



BC Cancer Agency

CARE + RESEARCH

An agency of the Provincial Health Services Authority

Family Practice Oncology Network

Practice Changing Breast Screening Guidelines

Dr. Christine Wilson,

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www.fpon.ca



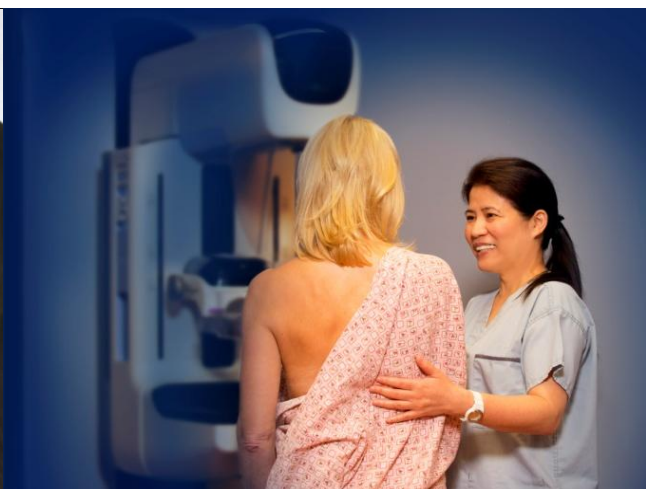
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SCREENING MAMMOGRAPHY PROGRAM

BREAST SCREENING RECOMMENDATIONS FOR WOMEN IN BRITISH COLUMBIA



Dr. Christine Wilson

MEDICAL DIRECTOR, SCREENING MAMMOGRAPHY PROGRAM

BC CANCER AGENCY

Faculty/Presenter Disclosure

- Faculty: Christine Wilson MD
- Relationships with commercial interests:
 - Medical Director Screening Mammography Program of BC (www.screeningbc.ca/breast)

Organized Screening Programs

There are 4 population-based screening programs in BC:

- Screening Mammography Program (SMP)
- Cervical Cancer Screening Program (CCSP)
- Colon Screening Program
- Hereditary Cancer Program (HCP)



Breast Screening Policy *(effective Feb 4, 2014)*

AGE	POLICY FOR <u>AVERAGE RISK</u> WOMEN
40-49	<p>Health care providers are encouraged to discuss the benefits and limitations of screening mammography with asymptomatic women in this age group.</p> <p>If screening mammography is chosen, it is available every two years. The patient will be recalled by the program at the recommended interval.</p> <p>A health care provider's referral is not required, but is recommended.</p>
50-74	<p>Routine screening mammograms are recommended every two years for asymptomatic women at average risk of developing breast cancer. Patient will be recalled at the recommended interval.</p>
75+	<p>Health care providers are encouraged to discuss the benefits and limitations of screening mammography with asymptomatic women in this age group.</p> <p>Health care providers should discuss stopping screening when there are comorbidities associated with a limited life expectancy or physical limitations for mammography that prevent proper positioning.</p> <p>If screening mammography is chosen, it is available every two to three years. The patient will not be recalled by the Screening Mammography Program of BC.</p> <p>A health care provider's referral is not required, but is recommended.</p>

Breast Screening Policy *(effective Feb 4, 2014)*

AGE	POLICY FOR <u>HIGHER THAN AVERAGE RISK</u> WOMEN
<i>Higher than average risk is defined as having one 1st degree relative (mother, sister, daughter, father, brother) with breast cancer</i>	
40-74	Routine screening mammograms are recommended every year . The patient will be recalled by the program at the recommended interval. A health care provider's referral is not required.

Breast Screening Policy *(effective Feb 4, 2014)*

AGE	POLICY FOR <u>HIGH RISK</u> WOMEN
<40	<p>SMP accepts women at high risk of developing breast cancer who are under age 40 with a physician referral, provided they do not have breast implants or an indication for a diagnostic mammogram.</p> <p>These may include women with a confirmed BRCA1 or BRCA2 mutation, prior chest wall radiation or women who have a very strong family history* of breast cancer.</p> <p><i>*A very strong family history of breast cancer may be defined as 2 cases of breast cancer in close female relatives (mother, sister, daughter, aunt, grandmother, great-aunt) on the same side of the family, both diagnosed before age 50; or 3 or more cases of breast cancer in close female relatives (mother, sister, daughter, aunt, grandmother, great-aunt) on the same side of the family, with at least one diagnosed before age 50.</i></p>
30-74	<p>The BC Cancer Agency recommends that all women who received mantle radiation for Hodgkin lymphoma adhere to the following breast cancer screening routine:</p> <ul style="list-style-type: none"> • Annual breast magnetic resonance imaging (MRI) starting at age 30 or 10 years after radiation treatment until the age of 65; • Annual screening mammography starting at age 30 or 10 years after radiation treatment until the age of 74.

