
- Calgary High Risk Breast Cancer Clinic: The High Risk Breast Cancer Clinic, Calgary Zone Alberta Health Services accepts referrals using the Central Access and Triage system. Phone (403) 944-2240
- Edmonton Cancer Genetics Clinic Referral Criteria: www.medicalgenetics.med.ualberta.ca. Edmonton Medical Genetics Clinic, 8-53 Medical Sciences Building, University of Alberta, Edmonton, Alberta T6G 2H7, Phone (780) 407-7333, Fax (780) 407-6845
- Allard Hereditary Breast and Ovarian Clinic, Royal Alexandra Hospital, Robbins Pavilion, Ground Level, 10240 Kingsway Avenue, Edmonton, Alberta, T5H 3V9, Phone (780) 735-4718, Fax (780) 735-4020
- Alberta Health Services. Risk Reduction and Surveillance Strategies for Individuals at High Genetic Risk for Breast and Ovarian Cancer (2011), available at: www.albertahealthservices.ca/1749.asp

For the complete guideline refer to the TOP website: www.topalbertadoctors.org

These recommendations are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. They should be used as an adjunct to sound clinical decision making.

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018



COLORECTAL CANCER SCREENING

Clinical Practice Guideline | November 2013

TARGET POPULATION

Asymptomatic men and women of all ages

EXCLUSIONS

Men and women with signs or symptoms suggesting colorectal cancer screening (CRC)

RECOMMENDATIONS

RISK ASSESSMENT

- ✓ Assess risk for colorectal cancer (CRC) for all men and women to determine when to start screening, the appropriate screening test and frequency
- X DO NOT wait for patient to turn 50 years of age to assess risk for CRC
- ✓ Assess for indicators of increased risk including family and/or personal history of colorectal cancer, colonic adenomas or inflammatory bowel disease, and high risk CRC conditions, i.e., Lynch syndrome, familial adenoma polyposis

AVERAGE RISK POPULATION

FECAL IMMUNOCHEMICAL TEST (FIT)

50 TO 74 YEARS OF AGE

- ✓ Screening is recommended with the Fecal Immunochemical Test (FIT)
- ✓ Screen with FIT every one to two years
- ✓ If the FIT result is positive, promptly refer for a colonoscopy. Use local CRC screening program (see [Appendix A](#)) or endoscopist, depending on available resources
- ✓ Wait 10 years after a normal colonoscopy to start or re-start screening with FIT. If the quality of the colonoscopy was uncertain, start or re-start screening with FIT five years after the colonoscopy

PRACTICE POINT

FIT is the recommended screening test for average risk men and women between 50 and 74 years of age
Screen with FIT every one to two years

These recommendations are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. They should be used as an adjunct to sound clinical decision making.

75 YEARS OF AGE AND OLDER

- X As a general practice, DO NOT screen asymptomatic patients with a life expectancy of less than 10 years and no family or personal history of colorectal neoplasia
- ✓ Discuss the risks and benefits of screening with the patient. The decision to screen should be individualized, based on informed patient preference, and between the patient and his/her physician

WHEN NOT TO USE FIT

- X DO NOT use as a diagnostic test for CRC in SYMPTOMATIC patients (e.g., reported bloody stools or recent change in bowel habit)
- X DO NOT use to determine or exclude a cause for anemia
- X DO NOT use when an average risk patient has had a high quality colonoscopy within the past 10 years
- X DO NOT use as a CRC screening test when the patient has an acute gastrointestinal (GI) condition and/or where bleeding is occurring or highly likely:
 - Inflammatory bowel disease
 - Acute gastroenteritis or *C. difficile* colitis
 - Actively bleeding hemorrhoids or anal fissure

OTHER SCREENING TESTS

The FIT is the recommended method of screening for the average risk population. [Appendix B](#) summarizes the evidence for other CRC screening tests, e.g., colonoscopy, flexible sigmoidoscopy, CT colonography, and others. Expertise and availability varies across the province.

INCREASED RISK POPULATIONS

Family history of colorectal cancer and/or high risk colonic adenomas are warning signs of increased risk (see Risk Assessment section for definition of high risk adenomas). Use clinical judgment.

