

iPrevent™ for Assessment and Management of Future Breast Cancer Risk

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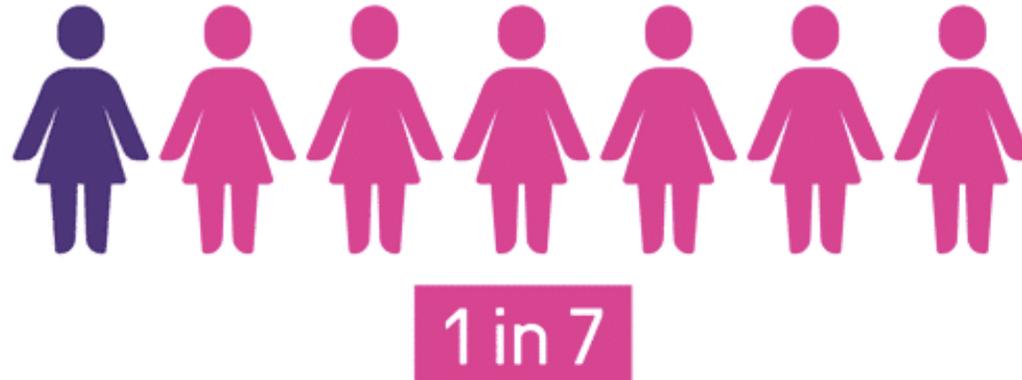
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WHY FOCUS ON PRIMARY PREVENTION?

In Australia, the risk of a woman being diagnosed with breast cancer is:



- Incidence is rising, mostly due to increased incidence of ER +ve BC
- Treating breast cancer costs the government/taxpayer over \$1.5 billion per annum

Australian Burden of Disease Study 2023 www.aihw.gov.au
Health System Spending on Disease and Injury in Australia 2020-2021, www.aihw.gov.au



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AUSTRALIAN CANCER PLAN



1 MAXIMISING CANCER PREVENTION AND EARLY DETECTION

A cancer control system that seeks to eliminate racism, proactively reduces cancer risk and supports all Australians to access personalised, evidence-based cancer prevention and early detection strategies.

[READ MORE >](#)

2 ENHANCED CONSUMER EXPERIENCE

People affected by cancer are partners in culturally safe, equitable and responsive cancer care, and health services and systems are trusted and supported for optimal experience, quality of life and cancer outcomes.

[READ MORE >](#)

3 WORLD CLASS HEALTH SYSTEMS FOR OPTIMAL CARE

Integrated, coordinated, data-driven, high-quality health service systems that consistently deliver optimal cancer care and excellence in outcomes.

[READ MORE >](#)

4 STRONG AND DYNAMIC FOUNDATIONS

A modern, fit for purpose cancer control infrastructure, advanced by the innovative application of technology, research and data to improve Australia's cancer outcomes.

[READ MORE >](#)

5 WORKFORCE TO TRANSFORM THE DELIVERY OF CANCER CARE

An engaged, capable, and future-focused cancer workforce that is culturally safe and responsive, well-equipped, well-supported and driven by collaboration, continuous improvement, and diversity to enable inclusive care for all Australians affected by cancer.

[READ MORE >](#)

