

Enhancing Patient Outcomes in Breast Screening and Risk Management

This webinar will start shortly.



Enhancing Patient Outcomes in Breast Screening and Risk Management

Zoom webinar – 7 August 2024 7:00pm – 8:00pm

Acknowledgement of traditional owners

We acknowledge the Tasmanian Aboriginal people as the traditional owners and ongoing custodians of the land on which we are meeting today. We pay our respects to Elders past and present.

We would also like to acknowledge Aboriginal people who are joining us today.

Some housekeeping

- Tonight's webinar is being recorded
- Please use the Zoom Q&A feature to ask questions
- At the end of the webinar your browser will automatically open an evaluation survey. We appreciate you taking the time to complete this to help us improve our events programme.
- Please don't forget to register for your next webinar at:
<https://www.primaryhealthtas.com.au/for-health-professionals/events/>

Presenter(s)

Dr. Virginia Baird

Dr. Gausihi Sivarajah

Enhancing breast screening and diagnostic approaches

Dr Virginia Baird, GPSI, RHH

Dr Gausihi Sivarajah, Breast Surgeon, RHH

Clinical Director, BreastScreen Tasmania



BreastScreen

TASMANIA

Tasmania's only accredited screening service



Tasmanian
Government

Outline

- ▶ Learning outcomes
- ▶ Breast cancer incidence
- ▶ Breast cancer survival
- ▶ Components of the Triple test (CBE, diagnostic imaging, histology)
- ▶ Appropriate investigations
- ▶ Role of BreastScreen
- ▶ Breast density: implications and approach to management



Learning outcomes

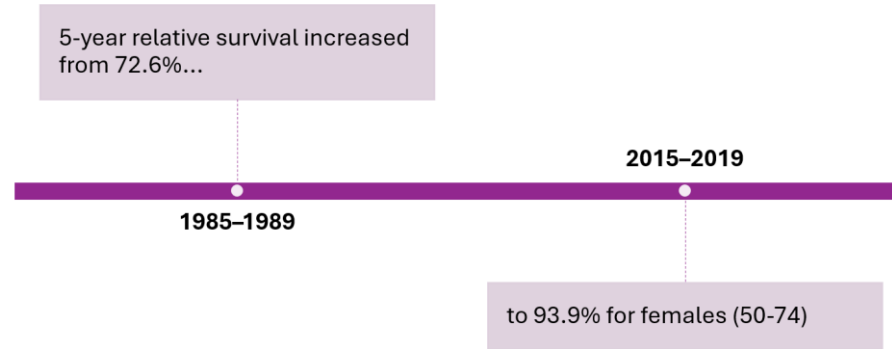
1. Outline the components of the triple test and its application, including imaging and diagnostic options
2. Identify the options for performing a breast cancer risk assessment
3. Relate the results of a risk assessment to available screening options
4. Effectively counsel patients on lifestyle modification aimed at reducing breast cancer risk
5. Recommend appropriate imaging modalities for patients with high-risk breast density
6. Understand the role of BreastScreen Tasmania



Breast cancer - Incidence

- ▶ Most commonly diagnosed cancer for females in Australia.
 - estimated 20,500 cases diagnosed in females in 2023. = 28% of the estimated cancers diagnosed in females.
- ▶ Most commonly diagnosed cancer for persons aged **40 to 59**.
- ▶ Second most commonly diagnosed cancer in Australia for persons aged 20 to 39 and 60 to 79
- ▶ Lifetime risk 1 in 7
- ▶ Incidence has increased from 136: 100,000 (2000) to 150:100,000 (2023)
 - ▶ expansion of screening to 70-74 yo in 2013

