



Australian Government

Australian Institute of  
Health and Welfare

# BreastScreen Australia data dictionary

Version 1.1

BreastScreen  
AUSTRALIA

A joint Commonwealth/State and Territory Program

CANCER SERIES NO. 92





**Australian Government**

**Australian Institute of  
Health and Welfare**

*Authoritative information and statistics  
to promote better health and wellbeing*

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Australian Institute of Health and Welfare  
Canberra

Cat. no. CAN 90

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# Contents

Acknowledgments .....	iv
Abbreviations .....	v
Symbols.....	v
Summary.....	vi
<b>1 Introduction.....</b>	<b>1</b>
1.1 What is the BreastScreen Australia data dictionary?.....	1
1.2 Objectives of the BreastScreen Australia data dictionary .....	2
<b>2 Summary of updates to the BreastScreen Australia data dictionary .....</b>	<b>4</b>
<b>3 Data elements.....</b>	<b>13</b>
A – Identifier segment.....	18
B – Client segment .....	36
C – Screening visit segment .....	78
D – Assessment visit segment.....	99
E – Local excision of lesion segment.....	146
F – Histopathology segment.....	166
G – Primary treatment segment.....	192
H – Death segment.....	202
<b>4 Performance indicator data elements .....</b>	<b>205</b>
<b>5 National Accreditation Standards Measures – data specifications.....</b>	<b>227</b>
Appendix 1: Metadata and data standards .....	393
Appendix 2: Classifications.....	396
Glossary .....	398
References.....	405

# Acknowledgments

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Updated under the auspices of the BreastScreen Australia Accreditation Review Committee, October 2014

# Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ARC	BreastScreen Australia Accreditation Review Committee
CB	Core biopsy
DCIS	Ductal carcinoma in situ
FNA	Fine needle aspiration
IRSD	Index of Relative Socioeconomic Disadvantage
LCIS	Lobular carcinoma in situ
METeOR	Metadata Online Registry
NAS	National Accreditation Standards
NQMC	National Quality Management Committee
SCU	State Coordination Unit
SEIFA	Socioeconomic Indexes for Areas

# Symbols

$\leq$	Less than or equal to
$\geq$	More than or equal to
%	Per cent
$\sum$	Sum
=	Equal
<	Less than
>	More than
< >	Less than and more than

# Summary

Breast cancer is the most common cancer, and second most common cause of cancer-related death, in Australian women. In 2011, 14,465 women were diagnosed with breast cancer, and in 2012 there were 2,795 deaths from this disease.

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 woman 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 woman 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 What is 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 woman 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 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*, 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.

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*.

A change in the target age group for BreastScreen Australia from women aged 50–69 to women 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: version 1.1* include both historic Measures for women aged 50–69 alongside the new NAS Measures that are specific to women aged 50–74.

Note that there are more NAS Measures that appear in the *BreastScreen Australia data dictionary: version 1.1*; NAS Measures for accreditation are comprised of quantitative and non-quantitative NAS Measures. The data dictionary only provides data specifications for quantitative NAS Measures.

## 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 items to be collected at the Service and/or State Coordination Unit (SCU) level for monitoring and evaluation purposes and for the purposes of client 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 items 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.

## 2 Summary of updates to the BreastScreen Australia data dictionary

This chapter summarises updates made to the *BreastScreen Australia data dictionary: version 1* (BreastScreen Australia 2005). These updates reflect changes made to the BreastScreen Australia accreditation system following a review in 2011–2014, directed by the BreastScreen Australia Accreditation Review Committee and endorsed by the Australian Health Ministers' Advisory Council's Community Care and Population Health Principal Committee, Standing Committee on Screening. The chapter is provided to help determine any changes required to State and Territory BreastScreen Registers in order to conform to the new *BreastScreen Australia data dictionary: version 1.1*, as well as informing all users more generally of the changes made since Version 1.

The most significant area of change has been to the accreditation measures, which appear in Section 5 of the data dictionary. Previously called National Accreditation Standards (NAS), these are now called NAS Measures. Briefly, seven high level Standards (previously termed 'clusters') have been introduced. Each standard is made up of Criteria (previously termed 'performance objectives'), which include a number of individual NAS Measures (Table S1). The NAS Measures describe the specific requirements for accreditation.