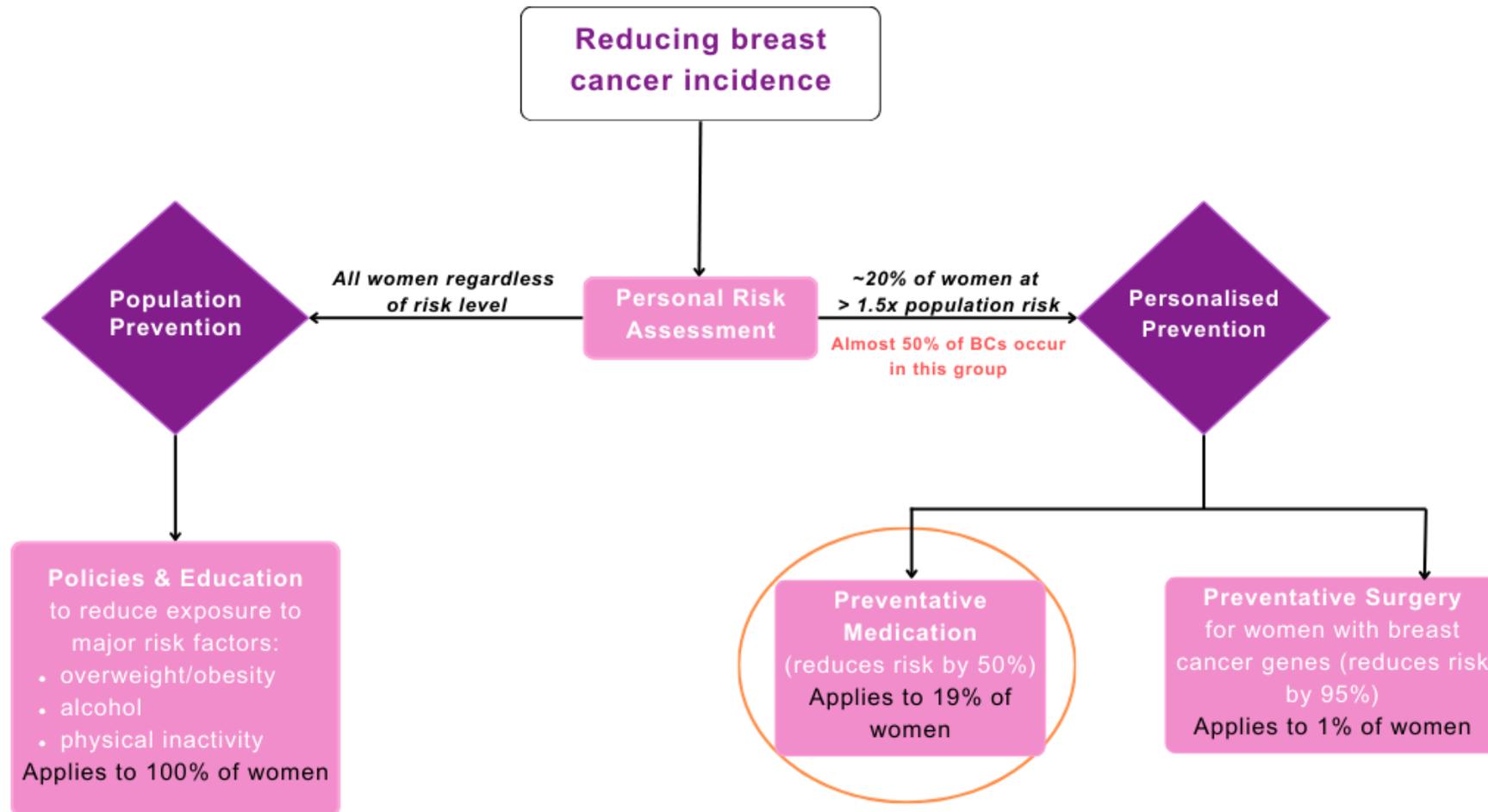
6 ACHIEVING EQUITY IN CANCER OUTCOMES FOR ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE

Supporting Aboriginal and Torres Strait Islander knowledge, strength and sovereignty in a health system that achieves equity for Aboriginal and Torres Strait Islander people affected by cancer.

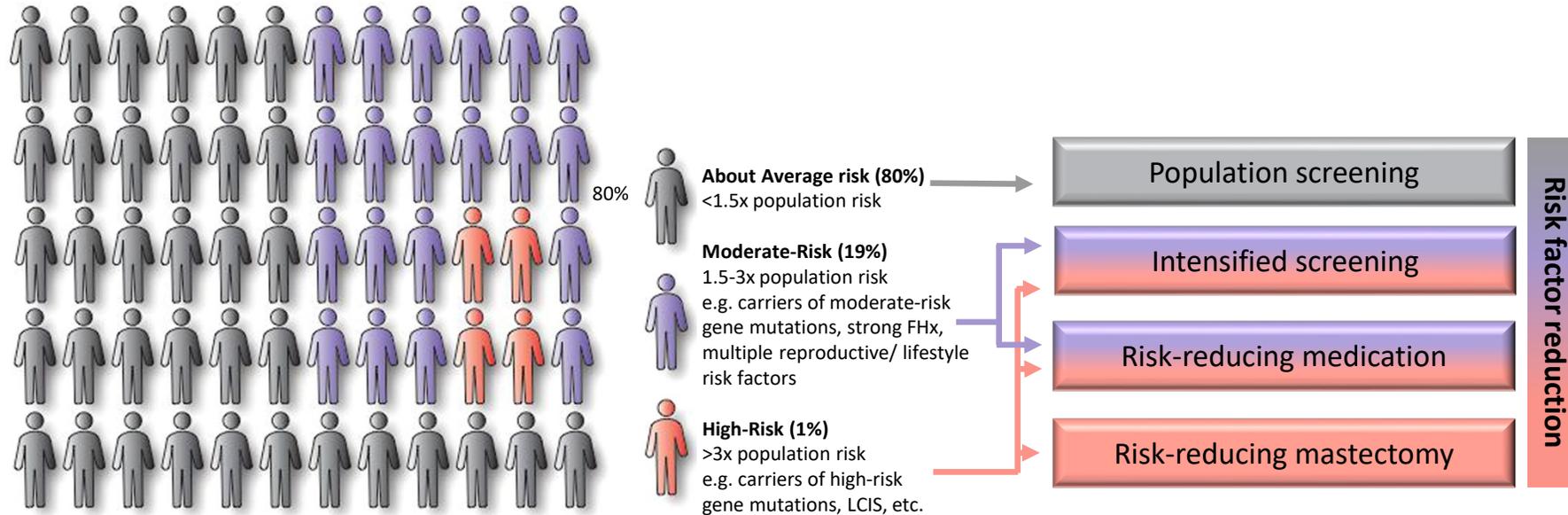
[READ MORE >](#)