Breast cancer - survival

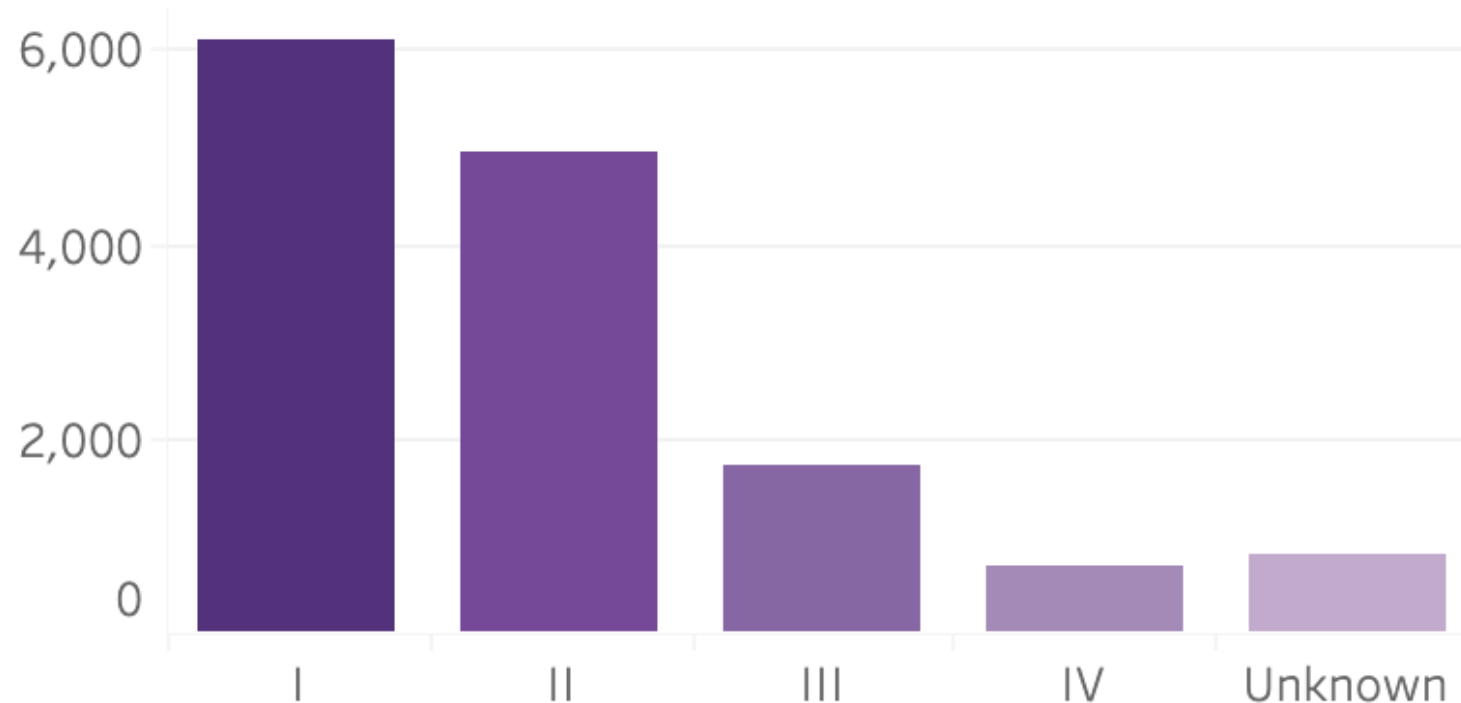


- ▶ Variation in survival for different types of breast cancer and the Stage of the cancer.
- ▶ 99% of all breast cancer cases in 2019 were carcinomas.
 - ▶ Ductal carcinomas (84% of all breast cancer cases)
 - ▶ Lobular carcinomas (13%).
- ▶ Ductal carcinomas
 - ▶ Infiltrating duct carcinoma (NOS) (73% of all breast cancers) - 5-year survival 93% (2015-2019)
 - ▶ Other ductal carcinomas - inflammatory - 5-year survival 61%, metaplastic carcinomas - 5-year survival 74%

