Australian Government

Australian Institute of Health and Welfare

BreastScreen AUSTRALIA

A joint Commonwealth/State and Territory Program

BreastScreen Australia data dictionary

Version 1.3

AIHW

BreastScreen Australia data dictionary

Version 1.3

Australian Institute of Health and Welfare
Canberra

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Contents

Summary

Breast cancer is the most common cancer, and second most common cause of cancer-related death, in Australian women. In 2019, 18,496 women were diagnosed with breast cancer, and in 2021 there were 3,129 deaths from this disease (AIHW 2023).

A national screening program introduced in Australia in 1991—BreastScreen Australia—aims to reduce illness and death resulting from breast cancer. This is achieved through organised screening to detect cases of unsuspected breast cancer in women, thus enabling early intervention.

Critical to the success of BreastScreen Australia is the ability to measure quality, performance and outcomes to inform a continuous quality improvement approach to breast cancer screening in Australia. This relies on the collection of accurate and consistently defined data for every episode of care for every participant screened.

Services accredited under BreastScreen Australia are expected to operate according to National Accreditation Standards (NAS) covering access and participation, cancer detection, assessment, timeliness, data management and information systems, client focus, and governance and management.

Standardised and comparable data are also provided annually to the Australian Institute of Health and Welfare (AIHW) for monitoring and evaluation of BreastScreen Australia performance against agreed performance indicators in the AIHW's *BreastScreen Australia monitoring report* series.

The *BreastScreen Australia data dictionary* is intended to be the authoritative source of data definitions used by BreastScreen Australia to meet the need for national consistency in data collected for program monitoring and evaluation, and for accreditation of BreastScreen Australia services. To fulfil this role, it includes metadata standards to support data collected at every episode of care for every participant screened, and data specifications for NAS Measures required for accreditation of BreastScreen Australia services, as well as data specifications for performance indicators used to monitor BreastScreen Australia.

1 Introduction

1.1 Development of the BreastScreen Australia data dictionary

BreastScreen Australia is Australia's national breast cancer screening program. It aims to reduce illness and death resulting from breast cancer through organised screening to detect cases of unsuspected breast cancer in women, thus enabling early intervention.

Critical to the success of BreastScreen Australia is the ability to measure quality, performance and outcomes to inform a continuous quality improvement approach to breast cancer screening in Australia. This relies on the collection of accurate and consistently defined data for every episode of care for every participant screened.

The *BreastScreen Australia data dictionary* is intended to be the authoritative source of data definitions that underpins the accreditation process of BreastScreen services, and supports the monitoring and evaluation of BreastScreen Australia.

Development of the first iteration of a national dataset for Australia's breast cancer screening program began in 1991 alongside the introduction of the then National Program for the Early Detection of Breast Cancer (now called BreastScreen Australia) and its first National Accreditation Requirements. This document was known simply as the 'Minimum Data Set', and was an unpublished paper circulated in 1994 (see 'National Program for the Early Detection of Breast Cancer 1994' in the References section). This 'Minimum Data Set' formed the backbone for all later iterations of the data dictionary.

Development of the Data Set into a data dictionary—the *BreastScreen Australia data dictionary: version 1*—occurred alongside the development of the National Accreditation Standards (NAS) in 2001 by the National Quality Management Committee (NQMC) under the auspices of the Australian Screening Advisory Committee, with further revisions and amendments over subsequent years. The *BreastScreen Australia data dictionary: version 1* was endorsed by the NQMC in 2004, and published in 2005 (BreastScreen Australia 2005).

Another review of the NAS occurred from 2011–2014 when, in 2011, the BreastScreen Australia Accreditation Review Committee (ARC) was established to oversee and guide a comprehensive review of the governance arrangements and accreditation system of BreastScreen Australia, including the National Accreditation Standards (NAS) following recommendations made as a result of the BreastScreen Australia Evaluation (BreastScreen Australia 2009). The Committee recognised that the *BreastScreen Australia data dictionary*, as an integral document supporting the accreditation process of BreastScreen Australia, would therefore require review and revision alongside the overarching review.

Under the direction of the ARC, and guided by expert BreastScreen database managers, epidemiologists and clinicians, the AIHW updated the *BreastScreen Australia data dictionary* in line with the changes made to the NAS, as well as other additions and improvements.

This process of review and revision resulted in the *BreastScreen Australia data dictionary: version 1.1* (AIHW 2015), which was endorsed by the Australian Health Ministers' Advisory Council's Community Care and Population Health Principal Committee, Standing Committee on Screening on 18 November 2014. The subsequent document, *version 1.2* (AIHW 2019), was endorsed by this Committee on 6 March 2019. This current document, version 1.3, was endorsed by the BreastScreen Australia Program Management Group on 8 February 2024.

Terminology changes have accompanied the iterations of the data dictionary. National Accreditation Requirements as they were known when the program was first established were replaced with National Accreditation Standards (NAS) in the *BreastScreen Australia data dictionary: version 1*, which were then replaced with NAS Measures in the *BreastScreen Australia data dictionary: version 1.1* and maintained in versions 1.2 and 1.3.

A change in the target age group for BreastScreen Australia from participants aged 50–69 to participants aged 50–74 also coincided with the review of the NAS in 2011–2014. This has necessitated that the NAS Measures that appear in the BreastScreen Australia data dictionary include both historic Measures for participants aged 50–69 alongside the new NAS Measures that are specific to participants aged 50–74.

BreastScreen Australia data dictionary version 1.3

The *BreastScreen Australia data dictionary* is a document that needs to be updated to reflect any changes to clinical practice, the accreditation system, or in response to improvement requests from within BreastScreen Australia, that require further revisions to the data dictionary to ensure this document is able to optimally support the accreditation process. These revisions were made by staff in the Screening Analysis and Monitoring Unit of the AIHW according to advice and guidance provided by the BreastScreen Australia Data Dictionary Working Group, comprised of data experts from each state and territory BreastScreen program (listed in the table below). These revisions were endorsed by the BreastScreen Australia Program Management Group on 8 February 2024.

BreastScreen Australia Data Dictionary Working Group

Matthew Warner-Smith	New South Wales
Jennifer Woodhead	New South Wales
Warwick May	New South Wales
Jules Wilkinson	Victoria
Georgina Marr	Victoria
Nick Ormiston-Smith	Queensland
Pantea Konn	Queensland
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Marcela Orellana	Western Australia
Dr Andy Holmes	South Australia
Ada Childs	South Australia
Dylan Sutton	Tasmania
Michael Phipps	Australian Capital Territory
Alison Budd	Australian Institute of Health and Welfare
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1.2 Objectives of the BreastScreen Australia data dictionary

The BreastScreen Australia data dictionary has been developed as the authoritative source of data definitions used by BreastScreen Australia to meet the need for national consistency in the data collected for program monitoring and evaluation. It was developed to ensure standardisation and comparability of data across the program. It was also designed to make data collection activities more efficient, by reducing duplication of effort in the field, and more effective, by ensuring that the information collected is fit for purpose.

The objectives of the BreastScreen Australia data dictionary are to:

- establish a core set of uniform definitions relating to the full range of BreastScreen Australia screening and assessment services, and an agreed range of population parameters.
- promote uniformity, availability, reliability, validity, consistency and completeness in the data.
- accord with nationally- and internationally-agreed protocols and standards, wherever possible.
- promote the national standard definitions through being readily available to all individuals and organisations involved in the generation, use and/or development of breast cancer screening services information.

The BreastScreen Australia data dictionary outlines data elements to be collected at the Service and/or State Coordination Unit (SCU) level for monitoring and evaluation purposes and for the purposes of participant care. The use of standard definitions and agreed methods for calculating screening performance measures facilitates comparisons among services, states and territories, and international breast cancer screening programs.

Each state and territory is required to provide data to the AIHW annually to prepare BreastScreen Australia monitoring reports. These reports are publicly available and used to measure the performance of the program through a set of key performance indicators. It is therefore critically important that such comparative data are accurate and consistent.

There is a requirement for the Service and/or SCU to conform with the BreastScreen Australia data dictionary, with regard to the collection of all required data elements and the definitions and methods used by the Service and/or SCU in the calculation of performance measures.

Note, however, that the *BreastScreen Australia data dictionary* will not cover all data elements collected by all states and territories. There may be historic, legislative or operational reasons why some jurisdictions may collect additional data elements of their own, or may derive data dictionary data elements from other data elements that they collect. Nevertheless, the *BreastScreen Australia data dictionary* fulfils its role of supporting the BreastScreen Australia accreditation process and achieving national consistency in data collected for program monitoring and evaluation.

Please note that, at the time of publication, the contents of this data dictionary have not yet been assessed for inclusion in the *National Health Data Dictionary* and thus may not align with some related standards currently specified in the *National Health Data Dictionary*, although complete alignment is intended.

1.3 Protocol for managing changes to the BreastScreen Australia data dictionary

BreastScreen Services/SCUs depend on the BreastScreen Australia data dictionary to support the accurate completion of accreditation reports. BreastScreen Services/SCUs and BreastScreen Australia require absolute clarity in being able to identify the current version of the data dictionary and, after endorsement of an updated version and subsequent public release, when it must be implemented for accreditation reports.

The protocols for managing changes to the BreastScreen Australia data dictionary are:

1. The BreastScreen Australia data dictionary will be updated up to once each year only.
2. An updated BreastScreen Australia data dictionary will be allocated a new version number.
3. A new version of the BreastScreen Australia data dictionary will be effective on the date of its public release. While recognising the need to allow a reasonable amount of time for modifications to BreastScreen Service/SCU systems to support changes within a new version, the changes must be implemented (unless otherwise agreed by the BreastScreen Australia Program Management Group):
   (a) within 12 months of the date of public release in accreditation applications to the NQMC; and
   (b) as soon as possible following the date of public release in other accreditation reports to the NQMC.

2 Summary of updates to the BreastScreen Australia data dictionary

This chapter summarises updates made in the *BreastScreen Australia data dictionary: version 1.3* compared to *version 1.2*

Terminology

Terminology around gender has been changed to be more inclusive of all people who are eligible to screen through BreastScreen Australia. Previously the terms ‘woman’ and ’women’ were used throughout this document. These terms have been replaced with the terms ‘participant’ and ‘participants’ where appropriate.

Note that this terminology change excludes the formal definitions of NAS Measures and Data Dictionary Measures. These use the terms ‘woman’ and ‘women’, as these are formal definitions that need to align across all BreastScreen Australia documentation.

> This document uses the terms ‘participant’ and ‘participants’ when referring to data collected under BreastScreen Australia. These data are not restricted by sex or gender, with all participants in breast screening included in these data.
>
> For breast cancer screening data, ‘participant’ or ‘participants’ is defined as a person having breast tissue that is suitable for breast cancer screening and who has engaged with the Service and/or SCU through a screening and/or assessment appointment or visit.
>
> Screening participants may include women, transgender men, transgender women, non-binary people or other gender diverse people. State and territory BreastScreen services provide advice on BreastScreen and gender, including whether screening for breast cancer may benefit transgender women, transgender men, non-binary, and gender diverse people.
>
> This document uses the term 'women' to mean ‘female' when referring to cancer incidence data and cancer mortality data, as these data sources are based on sex assigned at birth. However, it should be noted that some people may not identify with this term.

Data elements

Table S1: Revised data elements

Version 1.3	Version 1.2	Definition	Description of changes
C.6 Date participant notified of screening results	C.6 Date woman notified of screening results	The date the participant was first notified of the outcome of the participant's screening visit(s) by phone call in which the participant is directly spoken with, by letter or via email.	Expanded the definition to include that the participant was notified of the outcome of the participant's visit(s) to include "by phone call in which the participant is directly spoken with, by letter or via email".
D11.1 Recommendation —assessment	D11.1 Recommendation —assessment	The recommended action following the assessment workup for this screening episode.	New "Code 6, Discharge premalignant" has been added. Change made in Code 3 in the Guide for use.
E.8.1 Lesion identified in specimen	E.8.1 Lesion identified in specimen	Whether or not the lesion was correctly identified in the specimen during surgical excision.	NA – complete neoadjuvant response added as number 3 in the data domain section. NA – prior diagnostic needle biopsy complete excision added as number 4 in the data domain section. Expanded the Guide for use to add guidance for complete neoadjuvant response and prior diagnostic needle biopsy complete excision.
C.9 High-risk flag	C.8 High-risk flag	Identifies participants who are at considerably higher risk for breast cancer	Number has been changed.

Table S2: New data elements

Data element	Definition
C.8 Annual screening flag	Identifies whether the participant is recommended for annual routine screening.

NAS Measures

Table S3: Revised NAS Measures

NAS Measure	Description of change
2.3.1 (a)	Algorithm changed in 2.3.1 (a) (ii) to remove & ((F.1.2—C.2<365days))]
2.3.1 (b)	Algorithm changed in 2.3.1 (b) (ii) to remove & ((F.1.2—C.2<365days))]
2.3.2 (a)	Algorithm changed in 2.3.2 (a) (ii) to remove & ((F.1.2—C.2≥365 days & <730 days))) at A.2
2.3.2 (b)	Algorithm changed in 2.3.2 (b) (ii) to remove & ((F.1.2—C.2≥365 days & <730 days))) at A.2
2.4.1	Wording of the name revised to clarify measure. Changes have been made in the notes section.
2.6.7	[A.1 & B.9.1 & (D.11.1=3 where (D.11.2 + D11.3—C.2≤365 days)) &/or (E.12=3 & D.11.4—C.2≤365 days) at A.3] changed to [A.1 & B.9.1 & D.11.1=3 &/or E.12=3 at A.3] to capture all clients who had an early review recommendation at assessment.
3.1.3	'Measuring the false negative rate of non-breast lesions such as lymph nodes is complex. Therefore, biopsies of lymph nodes should not be included in this NAS Measure as the monitoring of these is best completed as part of a separate study' has been added in the specifications.
3.1.7	Change in the Data Dictionary Measure from 'The percentage of all lesions excised at assessment that were correctly identified at first excision' to 'The percentage of all lesions which are correctly identified at first excision through correlation of final pathology with specimen imaging findings or with screening assessment results'. Algorithm changed from [A.1 & B.9.1 & (each A.5 where E.8.1=1) at first E.2] to [A.1 & B.9.1 & (each A.5 where E.8.1=1 or 3 or 4) at first E.2] to include E.8. 1= 3, NA – complete neoadjuvant response and E.8. 1= 4, NA – prior diagnostic needle biopsy complete excision.
4.2.2	D.11.3 Date recommendation made has been deleted. D.11.4 Assessment visit—date has been added in the numerator. (D.2.2 = D.11.3) has been deleted from the numerator. (Count D.11.4=1) has been added. Denominator 'where D.8.1=5' changed to 'where D.8.1=5 or D.8.1 is null'.
4.2.5	The statement 'Participants recommended for early review are counted in the denominator' is added in the specifications.
4.2.6	D.10 Final result of assessment visit has been added in the denominator. [A.1 & B.9.1 & (D.11.4 for D2.2 between start date & end date & D.2.1=1 & D.10<>0) at A.3] The statement in the specification has been amended to 'Where a participant has multiple assessment visits and the participant completes assessment with a final result, it is important to include all assessment visits associated with that screening episode'.

Table S4: Deleted NAS Measures

NAS Measure	Description
3.1.6	'All women with impalpable lesions undergoing excision have specimen imaging recorded' has been deleted.

3 Data elements

For ease of use, the data element definitions in this data dictionary (excluding those for performance indicators) are presented in eight separate segments, A–H, as below

A. Identifier segment
B. Client segment
C. Screening visit segment
D. Assessment visit segment
E. Excision of lesion segment
F. Histopathology segment
G. Primary treatment segment
H. Death segment.

Performance indicator data element definitions are presented separately in Chapter 4.

Please note that the fields that describe the representational form of each data element are not meant to prescribe how state and territory database systems should store the information.

Fields such as ‘Datatype’, ‘Field size’, ‘Representational form’ and ‘Representational layout’ describe how the data element should be represented for reporting purposes. The information can be stored differently in state and territory computer systems as long as the information required can be extracted and converted into the format required.

The ‘Data domain’ field, however, does prescribe the minimum information to be collected.

Data elements

A—Identifier segment

Data dictionary Version 1.3		Data dictionary Version 1.2	
A.1	Client identifier number	A.1	Client identifier number
A.2	Screening unit identifier	A.2	Screening unit identifier
A.3	Assessment unit identifier	A.3	Assessment unit identifier
A.4	Surgical unit identifier	A.4	Surgical unit identifier
A.5	Lesion number	A.5	Lesion number
A.6	Service provider identifier	A.6	Service provider identifier
A.7	Machine identifier	A.7	Machine identifier
A.8	Estimated date flag	A.8	Estimated date flag
A.9	State identifier	A.9	State identifier

A.1 Client identifier number

Admin. Status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	A BreastScreen Australia identifier unique within a State and Territory.
Context	This data element identifies each participant on the BreastScreen database and is used for tracking participants within a State and Territory.

Relational and representational attributes

Datatype	Alpha numeric		*Representational form*	CODE
Field size	*Min.*	*Max.*	*Representational layout*	
Data domain	The client identifier number			
Guide for use	Only one Client Identifier Number is to be allocated to each participant within each jurisdiction. This is allocated at the first contact with the service and may include participants who never attend, e.g. where an appointment is made but not kept.			
Verification rules				
Related data elements	B.1 Name			
Related NAS Measures	Except for NAS Measure 2.5.2, all elements use this data element.			

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

A.2 Screening unit identifier

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	A BreastScreen Australia identifier number for each screening unit unique within a State and Territory.
Context	Screening visit. This data element identifies the unit in which the mammographic screening took place. This number also identifies whether the screening unit is a mobile or fixed unit.

Relational and representational attributes

Datatype	Alpha numeric		*Representational form*	CODE
Field size	*Min.*	*Max.*	*Representational layout*	
Data domain	The screening unit identifier number			
Guide for use	One Screening Unit Identifier code is to be allocated to each screening unit, unique within each Sate and Territory.			
Verification rules				
Related data elements	A.7 Machine identifier C.2 Date of first attendance for this episode			
Related NAS Measures	1.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months. 1.1.2 (b) ≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months. 1.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screening episode within the Program who are rescreened within 27 months of their previous screening episode. 1.1.3 (b) ≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode. 1.2.1 (a) The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at			

least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.1 (b) The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.2 (a) The Service and/or SCU monitors the proportion of women, aged 40–49 years and 75 years and over who are screened and recalled for assessment. (a) screened

2.1.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer.

2.1.1 (b) ≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.

2.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

2.1.2 (b) ≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer.

2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.5 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

2.2.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.1 (b) ≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.

2.2.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.2 (b) ≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.

2.2.3 The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

2.2.4 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

2.5.2 The overall repeat rate for the Service and/or SCU is ≤2% of all screening images.

2.6.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for annual screening.

2.6.1 (b) ≤10% of women aged 50–69 years attend for annual screening.

2.6.2 The Service and/or SCU monitors and reports the proportion of women who attend for annual screening, aged 40–49 years and 75 years and over.

2.6.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode and are recalled for assessment.

2.6.3 (b) <10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment.

2.6.3 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their first screening episode and are recalled for assessment.

2.6.4 (a) The Service and/or SCU offers, monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.4 (b) <5% of women aged 50–69 years who attend for their second or subsequent screening episode are recalled for assessment.

2.6.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.5 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

2.6.6 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening episode.

2.6.7 <0.2% women who attend for screening are recommended for early review for further assessment.

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

4.1.1 (a) ≥90% of women aged 50–74 years attend for a screening appointment within 28 calendar days of their booking date (fixed sites only).

4.1.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the time taken to achieve 90% from booking to screening (fixed sites only).

4.1.2 ≥90% of women have documented notification of the results of screening within 14 calendar days of the date of screening.

4.2.1 (a) ≥90% of women requiring assessment attend an assessment visit within 28 calendar days of their screening visit.

4.2.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the number of days the Service and/or SCU takes to achieve 90%.

4.2.1 (c) Where part (a) is not met, the Service and/or SCU records and report the percentage of women who were offered assessment within 28 calendar days of their screening visit.

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	The Screening unit identifier determines the service to which the outcomes of screening are attributed.

A.3 Assessment unit identifier

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	A BreastScreen Australia identifier number for each assessment unit unique within a State and Territory.
Context	This data element identifies the assessment centre at which the assessment of a client took place. It is also used to indicate whether the assessment centre is inside or outside BreastScreen Australia.

Relational and representational attributes

Datatype	Alpha numeric		*Representational form*	CODE
Field size	*Min.*	*Max.*	*Representational layout*	
Data domain	The assessment unit identifier number			
Guide for use	Use an ‘unknown’ identifier code to indicate when the location of the assessment centre/service is not known. More than one assessment unit identifier can apply to each screening episode; for example, a client may attend for mammographic work-up on a mobile unit and further work-up elsewhere or they may attend for their initial work-up in one assessment centre and have a core biopsy elsewhere.			
Verification rules				
Related data elements	D.2.1 Attendance for assessment			
Related NAS Measures	2.6.7 <0.2% women who attend for screening are recommended for early review for further assessment. 3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient. 3.1.2 0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive ‘percutaneous needle biopsy’ for the purpose of this standard. Where NAS Measure 3.1.2 is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU			

3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.7 ≥95% of all lesions are correctly identified at first excision.

3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively.

3.1.8 (b) Where part (a) is not met, the Service and/or SCU provide the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.

4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

4.2.3 ≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment.

4.2.4 ≥85% of women are verbally given the results of percutaneous needle biopsy within seven calendar days of the assessment procedure.

4.2.5 ≥95% of women complete all assessment within 15 calendar days.

4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	The location of the screening visit determines the attribution of the outcome of assessment. If a participant is assessed in a Screening and Assessment Service (SAS) outside the SAS where screening took place or in an assessment centre outside BreastScreen Australia or in another state, then the information about assessment is relevant only to the NAS Measures that measure the efficiency of the assessment unit undertaking the assessment process. The final outcome of assessment is attributed to the SAS where screening took place. For example if a cancer is detected then it is attributed to the screening SAS and NOT counted in the assessment SAS. This also applies to the reporting of NAS Measures such as the proportion returning to assessment, etc. The fact that the assessment took place outside the screening SAS or that the assessment was carried out in more than one assessment centre is captured by the Assessment unit identifier.

A.4 Surgical unit identifier

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	A BreastScreen Australia identifier for the surgical unit attended by the participant for excision of a lesion, unique within a State and Territory.
Context	Excision of a lesion for diagnosis or treatment following assessment.

Relational and representational attributes

Datatype	Alpha numeric		*Representational form*	CODE
Field size	*Min.*	*Max.*	*Representational layout*	
Data domain	The surgical unit identifier number			
Guide for use	One Surgical Unit Identifier code is to be allocated to each surgical unit, unique within each State and Territory. If the participant underwent surgery more than once, this data element is repeated.			
Verification rules				
Related data elements	A.6 Service provider identifier E.1 Excision performed E.8.2 Further surgery recommended			
Related NAS Measures				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

A.5 Lesion number

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The number of the suspicious lesion that has been identified during the screening visit, during the assessment visit, during excision or after the screening episode (interval cancer or cancer in a non-attender for rescreen).
Context	Lesion number is used to track each lesion for each participant.

Relational and representational attributes

Datatype	Alpha numeric			*Representational form*	CODE
Field size	*Min.* 2	*Max.* 2		*Representational layout*	AN
Data domain	The lesion number				
Guide for use	Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible for each stage of assessment, diagnosis and treatment. These lesions are the most significant lesions within each category (mammographic, clinical, for example, as listed below) and within each stage of reporting. A suggested coding system is set out below. The purpose of using a coding system is to be able to track each lesion for each participant. States and Territories may have their own unique system, providing that it allows for the tracking of up to two lesions at the final stage of diagnosis. The coding system identifies the type of lesion and the stage of the screening episode at which it was first identified. If a lesion at the final stage is found to be more significant than that recorded at an earlier stage then the earlier lesion should be replaced. Services may choose to track more lesions. Coding system: Mammographic lesions detected at screening (two lesions): M1 = the first mammographic lesion to be worked up. M2 = the second mammographic lesion to be worked up. Clinical symptoms/signs reported prior to assessment (by self-report from participant or sign noted at screening) which on mammographic workup does not correspond to a mammographic lesion (up to one lesion): S1 = a clinical symptom/sign to be worked up. Mammographic lesion found during assessment (up to one lesion): M3 = a mammographic lesion found during assessment. Lesion found at clinical examination during assessment that does not correspond to a mammographic lesion (up to one lesion):				

C1 = a clinical lesion found at clinical examination during assessment.

Lesion identified at ultrasound during assessment that does not correspond to a mammographic lesion (up to one lesion):

U1 = a lesion identified at ultrasound during assessment.

Lesion identified at tomosynthesis during assessment that does not correspond to a mammographic lesion (up to one lesion):

T3 = a lesion identified at tomosynthesis during assessment.

Lesion identified at contrast enhanced mammography during assessment that does not correspond to a mammographic lesion (up to one lesion):

D1 = a lesion identified at contrast enhanced mammography during assessment.

Lesion identified at magnetic resonance imaging during assessment that does not correspond to a mammographic lesion (up to one lesion):

N1 = a lesion identified at magnetic resonance imaging during assessment.

Lesion identified at excision (i.e. not identified at assessment) (up to one lesion):

E1 = a lesion identified at excision.

Lesion detected after completion of the last screening episode (for example, interval cancer or cancer in a non-attender for rescreen) (up to one lesion):

I1 = a lesion detected after completion of the last screening episode.

The meaning of the codes is:

M = Mammographic

S = Symptom/sign

C = Clinical

U = Ultrasound

T = Tomosynthesis

D = Contrast enhanced mammography

N = Magnetic resonance imaging

E = Excision

I = Interval cancer/cancer in a non-attender for rescreen.

Sometimes a third or fourth mammographic lesion may turn out to be more significant than M1 or M2. In this case one of the lesions collected and recorded as M1 and M2 will need to be replaced by this more significant lesion. The same applies to other lesion types.

Verification rules

Related data elements

D.3.1 Nature of mammographic lesion(s) to be assessed

D.3.2 Nature of mammographic lesion(s) to be assessed—side

D.5 Result of mammography

D.6.1 Result of clinical examination

D.6.2 Correspondence of clinical examination to mammographic abnormality

D.7.1 Result of ultrasound

D.7.2 Description of ultrasound lesion

D.8.1 Percutaneous needle biopsy performed

D.8.2 Percutaneous needle biopsy guidance method

D.8.3 Percutaneous needle biopsy result

D.9 Other procedures performed

E.4.1 Marking method

E.4.2 Localisation technique

E.5 Palpability of lesion

E.6 Frozen section

E.7 Specimen imaging

E.8.1 Lesion identified in specimen

E.9 Excision result

D.15.1 Result of tomosynthesis

D.15.2 Description of tomosynthesis lesion

D.16.1 Result of contrast enhanced mammography

D.17.1 Result of magnetic resonance imaging

F.2.1 Axillary dissection

F.2.2 Sentinel node biopsy performed

F.2.3 Axillary dissection—total number of nodes

F.2.4 Axillary dissection—number of nodes positive

F.3 Histopathology of non-malignant lesions

F.4 Histopathology of malignant lesions

F.5 Size of tumour

F.6 Histological grade

F.7 Dominant lesion identification number

Related NAS Measures

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with

an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

3.1.7 ≥95% of all lesions are correctly identified at first excision.

4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

A.6 Service provider identifier

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Identifying code of the service provider.
Context	This data element is used to identify each service provider involved with the mammographic screening, assessment and/or treatment of a participant.

Relational and representational attributes

Datatype	Alpha numeric		*Representational form*	CODE
Field size	*Min.*	*Max.*	*Representational layout*	
Data domain	The service provider identifier			

Guide for use

This data element is used to identify the following service providers, using a unique code for each service provider, to be allocated by the State and Territory Coordination Unit:

Radiographer: the person who operated the mammography machine. Coded for radiographer of initial screening images (*C.3.1*) and radiographer of technical repeat images (*C.3.3*), if different.

Reader (usually radiologist): the person who read the mammographic screening images (*C.4*) and mammographic assessment images (*D.5, D15.1* and *D.16.1*).

Clinical examiner: the person who carried out the clinical exam during assessment of the participant (*D.6.1*).

Ultrasound interpreter: the person (usually radiologist) who interpreted the ultrasound images during assessment of the participant (*D.7.1*).

Percutaneous needle biopsy operator: the person who performed the percutaneous needle biopsy during assessment of the participant (*D.8.2*).

Percutaneous needle biopsy interpreter: the cytologist/pathologist who interpreted the cytology/pathology of the percutaneous needle biopsy specimen (*D.8.3*).

Assessment coordinator: the person who coordinated the assessment team (*D.12*).

Magnetic resonance imaging interpreter: the person who interpreted the magnetic resonance imaging (*D.17.1*).

Surgeon: the doctor who performed the excision of lesion (*E.1*).

Excision interpreter: the pathologist (*F.3* to *F.6*).

Treating doctor: the doctor responsible for the primary treatment for participants diagnosed with breast cancer (*G.1*).

Verification rules

Related data elements

A.4	Surgical unit identifier
A.7	Machine identifier
C.3.1	Total number of images used
C.3.2	Technical repeat status
C.3.3	Number of technical repeats
C.4	Screening mammogram reading results
D.5	Result of mammography
D.6.1	Result of clinical examination
D.7.1	Result of ultrasound
D.8.2	Percutaneous needle biopsy guidance method
D.8.3	Percutaneous needle biopsy result
D.10	Final result of assessment visit
D.15.1	Result of tomosynthesis
D.16.1	Result of contrast enhanced mammography
D.17.1	Result of magnetic resonance imaging
E.1	Excision performed
E.8.2	Further surgery recommended
F.3	Histopathology of non-malignant lesions
F.4	Histopathology of malignant lesions
F.5	Size of tumour
F.6	Histological grade

Related NAS Measures

2.4.1 All screen readers read at least 2,000 mammographic screening cases within the Program per year, or on a pro-rata basis if they are on leave or only read for part of the year.

Where a reader reads for less than 3 months of the year, they may be excluded from the NAS calculation if the reason is documented.

Readers who are excluded or prorated should be listed with the reason in either the ‘Response by Service’ document or ‘Areas of Under-performance’ section.

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

A.7 Machine identifier

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Identifying code of the mammography machine used to screen the participant.
Context	This data element is used to identify the mammography machine and modality (analogue or digital) used to screen the participant

Relational and representational attributes

Datatype	Alpha numeric		*Representational form*	CODE
Field size	*Min.*	*Max.*	*Representational layout*	
Data domain	Number of machine used for initial screening images Number of machine used for technical repeat images			
Guide for use	The machine number changes when a machine is replaced. If only the tube is replaced, the machine number should be retained with a letter added to denote the new tube. For example, original machine number = 2; modified machine number = 2A. Mammography machine is identified by the screening unit where the screening mammogram was performed.			
Verification rules				
Related data elements	A.2 Screening unit identifier A.6 Service provider identifier C.3.1 Total number of images used C.3.2 Technical repeat status C.3.3 Number of technical repeats			
Related NAS Measures				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

A.8 Estimated date flag

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	An indication of whether any component of a reported date was estimated.
Context	Provision of a date is often a mandatory requirement in data collections. However, at times, the actual date or part thereof is not known (for example, date of birth). This data element is designed to flag the part or parts of a date that have been estimated when a date provided is based on an approximation of the date in question rather than reporting of the actual date. This data element may assist with record linkage processes (for example, when the date of birth is a component of the linkage key).

Relational and representational attributes

Datatype	Alphabetic			*Representational form*	CODE
Field size	*Min.* 0	*Max.* 3		*Representational layout*	AAA

Data domain

Null	date not estimated
A	date estimated from reported age
D	day value in date was estimated
DM	day and month values in date were estimated
DMY	all values (day, month, year) in date were estimated
M	month value (only) in date was estimated
MY	month and year values in date were estimated
Y	year value (only) in date was estimated
DY	day and year values in date were estimated

Guide for use

May be used to record an estimated date for date of birth or data elements for other dates such as date of death.

This data element should be reported in conjunction with a reported date when any part of the date represents an estimate rather than the actual or known date.

Verification rules

Related data elements

B.2	Date of birth—date of birth, date DDMMYYYY
C.1	Booking date
C.2	Date of first attendance for this episode
C.6	Date participant notified of screening results
C.7.2	Letter to general practitioner about screening results—date

D.2.2 Date of first attendance for assessment

D.2.3 Date first offered appointment for assessment

D.11.3 Date recommendation made

D.13.1 Date participant notified in writing of assessment results

D.13.2 Date participant notified verbally of biopsy results

D.14.2 Letter to general practitioner about assessment results - date

E.2 Date excision performed

E.11 Date of definitive diagnosis

F.1.2 Date of diagnosis of interval cancer

G.2 Date of commencement of treatment

H.1 Date of death

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

A.9 State identifier

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	An identifier for State or Territory.
Context	Health services

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

1	New South Wales
2	Victoria
3	Queensland
4	Western Australia
5	South Australia
6	Tasmania
7	Australian Capital Territory
8	Northern Territory
9	Other territories (Cocos (Keeling) Islands, Christmas Island and Jervis Bay Territory)

Guide for use

This data element is important for national reporting, but does not necessarily need to be a separate data element in the State and Territory databases.

This aligns with the Australian Institute of Health and Welfare order of States and Territories, which differs slightly from the Australian Bureau of Statistics order.

Verification rules

Related data elements

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	Australian Institute of Health and Welfare

B—Client segment

Data dictionary version 1.3		Data dictionary version 1.2	
B.1	Name	B.1	Name
B.2	Date of birth	B.2	Date of birth
B.3.1	Area of usual residence (SA2)	B.3.1	Area of usual residence (SA2)
B.3.2	Postcode of usual residence	B.3.2	Postcode of usual residence
B.4	Main language other than English spoken at home	B.4	Main language other than English spoken at home
B.5	Indigenous status	B.5	Indigenous status
B.6.1	Family history of breast cancer	B.6.1	Family history of breast cancer
B.6.2	Family history of breast cancer—relationship	B.6.2	Family history of breast cancer—relationship
B.6.3	Family history of breast cancer—age at diagnosis	B.6.3	Family history of breast cancer—age at diagnosis
B.6.4	Family history of breast cancer—laterality	B.6.4	Family history of breast cancer—laterality
B.7.1	Previous history of breast cancer	B.7.1	Previous history of breast cancer
B.7.2	Previous history of breast cancer—year	B.7.2	Previous history of breast cancer—year
B.7.3	Previous history of breast cancer—laterality	B.7.3	Previous history of breast cancer—laterality
B.8.1	Mammographic history at first screening visit	B.8.1	Mammographic history at first screening visit
B.8.2	Mammographic history—year	B.8.2	Mammographic history—year
B.9.1	Round number—State/Territory program	B.9.1	Round number—State/Territory program
B.9.2	Round number—national program	B.9.2	Round number—national program
B.10	Symptom status	B.10	Symptom status
B.11	General practitioner flag	B.11	General practitioner flag

B.1 Name

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	A set of descriptors identifying each participant allocated a Client identifier number, using title, surname and other names of the participant at the time of registration, and surname at birth.
Context	Data linkage, administrative purposes and individual identification.

Relational and representational attributes

Datatype	Character		*Representational form*	TEXT
Field size	*Min.*	*Max.*	*Representational layout*	

Data domain

Concatenation of:

- Title
- Surname (Family name)
- First Given Name
- Second Given Name
- Surname at Birth

Guide for use

The service should record for each client the participant's full name on their information systems, including as a minimum Surname (Family name), First name, Second name (if they have one) and Surname at birth (Maiden name). The field length for this data element is at the discretion of information system designers.

Often people use a variety of names, including legal names, married/maiden names, nicknames, assumed names, traditional names, etc. Even small differences in recording—such as the difference between MacIntosh and McIntosh—can make record linkage impossible. To minimise discrepancies in the recording and reporting of name information, services should ask the person for their full (formal) Given name(s) and Surname. These may be different from the name that the person may prefer the staff to use in personal dealings. Services may choose to separately record the preferred names that the person wishes to be used by the staff.

In some cultures it is traditional to state the family name first. To overcome discrepancies in recording/reporting that may arise as a result of this practice, services should always ask the person to specify their first given name and their family name or surname separately. These should then be recorded as Given name and Family name as appropriate, regardless of the order in which they may be traditionally given.

Verification rules

Related data elements	A.1	Client identifier number
Related NAS Measures		

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

B.2 Date of birth

Admin. status	CURRENT

Identifying and definitional attributes

Data element name	Date of birth
Definition	The date of birth of the person.
Context	Used for ascertaining the age at screen

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.* 8		*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

If date of birth is not known, provision should be made to collect age (in years) and a date of birth derived from age. If date of birth is derived from age, then date of birth should be entered as 01/01/approximate year.

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the date of birth is 1 July 1950 the date should be recorded as 01071950 as specified in the representational layout.

It is recommended that in cases where all components of Date of birth are not known or where an estimate is arrived at from age, a valid date be used together with the A.8 Estimated date flag to indicate that it is an estimate.

If year of birth is derived from age, then date of birth is entered as 01/01/approximate year. If both date of birth and age are unknown and an estimate cannot be obtained, but it has been ascertained that the person is 40 years or over, record the date of birth as 99/99/9999.

Verification rules

This field must:

- be ≤C.2 Date of first attendance for this episode
- not be null

Related data elements

Date of birth can be used as an aid to uniquely identify a participant if other identifying information is missing or in question.

Used with C.2 Date of first attendance for this episode to calculate a participant's age.

Related NAS Measures

1.1.1 (a) The Service and/or SCU monitors and reports the participation rate of women aged 50–74 years who participate in screening in the most recent 24-month period.

1.1.1 (b) The Service and/or SCU monitors and reports the participation rate of women aged 50–69 years who participate in screening in the most recent 24-month period.

1.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months.

1.1.2 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–67 years who attend for their first screening episode within the Program who are rescreened within 27 months.

1.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screening episode within the Program who are rescreened within 27 months of their previous screening episode.

1.1.3 (b) ≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode.

1.2.1 (a) The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.1 (b) The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.2 The Service and/or SCU monitors the proportion of women, aged 40–49 years and 75 years and over who are screened and recalled for assessment.
(a) screened
(b) recalled

2.1.1 (a) ≥50 per 10,000 women aged 50–74 years who attend for their first screening episode are diagnosed with invasive breast cancer.

2.1.1 (b) ≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.

2.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

2.1.2 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–69 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast.

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–69 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.5 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

2.2.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.1 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–69 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.2 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–69 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.3 The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

2.2.4 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with

an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–69 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–69 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode

2.6.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for annual screening.

2.6.1 (b) ≤10% of women aged 50–69 years attend for annual screening.

2.6.2 The Service and/or SCU monitors and reports the proportion of women who attend for annual screening, aged 40–49 years and 75 years and over.

2.6.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode and are recalled for assessment.

2.6.3 (b) <10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment.

2.6.3 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their first screening episode and are recalled for assessment.

2.6.4 (a) The Service and/or SCU offers, monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.4 (b) <5% of women aged 50–69 years who attend for their second or subsequent screening episode are recalled for assessment.

2.6.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their second or subsequent screening episode and are recalled for assessment

2.6.5 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

2.6.6 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening episode.

Administrative attributes

Origin	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comment	Please note that although this data element prescribes the format in which estimated date of birth is to be entered, it is acknowledged that not all State and Territory Programs are able to comply at this stage. It is recommended that State and Territory Programs aim to, in time, adjust their policies in relation to this data element.

B.3.1 Area of usual residence (SA2)

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition A designated region describing location and contact details that represents a medium-sized area built from a number of Statistical Area 1, as represented by a code. The aim is to represent a community that interacts together socially and economically.

Context Geographical location is reported using Statistical Area level 2 (SA2) to enable accurate aggregation of information to larger areas within the ASGS as well as detailed analysis at the SA2 level.

The ASGS is the ABS's framework for statistical geography.

The use of SA2 also allows analysis relating the data to information compiled by the ABS on the demographic and other characteristics of the population of each SA2.

In 2011, the ABS replaced the current Australian Standard Geographical Classification (ASGC) with the new Australian Statistical Geography Standard (ASGS). The ASGS comprises a hierarchy of geographic regions and is the future geographical standard on which the ABS will release statistical data. Statistical Areas Levels 1–4 (SA1, SA2, SA3 and SA4) are components of the new ASGS while Statistical Local Areas (SLA) belonged to the old ASGC structure.

ASGS structures will be updated every Census year. In comparison, SLA boundaries were updated annually.

To assign a single geographic identifier based on the ASGS using Australian address components:

SA1 classification requires street address, suburb/locality, postcode and state

SA2 or SA3 classification requires suburb/locality, postcode and state

SA4 can be generated from postcode only.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 9	*Max.*	9	*Representational layout*	NNNNNNNNN

Data domain The geographical location is reported using a nine digit numerical code to indicate the Statistical Area (SA) within the reporting state or territory, as defined in the Australian Statistical Geography Standard (ASGS) (ABS 2011).

SA2 coding structure: An SA2 is identifiable by a 9-digit fully hierarchical code. The SA2 identifier is a 4-digit code, assigned in alphabetical order within an SA3. An SA2 code is only unique within a state/territory if it is preceded by the state/territory identifier.

For example:

State/territory	SA4	SA3	SA2
N	NN	NNN	NNNN

Guide for use

The main purpose of the Australian Statistical Geography Standard (ASGS) is the dissemination of geographically classified statistics. It provides a common framework of statistical geography which enables the publication of statistics that are comparable and spatially integrated.

The ASGS is updated on an annual basis with a date of effect of 1 July each year. Therefore, the edition effective for the data collection reference year should be used.

The codes for Statistical Areas are unique within each State and Territory, but not within the whole country. Thus, to define a unique location, the code of the State or Territory is required in addition to the code for the Statistical Area.

The information about SA2 is retained for each visit.

When collecting the geographical location of a person‘s usual place of residence, the ABS recommends that ‘usual’ be defined as: the place where the person has or intends to live for 6 months or more, or the place that the person regards as their main residence, or where the person has no other residence, the place they currently reside. Apart from collecting a person’s usual place of residence there is also a need in some collections to collect area of residence immediately prior to or after assistance is provided, or at some other point in time.

Verification rules

Related data elements

B.3.2 Postcode of usual residence

Related NAS Measures

1.1.1 (a) The Service and/or SCU monitors and reports the participation rate of women aged 50–74 years who participate in screening in the most recent 24-month period.

1.1.1 (b) ≥70% of women aged 50–69 years participate in screening in the most recent 24-month period.

1.2.1 (a) The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.1 (b) The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

Administrative attributes

Source document	ABS 2011. Australian Statistical Geography Standard (ASGS): Volume 1—Main Structure and Greater Capital City Statistical Areas. Cat. no. 1270.0.55.001. Canberra: ABS.
Source organisation	ABS
Comments	There are 2,196 SA2 spatial units. In aggregate, they cover the whole of Australia without gaps or overlaps. Jervis Bay Territory, the Territory of the Cocos (Keeling) Islands and the Territory of Christmas Island are each represented by an SA2. Analyses facilitated by the inclusion of SA2 information include: comparison of the use of services by persons residing in different geographical areas; characterisation of catchment areas and populations for establishments for planning purposes; and documentation of the provision of services to residents of states or territories other than the state or territory of the provider.

B.3.2 Postcode of usual residence

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Postcode of usual residence is a four digit numeric code used by Australia Post to define a postal delivery area.
Context	This data element may be used for reporting participation in BreastScreen Australia by postcode of usual residence.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 4	*Max.* 4		*Representational layout*	NNNN
Data domain	Valid Australia Post postal code. 9999 = Unknown				
Guide for use	Australian postal addresses should include a valid postcode. For a full list of Australian postcodes visit the Australia Post website: www.auspost.com.au. If a participant provides a postal address, the postcode of actual usual residence should be collected, if different. May be collected as part of the participant's address or separately. Postal addresses may be different from where a person actually resides, or a service is actually located. The information about postcode is retained for each visit.				
Verification rules					
Related data elements	B.3.1 Area of usual residence (SA2)				
Related NAS Measures	1.1.1 (a) The Service and/or SCU monitors and reports the participation rate of women aged 50–74 years who participate in screening in the most recent 24-month period. 1.1.1 (b) ≥70% of women aged 50–69 years participate in screening in the most recent 24-month period. 1.2.1 (a) The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.				

1.2.1 (b) The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

Administrative attributes

Source document	Postcode book http://auspost.com.au/apps/postcode.html
Source organisation	Australia Post
Comments	Please note that although this data element requires that the information about postcode be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State and Territory systems ensure that prior information on postcode for each visit is retained. This data element may be used in the analysis of data on a geographical basis which involves a conversion from postcodes to the Australian Bureau of Statistics (ABS) postal areas. This conversion results in some inaccuracy of information as postcodes do not have a geographic definition and boundaries are not well defined. The AIHW is discouraging use of postcode as a geographic identifier for a number of reasons: While postcode indexes allow users to allocate data collected with a postcode to certain ASGS regions to enable comparison to ABS data, they are limited to the larger geographic boundaries. Coding data using postcode to smaller geographic boundaries does not provide consistently accurate results. Postcodes are, in Australia Post's words, 'maintained solely for mail processing purposes'. They do not follow the ABS's boundaries in many cases.

Therefore where a postcode crosses one of ABS's region boundaries a decision must be made as to where to assign the postcode. This may include assigning proportions to different boundaries.

Postcodes are sometimes discontinuous which results in discrete parts of postcodes physically located a considerable distance away from the ABS region to which they are allocated.

There are a large number of valid postcodes that do not correspond to residential areas (such as, post boxes, competition mail bags etc.) which are not appropriate for geographically identifying health information.

New postcodes are created, and postcode boundaries are updated as necessary by Australia Post which makes it difficult to maintain as a standardised geographic identifier.

B.4 Main language other than English spoken at home

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The language reported by a person as the main language other than English spoken by a person in their home (or most recent private residential setting occupied by the person) on a regular basis, to communicate with other residents of the home or setting and regular visitors.
Context	This data element is consistent with that used in the Australian Census of Population and Housing and is recommended for use whenever there is a requirement for comparison with Census data.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 2	*Max.*	4	*Representational layout*	NNNN

Data domain

Refer to the ABS Australian Standard Classification of Languages 2005 for details.

Guide for use

The Australian Standard Classification of Languages (ASCL) has a three- level hierarchical structure. The most detailed level of the classification consists of base units (languages) which are represented by four-digit codes. The second level of the classification comprises narrow groups of languages (the Narrow Group level), identified by the first two digits. The most general level of the classification consists of broad groups of languages (the Broad Group level) and is identified by the first digit. The classification includes Australian Indigenous languages and sign languages.

For example, the Lithuanian language has a code of 3102. In this case, 3 denote that it is an Eastern European language, while 31 denote that it is a Baltic language. The Pintupi Aboriginal language is coded as 8713. In this case 8 denote that it is an Australian Indigenous language and 87 denote that the language is Western Desert language.

Language data may be output at the Broad Group level, Narrow Group level or base level of the classification. If necessary significant Languages within a Narrow Group can be presented separately while the remaining Languages in the Narrow Group are aggregated. The same principle can be adopted to highlight significant Narrow Groups within a Broad Group.

Recommended question:

Do you/Does the person/Does (name) speak a language other than English at home? (If more than one language, indicate the one that is spoken most often.)