One first degree relative > 60 years at diagnosis of colorectal cancer and/or high risk adenomas

- ✓ Screen with FIT every one to two years starting at age 40
- ✓ If the FIT result is positive, promptly refer for a colonoscopy. Use local CRC screening program (see [Appendix A](#)) or endoscopist, depending on available resources

One first degree relative ≤ 60 years at diagnosis of colorectal cancer and/or high risk adenomas or two or more affected relatives

- ✓ Refer for consideration of colonoscopy at age 40, or 10 years prior to the index case, whichever is earliest. Use local CRC screening program (see [Appendix A](#)) or endoscopist

Alberta

Alberta Prevents Cancer web site – www.albertapreventscancer.ca

- *Alberta Prevents is a joint Alberta Health Services (AHS) Population Public and Aboriginal Health and Strategic Clinic Network initiative that will create an online platform for AHS to efficiently integrate the most effective messages, tools and resources for cancer and chronic disease prevention in one easily accessible source.*

Alberta **PREVENTS** Cancer

TOOLS AND RESOURCES

ABOUT US

CONTACT US



Together we can reduce the risk of cancer in Alberta by up to **50%**

Find proven ways to reduce your risk. [Learn More >](#)

8 WAYS TO REDUCE YOUR RISK

THINGS TO LIMIT AND AVOID

Tobacco

UV
Radiation

Alcohol

THINGS TO DO

Eat
Healthy

Be Active

Get
Screened

Healthy
Weight

Get
Vaccinated

[View all available tools and resources >](#)

Screening Made Easy

Introducing FIT. [Learn more >](#)

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

British Columbia

BC Cancer Web Site - www.bccancer.bc.ca/

- **BC Cancer provides a comprehensive cancer control program for the people of BC in partnership with regional health authorities. BC Cancer covers the entire spectrum of cancer care, from prevention and screening to diagnosis, treatment and rehabilitation.**



Follow us



Search...



Our Services

Health Info

Our Research

About

Contact

Health Professionals

Donate

Careers

Menu

Our Services / Services / [Hereditary Cancer](#)

SHARE

A

A

Hereditary Cancer

Hereditary cancer happens when a gene mutation that increases cancer risk is passed down from a parent to a child.

Being born with that gene mutation means that a person has a higher chance to develop specific types of cancer, and those cancers may happen at younger than average ages.

Hereditary Cancer Program

The Hereditary Cancer Program provides genetic counselling and genetic testing for BC/Yukon residents who may have inherited an increased risk for specific types of cancer. Similar services are available across Canada and in other countries.

Use the tabs below to find information about hereditary cancer, genetic testing and genetic counselling.

Common Questions

Eligibility

What to Expect

HCP information for health professionals >

Contact the Hereditary Cancer Program (HCP)

Vancouver

Phone: 604-877-6000 local 672198
Fax: 604-707-5931

Abbotsford

Phone: 604-851-4710 local 645236
Fax: 604-851-4720

Send an [email](#) to HCP.

HCP Clinic Locations

Vancouver

Fairmont Medical Building, 750 West

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

Manitoba

CancerCare Manitoba Web Site - www.cancercare.mb.ca

- ***CancerCare Manitoba (CCMB) is the provincially mandated cancer agency and is responsible for setting strategic priorities and long-term planning for cancer and blood disorders. CCMB provides clinical services to both children and adults. The cancer services the organization provides to Manitobans include prevention, early detection, multidisciplinary cancer treatment, supportive and end-of-life care.***



LOCATIONS ▾ PATIENTS & FAMILY ▾ TREATMENT & CARE ▾ PREVENTION ▾ RESEARCH & EDUCATION ▾ FOR HEALTH PROFESSIONALS ▾ ABOUT US ▾

Cancer Screening and Prevention

While some risk factors for cancer such as age, gender and genetics can't be changed, there are lifestyle choices that can decrease the risk of developing cancer.

Stopping the use of tobacco and protecting yourself while in the sun are things you can do to prevent cancers.

It's also important to be proactive about your health and get screened for cancer.

To learn about CancerCare Manitoba's quit smoking and screening programs, as well as facts about skin damage from the sun, please view the related sections.



Cancer Screening

If you have no signs or symptoms of cancer, you still need to be proactive about your health. CancerCare Manitoba promotes screening for three types of cancer: breast, cervix and colon. Screening is for individuals who have no signs or symptoms of the cancers for which they're being tested.

Screening is available at various locations across Manitoba, while colon tests can be done at home.

The value of screening includes:

- Finding and treating changes before they develop into cancer.
- Discovering other cancers early when treatment may work better.
- Tests for cervix and colon cancers can help prevent the start of cancer.