Stage at diagnosis - incidence

Number of cases, by stage at diagnosis

Breast cancer, Females



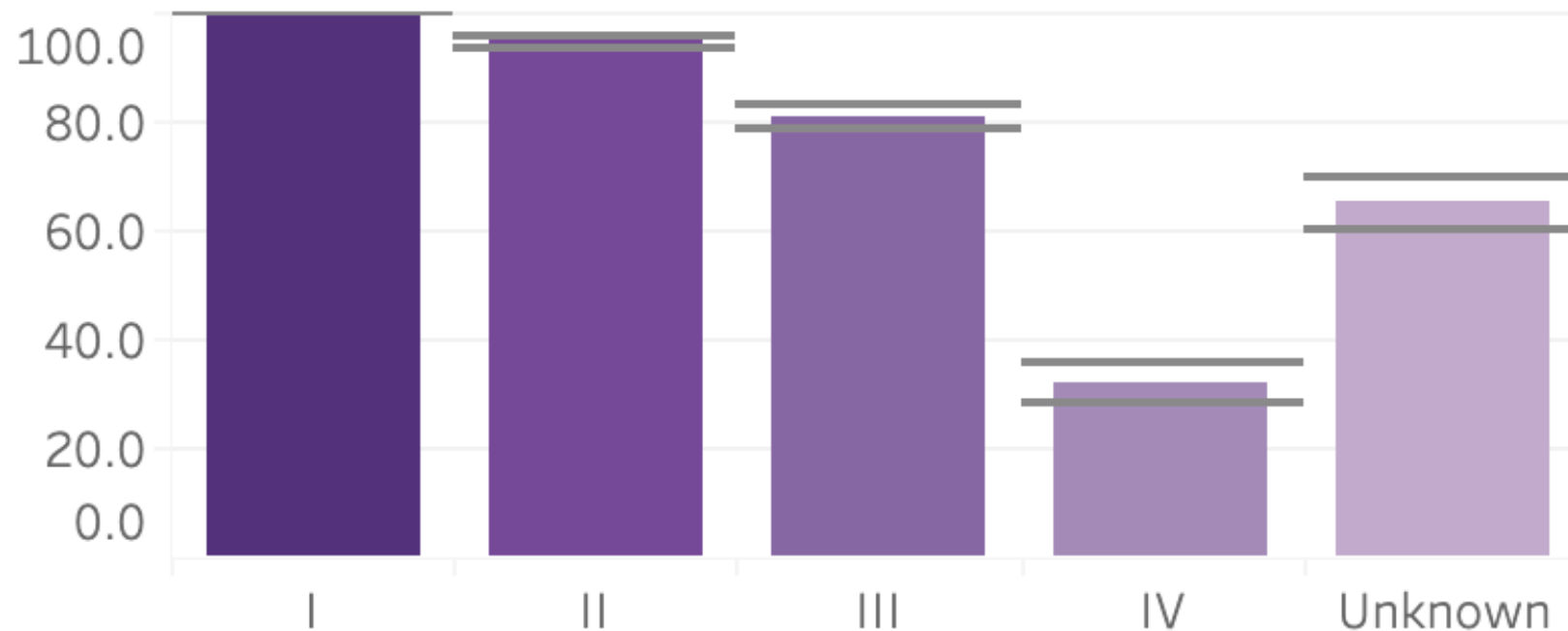
AIHW 2023



Tasmanian
Government

Stage at diagnosis - survival (2011-2016)

5-year relative-survival, by stage at diagnosis
Breast cancer, Females



Case 1 - 38 F, breast lump

History of current symptom	Endogenous/exogenous hormones	Chest/breast history	Lifestyle factors	Family history
Site Onset Duration Change over time/ with menstrual cycle Nipple discharge Pain Itch Skin changes	Menarche GxPx Age at first birth <30 Lactation >12 months Age at menopause LMP High BMI Contraception MHT	<ul style="list-style-type: none"> • Previous breast problems: surgery, biopsies, and their result (benign/malignant) • Previous radiation therapy <p>Most recent imaging</p>	<ul style="list-style-type: none"> • Alcohol • Physical inactivity • Smoking 	Breast, Ovarian Pancreatic Prostate BRCA1 (72%) BRCA2 (69%) Ashkenazi Jewish ancestry

- RACGP GP learning. Check, unit 611: May 2024. Breast cancer
- Cancer Australia. Risk factors for breast cancer: A review of the evidence. 2018.

Triple test

- ▶ Three diagnostic components:
 - medical history and clinical breast examination (CBE)
 - imaging - mammography and/or ultrasound
 - non-excisional biopsy - core biopsy and/or fine needle aspiration (FNA) cytology.
- ▶ The correct sequencing ⇔⇔ optimises interpretation of the results.
- ▶ Equivocal, suspicious, malignant ?
- ▶ Any abnormal result on any 1 of the 3 components requires investigation
- ▶ **Correlate** the cytological/histological results with the clinical and imaging findings.
- ▶ Use of the triple test will detect 99.6% of cancers.
- ▶ If all 3 are negative - no further investigation, unless symptoms persist - cancer <1%

* The investigation of a new breast symptom. A guide for General Practitioners 2021. Cancer Australia.



Tasmanian
Government

Case 1- History and CBE

- ▶ Lump:
 - ▶ noticed a lump about 9 months ago
 - ▶ Left breast 6 o'clock , 10 mm FN
 - ▶ No obvious change in size
 - ▶ No associated symptoms
- ▶ Smoker
- ▶ No significant family history
- ▶ CBE:
 - ▶ Inspection - No nipple abnormalities, no skin changes, slight increase in fullness at 6 o'clock adjacent to left areola
 - ▶ Palpation - no supraclavicular or axillary lymphadenopathy, palpable lump at 6/10 left breast, irregular margins, superficial