No (English only) ____

Yes, Italian ____

Yes, Greek ____

Yes, Cantonese ____

Yes, Arabic ____

Yes, Mandarin ____

Yes, Vietnamese ____

Yes, Spanish ____

Yes, German ____

Yes, Hindi ____

Yes, Other (please specify) _____

This list reflects the nine most common languages other than English spoken in Australia.

Languages may be added or deleted from the above short list to reflect characteristics of the population of interest.

Alternatively a tick box for 'English' and an 'Other - please specify' response category could be used.

Related data elements

B.5 Indigenous status

Related NAS Measures

1.2.1 (a) The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.1 (b) The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

Administrative attributes

Source document

Australian Bureau of Statistics 2014. Standard Australian Classification of Countries (SACC). 2nd edition. ABS cat. no. 1269.0. Canberra: ABS.

Source organisation

Australian Bureau of Statistics

Comments

This data element is important in identifying those people most likely to suffer disadvantage in terms of their ability to access services due to language and/or cultural difficulties. In conjunction with Indigenous status, Proficiency in spoken English and Country of birth this data element forms the minimum core set of cultural and language indicators recommended by the Australian Bureau of Statistics (ABS).

Data on main language other than English spoken at home are regarded as an indicator of ‘active’ ethnicity and also as useful for the study of inter-generational language retention. The availability of such data may help providers of health and community services to effectively target the geographic areas or population groups that need those services. It may be used for the investigation and development of language services such as interpreter/translation services.

B.5 Indigenous status

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition Whether a participant identifies as being of Aboriginal or Torres Strait Islander descent. This is in accord with the first two of three components of the Commonwealth definition.

Context Australia's Aboriginal and Torres Strait Islander peoples occupy a unique place in Australian society and culture. In the current climate of reconciliation, accurate and consistent statistics about Aboriginal and Torres Strait Islander peoples are needed in order to plan, promote and deliver essential services, to monitor changes in wellbeing and to account for government expenditure in this area. The purpose of this data element is to provide information about people who identify as being of Aboriginal or Torres Strait Islander origin. Agencies or establishments wishing to determine the eligibility of individuals for particular benefits, services or rights will need to make their own judgments about the suitability of the standard measure for these purposes, having regard to the specific eligibility criteria for BreastScreen Australia concerned.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

1. Aboriginal but not Torres Strait Islander origin
2. Torres Strait Islander but not Aboriginal origin
3. Aboriginal and Torres Strait Islander origin
4. Neither Aboriginal nor Torres Strait Islander origin
9. Not stated

Guide for use This data element is based on the Australian Institute of Health and Welfare's Metadata Online Registry METeOR standard for Indigenous status. For detailed advice on its use and application please refer to the METeOR website as indicated in the Reference documents.

The classification for Indigenous status has a hierarchical structure comprising two levels. There are four categories at the detailed level of the classification which are grouped into two categories at the broad level. There is one supplementary category for 'not stated' responses. The classification is as follows:

- Indigenous:
  - Aboriginal, but not Torres Strait Islander origin.
  - Torres Strait Islander, but not Aboriginal origin.
  - Both Aboriginal and Torres Strait Islander origin.

- Non-indigenous:
  - Neither Aboriginal nor Torres Strait Islander origin.
- Not stated/inadequately described:

This category is not to be available as a valid answer to the questions but is intended for use:

- Primarily when importing data from other data collections that do not contain mappable data.
- Where an answer was refused.
- Where the question was not able to be asked prior to completion of assistance because the client was unable to communicate or a person who knows the client was not available.
- Only in the last two situations may the tick boxes on the questionnaire be left blank.

The standard question for Indigenous Status is as follows:

[Are you] [Is the person] [Is (name)] of Aboriginal or Torres Strait Islander origin?

(For participants of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes.)

No.....

Yes, Aboriginal.....

Yes, Torres Strait Islander.....

This question is recommended for self-enumerated or interview-based collections. It can also be used in circumstances where a close relative, friend, or another member of the household is answering on behalf of the subject. It is strongly recommended that this question be asked directly wherever possible.

When someone is not present, the person answering for them should be in a position to do so, for example, this person must know well the person about whom the question is being asked and feel confident to provide accurate information about them.

This question must always be asked regardless of data collectors' perceptions based on appearance or other factors.

The Indigenous status question allows for more than one response. The procedure for coding multiple responses is as follows:

If the respondent marks 'No' and either 'Aboriginal' or 'Torres Strait Islander', then the response should be coded to either Aboriginal or Torres Strait Islander as indicated (for example, disregard the 'No' response).

If the respondent marks both the 'Aboriginal' and 'Torres Strait Islander' boxes, then their response should be coded to 'Both Aboriginal and Torres Strait Islander origin'.

If the respondent marks all three boxes ('No', 'Aboriginal' and 'Torres Strait Islander'), then the response should be coded to 'Both Aboriginal and Torres Strait Islander Descent' (for example, disregard the 'No' response). This approach may be problematic in some data collections, for example, when data are collected by interview or using screen based data capture systems.

An additional response category, Yes, both Aboriginal and Torres Strait Islander may be included if this better suits the data collection practices of the agency or establishment concerned.

Verification rules

Related data elements B.4 Main language other than English spoken at home

Related NAS Measures 1.2.1 (a) The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.1 (b) The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

Administrative attributes

Source document Australian Institute of Health and Welfare 2014. METeOR: Person—Indigenous status, code N. Viewed 06 June 2022, http://meteor.aihw.gov.au/content/index.phtml/itemId/291036.

Australian Institute of Health and Welfare 2010. National best practice guidelines for collecting Indigenous status in health data sets. Cat. no. IHW 29. Canberra: AIHW.

Source organisation Australian Bureau of Statistics

Comments The following definition, commonly known as 'The Commonwealth Definition', was given in a High Court judgement in the case of Commonwealth v Tasmania (1983) 46 ALR 625.

'An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives'.

There are three components to the Commonwealth definition:

- descent
- self-identification
- community acceptance.

In practice, it is not feasible to collect information on the community acceptance part of this definition in general purpose statistical and administrative collections and therefore standard questions on Indigenous status relate to descent and self-identification only.

B.6.1 Family history of breast cancer

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether a first degree female relative of the participant has had a diagnosis of breast cancer.
Context	This data element is used to determine, in conjunction with *B.6.2 relationship*, *B.6.3 age at diagnosis* and *B.6.4 laterality*, whether a participant is at higher than average risk of contracting breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No				
Guide for use	A first degree female relative is a mother, sister or daughter. This information is based on the participant's self-report at each visit and is retained for each visit.				
Verification rules					
Related data elements	B.6.2 Family history of breast cancer—relationship B.6.3 Family history of breast cancer—age at diagnosis B.6.4 Family history of breast cancer—laterality				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	In conjunction with related data elements, may be used for selecting participants for annual rescreen. Please note that although this data element requires that the information about Family history be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State and Territory systems ensure that prior information on *Family history* (*B.6.1* to *B.6.4*), for each visit is retained.

B.6.2 Family history of breast cancer—relationship

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The relationship of the participant's family member who has had a diagnosis of breast cancer to the participant.
Context	This data element is used to determine, in conjunction with *B.6.3 age at diagnosis* and *B.6.4 laterality*, whether a participant is at higher than average risk of contracting breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N
Data domain	1. Mother 2. Sister 3. Daughter				
Guide for use	This data element is only concerned with first degree female relatives. This information is based on the participant's self-report and is retained for each visit.				
Verification rules	Relationship is to be entered only if entry for *B.6.1 Family history of breast cancer* is 'yes'.				
Related data elements	B.6.1 Family history of breast cancer B.6.3 Family history of breast cancer—age at diagnosis B.6.4 Family history of breast cancer—laterality				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	In conjunction with related data elements, may be used for selecting participants for annual rescreen. Please note that although this data element requires that the information about Family history be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of

State and Territory systems ensure that prior information on Family history (B.6.1 to B.6.4), for each visit is retained.

B.6.3 Family history of breast cancer—age at diagnosis

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Age (when diagnosed) of the person in the participant's family who has had a diagnosis of breast cancer.
Context	This data element is used to determine, in conjunction with *B.6.2 relationship* and *B.6.4 laterality,* whether a participant is at higher than average risk of contracting breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.*	3	*Representational layout*	NNN
Data domain	Within valid age range.				
Guide for use	Age at diagnosis is the age at which breast cancer was diagnosed. This information is based on the participant's self-report and is retained for each visit. If the participant does not know the exact age, they should be asked to estimate the age. If this is not possible, attempts should be made to establish whether the relative was under 50 years or not.				
Verification rules	*Age at diagnosis* is to be entered only if entry for *B.6.1 Family history of breast cancer* is 'yes'.				
Related data elements	B.6.1 Family history of breast cancer B.6.2 Family history of breast cancer—relationship B.6.4 Family history of breast cancer—laterality				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	In conjunction with related data elements, may be used for selecting participants for annual rescreen. Please note that although this data element requires that the information about Family history be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State and Territory systems ensure that prior information on *Family history (B.6.1* to *B.6.4)*, for each visit is retained.

B.6.4 Family history of breast cancer—laterality

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Laterality of the breast cancer diagnosed in the participant's family member.
Context	This data element is used to determine, in conjunction with *B.6.2 relationship* and *B.6.3 age at diagnosis*, whether a participant is at higher than average risk of contracting breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N
Data domain	1. Unilateral 2. Bilateral 3. Unknown				
Guide for use	In this context unilateral means one breast affected and bilateral means both breasts affected. Unknown means unknown laterality. This information is based on the participant's self-report and is retained for each visit.				
Verification rules	Laterality is to be entered only if entry for *B.6.1 Family history of breast cancer* is 'yes'.				
Related data elements	B.6.1 Family history of breast cancer B.6.2 Family history of breast cancer—relationship B.6.3 Family history of breast cancer—age at diagnosis				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	In conjunction with related data elements, may be used for selecting participants for annual rescreen. Please note that although this data element requires that the information about Family history be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State

and Territory systems ensure that prior information on *Family history* (*B.6.1* to *B.6.4*), for each visit is retained.

B.7.1 Previous history of breast cancer

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not the participant has had a previous diagnosis of breast cancer, including ductal carcinoma in situ.
Context	This data element may be used to report the percentage of participants with a personal history of breast cancer who participated in BreastScreen Australia. It is also used in some State and Territory Programs to determine, in conjunction with related data elements, whether a participant is at higher than average risk of contracting breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes 2. No				
Guide for use	This information is based on the participant's self-report at each visit and is retained for each visit.				
Verification rules					
Related data elements	B.7.2 Previous history of breast cancer—year B.7.3 Previous history of breast cancer—laterality				
Related NAS Measures	2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode. 2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.				

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	In conjunction with related data elements, may be used for selecting participants for annual rescreen. Please note that although this data element requires that the information about Previous history be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State and Territory systems ensure that prior information on *Previous history (B.7.1* to *B.7.3)*, for each visit is retained.

B.7.2 Previous history of breast cancer—year

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The year in which the participant's previous breast cancer was diagnosed.
Context	This data element provides additional information on the timeframe in relation to *B.7.1 Previous history of breast cancer.*

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 4	*Max.*	4	*Representational layout*	YYYY
Data domain	Valid year				
Guide for use	If year is unknown, provision should be made to collect the number of years since diagnosis and a year derived from this. This information is based on the participant's self-report and is retained for each visit.				
Verification rules	*Year* is to be entered only if entry for *B.7.1 Previous history of breast cancer* is 'Yes'. Year >1900 and <current year				
Related data elements	B.7.1 Previous history of breast cancer B.7.3 Previous history of breast cancer—laterality				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	In conjunction with related data elements, may be used for selecting participants for annual rescreen. Please note that although this data element requires that the information about Previous history be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State and Territory systems ensure that prior information on *Previous history (B.7.1* to *B.7.3)*, for each visit is retained.

B.7.3 Previous history of breast cancer—laterality

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Laterality of the participant's previous breast cancer.
Context	This data element provides additional information on the laterality in relation to *B.7.1 Previous history of breast cancer*.

Relational and representational attributes

Datatype	Character				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	A
Data domain	L	Left				
	R	Right				
	B	Both				
	U	Unknown				
Guide for use	This information is based on the participant's self-report and is retained for each visit.					
Verification rules	*Laterality* is to be entered only if entry for *B.7.1 Previous history of breast cancer* is 'yes'.					
Related data elements	B.7.1	Previous history of breast cancer				
	B.7.2	Previous history of breast cancer—year				
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	In conjunction with related data elements, may be used for selecting participants for annual rescreen. Please note that although this data element requires that the information about Previous history be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State and Territory systems ensure that prior information on *Previous history* (*B.7.1* to *B.7.3*), for each visit is retained.

B.8.1 Mammographic history at first screening visit

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition Whether the participant has had a mammogram (of both breasts) taken for screening or diagnostic purposes, and whether this occurred in the National Program or whether they had a screening or diagnostic mammogram outside BreastScreen Australia.

Context This data element is used to determine whether a participant is attending for an incident or prevalent screen in conjunction with *B.8.2 Mammographic History—year.*

This data element is also used to code data element number *B.9.2 Round number—national program.*

Relational and representational attributes

Datatype	Numeric	*Representational form*	CODE
Field size	*Min.* 1 *Max.* 1	*Representational layout*	N

Data domain

1. Yes, in BreastScreen Australia
2. Yes, outside BreastScreen Australia
3. Yes, unknown
4. No

Guide for use Code ‘1’ (Yes, in BreastScreen Australia) means that the participant has had a screening mammogram within the BreastScreen Program in another State and Territory.

Code ‘2’ (Yes, outside BreastScreen Australia) means that the participant has had a screening or diagnostic mammogram outside BreastScreen Australia.

Code ‘3’ (Yes, unknown) means that the participant has had a previous mammogram, but it could not be determined if this occurred in or outside BreastScreen Australia.

Code ‘4’ (No) means that the participant has never had a mammogram.

This information is based on the participant’s self-report at the first visit.

Verification rules

Related data elements

B.8.2 Mammographic history—year

B.9.1 Round number—State/Territory program

B.9.2 Round number—national program

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

B.8.2 Mammographic history—year

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The year in which the presenting participant has had the most recent mammogram (of both breasts) taken for screening or diagnostic purposes, either in BreastScreen Australia or elsewhere.
Context	This data element is used to determine whether a participant is attending for an incident or prevalent screening episode in conjunction with Mammographic history at first screening visit. If the last mammogram was more than five years ago, the current screening episode is considered a prevalent screen.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 4	*Max.* 4		*Representational layout*	YYYY
Data domain	Valid year				
Guide for use	This information is based on the participant's self-report at the first visit.				
Verification rules	*Year* is to be entered only if entry for *B.8.1 Mammographic history at first screening* visit is 'yes'.				
Related data elements	B.8.1 Mammographic history at first screening visit				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

B.9.1 Round number—State/Territory program

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The number of the most recent screening round for a particular presenting participant, within the State/Territory BreastScreen Program.
Context	This data element records the most recent screening round within the State/Territory for each participant and is used for service provision, monitoring and planning.

Relational and representational attributes

Datatype	Numeric			*Representational form*	NUMBER
Field size	*Min.* 1	*Max.*	2	*Representational layout*	NN

Data domain

1. First screening episode in the State/Territory Program.
2. Second screening episode in the State/Territory Program.

And so on…

Guide for use	This data element is based on records held within each State and Territory BreastScreen Program.
Verification rules	
Related data elements	B.8.1 Mammographic history at first screening visit B.9.2 Round number—national program
Related NAS Measures	1.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months. 1.1.2 (b) ≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months. 1.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screening episode within the Program who are rescreened within 27 months of their previous screening episode. 1.1.3 (b) ≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode. 1.2.2 (a) The Service and/or SCU monitors the proportion of all women screened aged 40–49 years and 75 years and over. 1.2.2 (b) The Service and/or SCU monitors the proportion of all women recalled for assessment aged 40–49 years and 75 years and over.

2.1.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer.

2.1.1 (b) ≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.

2.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

2.1.2 (b) ≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer.

2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.5 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

2.2.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.1 (b) ≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.

2.2.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.2 (b) ≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.

2.2.3 The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

2.2.4 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

2.5.1 The Service and/or SCU monitors and reports the percentage of women who have up to 4 images per screen, including technical repeats.

2.6.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for annual screening.

2.6.1 (b) ≤10% of women aged 50–69 years attend for annual screening.

2.6.2 The Service and/or SCU monitors and reports the proportion of women who attend for annual screening, aged 40–49 years and 75 years and over.

2.6.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode and are recalled for assessment.

2.6.3 (b) <10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment.

2.6.3 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their first screening episode and are recalled for assessment.

2.6.4 (a) The Service and/or SCU offers, monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.4 (b) <5% of women aged 50–69 years who attend for their second or subsequent screening episode are recalled for assessment.

2.6.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.5 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

2.6.6 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening episode.

2.6.7 <0.2% women who attend for screening are recommended for early review for further assessment.

3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient.

3.1.2 0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive ‘percutaneous needle biopsy’ for the purpose of this standard.

Where NAS Measure 3.1.2 is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU.

3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.7 ≥95% of all lesions are correctly identified at first excision.

3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively.

3.1.8 (b) Where part (a) is not met, the Service and/or SCU provide the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.

4.1.1 (a) ≥90% of women aged 50–74 years attend for a screening appointment within 28 calendar days of their booking date (fixed sites only).

4.1.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the time taken to achieve 90% from booking to screening (fixed sites only).

4.1.2 ≥90% of women have documented notification of the results of screening within 14 calendar days of the date of screening.

4.2.1 (a) ≥90% of women requiring assessment attend an assessment visit within 28 calendar days of their screening visit.

4.2.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the number of days the Service and/or SCU takes to achieve 90%.

4.2.1 (c) Where part (a) is not met, the Service and/or SCU records and reports the percentage of women who were offered assessment within 28 calendar days of their screening visit.

4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

4.2.3 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

4.2.4 ≥85% of women are verbally given the results of percutaneous needle biopsy within seven calendar days of the assessment procedure.

4.2.5 ≥95% of women complete all assessment within 15 calendar days.

4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

B.9.2 Round number—national program

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether the most recent screening for a particular participant is the first or subsequent screening round in the National Program.
Context	This data element records the most recent screening round within the National Program for each participant.

Relational and representational attributes

Datatype	Numeric				*Representational form*	NUMBER
Field size	*Min.*	1	*Max.*	2	*Representational layout*	NN

Data domain	1.	First round in the National Program
	2.	Subsequent round in the National Program
	9.	Unknown

Guide for use	If a participant has had a previous mammogram in BreastScreen Australia *(B.8.1)* in another State or Territory, round number should reflect round in the national Program. Use code ‘1’ if B.9.1 = 1 and B.8.1 = 2–4 Use code ‘2’ if B.9.1 = 2 or if (B.9.1 = 1 and B.8.1 = 1) Use code ‘9’ if B.9.1 = 1 and B.8.1 = 3
Verification rules	
Related data elements	B.8.1 Mammographic history at first screening visit B.9.1 Round number—State/Territory program
Related NAS Measures	

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

B.10 Symptom status

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition Self-reported breast lump or nipple discharge (clear or blood stained) or other breast symptoms (for example, dimpling of the skin of the breast) of which the participant is aware prior to screening and which they report at the time of screening.

Context This data element may be used to report the percentage of participants presenting with symptoms who participated in BreastScreen Australia.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

0. No symptoms reported
1. Lump
2. Nipple discharge—clear
3. Nipple discharge—blood stained
4. Other breast symptoms, please specify
9. Not stated

Guide for use Symptoms should not be confused with signs, which are recorded after a clinical examination.

The information on symptoms is based on the participant's self-report and is retained for each visit. Indicate which symptom(s) they report.

Verification rules

Related data elements C.5 Recommendation—screening

Related NAS Measures 2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	Please note that although this data element requires that the information about symptom status be retained for each visit, it is acknowledged that not all State and Territory systems can comply. It is recommended that future upgrades of State and Territory systems ensure that prior information on symptom status for each visit is retained.

B.11 General Practitioner flag

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether the participant nominated a general practitioner to receive the results of the participant's visit to the screening and assessment service.
Context	This data element is used to identify whether communication of the participant's results to the participant's general practitioner is required.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No					
Guide for use	This information is obtained from the participant at each screening visit.					
Verification rules						
Related data elements	C.7.1 Letter to general practitioner about screening results C.7.2 Letter to general practitioner about screening results—date D.14.1 Letter to general practitioner about assessment results D.14.2 Letter to general practitioner about assessment results—date					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C—Screening visit segment

Data dictionary version 1.3		Data dictionary version 1.2	
C.1	Booking date	C.1	Booking date
C.2	Date of first attendance for this episode	C.2	Date of first attendance for this episode
C.3.1	Total number of images used	C.3.1	Total number of images used
C.3.2	Technical repeat status	C.3.2	Technical repeat status
C.3.3	Number of technical repeats	C.3.3	Number of technical repeats
C.4	Screening mammogram reading results	C.4	Screening mammogram reading results
C.5	Recommendation—screening	C.5	Recommendation—screening
C.6	Date participant notified of screening results	C.6	Date woman notified of screening results
C.7.1	Letter to general practitioner about screening results	C.7.1	Letter to general practitioner about screening results
C.7.2	Letter to general practitioner about screening results—date	C.7.2	Letter to general practitioner about screening results—date
C.8	Annual screening flag		
C.9	High-risk flag	C.8	High-risk flag

C.1 Booking date

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date an appointment was made by the participant, or someone on the participant's behalf.
Context	Used for monitoring and planning access, participation and outcome of screening services.

Relational and representational attributes

Datatype	Numeric				*Representational form*	DATE
Field size	*Min.*	8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date					
Guide for use	This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if a person contacted a service on July 1 2000 the Booking date should be recorded as 01072000 as specified in the representational layout. The date an appointment was made by the participant, or someone on the participant's behalf. It is recommended that in cases where all components of *Booking date* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.					
Verification rules						
Related data elements	A.8 Estimated date flag C.2 Date of first attendance for this episode					
Related NAS Measures	4.1.1 (a) ≥90% of women aged 50–74 years attend for a screening appointment within 28 calendar days of their booking date (fixed sites only). 4.1.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the time taken to achieve 90% from booking to screening (fixed sites only).					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.2 Date of first attendance for this episode

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the presenting participant first attended for screening, this episode.
Context	Used for monitoring and planning access, participation and outcome of screening.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

For the definition of ‘screening episode’, see the glossary (Appendix 4).

A screening episode includes all attendances for screening and assessment within 6 months relating to a particular episode of screening. This data element marks the commencement of the screening episode.

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example, if the participant first attended on July 1 2000 the Date of first attendance should be recorded as 01072000 as specified in the representational layout.

This data element should have a system prompt for screening unit identifier (A.2).

Verification rules

Related data elements

A.2	Screening unit identifier
A.8	Estimated date flag
B.2	Date of birth
C.1	Booking date

Related NAS Measures

1.1.1 (a) The Service and/or SCU monitors and reports the participation rate of women aged 50–74 years who participate in screening in the most recent 24-month period.

1.1.1 (b) ≥70% of women aged 50–69 years participate in screening in the most recent 24-month period.

1.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months.

1.1.2 (b) ≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months.

1.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screening episode within the Program who are rescreened within 27 months of their previous screening episode.

1.1.3 (b) ≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode.

1.2.1 (a) The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.1 (b) The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

1.2.2 The Service and/or SCU monitors the proportion of women, aged 40–49 years and 75 years and over who are screened and recalled for assessment.

(a) screened

(b) recalled

2.1.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer.

2.1.1 (b) ≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.

2.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

2.1.2 (b) ≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer.

2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.5 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

2.2.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.1 (b) ≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.

2.2.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.2 (b) ≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.

2.2.3 The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

2.2.4 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode

2.5.1 The Service and/or SCU monitors and reports the percentage of women who have up to 4 images per screen, including technical repeats.

2.5.2 The overall repeat rate for the Service and/or SCU is ≤2% of all screening images.

2.6.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for annual screening.

2.6.1 (b) ≤10% of women aged 50–69 years attend for annual screening.

2.6.2 The Service and/or SCU monitors and reports the proportion of women who attend for annual screening, aged 40–49 years and 75 years and over.

2.6.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode and are recalled for assessment.

2.6.3 (b) <10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment.

2.6.3 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their first screening episode and are recalled for assessment.

2.6.4 (a) The Service and/or SCU offers, monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.4 (b) <5% of women aged 50–69 years who attend for their second or subsequent screening episode are recalled for assessment.

2.6.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.5 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

2.6.6 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening episode.

2.6.7 <0.2% women who attend for screening are recommended for early review for further assessment.

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

4.1.1 (a) ≥90% of women aged 50–74 years attend for a screening appointment within 28 calendar days of their booking date (fixed sites only).

4.1.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the time taken to achieve 90% from booking to screening (fixed sites only).

4.1.2 ≥90% of women have a documented notification of the results of screening within 14 calendar days of the date of screening.

4.2.1 (a) ≥90% of women requiring assessment attend an assessment visit within 28 calendar days of their screening visit.

4.2.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the number of days the Service and/or SCU takes to achieve 90%.

4.2.1 (c) Where part (a) is not met, the Service and/or SCU records and report the percentage of women who were offered assessment within 28 calendar days of their screening visit.

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.3.1 Total number of images used

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The number of images used to screen a participant during the participant's screening visit(s).
Context	This data element is used for Service provision, monitoring and planning.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative Value
Field size	*Min.* 1	*Max.* 2		*Representational layout*	NN
Data domain	Number of films				
Guide for use	The total number of images used is the total of all satisfactory and unsatisfactory images taken, including technical repeats. Technical repeats are the additional image(s) that need to be taken due to technically unsatisfactory images at the screening visit. This data element should have a system prompt for radiographer identifier code of radiographer taking initial images (to be coded in *A.6 Service provider identifier*). The number of images used is recorded at the screening visit for the participant.				
Verification rules					
Related data elements	A.6 Service provider identifier A.7 Machine number C.3.2 Technical repeat status C.3.3 Number of technical repeats				
Related NAS Measures	2.5.1 The Service and/or SCU monitors and reports the percentage of women who have up to 4 images per screen, including technical repeats. 2.5.2 The overall repeat rate for the Service and/or SCU is ≤2% of all screening images.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.3.2 Technical repeat status

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a technical repeat was performed
Context	This data element is used for Service provision, monitoring and planning.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

1. No technical repeat performed—not required
2. No technical repeat performed—participant refused
3. Technical repeat performed—at initial screening visit
4. Technical repeat performed—at subsequent screening visit
9. Unknown

Guide for use

Technical repeats are the additional image(s) that need to be taken due to technically unsatisfactory images at the screening visit. They are initiated by the radiographer or radiologist. The unsatisfactory images are allocated to the radiographer who performed the mammography during the screening visit. The technical repeats (the additional images) are allocated to the radiographer who carried out the technical repeats. This may or may not be the initial radiographer. Also, the additional images may be taken during the first screening visit, or during a subsequent visit.

A technical repeat carried out at an assessment centre is still part of the screening process and should not be included in the calculation of recall rate, unless it results in the participant requiring assessment, for example, a true ‘recall to assessment’. Screening is not completed until a set of technically satisfactory images is available for reading.

Participants who fail to attend a technical repeat appointment are included in the ‘refused’ category.

The technical repeat status is recorded at the screening visit for the participant.

Verification rules

Related data elements

- A.6 Service provider identifier
- A.7 Machine identifier
- C.3.1 Total number of images used
- C.3.3 Number of technical repeats

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.3.3 Number of technical repeats

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The number of additional images taken due to technically unsatisfactory images at the screening visit.
Context	The number of technical repeats is used for Service provision, monitoring and planning.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.*	2	*Representational layout*	NN
Data domain	Number of technical repeats.				
Guide for use	Technical repeats are initiated by the radiographer or radiologist, and are due to technically unsatisfactory images at the screening visit. The unsatisfactory images are allocated to the radiographer who performed the mammography during the screening visit. The technical repeats (the additional images) are allocated to the radiographer who carried out the technical repeats. This may or may not be the initial radiographer. Also, the additional images may be taken during the first screening visit, or during a subsequent visit. A technical repeat carried out at an assessment centre should not be included in the calculation of recall rate, unless it results in the participant requiring assessment, for example, a true 'recall to assessment'. This data element should have a system prompt for radiographer identifier code of radiographer taking repeat images if different from initial radiographer (to be coded in *A.6 Service provider identifier*).				
Verification rules					
Related data elements	A.6 Service provider identifier A.7 Machine number C.3.1 Total number of images used C.3.2 Technical repeat status				
Related NAS Measures	2.5.2 The overall repeat rate for the Service and/or SCU is ≤2% of all screening images				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.4 Screening mammogram reading results

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Each reader's opinion of the participant's mammogram.
Context	Used for monitoring and planning access, participation and outcome of screening.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N
Data domain	1. Normal 2. Suspicious				
Guide for use	Some States & Territories use 5 categories to collect this data element. Where this is the case, the following conversion should be used: Normal and Benign are to be classified as 'Normal'. Equivocal, Suspicious and Malignant are to be classified as 'Suspicious'. Where TABAR grades are used to collect this data element, the following conversion should be used: • Normal and Benign are to be classified as 'Normal'. • Probably benign, Possibly malignant and Likely Malignant are to be classified as 'Suspicious'. This data element should have a system prompt for reader code (to be coded in *A.6 Service provider identifier*). The combined reading results are used in determining the screening recommendation (*C.5*). BreastScreen Australia requires that two readers are used. If their opinions differ, the opinion of a third radiologist is used by most services to determine the outcome. Therefore, this field must be completed for at least two and up to three readers involved in assessing the screening images. For each image reader, indicate opinion of images as either 'Normal' or 'Suspicious'. A participant with a suspicious mammogram is recommended for assessment.				
Verification rules	This field must be completed for at least two and up to three readers involved in reading the screening images. A third reader is entered if the opinions of the first two differ.				

Related data elements	A.6 Service provider identifier C.5 Recommendation—screening
Related NAS Measures	

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.5 Recommendation—screening

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The recommended action following the participant's visit(s) to the screening unit for this episode.
Context	Used for monitoring and planning access, participation and outcome of screening.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

1. Routine rescreen 2 years
2. Routine rescreen 1 year
3. To assessment centre for mammographic recall only
4. To assessment centre for other reasons (non-mammographic)
5. To assessment centre for combined recall.

Guide for use

This data element is based on the combined screening mammogram reading results and State and Territory policy on assessment of symptomatic participants without a mammographic abnormality.

Routine rescreen:
Under the National Program policy, the routine re-screen interval is two years. Under some State and Territory policies, participants in high risk categories (as defined by the State and Territory) are recommended for rescreening at one year.

To assessment centre:
If a participant is recommended to attend for assessment, indicate whether this is because of a mammographic recall (see *C.4*), for other reasons (non-mammographic) or for a combined recall.

A technically unsatisfactory mammogram is not a reason for assessment, even if the technical repeat is carried out at an assessment centre. This data element is not completed until the set of technically satisfactory images has been read.

Note: Some services have a policy not to invite participants of certain age groups for rescreening. This data element should be completed regardless of such a policy. If the outcome of the mammogram is 'normal', then 'routine rescreen 2 years' is coded.

Recorded when screening mammogram reading results become available.

Verification rules

Related data elements

B.10 Symptom status

C.4 Screening mammogram reading result

C.8 Annual screening flag

C.9 High-risk flag

D.1 Reason for assessment

Related NAS Measures

1.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months.

1.1.2 (b) ≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months.

1.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screening episode within the Program who are rescreened within 27 months of their previous screening episode.

1.1.3 (b) ≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode

2.6.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode and are recalled for assessment.

2.6.3 (b) <10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment.

2.6.3 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their first screening episode and are recalled for assessment.

2.6.4 (a) The Service and/or SCU offers, monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.4 (b) <5% of women aged 50–69 years who attend for their second or subsequent screening episode are recalled for assessment.

2.6.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their second or subsequent screening episode and are recalled for assessment.

2.6.5 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

2.6.6 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening episode.

4.2.1 (a) ≥90% of women requiring assessment attend an assessment visit within 28 calendar days of their screening visit.

4.2.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the number of days the Service and/or SCU takes to achieve 90%.

4.2.1 (c) Where part (a) is not met, the Service and/or SCU records and report the percentage of women who were offered assessment within 28 calendar days of their screening visit.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.6 Date participant notified of screening results

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the participant was first notified of the outcome of the participant's screening visit(s) by phone call in which the participant is directly spoken with, by letter or via email.
Context	Used for monitoring and planning access, participation and outcome of screening.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

When the mammogram outcome is suspicious, the participant is usually notified of the participant's screening results by phone call in which the participant is directly spoken with, by letter or via email. The notification date for this data element is the date when the participant is directly spoken with or the date on which the letter or email was generated.

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the participant was notified on 1 July 2000 the Date participant notified of screening results should be recorded as 01072000 as specified in the representational layout.

It is recommended that in cases where all components of *Date participant notified of screening results* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.

Verification rules

Related data elements

A.8	Estimated date flag
C.2	Date of first attendance for this episode
C.7.1	Letter to general practitioner about screening results
C.7.2	Letter to general practitioner about screening results—date

Related NAS Measures

4.1.2 ≥90% of women have documented notification of the results of screening within 14 calendar days of the date of screening.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

C.7.1 Letter to general practitioner about screening results

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a letter about the outcome of the participant's attendance for screening was sent to the participant's general practitioner.
Context	Used for monitoring and planning access, participation and outcome of screening.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes 2. No				
Guide for use	Indicate whether or not the participant's nominated general practitioner was sent a letter about the results of the participant's attendance(s) at the screening unit. Notification to general practitioner could be in electronic form (for example, an email) and need not be a mailed letter. Recorded by the Service when screening results letters are finalised.				
Verification rules					
Related data elements	B.11 General practitioner flag C.6 Date participant notified of screening results C.7.2 Letter to general practitioner—date				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.7.2 Letter to general practitioner about screening results—date

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the letter about the outcome of the participant's attendance for screening was sent to the participant's general practitioner.
Context	Used for monitoring and planning access, participation and outcome of screening.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

Indicate on which date the participant's nominated general practitioner was sent written advice, either by hard copy letter or electronically, about the results of the participant's attendance(s) at the screening unit.

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the letter was sent on 1 July 2000 the date should be recorded as 01072000 as specified in the representational layout.

It is recommended that in cases where all components of *Letter to general practitioner about screening results—date* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.

Verification rules

This date is to be entered only if entry for *C.7.1 Letter to general practitioner about screening results* is 'yes'.

Related data elements

A.8	Estimated date flag
B.11	General practitioner flag
C.6	Date participant notified of screening results
C.7.1	Letter to general practitioner about screening results

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.8 Annual screening flag

Admin. status	NEW

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Identifies whether the participant is recommended for annual routine screening.
Context	This data element identifies participants who are recommended for annual routine screening. This is as a result of the characteristics of the participant (for example, a personal history of breast cancer).

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1.	Yes				
	2.	No				
Guide for use	The annual screening flag should be used as a ‘high-risk’ flag, identifying participants who are at considerably higher risk for breast cancer. This flag is not intended to be used for participants who may receive a ‘one off’ recommendation to return in 12 months; rather, it is a permanent flag attributed to the participant. This data element is intended to be a ‘place-holder’.					
Verification rules	C.5 or D.11.1 or E.12 = 2					
Related data elements	C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

C.9 High-risk flag

Admin. status	SUPERSEDES	C.8 High-risk flag

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Identifies participants who are at considerably higher risk for breast cancer.
Context	This data element identifies participants who are at considerably higher risk for breast cancer as a result of their characteristics (for example, a personal history of breast cancer).

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No					
Guide for use	The ‘high-risk’ flag should be used to identify participants who are at considerably higher risk for breast cancer. BreastScreen Australia is currently working to establish a nationally-consistent definition of ‘high-risk’. Until such time as this is established, this data element is intended to be a ‘place-holder’.					
Verification rules	C.5 or D.11.1 or E.12 = 2					
Related data elements	C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D—Assessment visit segment

Data dictionary version 1.3		Data dictionary version 1.2	
D.1	Reason for assessment	D.1	Reason for assessment
D.2.1	Attendance for assessment	D.2.1	Attendance for assessment
D.2.2	Date of first attendance for assessment	D.2.2	Date of first attendance for assessment
D.2.3	Date of first offered appointment for assessment	D.2.3	Date of first offered appointment for assessment
D.3.1	Nature of mammographic lesion(s) to be assessed	D.3.1	Nature of mammographic lesion(s) to be assessed
D.3.2	Nature of mammographic lesion(s) to be assessed —side	D.3.2	Nature of mammographic lesion(s) to be assessed —side
D.4.1	Nature of clinical symptoms & signs to be assessed	D.4.1	Nature of clinical symptoms & signs to be assessed
D.4.2	Nature of clinical symptoms & signs to be assessed —side	D.4.2	Nature of clinical symptoms & signs to be assessed —side
D.5	Result of mammography	D.5	Result of mammography
D.6.1	Result of clinical examination	D.6.1	Result of clinical examination
D.6.2	Correspondence of clinical examination to mammographic abnormality	D.6.2	Correspondence of clinical examination to mammographic abnormality
D.7.1	Result of ultrasound	D.7.1	Result of ultrasound
D.7.2	Description of ultrasound lesion	D.7.2	Description of ultrasound lesion
D.8.1	Percutaneous needle biopsy performed	D.8.1	Percutaneous needle biopsy performed
D.8.2	Percutaneous needle biopsy guidance method	D.8.2	Percutaneous needle biopsy guidance method
D.8.3	Percutaneous needle biopsy result	D.8.3	Percutaneous needle biopsy result
D.9	Other procedures performed	D.9	Other procedures performed
D.10	Final result of assessment visit	D.10	Final result of assessment visit
D.11.1	Recommendation—assessment	D.11.1	Recommendation—assessment
D.11.2	Recommendation—number of months	D.11.2	Recommendation—number of months
D.11.3	Date recommendation made	D.11.3	Date recommendation made
D.11.4	Assessment visit—date	D.11.4	Assessment visit—date
D.11.5	Results visit—date	D.11.5	Results visit—date
D.12	Discharge from BreastScreen Australia following assessment	D.12	Discharge from BreastScreen Australia following assessment
D.13.1	Date participant notified in writing of assessment results	D.13.1	Date woman notified in writing of assessment results
D.13.2	Date participant notified verbally of biopsy results	D.13.2	Date woman notified verbally of biopsy results
D.14.1	Letter to general practitioner about assessment results	D.14.1	Letter to general practitioner about assessment results
D.14.2	Letter to general practitioner about assessment results—date	D.14.2	Letter to general practitioner about assessment results—date
D.15.1	Result of tomosynthesis	D.15.1	Result of tomosynthesis
D.15.2	Description of tomosynthesis lesion	D.15.2	Description of tomosynthesis lesion
D.16.1	Result of contrast enhanced mammography	D.16.1	Result of contrast enhanced mammography
D.17.1	Result of magnetic resonance imaging	D.17.1	Result of magnetic resonance imaging

D.1 Reason for assessment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The reason the presenting participant is attending the assessment clinic.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

1. Suspicious mammogram and/or signs/symptoms at screen
2. Early review
3. Interval signs/symptoms
4. Other, please specify

Guide for use

Indicate only one of the four categories.

Code 1, Suspicious mammogram and/or signs/symptoms at screening episode is based on the data element *Recommendation—screening (C.5)*, where the recommendation is codes 3 to 5.

Code 2, Early review is defined as the recall of a participant for further assessment within twelve months of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within six months of the screening date is considered part of the screening episode and cancers found as a result of the review are considered to be screen-detected. Early review carried out at six months or more from the date of screening, occurs after the screening episode is complete and cancers found are considered to be interval cancers. This code is used if *D.11.1 Recommendation—assessment* is coded as 3.

Code 3, Interval signs/symptoms is used for assessment visits initiated by a participant who has been screened previously in BreastScreen Australia. The participant is attending before the participant's next screening episode is due to commence (as determined by the participant's routine re-screening interval), and has clinical signs or symptoms. This occurs after the previous screening episode is complete; if cancer is found in the same breast in which the clinical signs or symptoms occur it would be counted as an interval cancer.

Code 4, Other, includes other reasons for recalling participants to assessment, for example, breast implants or a history of breast cancer, without a suspicious mammogram and/or signs/symptoms. The reason needs to be specified.

Recorded for all participants who have attended for assessment.

Verification rules

Related data elements	C.5 Recommendation—screening D.11.1 Recommendation—assessment F.1.3 Cancer diagnosed in BreastScreen Australia status
Related NAS Measures	2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode. 4.2.3 ≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment. 4.2.5 ≥95% of women complete all assessment within 15 calendar days.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.2.1 Attendance for assessment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not the participant attended for assessment.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes 2. No 9. Unknown				
Guide for use	If No then the episode would be closed if = >6 months from the screening date and no further data elements completed. Code 9 may be used if it is unknown whether the participant was assessed outside BreastScreen Australia. If Code 9 (Unknown) then no more data elements are collected in Segment D. This data element should have a system prompt for *A.3 Assessment unit identifier*. More than one Assessment unit identifier can apply to each screening episode. If procedures in this segment occur at more than one assessment centre then the system should allow for the coding of assessment unit identifier for each set of procedures that can be carried out separately. For example, mammographic work-up may occur on a mobile unit and other procedures at one or more fixed units. Recorded for all participants who have attended for assessment.				
Verification rules					
Related data elements	A.3 Assessment unit identifier D.2.2 Date of first attendance for assessment D.2.3 Date first offered appointment for assessment				
Related NAS Measures	4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit. 4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

Comments The location of the screening visit determines the attribution of the outcome of assessment. If a participant is assessed in a Screening and Assessment Service (SAS) outside the SAS where screening took place or in an assessment centre outside BreastScreen Australia or in another state, then the information about assessment is relevant only to the NAS Measures that measure the efficiency of the assessment unit undertaking the assessment process. The final outcome of assessment is attributed to the SAS where screening took place. For example, if a cancer is detected then it is attributed to the screening SAS and NOT counted in the assessment SAS. This also applies to the reporting of NAS Measures such as the proportion returning to assessment, etc. The fact that the assessment took place outside the screening SAS or that the assessment was carried out in more than one assessment centre is captured by the Assessment unit identifier.

D.2.2 Date of first attendance for assessment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the participant first attended for assessment, for this episode.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the participant first attended on July 1 2000 the Date of first attendance for assessment should be recorded as 01072000 as specified in the representational layout.

Recorded for all participants who have attended for assessment.

It is recommended that in cases where all components of *Date of first attendance for assessment* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.

Verification rules

Date of first attendance for assessment is to be entered only if entry for *Attendance for assessment (D.2.1)* is 'yes'.

Related data elements

A.8 Estimated date flag

D.2.1 Attendance for assessment

D.11.4 Assessment visit—date

D.11.5 Results visit—date

Related NAS Measures

4.2.1 (a) ≥90% of women requiring assessment attend an assessment visit within 28 calendar days of their screening visit.

4.2.1 (b) Where part (a) is not met, the Service and/or SCU records and reports the number of days the Service and/or SCU takes to achieve 90%.

4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

4.2.3 ≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment.

4.2.5 ≥95% of women complete all assessment within 15 calendar days.

4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.2.3 Date first offered appointment for assessment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the participant is offered an appointment for assessment, for this episode.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				
Guide for use	This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example, if the participant first attended on 1 July 2000 the Date of first attendance for assessment should be recorded as 01072000 as specified in the representational layout. Recorded for all participants who are offered an assessment appointment. It is recommended that in cases where all components of *Date first offered appointment for assessment* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.				
Verification rules	*Date first offered appointment for assessment* is to be entered only if entry for *D.2.1 Attendance for assessment* is 'yes'.				
Related data elements	A.8 Estimated date flag D.2.1 Attendance for assessment D.2.2 Date of first attendance for assessment				
Related NAS Measures	4.2.1 (c) Where part (a) is not met, the Service and/or SCU records and report the percentage of women who were offered assessment within 28 calendar days of their screening visit.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	This is a new data element that was created to enable calculation of the new NAS Measure 4.2.1 (c).

D.3.1 Nature of mammographic lesion(s) to be assessed

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The nature of a suspicious mammographic lesion that has generated the assessment process.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

0. No mammographic lesion
1. Calcification
2. Stellate lesion
3. Discrete mass with or without calcification
4. Multiple masses
5. Architectural distortion
6. Non-specific density
7. Other, please specify

Guide for use

Mammographic data are collected before workup by the radiologist who will do the work up at the time of assessment. More than one code may be reported.

Code 0 signifies that there is no mammographic lesion being assessed (for example, the participant is being assessed for clinical symptoms/signs only).

Code dominant category for reporting purposes.

DEFINITIONS:

Code 1, Calcification

Deposition or collections of calcium compounds in breast tissue of sufficient size to be seen on mammography. Calcifications are characterised by size distribution, density and morphology.

Features which may be suspicious for malignancy include size (0.05—0.5 mm), distribution, (cluster, multiple cluster, or sometimes scattered) pleomorphism and density variation.

Code 2, Stellate Lesion

Spiculations of variable length radiating from a central point or mass. When a central mass is present, it may be small or large, and of low, mixed or high density compared to surrounding breast parenchyma.

Code 3, Discrete Mass with or without Calcification

A mass is a space occupying lesion seen in two projections, and is described by density and edge characteristics.

Density may be high, low or variable compared to normal breast tissue. The outline (edge) may be smooth, lobulated, irregular, spiculated, stellate, or obscured by superimposed parenchyma.

Features suspicious for malignancy include increased density and an irregular, spiculated or stellate border, or portion of border.

Code 4, Multiple Masses

More than one lesion which conforms to the definition of a suspicious mass.

Code 5, Architectural Distortion

Abnormal configuration of the ductal and ligamentous structures of breast parenchyma compared with the remainder of the breast tissue markings.

Includes spiculation, focal retraction, distortion of the parenchymal edge, and disorganisation of markings.

Code 6, Non Specific Density

Asymmetry of breast tissue seen in either one or two planes not accurately described by other categories. Additional imaging may reveal normal breast parenchymal appearances, or an underlying mass, or definite architectural distortion. Includes new densities with poorly defined characteristics.

Code 7, Other

Lesions not included or varying from above includes skin thickening or abnormality, abnormal axillary lymph nodes, vascular abnormalities, nipple retraction, diffuse density change, duct abnormality, etc.

Collect data for up to two mammographic lesions.

Recorded for all participants who have mammographic workup at assessment.

For suggested coding, see *A.5 Lesion number*.

More than one code may be reported.

Code dominant category for reporting purposes.

Verification rules

Related data elements

A.5 Lesion number

D.3.2 Nature of mammographic lesion to be assessed—side

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	The definitions under the ‘Guide for use’ were supplied by Dr J. Cawson.