**Table S1: Summary of differences between Version 1 and Version 1.1 of the BreastScreen Australia data dictionary**

Version 1	Version 1.1
4 Outcomes	
6 Aims	
12 Objectives	6 Objectives
10 Clusters	7 Standards
38 Performance objectives	29 Criteria
55 NAS	42 NAS Measures
99 Data elements	104 Data elements

These changes have been endorsed by the BreastScreen Australia Accreditation Review Committee (ARC) and its two subcommittees – the NAS and Data Subcommittee, and the Performance Improvement and Governance Subcommittee.

Some *NAS Measures* are updates of the previous NAS, while others are new. Some of the 'old' NAS have been retired. To support these changes, many data elements have been updated and new ones introduced to Section 3 of the data dictionary, while other data elements have been retired. Changes to NAS Measures/NAS and data elements are outlined in Tables S2–S7.

As with previous versions of the *BreastScreen Australia data dictionary*, there is the potential for further review that may require future additional changes. The Australian Health Ministers' Advisory Council's Community Care and Population Health Principal Committee, Standing Committee on Screening has given the NQMC authority to undertake future reviews of the accreditation system and provide suggested revisions to the Standing Committee for endorsement.

## Data elements

**Table S2: Revised data elements**

Name		Definition	Description of change
Version 1.1	Version 1		
B.3.1 Area of usual residence (SA2)	B.3.1 Area of usual residence	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.	Slight name change.
B.6.2 Family history of breast cancer—relationship	B.6.2 Family history—relationship		Slight name change.
B.6.3 Family history of breast cancer—age	B.6.3 Family history—age		Slight name change.
B.6.4 Family history of breast cancer—laterality	B.6.4 Family history—laterality		Slight name change.
B.7.2 Previous history of breast cancer—year	B.7.2 Previous history—year		Slight name change.
B.7.3 Previous history of breast cancer—laterality	B.7.3 Previous history—laterality		Slight name change.
C.3.1 Total number of images used	C.3.1 Total number of films used	The number of images used to screen a woman during her screening visit(s).	Slight name change.
D.7.1 Result of ultrasound	D.7 Result of ultrasound	The result of the Ultrasound done after the recommendation 'to assessment centre' was made at the screening visit (see 'Recommendation—screening', C.5).	Renumbering of data element.
D.7.2 Description of ultrasound lesion	D.8 Description of ultrasound lesion	The description of the lesion based on ultrasound findings.	Renumbering of data element.
D.9 Other procedures performed	D.11 Other assessment procedures performed	Whether other procedures were used to assess the mammographic lesion(s).	Slight name change and numbering change.
D.10 Final result of assessment visit	D.12 Final result of assessment visit	The combined result of all procedures carried out during the assessment of a woman.	Renumbering of data element.
D.11.1 Recommendation—assessment	D.13.1 Recommendation—assessment	The recommended action following the assessment workup for this screening episode.	Renumbering of data element.
D.11.2 Recommendation—number of months	D.13.2 Recommendation—number of months	The number of months to the time when the Early review is recommended to take place.	Renumbering of data element.
D.11.3 Date recommendation made	D.13.3 Date recommendation made	The date the recommendation after the assessment workup for this screening episode was made.	Renumbering of data element.
D.11.4 Assessment visit—date	D.13.4 Assessment visit—date	The date the woman attended for a visit during this assessment episode.	Renumbering of data element.
D.12 Discharge from BreastScreen Australia following assessment	D.14 Discharge from Program following assessment	Whether or not a woman was discharged from BreastScreen Australia following the outcome of assessment.	Slight name change and renumbering of data element.
D.13.1 Date woman notified in writing of assessment results	D.15 Date woman notified of assessment results	The date the woman was first notified in writing of the outcome of her assessment visit(s).	Slight name change and renumbering of data element.
D.14.1 Letter to general practitioner about assessment results	D.16.1 Letter to general practitioner about assessment results	Whether or not a letter about the outcome of the woman's attendance for assessment was sent to her general practitioner.	Renumbering of data element.
D.14.2 Letter to general practitioner about assessment results—date	D.16.2 Letter to general practitioner about assessment results—date	The date the letter about the outcome of the woman's attendance for assessment was sent to her general practitioner.	Renumbering of data element.