2 COMPLEMENTARY APPROACHES TO BC PREVENTION



PERSONALISED PRIMARY PREVENTION (AND SCREENING) STARTS WITH RISK ASSESSMENT




www.petermac.org/iprevent

**Online breast cancer
risk assessment and
risk management decision
support tool**



Phillips KA et al JNCI-CS 2019



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CURRENT STATUS OF iPREVENT

Launched in 2018

The leading Australian BC prevention tool

RACGP Accepted Clinical Resource

Advocated by Cancer Australia

Up to 8000 hits per month

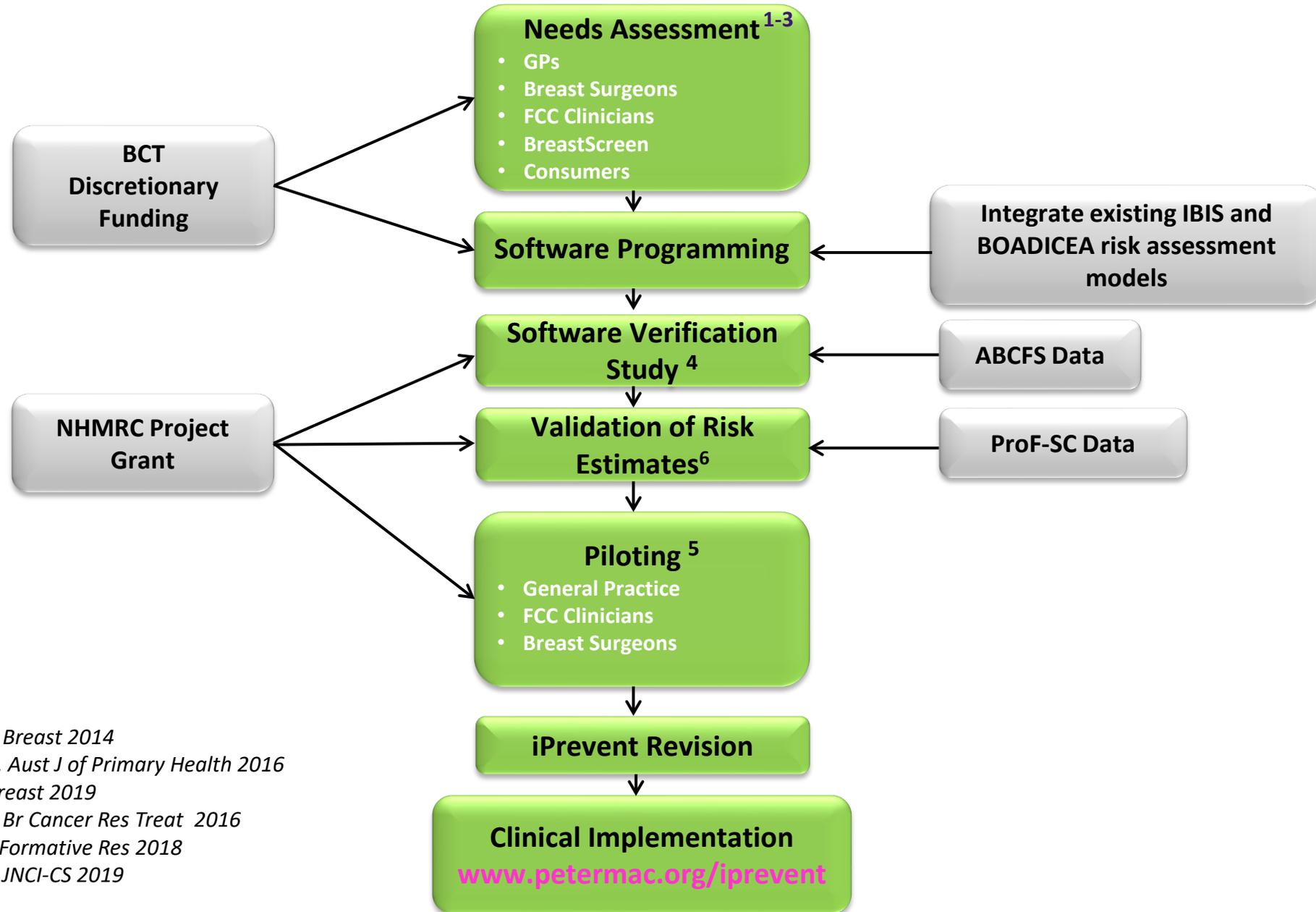
- GPs
- Women's health and menopause clinics
- Breast surgeons
- Family cancer clinicians
- Women

Planned program of improvements to make it even easier to use and to improve usability for non-English speakers



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iPREVENT DEVELOPMENT



1 Collins IM et al, Breast 2014

2 Phillips KA et al, Aust J of Primary Health 2016

3 Keogh L et al, Breast 2019

4 Collins IM et al, Br Cancer Res Treat 2016

5 Lo L et al, JMIR Formative Res 2018

6 Phillips KA et al JNCI-CS 2019



HOW DOES iPREVENT CALCULATE RISK?