D.3.2 Nature of mammographic lesion(s) to be assessed—side

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The breast in which the mammographic lesion detected at screening is located.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Character				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	A
Data domain:	R	Right				
	L	Left				
Guide for use	Collect data for up to two mammographic lesions. Recorded for all participants who have mammographic workup at assessment. For suggested coding, see *A.5 Lesion number*.					
Verification rules						
Related data elements	A.5 Lesion number D.3.1 Nature of mammographic lesion to be assessed					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.4.1 Nature of clinical symptoms & signs to be assessed

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The nature of suspicious clinical symptoms/signs reported prior to the assessment process.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	0. None 1. Lump 2. Serous nipple discharge 3. Blood-stained nipple discharge 4. Other, please specify				
Guide for use	Specify symptoms/signs if code 4 is reported. Clinical symptoms/signs are based on self-report (of symptoms) or outcome of any clinical examination prior to assessment (signs). The 'none' category (code 0) signifies that there is no clinical symptom/sign being assessed. Code dominant category for reporting purposes. No lesion number is recorded for this data element as the symptom/sign may correlate with a mammographic lesion. This is determined at *D.5 Result of Mammography*. Recorded for all participants who have clinical symptoms/signs assessed. More than one code may be reported.				
Verification rules					
Related data elements	D.4.2 Nature of clinical symptoms & signs to be assessed—side D.5 Result of mammography				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.4.2 Nature of clinical symptoms & signs to be assessed—side

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The breast in which the clinical symptom/sign reported at screening is located.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Character			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	A
Data domain	R Right L Left				
Guide for use	Recorded for all participants who have clinical symptoms/signs assessed.				
Verification rules	*Side* is to be entered only if entry for *D.4.1 Nature of clinical symptoms/signs to be assessed* is not '0'.				
Related data elements	D.4.1 Nature of clinical symptoms & signs to be assessed				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.5 Result of mammography

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The result of further mammography done at assessment.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric	*Representational form*	CODE
Field size	*Min.* 1 *Max.* 1	*Representational layout*	N

Data domain

0. Not done
1. No significant abnormality
2. Benign lesion
3. Equivocal lesion
4. Suspicious lesion
5. Malignant lesion
9. Unknown

Guide for use

This data element should have a system prompt for reader/radiologist who reports results of mammography (to be recorded in *A.6 Service provider identifier*).

Collected for all participants who have mammographic workup at assessment.

Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible.

If there is also a clinical symptom/sign being worked up, code Lesion Number as follows:

If it appears to correspond to the mammographic lesion(s) being worked up, then report as the Mammographic Lesion Number (M1 or M2);

If it appears to be distinct from the mammographic lesion being worked up, then code as lesion Number = S1.

If a new mammographic lesion is found during the mammographic work-up that does not correspond to those reported prior to assessment, lesion number = M3.

Verification rules

Related data elements

A.5	Lesion number
A.6	Service provider identifier
C.5	Recommendation—screening
D.4.1	Nature of clinical symptoms & signs to be assessed

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.6.1 Result of clinical examination

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition The result of the clinical examination done at assessment.

Context Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N

Data domain

0. Not done
1. No significant abnormality
2. Benign lesion
3. Equivocal lesion
4. Suspicious lesion
5. Malignant lesion
9. Unknown

Guide for use

This data element should have a system prompt for clinical examiner provider code (to be coded in *A.6 Service provider identifier*).

Collected for all participants after clinical examination at assessment.

Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

If there is also a new clinical lesion found at clinical examination that does not correspond to mammographic lesion(s), or sign/symptom, code as lesion = C1.

Verification rules

Related data elements

A.5	Lesion number
A.6	Service provider identifier
C.5	Recommendation—screening
D.6.2	Correspondence of clinical examination to mammographic abnormality

Related NAS Measures

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

D.6.2 Correspondence of clinical examination to mammographic abnormality

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not the lesion(s) assessed at clinical examination correspond to a mammographic abnormality.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N
Data domain:	1. Yes 2. No				
Guide for use	Collected for all participants after clinical examination at assessment. Where more than one lesion applies, collect for a minimum of two lesions corresponding to D.6.1 Result of clinical examination. Collect for additional clinical lesions where possible.				
Verification rules					
Related data elements	A.5 Lesion number D.6.1 Result of clinical examination				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.7.1 Result of ultrasound

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition The result of the ultrasound done at assessment.

Context Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

0. Not done
1. No significant abnormality
2. Benign lesion
3. Equivocal lesion
4. Suspicious lesion
5. Malignant lesion
9. Unknown

Guide for use

This data element should have a system prompt for ultrasound interpreter provider code (to be coded in *A.6 Service provider identifier*).

Collected for all participants who have ultrasound at assessment.

Report one code only for each lesion.

Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

If there is a new lesion found at ultrasound that does not correspond to mammographic or clinical lesions previously identified, code as lesion = U1.

Verification rules

Related data elements

A.5	Lesion number
A.6	Service provider identifier
C.5	Recommendation—screening
D.7.2	Description of ultrasound lesion

Related NAS Measures

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

D.7.2 Description of ultrasound lesion

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The description of the lesion based on ultrasound findings.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	0. Not done 1. Normal breast 2. Cystic 3. Solid, probably benign 4. Solid, probably malignant 5. Indeterminate 6. Other, please specify 9. Unknown				
Guide for use	Collected for all participants who have ultrasound at assessment. Report one code only for each lesion. Indicate [0] not done, or one classification from [1] to [9]. For suggested coding of lesions, see *A.5 Lesion number.* Where more than one lesion applies, collect for a minimum of two lesions corresponding to *D.7.1 Result of ultrasound*. Collect for additional lesions where possible.				
Verification rules					
Related data elements	A.5 Lesion number D.7.1 Result of ultrasound				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.8.1 Percutaneous needle biopsy performed

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a percutaneous needle biopsy was performed, including details of the type of needle biopsy performed or the reason why a needle biopsy was not performed.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes, fine needle aspiration 2. Yes, core biopsy, non-vacuum assisted 3. Yes, core biopsy, vacuum assisted 4. No–participant's decision 5. No–clinical decision 9. Unknown				
Guide for use	Record whether a percutaneous needle biopsy was performed. Collected for all participants who have attended assessment.				
Verification rules	If this Data Element = 1, 2, or 3 then C.5 = 3, 4, or 5 If this Data Element = 1, 2, or 3 then D.8.2 = not null D.8.3 = not null				
Related data elements	A.5 Lesion number C.5 Recommendation—screening D.8.2 Percutaneous needle biopsy guidance method D.8.3 Percutaneous needle biopsy result				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.8.2 Percutaneous needle biopsy guidance method

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The method used to direct needle position for percutaneous needle biopsy.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Palpation 2. Ultrasound 3. Mammographic—stereotactic 9. Unknown				
Guide for use	This data element should have a system prompt for needle biopsy operator provider code (to be coded in *A.6 Service provider identifier*). Collected for all participants who have a percutaneous needle biopsy performed at assessment. Report one code for each percutaneous needle biopsy procedure.				
Verification rules	D.8.1 Percutaneous biopsy performed = 1 or 2 or 3				
Related data elements	A.5 Lesion number A.6 Service provider identifier D.8.1 Percutaneous needle biopsy performed D.8.3 Percutaneous needle biopsy result				
Related NAS Measures	4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.8.3 Percutaneous needle biopsy result

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The result of the percutaneous needle biopsy.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric	*Representational form*	CODE
Field size	*Min.* 1 *Max.* 2	*Representational layout*	N
Data domain	1. Inadequate specimen 2. Benign 3. Atypical/equivocal 4. Suspicious 5. Malignant 9. Unknown		
Guide for use	This data element should have a system prompt for percutaneous needle biopsy interpreter provider code (to be coded in *A.6 Service provider identifier*). Collected for all participants who have a percutaneous needle biopsy performed at assessment. Report one code only for each needle biopsy procedure. Indicate one opinion from [1] to [5] for each procedure. Unknown [9] to be used only after attempts to seek a result have failed. Where more than one lesion applies, collect for a minimum of two lesions corresponding to *Percutaneous needle biopsy guidance method (D.8.2)*. Collect for additional lesions where possible. For suggested coding of lesions, see *A.5 Lesion number.* It may be desirable for some jurisdictional registers to collect further information than is possible from the permissible values [1] to [5]. This may include further categorising [5] Malignant into ‘Malignant—breast lesion’ and ‘Malignant—non-breast lesion’ and/or into ‘Malignant—invasive breast cancer’ and ‘Malignant—DCIS’, or other categories. As it is not a requirement from this data element, these additional categories have not been incorporated into the permissible values. It is therefore up to each jurisdictional register to determine if they would like to collect additional categories, and if so, how they should be collected within their register.		
Verification rules	Blank if *D.8.2 Percutaneous needle biopsy result* is blank		

Related data elements	A.5 Lesion number A.6 Service provider identifier D.8.1 Percutaneous needle biopsy performed D.8.2 Percutaneous needle biopsy guidance method
Related NAS Measures	3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient. 3.1.2 0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive 'percutaneous needle biopsy' for the purpose of this standard. Where NAS Measure 3.1.2 is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU 3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%. 4.2.4 ≥85% of women are verbally given the results of percutaneous needle biopsy within seven calendar days of the assessment procedure.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.9 Other procedures performed

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether other procedures were used to assess the mammographic lesion(s).
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N
Data domain	1. Cyst aspiration 2. Other, please specify				
Guide for use	Recorded for all participants who have procedures other than percutaneous needle biopsy performed at assessment. More than one procedure can be coded. Specify procedures used if code = 2 (‘other’). Where more than one lesion applies, code for a minimum of two lesions. Code for additional clinical lesions where possible. For suggested coding of lesions, see *A.5 Lesion number.*				
Verification rules					
Related data elements	A.5 Lesion number				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.10 Final result of assessment visit

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The combined result of all procedures carried out during the assessment of a participant.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric	*Representational form*	CODE
Field size	*Min.* 1 *Max.* 1	*Representational layout*	N

Data domain

0. Incomplete assessment
1. No significant abnormality
2. Benign lesion
3. Equivocal lesion
4. Suspicious lesion
5. Malignant lesion
9. Unknown

Guide for use

This data element should have a system prompt for Assessment coordinator provider code (to be coded in *A.6 Service provider identifier*).

Collected for all participants who have attended for assessment.

Report one code only.

Indicate [0] if assessment was not completed, or one opinion from [1] to [5]. Unknown [9] to be used only after attempts to seek a result have failed.

Verification rules

Related data elements

A.6 Service provider identifier

Related NAS Measures

3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient.

3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.11.1 Recommendation—assessment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The recommended action following the assessment workup for this screening episode.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

1. Routine rescreen at 2 years
2. Routine rescreen at 1 year
3. Early review
4. Definitive treatment for cancer
5. Diagnostic open biopsy
6. Discharge premalignant

Guide for use

Code 3, Early review is the recall of a participant for further assessment following an equivocal assessment visit (where a decision cannot be made). Early review within six months of the screening date is considered part of the screening episode and cancers found as a result of the review are considered to be screen-detected. Early review carried out at six months or more from the date of screening occurs after the screening visit is complete and cancers found are considered to be interval cancers.

Code 4, Definitive treatment: for breast cancer only—not treatment for other abnormalities.

Code 5, Diagnostic open biopsy, relates to excision for the purpose of making a definitive histological diagnosis.

Code 6, Discharge premalignant relates to the recommendation at assessment for the participant to be discharged for a premalignancy, in rare cases where the participant is not being referred for surgery.

Definitive treatment: for breast cancer only—not treatment for other abnormalities.

The aim of diagnostic open biopsy is to form definitive histology.

This data element records the recommendation following assessment although the recommendation may not be adhered to due to a participant's/doctor's decision or State and Territory policy.

Examples include:

Some services have a policy not to invite participants of certain age-groups for rescreening. This data element should be completed regardless of such a policy.

If the outcome of the mammogram is ‘normal’, then ‘routine rescreen 2 years’ is coded (code 1).

A recommendation for excision is made but this does not occur. An example would be an older participant, whose FNA/Core biopsy result is highly suspicious or malignant, but they are too frail to undergo surgery—in the first case (suspicious) code 5 is used, in the second case (malignant) code 4 is used.

Collected for all participants who have attended for assessment.

Report one code only.

This data element cannot be coded until the assessment is complete, unless the recommendation is Early review in which case segment D is repeated.

If recommendation is Early Review (*Reason for assessment D.1* = 2), repeat all data elements in Assessment Visit Segment until definitive assessment recommendation is made, codes 1,2, 4 or 5 in this data element (routine re-screen, definitive treatment or diagnostic open biopsy).

Verification rules

Related data elements

C.8 Annual screening flag

C.9 High-risk flag

D.1 Reason for assessment

D.11.2 Recommendation—number of months

D.11.3 Date recommendation made

Related NAS measures

1.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months.

1.1.2 (b) ≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months.

1.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screening episode within the Program who are rescreened within 27 months of their previous screening episode.

1.1.3 (b) ≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode

2.6.7 <0.2% women who attend for screening are recommended for early review for further assessment.

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively .

3.1.8 (b) Where part (a) is not met, the Service and/or SCU provide the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.

4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

4.2.3 ≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.11.2 Recommendation—number of months

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The number of months to the time when the Early review is recommended to take place.
Context	Used for monitoring the assessment and diagnosis of breast cancer. This data element is used for monitoring purposes and for the call back of participants to the early review visit. It also determines whether an Early review occurs within or after a screening episode.

Relational and representational attributes

Datatype	Numeric				Representational form	Quantitative value
Field size	Min.	1	Max.	2	Representational layout	NN
Data domain	Number of months					
Guide for use	Early review is the recall of a participant for further assessment following an equivocal assessment visit (where a decision cannot be made). Early review within six months of the screening date is considered part of the screening episode and cancers found as a result of the review are considered to be screen-detected. Early review carried out at six months or more from the date of screening occurs after the screening visit is complete and cancers found are considered to be interval cancers. Collected following completion of assessment for all participants who are recommended to return to assessment for early review.					
Verification rules	Number of months is to be entered only if entry for D.11.1 Recommendation—assessment is code 3.					
Related data elements	D.11.1 Recommendation—assessment					
Related NAS Measures	2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.11.3 Date recommendation made

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the recommendation after the assessment work up for this screening episode was made.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the recommendation was made on 1 July 2000 the date should be recorded as 01072000 as specified in the representational layout.

Collected for all participants who have attended for assessment.

This data element cannot be completed until the assessment is complete, unless the recommendation is early review, in which case segment D is repeated after the early review visit.

It is recommended that in cases where all components of *Date recommendation made* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.

Verification rules

Related data elements

A.8 Estimated date flag

D.11.1 Recommendation—assessment

Related NAS Measures

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

4.2.5 ≥95% of women complete all assessment within 15 calendar days.

4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.11.4 Assessment visit—date

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the participant attended for a procedural visit during this assessment episode.
Context	Used for monitoring the assessment and diagnosis of breast cancer. This data element is used in the calculation of the number of procedural visits a participant makes within an assessment episode.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.* 8		*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use	This data element is coded for each procedural visit relating to an assessment episode that is excluding results visits. For the definition of ‘assessment episode’, see the glossary. A date field is required wherever a separate procedural visit may occur during the assessment episode. The date recorded is the date on which the participant attended for each assessment visit. For example, a participant may attend for a mammographic work-up on a mobile unit and for further work-up elsewhere on a separate date. In this case two dates should be recorded. If the participant returns to the assessment clinic for an appointment with the counsellor only, for example to receive the participant’s results, such a visit should be recorded under *D.11.5 Results visit—date*. Multiple visits can also apply to Early review. Early review is considered to be a second assessment with all data elements in segment D repeated, commencing at *D.1 Reason for assessment*. Collected after all procedural visits at assessment are completed.
Verification rules	
Related data elements	D.2.2 Date of first attendance for assessment D.11.5 Results visit—date
Related NAS Measures	3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient. 3.1.2 0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is

achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive ‘percutaneous needle biopsy’ for the purpose of this standard.

Where NAS Measure 3.1.2 is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU

3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

3.1.7 ≥95% of all lesions are correctly identified at first excision.

3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively.

3.1.8 (b) Where part (a) is not met, the Service and/or SCU provides the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.

4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

4.2.3 ≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment.

4.2.4 ≥85% of women are verbally given the results of percutaneous needle biopsy within seven calendar days of the assessment procedure.

4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.11.5 Results visit—date

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the participant attended for a results visit during this assessment episode.
Context	Used for monitoring the assessment and diagnosis of breast cancer. This data element is used in the calculation of the number of visits a participant makes within an assessment episode.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				
Guide for use	This data element is coded for each visit in which a participant receives results of the participant's assessment. There should be no procedures performed at this visit. Collected following the participant's assessment results visit.				
Verification rules					
Related data elements	D.2.2 Date of first attendance for assessment D.11.4 Assessment visit—date				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.12 Discharge from BreastScreen Australia following assessment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a participant was discharged from BreastScreen Australia following the outcome of assessment.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No				
Guide for use	If the participant has been discharged from BreastScreen Australia they will not receive a routine recall invitation. A 'Yes' code includes participants discharged permanently from BreastScreen Australia as well as those participants suspended from BreastScreen Australia for some years (for example, some services reinvite participants diagnosed with breast cancer after five years). The most common reason for discharge will be a diagnosis of breast cancer, and in most cases the decision to discharge will be made after open biopsy. If a participant is recommended for open biopsy, this data element is coded as 2 (No) and information is recorded in E.1, E.11, E.12 and E.13 (Discharge from BreastScreen Australia following open biopsy). Code 1 (Yes) in this data element is used for participants diagnosed with cancer from the FNA/Core biopsy and not recommended for open biopsy. Participants may be discharged for other reasons, being either the participant's own decision or the service's recommendation, for example discharge due to a pre-malignant lesion. Collected for all participants who have attended for assessment.				
Verification rules					
Related data elements					
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

D.13.1 Date participant notified in writing of assessment results

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the participant was first notified in writing of the outcome of the participant's assessment visit(s).
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.* 8		*Representational layout*	DDMMYYYY
Data domain	Valid date				
Guide for use	The participant is usually notified of the participant's assessment results verbally (in person or by phone). A letter may be handed to the participant's at the same time, or it may be sent to the participant's by mail or in electronic form (for example, over email). The notification date is the date on which the letter was generated. This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the participant was notified on 1 July 2000 the Date participant notified of assessment results should be recorded as 01072000 as specified in the representational layout. Collected for all participants who have attended for assessment. It is recommended that in cases where all components of the *Date participant notified of assessment results* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.				
Verification rules					
Related data elements	A.8 Estimated date flag D.14.1 Letter to general practitioner about assessment results D.14.2 Letter to general practitioner about assessment results—date				
Related NAS Measures	4.2.5 ≥95% of women complete all assessment within 15 calendar days. 4.2.6 All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.13.2 Date participant notified verbally of biopsy results

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the participant was verbally notified of the outcome of the participant's cytology or pathology assessment result(s).
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

The participant is usually notified of the participant's assessment results verbally (in person or by phone). This notification date is the date on which the participant was notified of the participant's results verbally. How the participant was notified must be documented, for example, details of the phone call recorded.

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the participant was notified on 1 July 2000 the Date participant notified of assessment results should be recorded as 01072000 as specified in the representational layout.

Collected for all participants who have attended for assessment and had percutaneous needle biopsy performed.

It is recommended that in cases where all components of *Date participant notified verbally of biopsy results* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.

Verification rules

Related data elements

A.8 Estimated date flag

D.14.1 Letter to general practitioner about assessment results

D.14.2 Letter to general practitioner about assessment results—date

Related NAS Measures

4.2.4 ≥85% of women are verbally given the results of percutaneous needle biopsy within seven calendar days of the assessment procedure.

4.2.5 ≥95% of women complete all assessment within 15 calendar days.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

D.14.1 Letter to general practitioner about assessment results

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a letter about the outcome of the participant's attendance for assessment was sent to the participant's general practitioner.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No					
Guide for use	Indicate whether or not the participant's nominated general practitioner was sent a letter about the results of the participant's attendance(s) at the assessment unit. Notification to general practitioner could be in electronic form (for example, an email) and need not be a mailed letter. Collected for all participants who have attended for assessment.					
Verification rules						
Related data elements	B.11 General practitioner flag D.13.1 Date participant notified in writing of assessment results D.13.2 Date participant notified verbally of biopsy results D.14.2 Letter to general practitioner about assessment results—date					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.14.2 Letter to general practitioner about assessment results—date

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date the letter about the outcome of the participant's attendance for assessment was sent to the participant's general practitioner.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				
Guide for use	Indicate on which date the participant's nominated general practitioner was sent a letter or was contacted electronically about the results of the participant's attendance(s) at the assessment unit. This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the letter was sent on 1 July 2000 the date should be recorded as 01072000 as specified in the representational layout. Collected for all participants who have attended for assessment. It is recommended that in cases where all components of *Letter to general practitioner about assessment results—date* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.				
Verification rules	This date is to be entered only if entry for *D.14.1 Letter to general practitioner about assessment results* is code 1 (yes).				
Related data elements	A.8 Estimated date flag B.11 General practitioner flag D.13.1 Date participant notified in writing of assessment results D.13.2 Date participant notified verbally of biopsy results D.14.1 Letter to general practitioner about assessment results				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.15.1 Result of tomosynthesis

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The result of tomosynthesis done at assessment.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

0.	Not done
1.	No significant abnormality
2.	Benign lesion
3.	Equivocal lesion
4.	Suspicious lesion
5.	Malignant lesion
9.	Unknown

Guide for use

Collected for all participants who have tomosynthesis at assessment.

Report one code only for each lesion.

Where more than one lesion applies, collect for a minimum of two lesions and additional clinical lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

If there is a new lesion found at tomosynthesis that does not correspond to mammographic or clinical lesions previously identified, code as lesion = T3.

Verification rules

Related data elements

A.5	Lesion number
A.6	Service provider identifier
C.5	Recommendation—screening

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

D.15.2 Description of tomosynthesis lesion

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The description of the lesion based on tomosynthesis findings.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

0. Not done
1. No mammographic lesion
2. Calcification
3. Stellate lesion
4. Discrete mass with or without calcification
5. Multiple masses
6. Architectural distortion
7. Non-specific density
8. Other, please specify
9. Unknown

Guide for use

More than one code may be reported.

Code 0 signifies that tomosynthesis was not performed at assessment.

Code 1 signifies that there is no mammographic lesion being assessed (for example, the participant is being assessed for clinical symptoms/signs only).

Code dominant category for reporting purposes.

Collected for all participants who have tomosynthesis at assessment.

Report one code only for each lesion.

Indicate [0] not done, or one classification from [1] to [9].

For suggested coding of lesions, see A.5 Lesion number.

Where more than one lesion applies, collect for a minimum of two lesions corresponding to *D.15.1 Result of tomosynthesis*. Collect for additional clinical lesions where possible.

DEFINITIONS

Code 2, Calcification

Deposition or collections of calcium compounds in breast tissue of sufficient size to be seen on mammography. Calcifications are characterised by size distribution, density and morphology.

Features which may be suspicious for malignancy include size (0.05—0.5 mm), distribution, (cluster, multiple cluster, or sometimes scattered) pleomorphism and density variation.

Code 3, Stellate Lesion

Spiculations of variable length radiating from a central point or mass. When a central mass is present, it may be small or large, and of low, mixed or high density compared to surrounding breast parenchyma.

Code 4, Discrete Mass with or without Calcification

A mass is a space occupying lesion seen in two projections, and is described by density and edge characteristics.

Density may be high, low or variable compared to normal breast tissue. The outline (edge) may be smooth, lobulated, irregular, spiculated, stellate, or obscured by superimposed parenchyma.

Features suspicious for malignancy include increased density and an irregular, spiculated or stellate border, or portion of border.

Code 5, Multiple Masses

More than one lesion which conforms to the definition of a suspicious mass.

Code 6, Architectural Distortion

Abnormal configuration of the ductal and ligamentous structures of breast parenchyma compared with the remainder of the breast tissue markings.

Includes spiculation, focal retraction, distortion of the parenchymal edge, and disorganisation of markings.

Code 7, Non Specific Density

Asymmetry of breast tissue seen in either one or two planes not accurately described by other categories. Additional imaging may reveal normal breast parenchymal appearances, or an underlying mass, or definite architectural distortion. Includes new densities with poorly defined characteristics.

Code 8, Other

Lesions not included or varying from above includes skin thickening or abnormality, abnormal axillary lymph nodes, vascular abnormalities, nipple retraction, diffuse density change, duct abnormality, etc.

Verification rules

Related data elements

A.5 Lesion number

D.15.1 Result of tomosynthesis

Related NAS Measures

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

Comments The definitions under the ‘Guide for use’ were supplied by Dr J. Cawson.

D.16.1 Result of contrast enhanced mammography

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition The result of contrast enhanced mammography done at assessment.

Context Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype Numeric *Representational form* CODE

Field size *Min.* 1 *Max.* 1 *Representational layout* N

Data domain

0. Not done
1. No significant abnormality
2. Benign lesion
3. Equivocal lesion
4. Suspicious lesion
5. Malignant lesion
9. Unknown

Guide for use

Collected for all participants who have contrast enhanced mammography at assessment.

Report one code only for each lesion.

Where more than one lesion applies, collect for a minimum of two mammographic lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

If there is a new lesion found at contrast enhanced mammography that does not correspond to mammographic or clinical lesions previously identified, code as lesion = D1.

Verification rules

Related data elements

A.5 Lesion number
A.6 Service provider identifier
C.5 Recommendation—screening

Related NAS Measures

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation	BreastScreen Australia

D.17.1 Result of magnetic resonance imaging

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The result of magnetic resonance imaging done at assessment.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

0.	Not done
1.	No significant abnormality
2.	Benign lesion
3.	Equivocal lesion
4.	Suspicious lesion
5.	Malignant lesion
9.	Unknown

Guide for use

Collected for all participants who have magnetic resonance imaging at assessment.

Report one code only for each lesion.

Where more than one lesion applies, collect for a minimum of two mammographic lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

If there is a new lesion found at magnetic resonance imaging that does not correspond to mammographic or clinical lesions previously identified, code as lesion = N1.

Verification rules

Related data elements

A.5	Lesion number
A.6	Service provider identifier
C.5	Recommendation—screening

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E—Excision of lesion segment

Data dictionary version 1.3		Data dictionary version 1.2	
E.1	Excision performed	E.1	Excision performed
E.2	Date excision performed	E.2	Date excision performed
E.3	Funding of excision	E.3	Funding of excision
E.4.1	Marking method	E.4.1	Marking method
E.4.2	Localisation technique	E.4.2	Localisation technique
E.5	Palpability of lesion	E.5	Palpability of lesion
E.6	Frozen section	E.6	Frozen section
E.7	Specimen imaging	E.7	Specimen imaging
E.8.1	Lesion identified in specimen	E.8.1	Lesion identified in specimen
E.8.2	Further surgery recommended	E.8.2	Further surgery recommended
E.9	Excision result	E.9	Excision result
E.10	Number of excisions	E.10	Number of excisions
E.11	Date of definitive diagnosis	E.11	Date of definitive diagnosis
E.12	Recommendation—definitive	E.12	Recommendation—definitive
E.13	Discharge from BreastScreen Australia following excision	E.13	Discharge from BreastScreen Australia following excision

E.1 Excision performed

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not an excision was performed for a participant recommended for diagnostic open biopsy or treatment.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

1. Yes
2. No

Guide for use

Record whether excision was performed. If no, complete the following data elements:

E.11 Date of definitive diagnosis

E.12 Recommendation—definitive

E.13 Discharge from BreastScreen Australia following excision

The decision not to perform the excision may be the participant's or the surgeon's.

If the participant underwent surgery more than once, or was recommended to undergo surgery more than once, this and related data elements are repeated.

This data element should have a system prompt for Surgeon provider code (to be coded in *A.6 Service provider identifier*) and *A.4 Surgical unit identifier*.

Collected for all participants recommended for diagnostic open biopsy or treatment.

Verification rules

Related data elements

A.4	Surgical unit identifier
A.6	Service provider identifier
D.12	Discharge from BreastScreen Australia following assessment
E.8.2	Further surgery recommended
E.11	Date of definitive diagnosis
E.12	Recommendation—definitive
E.13	Discharge from BreastScreen Australia following excision

Related NAS Measures	3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient. 3.1.2 0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive 'percutaneous needle biopsy' for the purpose of this standard. Where NAS Measure 3.1.2 is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU 3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%. 3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy. 3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy. 3.1.7 ≥95% of all lesions are correctly identified at first excision. 5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.2 Date excision performed

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date on which the excision was performed.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				
Guide for use	If the participant underwent surgery more than once, this data element is to be collected for each occasion of surgery. The first date is used in the calculation of NAS Measures 3.1.7. This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the participant underwent surgery on 1 July 2000 the Date excision performed should be recorded as 01072000 as specified in the representational layout. Collected for all participants who had an excision performed. It is recommended that in cases where all components of the *Date excision performed* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.				
Verification rules					
Related data elements	A.8 Estimated date flag E.8.2 Further surgery recommended G.2 Date of commencement of treatment				
Related NAS Measures	3.1.7 ≥95% of all lesions are correctly identified at first excision.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.3 Funding of excision

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not the excision of lesion(s) detected by BreastScreen Australia was paid for by BreastScreen Australia funds.
Context	Used for monitoring the assessment and diagnosis of breast cancer. BreastScreen Australia can fund up to and including the cytological or histological diagnosis.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes—funded within BreastScreen Australia 2. No—funded outside BreastScreen Australia				
Guide for use	If the participant underwent surgery more than once, this data element is to be collected for each occasion of surgery. Collected for all participants who had an excision performed.				
Verification rules					
Related data elements	E.8.2 Further surgery recommended				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.4.1 Marking method

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The marking method used to localise the lesion during surgical excision.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. None (palpation) 2. Hookwire/needle 3. Carbon 4. Radioactive seeds				
Guide for use	For palpation record ‘none’ (code 1). Collected for all participants who had an excision performed. Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible. Lesion number corresponds to the numbering used for lesions recorded at assessment. If a new lesion has been identified at excision, it is given a new lesion number (*E.1*). See *A.5 Lesion number* for suggested coding.				
Verification rules					
Related data elements	A.5 Lesion number E.4.2 Localisation technique E.5 Palpability of lesion E.6 Frozen section E.7 Specimen imaging E.8.1 Lesion identified in specimen E.8.2 Further surgery recommended				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.4.2 Localisation technique

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The technique used to localise the lesion during surgical excision.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

1. Mammographic—non stereotactic
2. Ultrasound
3. Mammographic—stereotactic
4. Tomosynthesis

Guide for use

If hookwire, carbon method or radioactive seeds is the marking method used, then record technique used (one category). If marking method is none, technique is not collected.

Collected for all participants who had an excision performed.

Where more than one lesion applies, collect for a minimum of two lesions corresponding to *E.4.1 Marking method*. Collect for additional clinical lesions where possible.

Verification rules

'Localisation technique' is to be entered only if entry for *E.4.1 Marking method* is 'Hookwire/needle', 'Carbon' or 'Radioactive seeds'.

Related data elements

A.5	Lesion number
E.4.1	Marking method
E.5	Palpability of lesion
E.8.2	Further surgery recommended

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.5 Palpability of lesion

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not the lesion was palpable or impalpable at assessment.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Palpable 2. Impalpable 9. Unknown					
Guide for use	Collected for all participants who had an excision performed. Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible.					
Verification rules						
Related data elements	A.5 Lesion number E.4.1 Marking method E.4.2 Localisation technique					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	At the meeting of the National Quality Management Committee (NQMC) held on 22 November 2013, members considered a number of queries in relation to specimen imaging from Breast Surgeons of Australia and New Zealand. The NQMC directed: That specimen imaging is to be undertaken and recorded for a screen detected abnormality that is impalpable pre operatively; That specimen imaging is to be undertaken and recorded for any localised procedure; and

That specimen imaging is to be undertaken and recorded if a lump becomes palpable during an operation.

In line with this directive, the definition of this data element is ‘Whether or not the lesion was palpable or impalpable *at assessment*’ to make it clear that, even if the lesion subsequently becomes palpable at surgery, it should be classified as impalpable.

E.6 Frozen section

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a frozen section was taken during surgical excision for pathology purposes.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No					
Guide for use	Collected for all participants who had an excision performed. Where more than one lesion applies, collect for a minimum of two lesions corresponding to *E.4.1 Marking method.* Collect for additional clinical lesions where possible.					
Verification rules						
Related data elements	A.5 Lesion number E.4.1 Marking method E.8.2 Further surgery recommended					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.7 Specimen imaging

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not specimen imaging was recorded during surgical excision.
Context	Used for monitoring the assessment and diagnosis of breast cancer. Specimen imaging permits a degree of certainty that a lesion has been satisfactorily removed and is also useful for establishing the completeness of excision in treatment biopsies.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

1. Yes
2. No

Guide for use

Collected for all participants who had an excision performed.

Where more than one lesion applies, collect for a minimum of two lesions corresponding to *E.4.1 Marking method*. Collect for additional clinical lesions where possible.

Receiving a radiologist report specifying that specimen imaging was performed or confirmation from operating surgeon of intraoperative ultrasound was performed is appropriate indication that specimen imaging was recorded.

Verification rules

Related data elements

A.5	Lesion number
E.4.1	Marking method
E.8.2	Further surgery recommended

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.8.1 Lesion identified in specimen

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not the lesion was correctly identified in the specimen during surgical excision.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

1. Yes
2. No
3. NA – complete neoadjuvant response
4. NA – prior diagnostic needle biopsy complete excision

Guide for use

Generally, the answer will be based on specimen imaging (although sometimes small lesions may be removed by needle biopsy), histopathology or the assessment findings. If lesion was not identified, indicate whether (a) further surgery will be performed (in data element *E.8.2 Further surgery recommended*) or (b) if further surgical surveillance is recommended.

In cases of complete neoadjuvant response or complete excision from diagnostic needle biopsy there should be pathological evidence available to confirm the findings. Evidence includes but is not limited to: residual tumour bed, core tract, clip, or biopsy site identified at surgical pathology.

Cases with discordance between needle biopsy and subsequent excision can indicate the lesion was identified in sample if on multi-disciplinary team review the clinicians are satisfied that the discordance is explained by the pathology findings.

Where more than one lesion applies, collect for a minimum of two lesions corresponding to *E.4.1 Marking method*. Collect for additional clinical lesions where possible.

Collected for all participants who had an excision performed for palpable and impalpable lesions.

Verification rules

Related data elements

A.5	Lesion number
E.4.1	Marking method
E.8.2	Further surgery recommended

Related NAS Measures	3.1.7 ≥95% of all lesions are correctly identified at first excision.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3 Note that in the BreastScreen Australia data dictionary version 1, this was originally *E.8.1 Lesion identified in specimen*, but later changed in an Addendum to *E.8.1 Lesion removal*. This change was upheld in the BreastScreen Australia data dictionary version 1.1, but was reverted back to *E.8.1 Lesion identified in specimen* in the BreastScreen Australia data dictionary version 1.2.
Source organisation	BreastScreen Australia

E.8.2 Further surgery recommended

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not, following surgical excision, further surgery is recommended.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes 2. No				
Guide for use	If lesion was not identified, indicate whether further surgery is recommended. If further surgery is performed, then repeat the following data elements: *A.4 Surgical unit identifier* *A.6 Service provider identifier* *E.1 Excision performed* *E.2 Date excision performed* *E.3 Funding of excision* *E.4.1 Marking method* *E.4.2 Localisation technique* *E.6 Frozen section* *E.7 Specimen imaging* Before completing the data element *E.9 Excision result*. Collected for all participants who had an excision performed where *E.8.1 Lesion identified in specimen* is ‘No’. Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible.				
Verification rules	This data element applies only where *E.8.1 Lesion identified in specimen* is ‘No’				
Related data elements	A.4 Surgical unit identifier A.6 Service provider identifier E.1 Excision performed E.2 Date excision performed E.3 Funding of excision				

E.4.1 Marking method

E.4.2 Localisation technique

E.6 Frozen section

E.7 Specimen imaging

E.8.1 Lesion identified in specimen

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.9 Excision result

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether lesion(s) for which a participant underwent excision was/were malignant or non-malignant.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Malignant 2. Non malignant 3. No definitive result 4. Non malignant—malignancy removed at assessment needle biopsy				
Guide for use	Malignant includes DCIS and pleomorphic LCIS. For a full list of types of lesions included under non-malignant and malignant lesions, refer to the data elements *F.3 Histopathology of non-malignant lesions* and *F.4 Histopathology of malignant lesions.* For suggested coding of lesions, see *A.5 Lesion number*. If a new lesion is identified at excision (for example, not identified at assessment), then the suggested code lesion number = E.1. No definite result applies where the sample obtained does not permit definite diagnosis and where further biopsy will not be performed. The decision not to perform further biopsy may be the participant's or the surgeon's. Collected for all participants who had an excision performed. Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible.				
Related data elements	A.5 Lesion number E.11 Date of definitive diagnosis F.3 Histopathology of non-malignant lesions F.4 Histopathology of malignant lesions				
Related NAS Measures	5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.10 Number of excisions

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Number of occasions on which a participant underwent surgery before a definitive histological diagnosis was made.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric		*Representational form*	Quantitative value
Field size	*Min.*	*Max.*	*Representational layout*	N
Data domain	Number of occasions			
Guide for use	The number of occasions is based on separate days on which the participant underwent surgery. Collected for all participants who had an excision performed.			
Verification rules				
Related data elements				
Related NAS Measures				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.11 Date of definitive diagnosis

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Date of histological diagnosis, or where histological diagnosis was not obtained, the date of the cytological diagnosis.
Context	Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				
Guide for use	If excision was recommended but not performed, or entry for *E.9 Excision result* is 'no definitive result', then use the code 88/88/8888 to indicate that a definitive diagnosis was unable to be made. This data element combines the results of all lesions where the recommendation following assessment was definitive treatment or diagnostic open biopsy. If histological diagnosis was not obtained, this date refers to the date cytological diagnosis was made. It is recommended that in cases where all components of the date of definitive diagnosis are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.				
Verification rules					
Related data elements	A.8 Estimated date flag D.12 Discharge from BreastScreen Australia following assessment E.1 Excision performed E.9 Excision result				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.12 Recommendation—definitive

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition The definitive recommendation given to the participant, following excision of lesion(s).

Context Used for monitoring the assessment and diagnosis of breast cancer.

Relational and representational attributes

Datatype Numeric *Representational form* CODE

Field size *Min.* 1 *Max.* 1 *Representational layout* N

Data domain

1. Routine rescreen 2 years
2. Routine rescreen 1 year
3. Early review
4. Referral for treatment

Guide for use

This data element is completed when the episode is complete, even where definitive diagnosis is not available.

This data element records the recommendation following excision although the recommendation may not be adhered to due to a participant's/doctor's decision or State and Territory policy. Examples include:

Some services have a policy not to invite participants of certain age-groups for rescreening. This data element should be completed regardless of such a policy. If the outcome of the mammogram is 'normal', then 'routine rescreen 2 years' is coded (code 1).

A recommendation for treatment is made but this does not occur. An example would be an older participant too frail to undergo surgery—in this case code 4 is used.

Some services may discharge participants who are not diagnosed with cancer, for example those with pre-malignant lesions. In this case 'routine rescreen 2 years' is coded (code 1) according to national policy. The discharge is recorded in data element *E.13 Discharge from BreastScreen Australia following excision.*

Collected for all participants where the recommendation following assessment was referral for definitive treatment or referral for diagnostic open biopsy. This data element records the final outcome following treatment.

Only one category can be coded.

Early review: record number of months.

Verification rules

Related data elements

C.8 Annual screening flag

C.9 High-risk flag

D.12 Discharge from BreastScreen Australia following assessment

E.1 Excision performed

E.13 Discharge from BreastScreen Australia following excision

Related NAS Measures

1.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months.

1.1.2 (b) ≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months.

1.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screening episode within the Program who are rescreened within 27 months of their previous screening episode.

1.1.3 (b) ≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

2.6.7 <0.2% of women who attend for screening are recommended for early review for further assessment.

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

E.13 Discharge from BreastScreen Australia following excision

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a participant was discharged from BreastScreen Australia following the outcome of *E.12 Recommendation—Definitive*.
Context	

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No					
Guide for use	If the participant has been discharged from BreastScreen Australia; they will not receive a routine recall invitation. A 'Yes' code includes participants discharged permanently from BreastScreen Australia as well as those participants suspended from BreastScreen Australia for some years (for example, some services reinvite participants diagnosed with breast cancer after five years). In most cases, participants discharged will be those with cancer. However, participants may be discharged for other reasons, being either the participant's own decision or the service's recommendation, for example discharge due to a pre-malignant lesion. Collected for all participants where the recommendation following assessment was referral for definitive treatment or referral for diagnostic open biopsy. This data element is recorded when *E.12 Recommendation—definitive* is known.					
Verification rules						
Related data elements	D.12 Discharge from BreastScreen Australia following assessment E.1 Excision performed E.12 Recommendation—definitive					
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

F—Histopathology segment

Data dictionary version 1.3		Data dictionary version 1.2	
F.1.1	Reason for histopathology	F.1.1	Reason for histopathology
F.1.2	Date of diagnosis of interval cancer	F.1.2	Date of diagnosis of interval cancer
F.1.3	Cancer diagnosed in BreastScreen Australia	F.1.3	Cancer diagnosed in BreastScreen Australia
F.2.1	Axillary dissection	F.2.1	Axillary dissection
F.2.2	Sentinel node biopsy performed	F.2.2	Sentinel node biopsy performed
F.2.3	Axillary dissection—total number of nodes	F.2.3	Axillary dissection—total number of nodes
F.2.4	Axillary dissection—number of nodes positive	F.2.4	Axillary dissection—number of nodes positive
F.3	Histopathology of non-malignant lesions	F.3	Histopathology of non-malignant lesions
F.4	Histopathology of malignant lesions	F.4	Histopathology of malignant lesions
F.5	Size of tumour	F.5	Size of tumour
F.6	Histological grade	F.6	Histological grade
F.7	Dominant lesion identification number	F.7	Dominant lesion identification number

F.1.1 Reason for histopathology

Admin. Status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition Whether histopathology relates to cancer diagnosed after completion of the last screening episode in the Program or lesion(s) detected as part of the current screening episode.

Context Used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype Numeric *Representational form* CODE

Field size *Min.* 1 *Max.* 1 *Representational layout* N

Data domain

1. Interval cancer or cancer in a non-attender for rescreen
2. Lesion detected as part of the current screening episode

Guide for use

This data element is completed in relation to histopathology for lesions tracked through a screening episode and for all known cancers in participants screened at least once in the State/Territory Program. For the purposes of this data element, both invasive and non-invasive (DCIS) cancers are recorded.

Code 1 means that the histopathology relates to either an interval cancer or cancer in a non-attender for rescreen. For reporting purposes, the date of diagnosis will be used to determine whether it is an interval cancer or a cancer in a non-attender for rescreen. Both invasive and non-invasive cancers are collected (see comment). Definitions for both invasive and non- invasive interval cancer are included in the glossary.

Code 2 means that the histopathology relates to a lesion(s) detected as part of the current screening episode.

A cancer is defined as ‘interval’ if it is diagnosed within 24 months of the screening date of a negative screening episode, unless the participant is recommended for annual rescreen in which case only cancers diagnosed within 12 months of a negative screening episode are included.

For further clarification of an interval cancer definition, see Kavanagh et al 1999.

A cancer in a non-attender for rescreen is diagnosed following a negative screening episode and after 24 months from the date of the previous screen, unless the participant is recommended for annual rescreen in which case cancers diagnosed after 12 months of a negative screening episode are included.
Non-attenders for rescreen are:

- Participants who have been sent one or more invitations for rescreening, but have failed to attend or declined.
- Participants who have not been sent an invitation for rescreening due to State/Territory screening policy and have not returned for screening.

If cancer was diagnosed after the date of completion of the last screening episode, record *F.1.2 Date of diagnosis of interval cancer* and whether the participant had cancer diagnosed in BreastScreen Australia (*F.1.3 Cancer diagnosed in BreastScreen Australia*).

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

The question on the histopathology form needs to read: 'Does the histopathology relate to cancer diagnosed after the date of completion of the last screening episode in BreastScreen Australia' or 'Does the histopathology relate to interval cancer'.

Verification rules

Related data elements

F.1.2 Date of diagnosis of interval cancer

F.1.3 Cancer diagnosed in BreastScreen Australia

Related NAS Measures

2.1.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer.

2.1.1 (b) ≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.

2.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

2.1.2 (b) ≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer.

2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.5 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

2.2.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.1 (b) ≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.

2.2.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.2 (b) ≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.

2.2.3 The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

2.2.4 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who

are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

2.6.5 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

2.6.6 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening episode.

3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively.

3.1.8 (b) Where part (a) is not met, the Service and/or SCU provide the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	The national indicators relating to interval cancers only include invasive cancers. In relation to screen-detected malignancies, there are national indicators and accreditation requirements for both invasive cancers and DCIS. For BreastScreen Australia monitoring and evaluation purposes and comparison of screen detected malignancies with non-screen-detected malignancies it is important to collect information on interval DCIS.

F.1.2 Date of diagnosis of interval cancer

Admin. status CURRENT

Identifying and definitional attributes

Data element type: DATA ELEMENT

Definition: The date on which an interval cancer or cancer in a non-attender for rescreen was diagnosed. That is, a cancer diagnosed after completion of the last screening episode.

Context: Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers. This date is collected on the histopathology forms used by the services.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

This data element is completed for all non-screen-detected cancers diagnosed, within or outside BreastScreen Australia, in participants ever screened in BreastScreen Australia.

For reporting purposes, the date of diagnosis will be used to determine whether it is an interval cancer or a cancer in a non-attender for rescreen. Where the date of diagnosis is within 24 months of the screening date, the cancer is regarded as an interval cancer. Those diagnosed at more than 24 months of the screening date are regarded as non-attenders for rescreen.

For definitions of interval cancer and non-attender for rescreen, see *F.1.1 Reason for histopathology.*

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the diagnosis was made on July 1 2000 the date of diagnosis should be recorded as 01072000 as specified in the representational layout.

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

It is recommended that in cases where all components of *Date of diagnosis* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.

Verification rules	*Date of diagnosis* is to be entered only if entry for *F.1.1 Reason for histopathology* is 'interval cancer or cancer in a non-attender for rescreen' (code 1).
Related data elements	A.8 Estimated date flag F.1.1 Reason for histopathology F.1.3 Cancer diagnosed in BreastScreen Australia
Related NAS Measures	2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode. 2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode. 2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode. 2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode. 2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

F.1.3 Cancer diagnosed in BreastScreen Australia

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not a cancer diagnosed after completion of the last screening episode (i.e. an interval cancer or cancer in a non-attender for rescreen) was diagnosed in BreastScreen Australia.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Yes 2. No					
Guide for use	If 'Yes', the participant will have attended between 0 and 24 months of the participant's previous screening episode with interval signs/symptoms (refer to *D.1 Reason for assessment*). If 'No', the participant will have had breast cancer detected within 0 and 24 months of the participant's previous screening episode outside BreastScreen Australia or is a non-attender for rescreen. For definitions of interval cancer and non-attender for rescreen, see *F.1.1 Reason for histopathology.* Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.					
Verification rules	*Cancer diagnosed in BreastScreen Australia* is to be entered only if entry for *F.1.1 Reason for histopathology* is 'interval cancer or cancer in a non-attender for rescreen' (code 1).					
Related data elements	D.1 Reason for assessment F.1.1 Reason for histopathology F.1.2 Date of diagnosis of interval cancer					
Related NAS Measures	3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively. 3.1.8 (b) Where part (a) is not met, the Service and/or SCU provide the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.					