Screening is only offered for breast, cervix and colon cancers as there's not enough evidence to show that screening for other types of cancer across large populations will effectively reduce the number of cases of cancer



New Brunswick

Government of New Brunswick Web Site –

www2.gnb.ca/content/gnb/en/departments/health/NewBrunswickCancerNetwork/content/NewBrunswickBreastCancerScreeningProgram.html



GNB Home Contacts Français

Departments

Services

Search

Health

About Us

Services

Publications

Patients

Health Professionals

Public Health

Medicare | Drug Plans

Health New Brunswick Cancer Network

New Brunswick Breast Cancer Screening Program



Breast cancer is the most commonly diagnosed cancer among New Brunswick women and is a leading cause of cancer-related death. Regular breast cancer screening can detect tumours at an earlier stage and reduce breast cancer mortality.

Screening

The New Brunswick Breast Cancer Screening Program was established in 1995 with the purpose of finding cancers of the breast as early as possible. The program encourages women between the ages of 50-74 to be screened every two years at one of the 14 screening mammography sites across the province.

SHARE

Related Links

- Breast Cancer Screening Facilities
- Canadian Cancer Society
- Cancer View Canada

Videos



Newfoundland and Labrador

Eastern Health Web Site –

www.easternhealth.ca/WebInWeb.aspx?d=3&id=1091&p=1078

- **Eastern Health is the largest integrated health organization in Newfoundland and Labrador. We provide the full continuum of health services to a regional population of more than 300,000 and are responsible for a number of unique provincial programs.**



The screenshot shows the Eastern Health website with a focus on Cancer Care. The header includes the Eastern Health logo and the tagline "Healthy People, Healthy Communities". A navigation bar contains links for home, careers, tenders, give, for health professionals, and contact us. Below this, there are tabs for Our Services, Your Health, About Us, and News Centre. The main content area features a large banner for Cancer Care, a program of Eastern Health, with a smiling woman and the text "CANCER Care A PROGRAM OF EASTERN HEALTH". Below the banner, a breadcrumb trail reads "You Are: Home | Our Services | Cancer Care | Screening | Breast Screening". The left sidebar contains a search bar and a list of links: About Us, Patients and Family, Patient Navigator, Newfoundland and Labrador Cancer Care Registry (NLCCR), Screening (with a sub-link for Breast Screening), Cancer Research, Patient and Family Advisory Council, Contact Us, and Compliments or Concerns. The main content area is titled "Breast Screening" and includes a sub-section "Mammogram". The text describes the Breast Screening Program, which offers screening mammography to women aged 50-74 years. It mentions that screening mammograms are available at three locations in the province: Eastern Health, Central Health, and Western Health. The program also offers public education sessions on breast health, breast navigation services from abnormal screen to diagnosis, and general information on breast health awareness. A photograph shows a woman undergoing a mammogram. The text concludes with "Women between the ages of 50-74 may self-refer to breast screening." and "To make an appointment:".

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018

20

Nova Scotia

Nova Scotia Cancer Care Program – www.nshealth.ca/cancer-care

The Nova Scotia Cancer Care Program is responsible for cancer programs and services across the province including: cancer prevention and early detection, treatment, follow-up, supportive care, palliative care and end-of-life care.



[Need a Family Practice?](#) [Students and Learners](#) [Our Programs and Services](#) [Your Visit](#) [Locations](#)

Nova Scotia Cancer Care Program

The Nova Scotia Cancer Care Program is responsible for cancer programs and services across the province including: cancer prevention and early detection, treatment, follow-up, supportive care, palliative care and end-of-life care.

[CONTACT US](#)

Preventing & screening for Cancer

[VIEW](#)

I have Cancer

[VIEW](#)

I am a family member or caregiver

[VIEW](#)

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018



Ontario

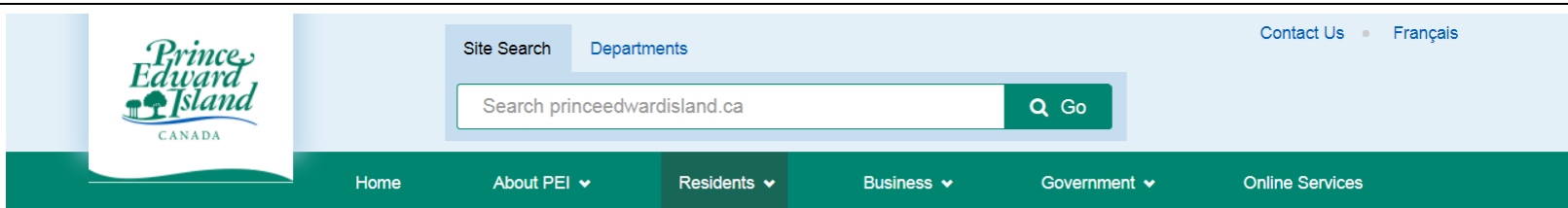
My Cancer IQ Web Site – www.mycanceriq.ca

For a cancer risk assessment and personalized action plan

Prince Edward Island

Health PEI - www.princeedwardisland.ca/en/topic/cancer-screening

Health PEI provides information on cancer screening and how to access screening services.



