CANADIAN CANCER SURVIVOR NETWORK

The Breast Cancer Screening Landscape in Canada

Progress, Gaps and Opportunities to Improve Early Detection

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Today: A Look At The Canadian Landscape In Breast Screening

- Breast Cancer- why screen?
- What is the current state of breast screening across Canada?
- How have guidelines driven inequity?
- Best practices and gaps
- Future state

Breast Cancer by the Numbers

32,400

Canadian women estimated to be diagnosed in 2026

5,400

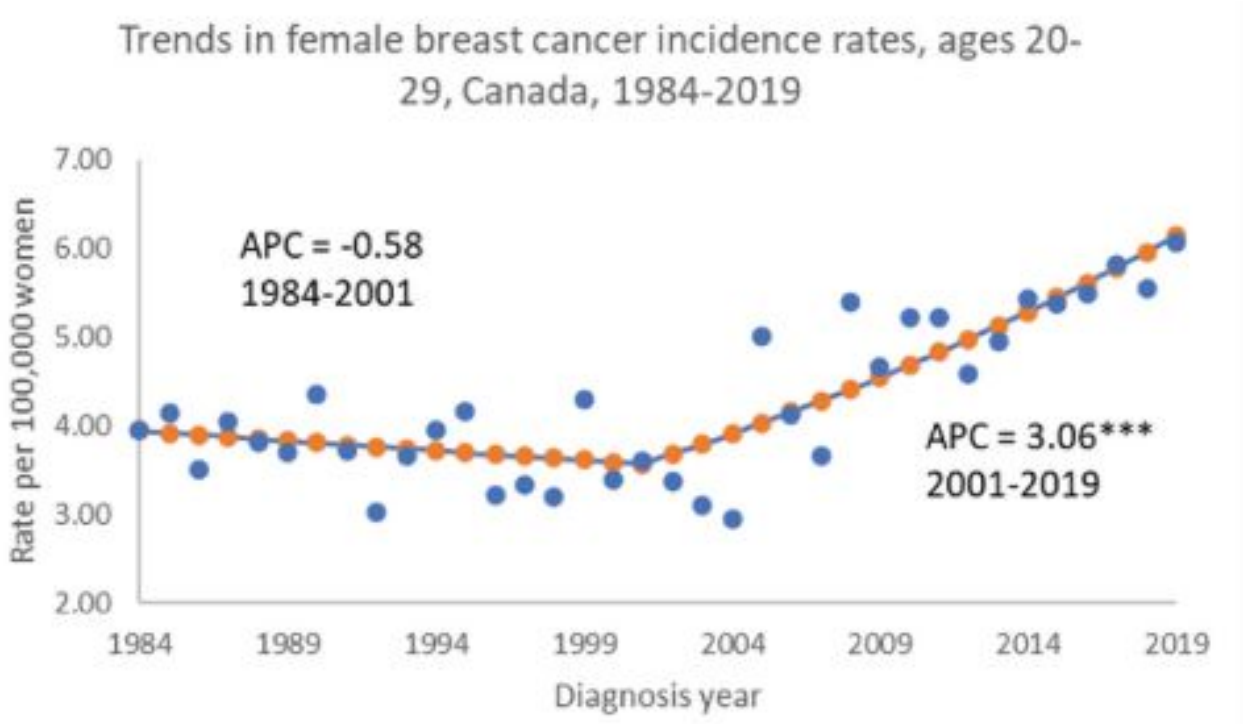
Canadian women estimated to die from breast cancer in 2026

1 in 8

Women expected to develop breast cancer in their lifetime

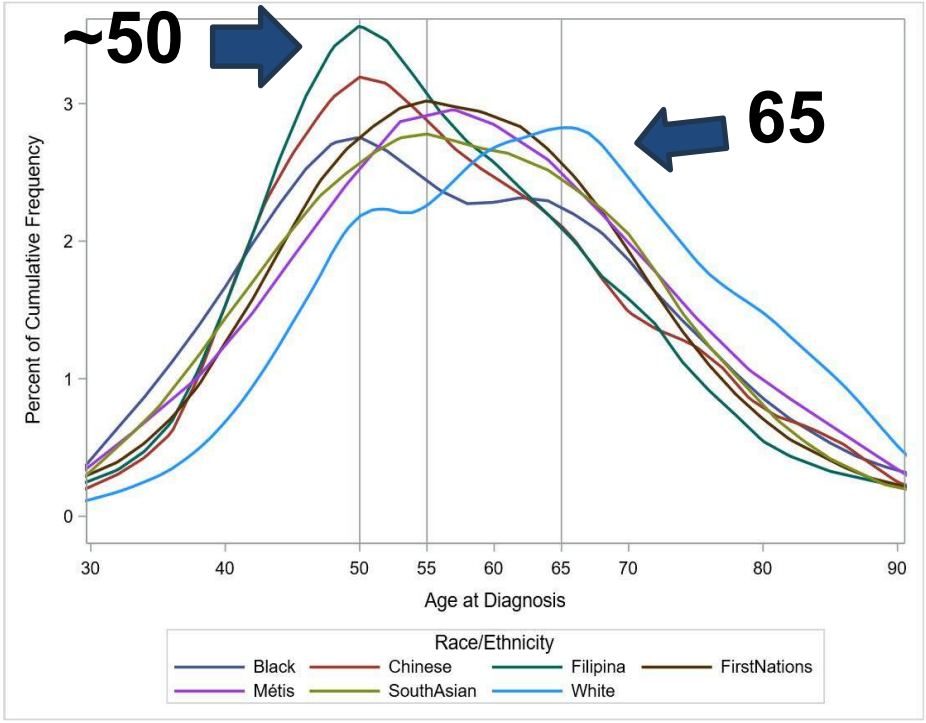
Breast Cancer Rates Are Rising

- Breast cancer incidence has increased for all age groups, particularly among women under age 50.
- Increases:
  - 20s: 56%
  - 30s: 12.5%
  - 40s: 9%



Breast Cancer Differs By Race And Ethnicity

- **Age**
  - Peak age of diagnosis: 65 White women; ~50 all other race/ethnicities
  - 16% of cases younger than 50 in White women, ~30% in all other race/ethnicities
- **Subtype**
  - More aggressive subtypes in Black women
- **Stage**
  - More advanced stage
- **Mortality**
  - Higher in Black women in 40s and 50s
  - 50% higher in Métis women in 60s
  - 20% higher in First Nations in 60s



Breast Cancer Geography

Incidence:

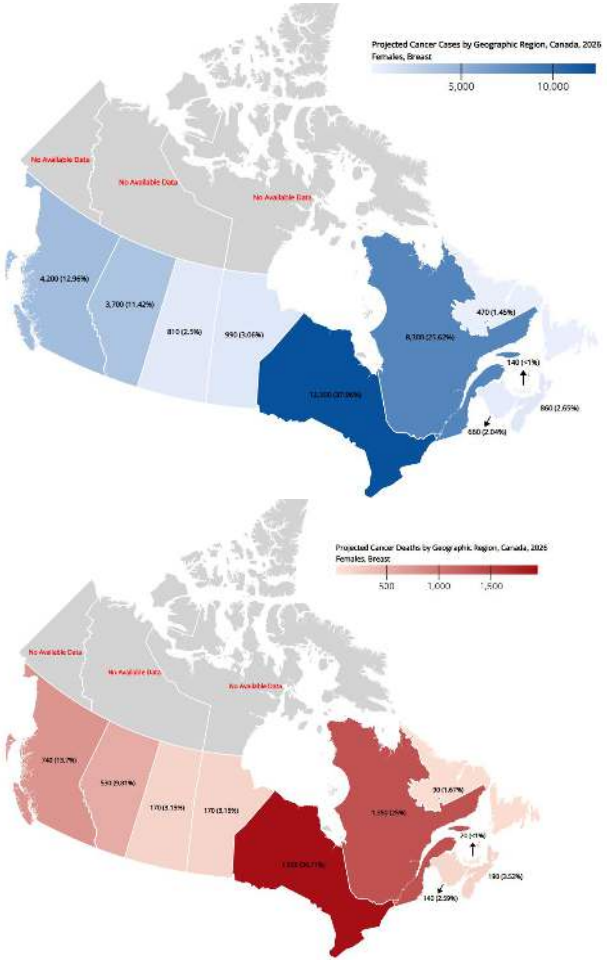
-Higher in certain urban centres with immigrant and racialized populations

-higher in rural regions in ON, Prairies and QC

-Stage at diagnosis varies by geography

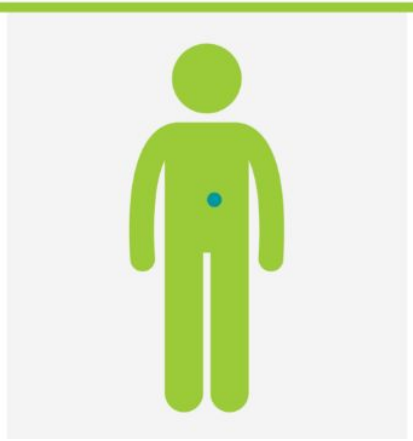
Mortality:

-highest in rural eastern regions and lowest in urban centres

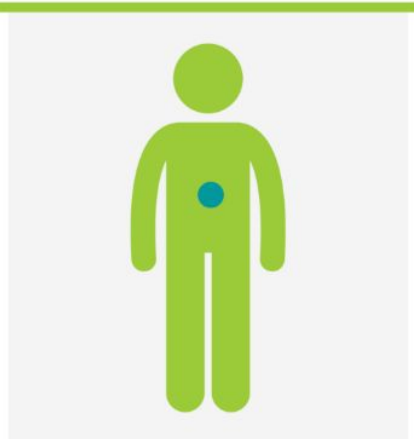


https://cancerstats.ca/?la=enSD

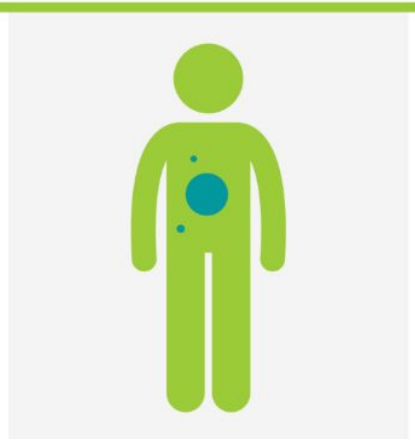
Cancer Stages



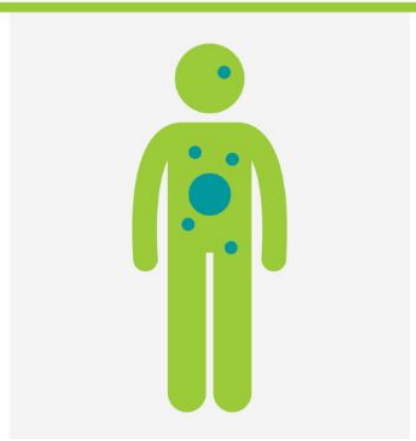
Stage I
- Small
- Localised



Stage II
- Larger
- Localised



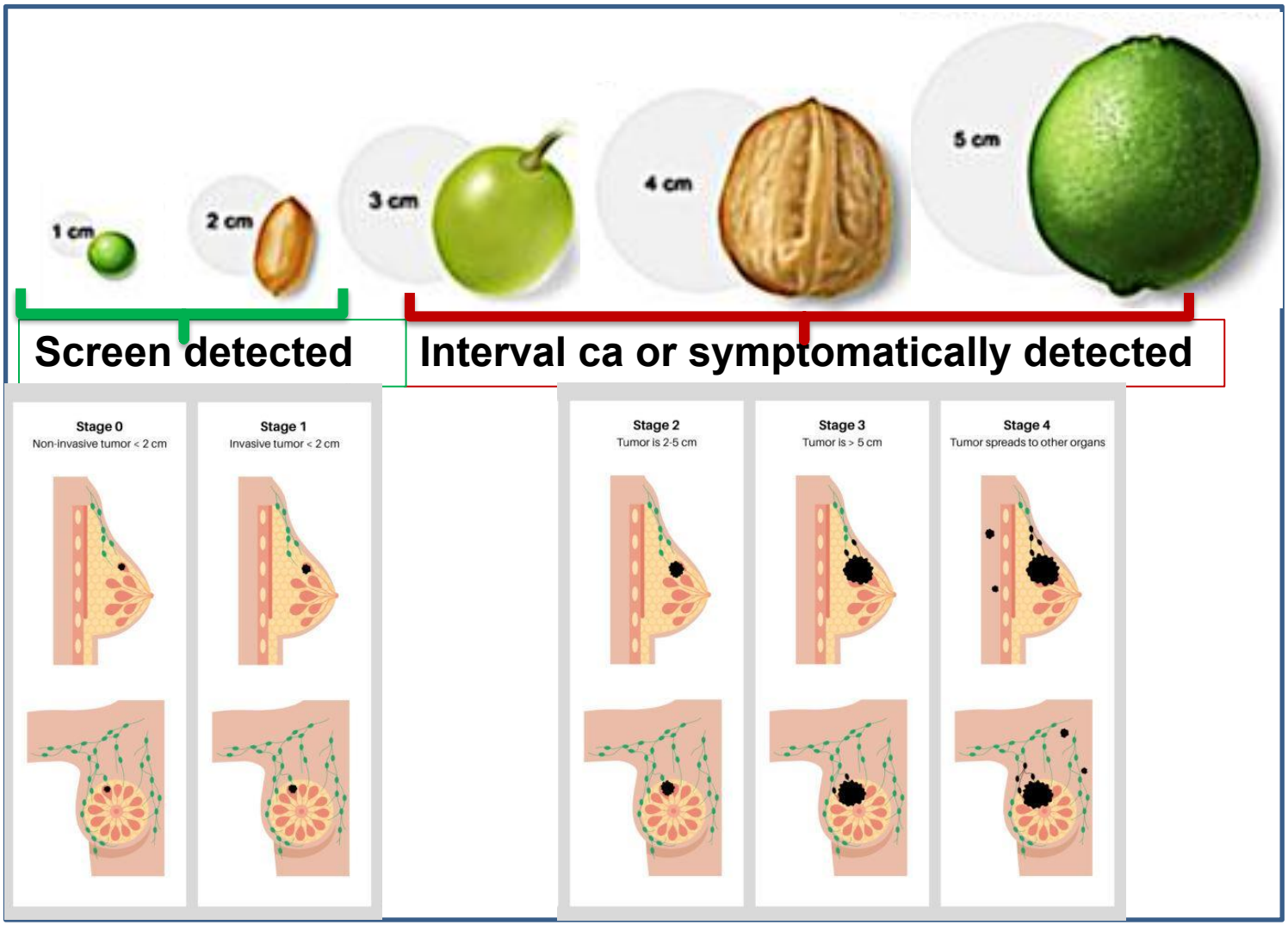
Stage III
- Larger
- Regional
- Lymph nodes



Stage IV
- Spread to other organs or area of body
- Typically not curable

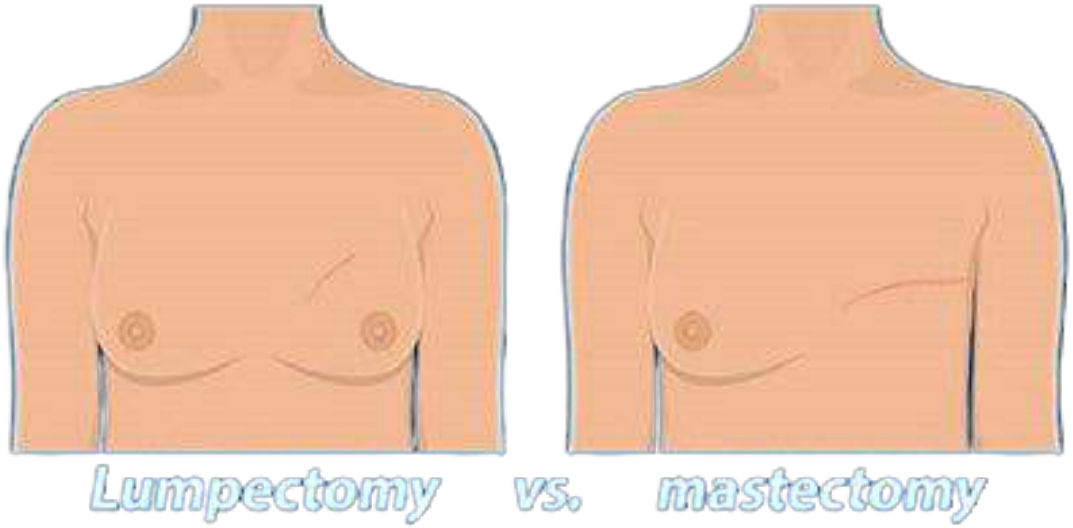
Survival decreases, treatments more intense

Early Detection=
Earlier Stage



Early Detection=
Less Treatment and Side Effects





Earlier Detection= Better Survival

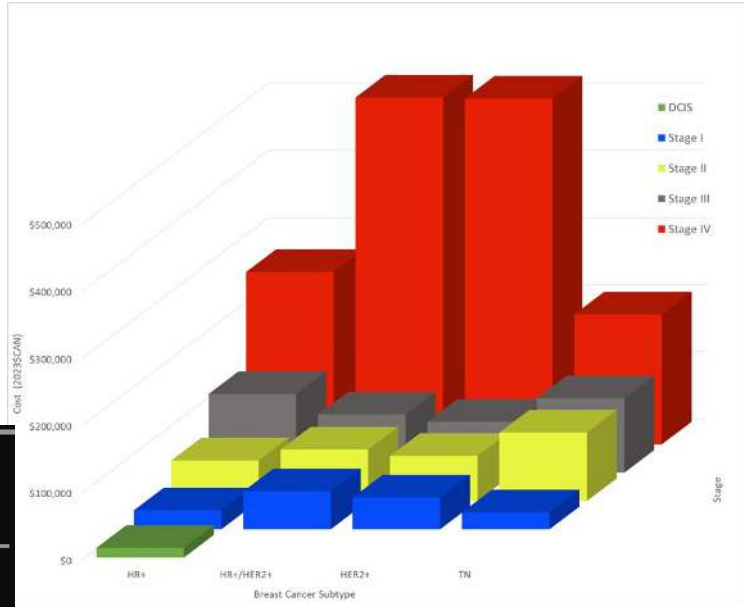


Stage 1	Stage 2	Stage 3	Stage 4
100%	93%	72%	30%

Earlier detection results in less treatment costs

Av. Cost across subtypes (2023 $CAN)

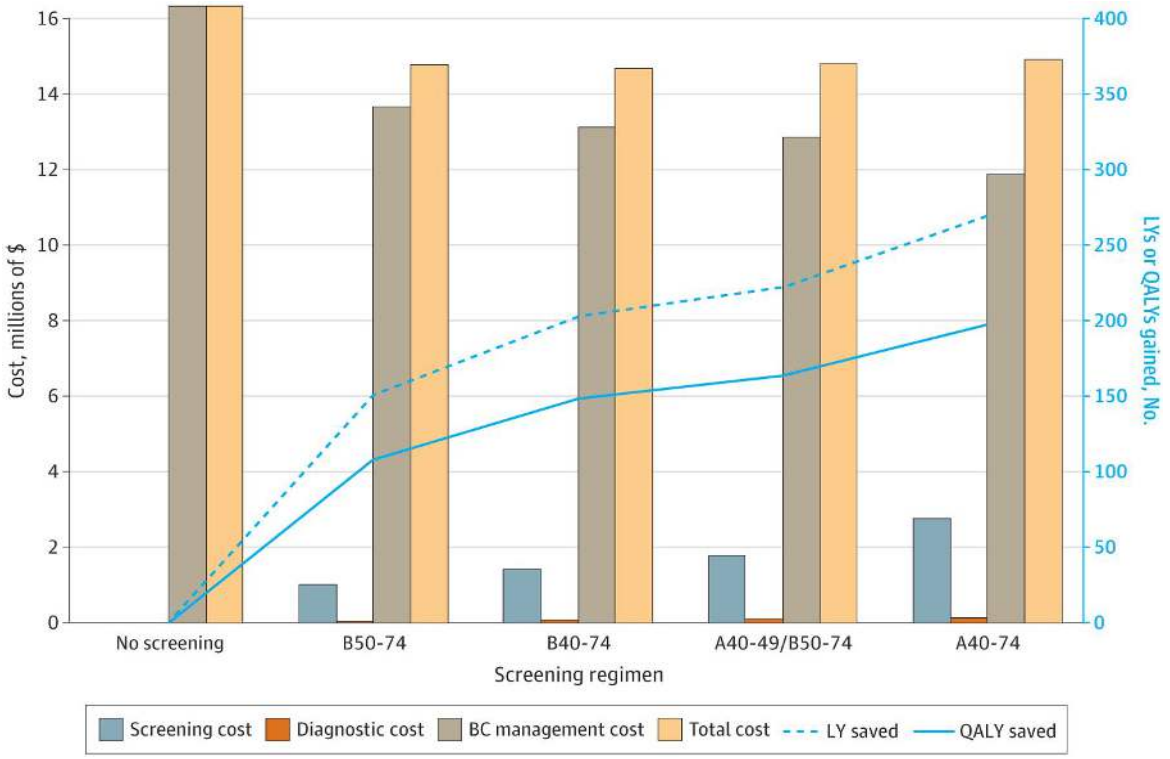
- Stage I: $39,263
- Stage II: $76,486
- Stage III: $97,668
- Stage IV: $370,398



Subtype	Stage				
	DCIS	I	II	III	IV
HR+	$14,505	$28,201	$60,289	$117,269	$256,693
HR+/HER2+		$56,401	$76,547	$86,653	$516,415
HER2+		$47,201	$67,136	$75,954	$514,992
TN		$25,247	$101,811	$110,798	$193,490

Wilkinson, A.N.. Seely JM, Rushton, et al. (2023). *Current Oncology*

Modelling: Starting Screening at Age 40 Results in Cost Savings



Screening saves $417 million annually.