E.2 Date excision performed	E.2 Date local excision performed	The date on which the local excision was performed.	Slight name change.
E.4.1 Marking method	E.4 Marking method	The marking method used to localise the lesion during surgical excision.	Renumbering of data element.
E.4.2 Localisation technique	E.5 Localisation technique	The technique used to localise the lesion during surgical excision.	Renumbering of data element.
E.8.1 Lesion removal	E.8.1 Lesion identified in specimen	Whether the screen detected lesion has been removed through needle biopsy or surgery.	Data element name and definition changed to detail whether or not the lesion has been removed.
E.13 Discharge from BreastScreen Australia following local excision	E.13 Discharge from Program following local excision		Slight name change.
F.1.3 Cancer diagnosed in BreastScreen Australia	F.1.3 Cancer diagnosed in Program		Slight name change.
G.1 Nature of primary treatment	G.1 Primary treatment form	The nature of primary treatment.	Slight name change.
G.5.1 Radiotherapy	G.5 Adjuvant radiotherapy	Whether or not radiotherapy was given as a part of the treatment regime.	Name change and numbering change.

**Table S3: New data elements**

Name	Definition
C.8 Annual screening flag	Identifies whether the woman is recommended for annual routine screening.
D.2.3 Date first offered appointment for assessment	The date the woman is offered an appointment for assessment, for this episode.
D.8.1 Percutaneous needle biopsy performed	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.
D.8.2 Percutaneous needle biopsy guidance method	The method used to direct needle position for percutaneous needle biopsy.
D.8.3 Percutaneous needle biopsy result	The result of the percutaneous needle biopsy.
D.11.5 Results visit—date	The date the woman attended for a results visit during this assessment episode.
D.13.2 Date woman notified verbally of biopsy results	The date the woman was verbally notified of the outcome of her cytology or pathology assessment result(s).
E.5 Palpability of lesion	Whether or not lesion was palpable or impalpable.
G.5.2 Chemotherapy	Whether or not chemotherapy was given as a part of the treatment regime.

**Table S4: Retired data elements**

Name	Definition
D.9.1 Fine needle cytology method	The method used to direct needle position for the fine needle cytology.
D.9.2 Fine needle cytology result	The result of the fine needle cytology.
D.10.1 Core biopsy method	The method used to direct needle position for the core biopsy.
D.10.2 Core biopsy result	The result of the core biopsy.

# NAS Measures

**Table S5: NAS Measures revised from previous NAS**

Name		Definition	Description of change
Version 1.1	Version 1		
1.1.1 (a)	1.1.1	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.	Split into parts (a) and (b) to include the new target age group.
1.1.1 (b)	1.1.1	≥70% of women aged 50–69 years participate in screening in the most recent 24-month period.	Split into parts (a) and (b) to include the new target age group.
1.1.2 (a)	1.2.1	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.	Split into parts (a) and (b) to include the new target age group.
1.1.2 (b)	1.2.1	≥75% of women aged 50–67 years who attend for their first screening episode within the Program are rescreened within 27 months.	Split into parts (a) and (b) to include the new target age group.
1.1.3 (a)	1.2.2	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.	Split into parts (a) and (b) to include the new target age group.
1.1.3 (b)	1.2.2	≥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.	Split into parts (a) and (b) to include the new target age group.
1.2.1 (a)(i)	1.3.5 (b)	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.	Split into parts (a) and (b) to include the new target age group.
1.2.1 (b)(i)	1.3.5 (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. (i) Indigenous women.	Split into parts (a) and (b) to include the new target age group.
1.2.1 (a)(ii)	1.3.5 (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. (ii) women from culturally and linguistically diverse backgrounds.	Split into parts (a) and (b) to include the new target age group.
1.2.1 (b)(ii)	1.3.5 (a)	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	Split into parts (a) and (b) to include the new target age group.

		linguistically diverse, rural/remote and lower socioeconomic backgrounds. (ii) women from culturally and linguistically diverse backgrounds.	
1.2.1 (a)(iii)	1.3.5 (c)	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.	Split into parts (a) and (b) to include the new target age group. Updated to reflect new ABS geography methodology.
1.2.1 (b)(iii)	1.3.5 (c)	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.	Split into parts (a) and (b) to include the new target age group. Updated to reflect new ABS geography methodology.
1.2.1 (a)(iv)	1.3.5 (d)	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.	Split into parts (a) and (b) to include the new target age group. Updated to reflect new ABS geography methodology.
1.2.1 (b)(iv)	1.3.5 (d)	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.	Split into parts (a) and (b) to include the new target age group. Updated to reflect new ABS geography methodology.
1.2.2 (a)	1.1.2	The Service and/or SCU monitors the proportion of all women in the Service who are screened and recalled for assessment, aged 40–49 years and 75 years and over. (a) women who are screened.	Numbering change, slight change in wording and age group.
1.2.2 (b)	2.6.3	The Service and/or SCU monitors the proportion of all women in the Service who are screened and recalled for assessment, aged 40–49 years and 75 years and over. (b) women who are recalled for assessment.	Numbering change, slight change in wording and age group.
2.1.1 (a)	2.1.1	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.	Split into parts (a) and (b) to include the new target age group.
2.1.1 (b)	2.1.1	≥50 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer.	Split into parts (a) and (b) to include the new target age group.
2.1.2 (a)	2.1.2	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.	Split into parts (a) and (b) to include the new target age group.