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

F.2.1 Axillary dissection

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether an axillary dissection was performed and, if so, the type of dissection.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain

1. Axillary Dissection not performed
2. Level II/III Axillary Dissection
3. Level I Axillary Dissection
4. Sentinel Node Biopsy
9. Unknown

Guide for use

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Where more than one lesion applies, code for a minimum of two lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

If the two lesions being reported are located in the same breast, the same information is entered for both lesions.

If histopathology relates to an interval cancer or cancer in a non-attender for rescreen (Yes in *F.1.1 Reason for histopathology*) suggested lesion number is 1.

Verification rules

Related data elements

A.5	Lesion number
F.1.1	Reason for histopathology
F.2.2	Sentinel node biopsy performed
F.2.3	Axillary dissection—total number of nodes
F.2.4	Axillary dissection—number of nodes positive
G.6.1	Metastasis—distant

Related NAS Measures

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

F.2.2 Sentinel node biopsy performed

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether a sentinel node biopsy was performed.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N

Data domain	1.	Yes
	2.	No
	9.	Unknown

Guide for use	Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed. Where more than one lesion applies, code for a minimum of two lesions corresponding to *F.2.1 Axillary dissection.* Collect for additional clinical lesions where possible. For suggested coding of lesions, see *A.5 Lesion number.*
Verification rules	

Related data elements	A.5	Lesion number
	F.2.1	Axillary dissection
	F.2.3	Axillary dissection—total number of nodes
	F.2.4	Axillary dissection—number of nodes positive
Related NAS Measures		

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

F.2.3 Axillary dissection—total number of nodes

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	This data element records the total number of lymph nodes identified and examined.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.* 2		*Representational layout*	NN
Data domain	Number of lymph nodes.				
Guide for use	Indicate how many lymph nodes were identified and examined. Code 0 if none. In some cases an axillary dissection is not performed, but a number of lymph nodes have been identified and examined. The intention is not to perform a dissection but nodes are collected, for example, intramammary lymph nodes or as part of an upper outer quadrant excision. These should be reported as they may turn out to be positive. Provision should be made to record this data element, even if an axillary dissection has not been performed. Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed. Where more than one lesion applies, code for a minimum of two lesions corresponding to *F.2.1 Axillary dissection.* Collect for additional clinical lesions where possible. For suggested coding of lesions, see *A.5 Lesion number*.				
Verification rules					
Related data elements	A.5 Lesion number F.2.1 Axillary dissection F.2.2 Sentinel node biopsy performed F.2.4 Axillary dissection—number of nodes positive				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

F.2.4 Axillary dissection—number of nodes positive

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The number of positive lymph nodes found.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.* 2		*Representational layout*	NN
Data domain	Number of positive lymph nodes				
Guide for use					
Verification rules	The number of positive lymph nodes should be equal to or less than the number of nodes examined (see *F.2.3 Axillary dissection—total number of nodes*). Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed. Where more than one lesion applies, code for a minimum of two lesions corresponding to *F.2.1 Axillary dissection.* Collect for additional clinical lesions where possible. For suggested coding of lesions, see *A.5 Lesion number*.				
Related data elements	A.5 Lesion number F.2.1 Axillary dissection F.2.2 Sentinel node biopsy performed F.2.3 Axillary dissection—total number of nodes G.6.1 Metastasis—distant				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

F.3 Histopathology of non-malignant lesions

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The type of non-malignant lesion identified during histopathology.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	2	*Representational layout*	NN.N

Data domain

1. Lobular carcinoma in situ (classical)
2. Atypical lobular hyperplasia
3. Ductal hyperplasia with atypia
4. Phyllodes tumour (benign)
5. Ductal hyperplasia without atypia
6. Fibroadenoma
7. Radial scar/complex sclerosing lesion
8. Sclerosing adenosis
9. Cyst
10. Other, please specify

Guide for use

Code all applicable categories.

Code dominant category for reporting purposes.

The categories under '1' in the data domain for this data element have been updated. Lobular carcinoma is now defined as Lobular carcinoma in situ (classical). Pleomorphic lobular carcinoma in situ, which used to be classified under Lobular carcinoma in situ has now moved to *F.4 Histopathology of malignant lesions* to align with the recognition of this rare lesion as a malignancy.

This item should have a system prompt for pathologist provider code (to be coded in *A.6 Service provider identifier*).

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Categories are not mutually exclusive.

Specify the type of non-malignant lesion identified at code = 10 (other).

Where more than one lesion applies, code for a minimum of two lesions Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

Verification rules

Related data elements

A.5 Lesion number

A.6 Service provider identifier

E.9 Excision result

F.4 Histopathology of malignant lesions

F.5 Size of tumour

Related NAS Measures

3.1.2 0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive 'percutaneous needle biopsy' for the purpose of this standard.

Where NAS Measure 3.1.2 is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

Comments Dominant category is determined by the pathologist interpreting the histopathology, based on known risk factors for breast cancer. This may be difficult for non-malignant lesions, but generally atypical lesions and lobular carcinoma in situ would be considered more significant.

F.4 Histopathology of malignant lesions

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The type of malignant lesion identified during histopathology.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 3	*Max.* 4		*Representational layout*	NN.N

Data domain

1	Invasive breast malignancies
1.1	Invasive ductal N.O.S
1.2	Tubular
1.3	Cribriform
1.4	Mucinous (colloid)
1.5	Medullary
1.6	Lobular classical
1.7	Lobular variant
1.8	Mixed ductal/lobular
1.9	Phyllodes tumour (malignant subtype only—not borderline or benign variants)
1.10	Other, primary invasive breast malignancy (specify)
1.11	Other, primary malignancy, not defined as breast cancer (specify)
1.12	Other, secondary malignancy (specify)
2	Non-invasive breast malignancies
2.1	DCIS, High Grade
2.2	DCIS, Intermediate Grade
2.3	DCIS, Low Grade
2.4	Other DCIS (specify)
2.5	Pleomorphic lobular carcinoma in situ

Guide for use

Atypical medullary should not be recorded as a separate item, but should be identified as invasive duct carcinoma N.O.S.

For the purposes of BreastScreen reporting, DCIS with microinvasion is classified as an invasive breast malignancy, and is therefore included in the total cases of invasive breast cancer detected through BreastScreen.

Equivocal invasive tumours are to be diagnosed as DCIS.

Categorisation of intracystic papillary carcinoma as either an invasive breast malignancy or non-invasive breast malignancy is problematic, as uncertainty exists among specialists as to whether it is an unusual form of invasive breast cancer or DCIS. Current management recommendations for intracystic papillary carcinoma are similar to those for DCIS, and it is included as DCIS for BreastScreen reporting purposes (as 2.4 Other DCIS).

Phyllodes borderline is considered a pre-malignant tumour, and is therefore coded as a non-malignant lesion in *F.3 Histopathology of non-malignant lesions.*

For Phyllodes Tumour include malignant subtype only—not borderline or benign variants include metastatic carcinoma and variants.

Other, primary invasive breast malignancy includes sarcoma. It also includes Paget's disease of the breast or nipple if an invasive component is present.

Other, primary malignancy, not defined as breast cancer includes lymphoma.

Code the dominant category for reporting purposes. Some lesions have both invasive and non-invasive components. Where both invasive and non-invasive categories are recorded, record the prognostically more significant category.

Lymphoma is not counted as a breast cancer detected through BreastScreen. However, malignancy in lymph nodes is counted if indicative of a primary breast cancer.

'Other DCIS' includes Papillary carcinoma and Paget's disease in the absence of an invasive component or any other DCIS. Paget's disease in the absence of an invasive component or DCIS is a very rare occurrence, but as Paget's disease is essentially DCIS of the breast ducts near the nipple, it has been determined that these few cases should be classified as 'Other DCIS'.

The categories under '2' in the data domain for this data element have been updated. These categories are not directly translatable from the previous categories used in the BreastScreen Australia Minimum Data Set. Generally, 'Comedo DCIS' is associated with High DCIS. However, the previous category of 'Non-comedo DCIS' may sometimes correspond to Low DCIS and sometimes to Intermediate DCIS.

The category 2.5 for Pleomorphic lobular carcinoma in situ has been added to align with the recognition of this rare lesion as a malignancy. It has been given its own category rather than including it under '2.4 Other DCIS' to allow the information on this lesion to be captured in the future if this is desirable.

This item should have a system prompt for pathologist provider code (to be coded in *A.6 Service provider identifier*).

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

A lesion may have both an invasive and non-invasive component, thus both 1 and 2 may be coded. However, within each group only one category should be coded.

Specify the type of malignant lesion identified if code = 1.10, 1.11 or 1.12 or code = 2.4.

Where more than one lesion applies, code for a minimum of two lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

Verification rules

Related data elements

A.5 Lesion number

A.6 Service provider identifier

E.9 Excision result

F.3 Histopathology of non-malignant lesions

F.5 Size of tumour

Related NAS Measures

2.1.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer.

2.1.1 (b) ≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.

2.1.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

2.1.2 (b) ≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer.

2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.5 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

2.2.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.1 (b) ≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.

2.2.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.2 (b) ≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.

2.2.3 The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

2.2.4 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

2.3.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (b) <7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 0–12 months following a negative screening episode.

2.3.1 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

2.3.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (b) ≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer 13–24 months following a negative screening episode.

2.3.2 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

2.6.5 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

2.6.6 The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening.

3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient.

3.1.2 0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment

episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive ‘percutaneous needle biopsy’ for the purpose of this standard.

Where NAS Measure 3.1.2 is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU

3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively.

3.1.8 (b) Where part (a) is not met, the Service and/or SCU provide the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively .

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	When this data element is used for the calculation of breast malignancy detection, 1.1–1.10 are included as cases of invasive breast cancer (1.11 refers to lymphomas which are often secondary to a primary breast malignancy; 1.12 refers to a malignancy that has metastasised to the breast—both cases are excluded from invasive breast malignancies detected through BreastScreen), 2.1–2.4 are included as cases of ductal carcinoma in situ; 2.5 is included as a malignancy that is managed similar to DCIS.

F.5 Size of tumour

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition The size, in millimetres, of the malignant tumour.

Context Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.*	4	*Representational layout*	NNNN

Data domain Size in millimetres

Guide for use Although size estimates are subject to errors, no matter which method is used to assess them, a single measurement of the greatest dimension of the tumour from either the fixed or fresh specimen should be adopted.

Specify whether the reported size is for DCIS, Invasive cancer or both DCIS and Invasive. If both, code size for both components. Measurements also encompass those cases of DCIS in which only microscopic foci of invasion are present. In the case of multiple microinvasive foci, the largest size should be reported. Summing of the sizes of these foci is not performed.

Where size has not been specified for invasive lesions but a description of ‘microinvasive’ is recorded, then use code ‘8888’. It is preferred that the use of the term ‘microinvasive’ be discouraged and all tumours are sized. For the purpose of the data set the pathology committee (of the MDS, 1994) felt that any inclusion of Extensive Intraduct Component (EIC) was not relevant, especially given both the lack of agreed definitions of EIC and the variable use made of the information in the clinical practice. It was felt that EIC was more appropriately dealt with by individual practices with close clinico-pathological agreement.

This data element is recorded for malignant lesions only.

If the size of the malignant tumour is not known, record as ‘9999’.

If the size is reported as ‘Micro invasive’, record as ‘8888’.

This data element should have a system prompt for pathologist provider code (to be coded in *A.6 Service provider identifier*).

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Where more than one lesion applies, collect for a minimum of two lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

Verification rules

Related data elements

A.5 Lesion number

A.6 Service provider identifier

F.3 Histopathology of non-malignant lesions

F.4 Histopathology of malignant lesions

Related NAS Measures

2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

F.6 Histological grade

Admin. status CURRENT

Identifying and definitional attributes

Data element type DATA ELEMENT

Definition The level of malignancy based on histological factors.

Context Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, and interval breast cancers.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

1. Grade 1
2. Grade 2
3. Grade 3

Guide for use

Indicate overall grade using the modified Bloom and Richardson System in Elston C.W, 'Grading of invasive carcinoma of the breast' in Page D.L, Anderson T.J, 'Diagnostic Histopathology of the breast'. (Edinburgh; Churchill Livingstone. 1987; 300–311).

Recorded for malignant lesions only.

This data element should have a system prompt for pathologist provider code (to be coded in *A.6 Service provider identifier*).

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Only one category should be coded.

Where more than one lesion applies, code for a minimum of two lesions. Collect for additional clinical lesions where possible.

For suggested coding of lesions, see *A.5 Lesion number.*

Verification rules

Related data elements

A.5 Lesion number

A.6 Service provider identifier

Related NAS Measures

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

F.7 Dominant lesion identification number

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The lesion number that corresponds to the dominant lesion.
Context	Histopathology information used in relation to monitoring breast cancer detection, small invasive breast cancer detection, interval breast cancers.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 2	*Max.* 2		*Representational layout*	AN
Data domain	Lesion number				
Guide for use	For lesions tracked through the Assessment and Excision Segments record the lesion number that turns out to be the most significant. Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed. For suggested coding of lesions, see *A.5 Lesion number.*				
Verification rules					
Related data elements	A.5 Lesion number				
Related NAS Measures	2.1.1 (a)The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer. 2.1.1 (b) ≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer. 2.1.2 (a)The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer. 2.1.2 (b) ≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer. 2.1.3 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer. 2.1.3 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.				

2.1.3 (c) ≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.4 (b) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

2.1.4 (c) The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

2.1.5 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

2.1.6 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

2.2.1 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

2.2.1 (b) ≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.

2.2.2 (a) The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

2.2.2 (b) ≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.

2.2.3 The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

2.2.4 The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

3.1.4 ≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.5 ≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed preoperatively.

3.1.8 (b) Where part (a) is not met, the Service and/or SCU provide the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

G—Primary treatment segment

Data dictionary version 1.3		Data dictionary version 1.2	
G.1	Nature of primary treatment	G.1	Nature of primary treatment
G.2	Date of commencement of treatment	G.2	Date of commencement of treatment
G.3	Side of malignancy	G.3	Side of malignancy
G.4	Surgical treatment	G.4	Surgical treatment
G.5.1	Radiotherapy	G.5.1	Radiotherapy
G.5.2	Chemotherapy	G.5.2	Chemotherapy
G.6.1	Metastasis—distant	G.6.1	Metastasis—distant
G.6.2	Site of metastasis	G.6.2	Site of metastasis

G.1 Nature of primary treatment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The nature of primary treatment.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Surgical 2. Radiotherapy 3. Chemotherapy 4. No treatment 9. Unknown				
Guide for use	This data element is intended to capture the first type of treatment performed. Identification of the primary (first) treatment performed assists in the identification of cases where surgery was not the first treatment performed. This can be important if, for instance, the first treatment performed was chemotherapy that shrunk the tumour, which would explain why the size of tumour at surgery was much smaller than the size of tumour identified prior to treatment. Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.				
Verification rules					
Related data elements					
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

G.2 Date of commencement of treatment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The date on which primary treatment commenced.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				

Guide for use

If the diagnostic open biopsy is also the treatment, then the date of commencement of treatment is the date on which the diagnostic open biopsy was performed (see *E.2 Date excision performed*).

This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the treatment commenced on July 1 2000 the Date of commencement of treatment should be recorded as 01072000 as specified in the representational layout.

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.

Recorded for all participants where *G.1 Nature of Primary Treatment* is 1, 2 or 3.

It is recommended that in cases where all components of *Date of commencement of treatment* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.

Verification rules		
Related data elements	A.8	Estimated date flag
	E.2	Date excision performed
Related NAS Measures		

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

G.3 Side of malignancy

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether the malignancy for which the participant was treated is in the left or the right breast, or whether both breasts are involved.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Numeric				*Representational form*	CODE
Field size	*Min.*	1	*Max.*	1	*Representational layout*	N
Data domain	1. Left 2. Right 3. Both					
Guide for use	Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed. Indicate which breast is involved and if bilateral indicate ‘both’ (code 3).					
Verification rules						
Related data elements						
Related NAS Measures						

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

G.4 Surgical treatment

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The definitive outcome of the surgical treatment.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N

Data domain

1. No surgery—participant's decision
2. No surgery—surgeon's decision
3. Level II/III Axillary Dissection
4. Level I Axillary Dissection
5. Axillary Node Sampling (non-directed)
6. Sentinel Node Biopsy
7. Complete excision
8. Total mastectomy
9. Unknown

Guide for use

Unknown (code 9) is to be used only after attempts to seek a result have failed.

This data element refers to surgery as part of primary treatment.

This data element is intended to capture the definitive surgical treatment. Therefore axillary dissection or sentinel node biopsy would only also be coded at G.4 if it was the definitive treatment (that is, no excision or mastectomy was performed). This would be a very rare scenario.

Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.

Verification rules	G.1 Nature of primary treatment should be 1
Related data elements	
Related NAS Measures	3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient.

3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

G.5.1 Radiotherapy

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not radiotherapy was given as a part of the treatment regime.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes, primary 2. Yes, adjuvant 3. No 9. Unknown				
Guide for use	Unknown (code 9) to be used only after attempts to seek a result have failed. Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.				
Verification rules					
Related data elements					
Related NAS Measures	3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient. 3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%. 5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

G.5.2 Chemotherapy

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not chemotherapy was given as a part of the treatment regime.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Yes, primary 2. Yes, adjuvant 3. No 9. Unknown				
Guide for use	Unknown (code 9) to be used only after attempts to seek a result have failed. Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.				
Verification rules					
Related data elements					
Related NAS Measures	3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient. 3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%. 5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

G.6.1 Metastasis—distant

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	Whether or not there was evidence of distant metastasis at the time of primary treatment.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Numeric			*Representational form*	CODE
Field size	*Min.* 1	*Max.* 1		*Representational layout*	N
Data domain	1. Present 2. Not present 9. Unknown				
Guide for use	‘Not present’ means tests have been done and no lesion demonstrated. Unknown (code 9) means no investigations were performed. If metastasis present, please specify the site (see *G.6.2 Site of metastasis*). This information is to be completed by surgeon at the time of initial surgical treatment. Regional metastasis (axilla) is collected in data elements *F.2.1* to *F.2.4*. Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.				
Verification rules					
Related data elements	F.2.1 Axillary dissection F.2.4 Axillary dissection—number of nodes positive G.6.2 Site of metastasis				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

G.6.2 Site of metastasis

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	A description of the site of the metastasis at the time of primary treatment.
Context	Used for monitoring collection of treatment information about participants with breast cancer.

Relational and representational attributes

Datatype	Text		*Representational form*
Field size	*Min.*	*Max.*	*Representational layout*
Data domain	Site of metastasis		
Guide for use	To be completed by surgeon at the time of initial surgical treatment. Collected from histopathology information for all participants referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.		
Verification rules	*Site of metastasis* is to be entered only if entry for *G.6.1 Metastasis—distant* is 'Present' (code 1).		
Related data elements	G.6.1 Metastasis—distant		
Related NAS Measures			

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

H—Death segment

Data dictionary version 1.3		Data dictionary version 1.2	
H.1	Date of death	H.1	Date of death
H.2	Underlying cause of death	H.2	Underlying cause of death

H.1 Date of death

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The participant's date of death
Context	

Relational and representational attributes

Datatype	Numeric			*Representational form*	DATE
Field size	*Min.* 8	*Max.*	8	*Representational layout*	DDMMYYYY
Data domain	Valid date				
Guide for use	Record the date the participant died. This data element should always be recorded as an 8 digit valid date comprising day, month and year. Year should always be recorded in its full 4 digit format. For days and months with a numeric value of less than 10, zeros should be used to ensure that the date contains the required 8 digits. For example if the participant died on 1 July 2000 the Date of death should be recorded as 01072000 as specified in the representational layout. It is recommended that in cases where all components of *Date of death* are not known, a valid date be used together with *A.8 Estimated date flag* to indicate that it is an estimate.				
Verification rules					
Related data elements	A.8 Estimated date flag				
Related NAS Measures					

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

H.2 Underlying cause of death

Admin. status	CURRENT

Identifying and definitional attributes

Data element type	DATA ELEMENT
Definition	The underlying cause of death of the participant.
Context	

Relational and representational attributes

Datatype	Numeric		*Representational form*	CODE
Field size	*Min.*	*Max.*	*Representational layout*	
Data domain	1. Breast cancer 2. Other			
Guide for use				
Verification rules				
Collection methods	Information to be obtained from the cancer registry or births, deaths and marriages registry in that state or territory, if legislation allows.			
Related data elements				
Related NAS Measures				

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia
Comments	Note that at present not all BreastScreen registers are able to access cause of death data, and as this data element is not required for any of the NAS Measures, the collection of this data element is purely on a voluntary basis.

4 Performance indicators

Indicator 1—Participation

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition Percentage of participants screened through BreastScreen Australia in a 24-month period by 5-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (50–74 years).

Related Standard Standard 1 Access and participation: Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Context BreastScreen Australia aims to achieve substantial reductions in mortality from breast cancer among Australian women by maximising the participation of women in the target age group of 50-74 years. A high participation rate also helps maximise the efficient use of the physical infrastructure and specialist staff resources required for the population based breast cancer screening program.

Relational and representational attributes

Datatype	Numeric				*Representational form*	Quantitative value
Field size	*Min.*	1	*Max.*	3	*Representational layout*	NNN

Data domain Percentage

Formula

$$\frac{\text{Number of participants screened by age group}}{\text{ABS ERP by age group}} \times 100$$

Numerator The number of individual participants screened during a 24-month period by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1	Client identifier number
A.9	State identifier
B.2	Date of birth
B.3.1	Area of usual residence (SA2)
B.3.2	Postcode of usual residence
B.4	Main language other than English spoken at home
B.5	Indigenous status
C.2	Date of first attendance for this episode

Denominator The number of women for each State/Territory/Australia, remoteness area, socioeconomic status, Indigenous status and main language spoken at home, using Australian Bureau of Statistics (ABS) estimated resident female population(s) as at 30 June averaged over the relevant 24 months by age group. This value will represent the estimated population at the midpoint of the reference period.

Data collection Australian Bureau of Statistics

Source ABS Estimated Resident Population

Specifications

- Count is of individual participants, not screening episodes.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Indicator is expressed per 100 women in the population.
- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- Age is determined by subtracting date of birth from date of first attendance for this episode.
- Data are presented by the following stratifications:
  - State/Territory
  - Remoteness area
  - Socioeconomic status
  - Indigenous status
  - Main language spoken at home.

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

Comments Remoteness area

The ABS Australian Statistical Geography Standard Remoteness Area classification or ASGS RA (ABS 2011) is a classification that allocates one of five remoteness categories to areas. Areas are classified as Major cities, Inner regional, Outer regional, Remote or Very remote.

The calculation of this measure will produce five results for the five different remoteness areas.

See Appendix 2 for more information.

Socioeconomic status

The IRSD is one of four SEIFAs developed by the Australian Bureau of Statistics (ABS 2011c). This index is based on factors such as average household income, education levels and unemployment rates. Rather than being a person-based measure, the IRSD is an area-based measure of socioeconomic status in which small areas of Australia are classified on a continuum from disadvantaged to affluent. This information is used as a proxy for the socioeconomic status of people living in those areas and may not be correct for each person in that area.

The calculation of this measure will produce five results (low to high socioeconomic status) across the five quintiles.

See Appendix 2 for more information.

Indigenous status

Women are allocated to one of the following categories: ‘Indigenous’, ‘Non-Indigenous’, ‘Not stated’.

The ABS provides estimates of the Indigenous and non-Indigenous population by five year age groups, sex and state/territory.

Cultural and linguistic diversity

Women are allocated to one of the following categories: ‘English’, ‘Non-English’, ‘Not stated’.

The ABS estimated resident population is not stratified by language spoken at home. In these cases the denominator is calculated by applying the age-specific distribution of language spoken at home from the most recent ABS Census to the relevant age specific estimated resident population counts.

Indicator 2—Rescreening

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition Proportion of all participants screened in a given index year whose screening outcome was a recommendation to return for screening in two years who returned for a screen within 27 months. This rate is reported by 5-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (50–72 years).

Related Standard Standard 1 Access and participation: Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations

Context If BreastScreen Australia is to achieve its potential in terms of mortality benefit, participants in the target age group must be rescreened on a regular basis to increase the likelihood that breast cancers are detected as early as possible. The screening interval needs to be short enough to detect cancers before they are clinically apparent so they can be treated earlier, providing improved survival. The interval needs to be long enough so that any potential harms of the screening program are minimised for participants (BreastScreen Australia 2009a).

The long-term effectiveness of the breast cancer screening programs depends on participants in the target age group continuing to be screened at regular intervals. Unless high rescreening rates are maintained, overall participation rates will decline.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.* 3		*Representational layout*	NNN
Data domain	Percentage				

Formula

$$\frac{\text{Number of participants who returned for a screen within 27 months by age group}}{\text{Number of participants who were screened whose screening outcome was a recommendation to return for screening in two years by age group}} \times 100$$

Numerator The number of participants screened in a given index year who returned for a screen within 27 months stratified by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1 Client identifier number
A.9 State identifier
B.2 Date of birth
B.9.1 Round number—State/Territory program
C.2 Date of first attendance for this episode

Denominator

The number of participants who were screened in the relevant index year whose screening outcome was a recommendation to return for screening, stratified by age group.

Data collection

BreastScreen Australia data dictionary

Source

BreastScreen Australia

Data element

A.1 Client identifier number
A.9 State identifier
B.2 Date of birth
B.9.1 Round number—State/Territory program
C.2 Date of first attendance for this episode
C.5 Recommendation—screening
E.12 Recommendation—definitive

Specifications

- Age is age at the time of screen in the index year.
- Screening round classified as ‘First round’, ‘Second round’ or ‘Third and subsequent rounds’.
- Indicator is expressed per 100 participants.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- In principle the denominator for this rate should be adjusted to remove participants who either died or developed an interval cancer after their screen in the index year. However, this would be too complex to collect.
- Data are presented by the following stratifications:
  - Screening round (first, second and third and subsequent)
  - State/Territory

Administrative attributes

Source document

BreastScreen Australia data dictionary, version 1.3

Source organisation

BreastScreen Australia

Indicator 3—Recall to assessment

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition The proportion of all participants screened in a given calendar year who were recalled for assessment by 5-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 85+) and for the target age group (50–74 years).

Related Standard Standard 2 Cancer detection: Breast cancer detection is maximised in the target population and harm is minimised.

Context Population based breast cancer screening is offered to a well population of women with the aim of detecting asymptomatic breast cancer at an early stage. It is important that BreastScreen Australia balances maximising cancer detection, particularly small cancer detection, with minimising the potential harm that may be caused to the participants screened, by unnecessary recall to assessment or investigations. An effective breast cancer screening program will limit any unnecessary investigations by minimising the proportion of participants recalled for further assessment without impacting on achieving a high breast cancer detection rate.

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.* 3		*Representational layout*	N

Data domain Percentage

Formula

$$\frac{\text{Number of participants who were recalled for assessment by age group}}{\text{Number of participants screened by age group}} \times 100$$

Numerator The number of participants who were recalled for assessment in the relevant calendar year.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1	Client identification number
A.9	State identifier
B.2	Date of birth
B.9.1	Round number—State/Territory program
C.2	Date of first attendance for this episode
C.5	Recommendation—screening

Denominator The number of participants screened in a given calendar year.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1 Client identification number
A.9 State identifier
B.2 Date of birth
B.9.1 Round number—State/Territory program
C.2 Date of first attendance for this episode

Specifications

- Recall for assessment counts:
  a) mammographic recall only (C.5 = 3 or 5)
  b) recall for other reasons (non–mammographic) (C.4 = 4) and/or
  c) combined recall (C.5 = 3 & 4 & 5)
- Screening round should be classified as ‘First round’ and ‘Subsequent rounds’
- Indicator is expressed per 100 participants.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Data are presented by the following stratifications:
  - Screening round (first and subsequent)
  - State/Territory

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

Indicator 4—Invasive breast cancer detection

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition The number of participants with invasive breast cancer detected through BreastScreen Australia per 10,000 participants screened in a 12-month period by 5-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (50–74 years). The rate is reported for breast cancers of all sizes, as well as for a subset of breast cancers that are small (having a diameter ≤15 mm).

Related Standard Standard 2 Cancer detection: Breast cancer detection is maximised in the target population and harm is minimised.

Context BreastScreen Australia aims to achieve significant reductions in morbidity and mortality attributable to breast cancer by maximising the early detection of breast cancer in the target population. Early detection will lead to better treatment options and improved chances of survival for participants screened in BreastScreen Australia.

Relational and representational attributes

Datatype	Numeric				*Representational form*	Quantitative value
Field size	*Min.*	1	*Max.*	5	*Representational layout*	NN

Data domain Rate

$$\frac{\text{Number of participants with invasive breast cancer by age group}}{\text{Number of participants screened by age group}} \times 10{,}000$$

$$\frac{\text{Number of participants with small (≤15 mm) invasive breast cancer by age group}}{\text{Number of participants screened by age group}} \times 10{,}000$$

Numerator The number of participants with all size as well as small diameter (≤15 mm) invasive breast cancer detected in BreastScreen Australia in a 12-month period by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1 Client identification number

A.9 State identifier

B.2 Date of birth

B.9.1 Round number—State/Territory program

C.2 Date of first attendance for this episode

F.4 Histopathology of malignant lesions

F.5 Size of tumour

F.7 Dominant lesion identification number

Denominator The number of participants screened by BreastScreen Australia over the relevant 12 months by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1 Client identifier number

A.9 State identifier

B.2 Date of birth

B.9.1 Round number—State/Territory program

C.2 Date of first attendance for this episode

Specifications

- Count is of individual participants, not tumours.
- Include invasive tumours only.
- Indicator is expressed per 10,000 participants screened.
- Use a participant's last screen in the 12-month period.
- A small cancer is one that is pathologically defined as ≤15 mm.
- A screen–detected breast cancer is a cancer that is histopathologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- If a small invasive breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases should be included in the numerator.
- Microinvasive tumours are included.
- Cancer detected at early review is excluded.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood–stained nipple discharge in the breast in which the cancer was diagnosed is excluded.
- Paget's disease is only included if an invasive component is present.
- Data are presented by the following stratifications:
  - Tumour size: ≤15 mm and all sizes
  - Screening round (first and subsequent)
  - State/Territory

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation	BreastScreen Australia

Indicator 5—Ductal carcinoma in situ detection

Admin. status CURRENT

Identifying and definitional attributes

Data element type: Performance indicator

Definition The number of participants diagnosed with ductal carcinoma in situ per 10,000 participants screened in a 12-month period by 5-year age groups (40–44, 45–49, 50–54,55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (50–74 years).

Related Standard Standard 2 Cancer detection: Breast cancer detection is maximised in the target population and harm is minimised.

Context Participants who have DCIS detected are at increased risk of developing invasive breast cancer (AIHW 2010a; World Health Organisation and the International Agency of Research in Cancer 2002). It is not currently possible to predict which DCIS cases will progress to invasive breast cancer. However, given the increased risk of invasive breast cancer after a diagnosis of DCIS, and that the detection and subsequent treatment of high grade DCIS is likely to prevent deaths from invasive breast cancer, BreastScreen Australia aims to maximise the detection of DCIS.

Relational and representational attributes

Datatype	Numeric				*Representational form*	Quantitative value
Field size	*Min.*	1	*Max.*	4	*Representational layout*	NNN.N

Data domain Rate

Formula

$$\frac{\text{Number of participants with DCIS by age group}}{\text{Number of participants screened by age group}} \times 10{,}000$$

Numerator The number of participants with ductal carcinoma in situ detected in BreastScreen Australia in a 12-month period by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1	Client identifier number
A.9	State identifier
B.2	Date of birth
B.9.1	Round number—State/Territory program
C.2	Date of first attendance for this episode
F.4	Histopathology of malignant lesions
F.7	Dominant lesion identification number

Denominator The number of participants screened by BreastScreen Australia over the relevant 12 months by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1 Client identifier number

A.9 State identifier

B.5 Date of birth

B.9.1 Round number—State/Territory program

C.2 Date of first attendance for this episode

Specifications

- Count is of individual participants, not tumours.
- Indicator is expressed per 10,000 participants screened.
- Symptomatic participants are included in both the numerator and the denominator.
- In case of a simultaneous diagnosis of DCIS and LCIS, the case should be counted as DCIS.
- In case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive.
- If there is a microinvasive lesion in the presence of DCIS, the lesion with the microinvasion is the dominant lesion over DCIS.
- Only the first case of DCIS in a participant should be counted.
- Data are presented by the following stratifications:
  - Screening round (first and subsequent)
  - State/Territory.

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

Indicator 6a—Interval cancers

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition The number of invasive breast cancers detected in participants screened through BreastScreen Australia that arise during an interval between two screening rounds, per 10,000 person-years in a defined period by 10-year age groups (40-49, 50-59, 60-69, 70-79, 80+) and for the target age group (50-74 years).

Related Standard Standard 2 Cancer detection: Breast cancer detection is maximised in the target population and harm is minimised.

Context BreastScreen Australia aims to have a high proportion of invasive breast cancers detected within a screening episode and a low proportion diagnosed after a screening episode detected no cancer. A cancer is defined as 'interval' if it is diagnosed in the interval between a negative screening episode and the next screening examination.

Interval cancer rates are a key performance indicator of the likely success of BreastScreen Australia to reduce mortality from breast cancer. Participants who have their cancer diagnosed as an interval cancer may have a poorer outcome compared to participants who have their cancer detected at their screening episode. If too many breast cancers are missed at screening and are found in the interval between screening episodes, the opportunity to prevent death is compromised. It is therefore important to monitor the rate of interval cancers by the Program at a national, State and Territory level. The interval cancer rate should also be monitored at Service level, as it is strong indicator of the quality and performance of individual Services and screen readers in particular.

Relational and representational attributes

Datatype	Numeric				*Representational form*	Quantitative value
Field size	*Min.*	1	*Max.*	4	*Representational layout*	NNN.N

Data domain Rate

Formula

$$\frac{\text{Number of interval invasive breast cancers by age group}}{\text{Number of participants—years at risk by age group}} \times 10{,}000$$

Numerator The number of participants with an interval invasive breast cancer in a 24-month period by age group.

Data collection State and Territory Cancer registries and BreastScreen Australia

Source State and Territory Cancer registries and BreastScreen Australia

Data element

A1	Client identifier number
A.5	Lesion number

A.9 State identifier
B.2 Date of birth
B.9.1 Round number— State/Territory program
B.10 Symptom status
C.2 Date of first attendance for this episode
C.5 Recommendation— screening
D.1 Reason for assessment
D.2.2 Date of first attendance for assessment
D.11.1 Recommendation—assessment
D.11.2 Recommendation—number of months
D.11.3 Date recommendation made
D.11.4 Assessment visit—date
E.12 Recommendation—definitive
F.1.1 Reason for histopathology
F.1.2 Date of diagnosis of interval cancer
F.4 Histopathology of malignant lesions

Denominator The number of participants–years at risk in the specified period by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1 Client identification number
A.9 State identifier
B.2 Date of birth
B.7.1 Previous history of breast cancer
B.9.1 Round number—State/Territory program
B.10 Symptom status
C.2 Date of first attendance for this episode
C.5 Recommendation—screening
D.11.1 Recommendation—assessment
E.12 Recommendation—definitive

Specifications

- Count is of individual participants, not tumours.
- Include invasive tumours only.
- Indicator is expressed per 10,000 participants screened.
- Screening round should be classified as ‘First round’ and ‘Subsequent rounds’.
- Data are presented by the following stratifications:
  - Time since screening (0–364 days and 365–729 days)
  - Screening round (first and subsequent)
  - State/Territory.
- See NAS Measures 2.3.1 and 2.3.2 for definitions of interval cancers.

Collection methods

Data are collected on the participants screened through BreastScreen Australia and the interval cancers are identified by linking this information with that of the State and Territory cancer registries.

BreastScreen Australia State and Territory Programs have developed a process of matching to their own State/Territory cancer registries in a way that is suitable to the size of their screening populations. For example, States with large population sizes have larger numbers of participants to match with the cancer registries. In these cases, the volume of matching needs to be facilitated by an automated matching program. Smaller State/Territories may be able to do their matching manually with the aid of SQL–based queries. Regardless of method, it is important that each State and Territory uses a comparable set of variables for their matches. The recommended variables (Kavanagh et al. 1999) to extract from both BreastScreen data bases and the cancer registry databases are, at a minimum:

- first name
- last name
- date of birth
- address (including number, street, suburb/town and postcode in separate fields)
- date of cancer diagnosis
- date of last contact (and date of death if separate field to date of last contact).

Other variables suggested for matching include:

- second given name
- alias and/or maiden name
- tumour details (including histology, laterality, behaviour, staging (TNM), grade).

Additional information required from the BreastScreen Australia databases include:

- date of screen
- outcome of screening episode (routine recall, lesion detected or early review).

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation BreastScreen Australia

Indicator 6b—Program sensitivity

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition The percentage of participants with screen–detected invasive breast cancer amongst all Program–screened participants diagnosed with invasive breast cancer in a defined period (screen–detected and interval cancers) by 10-year age groups (40–49, 50–59, 60–69, 70–79 and 80+) and for the target age group (50–74 years).

Related Standard None

Relational and representational attributes

Datatype	Numeric				*Representational form*	Quantitative value
Field size	*Min.*	1	*Max.*	3	*Representational layout*	NN

Data domain Percentage

Formula

$$\frac{\text{Number of invasive screen–detected breast cancers by age group}}{\text{Number of invasive screen–detected breast cancer plus number of interval invasive breast cancers by age group}} \times 100$$

Numerator The number of participants with screen–detected invasive breast cancer in a 24-month period by age group.

Data collection BreastScreen Australia data dictionary

Source BreastScreen Australia

Data element

A.1	Client identification number
A.5	Lesion number
A.9	State identifier
B.2	Date of birth
B.9.1	Round number—State/Territory program
C.2	Date of first attendance for this episode
D.2.2	Date of first attendance for assessment
D.11.2	Recommendation—number of months
D.11.3	Date recommendation made
D.11.4	Assessment visit—date
F.1.1	Reason for histopathology
F.1.2	Date of diagnosis of interval cancer
F.1.3	Cancer diagnosed in BreastScreen Australia
F.4	Histopathology of malignant lesions

Denominator	The number of participants with screen–detected invasive breast cancer plus the number of Program–screened participants with interval invasive breast cancer in the specified period by age group.
Data collection	BreastScreen Australia and State and Territory Cancer registries
Source	BreastScreen Australia and State and Territory Cancer registries
Data element	A.1 Client identification number A.9 State identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening F.4 Histopathology of malignant lesions F.7 Dominant lesion identification number
Specifications	• Count is of individual participants, not tumours. • Include invasive tumours only. • Screen detected cancers are as defined for Indicator 4. • Interval cancers are defined as for Indicator 6a. • Indicator is expressed as a percentage. • Screening round should be classified as ‘First round’ and ‘Subsequent rounds’. • Data are presented by the following stratifications: – Time since screening (0–364 days and 365–729 days) – Screening round (first or subsequent) – State/Territory.
Collection methods	Data are collected at point of screening and by the State/Territory cancer registry. Refer to Indicator 6a, Interval cancers, (BreastScreen Australia indicator 6a) for an outline of the matching process used to identify interval cancers. For further information on Program sensitivity, please refer to Kavanagh et al. 1999.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

Indicator 7a—Invasive breast cancer incidence

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition The number of new cases of invasive breast cancer per 100,000 estimated female resident population in a 12-month period by 5-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 85+) and for the target age group (50–74 years).

Related Standard None

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.*	4	*Representational layout*	NNN.N

Data domain Rate

Formula

$$\frac{\text{Number of new cases of breast cancer by age group}}{\text{Population by age}} \times 100{,}000$$

Numerator The number of new cases of breast cancer by age group.

Data collection State and Territory Cancer Registries

Source AIHW Australian Cancer Database

Denominator The number of women in that particular age group, using Australian Bureau of Statistics estimated resident female mid–year population.

Data collection Australian Bureau of Statistics

Source Australian Bureau of Statistics Estimated Resident Population

Specifications

- All invasive breast cancer is defined as ICD-10 code C50.
- Indicator is expressed per 100,000 women age–standardised to the 2001 total Australian population using direct standardisation.
- This indicator is derived from the AIHW holdings of cancer registry incidence data (AIHW Australian Cancer Database).
- Reporting period to be the latest available years.
- Data are presented by the following stratifications:
  - State/Territory
  - Remoteness area
  - Socioeconomic status
  - Indigenous status.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

Indicator 7b—Ductal carcinoma in situ incidence

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition The number of new cases of ductal carcinoma in situ (DCIS) per 100,000 estimated female resident population in a 12-month period by 10-year age groups (40–49, 50–59, 60–69, 70–79 and 80+) and for the target age group (50–74 years).

Related Standard None

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.*	4	*Representational layout*	NNN.N

Data domain Rate

Formula

$$\frac{\text{Number of new cases of DCIS by age group}}{\text{Population by age group}} \times 100{,}000$$

Numerator The number of new cases of DCIS in a 12-month period by age group.

Data collection State and Territory Cancer Registries

Source AIHW Australian Cancer Database

Denominator The number of women in that particular age group, using Australian Bureau of Statistics estimated resident female mid-year population.

Data collection Australian Bureau of Statistics

Source Australian Bureau of Statistics Estimated Resident Population

Specifications

- Indicator is expressed per 100,000 women.
- Count is of individual women, not tumours.
- The following should be excluded from the data set:
  - Lobular Carcinoma In Situ (LCIS)
  - Women with a previous invasive breast cancer.
- In case of a simultaneous diagnosis of DCIS and LCIS, the case should be counted as DCIS.
- In case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive.
- Only the first case of DCIS in a participant should be counted.

- Paget's disease either in the presence or absence of DCIS should be included as DCIS unless there is an invasive component.
- Data are presented by the following stratifications:
  - State/Territory.

Administrative attributes

Source document	BreastScreen Australia data dictionary, version 1.3
Source organisation	BreastScreen Australia

Indicator 8—Mortality

Admin. status CURRENT

Identifying and definitional attributes

Data element type Performance indicator

Definition The number of deaths from breast cancer per 100,000 estimated female resident population in a 12-month period by 5-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 85+) and for the target age group (50–74 years).

Related Standard None

Relational and representational attributes

Datatype	Numeric			*Representational form*	Quantitative value
Field size	*Min.* 1	*Max.*	4	*Representational layout*	NNN.N

Data domain Rate

Formula

$$\frac{\text{Number of deaths from breast cancer by age group}}{\text{Population by age group}} \times 100{,}000$$

Numerator The number of deaths from breast cancer by age group.

Data collection AIHW National Mortality database

Source AIHW National Mortality database

Denominator The number of women in that particular age group, using Australian Bureau of Statistics estimated resident female mid–year population.

Data collection Australian Bureau of Statistics

Source Australian Bureau of Statistics Estimated Resident Population

Specifications

- Indicator is expressed per 100,000 women.
- This indicator is derived from the AIHW holdings of cancer registry mortality data (National Mortality database).
- Data are presented by the following stratifications:
  - State/Territory
  - Remoteness area
  - Indigenous status.

Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.3

Source organisation: BreastScreen Australia

5 National Accreditation Standards Measures—data specifications

5.1 Usage guide

The following algorithms should be used where the data dictionary data elements match the data elements in the various program databases. Where the data elements do not match and the Service can use alternative or more effective data elements, the algorithms should be used as a guide to ensure the correct measurement of the standards.

The reference period reported should be as consistent as possible across data measures (either all using a calendar year or all using a financial year).

In most instances the denominator should be calculated first as the numerator is a subset of the denominator.

Unless otherwise stated, both symptomatic and asymptomatic participants are to be included in the numerator and the denominator.

Use *A.1 Client identification number* and *B.9.1 Round number—State/Territory program* to ensure correct linking of data elements.

For standards relating to assessment measures, include all participants assessed by the Service even if screened elsewhere. Assessments or assessment procedures performed outside the Service are to be excluded.

For standards relating to cancer detection, include all cancers detected for participants screened by the Service even if they were not assessed by the Service.

For standards that relate to performance in relation to the screening episode, which includes cancer detection, the reference period relates to the most recent 12-month period (either calendar or financial year, but consistently across measures) for which data are available using data element *C.2 Date of first attendance for this episode* (between start date and end date).

For standards that relate to performance in relation to the assessment visit, the reference period relates to the most recent 12-month period (either calendar or financial year, but consistently across measures) for which data are available, using data element *D.2.2 Date of first attendance for assessment* (between start date and end date). Where a participant has multiple visits, it is important to include all visits associated with that round.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.1—The Service and/or SCU maximises the participation of women in the target age groups for screening and rescreening.

NAS Measure 1.1.1 (a)

The Service and/or SCU monitors and reports the participation rate of women aged 50–74 years who participate in screening in the most recent 24-month period.

Data Dictionary Measure

The percentage of women aged 50–74 years in the Service and/or SCU catchment area who are screened by BreastScreen Australia during the most recent 24-month period.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Post code of usual residence C.2 Date of first attendance for this episode
Numerator	Number of individual participants aged 50–74 years residing in the Service and/or SCU catchment area screened by BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, C.2
Denominator	Number of women aged 50–74 years resident in the catchment area using Australian Bureau of Statistics estimated resident female population(s). This value will represent the estimated population at the midpoint of the reference period. If the reference period is based on calendar years, the population figure will be an average of the two corresponding Estimated Residential Populations (ERPs) as at 30 June. When the reference period is based on financial years, the population value will be the ERP for the year wholly contained within the reference period. Where Service and/or SCU boundaries cross ABS population boundaries, calculation of resident women to be made on a proportional basis.
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period.

- Count is of individual participants, not screening episodes.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Age is calculated as the age at the date of first attendance for the screening episode selected.
- Interstate participants are excluded from the numerator.

Algorithm

$$\frac{\text{[A.1 \& ((last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤74) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area))]}}{\text{ABS ERP}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population using appropriate estimated resident populations (ERPs) as defined by the Australian Bureau of Statistics.
- The calculation of this measure will produce one result. National collection collects data by calendar years.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.1—The Service and/or SCU maximises the participation of women in the target age groups for screening and rescreening.

NAS Measure 1.1.1 (b)

≥70% of women aged 50–69 years participate in screening in the most recent 24-month period.

Data Dictionary Measure

The percentage of women aged 50–69 years in the Service and/or SCU catchment area who are screened by BreastScreen Australia during the most recent 24-month period.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence C.2 Date of first attendance for this episode
Numerator	Number of individual participants aged 50–69 years residing in the Service and/or SCU catchment area screened by BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, C.2
Denominator	Number of women aged 50–69 years resident in the catchment area using Australian Bureau of Statistics estimated resident female population(s). This value will represent the estimated population at the midpoint of the reference period. If the reference period is based on calendar years, the population figure will be an average of the two corresponding Estimated Residential Populations (ERPs) as at 30 June. When the reference period is based on financial years, the population value will be the ERP for the year wholly contained within the reference period. Where Service and/or SCU boundaries cross ABS population boundaries, calculation of resident women to be made on a proportional basis.
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of individual participants, not screening episodes. • If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.

- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Age is calculated as the age at the date of first attendance for the screening episode selected.
- Interstate participants are excluded from the numerator.