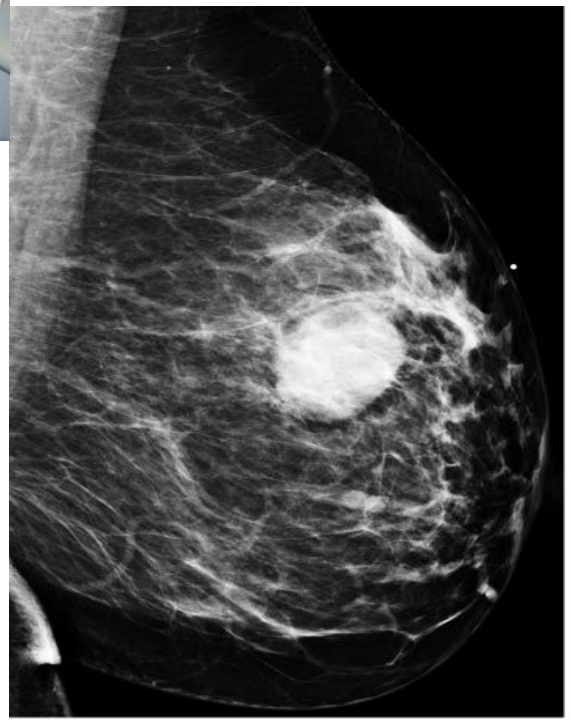
Wilkinson A, Mainprize J, Yaffe M, Seely JM, Rushton M. JAMA Netw Open. 2025

Screening = Earlier Detection

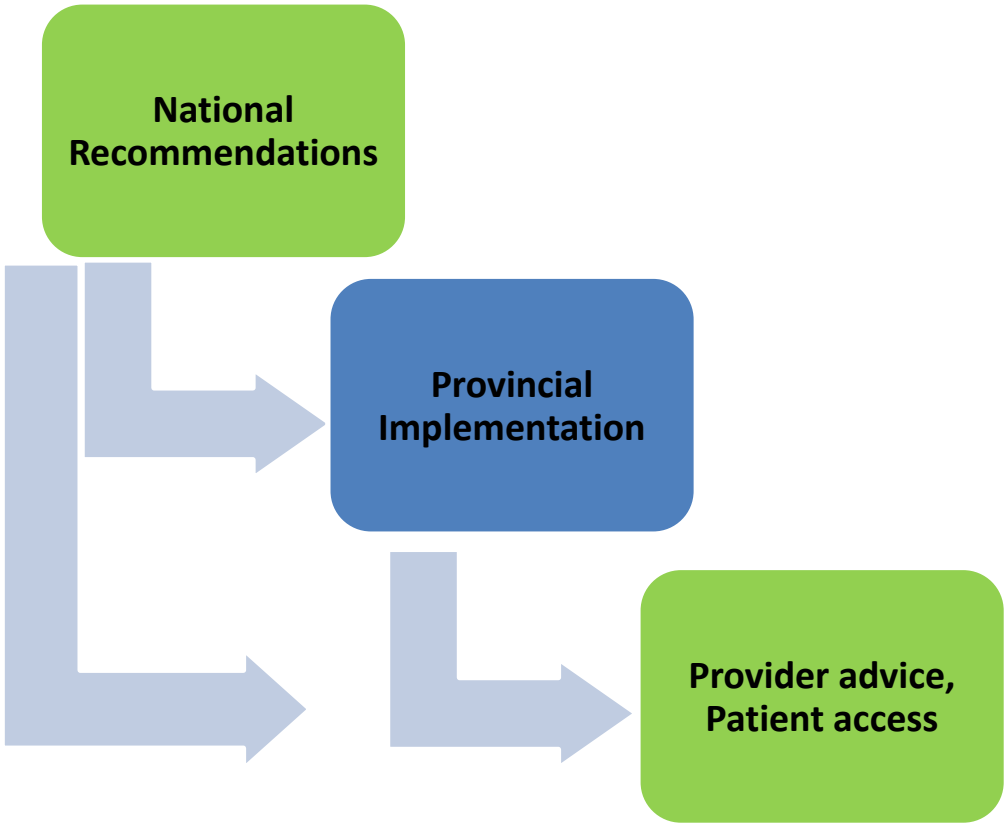
Mammograms

- Xray of breast tissue
- Cancers are seen because:
  - More dense (white)
  - Calcifications
  - Distortion of normal tissue
- Detectable when 2mm and larger
- Equivalent to 7 weeks natural radiation exposure





Who Gets Screening?
The Guideline Landscape



- National recommendations historically: Canadian Task Force on Preventive Health Care
- Over-reliance on old evidence/RCTs, limited inclusion of experts= outdated screening recommendations
- As a result, provinces independently instituting screening programs with significant inequities in access

https://www.canada.ca/en/public-health/news/2025/03/statement-from-the-minister-of-health.html

Fallout: Differences Across Provinces

- Age to start screening
- Frequency of screening
- Invitations and reminders to screen
- Breast density notification
- Availability of supplemental screening
- Screening for transgender and gender diverse individuals
- Age that screening ends
- Definition of high risk
- High risk program
- Adoption of technology (DBT)

Fallout of Historical Guideline Process: Inequity

A possible score of 7:

- Self referral at 40
- Annual screening 40-49
- Breast density notification
- Annual mammogram for D
- Supplemental screening
- Self referral older than 74
- High risk program

Not included:

- Surveillance post breast cancer survivorship
- Technology



https://densebreastscanada.ca/wp-content/uploads/2026/03/The-State-of-Breast-Cancer-Screening-in-Canada.pdf

Guideline Evolution In Canada

- Controversy over 2024 Breast screening guidelines led Minister of Health to suspend Task Force
- External Expert Review reviewed the Task Force and recommended modernisation
- Task Force disbanded
- **National Advisory Committee on Preventive Health Services** launched June 2026, with goal to:
  - Improve governance and accountability- external advisory body to PHAC
  - Strengthen collaboration with provinces and territories
  - Embed equity considerations
  - Improve involvement of Subject Matter Experts

National Advisory Committee on Preventive Health Services: Opportunity

PRIORITIZE

Make breast cancer screening an early priority for the new national advisory process.

PERSONALIZE

Move beyond age alone and incorporate individual risk.

ADDRESS EQUITY

Guidance should work across populations, provinces and geography.

STAY CURRENT

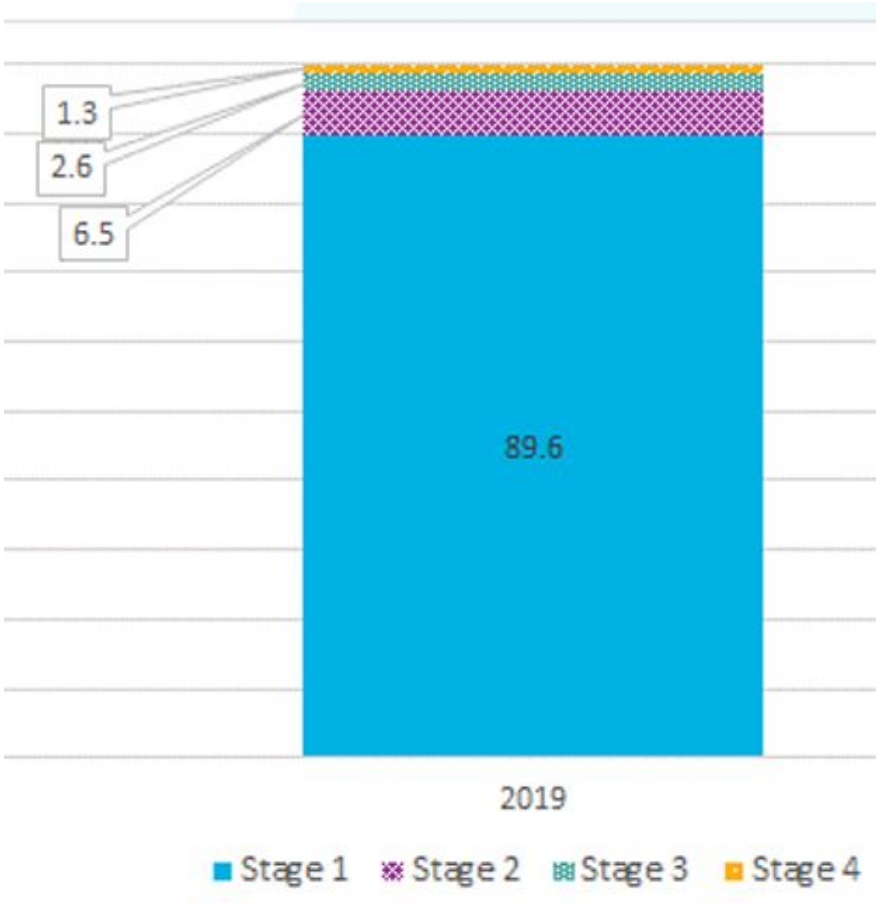
Build a process responsive to emerging evidence and technology.