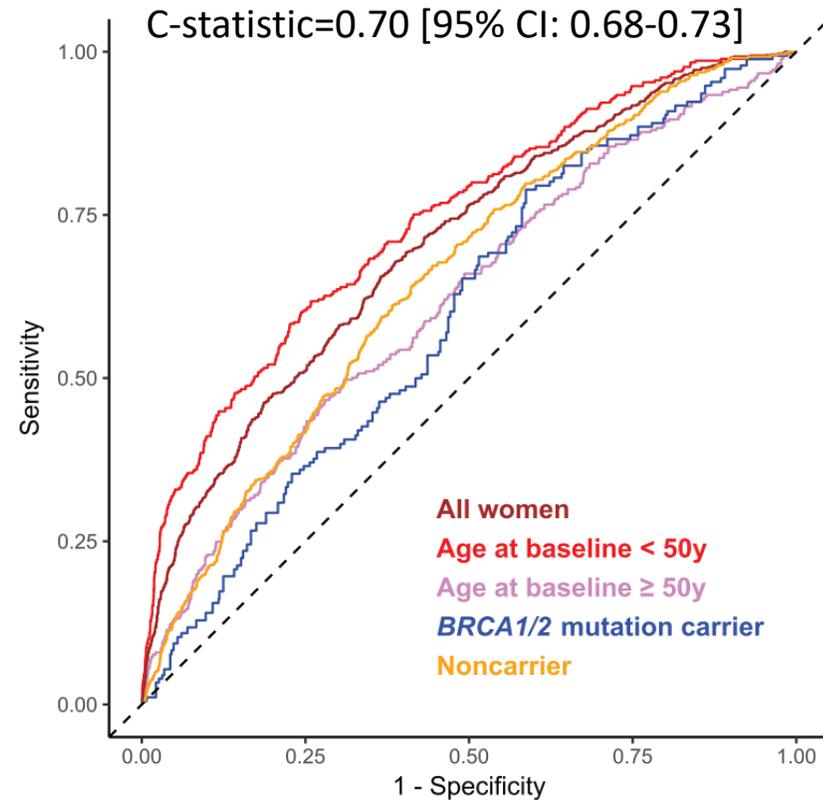
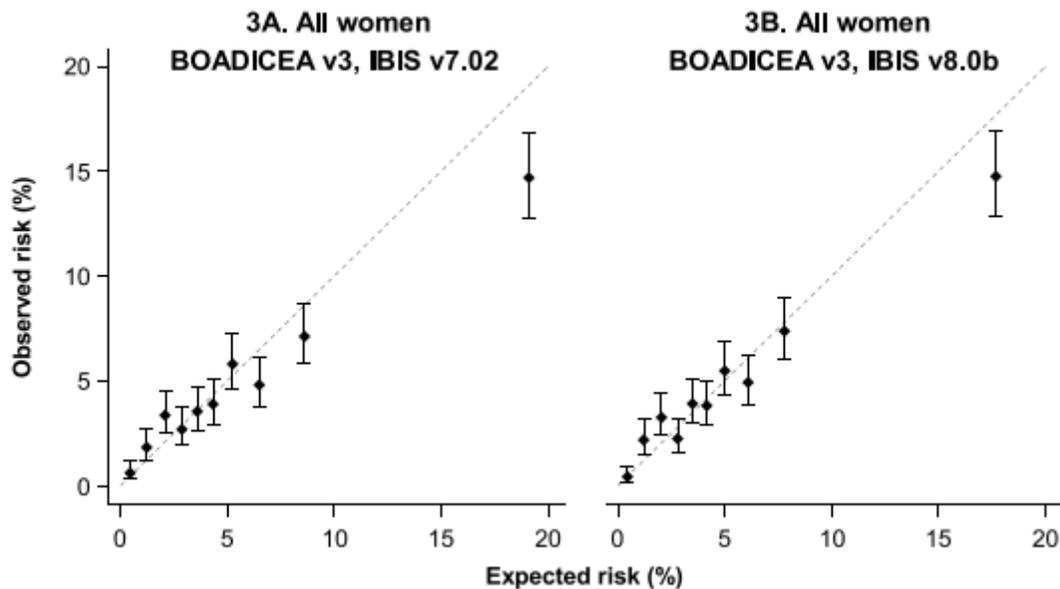


- Uses the 2 best performing risk algorithms: **IBIS v8** and **BOADICEA/CanRisk**
- Both are well calibrated and outperform other commonly used risk models¹
- Internal iPrevent switching strategy determines which risk algorithm used for each woman depending on her risk factors

1. Terry MB...Phillips KA et al JNCI 2018

iPREVENT IS WELL CALIBRATED AND HAS GOOD DISCRIMINATORY ACCURACY

- Prospective data on 15,732 women in PROF-SC Study¹
- Median follow-up 10 yrs, 619 incident BCs²



1. Terry MB, Phillips KA et al. *Int J Epidemiol* 45:683–692, 2016
2. Phillips KA et al. *JNCI-CS* 2019



HOW IS iPREVENT RELEVANT TO BREASTSCREEN?

1) ROSA Project recommendations around risk assessment and management

2) Mammographic Density notification

- Mammographic density is an important risk factor for development of a future breast cancer.
- Some BreastScreen jurisdictions already notify women of their breast density and there is consideration for this to become a national approach.
- BUT – mammographic density ALONE is inadequate to assess future breast cancer risk.
- Women notified that they have increased density must be strongly encouraged to have their risk assessed using a valid algorithm.