Algorithm

$$\frac{\text{[A.1 \& ((last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤69) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area))]}}{\text{ABS ERP}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population using appropriate estimated resident populations (ERPs) as defined by the Australian Bureau of Statistics.
- The calculation of this measure will produce one result.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.1—The Service and/or SCU maximises the participation of women in the target age groups for screening and rescreening.

NAS Measure 1.1.2 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their first screening episode within the Program who are rescreened within 27 months.

Data Dictionary Measure

The percentage of women aged 50–72 years who are rescreened within 27 months of their first screening episode.

Reference period	The most recent 12-month period (either calendar or financial year) for which data, including 27 months of follow-up data, are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	Number of individual participants aged 50–72 years who attend for their first screening episode and then return within ≤27 months. A.1, B.9.1, C.2
Denominator	Number of individual participants aged 50–72 years who attend for their first screening episode at the Service and/or SCU and are recommended for rescreening at 12 or 24 months. A.1, A.2, B.2, B.9.1, C.2, C.5, D.11.1, E.12
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period (index year). • Count is of individual participants as a participant can only have one first screening episode. • Participants aged 50–72 years only are included instead of participants aged 50–74 years because of policy variations between programs in relation to the age that participants continue to be reinvited for rescreening.

- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected.
- Interstate participants are excluded from the numerator and the denominator.
- This algorithm is applicable for calculation where the reference period is a calendar year or financial year. If using a different reference period, the number of months in the numerator may have to be adjusted.
- When calculating this standard, be aware that States/Territories may have different policies in relation to eligibility for rescreen that may need to be taken into consideration when interpreting the results.

Algorithm

$$\frac{[(A.1 \;\&\; B.9.1 \;\&\; ((C.2 \text{ for } B.9.1=2) — (C.2 \text{ for } B.9.1=1)) \leq 821 \text{ days})]}{[A.1 \;\&\; B.9.1=1 \;\&\; ((C.2 \text{ between start date \& end date}) \;\&\; (C.2 — B.2 \geq 50 \;\&\; \leq 72) \;\&\; (C.5 \text{ or } D.11.1 \text{ or } E.12=1 \text{ or } 2)) \text{ at } A.2]} \times 100$$

Notes

- Indicator is expressed as a proportion of all participants rescreened.
- The calculation of this measure will produce one result.
- If BreastScreen programs develop the capability of sharing information in the future, for example through eHealth, then this NAS Measure should include participants rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- In principle the denominator should be adjusted to remove participants who have died, been discharged from BreastScreen Australia or developed an interval cancer. However, this information may not be possible for some services. Where this information is not available, the denominator will include all participants recommended for rescreen, which only excludes participants who were diagnosed with a screen-detected breast cancer at their previous screen.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.1—The Service and/or SCU maximises the participation of women in the target age groups for screening and rescreening.

NAS Measure 1.1.2 (b)

≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months.

Data Dictionary Measure

The percentage of women aged 50–67 years who are rescreened within 27 months of their first screening episode.

Reference period	The most recent 12-month period (either calendar or financial year) for which data, including 27 months of follow-up data, are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	Number of individual participants aged 50–67 years who attend for their first screening episode and then return within ≤27 months. A.1, B.9.1, C.2
Denominator	Number of individual participants aged 50–67 years who attend for their first screening episode at the Service and/or SCU and are recommended for rescreening at 12 or 24 months. A.1, A.2, B.2, B.9.1, C.2, C.5, D.11.1, E.12
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period (index year). • Count is of individual participants as a participant can only have one first screening episode. • Participants aged 50–67 years only are included instead of participants aged 50–69 years because of policy variations between programs in relation to the age that participants continue to be reinvited for rescreening.

- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected.
- Interstate participants are excluded from the numerator and the denominator.
- This algorithm is applicable for calculation where the reference period is a calendar year or financial year. If using a different reference period, the number of months in the numerator may have to be adjusted.
- When calculating this standard, be aware that States/Territories may have different policies in relation to eligibility for rescreen that may need to be taken into consideration when interpreting the results.

Algorithm

$$\frac{\text{[(A.1 \& B.9.1 \& ((C.2 for B.9.1=2)—(C.2 for B.9.1=1)) ≤821 days)]}}{\text{[A.1 \& B.9.1=1 \& ((C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤67) \& (C.5 or D.11.1 or E.12=1 or 2)) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of all participants rescreened.
- The calculation of this measure will produce one result.
- If BreastScreen programs develop the capability of sharing information in the future, for example through eHealth, then this NAS Measure should include participants rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- In principle the denominator should be adjusted to remove participants who have died, been discharged from BreastScreen Australia or developed an interval cancer. However, this information may not be possible for some services. Where this information is not available, the denominator will include all participants recommended for rescreen, which only excludes participants who were diagnosed with a screen-detected breast cancer at their previous screen.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.1—The Service and/or SCU maximises the participation of women in the target age groups for screening and rescreening.

NAS Measure 1.1.3 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–72 years who attend for their second and subsequent screen within the Program who are rescreened within 27 months of their previous screening episode.

Data Dictionary Measure

The percentage of women aged 50–72 years who attend for subsequent rescreens within 27 months of their previous screening episode.

Reference period	The most recent 12-month period (either calendar or financial year) for which 27 months of follow-up data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	Number of participants aged 50–72 years who attend for a second or subsequent screening episode and return within ≤27 months. A.1, B.9.1, C.2
Denominator	Number of participants aged 50–72 years who attend for a second or subsequent screening episode and are recommended for rescreening at 12 or 24 months. A.1, A.2, B.2, B.9.1, C.2, C.5, D.11.1, E.12
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period (index year). • Count is of participants. • Participants aged 50–72 years only are included instead of participants aged 50–74 years because of policy variations between programs in relation to the age that participants continue to be reinvited for rescreening.

- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in the numerator and the denominator.
- Age is recorded as the age at the time of screening in the index year.
- Interstate participants are excluded from the numerator and the denominator.
- This algorithm is applicable for calculation where the reference period is a calendar year or financial year. If using a different reference period, the number of months in the numerator may have to be adjusted.
- When calculating this standard, be aware that States/Territories have different policies in relation to eligibility for rescreen that may need to be taken into consideration when interpreting the results.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 ((C.2 for B.9.1=(x+1))—(last C.2 for B.9.1=x)) ≤821 days]}}{\text{[A.1 \& B.9.1=x \& ((last C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤72) \& (C.5 or D.11.1 or E.12=1 or 2)) at A.2]}} \times 100$$

where x = index year round number of 2 or more

Notes

- Indicator is expressed as a proportion of participants rescreened.
- The calculation of this measure will produce one result.
- If BreastScreen programs develop the capability of sharing information in the future, for example through eHealth, then this NAS Measure should include participants rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- Count each participant once.
- In principle the denominator should be adjusted to remove participants who have died, been discharged from BreastScreen Australia or developed an interval cancer. However, this information may not be possible for some services. Where this information is not available, the denominator will include all participants recommended for rescreen, which only excludes participants who were diagnosed with a screen-detected breast cancer at their previous screen.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.1—The Service and/or SCU maximises the participation of women in the target age groups for screening and rescreening.

NAS Measure 1.1.3 (b)

≥90% of women aged 50–67 years who attend for their second and subsequent screens within the Program are rescreened within 27 months of their previous screening episode.

Data Dictionary Measure

The percentage of women aged 50–67 years who attend for subsequent rescreens within 27 months of their previous screening episode.

Reference period	The most recent 12-month period (either calendar or financial year) for which 27 months of follow-up data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	Number of participants aged 50–67 years who attend for their second or subsequent screening episode and then return within 27 months. A.1, B.9.1, C.2
Denominator	Number of participants aged 50–67 years who attend for their second or subsequent screening episode and are recommended for rescreening at 12 or 24 months. A.1, A.2, B.2, B.9.1, C.2, C.5, D.11.1, E.12
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period (index year). • Count is of participants in the reference period. • Participants aged 50–67 years only are included instead of participants aged 50–69 years because of policy variations between programs in relation to the age that participants continue to be reinvited for rescreening.

- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in the numerator and the denominator.
- Age is recorded as the age at the time of screening in the index year.
- Interstate participants are excluded from the numerator and the denominator.
- This algorithm is applicable for calculation where the reference period is a calendar year or financial year. If using a different reference period, the number of months in the numerator may have to be adjusted.
- When calculating this standard, be aware that States/Territories have different policies in relation to eligibility for rescreen that may need to be taken into consideration when interpreting the results.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 ((C.2 for B.9.1=(x+1))—(last C.2 for B.9.1=x)) ≤821 days]}}{\text{[A.1 \& B.9.1=x \& ((last C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤67) \& (C.5 or D.11.1 or E.12=1 or 2)) at A.2]}} \times 100$$

where x = index year round number of 2 or more.

Notes

- Indicator is expressed as a proportion of participants rescreened.
- The calculation of this measure will produce one result.
- If BreastScreen programs develop the capability of sharing information in the future, for example through eHealth, then this NAS Measure should include participants rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- Count each participant once.
- In principle the denominator should be adjusted to remove participants who have died, been discharged from BreastScreen Australia or developed an interval cancer. However, this information may not be possible for some services. Where this information is not available, the denominator will include all participants recommended for rescreen, which only excludes participants who were diagnosed with a screen-detected breast cancer at their previous screen.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (a) (i)

The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

(i) Indigenous women:

Data Dictionary Measure

The percentage of women aged 50–74 years who are screened by BreastScreen Australia during the most recent 24-month period disaggregated by Indigenous status.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence B.5 Indigenous status C.2 Date of first attendance for this episode
Numerator	Number of individual Aboriginal and Torres Strait Islander participants aged 50–74 years residing in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, B.5, C.2
Denominator	The ABS provides estimates of the Aboriginal and Torres Strait Islander and non-Indigenous population by five year age groups, sex and state/territory. The number of Aboriginal or Torres Strait Islander women aged 50–74 years resident in the catchment area using Australian Bureau of Statistics estimated Aboriginal and Torres Strait Islander female population(s).
Formula	Numerator / Denominator x 100

Specifications

- Select on reference period.
- Count is of individual participants, not screening episodes.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Participants for whom Indigenous status is not stated or missing are excluded from the numerator.

Algorithm

$$\frac{\text{[A.1 \& ((last C.2 between start date \& end date) \& (B.5=1 or 2 or 3) \& (last C.2—B.2≥50 \& ≤74) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of Aboriginal and Torres Strait Islander women in the population.
- The calculation of this measure will produce one result.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (b) (i)

The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

(i) Indigenous women:

Data Dictionary Measure

The percentage of women aged 50–69 years who are screened by BreastScreen Australia during the most recent 24-month period disaggregated by Indigenous status.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence B.5 Indigenous status C.2 Date of first attendance for this episode
Numerator	Number of individual Aboriginal and Torres Strait Islander participants aged 50–69 years residing in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, B.5, C.2
Denominator	The ABS provides estimates of the Aboriginal and Torres Strait Islander and non-Indigenous population by five year age groups, sex and state/territory. The number of Aboriginal or Torres Strait Islander women aged 50–69 years resident in the catchment area using Australian Bureau of Statistics estimated Aboriginal and Torres Strait Islander female population(s).
Formula	Numerator / Denominator x 100

Specifications

- Select on reference period.
- Count is of individual participants, not screening episodes.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Participants for whom Indigenous status is not stated or missing are excluded from the numerator.

Algorithm

$$\frac{\text{[A.1 \& (last C.2 between start date \& end date) \& (B.5=1 or 2 or 3) \& (last C.2—B.2≥50 \& ≤69) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of Aboriginal and Torres Strait Islander women in the population.
- The calculation of this measure will produce one result.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (a) (ii)

The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds
(ii) women from culturally and linguistically diverse backgrounds:

Data Dictionary Measure

The percentage of women aged 50–74 years who are screened by BreastScreen Australia during the most recent 24-month period by women with a language other than English spoken at home.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence B.4 Main language other than English spoken at home C.2 Date of first attendance for this episode
Numerator	Number of individual participants aged 50–74 years with language other than English spoken at home residing in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, B.4, C.2
Denominator	The ABS estimated resident population is not stratified by language spoken at home. In this case the denominator is calculated by applying the age-specific distribution of language spoken at home calculated from the most recent ABS Census to the relevant age specific estimated resident population counts.
Formula	Numerator / Denominator x 100
Specifications	• Count is of individual participants, not screening episodes.

- Select on reference period.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Participants for whom language spoken at home is not stated or missing are excluded from the numerator.

Algorithm

$$\frac{\text{[A.1 \& (last C.2 between start date \& end date) \& (B.4 ≠ 'English') \& (last C.2—B.2≥50 \& ≤74) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population with language other than English spoken at home.
- The calculation of this measure will produce one result.
- See Appendix B for more information.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (b) (ii)

The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

(ii) women from culturally and linguistically diverse backgrounds:

Data Dictionary Measure

The percentage of women aged 50–69 years who are screened by BreastScreen Australia during the most recent 24-month period by women with a language other than English spoken at home.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence B.4 Main language other than English spoken at home C.2 Date of first attendance for this episode
Numerator	Number of individual participants aged 50–69 years with language other than English spoken at home residing in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, B.4, C.2
Denominator	The ABS estimated resident population is not stratified by language spoken at home. In this case the denominator is calculated by applying the age-specific distribution of language spoken at home calculated from the most recent ABS Census to the relevant age specific estimated resident population counts.
Formula	Numerator / Denominator x 100
Specifications	• Count is of individual participants, not screening episodes.

- Select on reference period.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Participants for whom language spoken at home is not stated or missing are excluded from the numerator.

Algorithm

$$\frac{\text{[A.1 \& (last C.2 between start date \& end date) \& (B.4 ≠ 'English') \& (last C.2—B.2≥50 \& ≤69) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population with language other than English spoken at home.
- The calculation of this measure will produce one result.
- See Appendix B for more information.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (a) (iii)

The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

(iii) women residing across different remoteness areas:

Data Dictionary Measure

The percentage of women aged 50–74 years who are screened by BreastScreen Australia during the most recent 24-month period disaggregated according to the level of remoteness of the area in which a woman resides.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence C.2 Date of first attendance for this episode
Numerator	Number of individual participants aged 50–74 years residing in the five remoteness categories in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, C.2
Denominator	Number of women aged 50–74 years resident in the catchment area using Australian Bureau of Statistics estimated resident female population(s). This value will represent the estimated population at the midpoint of the reference period. If the reference period is based on calendar years, the population figure will be an average of the two corresponding Estimated Residential Populations (ERPs) as at 30 June. When the reference period is based on financial years, the population value will be the ERP for the year wholly contained within the reference period.

Where Service and/or SCU boundaries cross ABS population boundaries, calculation of resident women to be made on a proportional basis.

Allocate women to regions using the ABS Australian Statistical Geography Standard Remoteness Area classification or ASGS RA (ABS 2011, see notes below).

For further information see http://www.abs.gov.au/ausstats

Formula

Numerator / Denominator x 100

Specifications

- Select on reference period.
- Count is of individual participants, not screening episodes.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Each participant is to be counted only once, regardless of whether they have more than one screening episode in the 24 month period.

Algorithm

$$\frac{\text{[A.1 \& (last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤74) \& (B.3.1 or B.3.2 = corresponding ASGS RA classification in Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population.
- The ABS Australian Statistical Geography Standard Remoteness Area classification or ASGS RA (ABS 2011) is a classification that allocates one of five remoteness categories to areas. Areas are classified as Major cities, Inner regional, Outer regional, Remote or Very remote.
- The calculation of this measure will produce five results for five different remoteness areas.
- See Appendix B for more information.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (b) (iii)

The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.
(iii) women residing across different remoteness areas:

Data Dictionary Measure

The percentage of women aged 50–69 years who are screened by BreastScreen Australia during the most recent 24-month period disaggregated according to the level of remoteness of the area in which a woman resides.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	B.2	Date of birth
	B.3.1	Area of usual residence (SA2)
	B.3.2	Postcode of usual residence
	C.2	Date of first attendance for this episode
Numerator	Number of individual participants aged 50–69 years residing in the five remoteness categories in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia. A.1, B.2, B.3.1 or B.3.2, C.2	
Denominator	Number of women aged 50–69 years resident in the catchment area using Australian Bureau of Statistics estimated resident female population(s). This value will represent the estimated population at the midpoint of the reference period. If the reference period is based on calendar years, the population figure will be an average of the two corresponding Estimated Residential Populations (ERPs) as at 30 June. When the reference period is based on financial years, the population value will be the ERP for the year wholly contained within the reference period.	

Where Service and/or SCU boundaries cross ABS population boundaries, calculation of resident women to be made on a proportional basis.

Allocate women to regions using the ABS Australian Standard Geographic Classification Remoteness Area classification or ASGS RA (ABS 2011, see notes below).

For further information see http://www.abs.gov.au/ausstats

Formula

Numerator / Denominator x 100

Specifications

- Select on reference period.
- Count is of individual participants, not screening episodes.
- If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.
- Each participant is to be counted only once, regardless of whether they have more than one screening episode in the 24-month period.

Algorithm

$$\frac{\text{[A.1 \& (last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤69) \& (B.3.1 or B.3.2 = corresponding ASGS RA classification in Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population.
- The ABS Australian Statistical Geography Standard Remoteness Area classification or ASGS RA (ABS 2011) is a classification that allocates one of five remoteness categories to areas. Areas are classified as Major cities, Inner regional, Outer regional, Remote or Very remote.
- The calculation of this measure will produce five results for five different remoteness areas.
- See Appendix B for more information.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (a) (iv)

The Service and/or SCU monitors and reports participation of women aged 50–74 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

(iv) women residing across different socioeconomic locations:

Data Dictionary Measure

The percentage of women aged 50–74 years who are screened by BreastScreen Australia during the most recent 24-month period disaggregated according to the socioeconomic profile of the area in which a woman resides.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence C.2 Date of first attendance for this episode
Numerator	Number of individual participants aged 50–74 years residing in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia by Index of Relative Socio-Economic Disadvantage (IRSD). Use the latest ABS Census Socio-Economic Indexes for Areas (SEIFA) Index of IRSD to map SA2 to socioeconomic quintiles. Apply the mapping of SA2 to socioeconomic quintiles to the number of individual participants screened aged 50–74 years to determine participants screened for each quintile. A.1, B.2, B.3.1 or B.3.2, C.2
Denominator	Determine the number of women aged 50–74 years resident in the catchment area using Australian Bureau of Statistics estimated resident female population(s).

This value will represent the estimated population at the midpoint of the reference period. If the reference period is based on calendar years, the population figure will be an average of the two corresponding Estimated Residential Populations (ERPs) as at 30 June. When the reference period is based on financial years, the population value will be the ERP for the year wholly contained within the reference period. Where Service and/or SCU boundaries cross ABS population boundaries calculation of resident women to be made on a proportional basis.

Allocate women to regions using Australian Statistical Geography Standard (ASGS) ABS 2011. Apply the mapping of SA2 to socioeconomic quintiles to the relevant ERP for the 50–74 years age group to determine the relevant ERP for each quintile.

For further information see http://www.abs.gov.au/ausstats.

Formula

Numerator / Denominator x 100

Specifications

- Select on reference period.
- Count is of individual participants, not screening episodes.
- Each participant is to be counted only once, regardless of whether they have more than one screening episode in the 24-month period. If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age is calculated as the age at the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.

Algorithm

$$\frac{\text{[A.1 \& (last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤74) \& (B.3.1 or B.3.2 = corresponding SEIFA index classification in Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population.
- The IRSD is one of four SEIFAs developed by the Australian Bureau of Statistics (ABS 2011c). This index is based on factors such as average household income, education levels and unemployment rates. Rather than being a person-based measure, the IRSD is an area-based measure of socioeconomic status in which small areas of Australia are classified on a continuum from disadvantaged to affluent. This information is used as a proxy for the socioeconomic status of people living in those areas and may not be correct for each person in that area.
- The calculation of this measure will produce five results (low to high socioeconomic status across five quintiles).
- See Appendix B for more information.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.1 (b) (iv)

The Service and/or SCU monitors and reports participation of women aged 50–69 years from special groups and where rates are below that of the overall population, implements specific strategies to encourage their participation in screening. Consideration of equitable participation rates of at least the following groups is made: women from Indigenous, culturally and linguistically diverse, rural/remote and lower socioeconomic backgrounds.

(iv) women residing across different socioeconomic locations:

Data Dictionary Measure

The percentage of women aged 50–69 years who are screened by BreastScreen Australia during the most recent 24-month period disaggregated according to the socioeconomic profile of the area in which a woman resides.

Reference period	The most recent 24-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.2 Date of birth B.3.1 Area of usual residence (SA2) B.3.2 Postcode of usual residence C.2 Date of first attendance for this episode
Numerator	Number of individual participants aged 50–69 years residing in the Service and/or SCU catchment area screened by any Service and/or SCU in BreastScreen Australia by Index of Relative Socio-Economic Disadvantage (IRSD). Use the latest ABS Census Socio-Economic Indexes for Areas (SEIFA) IRSD to map SA2 to socioeconomic quintiles. Apply the mapping of SA2 to socioeconomic quintiles to the number of individual participants screened aged 50–69 years to determine participants screened for each quintile. A.1, B.2, B.3.1 or B.3.2, C.2
Denominator	Determine the number of women aged 50–69 years resident in the catchment area using Australian Bureau of Statistics estimated resident female population(s).

This value will represent the estimated population at the midpoint of the reference period. If the reference period is based on calendar years, the population figure will be an average of the two corresponding Estimated Residential Populations (ERPs) as at 30 June. When the reference period is based on financial years, the population value will be the ERP for the year wholly contained within the reference period. Where Service and/or SCU boundaries cross ABS population boundaries calculation of resident women to be made on a proportional basis.

Allocate women to regions using Australian Statistical Geography Standard (ASGS) (ABS 2011). Apply the mapping of SA2 to socioeconomic quintiles to the relevant ERP for the 50–69 years age group to determine the relevant ERP for each quintile.

For further information see http://www.abs.gov.au/ausstats.

Formula

Numerator / Denominator x 100

Specifications

- Select on reference period.
- Count is of individual participants, not screening episodes.
- Each participant is to be counted only once, regardless of whether they have more than one screening episode in the 24-month period. If a participant has been screened more than once in a 24-month period, then only the last screening episode is to be counted.
- Age is calculated as the age at the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in the numerator.

Algorithm

$$\frac{\text{[A.1 \& (last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤69) \& (B.3.1 or B.3.2 = corresponding SEIFA index classification in Service and/or SCU catchment area)]}}{\text{ABS population as specified in denominator above}} \times 100$$

Notes

- Indicator is expressed as a proportion of women in the population.
- The IRSD is one of four SEIFAs developed by the Australian Bureau of Statistics (ABS 2011c). This index is based on factors such as average household income, education levels and unemployment rates. Rather than being a person-based measure, the IRSD is an area-based measure of socioeconomic status in which small areas of Australia are classified on a continuum from disadvantaged to affluent. This information is used as a proxy for the socioeconomic status of people living in those areas and may not be correct for each person in that area.
- The calculation of this measure will produce five results (low to high socioeconomic status across five quintiles).
- See Appendix B for more information.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.2 (a)

The Service and/or SCU monitors the proportion of all women screened aged 40–49 years and 75 years and over.

Data Dictionary Measure

The proportion of women screened aged 40–49 years and 75 years and over in the most recent 12-month period for which data are available.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode
Numerator	(i) Number of screening episodes among participants aged 40–49 years. (ii) Number of screening episodes among participants aged 75 years and over. A.1, A.2, B.2, C.2
Denominator	Total number of screening episodes. A.1, A.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • The intent of this element is to monitor the impact out of target age group participants are having on resources. Accordingly, the count is of screening episodes and not participants. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age is calculated on date of last screening episode in this period.
- Participants whose ages have not been recorded to be included in a not stated category and are to be included in the denominator.

Algorithms

Standard 1.2.2 (a) (i)

$$\frac{\text{[A.1 \& (C.2—B.2≥40 \& ≤49) at A.2]}}{\text{[A.1 \& B.9.1 \& (C.2 between start date \& end date) at A.2]}} \times 100$$

Standard 1.2.2 (a) (ii)

$$\frac{\text{[A.1 \& (C.2—B.2≥75) at A.2]}}{\text{[A.1 \& B.9.1 \& (C.2 between start date \& end date) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of screening episodes.
- The calculation of this measure will produce two results.

1. Access and Participation Standard

Appropriate levels of access and participation in BreastScreen Australia are achieved in the target and eligible populations.

Criterion 1.2—BreastScreen services are accessible to the target and eligible populations, especially women from Indigenous; culturally and linguistically diverse; rural/remote; and lower socioeconomic backgrounds and women with a disability.

NAS Measure 1.2.2 (b)

The Service and/or SCU monitors the proportion of all women recalled for assessment aged 40–49 years and 75 years and over.

Data Dictionary Measure

The proportion of women recalled for assessment aged 40–49 years and 75 years and over in the most recent 12-month period for which data are available.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers//
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening
Numerator	(i) Number of screening episodes among participants aged 40–49 years recalled to an assessment centre (C.5 = 3 or 4 or 5). (ii) Number of screening episodes among participants aged 75 years and over recalled to an assessment centre (C.5 = 3 or 4 or 5). A.1, B.2, B.9.1, C.2
Denominator	Number of screening episodes among participants recalled to an assessment centre (C.5 = 3 or 4 or 5). A.1, A.2, B.9.1, C.2, C.5
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • The intent of this element is to monitor the impact out of target age group participants are having on resources. Accordingly, the count is of screening episodes and not participants. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1

are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected (C.2—B.2).
- Participants whose ages have not been recorded to be included in a not stated category and included in the denominator.
- If calculating for multiple services at a service level, use A.2 to select service.

Algorithms

Standard 1.2.2 (b) (i)

$$\frac{\text{[A.1 \& B.9.1 \& (C.2—B.2}\geq 40 \text{ \& } \leq 49)]}{\text{[A.1 \& B.9.1 \& ((C.5=3 or 4 or 5) \& (C.2 between start date \& end date)) at A.2]}} \times 100$$

Standard 1.2.2 (b) (ii)

$$\frac{\text{[A.1 \& B.9.1 \& (C.2—B.2}\geq 75)]}{\text{[A.1 \& B.9.1 \& ((C.5=3 or 4 or 5) \& (C.2 between start date \& end date)) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of screening episodes among participants recalled for assessment.
- The calculation of this measure will produce two results.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.1 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–74 years who attend for their first screening episode who are diagnosed with invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years attending for their first screening episode who are diagnosed with invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–74 years attending for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of individual participants as a participant can only have one first screening episode. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at date of attendance for the first screening episode.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date to be included.

Exclusions:

- Invasive cancer detected at early review ≥6 months from the initial screening date.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10)))}]}{[\text{A.1 \& B.9.1=1 \& ((C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤74)) at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.1 (b)

≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–69 years who attend for their first screening episode who are diagnosed with invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–69 years attending for their first screening episode who are diagnosed with invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–69 years attending for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of individual participants as a participant can only have one first screening episode. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at date of attendance for the first screening episode.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date to be included.

Exclusions:

- Invasive cancer detected at early review ≥6 months from the initial screening date.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10)))}]}{[\text{A.1 \& B.9.1=1 \& ((C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤69)) at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.2 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years attending for a second or subsequent screening episode who are diagnosed with an invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–74 years attending for a second or subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected (C.2—B.2).
- If a participant has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of invasive breast cancer should be included in the numerator and both screening episodes should be counted in the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Invasive cancer detected at early review ≥6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10)))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& } \leq 74)) \text{ at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.2 (b)

≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer.

The number of women aged 50–69 years who attend for their second or subsequent screening episode who are diagnosed with invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–69 years attending for a second or subsequent screening episode who are diagnosed with invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–69 years attending for a second or subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator. • Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

- Age calculated as at the date of first attendance for the screening episode selected (C.2—B.2).
- If a participant has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator and both screening episodes should be counted in the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Invasive cancer detected at early review ≥6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10)))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& }\leq 69)) at A.2]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.3 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–74 years who attend for their first screening episode who are diagnosed with small (≤15mm) invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.5 Size of tumour F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years attending for their first screening episode who are diagnosed with small (≤15mm in diameter) invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.5, F.7
Denominator	Number of participants aged 50–74 years attending for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of individual participants as a participant can only have one first screening episode. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and

B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at date of attendance for the first screening episode (C.2—B.2).
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.
- In cases of multiple lesions, size is of dominant lesion only.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review ≥6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1=1 \& (F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10 \& F.5≤15)))}]}{[\text{A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤74) at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- When micro-invasion is noted, size should be stated as ≤1mm.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.3 (b)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with small (≤15mm) invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.5 Size of tumour F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years attending for a second or subsequent screening episode who are diagnosed with small (≤15mm in diameter) invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.5, F.7
Denominator	Number of participants aged 50–74 years attending for a second or subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected (C.2—B.2).
- If a participant has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator and both screening episodes should be counted in the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.
- In cases of multiple lesions, size is of dominant lesion only.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Invasive cancer detected at early review ≥6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10 \& F.5}\leq 15)))]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& }\leq 74)) at A.2]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- When micro-invasion is noted, size should be stated at ≤1mm.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.3 (c)

≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15mm) invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–69 years who attend for screening who are diagnosed with small (≤15mm) invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.5 Size of tumour F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–69 years who attend for screening who are diagnosed with small (≤15mm in diameter) invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.5, F.7
Denominator	Number of participants aged 50–69 years who attend for screening. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants. • Do not disaggregate by screening round but use all screening rounds. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected (C.2—B.2).
- If a participant has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator and both screening episodes should be counted in the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.
- In cases of multiple lesions, size is of dominant lesion only.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review ≥6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((F.1.1=2) \& (F.7= (F.4=1.1 to 1.10 \& F.5}\leq 15)))]}{[\text{A.1 \& B.9.1 \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& } \leq 69) \text{ at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.
- When micro-invasion is noted, size should be stated as ≤1mm.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.4 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–74 years recommended and attending annually for screening who are diagnosed with invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years recommended and attending for annual rescreening who are diagnosed with invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–74 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). A.1, A.2, B.2, B.9.1, C.2, C.5, D11.1, E.12
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants.

- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If a participant has been screened more than once in the reference period, then only the last screening episode is to be selected.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review >6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((F1.1=2) \& (F.7=(F.4=1.1 to 1.10)))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((last C.2 between start date \& end date) \& (last C.2—B.2}\geq 50 \text{ \& }\leq 74)) at A.2 \& (C.5 or D.11.1 or E.12=2) for B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) }\leq 15 \text{ months}]} \times 10{,}000$$

Where x = round number for the previous screening episode

Notes

- Indicator is expressed per 10,000 participants attending for annual rescreening.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.4 (b)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend annually for screening, who are diagnosed with small (≤15mm) invasive breast cancer.

Data Dictionary Measure

The number of women aged 50–74 years recommended and attending annually for screening who are diagnosed with small (≤15mm) invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	B.2	Date of birth
	B.9.1	Round—State/Territory program
	C.2	Date of first attendance for this episode
	C.5	Recommendation—screening
	D.11.1	Recommendation—assessment
	E.12	Recommendation—definitive
	F.1.1	Reason for histopathology
	F.4	Histopathology of malignant lesion
	F.5	Size of tumour
	F.7	Dominant lesion identification number
Numerator	Number of participants aged 50–74 years recommended and attending for annual rescreening who are diagnosed with small (≤15mm in diameter) invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.5, F.7	
Denominator	Number of participants aged 50–74 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). A.1, A.2, B.2, B.9.1, C.2, C.5, D11.1, E.12	
Formula	Numerator / Denominator x 10,000	

Specifications

- Select on reference period.
- Count is of participants.
- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If a participant has been screened more than once in the reference period, then only the last screening episode is to be selected.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review ≥6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((F1.1=2) \& (F.7=(F.4=1.1 to 1.10 \& F.5 ≤15)))}]}{\begin{array}{c}[\text{A.1 \& B.9.1≥2 \& ((last C.2 between start date \& end date) \&} \\ \text{(last C.2—B.2≥50 \& ≤74)) at A.2 \& (C.5 or D.11.1 or E.12=2) for} \\ \text{B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) ≤15 months}]\end{array}} \times 10{,}000$$

Where x = round number for the previous screening episode

Notes

- Indicator is expressed per 10,000 participants attending for annual rescreening.
- When micro-invasion is noted, size should be stated at ≤1mm.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.4 (c)

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years who attend annually for screening, who are diagnosed with invasive breast cancer.

Data Dictionary Measure

The number of women aged 40–49 years recommended and attending annually for screening who are diagnosed with invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 40–49 years recommended and attending for annual rescreening who are diagnosed with invasive breast cancer. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 40–49 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). A.1, A.2, B.2, B.9.1, C.2, C.5, D11.1, E.12
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants.

- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If a participant has been screened more than once in the reference period, then only the last screening episode is to be selected.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review >6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((F1.1=2) \& (F.7=(F.4=1.1 to 1.10)))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((last C.2 between start date \& end date) \& (last C.2—B.2}\geq 40 \text{ \& }\leq 49)) \text{ at A.2 \& (C.5 or D.11.1 or E.12=2) for B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) }\leq 15 \text{ months}]} \times 10{,}000$$

Where x = round number for the previous screening episode.

Notes

- Indicator is expressed per 10,000 participants attending for annual rescreening.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.5

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with invasive breast cancer.

Data Dictionary Measure

The number of women aged 40–49 years and 75 and over who are diagnosed with invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	B.2	Date of birth
	B.9.1	Round number—State/Territory program
	C.2	Date of first attendance for this episode
	F.1.1	Reason for histopathology
	F.4	Histopathology of malignant lesion
	F.7	Dominant lesion identification number
Numerator	(i)	Number of participants aged 40–49 years who are diagnosed with invasive breast cancer at their first screening episode.
	(ii)	Number of participants aged 75 and over who are diagnosed with invasive breast cancer at their first screening episode.
	(iii)	Number of participants aged 40–49 years who are diagnosed with invasive breast cancer at their second or subsequent screening episode.
	(iv)	Number of participants aged 75 and over who are diagnosed with invasive breast cancer at their second or subsequent screening episode.
	A.1, B.9.1, F.1,1, F.4, F.7	
Denominator	(i)	Number of participants aged 40–49 years attending for their first screening episode.
	(ii)	Number of participants aged 75 and over attending for their first screening episode.

(iii) Number of participants aged 40–49 years attending for a second or subsequent screening episode.

(iv) Number of participants aged 75 and over attending for a second or subsequent screening episode.

A.1, A.2, B.2, B.9.1, C.2

Formula Numerator / Denominator x 10,000

Specifications

- Select on reference period
- Count is of individual participants, not lesions.
- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both, the numerator and the denominators.
- Age calculated on date of last screening in the reference period.
- A participant should only be counted once in the numerator and denominator. However, if the program's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While it is a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator.
- A screen–detected breast cancer is one that is histopathologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Inclusions:

- Lesions should be recorded and sized as invasive cancers if they include any invasive component.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review >6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm

2.1.5 (i)

$$\frac{\text{[A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7=(F.4=1.1 to 1.10)))]}}{\text{[A.1 \& B.9.1=1 \& (last C.2 between start date \& end date) \& (C.2 — B.2≥40 \& ≤49)) at A.2]}} \times 10{,}000$$

2.1.5 (ii)

$$\frac{\text{[A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7=(F.4=1.1 to 1.10)))]}}{\text{[A.1 \& B.9.1=1 \& (last C.2 between start date \& end date) \& C.2—B.2≥75)) at A.2]}} \times 10{,}000$$

2.1.5 (iii)

$$\frac{\text{[A.1 \& B.9.1≥2 \& ((F.1.1=2) \& (F.7=(F.4=1.1 to 1.10)))]}}{\text{[A.1 \& B.9.1≥2 \& ((last C.2 between start date \& end date) \& (C.2—B.2≥40 \& ≤49)) at A.2]}} \times 10{,}000$$

2.1.5 (iv)

$$\frac{\text{[A.1 \& B.9.1≥2 \& ((F.1.1=2) \& (F.7=(F.4=1.1 to 1.10)))]}}{\text{[A.1 \& B.9.1≥2 \& ((last C.2 between start date \& end date) \& (C.2—B.2≥75)) at A.2]}} \times 10{,}000$$

Notes

- Indicator is expressed as a rate per 10,000 participants screened.
- The calculation of this measure will produce four results (by age groups and by screening rounds).

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target and eligible population.

NAS Measure 2.1.6

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with small (≤15mm) invasive breast cancer.

Data Dictionary Measure

The number of women aged 40–49 years and 75 and over who are diagnosed with small (≤15mm) invasive breast cancer per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	B.2	Date of birth
	B.9.1	Round number—State/Territory program
	C.2	Date of first attendance for this episode
	F.1.1	Reason for histopathology
	F.4	Histopathology of malignant lesion
	F.5	Size of tumour
	F.7	Dominant lesion identification number
Numerator	(i)	Number of participants aged 40–49 years attending for screening who are diagnosed with small (≤15mm) invasive breast cancer.
	(ii)	Number of participants aged 75 and over attending for screening who are diagnosed with small (≤15mm) invasive breast cancer.
	A.1, B.9.1, F.1.1, F.4, F.5, F.7	
Denominator	(i)	Number of participants aged 40–49 years who attend for screening.
	(ii)	Number of participants aged 75 and over who attend for screening.
	A.1, A.2, B.2, B.9.1, C.2	
Formula	Numerator / Denominator x 10,000	
Specifications	• Select on reference period • Count is of individual participants, not lesions.	

- Calculate the denominator first. The numerator is a subset of the denominator, ie A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both, the numerator and the denominators.
- Age calculated on date of last screening in the reference period.
- A participant should only be counted once in the numerator and denominator. However, if the program's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While it is a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator.
- A screen–detected breast cancer is one that is histopathologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro–invasive tumours to be included.
- If there is micro–invasion in the presence of DCIS, the lesion with micro–invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review >6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

Algorithm 2.1.6 (i)

$$\frac{[\text{A.1 \& B.9.1 \& ((F.1.1=2) \& (F.7=(F.4=1.1 to 1.10 \& F.5}\leq\text{15mm)))]}}{[\text{A.1 \& B.9.1 \& (last C.2 between start date \& end date) \& (C.2} - \text{B.2}\geq\text{40 \& }\leq\text{49)) at A.2]}} \times 10{,}000$$

2.1.6 (ii)

$$\frac{\text{[A.1 \& B.9.1 \& ((F.1.1=2) \& (F.7=(F.4=1.1 to 1.10 \& F.5≤15mm)))]}}{\text{[A.1 \& B.9.1 \& (last C.2 between start date \& end date) \& (C.2—B.2≥75)) at A.2]}} \times 10{,}000$$

Notes

- Indicator is expressed as a rate per 10,000 participants screened.
- The calculation of this measure will produce two results.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.2—The Service and/or SCU maximises the detection of ductal carcinoma in situ (DCIS).

NAS Measure 2.2.1 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS.

Data Dictionary Measure

The number of women aged 50–74 years who attend for their first screening episode who are diagnosed with DCIS per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years attending for their first screening episode who are diagnosed with DCIS. A.1, B.9.1, F.1.1, F.4, F.7,
Denominator	Number of participants aged 50–74 years attending for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of individual participants as a participant can only have one first screening episode. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional

data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Age calculated as at date of attendance for the first screening episode.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A participant should only be counted once in the numerator and denominator.
- A screen-detected DCIS is one that is histologically confirmed as DCIS before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- In the case of a simultaneous diagnosis of DCIS and LCIS the case should be counted as DCIS.
- In the case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive for the purpose of this indicator and therefore not included in the DCIS data set.
- Participants diagnosed with DCIS at early review are not included in the DCIS detection rates if it is detected in the period 6–12 months after the completion of the screening episode.
- Although intracystic papillary carcinoma is regarded by some pathologists to be an unusual form of invasive cancer, most authorities advocate its treatment along the lines of DCIS. Therefore it is included in the count of DCIS.

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as ‘Other DCIS’).
- Paget’s disease in the absence of DCIS should be included as DCIS (categorised as ‘Other DCIS’) unless there is an invasive component (Paget’s disease in the presence of DCIS should be categorised as DCIS).

Exclusions:

- DCIS with microinvasion (classified as an invasive breast malignancy).
- Lobular carcinoma in situ (LCIS) including pleomorphic LCIS.

Algorithm

$$\frac{\text{[A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7 = (F.4=2.1 to 2.4)))]}}{\text{[A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤74) at A.2]}} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.2—The Service and/or SCU maximises the detection of ductal carcinoma in situ (DCIS).

NAS Measure 2.2.1 (b)

≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.

Data Dictionary Measure

The number of women aged 50–69 years who attend for their first screening episode who are diagnosed with DCIS per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–69 years attending for their first screening episode who are diagnosed with DCIS. A.1, B.9.1, F.1.1, F.4, F.7,
Denominator	Number of participants aged 50–69 years attending for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of individual participants as a participant can only have one first screening episode. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Age calculated as at date of attendance for the first screening episode.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A participant should only be counted once in the numerator and denominator.
- A screen-detected DCIS is one that is histologically confirmed as DCIS before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- In the case of a simultaneous diagnosis of DCIS and LCIS the case should be counted as DCIS.
- In the case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive for the purpose of this indicator and therefore not included in the DCIS data set.
- Participants diagnosed with DCIS at early review are not included in the DCIS detection rates if it is detected in the period 6–12 months after the completion of the screening episode.
- Although intracystic papillary carcinoma is regarded by some pathologists to be an unusual form of invasive cancer, most authorities advocate its treatment along the lines of DCIS. Therefore it is included in the count of DCIS.

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as 'Other DCIS').
- Paget's disease in the absence of DCIS should be included as DCIS (categorised as 'Other DCIS') unless there is an invasive component (Paget's disease in the presence of DCIS should be categorised as DCIS).

Exclusions:

- DCIS with microinvasion (classified as an invasive breast malignancy).
- Lobular carcinoma in situ (LCIS) including pleomorphic LCIS.

Algorithm

$$\frac{[\text{A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7 = (F.4=2.1 to 2.4)))}]}{[\text{A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& } \leq 69) \text{ at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.2—The Service and/or SCU maximises the detection of ductal carcinoma in situ (DCIS).

NAS Measure 2.2.2 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS.

Data Dictionary Measure

The number of women aged 50–74 years who attend for their second or subsequent screening episode who are diagnosed with DCIS per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years attending for a subsequent screening episode who are diagnosed with DCIS. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–74 years attending for a subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional

data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- If a participant has two screening episodes that meet the criteria both should be counted. Further, if, BreastScreen Australia's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator and both screening episodes should be counted in the denominator.
- A screen-detected DCIS is one that is histologically confirmed as DCIS before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- In the case of a simultaneous diagnosis of DCIS and LCIS, the case should be counted as DCIS.
- In the case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive for the purpose of this indicator and therefore not included in the DCIS data set.
- Participants diagnosed with DCIS at early review are not included in the DCIS detection rates if it is detected in the period 6–12 months after the completion of the screening episode.

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as 'Other DCIS').
- Paget's disease in the absence of DCIS should be included as DCIS (categorised as 'Other DCIS') unless there is an invasive component (Paget's disease in the presence of DCIS should be categorised as DCIS).

Exclusions:

- DCIS with microinvasion (classified as an invasive breast malignancy).
- Lobular carcinoma in situ (LCIS) including pleomorphic LCIS.

Algorithm

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((F.1.1=2) \& (F.7 = (F.4=2.1 to 2.4)))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& } \leq 74) \text{ at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.2—The Service and/or SCU maximises the detection of ductal carcinoma in situ (DCIS).

NAS Measure 2.2.2 (b)

≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.

Data Dictionary Measure

The number of women aged 50–69 years who attend for their second or subsequent screening episode who are diagnosed with DCIS per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–69 years attending for a subsequent screening episode who are diagnosed with DCIS. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–69 years attending for a subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- If a participant has two screening episodes that meet the criteria both should be counted. Further, if, BreastScreen Australia's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator and both screening episodes should be counted in the denominator.
- A screen-detected DCIS is one that is histologically confirmed as DCIS before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- In the case of a simultaneous diagnosis of DCIS and LCIS, the case should be counted as DCIS.
- In the case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive for the purpose of this indicator and therefore not included in the DCIS data set.
- Participants diagnosed with DCIS at early review are not included in the DCIS detection rates if it is detected in the period 6–12 months after the completion of the screening episode.

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as 'Other DCIS').
- Paget's disease in the absence of DCIS should be included as DCIS (categorised as 'Other DCIS') unless there is an invasive component (Paget's disease in the presence of DCIS should be categorised as DCIS).

Exclusions:

- DCIS with microinvasion (classified as an invasive breast malignancy).
- Lobular carcinoma in situ (LCIS) including pleomorphic LCIS.

Algorithm

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((F.1.1=2) \& (F.7 = (F.4=2.1 to 2.4)))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& }\leq 69) \text{ at A.2}]} \times 10{,}000$$

Notes

- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.2—The Service and/or SCU maximises the detection of ductal carcinoma in situ (DCIS).

NAS Measure 2.2.3

The Service and/or SCU monitors and reports the number of women aged 50–74 years who attend annually for screening, who are diagnosed with DCIS.

Data Dictionary Measure

The number of women aged 50–74 years recommended and attending annually for screening who are diagnosed with DCIS per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive F.1.1 Reason for histopathology F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants aged 50–74 years recommended and attending for annual rescreening who are diagnosed with DCIS. A.1, B.9.1, F.1.1, F.4, F.7
Denominator	Number of participants aged 50–74 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). A.1, A.2, B.2, B.9.1, C.2, C.5, D11.1, E.12
Formula	Numerator / Denominator x 10,000
Specifications	• Select on reference period. • Count is of participants.

- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A screen-detected DCIS is one that is histologically confirmed as DCIS before completion of an episode of screening at BreastScreen Australia.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- In the case of a simultaneous diagnosis of DCIS and LCIS the case should be counted as DCIS.
- In the case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive for the purpose of this indicator and therefore not included in the DCIS data set.
- Participants diagnosed with DCIS at early review are not included in the DCIS detection rates if it is detected in the period 6–12 months after the completion of the screening episode.

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as ‘Other DCIS’).
- Paget’s disease in the absence of DCIS should be included as DCIS (categorised as ‘Other DCIS’) unless there is an invasive component (Paget’s disease in the presence of DCIS should be categorised as DCIS).

Exclusions:

- DCIS with microinvasion (classified as an invasive breast malignancy).
- Lobular carcinoma in situ (LCIS) including pleomorphic LCIS.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((F1.1=2) \& (F.7=(F.4=2.1 to 2.4)))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((last C.2 between start date \& end date) \& (last C.2—B.2}\geq 50 \text{ \& } \leq 74)) \text{ at A.2 \& (C.5 or D.11.1 or E.12=2) for B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) } \leq 15 \text{ months}]} \times 10{,}000$$

Where x = round number for the previous screening episode.

Notes

- Indicator is expressed per 10,000 participants attending for annual rescreening.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.2—The Service and/or SCU maximises the detection of ductal carcinoma in situ (DCIS).

NAS Measure 2.2.4

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who are diagnosed with DCIS.

Data Dictionary Measure

The number of women aged 40–49 years and 75 and over who are diagnosed with DCIS per 10,000 women screened.

Reference period: The most recent 12-month period (either calendar or financial year) for which data are available.