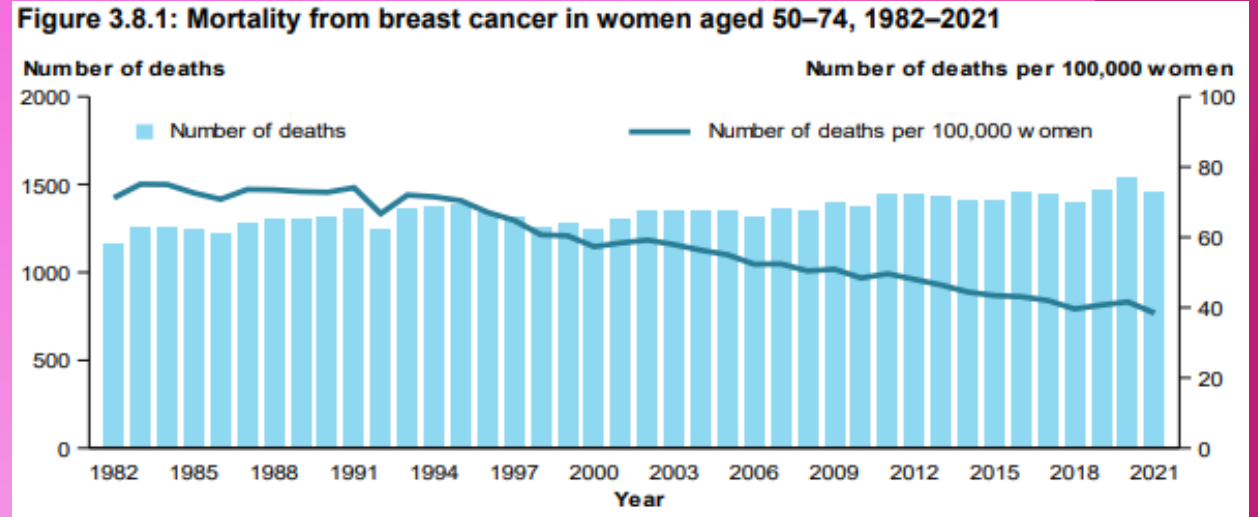
Diagnostic Investigations

▶ Appropriate Investigations

- ▶ Age, Degree of suspicion, Correlation
- ▶ <35/or pregnant/or lactating : US, +/- MMG if clinically suspicious/malignant, if US indeterminant/suspicious/malignant OR US result is not consistent with clinical findings.
- ▶ >35 : US + MMG
- ▶ Diagnostic MMG + US - high false positive and false negative with MMG in under 40s due to breast density
- ▶ MRI and CEM: not routinely recommended. If lack of correlation across the triple test consult with a specialist.



BreastScreen



▶ Role of Breast Screen

- ▶ Introduced to Australia in 1991

- ▶ Breast cancer mortality has decreased since BreastScreen Australia began—from 74 deaths per 100,000 women aged 50-74 in 1991 to around 41 deaths per 100,000 since 2014.

▶ Screening mammography

- ▶ 2 views of each breast

- ▶ More effective around age 50 - INCREASED fat, LESS density

▶ Who can go to breast screen? :

- ▶ age 50-74 are invited for 2-yearly mammograms,

- ▶ 40-49 & >74 can attend but are not recruited.

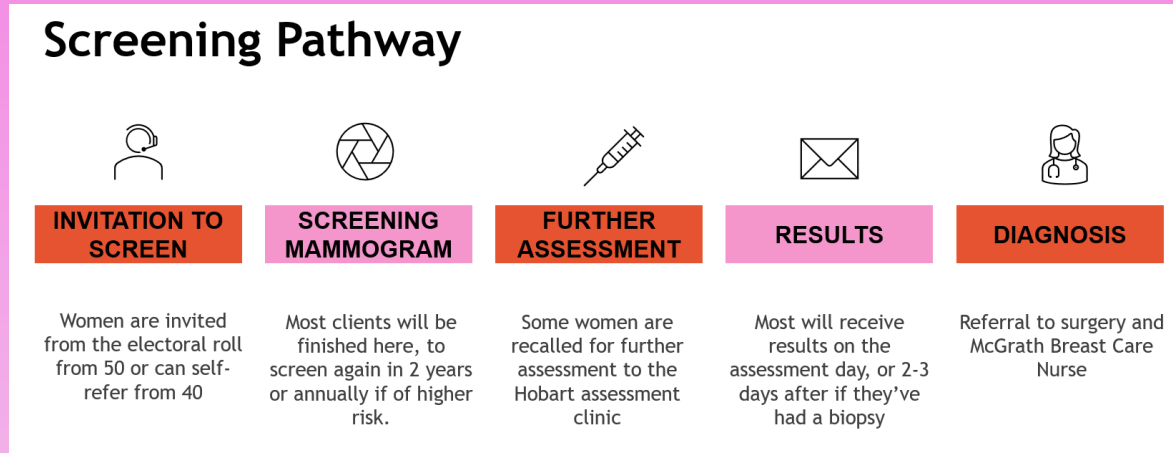


Tasmanian
Government

BreastScreen Tasmania



- ▶ BST is a free, statewide service, screening around 35,000 clients each year
- ▶ BST assessment service
 - ▶ Only 1 in 20 clients are called back to assessment



- ▶ Annual screening provided for:
- ▶ How clients can make an appointment:

Call 13 20 50

BreastScreen Australia

In 2019, of all breast cancer cases in women aged 50-74, **50%** were detected through BreastScreen Australia

In 2021, 59% of breast cancers detected through BreastScreen Australia for participants aged 50-74 were **small** ($\leq 15\text{mm}$)

75% of screen detected breast cancers were treated with breast conserving surgery compared to those detected outside the program (57.8%)

In 2020-21, around 1.7 million women participated in the BreastScreen Australia. This was **47%** of women aged 50-74.

In 2019, breast cancer was the most common cancer in Australian women, with 331 new cases per 100,000 women aged 50-74

Only **35%** of Aboriginal and Torres Strait Islander women aged 50-74 participated.