INTRODUCTION



ABOUT YOU



FAMILY HISTORY



YOUR RISK

ABOUT YOU

Your Medical History

Have you ever had a breast biopsy?

Where a sample of breast tissue was removed and tested

Choose One

Have you ever had a BRCA1 or BRCA2 gene test?

Choose One

Are you or any of your close blood relatives Ashkenazi Jewish?

[Click here for more information](#)

Choose One

Have you ever had a mammogram?

Yes

Were you told your breast density?

[Click here for more information](#)

Yes

What was your breast density result?

- a: almost entirely fatty
- b: scattered areas of fibro-glandular density
- c: heterogeneously dense
- d: extremely dense
- I don't know what my breast density is

< PREVIOUS

CANCEL

ESTIMATE RISKS

NEXT >



CASE STUDIES FOR 3 WOMEN WITH BIRADS D

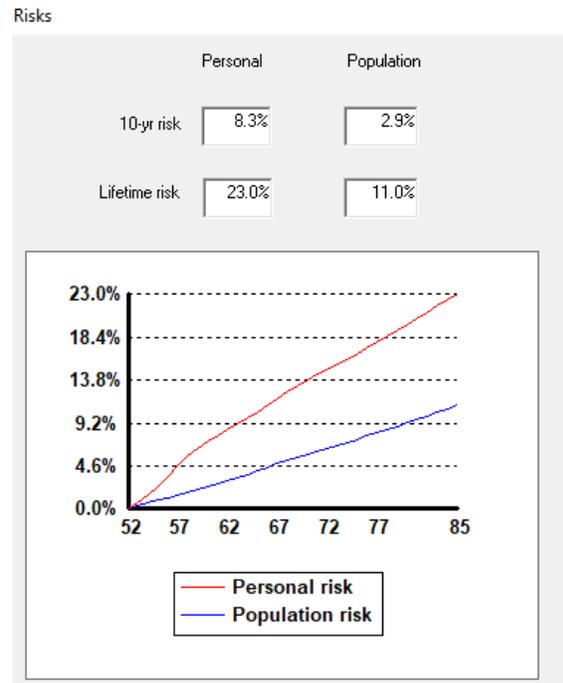
BIRADS D, 52yo, post-menopausal, No FHx breast cancer

Helen has extra risk factors – Menarche age 11, BMI =31, nulliparous, current HRT user

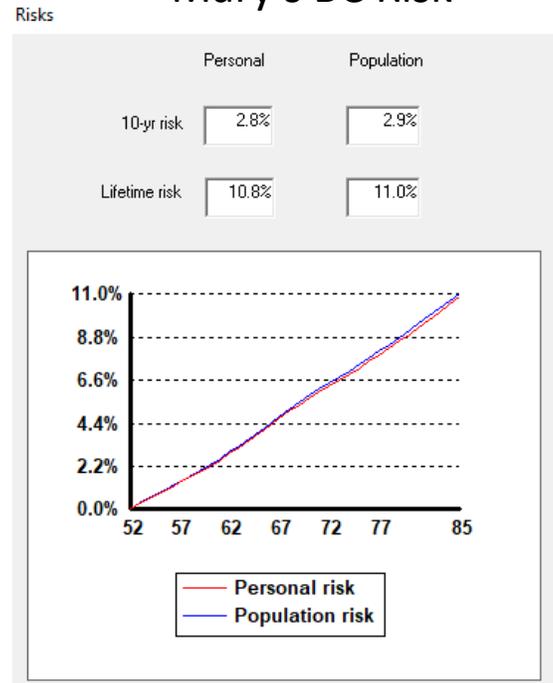
Mary has some protective factors – Menarche age 13, BMI=20, 1st child at age 27, no HRT

Anna has more protective factors - Menarche age 13, BMI=20, 1st child at age 24, no HRT

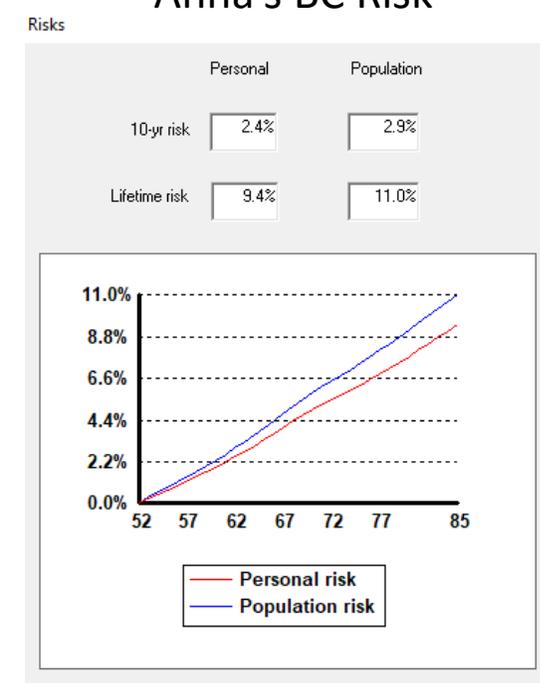
Helen's BC Risk



Mary's BC Risk



Anna's BC Risk





INTRODUCTION



ABOUT YOU



FAMILY HISTORY



YOUR RISK

Your Options

There are some things you might choose to do to manage your risk of breast cancer. This includes things that may reduce your risk, and others that might improve the chance of finding a breast cancer early.