2.1.2 (b)	2.1.2	≥35 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer.	Split into parts (a) and (b) to include the new target age group.
2.1.3 (a)	2.2.1	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 (≤15 mm) invasive breast cancer.	Split to expand on former NAS which was for all screening rounds.
2.1.3 (b)	2.2.1	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 (≤15 mm) invasive breast cancer.	Split to expand on former NAS which was for all screening rounds.
2.1.3 (c)	2.2.1	≥25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤15 mm) invasive breast cancer.	Split to expand on former NAS which was for all screening rounds.
2.2.1 (a)	2.3.1	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.	Split into parts (a) and (b) to include the new target age group.
2.2.1 (b)	2.3.1	≥12 per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS.	Split into parts (a) and (b) to include the new target age group.
2.2.2 (a)	2.3.2	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.	Split into parts (a) and (b) to include the new target age group.
2.2.2 (b)	2.3.2	≥7 per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS.	Split into parts (a) and (b) to include the new target age group.
2.3.1 (a)	2.4.2 (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 0–12 months following a negative screening episode.	Split into parts (a) and (b) to include the new target age group.
2.3.1 (b)	2.4.2 (a)	<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.	Split into parts (a) and (b) to include the new target age group.
2.3.2 (a)	2.4.2 (b)	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.	Split into parts (a) and (b) to include the new target age group.
2.3.2 (b)	2.4.2 (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.	Split into parts (a) and (b) to include the new target age group.
2.4.1	2.12.3	All screen readers read at least 2,000 mammographic screening cases within the Program per year.	Numbering change and slight change in wording.
2.5.2	2.10.3	The overall repeat rate for the Service and/or SCU is ≤2% of all screening images.	Rule changed from <3% to ≤2% and numbering change.
2.6.1 (a)	1.5.1	The Service and/or SCU monitors and reports the proportion of women aged 50–74 years who attend for annual screening.	Split into parts (a) and (b) to include the new target age group.
2.6.1 (b)	1.5.1	≤10% of women aged 50–69 years attend for annual screening.	Split into parts (a) and (b) to include the new target age group.
2.6.2	1.5.2	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.	Changed from 70 years and over to 75 years and over.
2.6.3 (a)	2.6.1	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.	Split into parts (a) and (b) to include the new target age group.

2.6.3 (b)	2.6.1	<10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment.	Split into parts (a) and (b) to include the new target age group.
2.6.4 (a)	2.6.2	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.	Split into parts (a) and (b) to include the new target age group.
2.6.4 (b)	2.6.2	<5% of women aged 50–69 years who attend for their second or subsequent screening episode are recalled for assessment.	Split into parts (a) and (b) to include the new target age group.
2.6.7	2.22.1	<0.2% women who attend for screening are recommended for early review for further assessment.	Numbering change.
3.1.4	2.8.1	≤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.	Numbering change.
3.1.5	2.8.2	≤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.	Numbering change.
3.1.6	2.21.2	All women with impalpable lesions undergoing excision have specimen imaging recorded.	Wording and numbering change.
3.1.7	2.21.3	≥95% of all lesions are correctly identified at first excision.	Wording and numbering change.
3.1.8 (a)	2.7.1	≥85% of invasive breast cancers or DCIS are diagnosed without the need for excision.	Rule changed from ≥75% to ≥85%, wording and numbering change and split into parts (a) and (b).
4.1.1 (a)	3.7.1	≥90% of women aged 50–74 years attend for a screening appointment within 28 calendar days of their booking date (fixed sites only).	Numbering change and restricted to women aged 50–74 years.
4.1.2	3.8.1	≥90% of women have a documented notification of the results of screening within 14 calendar days of the date of screening.	Wording and numbering change.
4.2.1 (a)	3.7.2	≥90% of women requiring assessment attend an assessment visit within 28 calendar days of their screening visit.	Numbering change.
4.2.2	2.20.3	≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.	Wording and numbering change.
4.2.3	2.20.1	≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment.	Wording and numbering change.
4.2.4	3.8.3 (a) / 3.8.3 (b)	≥85% of women are verbally given the results of percutaneous needle biopsy within seven calendar days of the assessment procedure.	New measure created to combine two former NAS.
4.2.5	2.20.2	≥95% of women complete all assessment within 15 calendar days.	Wording changed from within a 2 week period to within 15 calendar days.
4.2.6	3.8.6	All women are notified of the results of their assessment in writing within 14 calendar days of the date of completion of assessment.	Numbering change.
5.1.1	2.24.3	≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.	Wording and numbering change.
5.1.2	2.24.4	≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.	Changed from ≥80% to ≥95%.