Other Breast Health Recommendations

(effective Feb 4, 2014)

PROCEDURE	RECOMMENDATION
Breast Self Exam (BSE)	<p>Routine breast self examinations (when used as the only method to screen for breast cancer) are not recommended for asymptomatic women at average risk of developing breast cancer.</p> <p>Women should be familiar with their breast texture and appearance and bring any concerns to their health care provider.</p>
Clinical Breast Exam (CBE)	<p>There is insufficient evidence to either support or refute routine clinical breast exams (in the absence of symptoms) alone or in conjunction with mammography. The patient and her health care provider should discuss the benefits and limitations of this procedure to determine what is best for the patient.</p> <p>This excludes women with prior breast cancer history.</p>
Magnetic Resonance Imaging (MRI)	<p>Routine screening with breast MRI of women at average risk of developing breast cancer is not recommended.</p> <p>Exceptions are made for higher than average risk groups including: BRCA1 and/or BRCA2 carriers, first degree family relatives of BRCA1 and/or BRCA2 who choose not to be tested, and those with prior Hodgkin's disease (or other lymphoproliferative diseases) at a young age (between the ages of 10-30 years old) treated with chest radiation.</p>

Screening Mammography Program

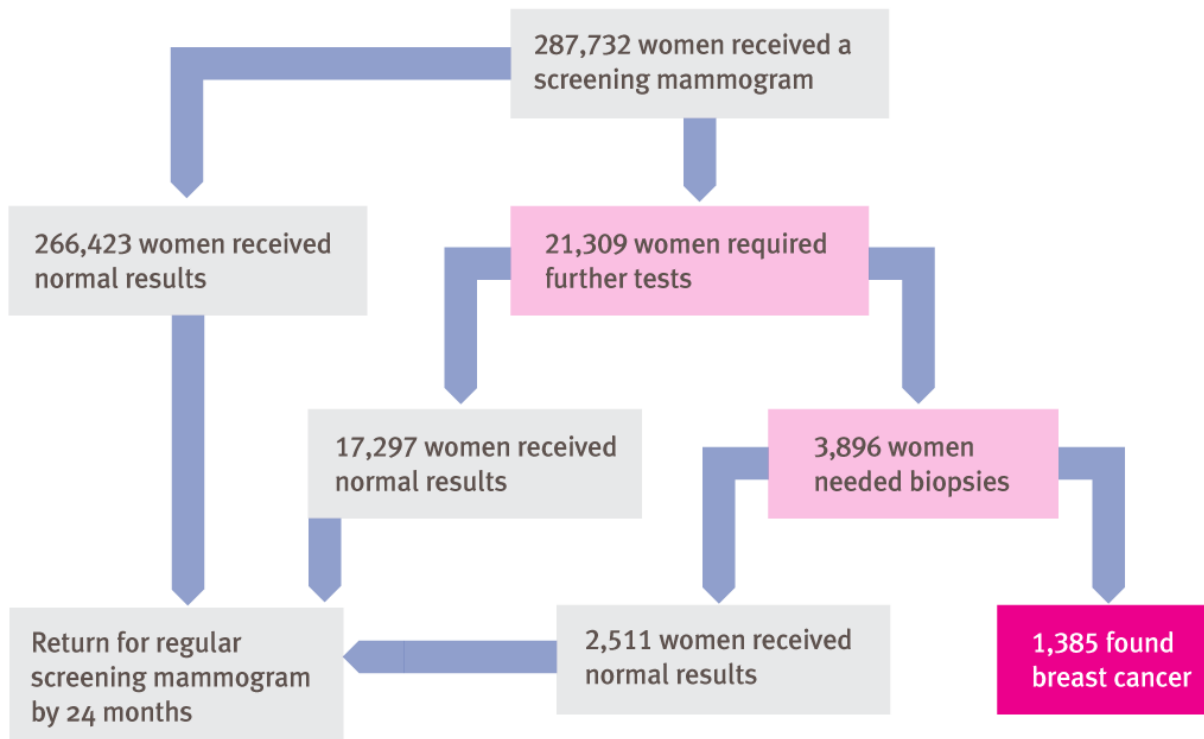
TARGET POPULATION:	Women age 50-69 years <i>Service also available to women age 40-49 & 70+</i>
SCREENING TEST:	Two-view screening mammograms offered across BC
RESULTS:	Screen read by a radiologist Results mailed to both patient and her health care provider
REMINDER:	Mailed to patient when time to re-screen