Data collection: BreastScreen Australia data dictionary

Data source: State and territory BreastScreen registers

Data elements:

- A.1 Client identifier number
- A.2 Screening unit identifier
- B.2 Date of birth
- B.9.1 Round number—State/Territory program
- C.2 Date of first attendance for this episode
- F.1.1 Reason for histopathology
- F.4 Histopathology of malignant lesion
- F.7 Dominant lesion identification number

Numerator:

(i) Number of participants aged 40–49 years who are diagnosed with DCIS at their first screening episode.

(ii) Number of participants aged 75 and over who are diagnosed with DCIS at their first screening episode.

(iii) Number of participants aged 40–49 years who are diagnosed with DCIS at a second or subsequent screening episode.

(iv) Number of participants aged 75 and over who are diagnosed with DCIS at a second or subsequent screening episode.

A.1, B.9.1, F.1.1, F.4, F.7

Denominator:

(i) Number of participants aged 40–49 years attending for their first screening episode.

(ii) Number of participants aged 75 and over attending for their first screening episode.

(iii) Number of participants aged 40–49 years attending for a second or subsequent screening episode.

(iv) Number of participants aged 75 and over attending for a second or subsequent screening episode.

A.1, A.2, B.2, B.9.1, C.2

Formula Numerator / Denominator x 10,000

Specifications

- Select on reference period
- Count is of individual participants, not lesions.
- Calculate the denominator first. The numerator is a subset of the denominator, ie A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both, the numerator and the denominators.
- Age calculated on date of last screening in the reference period.
- A participant should only be counted once in the numerator and denominator. However, if the program's policy is to invite participants for rescreening after a diagnosis of breast cancer and a participant attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that participant at separate screening episodes during that period. While it is a rare event, if breast cancer was detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator.
- A screen–detected breast cancer is one that is histopathologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- In the case of a simultaneous diagnosis of DCIS and LCIS, the case should be counted as DCIS.
- In the case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive for the purpose of this indicator and therefore not included in the DCIS data set.
- This standard relates to all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- Participants who develop DCIS while on early review are not included in the DCIS detection rates if it is detected in the period 6–12 months after the completion of the screening episode.

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as 'Other DCIS').

Exclusions:

- Paget's disease (ICD–0–2 8540/3)
- Lobular carcinoma in situ (LCIS) (ICD–0–2 8520/2)

Algorithm

2.2.4 (i)

$$\frac{\text{[A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7=(F.4=2.1 to 2.4)))]}}{\text{[A.1 \& B.9.1=1 \& (last C.2 between start date \& end date) \& (C.2 — B.2≥40 \& ≤49)) at A.2]}} \times 10{,}000$$

2.2.4 (ii)

$$\frac{\text{[A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.7=(F.4=2.1 to 2.4)))]}}{\text{[A.1 \& B.9.1=1 \& (last C.2 between start date \& end date) \& C.2—B.2≥75)) at A.2]}} \times 10{,}000$$

2.2.4 (iii)

$$\frac{\text{[A.1 \& B.9.1≥2 \& ((F.1.1=2) \& (F.7=(F.4=2.1 to 2.4)))]}}{\text{[A.1 \& B.9.1≥2 \& ((last C.2 between start date \& end date) \& (C.2—B.2≥40 \& ≤49)) at A.2]}} \times 10{,}000$$

2.2.4 (iv)

$$\frac{\text{[A.1 \& B.9.1≥2 \& ((F.1.1=2) \& (F.7=(F.4=2.1 to 2.4)))]}}{\text{[A.1 \& B.9.1≥2 \& ((last C.2 between start date \& end date) \& (C.2—B.2≥75)) at A.2]}} \times 10{,}000$$

Notes

- Indicator is expressed as a rate per 10,000 participants screened.
- The calculation of this measure will produce four results (by age groups and by screening rounds).

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.3—The Service and/or SCU minimises the number of interval invasive breast cancers.

NAS Measure 2.3.1 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

Data Dictionary Measure

The number of women aged 50–74 years who are diagnosed with an interval invasive breast cancer between 0 and 364 days following a negative screening episode per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	A.5	Lesion number
	B.2	Date of birth
	B.7.1	Previous history of breast cancer
	B.9.1	Round number—State/Territory program
	B.10	Symptom status
	C.2	Date of first attendance for this episode
	C.5	Recommendation—screening
	D.1	Reason for assessment
	D.11.1	Recommendation—assessment
	D.11.2	Recommendation—number of months
	D.11.3	Date recommendation made
	E.12	Recommendation—definitive
	F.1.1	Reason for histopathology
	F.1.2	Date of diagnosis of interval cancer
	F.4	Histopathology of malignant lesion

More information on interval cancers

Interval cancers are invasive breast cancers that are diagnosed in the interval between the completion of a negative screening episode and the commencement of the next screening episode. For most participants, the next screening episode will occur around 24 months after the participant's previous negative screening episode, as the recommended screening interval for most participants in BreastScreen Australia is 24 months. The exception to this is participants on annual screens, for whom the next screening episode will occur around 12 months after the participant's previous negative screening episode.

An interval cancer may be:

- an aggressive breast cancer that emerges and grows very rapidly in the period between screening episodes
- a breast cancer that, due to the characteristics of the cancer or the breast tissue, is not visible on screening mammography and therefore not able to be detected
- a breast cancer that can be retrospectively detected on the previous screening mammogram.

The first two types of interval cancer described above are true interval cancers, and therefore do not represent any failure in detection; the third represents a failure of the screening process. Through the BreastScreen accreditation process, state and territory BreastScreen programs are required to audit interval cancers. On investigation, more than 80% are found to be true interval cancers.

Interval cancers may be detected outside BreastScreen Australia or through BreastScreen Australia, depending on the policies for screening symptomatic participants that exist in each State and Territory.

Interval cancers diagnosed outside BreastScreen Australia

The majority of interval cancers are detected outside BreastScreen Australia. In the typical scenario, following the completion of a negative screening episode, if a participant develops signs or symptoms of breast cancer, they will typically visit the participant's General Practitioner and from there be assessed in a diagnostic clinic. If it is found that they have developed breast cancer, details of this diagnosis will be provided to the cancer register in that state or territory. BreastScreen registers link to the cancer register in their state or territory on an annual basis, which allows them to discover any invasive breast cancers that were diagnosed in screened participants outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of the participant's previous negative screen (or within 364 days of the date of attendance of the participant's previous negative screen for participants on annual screens), this will be categorised as an interval cancer.

In some jurisdictions it is policy to refer a participant who attends for screening with significant symptoms to the participant's GP to have these investigated (rather than automatically recall the participant to assessment if there are no other mammographic signs). In some cases this may result in a diagnosis of breast cancer which, by definition, is considered to be an interval cancer.

Interval cancers diagnosed within BreastScreen Australia—early rescreen

More rarely, if a participant develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather than attending a diagnostic

clinic, they may return to BreastScreen Australia early to have their breast symptoms assessed through the Program.

This is called an ‘early rescreen’ if the participant’s date of attendance for this screen is <730 days after the date of attendance of the participant’s previous screen (or <365 days after the date of attendance of the participant’s previous screen for participants on annual screens).

If a participant attends BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen AND presents with a breast lump and/or clear or blood-stained nipple discharge AND has an invasive breast cancer detected in that same breast, this cancer will be categorised as an interval cancer.

Invasive breast cancers that are found in participants who attend BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen but do not adhere to the above conditions are categorised as screen-detected cancers, not interval cancers (that is, there needs to be a breast lump or clear or blood-stained nipple discharge in the breast in which the cancer was detected, not just a cancer detected in a participant at early rescreen). Participants with no breast symptoms are likely to be attending an early rescreen because it is more convenient for the participant to attend at that time, or for reasons related to available resources (for instance that may be when a mobile clinic is available).

Note that policies for screening symptomatic participants differ across States and Territories; some will redirect participants with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a participant for an early rescreen through BreastScreen Australia. The specifications above are to ensure that these cancers are captured and counted as interval cancers regardless of whether their detection is in a diagnostic clinic or through BreastScreen Australia.

Interval cancers diagnosed within BreastScreen Australia—early review

Also rarely, participants who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a participant for further assessment within 364 days of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within 182 days of the screening date is considered to be part of the screening episode and invasive breast cancers found as a result of the review are considered to be screen-detected. Early review carried out at 183 days or more from the date of screening (but less than 365 days), occurs after the screening episode is complete and invasive breast cancers found are considered to be interval cancers.

Interval cancers, regardless of where they are detected, are separated into those that are diagnosed in the first calendar year (0–364 days) following a negative screening episode, and those that are diagnosed in the second calendar year (365–729 days) following a negative screening episode.

This measure counts interval cancers that are diagnosed in the first calendar year following a negative screening episode.

Numerator

Sum all cases i to iii to derive the numerator.

i. The number of participants aged 50–74 years with an invasive breast cancer diagnosed outside BreastScreen Australia after completion of a negative

screening episode and before their next screen, with a date of diagnosis <365 days after the date of attendance of their previous screening episode

ii. The number of participants aged 50–74 years with an invasive breast cancer diagnosed by BreastScreen Australia at early rescreen <365 days after the date of attendance of their previous negative screening episode and who present with a breast lump and/or clear or blood-stained nipple discharge in the breast in which the breast cancer was diagnosed.

iii. The number of participants aged 50–74 years with an invasive breast cancer diagnosed by BreastScreen Australia at early review ≥183 days and <365 days after the date of attendance of their previous screening episode.

A.1, A.2, A.5, B.9.1, B.10, C.2, C.5, D.1, D.11.1, D.11.2, D.11.3, E.12, F.1.1, F.1.2, F.4

Denominator

The number of person-years at risk in the specified period for participants aged 50–74 years.

This is all participants aged 50–74 years who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12

Formula

Numerator / Denominator x 10,000

Specifications

Numerator—interval invasive breast cancers

- Invasive cancers diagnosed outside BreastScreen Australia in screened participants with a previous negative screening episode and a date of diagnosis <365 days after the date of attendance of their previous screening episode.
- Invasive cancer detected through BreastScreen Australia at early rescreen <365 days after the date of attendance of a previous negative screening episode where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Invasive cancers detected through BreastScreen Australia at early review ≥183 days and <365 days after the date of attendance of their previous screening episode.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.

Exclusions:

- Invasive breast cancer detected through BreastScreen Australia at early review <183 days from date of attendance of their previous screening episode.
- Exclude participants with a previous history of breast cancer.

Denominator—person-years at risk

- All participants screened aged 50–74 years who attended the Service and/or SCU for screening during the index year who have not reported a personal history of invasive cancer or DCIS.
- Participants who are recommended for annual rescreening are only at risk of interval cancer up to and including 364 days after the date of attendance of their previous negative screening episode.
- Participants who are recommended for routine rescreening are only at risk of interval cancer up to and including 729 days after the date of attendance of their previous negative screening episode.

To calculate participants years at risk

- Select on reference period
- Use A.1 and B.9.1 to ensure correct linking of data elements.
- Count is of individual participants, not lesions.
- Age calculated on date of attendance of last screening episode in the reference period.
- Exclude participants with a previous history of breast cancer.

Other

Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

Algorithm

2.3.1 (a) (i) Numerator

$$\frac{\begin{array}{c}\text{[A.1 \& B.9.1 \& ((C.5=1 or 2) or}\\ \text{(if C.5=3 or 4 or 5 \& D.11.1=1 or 2)) or}\\ \text{(if D.11.1=4 or 5 \& E.12=1 or 2) \&}\\ \text{((F.1.1=1 \& (F.1.2—C.2<365 days) \& (F.4=1.1 to 1.10))]}\end{array}}{} \times 10{,}000$$

2.3.1 (a) (ii) Numerator

$$\frac{\begin{array}{c}\text{[A.1 \& B.9.1 \& (((C.5=1 or 2) or ((C.5=3 or 4 or 5 \& D.11.1=1 or 2) or}\\ \text{(if D.11.1=4 or 5 \& E.12=1 or 2) \&}\\ \text{(next B.9.1 and C.2<365 days)) \&}\\ \text{where ((B.10=1 or 2 or 3 for A.5) \&}\\ \text{(F.4=1.1 to 1.10 for same A.5))) at A.2]}\end{array}}{} \times 10{,}000$$

2.3.1 (a) (iii) Numerator

$$\frac{\begin{array}{c}\text{[A.1 \& B.9.1 \& (((D.1=2 \& D.11.1=4 or 5) \&}\\ \text{(F.4=1.1 to 1.10)) or if ((D.11.1=3) \&}\\ \text{((F.1.2 between D.11.3 \& (D.11.3 + D.11.2) where}\\ \text{(D.11.3—C.2 + D.11.2≥183 days))) at A.2]}\end{array}}{} \times 10{,}000$$

Denominator

[A.1 & B.9.1 & ((C.2 between start & end date)
& (C.2—B2≥50 & ≤74) & (B.7.1=2) &
((C.5, D.11.1 or E.12=1 or 2) or (D.11.1 or E.12 = 3))) at A.2]

Notes

- Early rescreen is defined as a rescreen with a date of attendance <730 days after the date of attendance of a participant's previous screening episode for participants on two-yearly screens, or a rescreen with a date of attendance <365 days after the date of attendance of a participant's previous screening episode for participants on annual screens.
- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce three results.
- There is variability across jurisdictions as to whether symptomatic participants are screened.
- Coding should be checked to ensure that the date for F.1.1 Reason for histopathology have been coded correctly to identify each situation as listed under the numerator and in the specifications where an interval cancer has been diagnosed.
- For small services, data could be collected over consecutive 12-month periods to increase the number of participants screened before calculating the interval cancer detection rate, for a more meaningful result.
- NAS Measure 2.3.1 counts interval invasive breast cancers diagnosed in the first calendar year following a negative screening episode. NAS Measure 2.3.2 counts interval invasive breast cancers diagnosed in the second calendar year following a negative screening episode.
- A breast cancer detected as a result of internal or external review activities by a Service after a result of 'no evidence of breast cancer' has been issued to a participant is to be recorded as an interval cancer.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.3—The Service and/or SCU minimises the number of interval invasive breast cancers.

NAS Measure 2.3.1 (b)

<7.5 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

Data Dictionary Measure

The number of women aged 50–69 years who are diagnosed with an interval invasive breast cancer between 0 and 364 days following a negative screening episode per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	A.5	Lesion number
	B.2	Date of birth
	B.7.1	Previous history of breast cancer
	B.9.1	Round number—State/Territory program
	B.10	Symptom status
	C.2	Date of first attendance for this episode
	C.5	Recommendation—screening
	D.1	Reason for assessment
	D.11.1	Recommendation—assessment
	D.11.2	Recommendation—number of months
	D.11.3	Date recommendation made
	E.12	Recommendation—definitive
	F.1.1	Reason for histopathology
	F.1.2	Date of diagnosis of interval cancer
	F.4	Histopathology of malignant lesion

More information on interval cancers

Interval cancers are invasive breast cancers that are diagnosed in the interval between the completion of a negative screening episode and the commencement of the next screening episode. For most participants, the next screening episode will occur around 24 months after the participant's previous negative screening episode, as the recommended screening interval for most participants in BreastScreen Australia is 24 months. The exception to this is participants on annual screens, for whom the next screening episode will occur around 12 months after the participant's previous negative screening episode.

An interval cancer may be:

- an aggressive breast cancer that emerges and grows very rapidly in the period between screening episodes
- a breast cancer that, due to the characteristics of the cancer or the breast tissue, is not visible on screening mammography and therefore not able to be detected
- a breast cancer that can be retrospectively detected on the previous screening mammogram.

The first two types of interval cancer described above are true interval cancers, and therefore do not represent any failure in detection; the third represents a failure of the screening process. Through the BreastScreen accreditation process, state and territory BreastScreen programs are required to audit interval cancers. On investigation, more than 80% are found to be true interval cancers.

Interval cancers may be detected outside BreastScreen Australia or through BreastScreen Australia, depending on the policies for screening symptomatic participants that exist in each State and Territory.

Interval cancers diagnosed outside BreastScreen Australia

The majority of interval cancers are detected outside BreastScreen Australia. In the typical scenario, following the completion of a negative screening episode, if a participant develops signs or symptoms of breast cancer, they will typically visit their General Practitioner and from there be assessed in a diagnostic clinic. If it is found that they have developed breast cancer, details of this diagnosis will be provided to the cancer register in that state or territory. BreastScreen registers link to the cancer register in their state or territory on an annual basis, which allows them to discover any invasive breast cancers that were diagnosed in screened participants outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of the participant's previous negative screen (or within 364 days of the date of attendance of the participant's previous negative screen for participants on annual screens), this will be categorised as an interval cancer.

In some jurisdictions it is policy to refer a participant who attends for screening with significant symptoms to the participant's GP to have these investigated (rather than automatically recall the participant to assessment if there are no other mammographic signs). In some cases this may result in a diagnosis of breast cancer which, by definition, is considered to be an interval cancer.

Interval cancers diagnosed within BreastScreen Australia— early rescreen

More rarely, if a participant develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather than attending a diagnostic

clinic, they may return to BreastScreen Australia early to have their breast symptoms assessed through the Program.

This is called an ‘early rescreen’ if the participant’s date of attendance for this screen is <730 days after the date of attendance of the participant’s previous screen (or <365 days after the date of attendance of the participant’s previous screen for participants on annual screens).

If a participant attends BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen AND presents with a breast lump and/or clear or blood-stained nipple discharge AND has an invasive breast cancer detected in that same breast, this cancer will be categorised as an interval cancer.

Invasive breast cancers that are found in participants who attend BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen but do not adhere to the above conditions are categorised as screen-detected cancers, not interval cancers (that is, there needs to be a breast lump or clear or blood-stained nipple discharge in the breast in which the cancer was detected, not just a cancer detected in a participant at early rescreen). Participants with no breast symptoms are likely to be attending an early rescreen because it is more convenient for the participant to attend at that time, or for reasons related to available resources (for instance that may be when a mobile clinic is available).

Note that policies for screening symptomatic participants differ across States and Territories; some will redirect participants with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a participant for an early rescreen through BreastScreen Australia. The specifications above are to ensure that these cancers are captured and counted as interval cancers regardless of whether their detection is in a diagnostic clinic or through BreastScreen Australia.

Interval cancers diagnosed within BreastScreen Australia— early review

Also rarely, participants who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a participant for further assessment within 364 days of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within 182 days of the screening date is considered to be part of the screening episode and invasive breast cancers found as a result of the review are considered to be screen-detected. Early review carried out at 183 days or more from the date of screening (but less than 365 days), occurs after the screening episode is complete and invasive breast cancers found are considered to be interval cancers.

Interval cancers, regardless of where they are detected, are separated into those that are diagnosed in the first calendar year (0–364 days) following a negative screening episode, and those that are diagnosed in the second calendar year (365–729 days) following a negative screening episode.

This measure counts interval cancers that are diagnosed in the first calendar year following a negative screening episode.

Numerator

Sum all cases i to iii to derive the numerator.

i. The number of participants aged 50–69 years with an invasive breast cancer diagnosed outside BreastScreen Australia after completion of a negative

screening episode and before their next screen, with a date of diagnosis <365 days after the date of attendance of their previous screening episode.

ii. The number of participants aged 50–69 years with an invasive breast cancer diagnosed by BreastScreen Australia at early rescreen <365 days after the date of attendance of their previous negative screening episode and who present with a breast lump and/or clear or blood-stained nipple discharge in the breast in which the breast cancer was diagnosed.

iii. The number of participants aged 50–69 years with an invasive breast cancer diagnosed by BreastScreen Australia at early review ≥183 days and <365 days after the date of attendance of their previous screening episode.

A.1, A.2, A.5, B.9.1, B.10, C.2, C.5, D.1, D.11.1, D.11.2, D.11.3, E.12, F.1.1, F.1.2, F.4

Denominator

The number of person-years at risk in the specified period for participants aged 50–69 years.

This is all participants aged 50–69 years who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12

Formula

Numerator / Denominator x 10,000

Specifications

Numerator—interval invasive breast cancers

- Invasive cancers diagnosed outside BreastScreen Australia in screened participants with a previous negative screening episode and a date of diagnosis <365 days after the date of attendance of their previous screening episode.
- Invasive cancer detected through BreastScreen Australia at early rescreen <365 days after the date of attendance of a previous negative screening episode where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Invasive cancers detected through BreastScreen Australia at early review ≥183 days and <365 days after the date of attendance of their previous screening episode.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.

Exclusions:

- Invasive breast cancer detected through BreastScreen Australia at early review <183 days from date of attendance of their previous screening episode.
- Exclude participants with a previous history of breast cancer.

Denominator—person-years at risk

- All participants screened aged 50–69 years who attended the Service and/or SCU for screening during the index year who have not reported a personal history of invasive cancer or DCIS.
- Participants who are recommended for annual rescreening are only at risk of interval cancer up to and including 364 days after the date of attendance of their previous negative screening episode.
- Participants who are recommended for routine rescreening are only at risk of interval cancer up to and including 729 days after the date of attendance of their previous negative screening episode.

To calculate participants years at risk

- Select on reference period
- Use A.1 and B.9.1 to ensure correct linking of data elements.
- Count is of individual participants, not lesions.
- Age calculated on date of attendance of last screening episode in the reference period.
- Exclude participants with a previous history of breast cancer.

Other

Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

Algorithm

2.3.1 (b) (i) Numerator

$$\frac{\text{[A.1 \& B.9.1 \& ((C.5=1 or 2) or (if C.5=3 or 4 or 5 \& D.11.1=1 or 2)) or (if D.11.1=4 or 5 \& E.12=1 or 2) \& ((F.1.1=1 \& (F.1.2—C.2<365 days) \& (F.4=1.1 to 1.10))]}{}\ \text{x } 10{,}000$$

2.3.1 (b) (ii) Numerator

$$\frac{\text{[A.1 \& B.9.1 \& (((C.5=1 or 2) or ((C.5=3 or 4 or 5 \& D.11.1=1 or 2) or (if D.11.1=4 or 5 \& E.12=1 or 2) \& (next B.9.1 and C.2<365 days)) \& where ((B.10=1 or 2 or 3 for A.5) \& (F.4=1.1 to 1.10 for same A.5))) at A.2]}{}\ \text{x } 10{,}000$$

2.3.1 (b) (iii) Numerator

$$\frac{\text{[A.1 \& B.9.1 \& (((D.1=2 \& D.11.1=4 or 5) \& (F.4=1.1 to 1.10)) or if ((D.11.1=3) \& ((F.1.2 between D.11.3 \& (D.11.3 + D.11.2) where (D.11.3—C.2 + D.11.2≥183 days))) at A.2]}{}\ \text{x } 10{,}000$$

Denominator

[A.1 & B.9.1 & ((C.2 between start & end date)
& (C.2—B2≥50 & ≤69) & (B.7.1=2) &
((C.5, D.11.1 or E.12=1 or 2) or (D.11.1 or E.12 = 3))) at A.2]

Notes

- Early rescreen is defined as a rescreen with a date of attendance <730 days after the date of attendance of a participant's previous screening episode for participants on two-yearly screens, or a rescreen with a date of attendance <364 days after the date of attendance of a participant's previous screening episode for participants on annual screens.
- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce three results.
- There is variability across jurisdictions as to whether symptomatic participants are screened.
- Coding should be checked to ensure that the date for F.1.1 Reason for histopathology have been coded correctly to identify each situation as listed under the numerator and in the specifications where an interval cancer has been diagnosed.
- For small services, data could be collected over consecutive 12-month periods to increase the number of participants screened before calculating the interval cancer detection rate, for a more meaningful result.
- NAS Measure 2.3.1 counts interval invasive breast cancers diagnosed in the first calendar year following a negative screening episode. NAS Measure 2.3.2 counts interval invasive breast cancers diagnosed in the second calendar year following a negative screening episode.
- A breast cancer detected as a result of internal or external review activities by a Service after a result of 'no evidence of breast cancer' has been issued to a participant is to be recorded as an interval cancer.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.3—The Service and/or SCU minimises the number of interval invasive breast cancers.

NAS Measure 2.3.1 (c)

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the first calendar year following a negative screening episode.

Data Dictionary Measure

The number of women aged 40–49 years and 75 years and over who are diagnosed with an interval invasive breast cancer between 0 and 364 days following a negative screening episode per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	A.5	Lesion number
	B.2	Date of birth
	B.7.1	Previous history of breast cancer
	B.9.1	Round number—State/Territory program
	B.10	Symptom status
	C.2	Date of first attendance for this episode
	C.5	Recommendation—screening
	D.1	Reason for assessment
	D.11.1	Recommendation—assessment
	D.11.2	Recommendation—number of months
	D.11.3	Date recommendation made
	E.12	Recommendation—definitive
	F.1.1	Reason for histopathology
	F.1.2	Date of diagnosis of interval cancer
	F.4	Histopathology of malignant lesion

More information on interval cancers

Interval cancers are invasive breast cancers that are diagnosed in the interval between the completion of a negative screening episode and the commencement of the next screening episode. For most participants, the next screening episode will occur around 24 months after the participant's previous negative screening episode, as the recommended screening interval for most participants in BreastScreen Australia is 24 months. The exception to this is participants on annual screens, for whom the next screening episode will occur around 12 months after the participant's previous negative screening episode.

An interval cancer may be:

- an aggressive breast cancer that emerges and grows very rapidly in the period between screening episodes
- a breast cancer that, due to the characteristics of the cancer or the breast tissue, is not visible on screening mammography and therefore not able to be detected
- a breast cancer that can be retrospectively detected on the previous screening mammogram.

The first two types of interval cancer described above are true interval cancers, and therefore do not represent any failure in detection; the third represents a failure of the screening process. Through the BreastScreen accreditation process, state and territory BreastScreen programs are required to audit interval cancers. On investigation, more than 80% are found to be true interval cancers.

Interval cancers may be detected outside BreastScreen Australia or through BreastScreen Australia, depending on the policies for screening symptomatic participants that exist in each State and Territory.

Interval cancers diagnosed outside BreastScreen Australia

The majority of interval cancers are detected outside BreastScreen Australia. In the typical scenario, following the completion of a negative screening episode, if a participant develops signs or symptoms of breast cancer, they will typically visit their General Practitioner and from there be assessed in a diagnostic clinic. If it is found that they have developed breast cancer, details of this diagnosis will be provided to the cancer register in that state or territory. BreastScreen registers link to the cancer register in their state or territory on an annual basis, which allows them to discover any invasive breast cancers that were diagnosed in screened participants outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of the participant's previous negative screen (or within 364 days of the date of attendance of the participant's previous negative screen for participants on annual screens), this will be categorised as an interval cancer.

In some jurisdictions it is policy to refer a participant who attends for screening with significant symptoms to the participant's GP to have these investigated (rather than automatically recall the participant to assessment if there are no other mammographic signs). In some cases this may result in a diagnosis of breast cancer which, by definition, is considered to be an interval cancer.

Interval cancers diagnosed within BreastScreen Australia—early rescreen

More rarely, if a participant develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather than attending a diagnostic

clinic, they may return to BreastScreen Australia early to have their breast symptoms assessed through the Program.

This is called an ‘early rescreen’ if the participant’s date of attendance for this screen is <730 days after the date of attendance of the participant’s previous screen (or <365 days after the date of attendance of the participant’s previous screen for participants on annual screens).

If a participant attends BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen AND presents with a breast lump and/or clear or blood-stained nipple discharge AND has an invasive breast cancer detected in that same breast, this cancer will be categorised as an interval cancer.

Invasive breast cancers that are found in participants who attend BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen but do not adhere to the above conditions are categorised as screen-detected cancers, not interval cancers (that is, there needs to be a breast lump or clear or blood-stained nipple discharge in the breast in which the cancer was detected, not just a cancer detected in a participant at early rescreen). Participants with no breast symptoms are likely to be attending an early rescreen because it is more convenient for the participant to attend at that time, or for reasons related to available resources (for instance that may be when a mobile clinic is available).

Note that policies for screening symptomatic participants differ across States and Territories; some will redirect participants with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a participant for an early rescreen through BreastScreen Australia. The specifications above are to ensure that these cancers are captured and counted as interval cancers regardless of whether their detection is in a diagnostic clinic or through BreastScreen Australia.

Interval cancers diagnosed within BreastScreen Australia—early review

Also rarely, participants who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a participant for further assessment within 364 days of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within 182 days of the screening date is considered to be part of the screening episode and invasive breast cancers found as a result of the review are considered to be screen-detected. Early review carried out at 183 days or more from the date of screening (but less than 365 days), occurs after the screening episode is complete and invasive breast cancers found are considered to be interval cancers.

Interval cancers, regardless of where they are detected, are separated into those that are diagnosed in the first calendar year (0–364 days) following a negative screening episode, and those that are diagnosed in the second calendar year (365–729 days) following a negative screening episode.

This measure counts interval cancers that are diagnosed in the first calendar year following a negative screening episode.

Numerator

(i) The number of participants aged 40–49 years with an interval invasive breast cancer diagnosed <365 days after the date of attendance of their previous screening episode.

(ii) The number of participants aged 75 years and over with an interval invasive breast cancer diagnosed <365 days after the date of attendance of their previous screening episode.

A.1, A.2, A.5, B.9.1, B.10, C.2, C.5, D.1, D.11.1, D.11.2, D.11.3, E.12, F.1.1, F.1.2, F.4

Denominator

(i) The number of person-years at risk in the specified period for participants aged 40–49 years.
This is all participants aged 40–49 years who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

(ii) The number of person-years at risk in the specified period for participants aged 75 years and over.
This is all participants aged 75 years and over who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12

Specifications

See NAS Measure 2.3.1 (a).

Algorithm

Calculate as for Standard 2.3.1 (a) and replace:

(i) (C.2 – B2 ≥50 & ≤74) with (C.2 – B2 ≥40 & ≤49)

- (C.2 – B2 ≥50 & ≤74) with (C.2 – B2 ≥75).

Notes

- See NAS Measures 2.3.1 (a).
- The calculation of this measure will produce two results.
- A breast cancer detected as a result of internal or external review activities by a Service after a result of ‘no evidence of breast cancer’ has been issued to a participant is to be recorded as an interval cancer.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.3—The Service and/or SCU minimises the number of interval invasive breast cancers.

NAS Measure 2.3.2 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

Data Dictionary Measure

The number of women aged 50–74 years who are diagnosed with an interval invasive breast cancer between 365 and 729 days following a negative screening episode per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	A.5	Lesion number
	B.2	Date of birth
	B.7.1	Previous history of breast cancer
	B.9.1	Round number—State/Territory program
	B.10	Symptom status
	C.2	Date of first attendance for this episode
	C.5	Recommendation—screening
	D.11.1	Recommendation—assessment
	E.12	Recommendation—definitive
	F.1.1	Reason for histopathology
	F.1.2	Date of diagnosis of interval cancer
	F.4	Histopathology of malignant lesion

More information on interval cancers

Interval cancers are invasive breast cancers that are diagnosed in the interval between the completion of a negative screening episode and the commencement of the next screening episode. For most participants, the next screening episode will occur around 24 months after the participant's previous negative screening episode, as the recommended screening interval for most participants in BreastScreen Australia is 24 months. The exception to this is participants on annual screens, for whom the next screening episode will occur around 12 months after the participant's previous negative screening episode.

An interval cancer may be:

- an aggressive breast cancer that emerges and grows very rapidly in the period between screening episodes
- a breast cancer that, due to the characteristics of the cancer or the breast tissue, is not visible on screening mammography and therefore not able to be detected
- a breast cancer that can be retrospectively detected on the previous screening mammogram.

The first two types of interval cancer described above are true interval cancers, and therefore do not represent any failure in detection; the third represents a failure of the screening process. Through the BreastScreen accreditation process, state and territory BreastScreen programs are required to audit interval cancers. On investigation, more than 80% are found to be true interval cancers.

Interval cancers may be detected outside BreastScreen Australia or through BreastScreen Australia, depending on the policies for screening symptomatic participants that exist in each State and Territory.

Interval cancers diagnosed outside BreastScreen Australia

The majority of interval cancers are detected outside BreastScreen Australia. In the typical scenario, following the completion of a negative screening episode, if a participant develops signs or symptoms of breast cancer, they will typically visit their General Practitioner and from there be assessed in a diagnostic clinic. If it is found that they have developed breast cancer, details of this diagnosis will be provided to the cancer register in that state or territory. BreastScreen registers link to the cancer register in their state or territory on an annual basis, which allows them to discover any invasive breast cancers that were diagnosed in screened participants outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of the participant's previous negative screen (or within 364 days of the date of attendance of the participant's previous negative screen for participants on annual screens), this will be categorised as an interval cancer.

In some jurisdictions it is policy to refer a participant who attends for screening with significant symptoms to the participant's GP to have these investigated (rather than automatically recall the participant to assessment if there are no other mammographic signs). In some cases this may result in a diagnosis of breast cancer which, by definition, is considered to be an interval cancer.

Interval cancers diagnosed within BreastScreen Australia—early rescreen

More rarely, if a participant develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather than attending a diagnostic

clinic, they may return to BreastScreen Australia early to have their breast symptoms assessed through the Program.

This is called an ‘early rescreen’ if the participant’s date of attendance for this screen is <730 days after the date of attendance of the participant’s previous screen (or <365 days after the date of attendance of the participant’s previous screen for participants on annual screens).

If a participant attends BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen AND presents with a breast lump and/or clear or blood-stained nipple discharge AND has an invasive breast cancer detected in that same breast, this cancer will be categorised as an interval cancer.

Invasive breast cancers that are found in participants who attend BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen but do not adhere to the above conditions are categorised as screen-detected cancers, not interval cancers (that is, there needs to be a breast lump or clear or blood-stained nipple discharge in the breast in which the cancer was detected, not just a cancer detected in a participant at early rescreen). Participants with no breast symptoms are likely to be attending an early rescreen because it is more convenient for the participant to attend at that time, or for reasons related to available resources (for instance that may be when a mobile clinic is available).

Note that policies for screening symptomatic participants differ across States and Territories; some will redirect participants with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a participant for an early rescreen through BreastScreen Australia. The specifications above are to ensure that these cancers are captured and counted as interval cancers regardless of whether their detection is in a diagnostic clinic or through BreastScreen Australia.

Interval cancers diagnosed within BreastScreen Australia—early review

Also rarely, participants who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a participant for further assessment within 364 days of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within 182 days of the screening date is considered to be part of the screening episode and invasive breast cancers found as a result of the review are considered to be screen-detected. Early review carried out at 183 days or more from the date of screening (but less than 365 days), occurs after the screening episode is complete and invasive breast cancers found are considered to be interval cancers.

Interval cancers, regardless of where they are detected, are separated into those that are diagnosed in the first calendar year (0–364 days) following a negative screening episode, and those that are diagnosed in the second calendar year (365–729 days) following a negative screening episode.

This measure counts interval cancers that are diagnosed in the first calendar year following a negative screening episode.

Numerator

Sum cases i and ii to derive the numerator.

i. The number of participants aged 50–74 years with an invasive breast cancer diagnosed outside BreastScreen Australia after completion of a negative screening episode and before their next screen, with a date of diagnosis

≥365 days and <730 days after the date of attendance of their previous screening episode.

ii. The number of participants aged 50–74 years with an invasive breast cancer diagnosed by BreastScreen Australia at early rescreen ≥365 days and <730 days after the date of attendance of their previous negative screening episode and who present with a breast lump and/or clear or blood-stained nipple discharge in the breast in which the breast cancer was diagnosed.

A.1, A.2, A.5, B.9.1, B.10, C.2, C.5, D.11.1, E.12, F.1.1, F.1.2, F.4

Denominator

The number of person-years at risk in the specified period for participants aged 50–74 years.

This is all participants aged 50–74 years who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12

Formula

Numerator / Denominator x 10,000

Specifications

Numerator—interval invasive breast cancers

- Invasive cancers diagnosed outside BreastScreen Australia in screened participants with a previous negative screening episode and a date of diagnosis ≥365 days and <730 days after the date of attendance of their previous screening episode.
- Invasive cancer detected through BreastScreen Australia at early rescreen ≥365 days and <730 days after the date of attendance of a previous negative screening episode where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.

Exclusions:

- Exclude participants with a previous history of breast cancer.

Denominator—person-years at risk

- All participants screened aged 50–74 years who attended the Service and/or SCU for screening during the index year who have not reported a personal history of invasive cancer or DCIS.
- Participants who are recommended for annual rescreening are only at risk of interval cancer up to and including 364 days after the date of attendance of their previous negative screening episode.

- Participants who are recommended for routine rescreening are only at risk of interval cancer up to and including 729 days after the date of attendance of their previous negative screening episode.

To calculate participants years at risk

- Select on reference period
- Use A.1 and B.9.1 to ensure correct linking of data elements.
- Count is of individual participants, not lesions.
- Age calculated on date of attendance of last screening episode in the reference period.
- Exclude participants with a previous history of breast cancer.

Other

Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

Algorithm

2.3.2 (a) (i) Numerator

$$\frac{\begin{array}{c}[\text{A.1 \& B.9.1 \& ((C.5=1 or 2) or}\\ \text{(if C.5=3 or 4 or 5 \& D.11.1=1 or 2)) or}\\ \text{(D.11.1=4 or 5 \& E.12=1 or 2)) \&}\\ \text{((F.1.1=1 \& (F.1.2—C.2}\geq\text{365 days \& <730 days) \&}\\ \text{(F.4=1.1 to 1.10))]}\end{array}}{\begin{array}{c}\text{Denominator}\\ \\ [\text{A.1 \& B.9.1 \& ((C.2 between start \& end date) \&}\\ \text{(C.2—B2}\geq\text{50 \& }\leq\text{74) \&}\\ \text{(B.7.1=2) \& ((C.5=1) or (if C.5=3 or 4 or 5 then D.11.1=1) or}\\ \text{(if D.11.1=4 or 5 then E.12=1))) at A.2]}\end{array}} \times 10{,}000$$

2.3.2 (a) (ii) Numerator

$$\frac{\begin{array}{c}[\text{A.1 \& B.9.1 \& (((C.5=1) or (C.5=3 or 4 or 5 \& D.11.1=1) or}\\ \text{(D.11.1=4 or 5 \& E.12=1)) \&}\\ \text{(next B.9.1 and C.2}\geq\text{365 days \& <730 days) \&}\\ \text{where ((B.10=1 or 2 or 3 for A.5) \&}\\ \text{(F.4=1.1 to 1.10 for same A.5))) at A.2]}\end{array}}{\begin{array}{c}\text{Denominator}\\ \\ [\text{A.1 \& B.9.1 \& ((C.2 between start \& end date) \&}\\ \text{(C.2—B2}\geq\text{50 \& }\leq\text{74) \&}\\ \text{(B.7.1=2) \& ((C.5=1) or (if C.5=3 or 4 or 5 then D.11.1=1) or}\\ \text{(if D.11.1=4 or 5 then E.12=1))) at A.2]}\end{array}} \times 10{,}000$$

Notes

- Early rescreen is defined as a rescreen with a date of attendance <730 days after the date of attendance of a participant's previous screening episode for participants on two-yearly screens, or a rescreen with a date of attendance <364 days after the date of attendance of a participant's previous screening episode for participants on annual screens.
- Indicator is expressed per 10,000 participants screened.

- The calculation of this measure will produce two results.
- There is variability across jurisdictions as to whether symptomatic participants are screened.
- Coding should be checked to ensure that the date for F.1.1 Reason for histopathology have been coded correctly to identify each situation as listed under the numerator and in the specifications where an interval cancer has been diagnosed.
- For small services, data could be collected over consecutive 12-month periods to increase the number of participants screened before calculating the interval cancer detection rate, for a more meaningful result.
- NAS Measure 2.3.1 counts interval invasive breast cancers diagnosed in the first calendar year following a negative screening episode. NAS Measure 2.3.2 counts interval invasive breast cancers diagnosed in the second calendar year following a negative screening episode.
- A breast cancer detected as a result of internal or external review activities by a Service after a result of ‘no evidence of breast cancer’ has been issued to a participant is to be recorded as an interval cancer.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.3—The Service and/or SCU minimises the number of interval invasive breast cancers.

NAS Measure 2.3.2 (b)

≤15 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

Data Dictionary Measure

The number of women aged 50–69 years who are diagnosed with an interval invasive breast cancer between 365 and 729 days following a negative screening episode per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier A.5 Lesion number B.2 Date of birth B.7.1 Previous history of breast cancer B.9.1 Round number—State/Territory program B.10 Symptom status C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive F.1.1 Reason for histopathology F.1.2 Date of diagnosis of interval cancer F.4 Histopathology of malignant lesion

More information on interval cancers

Interval cancers are invasive breast cancers that are diagnosed in the interval between the completion of a negative screening episode and the commencement of the next screening episode. For most participants, the next screening episode will occur around 24 months after the participant's previous negative screening episode, as the recommended screening interval for most participants in BreastScreen Australia is 24 months. The exception to this is participants on annual screens, for whom the next screening episode will occur around 12 months after the participant's previous negative screening episode.

An interval cancer may be:

- an aggressive breast cancer that emerges and grows very rapidly in the period between screening episodes
- a breast cancer that, due to the characteristics of the cancer or the breast tissue, is not visible on screening mammography and therefore not able to be detected
- a breast cancer that can be retrospectively detected on the previous screening mammogram.

The first two types of interval cancer described above are true interval cancers, and therefore do not represent any failure in detection; the third represents a failure of the screening process. Through the BreastScreen accreditation process, state and territory BreastScreen programs are required to audit interval cancers. On investigation, more than 80% are found to be true interval cancers.

Interval cancers may be detected outside BreastScreen Australia or through BreastScreen Australia, depending on the policies for screening symptomatic participants that exist in each State and Territory.

Interval cancers diagnosed outside BreastScreen Australia

The majority of interval cancers are detected outside BreastScreen Australia. In the typical scenario, following the completion of a negative screening episode, if a participant develops signs or symptoms of breast cancer, they will typically visit their General Practitioner and from there be assessed in a diagnostic clinic. If it is found that they have developed breast cancer, details of this diagnosis will be provided to the cancer register in that state or territory. BreastScreen registers link to the cancer register in their state or territory on an annual basis, which allows them to discover any invasive breast cancers that were diagnosed in screened participants outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of the participant's previous negative screen (or within 364 days of the date of attendance of the participant's previous negative screen for participants on annual screens), this will be categorised as an interval cancer.

In some jurisdictions it is policy to refer a participant who attends for screening with significant symptoms to the participant's GP to have these investigated (rather than automatically recall the participant to assessment if there are no other mammographic signs). In some cases this may result in a diagnosis of breast cancer which, by definition, is considered to be an interval cancer.

Interval cancers diagnosed within BreastScreen Australia—early rescreen

More rarely, if a participant develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather than attending a diagnostic clinic, they may return to BreastScreen Australia early to have their breast symptoms assessed through the Program.

This is called an 'early rescreen' if the participant's date of attendance for this screen is <730 days after the date of attendance of the participant's previous screen (or <365 days after the date of attendance of the participant's previous screen for participants on annual screens).

If a participant attends BreastScreen Australia <730 days after the date of attendance of the participant's previous negative screen AND presents with a breast lump and/or clear or blood-stained nipple discharge AND has an invasive breast cancer detected in that same breast, this cancer will be categorised as an interval cancer.

Invasive breast cancers that are found in participants who attend BreastScreen Australia <730 days after the date of attendance of the participant's previous negative screen but do not adhere to the above conditions are categorised as screen-detected cancers, not

interval cancers (that is, there needs to be a breast lump or clear or blood-stained nipple discharge in the breast in which the cancer was detected, not just a cancer detected in a participant at early rescreen). Participants with no breast symptoms are likely to be attending an early rescreen because it is more convenient for the participant to attend at that time, or for reasons related to available resources (for instance that may be when a mobile clinic is available).

Note that policies for screening symptomatic participants differ across States and Territories; some will redirect participants with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a participant for an early rescreen through BreastScreen Australia. The specifications above are to ensure that these cancers are captured and counted as interval cancers regardless of whether their detection is in a diagnostic clinic or through BreastScreen Australia.

Interval cancers diagnosed within BreastScreen Australia—early review

Also rarely, participants who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a participant for further assessment within 364 days of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within 182 days of the screening date is considered to be part of the screening episode and invasive breast cancers found as a result of the review are considered to be screen-detected. Early review carried out at 183 days or more from the date of screening (but less than 365 days), occurs after the screening episode is complete and invasive breast cancers found are considered to be interval cancers.

Interval cancers, regardless of where they are detected, are separated into those that are diagnosed in the first calendar year (0–364 days) following a negative screening episode, and those that are diagnosed in the second calendar year (365–729 days) following a negative screening episode.

This measure counts interval cancers that are diagnosed in the first calendar year following a negative screening episode.

Numerator

Sum cases i and ii to derive the numerator.

i. The number of participants aged 50–69 years with an invasive breast cancer diagnosed outside BreastScreen Australia after completion of a negative screening episode and before their next screen, with a date of diagnosis ≥365 days and <730 days after the date of attendance of their previous screening episode.

ii. The number of participants aged 50–69 years with an invasive breast cancer diagnosed by BreastScreen Australia at early rescreen ≥365 days and <730 days after the date of attendance of their previous negative screening episode and who present with a breast lump and/or clear or blood-stained nipple discharge in the breast in which the breast cancer was diagnosed.

A.1, A.2, A.5, B.9.1, B.10, C.2, C.5, D.11.1, E.12, F.1.1, F.1.2, F.4

Denominator

The number of person-years at risk in the specified period for participants aged 50–74 years.

This is all participants aged 50–69 years who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12

Formula

Numerator / Denominator x 10,000

Specifications

Numerator—interval invasive breast cancers

- Invasive cancers diagnosed outside BreastScreen Australia in screened participants with a previous negative screening episode and a date of diagnosis ≥365 days and <730 days after the date of attendance of their previous screening episode.
- Invasive cancer detected through BreastScreen Australia at early rescreen ≥365 days and <730 days after the date of attendance of a previous negative screening episode where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.
- Paget's disease is only included if an invasive component is present.

Exclusions:

- Exclude participants with a previous history of breast cancer.

Denominator—person-years at risk

- All participants screened aged 50–69 years who attended the Service and/or SCU for screening during the index year who have not reported a personal history of invasive cancer or DCIS.
- Participants who are recommended for annual rescreening are only at risk of interval cancer up to and including 364 days after the date of attendance of their previous negative screening episode.
- Participants who are recommended for routine rescreening are only at risk of interval cancer up to and including 729 days after the date of attendance of their previous negative screening episode.

To calculate participants years at risk

- Select on reference period
- Use A.1 and B.9.1 to ensure correct linking of data elements.
- Count is of individual participants, not lesions.
- Age calculated on date of attendance of last screening episode in the reference period.
- Exclude participants with a previous history of breast cancer.