**Table S6: New NAS Measures**

Name	Definition
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 ( $\leq 15$ mm) 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.
2.2.3	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.
2.5.1	The Service and/or SCU monitors and reports the percentage of women who have up to 4 images per screen, including technical repeats.
2.6.5	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.
3.1.1	<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.
3.1.3	The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%.
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 without the need for excision.
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).
4.2.1 (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.

**Table S7: Retired NAS**

Name	Definition
2.1.3	The Service monitors the rates of invasive breast cancer among women aged 40–49 years and 70 years and over.
2.2.2	The Service monitors the rates of small ( $\leq 15$ mm) invasive breast cancer among women aged 40–49 years and 70 years and over.
2.3.3	The Service monitors the rates of DCIS among women aged 40–49 years and 70 years and over.
2.4.3	The Service monitors the number of women aged 40–49 years and 70 years and over diagnosed with an interval invasive breast cancer.
2.8.3	$\leq 4.0\%$ of women assessed after their first screen are found not to have invasive cancer of DCIS after a diagnostic open biopsy.
2.8.4	$\leq 3.2\%$ of women assessed after their second or subsequent screen are found not to have invasive cancer of DCIS after a diagnostic open biopsy.
2.18.1	$< 25\%$ of all lesions assessed by FNA are classified with the result inadequate/insufficient.
2.18.2	The proportion of core biopsy procedures with a false negative or inadequate result.
2.19.5	$< 6\%$ of malignant lesions assessed by FNA have a false negative result.
2.19.6 (a)	$< 1\%$ of malignant lesions assessed by FNA have a false positive result.
2.19.6 (b)	The proportion of non-malignant lesions assessed by FNA with a false positive result.
2.19.7	$< 0.5\%$ of lesions sampled through core biopsy have a false positive result.
2.19.8	The absolute sensitivity of a diagnosis of breast cancer based on FNA cytology is $> 60\%$ .
2.19.9	The complete sensitivity of FNA biopsy in the assessment of breast lesions is $> 80\%$ .
2.19.10	The absolute sensitivity of core biopsy in the assessment of breast lesions is $> 70\%$ .
2.19.11	The complete sensitivity of core biopsy in the assessment of breast lesions is $> 80\%$ .
2.19.12	The positive predictive value of a malignant FNA diagnosis is $> 98\%$ .
2.19.13	The positive predictive value of a malignant core biopsy diagnosis is $> 99\%$ .
3.7.3	$\geq 70\%$ of open biopsies are performed within 14 calendar days of the recommendation for the procedure.
3.8.2	All women are notified of the results of their screening in writing, within 28 calendar days of the date of screening.
3.8.4	All women receive the results of FNA biopsy or core biopsy in writing within 14 calendar days of the assessment procedure.
4.1.3	The Service demonstrates a minimum annual throughput for each independent screening unit of: 4,000 women for urban units and 3,000 women for rural/remote units.