Program Information

- There are 37 centers and 3 mobiles that perform screening mammography in BC
- Women age 40-74 can book appointments directly with the program
- 81% of cancers are found in women age 50 and over
- Participation rate for ages 50-69 is about 52%

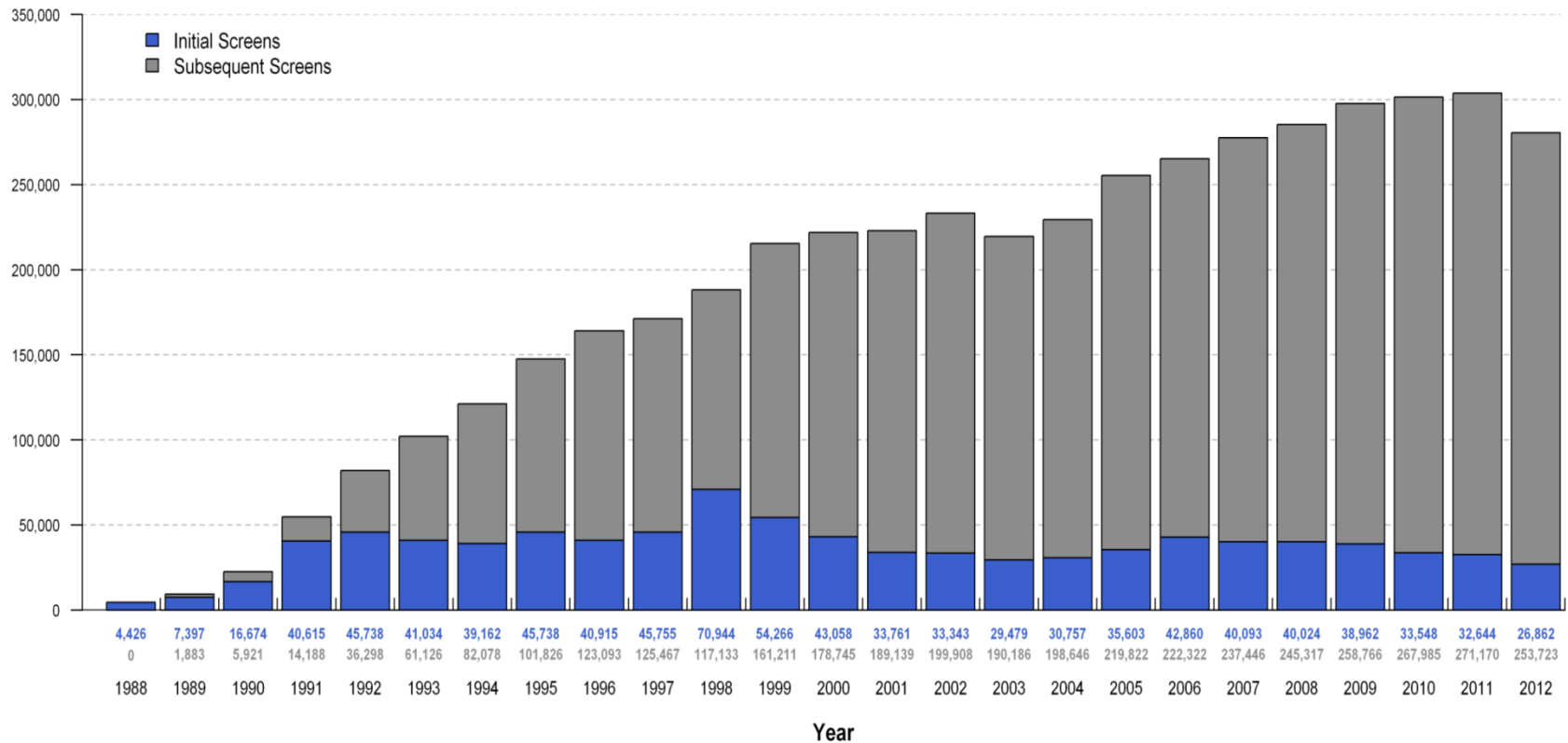
Screening Mammography Program

2013 SMP Statistics