Other

Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

Algorithm

2.3.2 (b) (i) Numerator

$$\frac{\text{[A.1 \& B.9.1 \& ((C.5=1 or 2) or (if C.5=3 or 4 or 5 \& D.11.1=1 or 2)) or (D.11.1=4 or 5 \& E.12=1 or 2)) \& ((F.1.1=1 \& (F.1.2—C.2≥365 days \& <730 days) \& (F.4=1.1 to 1.10))]}{\text{[A.1 \& B.9.1 \& ((C.2 between start \& end date) \& (C.2—B2≥50 \& ≤69) \& (B.7.1=2) \& ((C.5=1) or (if C.5=3 or 4 or 5 then D.11.1=1) or (if D.11.1=4 or 5 then E.12=1))) at A.2]}} \times 10{,}000$$

2.3.2 (b) (ii) Numerator

$$\frac{\text{[A.1 \& B.9.1 \& (((C.5=1) or (C.5=3 or 4 or 5 \& D.11.1=1) or (D.11.1=4 or 5 \& E.12=1)) \& (next B.9.1 and C.2≥365 days \& <730 days) \& where ((B.10=1 or 2 or 3 for A.5) \& (F.4=1.1 to 1.10 for same A.5))) at A.2]}{\text{[A.1 \& B.9.1 \& ((C.2 between start \& end date) \& (C.2—B2≥50 \& ≤69) \& (B.7.1=2) \& ((C.5=1) or (if C.5=3 or 4 or 5 then D.11.1=1) or (if D.11.1=4 or 5 then E.12=1))) at A.2]}} \times 10{,}000$$

Denominator

Notes

- Early rescreen is defined as a rescreen with a date of attendance <730 days after the date of attendance of a participant's previous screening episode for participants on two-yearly screens, or a rescreen with a date of attendance <364 days after the date of attendance of a participant's previous screening episode for participants on annual screens.
- Indicator is expressed per 10,000 participants screened.
- The calculation of this measure will produce two results.
- There is variability across jurisdictions as to whether symptomatic participants are screened.
- Coding should be checked to ensure that the date for F.1.1 Reason for histopathology have been coded correctly to identify each situation as listed under the numerator and in the specifications where an interval cancer has been diagnosed.
- For small services, data could be collected over consecutive 12-month periods to increase the number of participants screened before calculating the interval cancer detection rate, for a more meaningful result.
- NAS Measure 2.3.1 counts interval invasive breast cancers diagnosed in the first calendar year following a negative screening episode. NAS Measure 2.3.2 counts interval invasive breast cancers diagnosed in the second calendar year following a negative screening episode.
- A breast cancer detected as a result of internal or external review activities by a Service after a result of 'no evidence of breast cancer' has been issued to a participant is to be recorded as an interval cancer.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.3—The Service and/or SCU minimises the number of interval invasive breast cancers.

NAS Measure 2.3.2 (c)

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for screening who are diagnosed with an interval invasive breast cancer in the second calendar year following a negative screening episode.

Data Dictionary Measure

The number of women aged 40–49 years and 75 years and over who are diagnosed with an interval invasive breast cancer between 365 and 729 days following a negative screening episode per 10,000 women screened.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.	
Data collection	BreastScreen Australia data dictionary	
Data source	State and territory BreastScreen registers	
Data elements	A.1	Client identifier number
	A.2	Screening unit identifier
	A.5	Lesion number
	B.2	Date of birth
	B.7.1	Previous history of breast cancer
	B.9.1	Round number—State/Territory program
	B.10	Symptom status
	C.2	Date of first attendance for this episode
	C.5	Recommendation—screening
	D.11.1	Recommendation—assessment
	E.12	Recommendation—definitive
	F.1.1	Reason for histopathology
	F.1.2	Date of diagnosis of interval cancer
	F.4	Histopathology of malignant lesion

More information on interval cancers

Interval cancers are invasive breast cancers that are diagnosed in the interval between the completion of a negative screening episode and the commencement of the next screening episode. For most participants, the next screening episode will occur around 24 months after the participant's previous negative screening episode, as the recommended screening interval for most participants in BreastScreen Australia is 24 months. The exception to this is participants on annual screens, for whom the next screening episode will occur around 12 months after the participant's previous negative screening episode.

An interval cancer may be:

- an aggressive breast cancer that emerges and grows very rapidly in the period between screening episodes
- a breast cancer that, due to the characteristics of the cancer or the breast tissue, is not visible on screening mammography and therefore not able to be detected
- a breast cancer that can be retrospectively detected on the previous screening mammogram.

The first two types of interval cancer described above are true interval cancers, and therefore do not represent any failure in detection; the third represents a failure of the screening process. Through the BreastScreen accreditation process, state and territory BreastScreen programs are required to audit interval cancers. On investigation, more than 80% are found to be true interval cancers.

Interval cancers may be detected outside BreastScreen Australia or through BreastScreen Australia, depending on the policies for screening symptomatic participants that exist in each State and Territory.

Interval cancers diagnosed outside BreastScreen Australia

The majority of interval cancers are detected outside BreastScreen Australia. In the typical scenario, following the completion of a negative screening episode, if a participant develops signs or symptoms of breast cancer, they will typically visit their General Practitioner and from there be assessed in a diagnostic clinic. If it is found that they have developed breast cancer, details of this diagnosis will be provided to the cancer register in that state or territory. BreastScreen registers link to the cancer register in their state or territory on an annual basis, which allows them to discover any invasive breast cancers that were diagnosed in screened participants outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of the participant's previous negative screen (or within 364 days of the date of attendance of the participant's previous negative screen for participants on annual screens), this will be categorised as an interval cancer.

In some jurisdictions it is policy to refer a participant who attends for screening with significant symptoms to the participant's GP to have these investigated (rather than automatically recall the participant to assessment if there are no other mammographic signs). In some cases this may result in a diagnosis of breast cancer which, by definition, is considered to be an interval cancer.

Interval cancers diagnosed within BreastScreen Australia—early rescreen

More rarely, if a participant develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather than attending a diagnostic

clinic, they may return to BreastScreen Australia early to have their breast symptoms assessed through the Program.

This is called an ‘early rescreen’ if the participant’s date of attendance for this screen is <730 days after the date of attendance of the participant’s previous screen (or <365 days after the date of attendance of the participant’s previous screen for participants on annual screens).

If a participant attends BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen AND presents with a breast lump and/or clear or blood-stained nipple discharge AND has an invasive breast cancer detected in that same breast, this cancer will be categorised as an interval cancer.

Invasive breast cancers that are found in participants who attend BreastScreen Australia <730 days after the date of attendance of the participant’s previous negative screen but do not adhere to the above conditions are categorised as screen-detected cancers, not interval cancers (that is, there needs to be a breast lump or clear or blood-stained nipple discharge in the breast in which the cancer was detected, not just a cancer detected in a participant at early rescreen). Participants with no breast symptoms are likely to be attending an early rescreen because it is more convenient for the participant to attend at that time, or for reasons related to available resources (for instance that may be when a mobile clinic is available).

Note that policies for screening symptomatic participants differ across States and Territories; some will redirect participants with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a participant for an early rescreen through BreastScreen Australia. The specifications above are to ensure that these cancers are captured and counted as interval cancers regardless of whether their detection is in a diagnostic clinic or through BreastScreen Australia.

Interval cancers diagnosed within BreastScreen Australia—early review

Also rarely, participants who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a participant for further assessment within 364 days of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within 182 days of the screening date is considered to be part of the screening episode and invasive breast cancers found as a result of the review are considered to be screen-detected. Early review carried out at 183 days or more from the date of screening (but less than 365 days), occurs after the screening episode is complete and invasive breast cancers found are considered to be interval cancers.

Interval cancers, regardless of where they are detected, are separated into those that are diagnosed in the first calendar year (0–364 days) following a negative screening episode, and those that are diagnosed in the second calendar year (365–729 days) following a negative screening episode.

This measure counts interval cancers that are diagnosed in the first calendar year following a negative screening episode.

Numerator

(i) The number of participants aged 40–49 years with an interval invasive breast cancer diagnosed ≥365 days and <730 days after the date of attendance of their previous screening episode.

(ii) The number of participants aged 75 years and over with an interval invasive breast cancer diagnosed ≥365 days and <730 days after the date of attendance of their previous screening episode.

A.1, A.2, A.5, B.9.1, B.10, C.2, C.5, D.11.1, E.12, F.1.1, F.1.2, F.4

Denominator

(i) The number of person-years at risk in the specified period for participants aged 40–49 years.

This is all participants aged 40–49 years who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

(ii) The number of person-years at risk in the specified period for participants aged 75 years and over.

This is all participants aged 75 years and over who attended the Service and/or SCU for screening during the index year who have not had a previous history of breast cancer.

A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12

Specifications

See NAS Measure 2.3.2 (a)

Algorithm

Calculate as for Standard 2.3.2 (a) and replace:

(i) (C.2 – B2 ≥50 & ≤74) with (C.2 – B2 ≥40 & ≤49).
(ii) (C.2 – B2 ≥50 & ≤74) with (C.2 – B2 ≥75).

Notes

- See NAS Measure 2.3.2 (a)
- The calculation of this measure will produce two results.
- A breast cancer detected as a result of internal or external review activities by a Service after a result of 'no evidence of breast cancer' has been issued to a participant is to be recorded as an interval cancer.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.4—The Service and/or SCU ensures high quality screen reading.

NAS Measure 2.4.1

All screen readers read at least 2,000 mammographic screening cases within the Program per year, or on a pro-rata basis if they are on leave or only read for part of the year.

Where a reader reads for less than 3 months of the year, they may be excluded from the NAS calculation if the reason is documented.

Readers who are excluded or prorated should be listed with the reason in either the 'Response by Service' document or 'Areas of Under-performance' section.

Data Dictionary Measure

The number of mammographic screening cases read by readers per year.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.6 Service provider identifier
Numerator	The number of cases read by each reader. A.1, A.6
Denominator	Not applicable
Formula	Number of cases read by each reader.
Specifications	• Select on reference period. • Count is of number of cases read. • Cases of both symptomatic and asymptomatic participants to be counted. • To identify all images read, select from all relevant services, as a reader may read for more than one service.
Algorithm	For each A.6 (ΣA.1)
Notes	• Indicator is expressed as the number of cases read per reader. • The result of this calculation should be presented as two components: – number of images read by each reader – the number of readers who meet the measure. • C.2 Date of first attendance for this episode can be used to select cases within a 12-month period if required.

- Readers to be evaluated on a pro-rata basis if they are employed part way through the year or if they are on approved leave for part of the year.
- Readers not to be evaluated on a pro-rata basis if they are employed for a full year but do not have a legitimate reason for only reading for part of the year (and not reaching the minimum number of cases).

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.5—The Service and/or SCU ensures high quality imaging.

NAS Measure 2.5.1

The Service and/or SCU monitors and reports the percentage of women who have up to 4 images per screen, including technical repeats.

Data Dictionary Measure

The percentage of women in any 12-month period who have up to 4 images per screen, including technical repeats.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.3.1 Total number of images used
Numerator	The number of screening episodes among participants where the participant have up to 4 images per screen. A.1, C.3.1
Denominator	Number of screening episodes among participants. A.1, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count all screening episodes for each participant in the reference period. • Technical repeats to be included with total number of images. • The calculation gives the per cent of participants who had up to 4 images per screen. • Where this element is unmet, the Service and/or SCU will provide additional information on the dosage used.
Algorithm	$\frac{\text{For each A.1 (C.3.1>0 and ≤4)}}{\text{[A.1 \& B.9.1 \& (C.2 between start date \& end date)]}} \times 100$
Notes	• Indicator is expressed as a proportion of screening episode. • The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.5—The Service and/or SCU ensures high quality imaging.

NAS Measure 2.5.2

The overall repeat rate for the Service and/or SCU is ≤2% of all screening images.

Data Dictionary Measure

The percentage of the total number of screening images used in any 12-month period which are for repeat images. However, the Service and/or SCU will demonstrate that this is also calculated on a monthly basis.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.2 Screening unit identifier C.2 Date of first attendance for this episode C.3.1 Total number of images used C.3.3 Number of technical repeats
Numerator	The total number of images repeated due to technically unsatisfactory images at the screening visit. A.2, C.2, C.3.3
Denominator	The total number of images taken to screen a participant at the participant's screening visit(s). A.2, C.2, C.3.1
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of images, not screening visits or participants. • Only images taken or repeated at screening to be counted (not assessment images). • Repeat images taken at the initial visit and at any technical repeat visit are to be counted. • Technical repeats include those initiated by the radiographer and those requested by the reader(s). • If a screen is performed at one service and then repeated at another service, the repeat will be against the first service, as this is the service to which the technically unsatisfactory image should be attributed.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

Algorithm

$$\frac{[((\text{C.2 between start date \& end date}) \,\&\, (\Sigma\ \text{C.3.3}))\ \text{at A.2}]}{[((\text{C.2 between start date \& end date}) \,\&\, (\Sigma\ \text{C.3.1}))\ \text{at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of images.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.1 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for annual screening.

Data Dictionary Measure

The percentage of women aged 50–74 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous screening episode).

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	Number of participants aged 50–74 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). A.1, B.9.1, C.2, C.5, D11.1, E.12
Denominator	Number of participants aged 50–74 years who attended for screening in the reference period A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is participants. • Age calculated as at the date of first attendance for the screening episode selected. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and

B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Where a participant has two screening episodes in the reference period, select the last screen.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& (C.5 or D.11.1 or E.12=2) for B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) ≤15 months]}}{\text{[A.1 \& B.9.1>1 \& ((last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤74)) at A.2]}} \times 100$$

Where x = round number for the previous screening episode

Notes

- This indicator is expressed per 100 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.1 (b)

≤10% of women aged 50–69 years attend for annual screening.

Data Dictionary Measure

The percentage of women aged 50–69 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous screening episode).

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	Number of participants aged 50–69 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). A.1, B.9.1, C.2, C.5, D11.1, E.12
Denominator	Number of participants aged 50–69 years who attended for screening in the reference period. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants. • Age calculated as at the date of first attendance for the screening episode selected. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional

data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Where a participant has two screening episodes in the reference period, select the last screen.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& (C.5 or D.11.1 or E.1 =2) for B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) <15 months]}}{\text{[A.1 \& B.9.1>1 \& ((last C.2 between start date \& end date) \& (last C.2—B.2≥50 \& ≤69)) at A.2]}} \times 100$$

Notes

- This indicator is expressed per 100 participants screened.
- The calculation of this measure will produce one result.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.2

The Service and/or SCU monitors and reports the proportion of women who attend for annual screening, aged 40–49 years and 75 years and over.

Data Dictionary Measure

The percentage of women who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous screening episode), aged 40–49 years and 75 years and over.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	i. Number of participants aged 40–49 years who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). ii. Number of participants aged 75 years and over who were recommended for annual rescreening at their previous screening episode and who attended for annual screening in the reference period (within 15 months of the previous attendance). A.1, B.9.1, C.2, C.5, D11.1, E.12
Denominator	i. Number of participants aged 40–49 years who attend for screening in the reference period. ii. Number of participants aged 75 years and over who attend for screening in the reference period. A.1, A.2, B.2, B.9.1, C.2

Formula Numerator / Denominator x 100

Specifications

- Select on reference period.
- Count is of participants.
- Reference period based on date of first attendance for screening.
- Age calculated as at the date of first attendance for the screening episode selected.
- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in the numerator and the denominator.
- Where a participant has two screening episodes in the reference period, select the last screen.

Algorithm 2.6.2 (i)

$$\frac{\text{[A.1 \& B.9.1 \& (C.5 or D.11.1 or E.12=2) for B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) ≤15 months]}}{\text{[A.1 \& B.9.1≥2 \& ((last C.2 between start date \& end date) \& (last C.2—B.2≥40 \& ≤49)) at A.2]}} \times 100$$

2.6.2 (ii)

$$\frac{\text{[A.1 \& B.9.1 \& (C.5 or D.11.1 or E.12=2) for B.9.1=x) \& ((C.2 for B.9.1=(x+1)) – (C.2 for B.9.1=x)) ≤15 months]}}{\text{[A.1 \& B.9.1≥2 \& ((last C.2 between start date \& end date) \& (last C.2—B.2≥75)) at A.2]}} \times 100$$

Notes

- Indicator is expressed per 100 participants screened.
- The calculation of this measure will produce two results.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.3 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their first screening episode and are recalled for assessment.

Data Dictionary Measure

The percentage of women aged 50–74 years who attend for their first screening episode and are recalled for assessment.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening
Numerator	Number of participants aged 50–74 years who attend for their first screening episode and who are recalled for assessment (C.5=3 or 4 or 5). A.1, B.9.1, C.5
Denominator	Number of participants aged 50–74 years who attend for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on the date of the first attendance for screening. • Count is of participants as a participant can only have one first screening episode. • Age calculated as at the date of first attendance for the screening episode selected. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional

data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

2.6.3 (a)

$$\frac{\text{[A.1 \& B.9.1=1 \& (C.5=3 or 4 or 5)]}}{\text{[A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤74) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants screened.
- The calculation of this measure will produce one result for recall to assessment.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.3 (b)

<10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment.

Data Dictionary Measure

The percentage of women aged 50–69 years who attend for their first screening episode and are recalled for assessment.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening
Numerator	Number of participants aged 50–69 years who attend for their first screening episode and who are recalled (C.5=3 or 4 or 5) A.1, B.9.1, C.5
Denominator	Number of participants aged 50–69 years who attend for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on the date of the first attendance for screening. • Count is of participants as a participant can only have one first screening episode. • Age calculated as at the date of first attendance for the screening episode selected. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

2.6.3 (b)

$$\frac{\text{[A.1 \& B.9.1=1 \& (C.5=3 or 4 or 5)]}}{\text{[A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤69) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants screened.
- The calculation of this measure will produce one result for recall to assessment.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.3 (c)

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their first screening episode and are recalled for assessment.

Data Dictionary Measure

The percentage of women aged 40–49 years and 75 years and over who attend for their first screening episode and are recalled for assessment.

Reference period The most recent 12-month period (either calendar or financial year) for which data are available.

Data collection BreastScreen Australia data dictionary

Data source State and territory BreastScreen registers

Data elements

A.1 Client identifier number
A.2 Screening unit identifier
B.2 Date of birth
B.9.1 Round number—State/Territory program
C.2 Date of first attendance for this episode
C.5 Recommendation—screening

Numerator

(i) Number of participants aged 40–49 years who attend for their first screening episode and who are recalled for assessment (C.5=3 or 4 or 5)

(ii) Number of participants aged 75 years and over who attend for their first screening episode and who are recalled for assessment (C.5=3 or 4 or 5)

A.1, B.9.1, C.5

Denominator

(i) Number of participants aged 40–49 years who attend for their first screening episode.
(ii) Number of participants aged 75 years and over who attend for their first screening episode.

A.1, A.2, B.2, B.9.1, C.2

Formula Numerator / Denominator x 100

Specifications

- Select on reference period.
- Reference period is based on the date of the first attendance for screening.
- Count is of participants as a participant can only have one first screening episode.

- Age calculated as at the date of first attendance for the screening episode selected.
- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

Algorithm

2.6.3 (c) (i)

$$\frac{[\text{A.1 \& B.9.1=1 \& (C.5=3 or 4 or 5)}]}{[\text{A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2≥40 \& ≤49) at A.2}]} \times 100$$

2.6.3 (c) (ii)

$$\frac{[\text{A.1 \& B.9.1=1 \& (C.5=3 or 4 or 5)}]}{[\text{A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2≥75) at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of participants screened.
- The calculation of this measure will produce two results for recall to assessment.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.4 (a)

The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for their second or subsequent screening episode and are recalled for assessment.

Data Dictionary Measure

The percentage of women aged 50–74 years who attend for their second or subsequent screening episode and are recalled for assessment.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening
Numerator	Number of participants aged 50–74 years who attend for their second or subsequent screening episodes who are recalled for assessment (C.5=3 or 4 or 5) A.1, B.9.1, C.5
Denominator	Number of participants aged 50–74 years who attend for their second or subsequent screening episodes. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on the date of first attendance for screening. • Count is of participants who are recalled for assessment. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected.
- While a rare event, if a participant was recalled at separate screening episodes during the reporting period, both recalls should be counted in the numerator and both screening episodes should be counted in the denominator.

Algorithm 2.6.4 (a)

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.5=3 or 4 or 5)}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& }\leq 74\text{) at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of participants who are recalled for assessment.
- The calculation of this measure will produce one result for recall to assessment.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.4 (b)

<5% of women aged 50–69 years who attend for their second or subsequent screening episode are recalled for assessment.

Data Dictionary Measure

The percentage of women aged 50–69 who attend for their second or subsequent screening episode and are recalled for assessment.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening
Numerator	Number of participants aged 50–69 years who attend for their second or subsequent screening episode who are recalled for assessment (C.5=3 or 4 or 5). A.1, B.9.1, C.5
Denominator	Number of participants aged 50–69 years who attend for their second or subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on the date of first attendance for screening. • Count is of participants who are recalled for assessment. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected.
- While a rare event, if a participant was recalled at separate screening episodes during the reporting period, both recalls should be counted in the numerator and both screening episodes should be counted in the denominator.

Algorithm 2.6.4 (b)

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.5=3 or 4 or 5)}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& }\leq 69) \text{ at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of participants who are recalled for assessment.
- The calculation of this measure will produce one result for recall to assessment.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.4 (c)

The Service and/or SCU monitors and reports the proportion of women aged 40–49 years and 75 years and over who attend for their second or subsequent screening episode and are recalled for assessment.

Data Dictionary Measure

The percentage of women aged 40–49 years and 75 years and over who attend for their second or subsequent screening episode and are recalled for assessment.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening
Numerator	(i) Number of participants aged 40–49 years who attend for their second or subsequent screening episode and who are recalled for assessment (C.5=3 or 4 or 5) (ii) Number of participants aged 75 years and over who attend for their second or subsequent screening episode and who are recalled for assessment (C.5=3 or 4 or 5) A.1, B.9.1, C.5
Denominator	(i) Number of participants aged 40–49 years who attend for their second or subsequent screening episode. (ii) Number of participants aged 75 years and over who attend for their second or subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on the date of first attendance for screening.

- Count is of participants who are recalled for assessment.
- Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected.
- While a rare event, if a participant was recalled at separate screening episodes during the reporting period, both recalls should be counted in the numerator and both screening episodes should be counted in the denominator.

Algorithm

2.6.4 (c) (i)

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.5=3 or 4 or 5)}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 40 \text{ \& }\leq 49\text{) at A.2}]} \times 100$$

2.6.4 (c) (ii)

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.5=3 or 4 or 5)}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 75\text{) at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of participants screened.
- The calculation of this measure will produce two results for recall to assessment.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.5

The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their first screening episode.

Data Dictionary Measure

The percentage of women aged 50–74 years recalled for assessment at their first screening episode who receive a definitive diagnosis of invasive breast cancer or DCIS.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening F.1.1 Reason for histopathology F.4 Histopathology of malignant lesions
Numerator	Number of participants aged 50–74 years who attend for their first screening episode who are recalled for assessment and are diagnosed with invasive breast cancer or DCIS. A.1, B.9.1, F.1.1, F.4
Denominator	Number of participants aged 50–74 years who attend for their first screening episode who are recalled for assessment. A.1, A.2, B.2, B.9.1, C.2, C.5
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants as a participant can only have one first screening episode. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Invasive breast cancer specifications

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review >6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

DCIS specifications

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as 'Other DCIS').
- Paget's disease in the absence of DCIS should be included as DCIS (categorised as 'Other DCIS') unless there is an invasive component (Paget's disease in the presence of DCIS should be categorised as DCIS).

Exclusions:

- DCIS with microinvasion (classified as an invasive breast malignancy).
- Lobular carcinoma in situ (LCIS) including pleomorphic LCIS.

Algorithm

$$\frac{\text{[A.1 \& B.9.1=1 \& ((F.1.1=2) \& (F.4=1.1 to 1.10 or 2.1 to 2.4))]}}{\text{[A.1 \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2≥50 \& ≤74) \& (C.5=3 or 5) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants recalled to assessment.
- The calculation of this measure will produce one result for the positive predictive value of a screen for detecting invasive breast cancer or DCIS.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.6

The Service and/or SCU monitors and reports the positive predictive value of a recall to assessment for detecting invasive breast cancer or DCIS in women aged 50–74 years who attend for their second or subsequent screening episode.

Data Dictionary Measure

The percentage of women aged 50–74 years recalled for assessment at their second or subsequent screening episode who receive a definitive diagnosis of invasive breast cancer or DCIS.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening F.1.1 Reason for histopathology F.4 Histopathology of malignant lesions
Numerator	Number of participants aged 50–74 years who attend for a subsequent screening episode who are recalled to assessment and who are diagnosed with invasive breast cancer or DCIS. A.1, B.9.1, F.1.1, F.4
Denominator	Number of participants aged 50–74 years who attend for a second or subsequent screening episode and are recalled to assessment. A.1, A.2, B.2, B.9.1, C.2, C.5
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data

elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Age calculated as at the date of first attendance for the screening episode selected.
- While a rare event, if breast cancer were detected for a participant at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator.
- If a participant was recommended for assessment at two separate screening episodes within the time period then these should both be included in the denominator.
- A screen-detected breast cancer is one that is histologically confirmed as a breast cancer before completion of an episode of screening at BreastScreen Australia.
- Includes all participants screened by the Service and/or SCU even if they are assessed elsewhere.
- If the participant did not undergo surgery, it may be possible to identify whether the breast cancer is invasive from the core biopsy histopathology.

Cancer detection specifications

Inclusions:

- Tumours should be recorded and sized as invasive cancers if they include any invasive component.
- Micro-invasive tumours to be included.
- Paget's disease is only included if an invasive component is present.
- Invasive breast cancer detected at early review <6 months from the initial screening date.

Exclusions:

- Cancer detected at early review >6 months from the initial screening date.
- Invasive cancer diagnosed at early rescreen where the participant presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Participants who present at assessment with interval signs and symptoms.

DCIS specifications

Inclusions:

- Include DCIS tumours only (no invasive component).
- Equivocal invasive tumours are to be included as DCIS.
- Intracystic or noninvasive papillary carcinoma is to be included (categorised as 'Other DCIS').
- Paget's disease in the absence of DCIS should be included as DCIS (categorised as 'Other DCIS') unless there is an invasive component
  (Paget's disease in the presence of DCIS should be categorised as DCIS).

Exclusions:

- DCIS with microinvasion (classified as an invasive breast malignancy).
- Lobular carcinoma in situ (LCIS) including pleomorphic LCIS.

Algorithm

$$\frac{[\text{A.1 \& B.9.1}\geq 2 \text{ \& ((F.1.1=2) \& (F.4=1.1 to 1.10 or 2.1 to 2.4))}]}{[\text{A.1 \& B.9.1}\geq 2 \text{ \& (C.2 between start date \& end date) \& (C.2—B.2}\geq 50 \text{ \& } \leq 74\text{) \& (C.5=3 or 5) at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of participants recalled to assessment.
- The calculation of this measure will produce one result for the positive predictive value of a screen for detecting invasive breast cancer or DCIS.

2. Cancer Detection Standard

Breast cancer detection is maximised in the target population and harm is minimised.

Criterion 2.6—Investigations and recall for assessment of non-malignant lesions is minimised.

NAS Measure 2.6.7

<0.2% of women who attend for screening are recommended for early review for further assessment.

Data Dictionary Measure

The percentage of women who attend for screening who are recommended for early review for further assessment.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier A.3 Assessment unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode D.11.1 Recommendation—assessment E.12 Recommendation—definitive
Numerator	Number of participants who attend for screening who are recommended for early review. A.1, A.3, B.9.1, D.11.1, E.12
Denominator	Number of participants who attend for screening. A.1, A.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants. • Reference period is based on the date of the first attendance for screening. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A.3—Assessment unit identifier in this instance includes all participants screened and assessed by the Service and/or SCU. Participants screened elsewhere and assessed by the Service and/or SCU are excluded. Assessments performed outside the Service and/or SCU are to be excluded.
- If a participant has more than one screening and assessment episode during the period, both episodes are included.
- Participants who are recommended for early review after an excision should be included in the numerator.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& D.11.1=3 \&/or E.12=3 at A.3]}}{\text{[A.1 \& B.9.1 \& (C.2 between start date \& end date) at A.2]}} \times 100$$

Notes

- Indicator is expressed per 100 participants screened.
- Early review is the recall of a participant for further assessment following an equivocal assessment visit (where a decision cannot be made). Early review within six months of the screening date is considered to be part of the screening episode and invasive breast cancers found as a result of the review are considered to be screen-detected. Early review carried out at six months or more from the date of screening, occurs after the screening episode is complete and invasive breast cancers found are considered to be interval cancers.
- The calculation of this measure will provide one result.
- All participants on early review are to be included in the calculation.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe, and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.1

<5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient.

Data Dictionary Measure

The number of percutaneous needle biopsies with a benign or inadequate result and malignant result on final histology as a percentage of all lesions sampled through percutaneous needle biopsy and returning a malignant result on final histology plus all cases called malignant on percutaneous needle biopsy and never confirmed by final histology but were clinically presumed to be malignant.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.8.3 Percutaneous needle biopsy result D.10 Final result of assessment visit D.11.4 Assessment visit—date E.1 Excision performed F.4 Histopathology of malignant lesions G.4 Surgical treatment
Numerator	Number of percutaneous needle biopsies with a benign or inadequate percutaneous needle biopsy result and malignant result on final histology. A.1, B.9.1, D.8.3, F.4
Denominator	Number of percutaneous needle biopsies returning a malignant result on final histology plus all cases called malignant on percutaneous needle biopsy and never confirmed by final histology but were clinically presumed to be malignant. A.1, A.3, B.9.1, D.8.3, D.10, D.11.4, E.1, F.4, G.4
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of fine needle aspiration and core biopsy procedures performed. • Where multiple fine needle aspiration or core biopsy procedures that yielded an inadequate result were performed include all procedures. • The reference period is based on the first date of attendance for assessment.

- Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- All lesions where core biopsy is performed need to be followed through to final result.
- Measuring the false negative rate of non-breast lesions such as lymph nodes is complex. Therefore, biopsies of lymph nodes should not be included in this NAS Measure as the monitoring of these is best completed as part of a separate study.
- In some cases, the histology result from the core biopsy will be the final result.
- A.3 includes all participants assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.
- E.1 is used to indicate whether histological confirmation is available.
- For lesions called malignant on biopsy and never confirmed on final histology but clinically presumed to be malignant, and where there are no core or excision results, the final diagnosis is made on the malignant cytology.
- Interval cancers are not included.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& (D.8.3=1 or 2) \& (F.4=1.1 to 1.10 or 2.1 to 2.5)]}}{\text{[A.1 \& B.9.1 \& (D.11.4 \& (D.8.3=not null) \& (E.1=1 \& F.4=1.1 to 1.10 or 2.1 to 2.4) + (D.8.3=5 \& D.10=5) where E.1=2 \& (G.4=not null)) at A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of procedures.
- The calculation of this measure will produce one result.
- Previously, NAS relating to FNA cytology and core biopsy were separated and given different targets according to the modality used. This measure combines previous NAS 2.18.1, 2.18.2 and 2.19.5. The intent of this measure is to adopt an outcomes based approach, requiring minimum performance targets and leaving it to each Service and/or SCU to determine which approach would be implemented in their setting to achieve the desired goals.
- This may include non-representative core biopsies implying the lesion has been missed during the procedure, which is not a judgement on the accuracy of interpretation, but on the technical aspects of core biopsy performance.
- Inadequate percutaneous needle biopsies are defined as samples of insufficient yield for adequate diagnosis of the lesion. In cases of core biopsies for micro calcifications this includes samples without calcium.
- Fine needle aspiration biopsies tend to have higher inadequate outcomes—this will influence the result returned for this measure for Services performing a high proportion of FNA procedures.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.2 (a)

0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive 'percutaneous needle biopsy' for the purpose of this standard.

Data Dictionary Measure

The number of lesions assessed by percutaneous needle biopsy with a malignant result on biopsy and a non-malignant result on final histology as a percentage of all lesions biopsied returning a non-malignant result on final histology.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.8.3 Percutaneous needle biopsy result D.11.4 Assessment visit—date E.1 Excision performed F.3 Histopathology of non-malignant lesions F.4 Histopathology of malignant lesions
Numerator	Number of percutaneous needle biopsies with a malignant percutaneous needle biopsy result and non-malignant result on final histology. A.1, B.9.1, D.8.3, F.3, F.4
Denominator	Number of all biopsies with a non-malignant result on final histology. A.1, A.3, B.9.1, D.8.3, D.11.4, E.1, F.3, F.4
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of fine needle aspiration and core biopsy procedures performed. • Where multiple fine needle aspiration or core biopsy procedures are performed, count each procedure. • The reference period is based on the first date of attendance for assessment.

- In the numerator the percutaneous needle biopsy returns a malignant result but was shown to be benign on final histology.
- A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive 'percutaneous needle biopsy' for the purpose of this measure.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- All lesions where percutaneous needle biopsy is performed need to be followed through to final result.
- In some cases, the histology result from the core biopsy will be the final result.
- A.3 includes all participants assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.
- E.1 is used to indicate whether histological confirmation is available.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((D.8.3=5) \& (F.3=not null \& F.4=null))}]}{[\text{A.1 \& B.9.1 \& (D.11.4 \& (D.8.3=not null) \& (E.1=1 \& F.3=not null \& F.4 = null)) at A.3}]} \times 100$$

Notes

- If a lesion at assessment had multiple discordant biopsies (i.e. one malignant, one benign), then it should only be considered a false positive for the calculation of this measure if the malignant assessment biopsy was considered definitive. i.e. if there were a malignant FNA (false positive test) followed by a benign core (true negative test) then the false positive would not be counted in this measure, as no harm reached the participant.
- Indicator is expressed as a proportion of procedures.
- The calculation of this measure will produce one result.
- Previously, NAS relating to FNA cytology and core biopsy were separated and given different targets according to the modality used. This measure is based on the previous NAS 2.19.6 (b), which was only calculated for FNA cytology. The intent of this measure is to adopt an outcomes based approach, requiring minimum performance targets and leaving it to each Service and/or SCU to determine which approach would be implemented in their setting to achieve the desired goals.
- On occasions, the entire lesion is removed at core biopsy, leaving only non-malignant tissue in the surgical specimen (as in E.9 = 4). If the case is reviewed and malignancy is confirmed in the core biopsy, this should not be classified as a false positive.
- The threshold for false positive cancer diagnoses has been set at zero to ensure participant safety, transparency and accountability and the need for such events to be reported and investigated whenever they occur. More information is provided in the NAS commentary.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.2 (b)

Where part (a) is not met, an investigation that includes an examination of root causes on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.3

The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

Data Dictionary Measure

The number of percutaneous needle biopsies with a malignant biopsy result returning a malignant final histology result plus the number of percutaneous needle biopsies with a malignant biopsy result and never confirmed by final histology but were clinically presumed to be malignant, as a percentage of all percutaneous needle biopsies returning a malignant result on final histology plus all those with a malignant biopsy result and never confirmed by final histology but were clinically presumed to be malignant.

Reference period	The most recent 12-month period (either calendar or financial years) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.8.3 Percutaneous needle biopsy result D.10 Final result of assessment visit D.11.4 Assessment visit—date E.1 Excision performed F.4 Histopathology of malignant lesions G.4 Surgical treatment
Numerator	The number of percutaneous needle biopsies with a malignant biopsy result returning a malignant final histology result plus the number of percutaneous needle biopsies with a malignant biopsy result and never confirmed by final histology but were clinically presumed to be malignant. A.1, B.9.1, D.8.3, D.10, E.1, F.4, G.4
Denominator	The number of percutaneous needle biopsies returning a malignant result on final histology plus all those with a malignant biopsy result and never confirmed by final histology but were clinically presumed to be malignant. A.1, A.3, B.9.1, D.8.3, D.10, D.11.4, E.1, F.4, G.4
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of fine needle aspiration and core biopsy procedures performed.

- The reference period is based on first attendance date for assessment.
- Where a participant has multiple fine needle aspiration cytology and core biopsy procedures each procedure is to be counted.
- Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- All lesions where percutaneous needle biopsy is performed need to be followed through to final result.
- Measuring the false negative rate of non-breast lesions such as lymph nodes is complex. Therefore, biopsies of lymph nodes should not be included in this NAS Measure as the monitoring of these is best completed as part of a separate study.
- In some cases, the histology result from the core biopsy will be the final result.
- A.3 includes all participants assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.
- E.1 is used to indicate whether histological confirmation is available.
- For lesions called malignant on biopsy and never confirmed on final histology but are clinically presumed to be malignant, and where there are no core or excision results, the final diagnosis is made on the malignant biopsy result.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& ((D.8.3=5) \& (E.1=1 \& F.4=1.1 to 1.10 or 2.1 to 2.5)) + ((D.8.3=5 \& D.10=5) where (E.1=2 \& G.4=not null))]}}{\text{[A.1 \& B.9.1 where (D.11.4 \& D.8.3=not null \& (E.1=1 \& F.4 =1.1 to 1.10 or 2.1 to 2.5)) + ((D.8.3=5 \& D.10=5) where (E.1=2 \& (G.4=not null))) at A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of percutaneous needle biopsy procedures.
- The calculation of this measure will produce one result.
- Previously, NAS relating to FNA cytology and core biopsy were separated and given different targets according to the modality used This element combines previous NAS 2.19.8 and 2.19.10. The intent of this measure is to adopt an outcomes based approach, requiring minimum performance targets and leaving it to each service to determine which approach would be implemented in their setting to achieve the desired goals.
- On occasions, the entire lesion is removed at core biopsy, leaving only non-malignant tissue in the surgical specimen. If the case is reviewed and malignancy is confirmed in the core biopsy, this should not be classified as a false positive.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.4

≤0.35% of women who attend for their first screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

Data Dictionary Measure

The percentage of the total number of women who attend for their first screening episode who are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier A.3 Assessment unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for screening D.11.1 Recommendation—assessment E.1 Excision performed F.3 Histopathology of non-malignant lesions F.4 Histopathology of malignant lesions F.7 Dominant lesion identification number
Numerator	Number of participants assessed following their first screening episode who were found not to have invasive cancer or DCIS after diagnostic open biopsy which was recommended by the Service and/or SCU. A.1, A.3, B.9.1, D.11.1, E.1, F.3, F.4, F.7
Denominator	Number of participants who attended for their first screening episode. A.1, A.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of individual participants, not screening episodes as a participant can only have one first screening episode. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- As this is a measure of the effectiveness of assessment, the numerator is a subset of the denominator (for example, participants screened during the reporting period) but includes only those participants assessed by the Service and/or SCU.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Where a core biopsy removes a cancer and the subsequent excision is negative this is not a true false positive.
- A.3 includes all participants screened and assessed by the Service and/or SCU. Participants screened elsewhere and assessed by the Service and/or SCU are excluded. Assessments performed outside the Service and/or SCU are to be excluded.
- Participants who are found to have a malignant lesion that is not invasive breast cancer or DCIS are not included in the numerator.

Algorithm

$$\frac{\text{[A.1 \& B.9.1=1 \& ((D.11.1=5 at A.3) \& (E.1=1 \& F.7 where (F.3=not null and F.4=null))]}}{\text{[A.1 \& B.9.1=1 \& (C.2 between start date \& end date) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants screened.
- The calculation of this measure will produce one result.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.5

≤0.16% of women who attend for their second or subsequent screening episode are found not to have invasive breast cancer or DCIS after diagnostic open biopsy.

Data Dictionary Measure

The percentage of the total number of women who attend for their second or subsequent screening episode who are found not to have invasive cancer or DCIS after diagnostic open biopsy.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier A.3 Assessment unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for screening D.11.1 Recommendation—assessment E.1 Excision performed F.3 Histopathology of non-malignant lesion F.4 Histopathology of malignant lesions F.7 Dominant lesion identification number
Numerator	Number of participants who attended for their second or subsequent screening episode were found not to have invasive cancer or DCIS after excision which was recommended by the Service and/or SCU. A.1, A3, B.9.1, D.11.1, E.1, F.3, F.4, F.7
Denominator	Number of participants attending for a second or subsequent screening episode. A.1, A.2, B.9.1, C.2.
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- As this is a measure of the effectiveness of assessment, the numerator is a subset of the denominator (for example, participants screened during the reporting period) but includes only those participants assessed by the Service and/or SCU.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Where a core biopsy removes a cancer and the subsequent excision is negative this is not a true false positive.
- A.3 includes all participants screened and assessed by the Service and/or SCU. Participants screened elsewhere and assessed by the Service and/or SCU are excluded. Assessments performed outside the Service and/or SCU are to be excluded.
- Participants who are found to have a malignant lesion that is not invasive breast cancer or DCIS are not included in the numerator.
- While a rare event, if a participant had an unnecessary diagnostic open biopsy in separate screening episodes during the reporting period, both cases should be included in the numerator and both screening episodes should be included in the denominator.

Algorithm

$$\frac{\text{[A.1 \& B.9.1≥2 \& ((D.11.1=5 at A.3) \& (E.1=1 \& F.7 where (F.3=not null and F.4=null))]}}{\text{[A.1 \& B.9.1≥2 \& (C.2 between start date \& end date) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants screened.
- The calculation of this measure will produce one result.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.7

≥95% of all lesions are correctly identified at first excision.

Data Dictionary Measure

The percentage of all lesions which are correctly identified at first excision through correlation of final pathology with specimen imaging findings or with screening assessment results.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier A.5 Lesion number B.9.1 Round number—State/Territory program D.11.4 Assessment visit—date E.1 Excision performed E.2 Date excision performed E.8.1 Lesion identified in specimen
Numerator	Number of all lesions correctly identified at first excision. A.1, A.5, B.9.1, E.2, E.8.1
Denominator	Number of all lesions undergoing excision. A.1, A.3, A.5, B.9.1, D.11.4, E.1
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on assessment date. • Count is of lesions. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator. • Both symptomatic and asymptomatic participants to be counted in the numerator and the denominator. • A.3 includes participants assessed by the Service and/or SCU even if screened elsewhere.

- This measure relates to participants assessed by the Service and/or SCU as the Service and/or SCU may be able to influence the performance of this procedure.
- Include all excisions (both diagnostic open biopsy and treatment excisions) performed (as specified by E1=1).
- Exclude mastectomies.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& (each A.5 where E.8.1=1 or 3 or 4) at first E.2]}}{\text{[A.1 \& B.9.1 \& D.11.4 \& (E.1=1 \& each A.5) at A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of all lesions undergoing excision.
- The calculation of this measure will provide one result.
- Note: NAS Measure 3.1.7 relates to all lesions whereas former NAS 2.21.3 related to impalpable lesions.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.8 (a)

≥85% of invasive breast cancers or DCIS are diagnosed preoperatively.

Data Dictionary Measure

The total number of invasive breast cancers or DCIS diagnosed preoperatively expressed as a percentage of total breast cancers or DCIS diagnosed.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.11.1 Recommendation—assessment D.11.4 Assessment visit—date F.1.1 Reason for histopathology F.1.3 Cancer diagnosed in BreastScreen Australia F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	Number of participants assessed by the Service and/or SCU who had an invasive cancer or DCIS diagnosed preoperatively. A.1, B.9.1, D.11.1
Denominator	Number of participants assessed by the Service and/or SCU who had an invasive cancer or DCIS diagnosed. A.1, A.3, B.9.1, D.11.4, F.1.1, F.1.3, F.4, F.7
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants with a cancer detected. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator. • The reference period is based on assessment date.

- Where this target is not achieved, the Service and/or SCU provides the proportion of invasive breast cancers and DCIS diagnosed pre-operatively.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A.3 includes all participants assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.
- As this is a measure of the effectiveness of assessment and includes all participants assessed by the Service and/or SCU, select the reporting period on the date of first attendance for assessment.
- There may be rare occasions when a participant has more than one assessment episode which results in a cancer being detected. In this instance, both episodes are counted.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& (D.11.1=4)]}}{\text{[A.1 \& B.9.1 \& D.11.4 \& (F.1.1=2 or (F.1.1=1 \& F.1.3=1)) \& (F.7 = (F.4=1.1 to 1.10 or 2.1 to 2.4))) at A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants diagnosed with breast cancer.
- The calculation of this measure will produce one result.

3. Assessment Standard

Assessment and diagnosis of breast cancer is appropriate, safe and effective.

Criterion 3.1—The Service and/or SCU maximises the efficacy of assessment.

NAS Measure 3.1.8 (b)

Where part (a) is not met, the Service and/or SCU provides the proportion of breast cancers that are diagnosed as invasive and DCIS preoperatively.

Data Dictionary Measure

The proportion of breast cancers that are diagnosed preoperatively that are invasive breast cancer and DCIS.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.11.1 Recommendation—assessment D.11.4 Assessment visit—date F.1.1 Reason for histopathology F.1.3 Cancer diagnosed in BreastScreen Australia F.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
Numerator	i. Invasive breast cancer Number of participants assessed by the Service and/or SCU who had an invasive breast cancer that was diagnosed preoperatively. ii. DCIS Number of participants assessed by the Service and/or SCU who had a DCIS that was diagnosed preoperatively. A.1, B.9.1, F.4
Denominator	Number of participants assessed by the Service and/or SCU who had an invasive cancer or DCIS that was diagnosed preoperatively. A.1, A.3, B.9.1, D.11.1, D.11.4, F.1.1, F.1.3, F.4, F.7
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants with an invasive cancer or DCIS detected.

- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- The reference period is based on assessment date.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A.3 includes all participants assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.
- As this is a measure of the effectiveness of assessment and includes all participants assessed by the Service and/or SCU, select the reporting period on the date of first attendance for assessment.
- In the rare event that a participant meets the criteria in separate screening episodes, include both screening episodes.

Algorithm

NAS Measure 3.1.8 (b) (i) Of the participants with invasive breast cancers and DCIS diagnosed pre-operatively, what proportion of participants were diagnosed pre-operatively with invasive breast cancer?

$$\frac{[\text{A.1 \& B.9.1 \& F.4=1.1 to 1.10}]}{[\text{A.1 \& B.9.1 \& D.11.4 \& (D.11.1=4) \& (F.1.1=2 or (F.1.1=1 \& F.1.3=1)) \& (F.7 = (F.4=1.1 to 1.10 or 2.1 to 2.4))) at A.3}]} \times 100$$

NAS Measure 3.1.8 (b) (ii) Of the participants with invasive breast cancers and DCIS diagnosed pre-operatively, what proportion of participants were diagnosed pre-operatively with DCIS?

$$\frac{[\text{A.1 \& B.9.1 \& F.4=2.1 to 2.4}]}{[\text{A.1 \& B.9.1 \& D.11.4 \& (D.11.1=4) \& (F.1.1=2 or (F.1.1=1 \& F.1.3=1)) \& (F.7 = (F.4=1.1 to 1.10 or 2.1 to 2.4))) at A.3}]} \times 100$$

Notes

- Indicator is expressed as a proportion of participants diagnosed pre-operatively with breast cancer.
- The denominator for 3.1.8 (b) is the same as the numerator for 3.1.8 (a).
- The calculation of this measure will produce two results (one for invasive breast cancers and one for DCIS).

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.1—The Service and/or SCU ensures that women progress through the screening pathway in a timely manner.

NAS Measure 4.1.1 (a)

≥90% of women aged 50–74 years attend for a screening appointment within 28 calendar days of their booking date (fixed sites only).