### 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. Local 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

A.1 Client identifier number .....	19
A.2 Screening unit identifier .....	20
A.3 Assessment unit identifier .....	24
A.4 Surgical unit identifier .....	26
A.5 Lesion number.....	27
A.6 Service provider identifier.....	30
A.7 Machine identifier .....	32
A.8 Estimated date flag.....	33
A.9 State identifier .....	35

## B—Client segment

B.1 Name .....	37
B.2 Date of birth .....	39
B.3.1 Area of usual residence (SA2) .....	43
B.3.2 Postcode of usual residence .....	46
B.4 Main language other than English spoken at home .....	49
B.5 Indigenous status .....	52
B.6.1 Family history of breast cancer .....	56
B.6.2 Family history of breast cancer—relationship .....	57
B.6.3 Family history of breast cancer—age at diagnosis .....	58
B.6.4 Family history of breast cancer—laterality .....	60
B.7.1 Previous history of breast cancer .....	62
B.7.2 Previous history of breast cancer—year .....	64
B.7.3 Previous history of breast cancer—laterality.....	65
B.8.1 Mammographic history at first screening visit .....	66
B.8.2 Mammographic history—year .....	68
B.9.1 Round number—State/Territory program.....	69
B.9.2 Round number—national program.....	74
B.10 Symptom status.....	75
B.11 General practitioner flag .....	77

## C—Screening visit segment

C.1 Booking date .....	79
C.2 Date of first attendance for this episode .....	80
C.3.1 Total number of images used .....	85
C.3.2 Technical repeat status .....	86

C.3.3 Number of technical repeats .....	88
C.4 Screening mammogram reading results .....	89
C.5 Recommendation—screening .....	91
C.6 Date woman notified of screening results .....	94
C.7.1 Letter to general practitioner about screening results .....	95
C.7.2 Letter to general practitioner about screening results—date .....	96
C.8 Annual screening flag .....	97
<b>D—Assessment visit segment</b>	
D.1 Reason for assessment .....	101
D.2.1 Attendance for assessment .....	103
D.2.2 Date of first attendance for assessment .....	105
D.2.3 Date first offered appointment for assessment .....	107
D.3.1 Nature of mammographic lesion(s) to be assessed .....	108
D.3.2 Nature of mammographic lesion(s) to be assessed—side .....	110
D.4.1 Nature of clinical symptoms & signs to be assessed .....	111
D.4.2 Nature of clinical symptoms & signs to be assessed—side .....	112
D.5 Result of mammography .....	113
D.6.1 Result of clinical examination .....	115
D.6.2 Correspondence of clinical examination to mammographic abnormality .....	117
D.7.1 Result of ultrasound .....	118
D.7.2 Description of ultrasound lesion .....	120
D.8.1 Percutaneous needle biopsy performed .....	121
D.8.2 Percutaneous needle biopsy guidance method .....	122
D.8.3 Percutaneous needle biopsy result .....	123
D.9 Other procedures performed .....	125
D.10 Final result of assessment visit .....	126
D.11.1 Recommendation—assessment .....	127
D.11.2 Recommendation—number of months .....	130
D.11.3 Date recommendation made .....	132
D.11.4 Assessment visit—date .....	134
D.11.5 Results visit—date .....	136
D.12 Discharge from BreastScreen Australia following assessment .....	137
D.13.1 Date woman notified in writing of assessment results .....	139
D.13.2 Date woman notified verbally of biopsy results .....	141
D.14.1 Letter to general practitioner about assessment results .....	143
D.14.2 Letter to general practitioner about assessment results—date .....	144

## **E—Local excision of lesion segment**

E.1 Local excision performed .....	147
E.2 Date excision performed .....	149
E.3 Funding of local excision .....	150
E.4.1 Marking method.....	151
E.4.2 Localisation technique.....	152
E.5 Palpability of lesion.....	153
E.6 Frozen section.....	155
E.7 Specimen imaging.....	156
E.8.1 Lesion removal .....	157
E.8.2 Further surgery recommended.....	158
E.9 Local excision result .....	160
E.10 Number of excisions.....	161
E.11 Date of definitive diagnosis .....	162
E.12 Recommendation—definitive .....	163
E.13 Discharge from BreastScreen Australia following local excision .....	165

## **F—Histopathology segment**

F.1.1 Reason for histopathology.....	167
F.1.2 Date of diagnosis of interval cancer .....	171
F.1.3 Cancer diagnosed in BreastScreen Australia.....	173
F.2.1 Axillary dissection .....	175
F.2.2 Sentinel node biopsy performed.....	177
F.2.3 Axillary dissection—total number of nodes .....	178
F.2.4 Axillary dissection—number of nodes positive .....	179
F.3 Histopathology of non-malignant lesions.....	180
F.4 Histopathology of malignant lesions.....	182
F.5 Size of tumour .....	187
F.6 Histological grade .....	189
F.7 Dominant lesion identification number .....	190