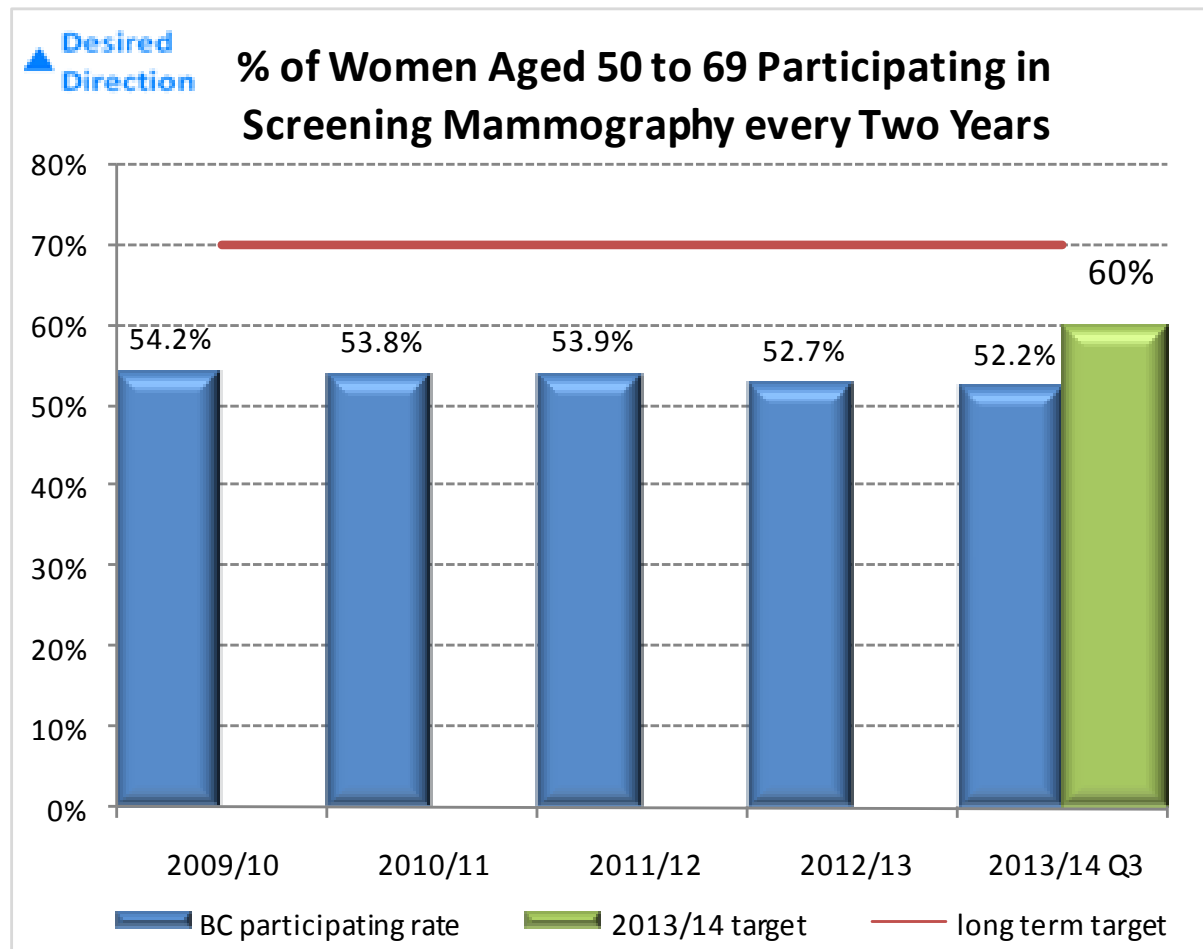


SMP Screening Volumes

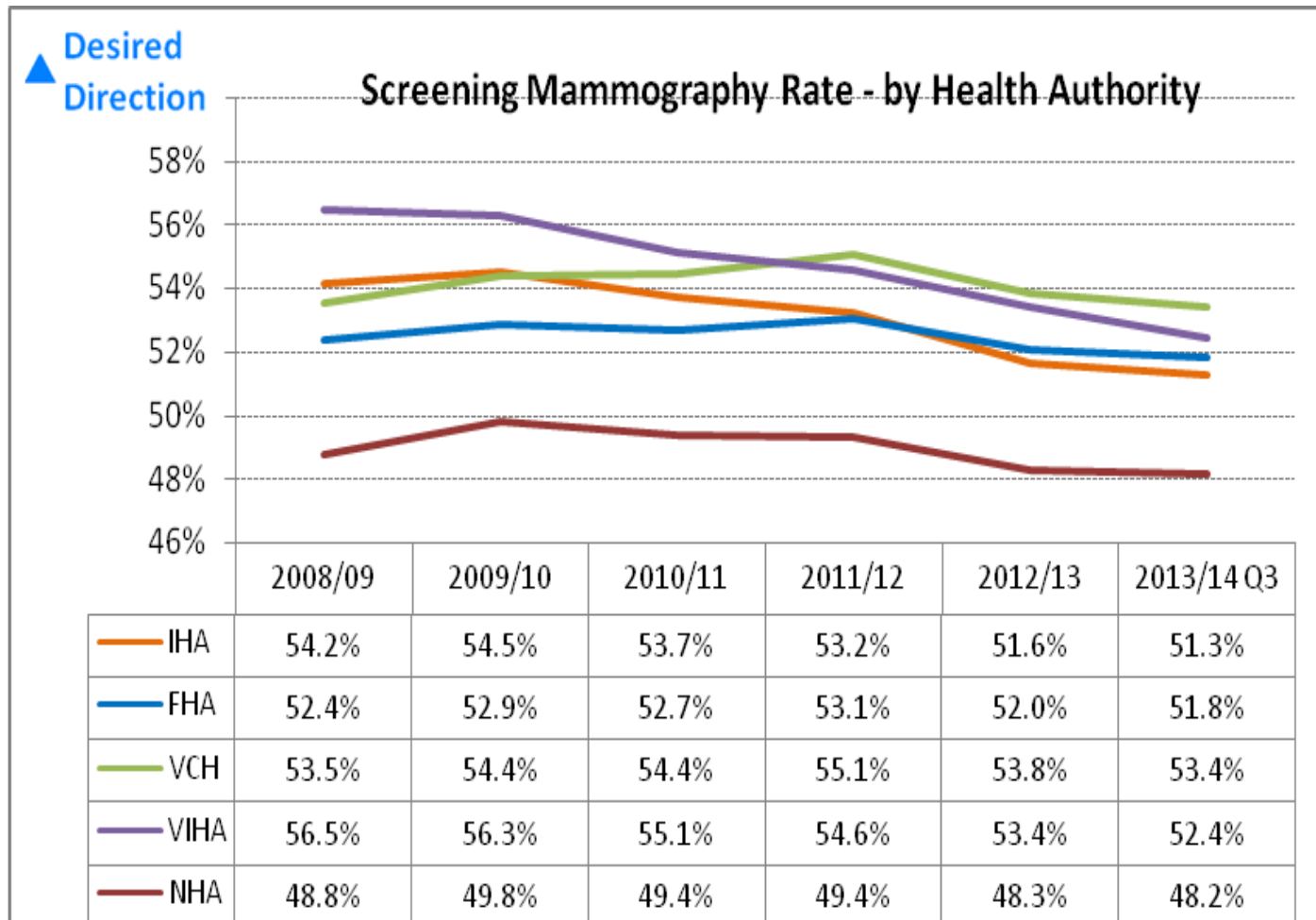
SMP Screening Volume: 1988 - 2012, ages 40-79, by screen type and calendar year