BreastScreen Australia participation, for participants 50-74

State and territory	Number	Crude rate	AS rate
NSW	496,670	43.9	43.2
Vic	415,547	46.2	45.8
Qld	379,901	51.9	51.4
WA	182,337	48.8	48.2
SA	140,940	51.3	50.3
Tas	51,784	56.8	56.0
ACT	28,684	52.2	51.9
NT	9,411	34.5	34.6
Australia	1,705,274	47.5	47.0

Source: AIHW analysis of BreastScreen Australia data , 2020-21

Under-screened clients

- ▶ Indigenous community
 - ▶ In 2019-2020, the age-standardised participation rate of Indigenous participants aged 50-74 in BreastScreen Australia was **35.8%**, compared with the non-Indigenous participation rate of **49.5%**
 - ▶ Self-reporting indigenous status, Less opportunity to screen
- ▶ Disability
- ▶ CALD community (unfamiliar with preventative health model)
 - ▶ In 2019-2020, the age-standardised participation rate for participants aged 50-74 who spoke a language other than English at home was **40.2%**, compared with **51.5%** for participants who spoke English at home
- ▶ Transgender/non-binary:
 - ▶ *Transwomen*: If you have been using gender-affirming hormones for 5 or more years, 2 yearly screening from age 50-74
 - ▶ *Transmen*: If you have not had gender affirming chest **surgery**, 2 yearly screening from age 50-74



Reporting of Breast Density

RANZCR (and BreastScreen Australia) advocate mandating the reporting of breast density in both screening and diagnostic settings

<https://www.ranzcr.com/whats-on/news-media/ranzcr-advocates-mandatory-reporting-of-breast-density-for-improved-breast-cancer-screening>



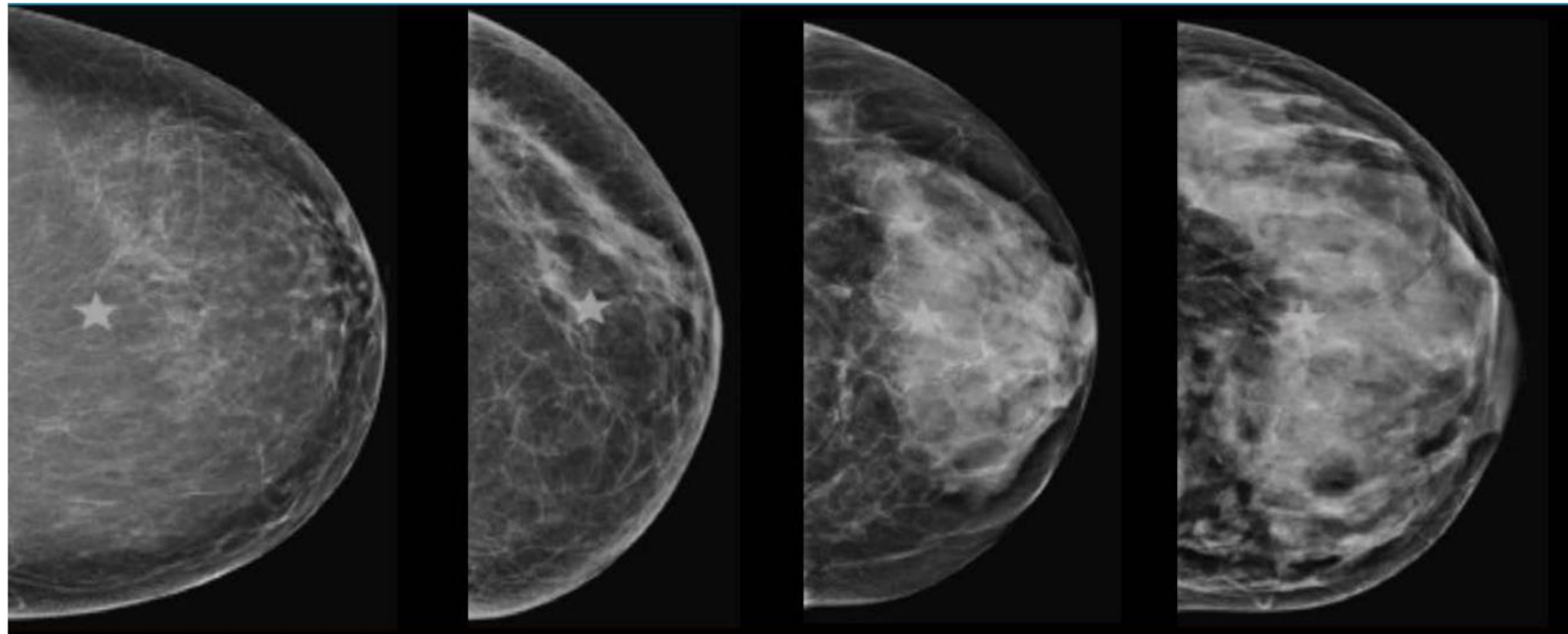
Tasmanian
Government

Breast density - What is it?