Canada has a chance to build guidance around current evidence, individual risk and equity

Breast Screening Best Practices and Realities

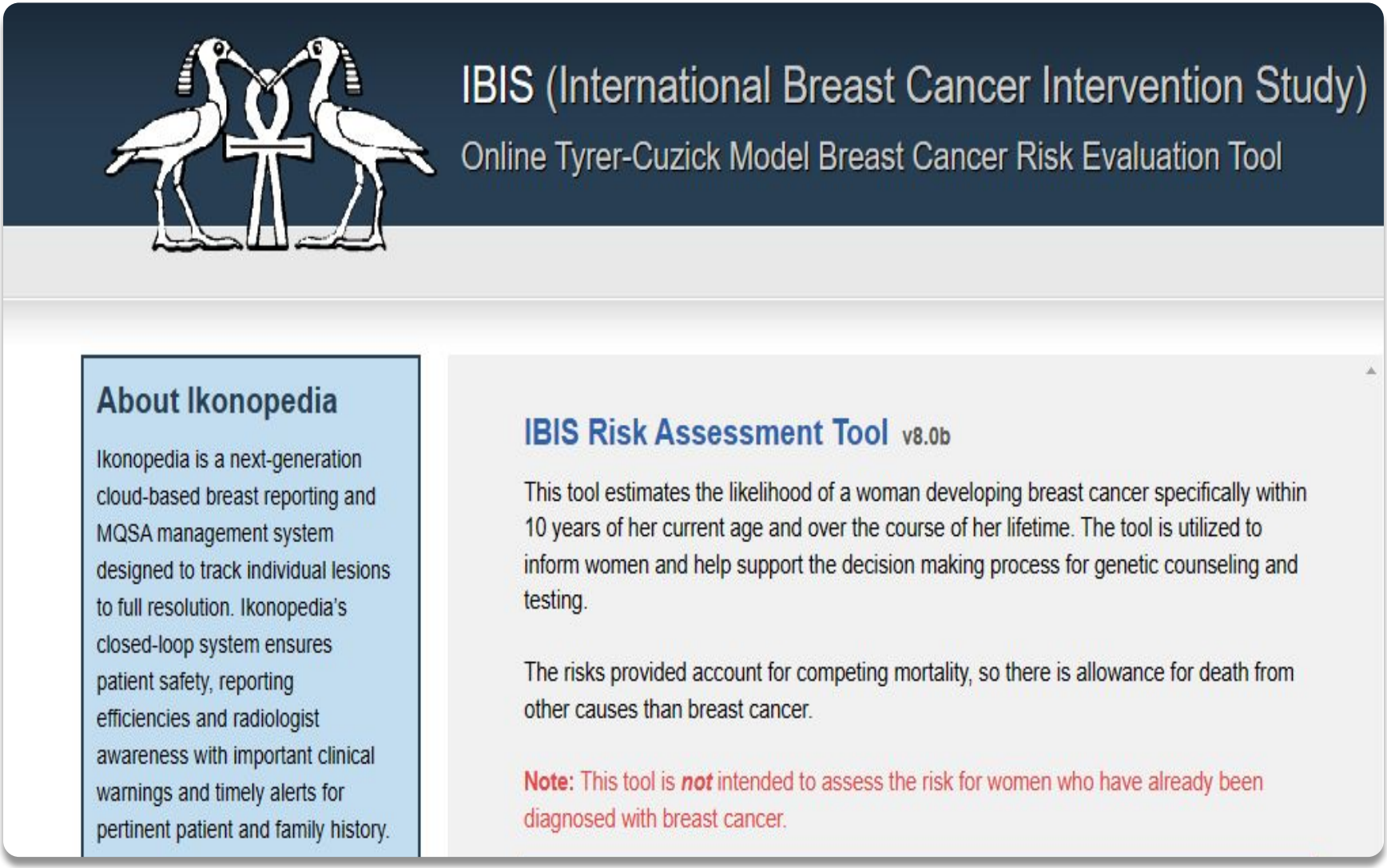
Age 25-30

- Risk assessment age 25-30 to assess overall lifetime risk
- Identify those who are high risk
- Start high risk screening age 25-30
- Yearly MRI+mammo



Stage at Diagnosis in OBSP High Risk Program

Calculating your risk:
IBIS Risk Assessment Tool



Inequities In Screening: High Risk

- Organized high risk programs only in:
  - NS
  - ON
  - AB
- Geographic access to MRI
- Some access through genetics programs in BC

What we need to see: Age 25-30

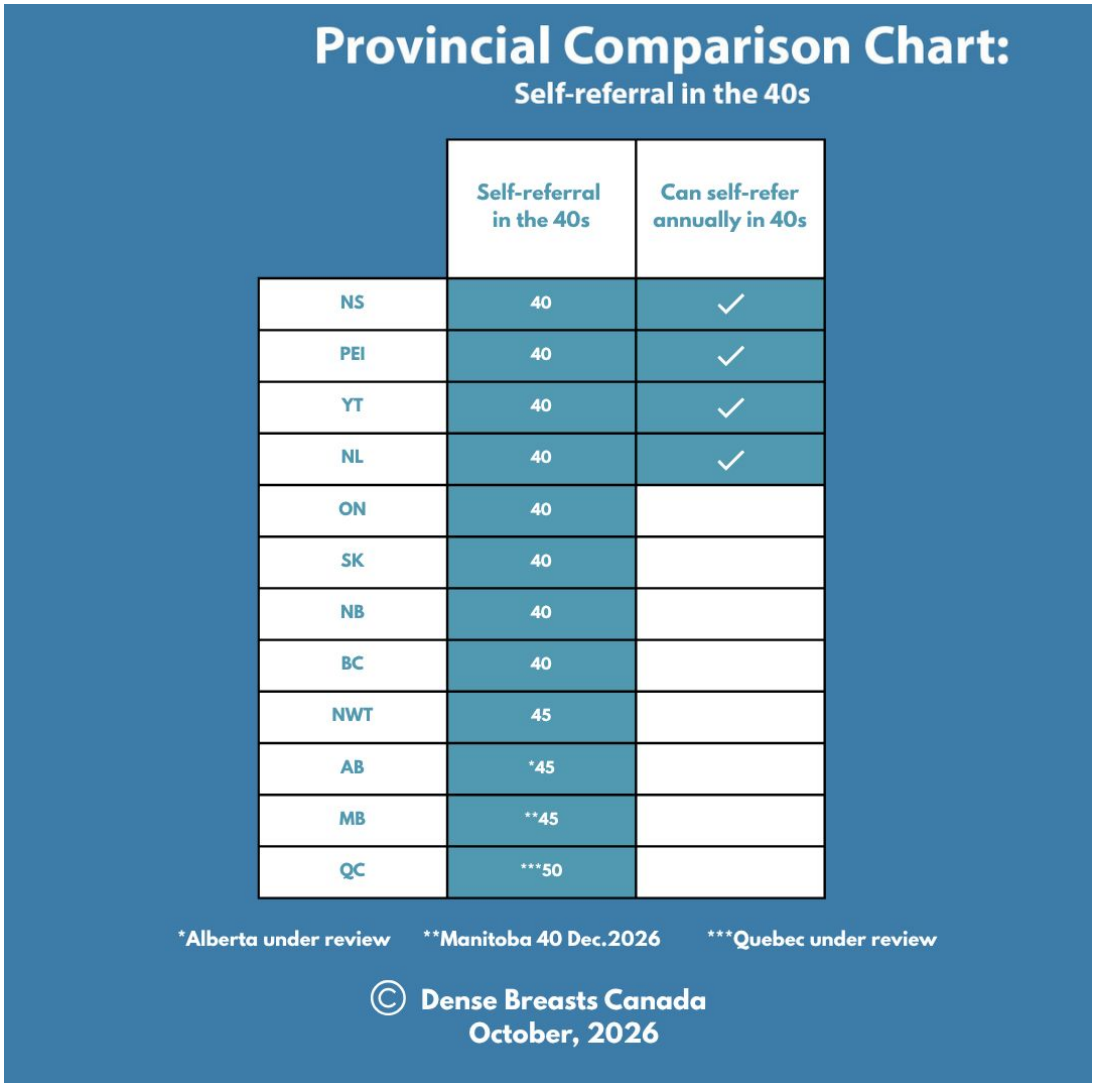
- Risk assessment for all women
- High risk screening if appropriate, annual MRI starting age 25, adding mammogram at 30
- If family history, but not high risk, start mammograms 10 years earlier than age of diagnosis of her youngest first degree relative

Age 40-49

- 1 in 6 breast cancer are diagnosed in women in 40s
- 34% of the life-years lost to breast cancer are in women diagnosed at ages 40-49
- In a retrospective US cohort, the median age of diagnosis among women who subsequently died of breast cancer was 49.
- Faster growth in premenopausal women requires means shorter screening interval
- Suboptimal screening participation rates for women 40-49:
  - **BC: 25%**
  - **ON: 31%**

Smetherman D et al. J Breast Imaging. 2021;3(6):712-720.
Shapiro S. Cancer 1977; 39:2772-2782.
Webb ML et al. Cancer 2014;120:2839–2846.
Miglioretti DL et al. JAMA Oncol 2015;1(8):1069-77.

Inequities In Screening: Ages 40-49



What we need to see: Age 40-49

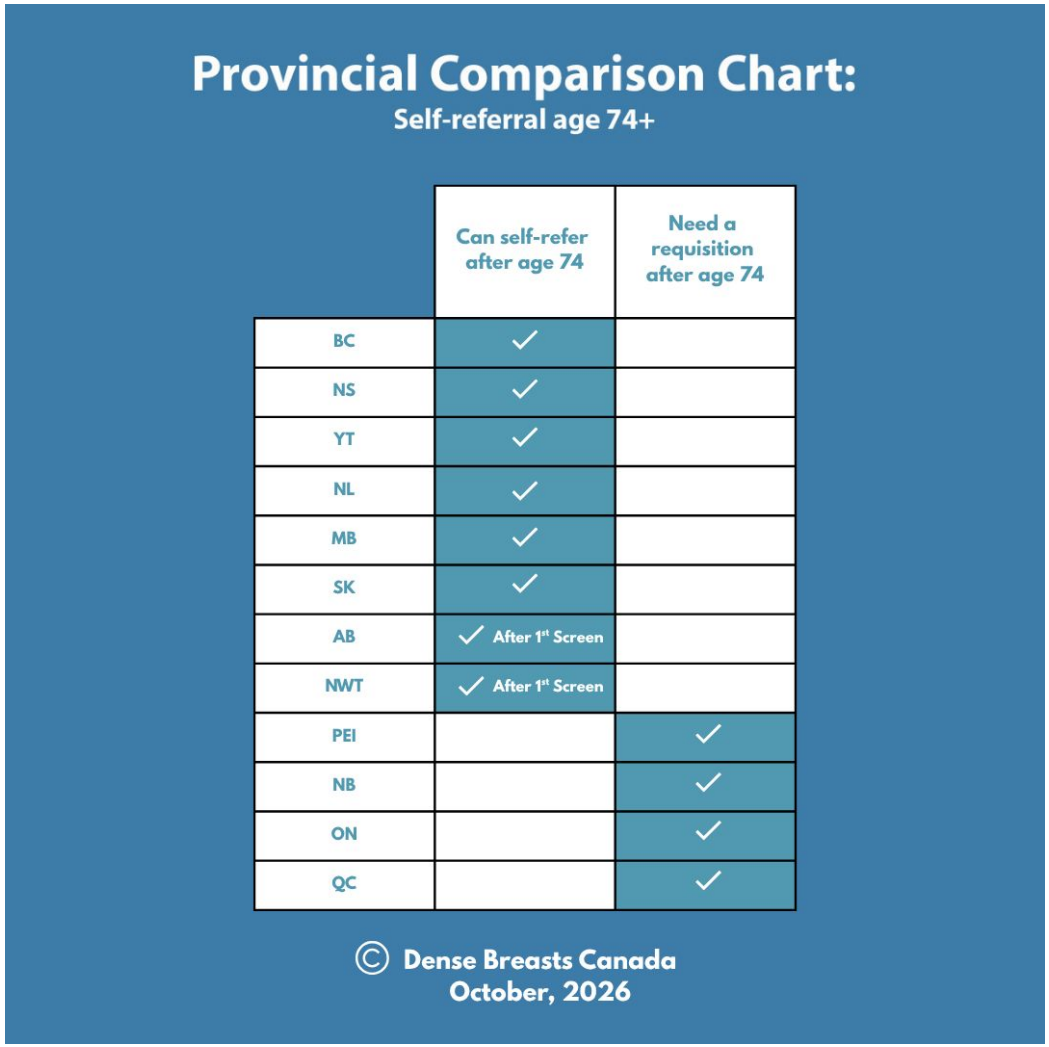
- Awareness raising campaigns by governments
- National guidance for healthcare providers
- Accurate information provided to physicians on harms and benefits of screening
- Invite letters sent to women at age 40
- Offer annual screening in the 40s
- Technology use, such as 3D Mammography