SMP Screening Participation



SMP Participation Rates by HA



Relative Survival Breast Cancer (women) %

	Australia	Canada	BC	Denmark	Norway	Sweden	UK
1 Year							
1995-99	95.8	95.9	97.1	93	95.4	97.6	90.4
2000-02	96.3	96.2	96.5	94.3	95.8	98.4	92.4
2005-07	96.7	96.3	97.1	95.0	96.6	98.0	94.2
5 Years							
1995-99	85.0	85.3	87.1	76.9	81.8	86.7	74.8
2000-02	87.0	86.4	87.5	81.5	83.8	89.3	78.8
2005-07	88.1	86.3	89.1	82.4	85.5	88.5	81.6

Coleman et al Lancet Dec 2010

Breast Cancer Screening

- Over Diagnosis - a neoplasm that would never become clinically apparent without screening before a patient's death.
- Currently no way to confidently distinguish those cancers that are occult from those that will progress so all are treated

**National Cancer Institute website – April 7, 2014*

Breast Cancer Screening – Over Diagnosis

- BC data
- Incidence rates of breast cancer before and after initiation of population screening
- Participation-based estimates of over diagnosis to be 5.4% for invasive disease alone and 17.3% when DCIS was included.

Breast Cancer Screening – Over Diagnosis

- Participants had higher rates than non participants but lower rates after screening stopped
- Population incidence rates for invasive cancer increased after 1980
- By 2009 returned to 1970's levels in women under 60
- Remained elevated in women 60 to 79

Breast Cancer Screening – Over Diagnosis

- Rates of DCIS increased in all groups
- Extent of over diagnosis of IC modest and occurred rarely over 60 y – should be considered in screening decisions

Incidence of breast cancer and estimates of over diagnosis after the initiation of population based screening program – A. Coldman and N. Phillips, CMAJ, July 9, 2013.

Breast Cancer Screening: False Positives

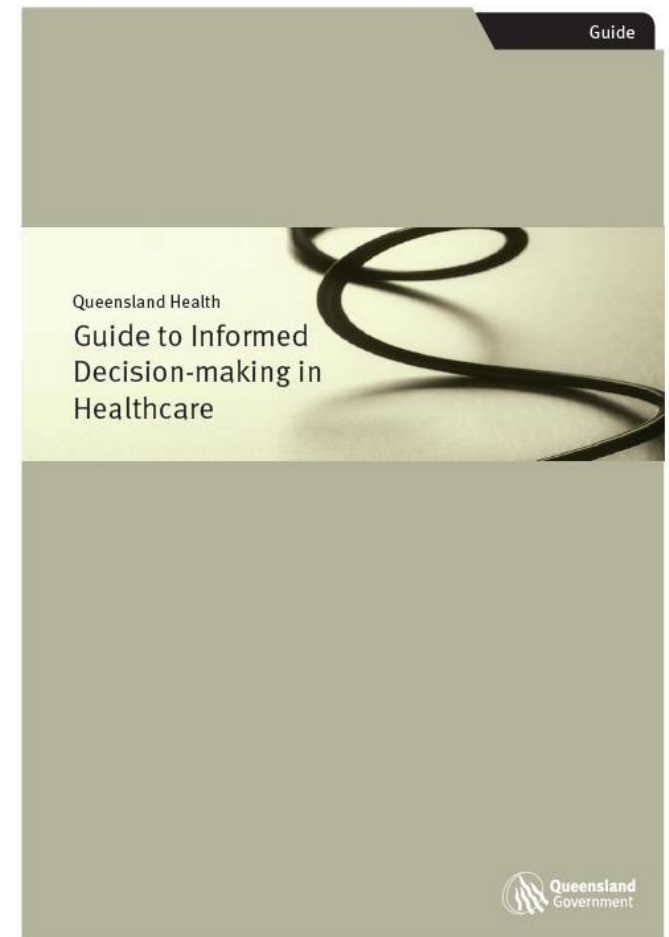
Age group	40-49	50-59	60-69	70-79
False +ve	88	67	55	50
False +ve biopsy	8.5	6.7	5.6	5.7
Cancer detected	2	4	6	8