Government / Health PEI

Cancer Screening and Early Detection

Share this page: [Twitter](#) [Facebook](#) [Email](#)

Screening is an important part of your health routine.

Cancer screening is available for some types of cancers. Screening tests help identify and detect cancer early before there are symptoms, so that abnormal cells can be removed before they become cancer.

It is important to understand your risk of developing cancer and what type of screening is right for you. Talk to your family doctor and nurse practitioner about ways you can screen for cancer, and remember to discuss any history of cancer you may have in your family as this may increase your risk.

The following cancer screening programs and services are available in PEI:

- [Breast Cancer Screening Program](#)
- [Colorectal Cancer Screening Program](#)
- [Pap Test Clinics for Cervical Cancer Prevention](#)

For more information on cancer screening guidelines and recommendations in Canada, including on prostate and lung cancer screening, visit the [Canadian Task Force on Preventive Health Care](#).

Published date: March 20, 2016

Health PEI
One Island Health System

Additional Links

[Pap Screening Clinics](#) >

[PEI Breast Screening Prog...](#) >

[Pap Screening and Cervica...](#) >

[Colorectal Cancer Screeni...](#) >

Quebec

Ministère de la Santé et des Services sociaux

- www.quebec.ca/sante/conseils-et-prevention/depistage-et-offre-de-tests-de-porteur/programme-quebecois-de-depistage-du-cancer-du-sein/

- *The Ministère de la Santé et des Services sociaux launched the Québec Breast Cancer Screening Program (PQDCS) in May 1998. The PQDCS invites women aged 50 to 69 to have a mammogram every 2 years. A mammogram is the only screening exam that can reduce the number of deaths from breast cancer. The PQDCS's objective is to reduce breast cancer deaths in women between the ages of 50 and 69 by 25%.*

Québec

Vous êtes sur la version bêta de Québec.ca. [En savoir plus sur son développement](#)

Accueil / Santé / Conseils et prévention / Dépistage et offre de tests de porteur / Programme québécois de dépistage du cancer du sein

Programme québécois de dépistage du cancer du sein (PQDCS)

- Description
- Admissibilité
- Coût
- Démarche
- Ressources régionales
- Évaluation du Programme

Description

Le ministère de la Santé et des Services sociaux a lancé le Programme québécois de dépistage du cancer du sein (PQDCS) en mai 1998.

Le PQDCS invite les Québécoises âgées de 50 à 69 ans à passer une mammographie de dépistage du cancer du sein tous les 2 ans. La mammographie est le seul examen de dépistage qui permet de réduire le nombre de décès attribuables au cancer du sein.

À consulter aussi

[Dépistage du cancer du sein](#)

[Avantages, inconvénients et limites du dépistage par mammographie](#)

Saskatchewan

Saskatchewan Cancer Agency – www.saskcancer.ca

- *The Saskatchewan Cancer Agency operates prevention and early detection programs, conducts innovative research and provides safe, patient and family-centred care at our two cancer centres. Their mission is to provide leadership in health promotion, early detection, treatment and research for cancer.*



Saskatchewan Cancer Agency
A healthy population free from cancer

Search Find

Print This Page | Email to a Friend

Home Patients & Families Professionals Screening Research About Us Contact

SCA Home | Screening

Contents

- > Screening Program for Cervical Cancer
- > Screening Program for Breast Cancer
- > Screening Program for Colorectal Cancer
- > Cancer Prevention

Your donation stays in Saskatchewan.

YOU CAN MAKE A DIFFERENCE
DONATE TODAY!

WAYS OF GIVING



Screening



Font Size: a a a

Screening

Screening Program for Breast Cancer

The Saskatchewan Screening Program for Breast Cancer is a province-wide program for the early detection of breast cancer using digital mammography.

Screening Program for Colorectal Cancer

The Screening Program for Colorectal Cancer is a screening program for the detection of colorectal cancer. The program is currently being phased in across the province.

Screening Program for Cervical Cancer

The Screening Program for Cervical Cancer is a screening program of the Saskatchewan Cancer Agency dedicated to the prevention of cervical cancer.

Cancer Prevention

Research shows that at least 50 per cent of cancers can be prevented through a healthier lifestyle.

Privacy: Our Commitment to You

At the Saskatchewan Cancer Agency we understand that effective health care depends on the trust between patients/clients and caregivers. We respect your privacy by safeguarding your health information.



Inside Screening

www.geneticseducation.ca | @GECKOgenetics

Updated May 2018