Age 74+

- Breast cancer mortality has not dropped in older women since 2013, because of increased stage IV diagnoses
- Mortality in women 80+ who had a mammogram in the 5 yrs before diagnosis decreased by two-thirds
- Women over 74 were not included in any RCTs, not included in screening in most provinces
- Screening should continue as long as life expectancy ~10 years
- Screening can be available after age 74 with a requisition from a provider, but this is not widely known

Huang SY et al. Ann Surg Oncol 2026; 33:129–137

Inequities in screening: Age 74+

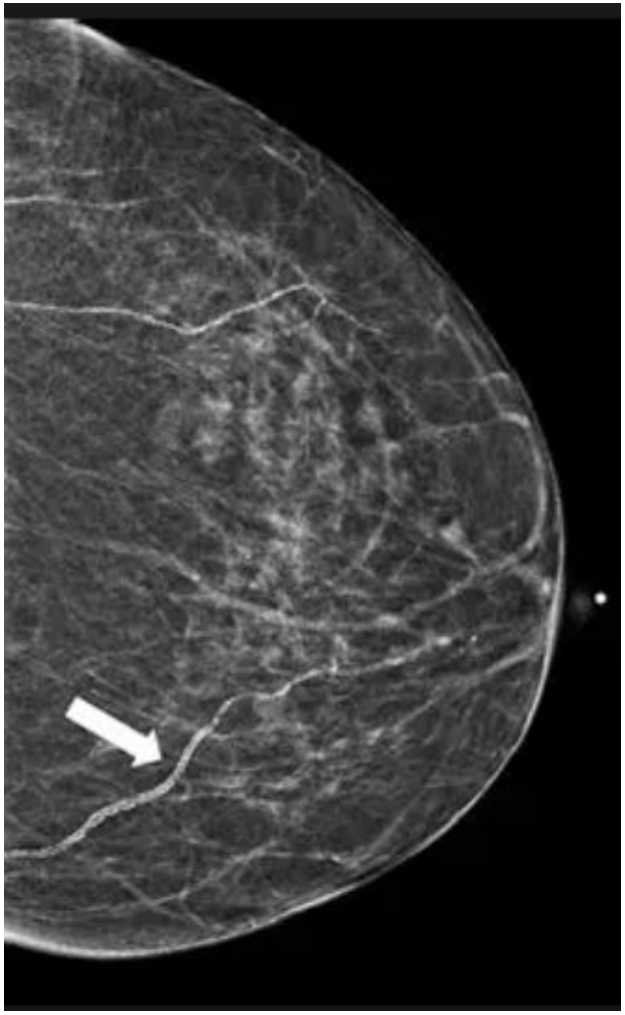


What we need to see: Age 74+

- Awareness raising campaigns by governments
- National guidance for healthcare providers
- Invite letters sent to women until age 80
- Self-referral for women older than 74 if adequate life expectancy

Breast Arterial Calcifications

- Cardiovascular disease is the leading cause of death in women
- Breast arterial calcifications (BAC) are a marker for cardiovascular disease
- BACs are associated with cardiovascular disease risk and more common with increasing age (1-30% prevalence)
- BACs are visible on routine mammograms



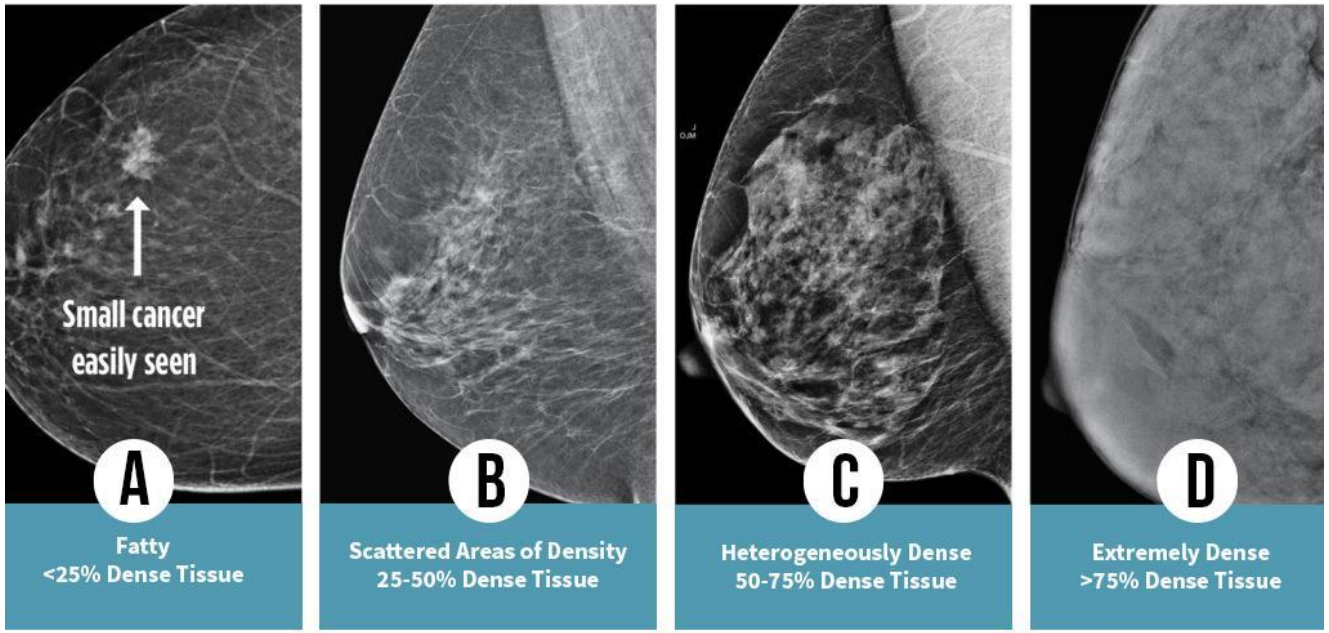
Christensen E et al. Am J Cardiol 2026; 265:7-16.

What we need to see: Breast Arterial Calcification

- Canadian Guidelines from CAR or CSBI
- BAC reporting on mammogram reports
- Provides additional, actionable health information
- Allows for optimization of cardiovascular risk management

Breast Density

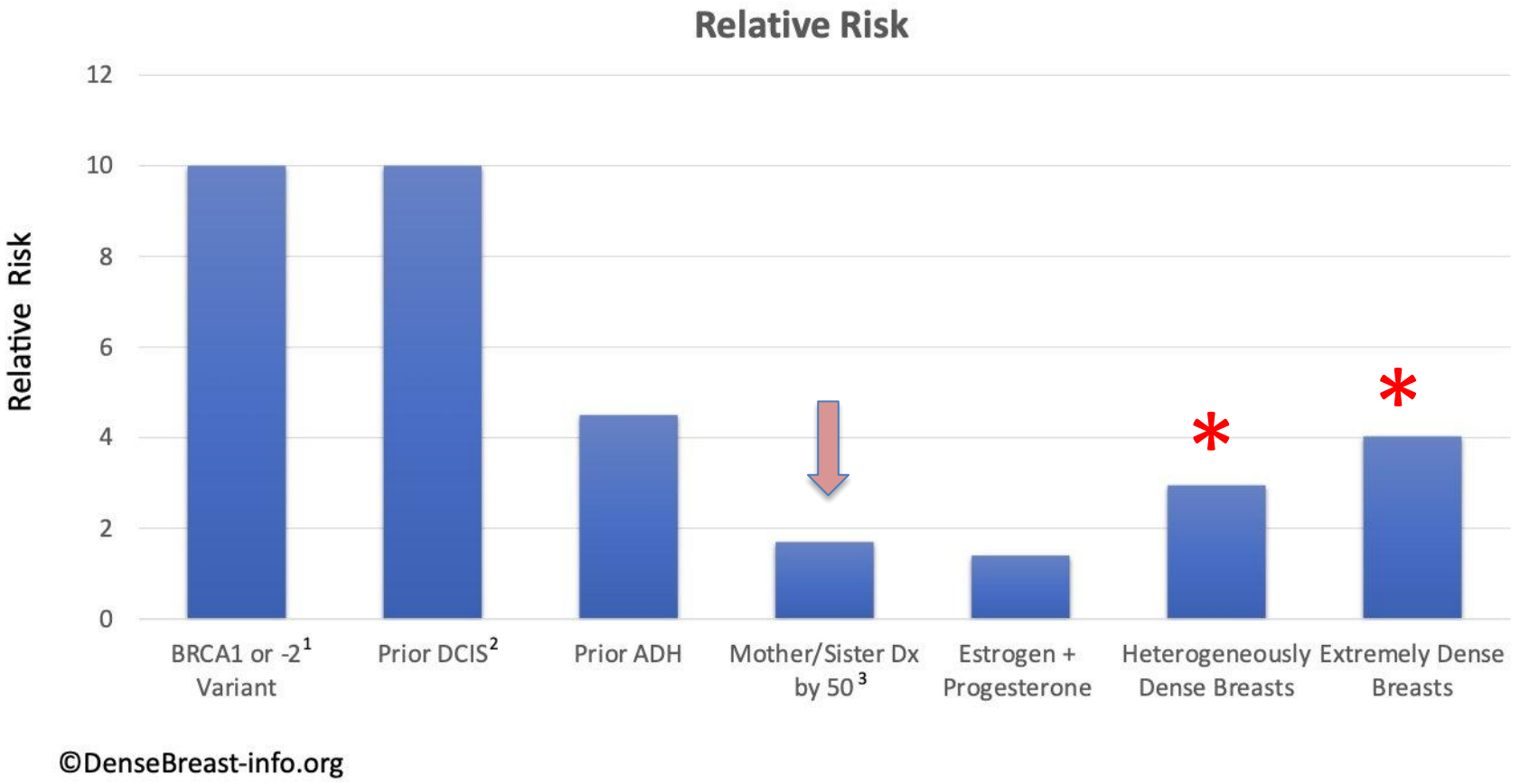
- 4 categories of breast density A□D
- C and D are called dense breasts
- About 50% of women have dense breasts



Boyd NF et al. N Engl J Med. 2007; 356(3):227-36.