Click on each of these options to see more information:

Options to reduce your risk

- ▶ [Medication](#)
- ▶ [Lifestyle measures](#)

Your screening options

- ▶ [Screening for breast cancer](#)

Breast awareness

It is important that you promptly report any changes in your breasts to your doctor, especially:

- ▶ a new lump or lumpiness, especially if it is only in one breast
- ▶ fluid coming from the nipple
- ▶ a change in the size or shape of the breast or nipple
- ▶ a change in the skin over the breast, such as redness or dimpling
- ▶ an unusual persistent pain, especially if it is in one breast

You should consider attending a Family Cancer Clinic. Click [here](#) for more information.

Click [here](#) to return to Your Risk.

< PRINT YOUR REPORT

FINISH IPREVENT SESSION >





Lifestyle Measures

Changing your lifestyle may help reduce your breast cancer risk. Some of these things may not be relevant to you currently, but they may become relevant in the future.

Exercise

Adults should do 30 minutes of moderate to brisk exercise on most days. You do not currently achieve that. Regular moderate to brisk exercise of 1.5 to 4 hours per week reduces breast cancer risk. The more you exercise, the greater the reductions in breast cancer risk.

It is recommended that you do at least 30 minutes of moderate to brisk exercise on most days.

Smoking

Smoking increases your risk of many diseases, and may increase breast cancer risk. There are many proven strategies to help you quit. Ask for advice from your doctor, [Quit Victoria](#) or call the Quitline on 137848.

It is recommended that you quit smoking.

Alcohol

On average, you consume 15 standard drinks of alcohol per week (click [here](#) to review how many standard drinks you have). Drinking even one alcoholic drink per day increases your risk for breast cancer and other diseases. The more you drink, the greater the increase in risk.

National guidelines recommend you reduce your alcohol intake to no more than two standard drinks a day.

Weight

Your body mass index (BMI) is calculated from your weight and height. It can determine if you are underweight, a healthy weight, overweight, or obese.

Your BMI is 25.7. This indicates you are overweight. Being overweight increases your risk for many diseases. After the menopause, being overweight increases the risk of breast cancer.

It is recommended you reduce your weight. Your target healthy weight is below 68.0 kg.





INTRODUCTION



ABOUT YOU



FAMILY HISTORY



YOUR RISK

Screening

It is **recommended** that you attend for yearly screening mammograms. This is the best way for women your age to detect breast cancer early. Early detection offers women a better chance of successful treatment. It can help reduce your chance of dying from breast cancer. Mammograms do not reduce your chance of getting cancer.

You can call BreastScreen on 13 20 50 to make a mammogram appointment.



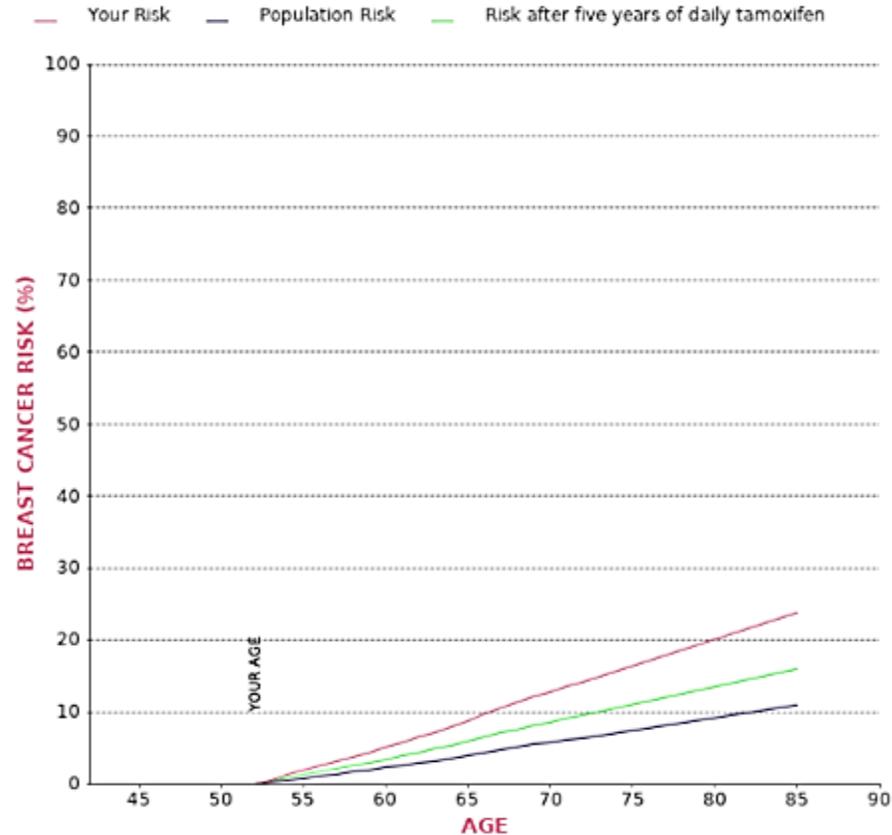
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Tamoxifen will reduce your risk of developing breast cancer over your lifetime from 23.6% to 15.8%.