- ▶ Appearance on mammography, **not** clinical
- ▶ No gold-standard for measurement
- ▶ BI-RADS (ACR, 2013)
 - A. Almost entirely fatty— (less than 25% glandular tissue)
 - B. Scattered areas of fibroglandular densities— (approximately 25-50% glandular tissue)
 - C. Heterogeneously dense, which may obscure small masses— (approximately 51-75% glandular tissue)
 - D. Extremely dense, which lowers the sensitivity of mammography— (greater than 75% glandular tissue)



Breast density - BI-RADS



a
Almost all
fatty tissue

b
Mostly fatty tissue
with scattered
dense tissue

c
Mixed fatty
and dense
(heterogeneous)
tissue

d
Extremely
dense tissue

** The star on the images represents how cancer can be hidden in mammogram images*

Source: I-MED Radiology



Tasmanian
Government

Breast density - Prevalence and Risk factors

- ▶ BI-RADS
 - A. Almost entirely fatty—**21.6% (10%)**
 - B. Scattered areas of fibroglandular densities—**41.5% (40%)**
 - C. Heterogeneously dense —**28.9% (40%)**
 - D. Extremely dense—**8% (10%)**
- ▶ Proportion of women with dense breasts, in BI-RADS categories C and D, decreases with increasing age
- ▶ Genetic component
- ▶ Density lower with parity, increasing BMI
- ▶ Density higher with MHT (higher with combination MHT than oestrogen alone), lactation, pregnancy

Wanders et al., Volumetric breast density affects performance of digital screening mammography. *Breast Cancer Res Treat.* 2017



Tasmanian
Government

Breast Density - Implications

- ▶ Higher mammographic breast density is associated with an increased risk of breast cancer.
- ▶ Breast density is indicated to be an independent RF and a biomarker of breast cancer.
- ▶ Women with extremely dense breasts (BI-RADS d) on mammography (85th percentile) are **2.11 times more likely** to develop breast cancer than women with average breast density (BI-RADS B). (c.f x2 if first degree relative <50, x3-x6 if BRCA)

Bodewes FTH, van Asselt AA, Dorrius MD, Greuter MJW, de Bock GH (2022). Mammographic breast density and the risk of breast cancer: A systematic review and meta-analysis. *Breast*, 66: 62-68

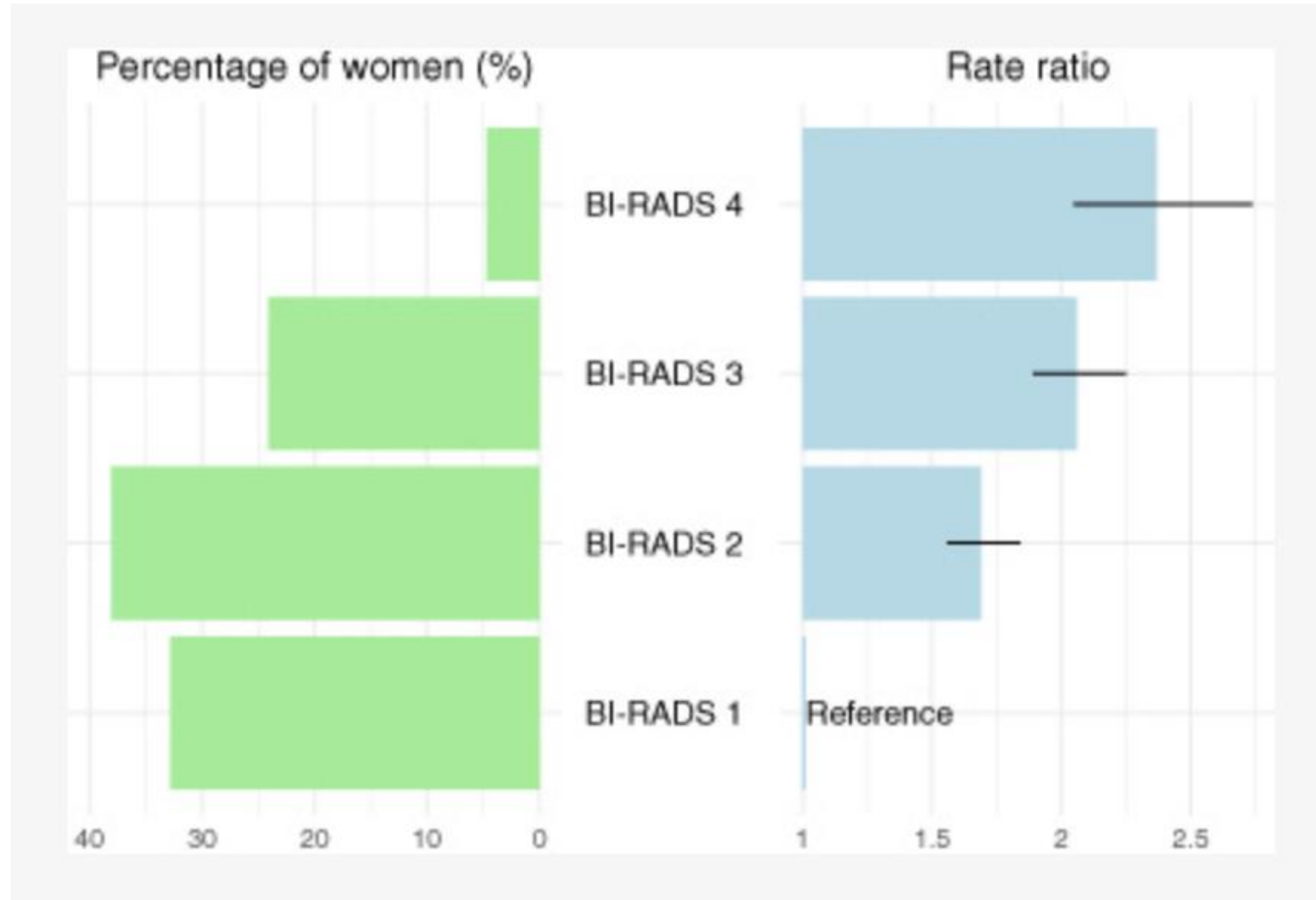
Winkel RR, von Euler-Chelpin M, Nielsen M, et al. (2016) 'Mammographic density and structural features can individually and jointly contribute to breast cancer risk assessment in mammography screening: A case-control study', *BMC Cancer*, 16(1), doi:10.1186/s12885-016-2450-7.