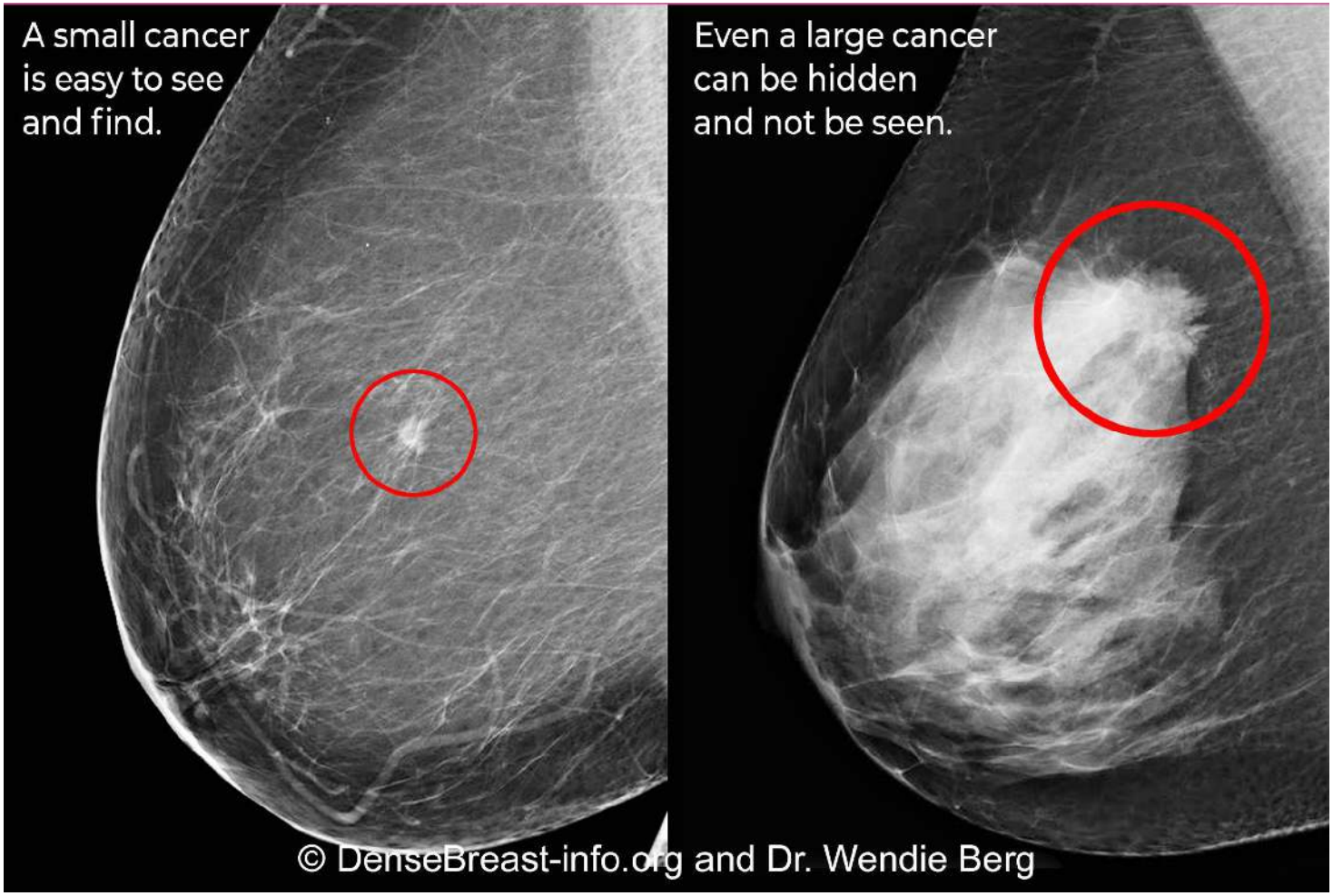
Breast Density Compared With Other Risk Factors

Increased cancer risk

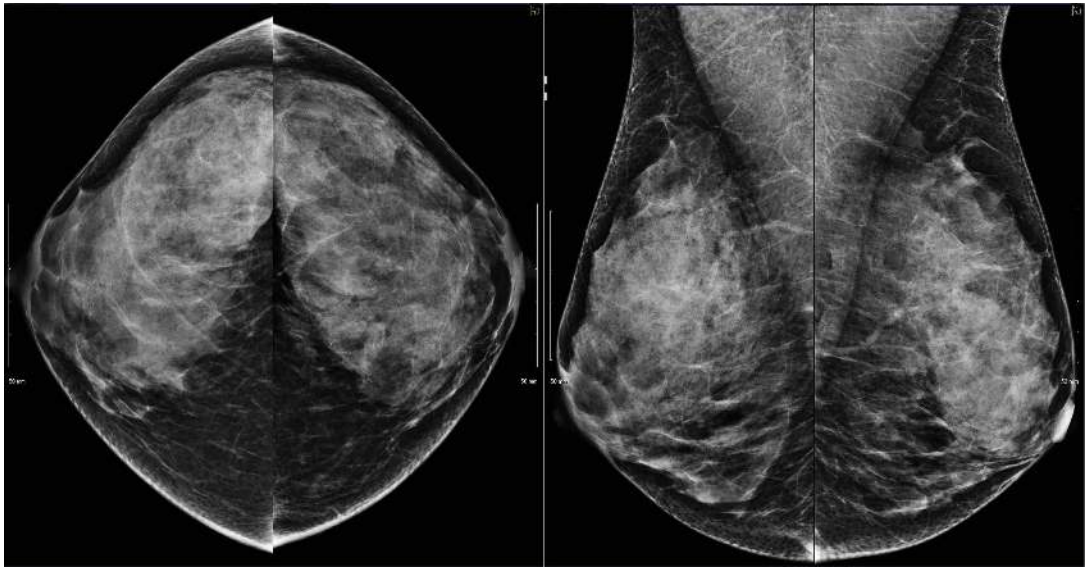


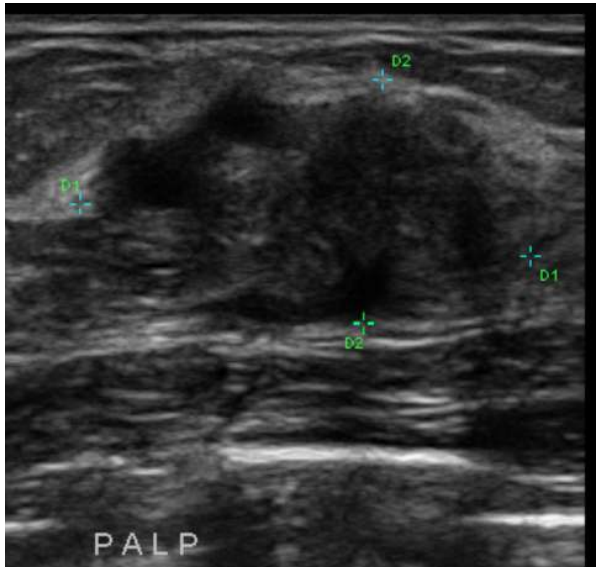
Breast Density

Decreased effectiveness of mammography



Ultrasound





Gordon PB et al. Can Assoc Radiol J. 2025; 76(3):497-507.

Innovation in technologies

- Digital Breast Tomosynthesis
- Contrast Enhanced Mammography (CEM)
- MRI and abbreviated MRI
- AI
- Polygenic Risk Scores
- Liquid biopsy

DBT

- Digital Breast Tomosynthesis
- “3D breast screening”
- Series of 2-D images builds 3-D image
- Reduced recall rate by up to 40%
- Improved sensitivity in C but not D density
- Slightly higher radiation dose
- Slow uptake for screening in Canada.
- Alberta is mostly using DBT, USA ~80%

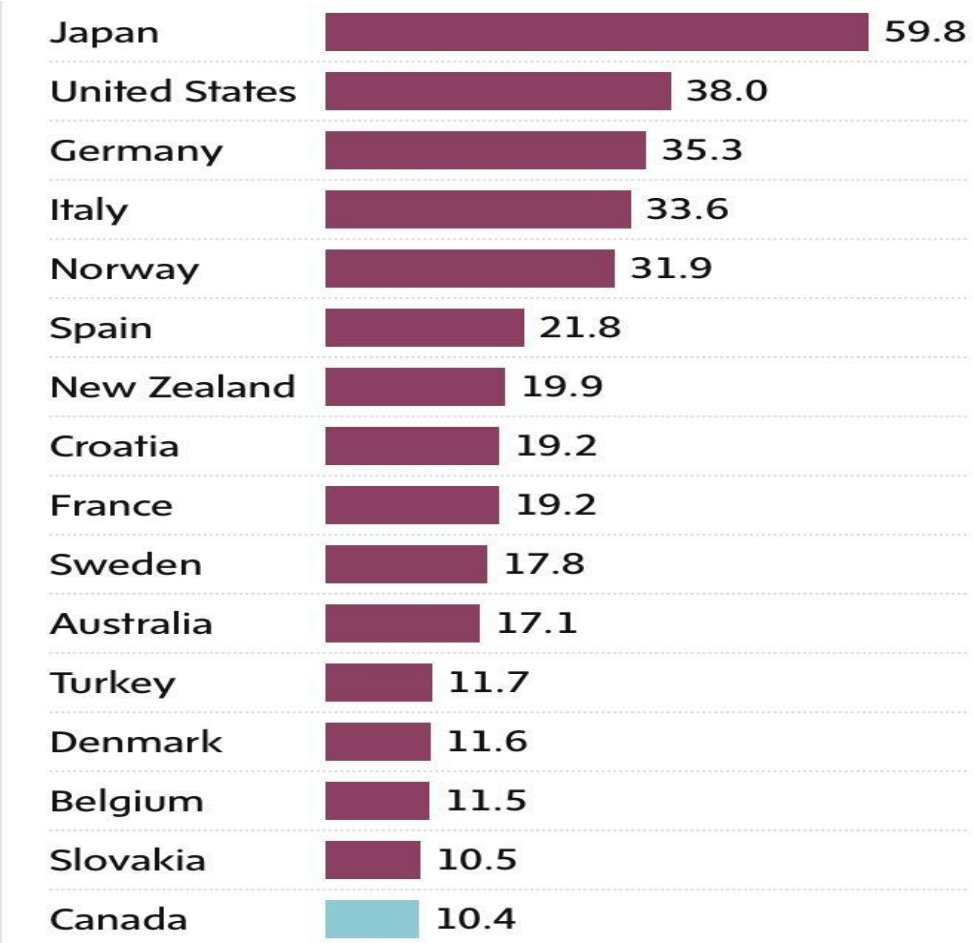


Breast MRI and Abbreviated MRI

- No radiation
- Requires contrast
- Abbreviated
- Highest cancer detection 10-16/1000 1st round
- Reduces interval cancers and late-stage disease