Over the same time, the risk for an average woman of your age is 11.0%.

This means that if we take 1000 women with the same risk of breast cancer as you all took 5 years of tamoxifen, 158 would develop breast cancer over the rest of their lives. However, if none of the 1000 women took tamoxifen 236 would get breast cancer. Breast cancer would have been prevented in 78 women.

Expand below for a graph of the effect of tamoxifen on your breast cancer risk over the rest of your life.



THE EVIDENCE IMPLEMENTATION GAP



**Evidence from
research**

**Implementation
into practice**



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EVIDENCE-IMPLEMENTATION GAP FOR BC PREVENTION MEDICATIONS

- 20% of Australian women eligible for BC prevention medications
- **Almost 50% of all BCs in Australia are destined to occur in this 20% of women**
Tablet medications taken daily for 3-5 years – approx. halve BC risk, with the benefit persisting for at least 20 years
- Use by women at increased risk is recommended by all relevant guidelines
- BUT fewer than 2% of women at increased risk have used them
- **Evidence – Implementation gap** driven by lack of a medical workforce capable of, and willing to, discuss and prescribe these medications
- Over 1/3rd of GPs are not even aware they exist
- Those who are say the greatest barrier to prescribing them is lack of knowledge and that the strongest facilitator would be specialist support
- They do not want to be responsible for initiating these meds, but are happy to write ongoing prescriptions

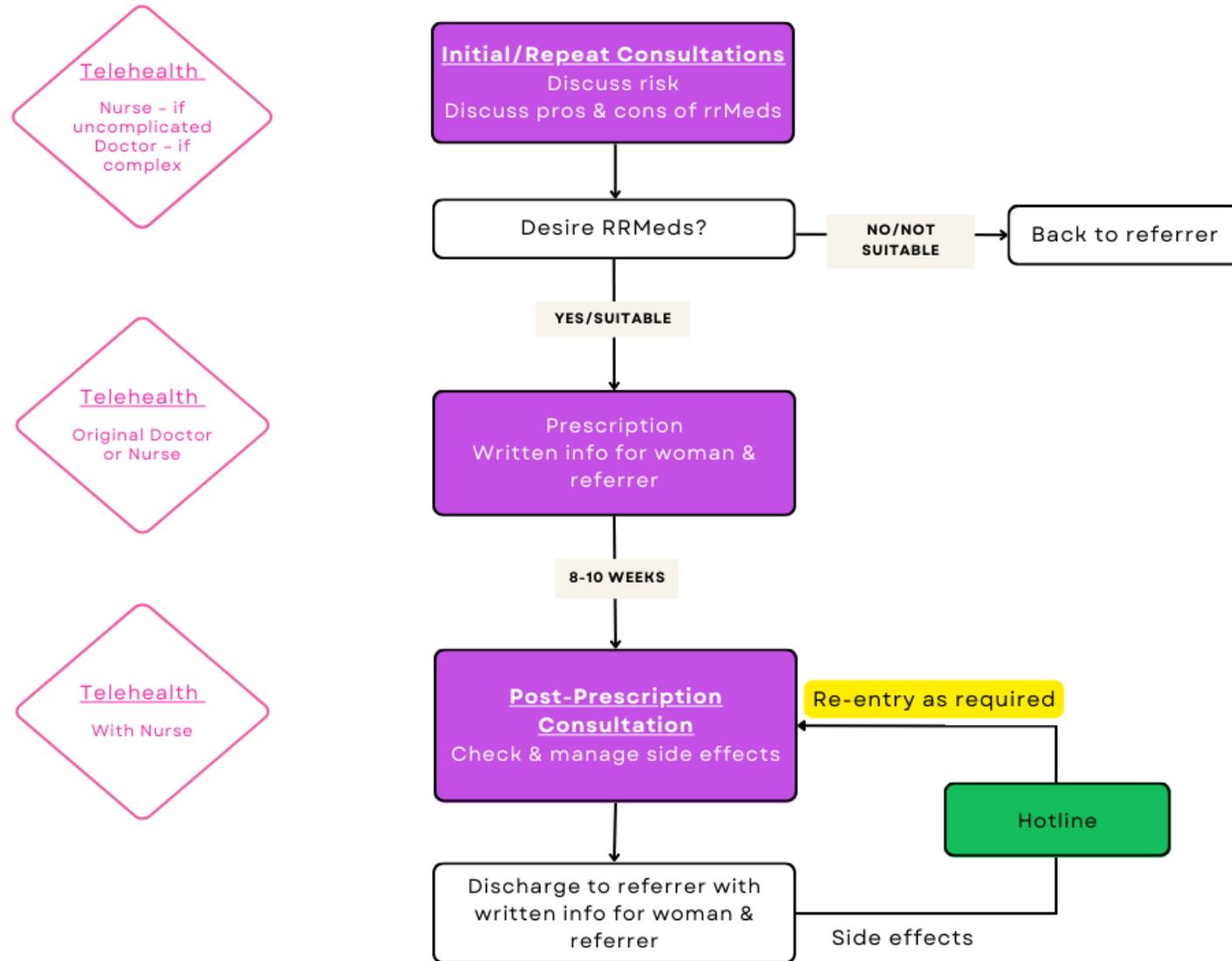


PREVENTING CANCER WITH MEDICATIONS SERVICE (PCMED)