Tasmanian
Government

Breast density - Breast cancer incidence

(Lynge et al. 2023)



Breast density - Recommended screening

- ▶ Mammograms.
- ▶ No evidence to support additional screening modalities in the clinical guidelines. Clinical trials are underway - ?screening with US, CEM or MRI
- ▶ Incremental and relative benefits of additional testing need to be balanced against the potential harms to women - heightened anxiety, false positive results (can be as high as 8.1% with ultrasound), unnecessary biopsies and over-diagnosis.

Nickel B, et al. (2022). Factors associated with women's supplemental screen intentions following dense breast notification in an online randomised experimental study

- ▶ Tyrer Cusick - Lifetime risk <20% and BI-RADS Type C or D breast density - "Consider yearly MRI in addition to your yearly mammogram as MRI finds more cancers than a mammogram alone in dense breasts. If MRI is not possible, consider a contrast-enhanced mammogram (CEM) or molecular breast imaging (MBI). If these tests are not possible, consider ultrasound."



Tasmanian
Government

- ▶ Type D breast density **AND** other risk factors - discuss supplementary screening options such as ultrasound or tomosynthesis.
- ▶ Supplemental imaging can be of benefit for women with high breast density who have other significant risk factors.
- ▶ Special populations:
 - ▶ Women with **BRCA 1 or 2 gene mutations** are recommended to undergo annual breast MRI from the age of 30 to 50 years.
 - ▶ Women with a **strong family history** of breast cancer are recommended to undergo annual screening mammograms.
 - ▶ **Previous biopsy results showing a premalignant disease** are recommended to undergo annual screening mammograms.



Breast density - Approach to patients

1. Discuss implications of breast density for individual patient.
2. Use a validated breast cancer risk assessment tool e.g. [iPrevent](#), [Tyrer-Cuzick](#)/IBIS.
3. Discuss individual lifestyle risk factors
 - ▶ Maintain healthy weight
 - ▶ Exercise regularly – most days for at least 30 min mod-strenuous
 - ▶ Healthy diet
 - ▶ Reduce alcohol intake
 - ▶ Cease smoking

4. Encourage a **habit** of being breast aware

(Hill D, Jamrozik K, White V, et al. Surgical management of breast cancer in Australia in 1995. *NHMRC National Breast Cancer Centre, Sydney, 1999*)

1. MHT??
2. INFORMD <https://www.informd.org.au/>



Tasmanian
Government

Difference in breast cancer incidence per 1,000 women aged 50-59.
Approximate number of women developing breast cancer over the next five years.

NICE Guideline, Menopause:
Diagnosis and management
November 2015

23 cases of breast cancer diagnosed in the UK general population



An additional four cases in women on combined hormone replacement therapy (HRT)



Four fewer cases in women on oestrogen only Hormone Replacement Therapy (HRT)



An additional four cases in women on combined hormonal contraceptives (the pill)



An additional five cases in women who drink 2 or more units of alcohol per day



Three additional cases in women who are current smokers



An additional 24 cases in women who are overweight or obese (BMI equal or greater than 30)



Seven fewer cases in women who take at least 2½ hours moderate exercise per week



Case study 1

- ▶ 38 F palpable mass in left breast at 6 o'clock position
 - ▶ Referred for mammogram and USS by GP – shadowing with no lesion, no biopsy at that time, suggested repeat imaging 3 months later
 - ▶ Non-resolving mass, imaging (USS) repeated 4 months later – no progressive sonographic imaging, but acoustic shadowing persisted
- ▶ Persisting mass - referred to breast surgeon
 - ▶ FNA performed – atypical cells
 - ▶ MRI – no abnormality corresponding in left breast palpable mass detected
 - ▶ Repeat ultrasound (9 months from initial presentation) – 18mm lesion
 - ▶ Core biopsy performed: Invasive Lobular Cancer
- ▶ Clinical suspicion



Case study 2

- ▶ Referred patient for private MMG and USS
 - ▶ 6-8 week wait
 - ▶ Approx. \$500 OOP
- ▶ Attended BreastScreen
 - ▶ 2D MMG - reported as normal
- ▶ Subsequently attended for diagnostic MMG, tomosynthesis and US
 - ▶ MMG and tomosynthesis normal
 - ▶ Hypoechoic lesion found on USS
 - ▶ Biopsy proven IBC
- ▶ Triple test



Summary

- ▶ Triple test
 - ▶ Gold standard for symptomatic patients, includes **diagnostic** breast imaging
- ▶ Discuss breast density in the context of other risk factors for breast cancer
 - ▶ CanRisk, IBIS
- ▶ Modifiable risk factor management
- ▶ 2D mammograms remain the standard screening modality
- ▶ Consider supplemental screening if additional risks

Questions?