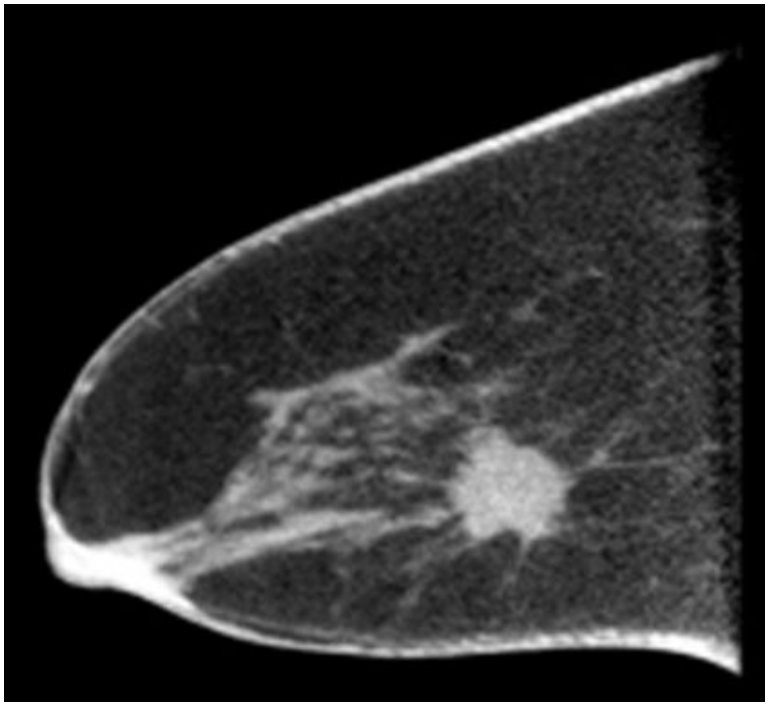
MRIs per million people, by country



The Globe and Mail, Source OECD, Data for 2023 and 2024

Contrast Enhanced Mammography (CEM)

- “Functional Imaging”
- Allows visualization of blood vessels feeding tumour.
- Almost same sensitivity as MRI
- Potential to expand access to supplemental imaging beyond larger centers



Technology is Underutilized in Canada

Modality	Additional cancers found per 1000 women
Ultrasound (ABUS)	4.2
MRI	17.4
CEM	19.2

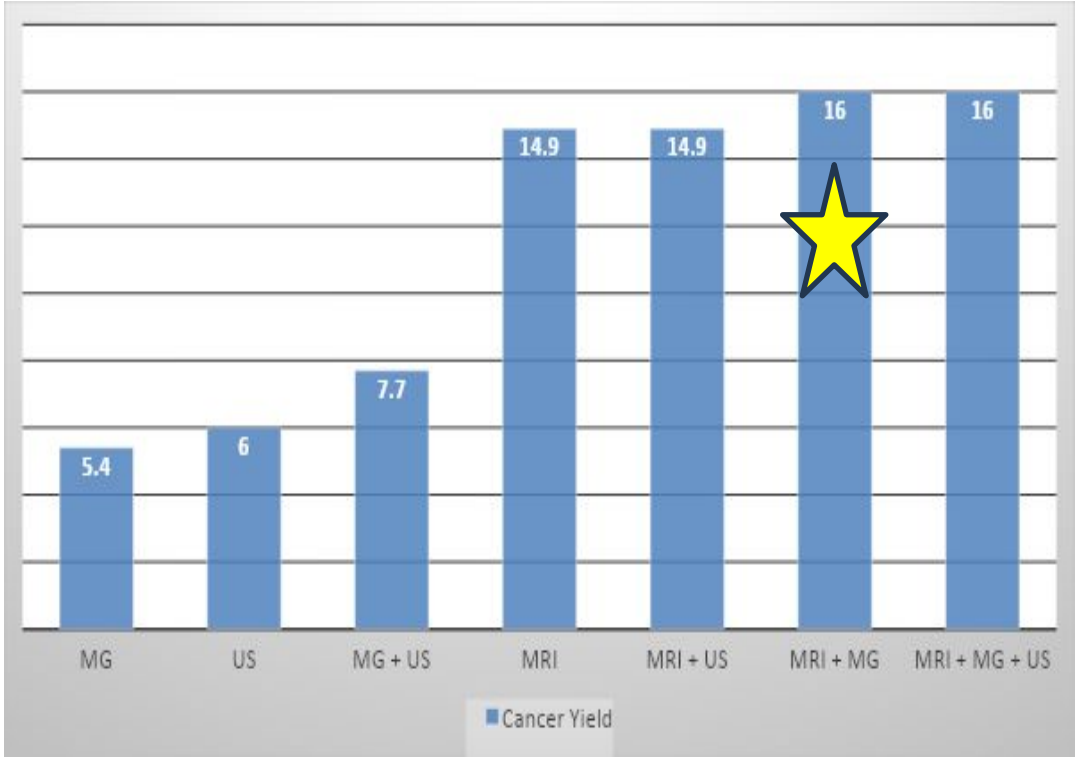
We have the technology in Canada to find cancer early in women with dense breasts.

Challenge to overcome
Lack of resources: human and equipment

Gilbert F et al. The Lancet, 2025; 405, 1935-1944

Breast Density- Supplemental Screening

- Addition of extra imaging to mammogram
- Increases specificity, sensitivity, cancer detection rates
- Decreased interval cancers, decreased node positive cancers, ?mortality
- Cost effective for ACR D



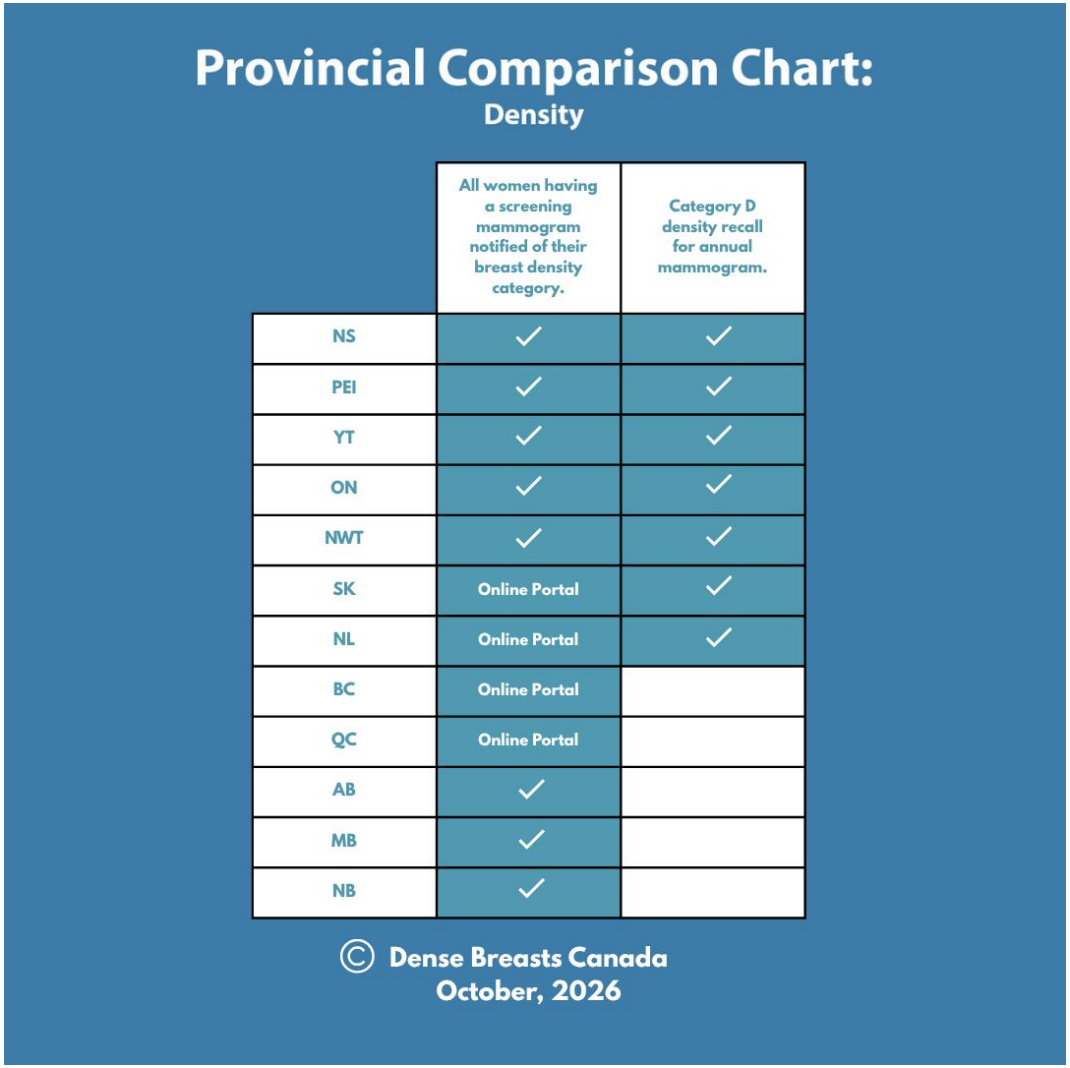
Kuhl CK et al. J Clin Oncol 2010; 28:1450-1457.