** Per 1000 women screened – BCCA SMP*

Informed Decision Making

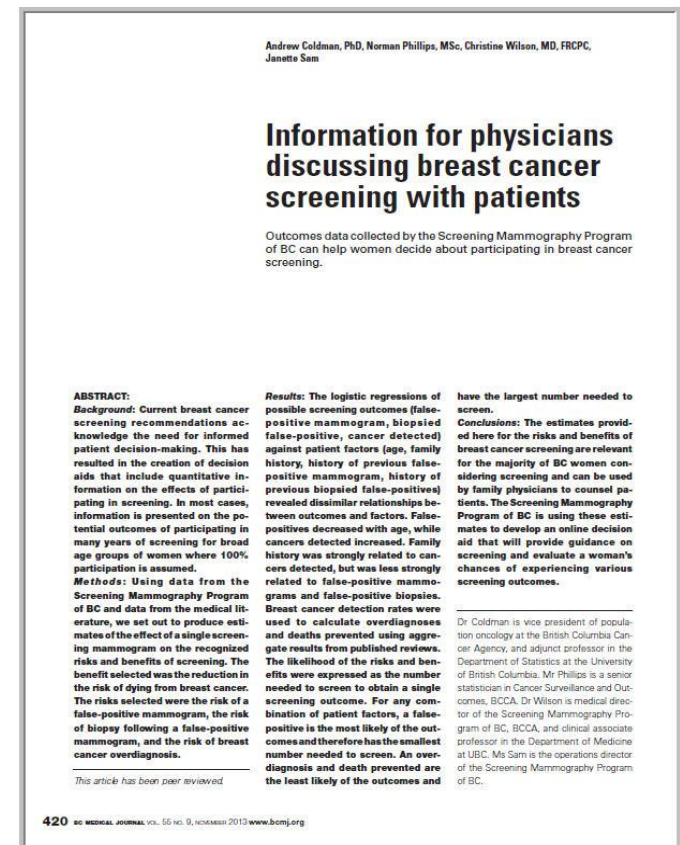
Why informed decision making?

- Informed decision making broadens the approach beyond consent
- It provides information to support a patient to make a decision about the healthcare offered e.g. should I have this test or not?
- It is the foundation of patient centered care
- It takes in to account a patient's values, beliefs and priorities



Communicating Benefits & Limitations

- In 2013 the BC Cancer Agency published a peer reviewed article “*Information for physicians discussing breast cancer screening with Patients*”. BC Medical Journal
- Used data from the Screening Mammography Program of BC and data from the medical literature to produce estimates of the effect of a single screening mammogram on the recognized risks and benefits of screening.



Informed Decision Making:

Communicating Benefits & Limitations

- The BCMJ felt the information would be widely appreciated by physicians and developed a supporting tool doctors could use to share the information with their patients
- Reviews the benefits and harms of screening

Screening Outcome Rates (per 1000)

Screened Population	40-49	50-59	60-69	70-79
Cancers Detected	2	4	6	8
False Positive ¹	88	67	55	50
False Positive Biopsy ²	8.5	6.7	5.6	5.7

Available at www.screeningbc.ca/breast

The screenshot shows a page from bcmj.org titled "health notes" with the main heading "Breast cancer screening: Is it right for you?". It includes a table of screening outcome rates per 1000 women, a glossary, and various informational paragraphs. The table data is as follows:

Screening outcome rates (per 1000 women)*				
Age group	40-49	50-59	60-69	70-79
False-positive	88	67	55	50
False-positive biopsy	8.5	6.7	5.6	5.7
Cancer detected ¹	2	4	6	8

* BC Cancer Agency Screening Mammography Program

GLOSSARY


- biopsy** – Taking a small sample of tissue to help make a diagnosis
- false-positive** – The result of a screening test that suggests there is disease when in fact none is present
- overdiagnosis** – Diagnosis of a disease that will not affect your life expectancy or quality of life
- screening** – A test done on a healthy person to find an unsuspected disease

www.bcmj.org/health-notes BC MEDICAL JOURNAL 1 of 1

Informed Decision Making:

Communicating Benefits & Limitations

Online Breast Cancer Decision Aid: www.screeningbc.ca/breast

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Breast Cancer Screening Decision Aid


Is Screening right for you?

Answer the following questions to determine what the probable results from your screening will be.

- How old are you?
- When was your last screening mammogram?
- Do you have a first degree relative (mother, sister, or daughter) with breast cancer?
- Have you had a breast biopsy that was determined to be benign (not cancer)?
- Have you ever been diagnosed with breast cancer?
- Have you ever received an abnormal result (false positive) from a screening mammogram?