Data Dictionary Measure

The percentage of women who attend for a screening appointment within 28 calendar days of their booking date.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.1 Booking date C.2 Date of first attendance for this episode
Numerator	Number of participants aged 50–74 years who attend for a screening appointment within 28 calendar days of their booking date at fixed sites only. A.1, B.9.1, C.1, C.2
Denominator	Number of participants aged 50–74 years who attend for a screening appointment at fixed sites only. A.1, A.2, B.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator. • Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

- This measure relates to fixed screening sites only.
- Where a participant has more than one screening episode in the reference period count all screening episodes.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((C.2—C.1) ≤28 days)}]}{[\text{A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& ((C.2—B.2≥50 \& ≤74) at A.2='fixed site')}]} \times 100$$

Notes

- NAS Measures 4.1.1 (a) and (b) are the only measures within 'Criteria 4.1– The Service and/or SCU ensures that participants progress through the screening pathway in a timely manner' that is restricted to participants aged 50–74 years. The rationale for this is that the requirement that participants attend for a screening appointment within 28 calendar days of their booking date should only apply to participants in the target group (50–74); however once participants attend their screen, they should all have timely access to screening results, assessment visits and assessment results etc., regardless of age.
- Indicator is expressed as a proportion of participants attending a screening appointment.
- Calculation of this measure will produce one result.
- Where clients book an appointment and subsequently choose to change their appointment, and it is not feasible to calculate the difference between the appointment date and the date when they changed their appointment (this difference is the true waiting time), then, if possible, remove such clients from the calculation.
- This NAS Measure should be calculated on first attempt for screening to avoid measuring the time from booking to second attempt at screening.
- An alternative method of calculating this NAS Measure is to export all screening appointments with the number of days from booking to appointment from lowest to highest then note the time taken to achieve 90% from booking date to screening date.
- Where NAS Measure 4.1.1 (a) is unmet, NAS Measure 4.1.1 (b) is calculated.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.1—The Service and/or SCU ensures that women progress through the screening pathway in a timely manner.

NAS Measure 4.1.1 (b)

Where part (a) is not met, the Service and/or SCU records and reports the time taken to achieve 90% from booking to screening (fixed sites only).

Data Dictionary Measure

The number of days taken between booking and attending for 90% of women.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.2 Date of birth B.9.1 Round number—State/Territory program C.1 Booking date C.2 Date of first attendance for this episode
Numerator	Number of days from booking to screening, at fixed sites only, required to achieve 90% of participants aged 50–74 years attending for screening episodes. A.1, B.9.1, C.1, C.2
Denominator	Number of participants aged 50–74 years who attend for a screening appointment at fixed sites only. A.1, A.2, B.2, B.9.1, C.2
Formula	Minimum number of days from booking date to screening date where Numerator / Denominator x 100 = 90% is achieved
Specifications	• Select on reference period. • Count is of participants screened, determined for each consecutive interval (in days) from booking to screening. The cumulative count of participants for each interval as a percentage of total participants screened is determined until 90% of total participants screened is reached. At 90%, the interval (in days) represents the waiting time from booking to screening before 90% of participants attending for screening is achieved. • Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

- This measure relates to fixed screening sites only.
- This algorithm calculates the total number of days for each screening episode between a participant's booking date and screening date.
- Where a participant has more than one screening episode in the reference period count all screening episodes.

Algorithm

$$\frac{\sum \text{number of participants screened (A.1 \& B.9.1) for each interval (in days) between C.2 and C.1}}{\text{[A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& ((C.2—B.2≥50 \& ≤74) at A.2='fixed site')]}} \times 100$$

Calculate n (number of days) where algorithm = 90%

Notes

- NAS Measures 4.1.1 (a) and (b) are the only measures within 'Criteria 4.1– The Service and/or SCU ensures that participants progress through the screening pathway in a timely manner' that is restricted to participants aged 50–74 years. The rationale for this is that the requirement that participants attend for a screening appointment within 28 calendar days of their booking date should only apply to participants in the target group (50–74); however, once participants attend their screen, they should all have timely access to screening results, assessment visits and assessment results etc., regardless of age.
- Indicator is expressed as a proportion of screening episodes.
- Calculation of this measure will produce one result.
- Where NAS Measure 4.1.1 (a) is unmet, NAS Measure 4.1.1 (b) is calculated.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.1—The Service and/or SCU ensures that women progress through the screening pathway in a timely manner.

NAS Measure 4.1.2

≥90% of women have a documented notification of the results of screening within 14 calendar days of the date of screening.

Data Dictionary Measure

The percentage of women who have documented notification of the results of screening within 14 calendar days of the date of screening.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.6 Date participant notified of screening results
Numerator	Number of screening episodes where participants have a documented notification of their results within 14 calendar days of the screening visit. A.1, B.9.1, C.2, C.6
Denominator	Number of screening episodes. A.1, A.2, B.9.1, C.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of screening episodes, not participants. If a participant has more than one screening episode during the period, then all screening episodes are included. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator. • Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.

- This measure relates to all participants screened including those recalled to assessment.
- Documented notification refers to contact with the participant, for example, by a phone call in which the participant is directly spoken with, by letter or via email.
- Date of screen is date of last screening attendance.
- The date of notification is the date the result letter is sent or the participant is contacted verbally.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((C.6—C.2) ≤14 days)}]}{[\text{A.1 \& B.9.1 \& (C.2 between start date \& end date) at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of screening episodes.
- The calculation of this measure will produce one result.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.1 (a)

≥90% of women requiring assessment attend an assessment visit within 28 calendar days of their screening visit.

Data Dictionary Measure

The percentage of women requiring assessment who attend for an assessment visit within 28 calendar days of their screening visit.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.2.2 Date of first attendance for assessment.
Numerator	Number of participants requiring assessment who attend an assessment visit within 28 calendar days of their screening visit. A.1, B.9.1, C.2, D.2.2
Denominator	Number of participants requiring assessment as a result of their screening visit. A.1, A.2, B.9.1, C.2, C.5
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of screening episodes in the reference period. • There may be cases where a participant has two screening episodes in which they attended assessment in the one reference period. Where this is the case both screening episodes should be counted. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Participants who are screened by the Service and/or SCU but are assessed outside the Service and/or SCU to be excluded from the denominator.
- Participants who refused to attend assessment to be excluded from the denominator.
- Participants who were not contactable to be excluded from the denominator.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& ((D.2.2—C.2) ≤28 days)}]}{[\text{A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& (C.5=3 or 4 or 5)) at A.2}]} \times 100$$

Notes

- Indicator is expressed as a proportion of screening episodes among participants requiring assessment.
- Calculation of this measure will produce one result.
- Where NAS Measure 4.2.1 (a) is unmet, NAS Measure 4.2.1 (b) or NAS Measure 4.2.1 (c) are calculated.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.1 (b)

Where part (a) is not met, the Service and/or SCU records and reports the number of days the Service and/or SCU takes to achieve 90%.

Data Dictionary Measure

The number of days the Service and/or SCU takes to achieve 90%.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.2.2 Date of first attendance for assessment.
Numerator	Number of days taken for 90% of participants requiring assessment to attend for assessment. A.1, B.9.1, C.2, D.2.2
Denominator	Number of participants requiring assessment as a result of their screening visit. A.1, A.2, B.9.1, C.2, C.5
Formula	Minimum number of days from screening date to assessment date where Numerator / Denominator x 100 = 90% is achieved
Specifications	• Select on reference period. • Count is of screening episodes among participants assessed, determined for each consecutive interval (in days) from screening date to assessment date. The cumulative count of participants for each interval as a percentage of total participants requiring assessment is determined until 90% of total participants screened is reached. At the 90% mark, the interval (in days) represents the waiting time from screening to assessment before 90% of participants attending for assessment is achieved. • An alternative method of calculating this sub element is to export all screening appointments along with the number of days from booking to appointment

from lowest to highest then note the time taken to achieve 90% from booking date to screening date.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Participants who are screened by the Service and/or SCU but are assessed outside the Service and/or SCU to be excluded from the denominator.
- Participants who refused to attend assessment to be excluded from the denominator.
- Participants who were not contactable to be excluded from the denominator.

Algorithm

$$\frac{[\sum \text{number of participants assessed (A.1 \& B.9.1) for each interval (in days) between C.2 and D.2.2]}}{\text{[A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& (C.5=3 or 4 or 5)) at A.2]}} \times 100$$

Calculate n (number of days) where algorithm = 90%

Notes

- Indicator is expressed as a proportion of screening episodes among participants requiring assessment.
- Calculation of this measure will produce one result.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.1 (c)

Where part (a) is not met, the Service and/or SCU records and reports the percentage of women who were offered assessment within 28 calendar days of their screening visit.

Data Dictionary Measure

The percentage of women who were offered assessment within 28 calendar days of their screening visit.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode C.5 Recommendation—screening D.2.3 Date of first offered assessment appointment
Numerator	Number of participants requiring assessment who are offered assessment within 28 calendar days of their screening visit. A.1, B.9.1, C.2, D.2.3
Denominator	Number of participants requiring assessment as a result of their screening visit. A.1, A.2, B.9.1, C.2, C.5
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is participants. • While a rare event if a participant has two separate screening episodes during the reference period include both. • Both symptomatic and asymptomatic participants to be counted in the numerator and the denominator. • Participants who are screened by the Service and/or SCU but are assessed outside the Service and/or SCU to be excluded from the denominator.

- Participants who refused to attend assessment to be excluded from the denominator.
- Participants who were not contactable to be excluded from the denominator.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& ((D2.3—C.2) ≤28 days)]}}{\text{[A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& (C.5=3 or 4 or 5)) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants requiring assessment.
- Calculation of this measure will produce one result.
- Currently not all state and territory BreastScreen registers contain the data fields required to calculate this measure.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.2

≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

Data Dictionary Measure

The percentage of women attending assessment who do not require percutaneous needle biopsy who receive a definitive outcome at their first assessment visit.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier A.5 Lesion number B.9.1 Round number—State/Territory program D.2.1 Attendance for assessment D.2.2 Date of first attendance for assessment D.8.1 Percutaneous needle biopsy performed D.11.1 Recommendation—assessment D.11.4 Assessment visit—date
Numerator	Number of participants who attended for assessment and did not require percutaneous needle biopsy who received a definitive outcome at their first assessment visit. A.1, B.9.1, D.2.2, D.11.1, D.11.4
Denominator	Number of participants who attended for assessment and did not require percutaneous needle biopsy. A.1, A.3, A.5, B.9.1, D.2.1, D.2.2, D.8.1
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on date of first visit to assessment • Count is of participants assessed who did not require a percutaneous needle biopsy (participants who chose not to have a percutaneous biopsy are not

included in this count as this has no bearing on whether a biopsy was clinically required or not).

- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A.3 includes participants assessed by the Service and/or SCU even if screened elsewhere.
- Mobile assessments or 'step down' assessments should be included.
- Definitive outcome is identified from the last assessment recommendation, i.e. D.11.1 Recommendation—Assessment. An assessment outcome of early review is not considered to be a definitive outcome and therefore is not counted in the numerator.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& ((D.11.1=1 or 2 or 4 or 5) \& (Count D.11.4=1))]}}{\text{[A.1 \& B.9.1 \& (D.2.2 between start date \& end date) \& (D.2.1=1 \& (each A.5 where D.8.1=5 or D.8.1 is null)) at A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants assessed not requiring percutaneous needle biopsy.
- It is assumed that a participant is told of the participant's outcome at the participant's first assessment visit where no percutaneous needle biopsy is required.
- The calculation of this measure will produce one result.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.3

≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment.

Data Dictionary Measure

The percentage of women attending assessment who receive a definitive recommendation from assessment in no more than two visits.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.1 Reason for assessment D.2.2 Date of first attendance for assessment D.11.1 Recommendation—assessment D.11.4 Assessment visit—date
Numerator	Number of participants who attend for assessment and receive a definitive recommendation in no more than two procedural assessment visits during the same episode. A.1, B.9.1, D.2.2, D.11.1, D.11.4,
Denominator	Number of participants who attend for assessment. A.1, A.3, B.9.1, D.1, D.2.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on assessment date. • Count is of participants assessed. • The intent of this element is that a participant should require no more than two procedural visits and one results visit. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting

additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- Use D.11.4 to count number of dates of each assessment visit for each episode, or use visit number if States/Territories have a field specified.
- A.3 includes all participants assessed by the Service and/or SCU even if screened elsewhere.
- An assessment visit should include a step down visit.
- Definitive outcome is identified from the last assessment recommendation, for example, D.11.1 Recommendation—Assessment. Note that an assessment recommendation of early review is not a definitive outcome of assessment and therefore should not be included in the numerator.
- Participants attending for early review should be excluded from the denominator as the initial assessment visit for that early review may not be captured during the reference period.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& D.2.2 \& ((Count of D.11.4≤2) \& last D.11.1=1 or 2 or 4 or 5)]}}{\text{[A.1 \& B.9.1 \& (first D.2.2 between start date \& end date and D.1<>2) at first A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants assessed.
- The calculation of this measure will produce one result.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.4

≥85% of women are verbally given the results of percutaneous needle biopsy within seven calendar days of the assessment procedure.

Data Dictionary Measure

The percentage of women who have percutaneous needle biopsy at assessment who are verbally given the results within seven calendar days.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.8.3 Percutaneous needle biopsy result D.11.4 Assessment visit—date D.13.2 Date participant notified verbally of biopsy result
Numerator	Number of percutaneous needle biopsies performed where the participant is verbally given the results within seven calendar days of the assessment procedure. A.1, B.9.1, D.8.3, D.11.4, D.13.2
Denominator	Number of percutaneous needle biopsies performed. A.1, A.3, B.9.1, D.8.3, D.11.4
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period based on date of first attendance for assessment. • Count is of all percutaneous needle biopsy procedures. • Where a participant has multiple procedures, count each procedure. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A.3 includes participants assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& for each D.8.3=not null (D.13.2—D.11.4≤ 7calendar days)]}}{\text{[A.1 \& B.9.1 \& each (D.8.3=not null) \& D.11.4 at A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of all percutaneous needle biopsy procedures.
- The calculation of this measure will produce one result.
- If a participant has separate procedures on different days, both event intervals should be assessed. Where there are multiple procedures on different days, it is ideal to be able to define the interval between each procedure and the date the participant was notified verbally of the participant's results; however, this may not be possible for all services since in some cases only one date for results is able to be recorded.
- Some services may find it difficult to record the date the results were communicated to the participants for each procedure.
- A new data dictionary Data element D.13.2 *Date participant notified verbally of biopsy results* was created for use in calculating this NAS Measure.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.5

≥95% of women complete all assessment within 15 calendar days.

Data Dictionary Measure

The percentage of women attending assessment who receive a definitive outcome of assessment within 15 calendar days.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.1 Reason for assessment D.2.2 Date of first attendance at assessment D.11.1 Recommendation—assessment D.11.3 Date recommendation made D.13.1 Date participant notified in writing of assessment results D.13.2 Date participant notified verbally of biopsy results
Numerator	Number of participants who attend for assessment and receive a definitive outcome of the assessment either verbally or in writing within 15 calendar days. A.1, B.9.1, D.2.2, D.11.1, D.13.1, D13.2
Denominator	Number of participants who attend for assessment. A1, A.3, B.9.1, D.1, D.2.2
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants assessed. • Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator. • Reference period is based on assessment date associated with that round.

- Both symptomatic and asymptomatic participants to be counted both in the numerator and denominator.
- A.3 includes all participants assessed by the Service and/or SCU even if screened elsewhere.
- Participants who had mobile assessments or ‘step down’ assessments should not be included.
- Participants recommended for early review are counted in the denominator.
- Definitive outcome is identified from the last assessment recommendation, for example, D.11.1 Recommendation—Assessment. Note that an assessment recommendation of early review is not a definitive outcome of assessment and therefore should not be included in the numerator.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& ((D.11.1=1 or 2 or 4 or 5) \& (D.11.3 or D.13.1 or D.13.2—D.2.2≤15 days))]}}{\text{[A.1 \& B.9.1 \& (first D.2.2 between start date \& end date) \& (D.1<>2) at first A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants assessed.
- The calculation of this measure will produce one result.

4. Timeliness Standard

Screening and assessment services are provided to women in a timely and efficient manner.

Criterion 4.2—The Service and/or SCU ensures that women progress through the assessment pathway in a timely manner.

NAS Measure 4.2.6

All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.

Data Dictionary Measure

The percentage of women assessed who have a letter sent notifying them of the results of assessment within 14 calendar days of the date of completion of assessment.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.3 Assessment unit identifier B.9.1 Round number—State/Territory program D.2.1 Attendance for assessment D.2.2 Date of first attendance for assessment D.10 Final result of assessment visit D.11.3 Date recommendation made D.11.4 Assessment visit—date D.13.1 Date participant notified in writing of assessment results
Numerator	Number of participants assessed who have a letter sent notifying them of their results within 14 calendar days of the assessment visit. A.1, B.9.1, D.11.3, D.13.1
Denominator	Number of participants who attend for assessment. A.1, A.3, B.9.1, D.2.1, D.2.2, D.10, D.11.4
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Reference period is based on assessment date. • Count is of participants assessed. • Calculate the denominator first. The numerator is a subset of the denominator, i.e. A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional

data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.

- The reference period is established by selecting D.2.2—Date of first attendance for assessment (between start date and end date). Where a participant has multiple assessment visits and the participant completes assessment with a final result, it is important to include all assessment visits associated with that screening episode.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- A.3 includes participants assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& (D.13.1—D.11.3≤14 days)]}}{\text{[A.1 \& B.9.1 \& (D.11.4 for D2.2 between start date \& end date \& D.2.1=1 \& D.10<>0) at A.3]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants assessed.
- The calculation of this measure will provide one result.

5. Data Management and Information Systems Standard

Data and information management systems and processes ensure the safe and effective use of data for strategic, clinical management and service improvement purposes.

Criterion 5.1—The Service and/or SCU ensures the collection of treatment information about women with breast cancer.

NAS Measure 5.1.1

≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

Data Dictionary Measure

The percentage of surgical histopathology information received by the Service and/or SCU.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode E.1 Excision performed E.9 Excision result E.12 Recommendation—definitive F.1.1 Reason for histopathology F.1.3 Cancer diagnosed in BreastScreen Australia F.4 Histopathology of malignant lesion G.4 Surgical treatment
Numerator	Number of participants diagnosed with breast cancer who have undergone surgery for whom the Service and/or SCU has received surgical histopathology information. A.1, B.9.1, G.4
Denominator	Number of participants diagnosed with breast cancer by the Service and/or SCU who have undergone surgery. A.1, A.2, B.9.1, C.2, E.1, E.9, E.12, F.1.1, F.1.3, F.4
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants.

- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- This measure relates to participants screened by the Service and/or SCU who had a malignancy diagnosed regardless of whether they were assessed by the Service and/or SCU.
- Information with respect to interval cancers is to be requested if the interval cancer was detected by the Service and/or SCU, for example, early rescreen of a symptomatic participant or at early review at six months or more after the screening episode is complete.
- Information supplied should comply with the data dictionary for this NAS Measure to be met.
- This NAS Measure relates to excisions only.

Algorithm

$$\frac{[\text{A.1 \& B.9.1 \& (G.4 not null)}]}{[\text{A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& ((F.1.1=2 or (F.1.1=1 \& F.1.3=1)) \& (F.4=1.1 to 1.10 or 2.1 to 2.4)) if (E.12=4 \& E.1=1 \& E.9=1)) at A.2]} \times 100$$

Notes

- Indicator is expressed as a proportion of participants diagnosed with breast cancer and who have had surgery.
- The calculation of this measure will provide one result.

5. Data Management and Information Systems Standard

Data and information management systems and processes ensure the safe and effective use of data for strategic, clinical management and service improvement purposes.

Criterion 5.1—The Service and/SCU ensure the collection of treatment information about women with breast cancer.

NAS Measure 5.1.2

≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.

Data Dictionary Measure

The percentage of primary treatment information received by the Service and/or SCU.

Reference period	The most recent 12-month period (either calendar or financial year) for which data are available.
Data collection	BreastScreen Australia data dictionary
Data source	State and territory BreastScreen registers
Data elements	A.1 Client identifier number A.2 Screening unit identifier B.9.1 Round number—State/Territory program C.2 Date of first attendance for this episode D.11.1 Recommendation—assessment F.1.1 Reason for histopathology F.1.3 Cancer diagnosed in BreastScreen Australia F.4 Histopathology of malignant lesion G.4 Surgical treatment G.5.1 Radiotherapy G.5.2 Chemotherapy
Numerator	Number of participants diagnosed with breast cancer by the Service and/or SCU who have undergone primary treatment for whom the Service and/or SCU received primary treatment information. A.1, B.9.1, G.4, G.5.1, G.5.2
Denominator	Number of participants diagnosed with breast cancer by the Service and/or SCU who have undergone primary treatment. A.1, A.2, B.9.1, C.2, D.11.1, F.1.1, F.1.3, F.4
Formula	Numerator / Denominator x 100
Specifications	• Select on reference period. • Count is of participants.

- Calculate the denominator first. The numerator is a subset of the denominator, for example, A.1 in the numerator is the same A.1 in the denominator. A.1 and B.9.1 are used to ensure correct linking of data elements when selecting additional data elements for the numerator. Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic participants to be counted in both the numerator and the denominator.
- This measure relates to participants screened by the Service and/or SCU who had breast cancer diagnosed regardless of whether they were assessed by the Service and/or SCU.
- Information with respect to interval cancers is to be requested if the interval cancer was detected by the Service and/or SCU, i.e. early rescreen of a symptomatic participant or at early review at six months or more after the screening episode is complete.
- Information supplied should comply with the data dictionary for this NAS Measure to be met.

Algorithm

$$\frac{\text{[A.1 \& B.9.1 \& ((G.4 not null) or (G.5.1 not null) or (G.5.2 not null))]}}{\text{[A.1 \& B.9.1 \& (C.2 between start date \& end date) \& (D.11.1=4 or D.11.1=5 and ((F.1.1=2 or (F1.1=1 \& F.1.3=1) \& (F.4=1.1 to 1.10 or 2.1 to 2.4))) at A.2]}} \times 100$$

Notes

- Indicator is expressed as a proportion of participants diagnosed with breast cancer.
- The calculation of this measure will provide one result.

5.2 Reporting matrix and performance measures for NAS Measures relating to percutaneous needle biopsy (Assessment Standard 3)

Reporting matrix

Percutaneous needle biopsy → Final histology ↓	Malignant	Suspicious	Atypical	Benign	Inadequate	Total
Total malignant	Box 1	Box 2	Box 3	Box 4	Box 5	Box 6
Invasive	Box 7	Box 8	Box 9	Box 10	Box 11	Box 12
Non-invasive	Box 13	Box 14	Box 15	Box 16	Box 17	Box 18
Total benign	Box 19	Box 20	Box 21	Box 22	Box 23	Box 24
No histology	Box 25	Box 26	Box 27	Box 28	Box 29	Box 30
Total	Box 31	Box 32	Box 33	Box 34	Box 35	Box 36

Each box (numbered 1–36) of the tables above is used to calculate the number of cases of percutaneous needle biopsies, that is all fine needle aspirations and core biopsies performed cross referenced with the worst histology diagnosis. Note that all procedures should be included.

Calculation of Performance Measures

Performance NAS Measure 3.1.1

<5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient.

$$= \frac{4+5}{6+25} \times 100\%$$

Performance NAS Measure 3.1.2

0% of benign lesions assessed by percutaneous needle biopsy have a false positive cancer diagnosis, when the definitive needle biopsy result is achieved after performance of the final needle biopsy at an assessment episode(s). A false positive FNA which is followed by a true negative core biopsy, prior to recommendation for surgery or treatment, is not considered to be a false positive 'percutaneous needle biopsy' for the purpose of this standard.

$$= \frac{19}{24} \times 100\%$$

Performance NAS Measure 3.1.3

The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.

$$= \frac{1+25}{6+25} \times 100\%$$

Appendix A: Metadata and data standards

Detailed description of the format for data element definitions

All data element definitions included in this data dictionary are based on ISO/IEC Standard 11179 *Specification and Standardization of Data Elements*—the international standard for defining data elements issued by the International Organization for Standardization and the International Electrotechnical Commission. The meanings of the various parts of the format are provided below.

«NAME»

	Status	Effective Date	Reg. Auth.	ID No.
NCSI Model Location			Data Class	Version

Identifying and definitional attributes

Data element type:

Definition:

Context:

Relational and representational attributes

Datatype: *Representational form:*

Field size: *Min.* *Max.* *Representational layout:*

Data domain:

Guide for use:

Collection methods:

Related data elements:

Related NAS Measures:

Administrative attributes

Source document:

Source organisation:

Comments:

Identifying and definitional attributes

Name: A single or multi-word designation assigned to a data element. This appears in the heading for each unique data definition in the Dictionary.

Status: The operational status (CURRENT, SUPERSEDES) of the data element.

Data element type: A data element may be either:

(a) a DATA CONCEPT—a concept which can be represented in the form of a data element, described independently of any particular representation, for example, ‘Informal carer’, which does not have any particular representation of its own, except through data elements such as ‘Carer availability’ and ‘Relationship of carer to care recipient’.

(b) a DATA ELEMENT—a unit of data for which the definition, identification, representation and permissible values are specified by means of a set of attributes. For example, a person’s ‘Date of birth’ is a unit of data for which the definition, identification, representation and permissible values are specified.

(c) a DERIVED DATA ELEMENT—a data element for which values are derived by calculation using the values of other data elements.

(d) a COMPOSITE DATA ELEMENT—a data element where values represent a grouping of the values of other data elements in a specified order.

Definition: A statement that expresses the essential nature of a data element and its differentiation from all other data elements.

Context: A designation or description of the application environment or discipline in which a name is applied or from which it originates. For the Dictionary this attribute may also include the justification for collecting the data elements and uses of the information.

Relational and representational attributes

Data type: The type of symbol, character or other designation used to represent a data element. Examples include integer, numeric, alphanumeric, and alphabetic. For example, the data type for ‘Marital status’ is a numeric drawn from a domain or codeset in which numeric characters such as 1 = Never married, and 4 = Separated are used to denote a data domain value (*see* Data domain below).

Representational form: Name or description of the form of representation for the data element, such as ‘CODE’, ‘Quantitative value’, and ‘DATE’. For example, the representational form for ‘Country of birth’ is ‘CODE’ because the form of representation is individual numbers that each represent a different country.

Field size (minimum and maximum):	The minimum and maximum number, respectively, of storage units (of the corresponding datatype) to represent the data element value. For example, a data element value expressed in dollars may require a minimum field size of one character (1) up to a maximum field size of nine characters (999999999). Field size does not generally include characters used to mark logical separations of values such as commas, hyphens or slashes.
Representational layout:	The layout of characters in data element values expressed by a character string representation. Examples include 'DDMMYYYY' for calendar date, 'N' for a 1-digit numeric field, and '$$$,$$$,$$$' for data elements about expenditure.
Data domain:	The set of representations of permissible instances of the data element, according to the representation form, layout, data type and maximum size specified in the corresponding attributes. The set can be specified by name (such as valid date), by reference to a source (such as the ABS Classification of Languages), or by enumeration of the representation of the instances (for example, for 'Labour force status' values are 1 = Employed, 2 = Unemployed, and so on).
Guide for use (optional):	Additional comments or advice on the interpretation or application of the attribute 'data domain'. This attribute has no direct counterpart in the ISO/IEC Standard 11179 but has been included to assist in clarification of issues relating to the classification of data elements.
Collection methods (optional):	Comments and advice concerning the actual capture of data for the particular data element, including guidelines on the design of questions for use in collecting information, and treatment of 'not stated' or non-response. This attribute is not specified in the ISO/IEC Standard 11179 but has been added to cover important issues about the actual collection of data.
Related data elements (optional):	Shows relationships between the data element (or data concept) and other data elements/concepts in the Dictionary, including the type of relationship, for example,— 'supersedes data element X.X'.
Related NAS Measures (optional):	Shows relationships between the data element (or data concept) and other NAS Measures in the Dictionary.

Administrative attributes

Source document (optional):	The document from which definitional or representational attributes originate.
Source organisation:	The organisation responsible for the source document and/or the development of the data definition. This attribute is not specified in ISO/IEC Standard 11179 but has been added for completeness. The Source organisation is not necessarily the organisation responsible for the ongoing development/maintenance of the data element definition.
Comments (optional):	Any additional explanatory remarks on the data element.

Appendix B: Classifications

Australian Standard Geographical Classification (ASGC) and Australian Statistical Geography Standard (ASGS)

In 2011, the ABS replaced the Australian Standard Geographical Classification (ASGC) (ABS 2006) with the new Australian Statistical Geography Standard (ASGS) (ABS 2011). This and the more recent 2016 ASGS comprises a hierarchy of geographic regions and is the future geographical standard on which the ABS will release statistical data. Statistical Areas Levels 1–4 (SA1, SA2, SA3 and SA4) are components of the new ASGS while Statistical Local Areas (SLA) belonged to the old ASGC structure.

ASGS structures will be updated every Census year. In comparison, SLA boundaries were updated annually.

To assign a single geographic identifier based on the ASGS using Australian address components:

- SA1 classification requires street address, suburb/locality, postcode and state
- SA2 or SA3 classification requires suburb/locality, postcode and state
- SA4 can be generated from postcode only.

SA2 level data are used in developing ABS products including Remoteness Area (RA) definitions, and Socioeconomic Indexes for Areas (SEIFA).

This classification allocates one in five remoteness categories to areas depending on their distance from different-sized urban centres, where the population size of the urban centre is considered to govern the range and type of services available.

Socio-Economic Indexes for Areas (SEIFA)

Socio-Economic Indexes for Areas (SEIFA) is a product developed by the ABS that ranks areas in Australia according to relative socioeconomic advantage and disadvantage. The indexes are based on information from the five-yearly Census.

For the purposes of SEIFA, the ABS continues to broadly define relative socioeconomic advantage and disadvantage in terms of people's access to material and social resources, and their ability to participate in society.

SEIFA is based on Census data, and consists of four indexes, each focusing on a different aspect of socioeconomic advantage and disadvantage, and being a summary of a different subset of Census variables.

Differences between SEIFA 2011/2016 and previous years

SEIFA 2011 consists of the same 4 indexes as used in 2006 and 2001.

SEIFA 2011, and more recent SEIFA 2016, use the ASGS, which is a change from past versions, which used the Australian Standard Geographical Classification. The main implication for SEIFA from this change is that the new base unit of analysis is the Statistical Area Level 2 (SA2), rather than the Census Collection District (CD) used in the past.

Index scores for larger geographic areas have been produced by taking population-weighted averages of constituent SA2 scores.

The methods used for SEIFA 2011/2016 are generally the same as previously, although the exclusion rules have been updated to ensure a reliable index score is obtained for as many areas as possible.

Of particular note to users of past versions of SEIFA, one of the Indexes, the Index of Relative Socio-economic Disadvantage (IRSD, see below), no longer contains the variable relating to the proportion of people identifying as Indigenous in an area.

Index of Relative Socio-Economic Disadvantage

The Index of Relative Socio-economic Disadvantage (IRSD) is one of four Socio-Economic Indexes for Areas (SEIFAs) developed by the Australian Bureau of Statistics (ABS 2013). This index is based on factors such as average household income, education levels and unemployment rates. Rather than being a person-based measure, the IRSD is an area-based measure of socioeconomic status in which small areas of Australia are classified on a continuum from disadvantaged to affluent. This information is used as a proxy for the socioeconomic status of people living in those areas and may not be correct for each individual person in any particular area.

Standard Australian Classification of Countries

The Standard Australian Classification of Countries is the Australian statistical standard for statistics classified by language (ABS 2016). It was designed for use in the collection, aggregation and dissemination of data relating to languages spoken in Australia and used to classify the language variables ‘First language spoken’, ‘Languages spoken at home’, ‘Main language spoken’ and ‘Main language other than English spoken at home’. The classification was developed through extensive research, stakeholder consultation and data analysis.

Glossary

Aboriginal or Torres Strait Islander: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander.

Absolute sensitivity: Is the measure of success in the diagnosis of cancer by percutaneous needle biopsy.

Architectural distortion: Abnormal configuration of the ductal and ligamentous structures of breast parenchyma compared with the remainder of the breast tissue markings. Includes speculation, focal retraction, distortion of the parenchymal edge, or disorganisation of markings.

Aspiration: Putting a hypodermic needle into the tissue or area of concern and drawing back on the syringe to obtain fluid or cells.

Assessment centre/clinic: The centre where participants are recalled for diagnostic work-up due to an abnormality detected as a result of the screening visit, signs/symptoms reported at the screening visit, or for other reasons, either within or outside BreastScreen Australia.

Assessment episode: An assessment episode includes all attendances for assessment during a particular screening episode. An assessment episode is complete when there is one of three outcomes: return for routine rescreening, referral for definitive treatment or recommendation for early review.

Assessment visit: Any visit by a participant to an assessment centre or clinic for the purpose of all follow-up investigative procedures arising from a participant's attendance for screening up to and including cytological or histological diagnosis. This does not include attending the assessment clinic for the purpose of receiving results.

Axillary dissection: Surgical excision of the axillary contents (fat and lymph nodes) en bloc with mastectomy or as an independent procedure. The extent of the axillary dissection is further defined in the following way:

- Level 1—excision of the axillary contents up to the inferior border of the pectoralis minor muscle.
- Level 2—excision of the axillary contents up to the superior border of the pectoralis minor muscle.
- Level 3—excision of the axillary contents up to the apex of the axilla.

Axillary lymph node dissection: Surgical removal of lymph nodes found in the armpit region. See **axillary dissection**.

Axillary lymph nodes: Lymph nodes found in the armpit area.

Benchmarking: A continuous process of measuring quality or performance against the highest standards.

Benign: Not malignant, not cancer.

Benign diagnostic open biopsy: An open biopsy recommended by the Service for diagnostic purposes and where the histopathology was not of invasive cancer or **DCIS**; examples include atypical hyperplasia, radial scar or **LCIS**.

Bilateral: Involving both sides, such as both breasts.

Biopsy: Removal of a sample of tissue or cells from the body to assist in diagnosis of a disease.

Breast conserving surgery: Surgery where the cancer is removed, together with a margin of normal breast tissue. The whole breast is not removed.

Calcification: The deposition of calcium salts in body tissues. In the breast, calcification can be seen in normal and abnormal ducts and in association with some carcinomas, both invasive and in situ.

Cancer: A malignant growth. See also **carcinoma**.

Cancer death: A death where the underlying cause is indicated as cancer.

Carcinoma: A malignant tumour arising from epithelial cells, which are cells lining the external or internal surfaces of the body. Carcinomas spread to nearby tissues. They may also spread to distant sites such as lung, liver, lymph nodes and bone. Also see **metastasis**.

Carcinoma in situ (CIS): A non-invasive lesion in which neoplastic cells are confined by the basement membrane. Carcinoma in situ has an increased risk of becoming an invasive carcinoma if untreated. See also **ductal carcinoma in situ** and **lobular carcinoma in situ**.

Carcinoma NOS: Carcinoma not otherwise specified. Frequently used as a synonym for invasive ductal carcinoma or Carcinoma of No Special Type.

Catchment area: Catchment area is a geographic region based on service size in relation to the population, accessibility and location of other services.

Clinical examination of breast: The physical examination of the breast and axilla by a health professional.

Combined recall to assessment: Recall to assessment for a mammographic abnormality as well as non-mammographic abnormality.

Complete local excision: The complete removal of a tumour with a surrounding margin of normal breast tissue. Also known as CLE and **breast conserving surgery**.

Consensus reading: Where the screen readers consider the mammogram together to reach agreement over discordant reads.

Core biopsy: The sampling of breast tissue with a cutting needle, 14 gauge or larger, to obtain a tiny cylinder of tissue for histological examination. This technique may involve a mechanical device to drive the cutting needle.

Cyst: Fluid-filled sac.

Cytological diagnosis: A diagnosis based on looking at cells.

Cytology: Assessment of cellular detail and abnormalities in a preparation of cells obtained by fine needle aspiration (FNA), or by other methods such as imprint or duct discharge cytology (NHMRC 1995).

Definitive outcome at assessment: An assessment recommendation of: 1. Routine rescreen at 2 years; 2. Routine rescreen at 1 year; 3. Definitive treatment for cancer.

Definitive result: Whether the lesion is malignant or non-malignant. No definitive result applies where the sample obtained does not permit definitive diagnosis and where further biopsy will not be performed. The decision not to perform further biopsy may be either the participant's or the surgeon's.

DCIS (Ductal carcinoma in situ): A form of carcinoma in situ with no invasive component, diagnosed by its characteristic histopathologic features. Frequently associated with mammographic abnormalities, including calcification. There is an increased risk of progression to invasive carcinoma at the same site as the DCIS if not adequately treated.

Diagnostic mammography: Mammography which is performed when an individual has signs or symptoms of disease.

Discrete mass with or without calcification: A mass is a space-occupying lesion seen in two projections, and is described by density and edge characteristics. Density may be high, low or variable compared to normal breast tissue. The outline (edge) may be smooth, lobulated, irregular, speculated, stellate, or obscured by superimposed parenchyma. Features suspicious for malignancy include increased density and an irregular, speculated or stellate border, or portion of border.

Double reading: Where the screening films are independently read by two readers.

Ductal carcinoma in situ: See **DCIS**.

Early review: The recall of a participant for further assessment within 12 months of the screening date and following an equivocal assessment visit (where a decision cannot be made). Early review within 6 months of the screening date is considered part of the screening episode and cancers found as a result of the review are considered to be screen-detected; but cancers found at early review carried out at 6 months or more from the date of screening are considered to be **interval cancers**.

Excision: Surgical removal by cutting of the lesion in question.

Fine needle aspiration biopsy: The sampling of cells from breast tissue for examination by a pathologist. Also known as FNA, FNAB or FNB.

First screen: Participants who are attending for their first screening episode within the National Program, including the pilot phase and regardless of the Service. Also known as the **initial screen**.

FNA: The sampling of cells from breast tissue for examination by a pathologist. Also known as **fine needle aspiration biopsy**, **FNAB** or FNB.

FNAB: The sampling of cells from breast tissue for examination by a pathologist. Also known as **FNA**, **fine needle aspiration biopsy** or FNB.

Frozen section: Freezing of a tissue biopsy to facilitate cutting a thin tissue section which is stained and examined microscopically. Usually used to obtain a tissue diagnosis at or during an operation.

Grade: The degree of similarity of the cancer cells to normal cells:

- A grade 1 carcinoma is well differentiated and is associated with a good prognosis.
- A grade 2 carcinoma is moderately differentiated and is associated with an intermediate prognosis.
- A grade 3 carcinoma is poorly differentiated and is associated with a poor prognosis.

Tumour grade is assigned by an assessment of microscopic features of the tumour by a histopathologist.

Histology: An examination of the body tissue by a pathologist using a microscope.

Histopathology: Microscopic study of diseased tissue, usually performed by a histopathologist.

Impalpable: Not able to be felt on a clinical examination.

Inadequate percutaneous needle biopsy result: Inadequate percutaneous needle biopsies are defined as samples of insufficient yield for adequate diagnosis of the screen-detected lesion. In cases of core biopsies for micro-calcifications this includes samples without calcium.

Indigenous: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander.

Initial screen: Participants who are attending for their first screening episode within the National Program, including the pilot phase and regardless of the Service. Also known as a **first screen**.

Interval cancers: Interval cancers are invasive breast cancers that are diagnosed in the interval between the completion of a negative screening episode and the commencement of the next screening episode. For most participants, the next screening episode will occur around 24 months after the participant's previous negative screening episode, as the recommended screening interval for most participants in BreastScreen Australia is 24 months. The exception to this is participants on annual screens, for whom the next screening episode will occur around 12 months after the participant's previous negative screening episode.

An interval cancer may be:

- an aggressive breast cancer that emerges and grows very rapidly in the period between screening episodes
- a breast cancer that, due to the characteristics of the cancer or the breast tissue, is not visible on screening mammography and therefore not able to be detected
- a breast cancer that can be retrospectively detected on the previous screening mammogram.

The first two types of interval cancer described above are true interval cancers, and therefore do not represent any failure in detection; the third represents a failure of the screening process. Through the BreastScreen accreditation process, state and territory BreastScreen programs are required to audit interval cancers. On investigation, more than 80% are found to be true interval cancers.

Interval cancers may be detected outside BreastScreen Australia or through BreastScreen Australia, depending on the policies for screening symptomatic participants that exist in each State and Territory.

Invasive: The tendency of a malignant process or growth to spread into healthy tissue (Thomas 1997). Invasion occurs when cancer cells push between and break through other surrounding cells and structures (AIHW 2000a). An invasive cancer is greater than 15 mm (as compared to a small invasive cancer which is less than or equal to 15 mm). Tumours demonstrating micro-invasion should be reduced and sized as invasive cancers and not as DCIS. Invasive cancer excludes DCIS.

Jurisdiction: The territory over which authority is exercised. In this data dictionary the term is used to refer to an Australian state or territory.

LCIS (Lobular carcinoma in situ): An atypical epithelial process characterised by an increased risk of progression to invasive carcinoma. It is difficult to detect by mammography.

Lobular carcinoma in situ: See **LCIS**.

Localisation: Method used to locate/mark an impalpable lesion for surgical removal with wire marker or carbon.

Lumpectomy: Surgical removal of a lump from the breast. Also see **complete local excision**.

Lymph node: A lymphoid organ comprising specialised white cells or lymphocytes and related cells. They have a filtering function and are the site of development of antibody-producing (B) lymphocytes and plasma cells, and cytotoxic and memory (T) lymphocytes. Lymph nodes are found along lymphatic channels, particularly the axillae, neck and inguinal regions. Axillary lymph nodes are a common site for metastatic breast carcinoma.

Main language other than English spoken at home: The language reported by a person as the main language other than English spoken by a person in their home (or most recent private

residential setting occupied by the person) on a regular basis, to communicate with other residents of the home or setting and regular visitors (see also Data Element B.4).

Malignant: A tumour having the capacity to invade and destroy tissue locally, and metastasise via the bloodstream or lymph to distant sites and cause death.

Mammogram: A soft tissue x-ray of the breast which may be used to evaluate a lump or which may be used as a screening test in women with no signs or symptoms of breast cancer.

Mammography: The process of taking a mammogram.

Mammographic recall: A recall due to a suspicious (screening) mammogram.

Metastasis: The spread of a cancer from the primary site to somewhere else via the bloodstream or lymphatic system.

METeOR: METeOR is Australia's repository for national metadata standards for health, housing and community services statistics and information http://meteor.aihw.gov.au.

Morbidity: A measure of illness when referring to ill health in an individual or ill health in a population group. In the broadest sense, morbidity is any departure, subjective or objective, from a state of physiological or psychological wellbeing.

Multidisciplinary approach to assessment: Where the radiologist and the surgeon, or other designated examining clinician, are in attendance together at assessment to correlate and evaluate the clinical and imaging findings and to decide on further investigations or management.

Multiple masses: More than one lesion which conforms to the definition of a suspicious mass.

Non-mammographic recall: Recall to assessment for reasons other than a mammographic abnormality, for example, signs or symptoms.

Non-specific density: Asymmetry of breast tissue seen in either one or two planes not accurately described by other categories. Additional imaging may reveal normal breast parenchymal appearances, or an underlying mass, or definite architectural distortion. Includes new densities with poorly defined characteristics.

Open biopsy: A surgical procedure performed under local or general anaesthetic in which a sample of breast tissue for histological examination is obtained in a conventional surgical procedure, using an open incision.

Participant: Participant is a person having breast tissue that is suitable for breast cancer screening and who has engaged with the Service and/or SCU through a screening and/or assessment appointment or visit. Screening participants may include women, transgender men, transgender women, non-binary people or other gender diverse people.

Pathologist: Doctor who specialises in examining tissue and diagnosing disease.

Pathology: Scientific study of the alterations produced by disease.

Percutaneous needle biopsy: Fine needle aspiration or core biopsy.

Person-years: The denominator for the interval cancer rate, it is the 'number of years at risk' of being diagnosed with an interval cancer and takes into account participants who screen annually rather than every 2 years (who would be at risk for the first year after their screen but not the second).

Preoperative diagnosis of cancer: A malignant result on FNA or core biopsy (includes DCIS and invasive cancer) which is consistent with suspicious or malignant imaging findings.

Primary breast tumour: Tumour arising in the breast, and derived from breast tissue.

Primary treatment: All treatment modalities initiated within 6 months of diagnosis. This does not include treatment for recurrence or metastases.

Radical mastectomy: Total mastectomy with removal of all lymph nodes from the armpit and removal of muscles of the chest. This operation is obsolete and should be performed rarely. Also known as Halsted mastectomy.

Radiographic: Pertaining to an x-ray.

Radiotherapy: The use of radiation, usually x-rays or gamma rays, to kill tumour cells.

Sensitivity: The proportion of people with a disease who are correctly diagnosed (test positive based on diagnostic criteria). The higher the sensitivity of a test or diagnostic criteria, the lower the rate of 'false negatives'—people who have a disease but are not identified through the test.

Screen-detected abnormalities: Abnormalities which are observed on a screening test.

Screen-detected cancer: A screen-detected breast cancer is any invasive breast cancer or DCIS diagnosed during the screening episode.

Screening: The presumptive identification of unrecognised disease or defect by the application of tests, examinations or other procedures which can be applied rapidly. Screening tests sort out apparently well persons who probably have a disease from those who probably do not.

Screening and Assessment Service: An integrated service consisting of an assessment centre/service and its associated screening units.

Screening episode: A screening episode includes all attendances for screening and assessment within 6 months relating to a particular round of screening. It commences at the date of attendance for screening. It is completed when:

- a recommendation is made to return the participant to routine rescreening
- a recommendation is made for early review at 6 months or more from the screening date
- a diagnosis of cancer is made
- the participant fails to attend for technical recall or assessment within 6 months
- the participant dies.

Screening mammography: Mammography which is performed when a participant does not have signs or symptoms of disease.

Second or subsequent screen: Participants who are attending for any screening episode in BreastScreen Australia other than their first screen.

Screening unit: A screening unit is usually one site, fixed or mobile.

Size of tumour: The greatest dimension of the tumour in millimetres. This is ideally determined from the fresh specimen or, if appropriate, from histopathology slides.

Small invasive cancer: An invasive cancer less than or equal to 15 mm.

Symptom: A lump or nipple discharge (clear or bloody).

Staff: Staff refers to any person employed by the service, which includes full-time, part-time and casual staff.

Stellate lesion: Speculations of variable length radiating from a central point or mass. When a central mass is present, it may be small or large, and of low, mixed or high density compared to surrounding breast parenchyma.

Step down assessment: Assessment that involves diagnostic further views using mammography only. Can be used if attendance at a routine assessment centre is either not possible or not convenient.

Stereotaxis: A radiological technique to accurately localise a lesion in the breast. Used to permit precise insertion of a needle in order to obtain material for cytology (fine needle) or histology (core biopsy) or as an aid to surgical excision of an impalpable lesion.

Surgical unit: A BreastScreen Australia identifier for the surgical unit attended by the participant for excision of a lesion, unique within the state or territory.

Target group: Participants aged between 50 and 74 years.

Technical repeat: The taking of further films initiated by the radiographer or radiologist due to technically unsatisfactory films at the screening visit.

Total mastectomy: Surgery to remove the entire breast, including the nipple and areola.

Tumour: An abnormal growth of tissue. Tumours may be benign or malignant. If malignant they may be primary or secondary (metastatic).

Two standard views: The cranio-caudal and medio-lateral oblique views in mammography.

Ultrasound: Production of a visual image of a part of the body by recording the echoes of sound waves directed into the body.

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