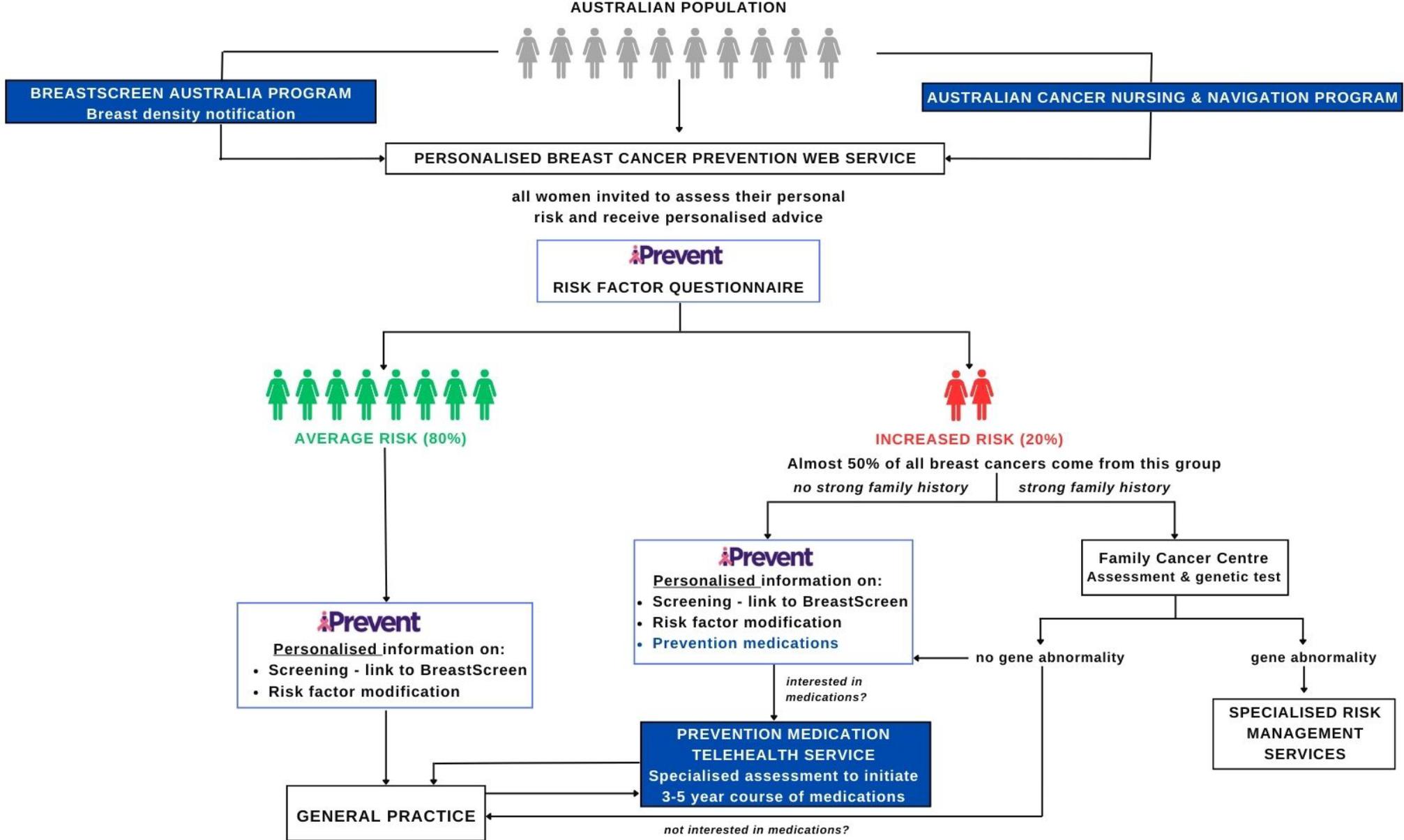
- Co-Led – Kelly Phillips (Med Onc) and Katrina West (Nurse Practitioner)
- Consultative, telehealth service
- Primary aim is to initiate RRMeds
- Support women, referring clinicians and GP throughout treatment trajectory
- Initial pilot with embedded formal implementation research
- Vision – national telehealth service



PREVENTING CANCER WITH MEDICATIONS SERVICE



NATIONAL PERSONALISED BC PREVENTION PLATFORM?



PERSONALISED BC PREVENTION AND SCREENING – PRIORITY TO REALITY