BreastScreen

TASMANIA

Tasmania's only accredited screening service



Tasmanian
Government

Resources

- ▶ RACGP GP learning. Check, unit 611: May 2024. Breast cancer
- ▶ Cancer Australia. Risk factors for breast cancer: A review of the evidence. 2018
- ▶ Cancer Australia. Investigation of a new breast symptom: a guide for General Practitioners. 2021
- ▶ RANZCR Breast Density Position Statement. 2023



Tasmanian HealthPathways is a web-based information portal developed by Primary Health Tasmania. It is designed to help primary care clinicians plan local patient care through primary, community and secondary healthcare systems.



For access to the Tasmanian HealthPathways, please email:

healthpathways@primaryhealthtas.com.au

Tasmania HealthPathways

Search HealthPathways

Tasmania

Home

COVID-19

About HealthPathways

Aboriginal and Torres Strait Islander Health

Acute Services

Allied Health and Nursing

Child Health

End-of-Life Care

Investigations

Legal and Ethical

Lifestyle and Preventive Care

Medical

Mental Health and Addiction

Older Adults Health

Medicines Management

Public Health

Specific Populations

Surgical

Women's Health

Our Health System

Tasmania

HEALTHPATHWAYS

CPD Events

19 June 2024
ADHD discussion with Prof. David Coghill
View more events...

Latest News

1 May
Real Time Prescription Monitoring (RTPM) system TasScript
Several pathways refer to prescribing high-risk monitored medicines. From 1 May 2024, the RTPM system TasScript replaces DORA. It is mandatory for prescribers to take all reasonable steps to check TasScript before prescribing. Read more...
28 May
Public health...
VIEW MORE UPDATES...

Pathway Updates

NEW - 18 June
ADHD Medications for Adults
Updated - 11 June
Gout
Updated - 31 May
Hereditary Haemochromatosis and Raised Ferritin
Updated - 31 May
ADHD in Children and Young People
Updated - 24 May
COVID-19 Vaccination
VIEW MORE UPDATES...

ONLINE LEARNING HUB

PRIMARY HEALTH TASMANIA

RACGP RED BOOK

FINDHELPTAS

MBS ONLINE

NPS MEDICINEWISE

PBS

TASMANIAN HEALTH DIRECT



Tasmania HealthPathways

Search HealthPathways

Tasmania

Genetics

Haematology

Immunology

Infectious Diseases

Intellectual Disability

Nephrology

Neurology

Oncology

Brain Tumours

Breast Cancer - Established

Breast Cancer Follow-up

Breast Symptoms and Suspected Breast Cancer

Cancer Immunotherapy Side-effects

Cancer Supportive Care

Cancer Therapy Induced Diarrhoea

Chemotherapy and Infection

Chemotherapy-induced Nausea and Vomiting

Corticosteroid Use in Oncology

Established Malignant Melanoma

Gastro-oesophageal Cancer - Established

High Grade Gliomas

Pancreatic Cancer - Established

Medical / Oncology / Breast Symptoms and Suspected Breast Cancer

Breast Symptoms and Suspected Breast Cancer

This pathway covers the investigation of breast symptoms and suspected breast cancer in women and men.

See also:

- Breast Screening
- Familial Breast and Ovarian Cancer Syndromes

Red Flags

- Breast or axillary lump, breast distortion, skin dimpling or ulceration
- Recent nipple changes including nipple eczema that does not respond to treatment
- Unilateral blood stained nipple discharge
- Mastitis not responding to treatment
- Repeated consultation about the same breast symptoms

Background

About breast cancer

Assessment

Practice point

Investigate men as for women
If breast lumps or symptoms in men, investigate as for women



For access to the Tasmanian HealthPathways,
please email:

healthpathways@primaryhealthtas.com.au

Some final words

- After this webinar end, your browser will open a link to an evaluation survey.
- Statements of attendance will be emailed to participants.
- For event queries, please contact events@primaryhealthtas.com.au

Thank you



Disclaimer

- Information presented in webinars organised by Primary Health Tasmania can come from a number of sources, and does not necessarily reflect the views of Primary Health Tasmania. Every reasonable effort is taken to ensure the information is accurate and current.
- The content is general in nature – please refer to any referenced guidelines or standards for further information. Health professionals should rely on their own independent inquiries and professional judgement when making any decisions.
- Primary Health Tasmania and the Australian Government are not responsible for any injury, loss or damage however arising from the use of or reliance on the information provided in this webinar.

Stay informed



www.primaryhealthtas.com.au



www.facebook.com/primaryhealthtas



www.twitter.com/TasPHN
[@TasPHN](https://twitter.com/TasPHN)