Canadian Society of Breast Imaging: Position Statement

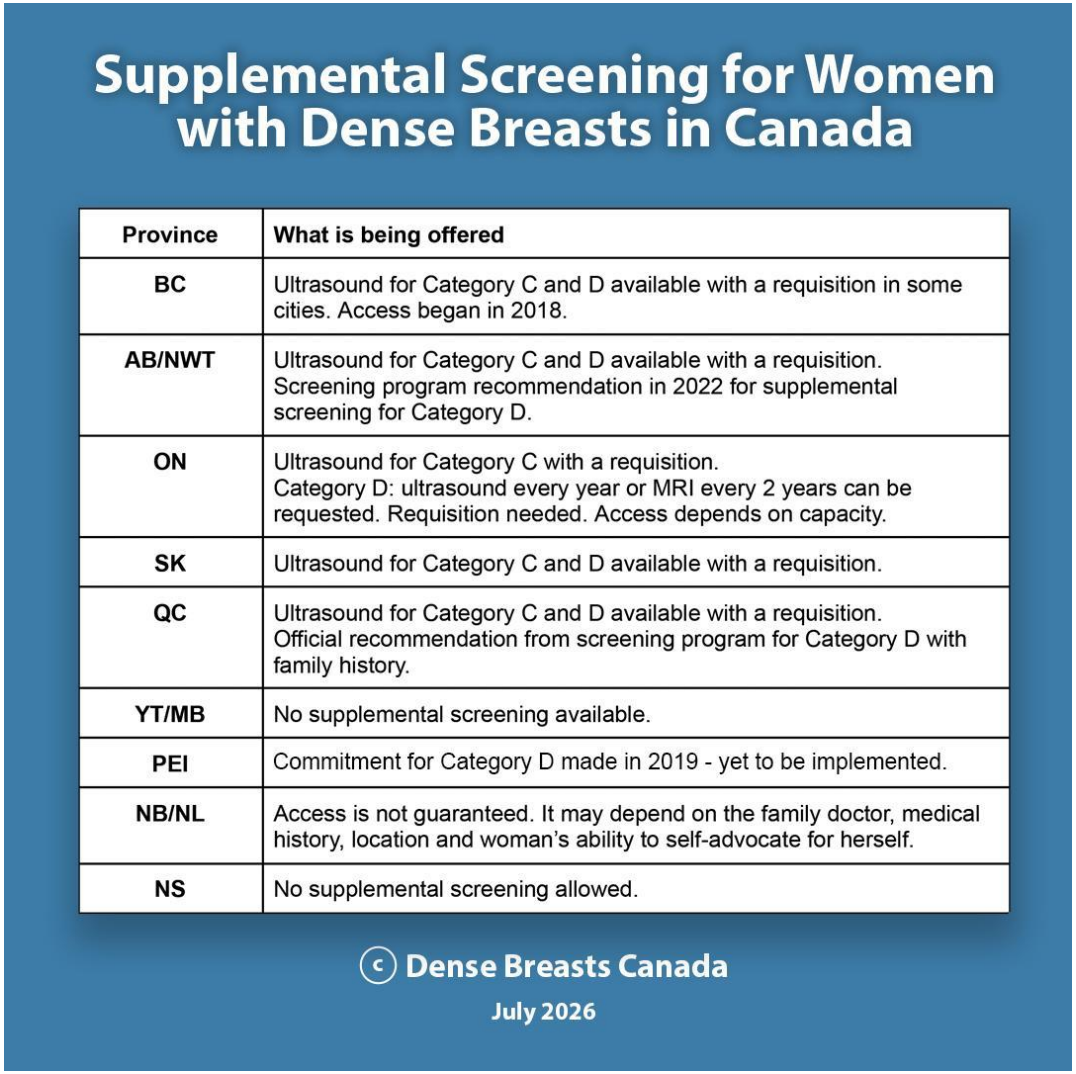
- Supplemental screening for Category C and D: preference depending on capacity :
  1. MRI
  2. CEM
  3. Ultrasound
- If supplemental screening availability is limited, priority should be given to women with D density.

Kellow Z et al. Journal of Breast Imaging 2026; 8(1):1–7.
Bakker MF et al. N Engl J Med 2019;381:2091-2102.

Breast Density Notification



Inequities In Supplemental Screening



Supplemental Screening for Women with Dense Breasts in Canada

Province	What is being offered
BC	Ultrasound for Category C and D available with a requisition in some cities. Access began in 2018.
AB/NWT	Ultrasound for Category C and D available with a requisition. Screening program recommendation in 2022 for supplemental screening for Category D.
ON	Ultrasound for Category C with a requisition. Category D: ultrasound every year or MRI every 2 years can be requested. Requisition needed. Access depends on capacity.
SK	Ultrasound for Category C and D available with a requisition.
QC	Ultrasound for Category C and D available with a requisition. Official recommendation from screening program for Category D with family history.
YT/MB	No supplemental screening available.
PEI	Commitment for Category D made in 2019 - yet to be implemented.
NB/NL	Access is not guaranteed. It may depend on the family doctor, medical history, location and woman's ability to self-advocate for herself.
NS	No supplemental screening allowed.

© Dense Breasts Canada

July 2026

What we need to see: Breast Density

- Notification in result letters for all women
- Yearly mammogram for at least Category D
- Supplemental screening
  - MRI, contrast enhanced mammography or ultrasound

Surveillance for Women with Breast Cancer

- Women with a personal history of breast cancer are at increased risk of developing another breast cancer.
- Annual mammography is generally the standard surveillance approach after treatment, but not always enough
- Access to additional surveillance with MRI varies across Canada.
- Women with dense breasts, younger age at diagnosis, or other risk factors may benefit from enhanced surveillance.
- More consistent, individualized surveillance recommendations are needed.

A Decade Of Meaningful Progress

Density notification

Women across Canada are now informed of their breast density.

Screening at 40

Self-referral beginning at 40 has expanded across most of the country.

Additional screening

Access is increasing, but remains uneven and location-dependent.

Guideline reform

A new national advisory process creates an opportunity to modernize guidance.

The breast screening landscape looks very different than it did 10 years ago.

Technology is moving faster than guidelines and policy…

AI

- Determine breast density
- Read mammograms, DBT
  - Second reads
  - Decrease workload for reading
  - Prioritize mammograms for radiologists to read

AI Risk Prediction

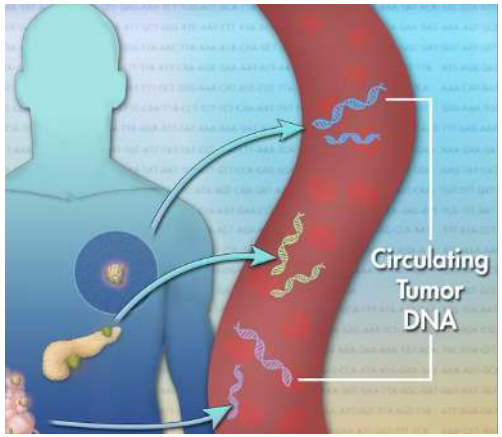
- Mammogram-based risk prediction
  - Able to predict breast cancer risk from mammogram images (Clarity, Mirai)
  - Better performance that traditional statistical models
  - NCCN guidelines now suggest an AI mammogram risk prediction for every woman at age 35 to establish individualized screening pathway

Polygenic Risk Score

- Single nucleotide polymorphisms (SNPs) are small genetic mutations which cumulatively can increase your risk of breast cancer
- There are more than 100 SNPs associated with breast cancer
- Can be detected through a saliva test
- Adding together all SNPs weighted by their association with breast cancer= Polygenic Risk Score
- Polygenic risk scores correlate with both density and family history
- Need to be combined with other existing risk calculators to be useful clinically

Liquid Biopsy

- Blood tests for cancer cell DNA (circulating tumour DNA) in bloodstream
- Cancer cells die and release fragments of DNA into bloodstream
- Can be used for screening, monitoring response to treatment and surveillance for recurrence
- Difficulties
  - early stage cancers may not shed much DNA
  - Not specific to breast- if circulating DNA is found, need to determine where in the body it has come from



What we need to see: Innovations

- Timely adoption and integration of new technology/innovations that have adequate evidence

The Future:
One-size-does-not-fit-all

AGE

FAMILY HISTORY

GENETICS

BREAST DENSITY

RACE & ETHNICITY

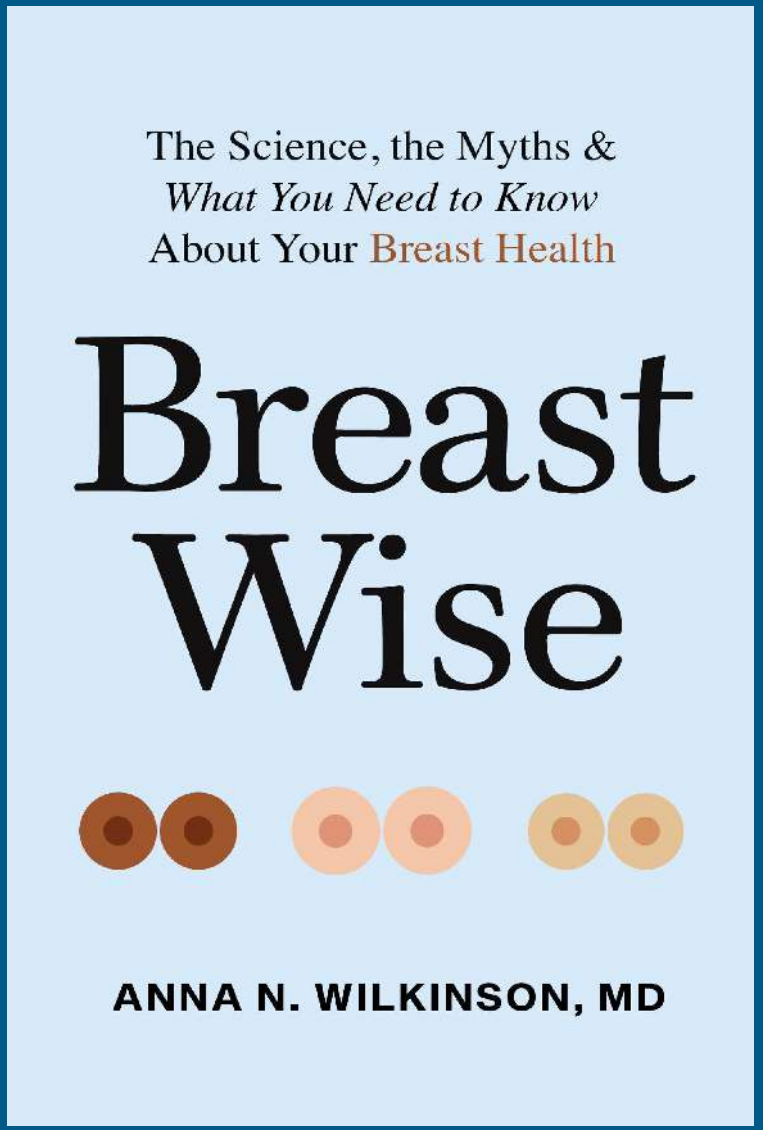
PRIOR BREAST CANCER

Individualized screening based on risk

What you can do as an individual

- Know your overall risk
- Be breast self-aware
- Know what screening is recommended for you
- Take advantage of screening that you have access to
- Use your voice: Contact your political representative to voice your concerns if you are not receiving the screening you need.
- Clinicians, patients, researchers, and advocates must speak with one voice, and we need to educate policymakers to bring about policy change.

What you can do:



Additional Resources

- Canadian Society of Breast Imaging csbi.ca
- DensebreastsCanada.ca

THANK YOU