SUBMIT ANSWERS



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Breast Cancer Screening Decision Aid

If you are between the ages of **40-49** **without a family history of breast cancer**, you are encouraged to talk to your doctor about the benefits and limitations of screening mammography. If screening is chosen, it is available every **two years**. A doctor's referral is not needed but is recommended.

A family history of breast cancer is one first degree relative (mother, sister, or daughter) with breast cancer.

Possible Outcomes of Your Next Mammogram

Based on the history information that you entered, the following statistics indicate your likelihood of various outcomes for your next screening.* We recommend taking this information to your doctor to assist you in deciding if screening is right for you.

Your likelihood of having a breast cancer found is	0.4%	That means 4 out of 1000 women screened with a history similar to yours would have a breast cancer detected at their next screening mammogram. For comparison, on average every year in BC, 4 out of every 1000 women ages 50-59 screened will have a breast cancer detected.
Your likelihood of having a false alarm is	4.4%	That means 44 out of 1000 women screened with a history similar to yours would be called back for further testing which will turn out to be normal. For comparison, on average in BC every year, 55 out of every 1000 women ages 50-59 screened will have a false alarm.
Your likelihood of having a biopsy false alarm is	0.4%	That means 4 out of 1000 women screened with a history similar to yours would need a biopsy which will turn out to be normal after testing. For comparison, on average in BC every year, 55 out of every 1000 women ages 50-59 screened will have a biopsy which will turn out to be normal.

Informed Decision Making:

Communicating Benefits & Limitations

Know the benefits...

Mammograms save lives

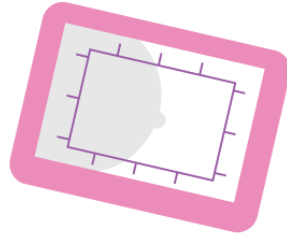
Mammograms help find cancer when it is small, allowing more treatment options.

Mammograms are effective

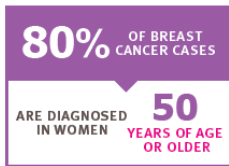
25%
REDUCTION
IN DEATHS



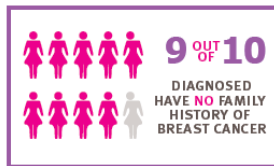
Research has shown a 25 per cent reduction in deaths from breast cancer among women who are screened regularly.



Your breast cancer risk increases with age



AGE	CANCERS DETECTED
40-49	2 out of 1000
50-59	4 out of 1000
60-69	6 out of 1000



...and understand the limitations.

Mammograms are not perfect

Not all breasts look the same on a mammogram – a woman's age or breast density can make cancers more or less difficult to see. In general, screening mammograms are more effective in women over 50 because they tend to have less dense breast tissue.

Mammograms may lead to additional testing

On average, 7 per cent of women screened will require additional testing to look more closely at a specific area of the breast. This does not mean that a cancer was found – over 95 per cent of the women recalled for additional testing **do not** have cancer.

Mammography does not detect all cancers

Some cancers cannot be detected on a mammogram due to the location of the cancer or the density of the breast tissue. About 25 per cent of cancers in women age 40-49 are not detectable by a screening mammogram, compared with about 10 per cent in women older than 50.

Other Breast Screening Initiatives



Five Plus Campaign



- Launched in October 2014
- Five Plus initiative is a part of the Provincial Breast Health Strategy, which unites various health agencies and partners to improve breast cancer screening, diagnosis and prevention across BC.

Mantle Radiation

- Mantle radiation treatment for Hodgkin lymphoma is a known risk factor for secondary breast cancer.
- The BC Cancer Agency recommends that all women who received mantle radiation for Hodgkin lymphoma adhere to the following breast cancer screening routine:
 - Annual breast magnetic resonance imaging (MRI) starting at age 30 or 10 years after radiation treatment until the age of 65;
 - Annual screening mammography starting at age 30 or 10 years after radiation treatment until the age of 74.
- In November, letters will be sent to former Hodgkin's lymphoma patients who have had mantle radiation (and to their GPs), reminding them of these screening recommendations.

Questions?

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