## **G—Primary treatment segment**

G.1 Nature of primary treatment.....	193
G.2 Date of commencement of treatment .....	194
G.3 Side of malignancy.....	195
G.4 Surgical treatment.....	196
G.5.1 Radiotherapy.....	198
G.5.2 Chemotherapy .....	199



G.6.1 Metastasis—distant.....	200
G.6.2 Site of metastasis.....	201
<b>H—Death segment</b>	
H.1 Date of death.....	203
H.2 Underlying cause of death .....	204

## A—Identifier segment

Data dictionary Version 1.1		Data dictionary Version 1	
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

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## A.1 Client identifier number

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*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 woman on the BreastScreen database and is used for tracking women within a State and Territory.

### Relational and representational attributes

<i>Datatype</i>	Alpha numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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*Data domain*            The client identifier number

*Guide for use*            Only one Client Identifier Number is to be allocated to each woman within each jurisdiction.

This is allocated at the first contact with the service and may include women 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 1.1

*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

<i>Datatype</i>	Alpha numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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*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 State 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)  $\geq 50$  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)  $\geq 35$  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 ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) invasive breast cancer.

2.1.3 (c)  $\geq 25$  per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) 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.

2.2.1 (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)  $\geq 12$  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)  $\geq 7$  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.

2.3.1 (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)  $\leq 15$  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.

2.5.2 The overall repeat rate for the Service and/or SCU is  $\leq 2\%$  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)  $\leq 10\%$  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.

2.6.4 (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.

2.6.5 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 1.1

*Source organisation*      BreastScreen Australia

*Comments*      The Screening unit identifier determines the service to which the outcomes of screening are attributed.

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## A.3 Assessment unit identifier

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*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

<i>Datatype</i>	Alpha numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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*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; e.g., a client may attend for mammographic work-up on a mobile unit and further work-up elsewhere or she may attend for her 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, a root cause analysis 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  $\leq 0.35\%$  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  $\leq 0.16\%$  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.

3.1.6 All women with impalpable lesions undergoing excision have specimen imaging recorded.

3.1.7  $\geq 95\%$  of all lesions are correctly identified at first excision.

3.1.8 (a)  $\geq 85\%$  of invasive breast cancers or DCIS are diagnosed without the need for excision.

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 without the need for excision.

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

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

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

4.2.5  $\geq 95\%$  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 1.1

*Source organisation* BreastScreen Australia

*Comments* The location of the screening visit determines the attribution of the outcome of assessment. If a woman 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.

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## A.4 Surgical unit identifier

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*Admin. status*            CURRENT

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                A BreastScreen Australia identifier for the surgical unit attended by the woman for local excision of a lesion, unique within a State and Territory.

*Context*                    Local excision of a lesion for diagnosis or treatment following assessment.

### Relational and representational attributes

<i>Datatype</i>	Alpha numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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*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 woman underwent surgery more than once, this data element is repeated.

*Verification rules*

<i>Related data elements</i>	A.6	Service provider identifier
	E.1	Local excision performed
	E.8.2	Further surgery recommended

*Related NAS Measures*

### Administrative attributes

*Source document*        BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## A.5 Lesion number

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*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 local 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 client.

### Relational and representational attributes

<i>Datatype</i>	Alpha numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 2	<i>Max.</i> 2	<i>Representational layout</i>	AN
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*Data domain*            The lesion number

*Guide for use*            Data are collected for up to two lesions for each stage of assessment, diagnosis and treatment. These lesions are the most significant lesions within each category (mammographic, clinical, etc 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 client. 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 woman 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 local excision (i.e. not identified at assessment) (up to one lesion):

E1 = a lesion identified at local excision.

Lesion detected after completion of the last screening episode (i.e. 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

E = Local 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 removal

- E.9 Local excision result
- 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.
- 2.3.2 (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.
- 3.1.6 All women with impalpable lesions undergoing excision have specimen imaging recorded.
- 3.1.7 ≥95% of all lesions are correctly identified at first excision.
- 3.3.2 ≥ 95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.
- 4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.

## **Administrative attributes**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	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 client.

### Relational and representational attributes

<i>Datatype</i>	Alpha numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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*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).

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

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

Percutaneous needle biopsy operator: the person who performed the percutaneous needle biopsy during assessment of the client (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).

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

Local excision interpreter: the pathologist (F.3 to F.6).

Treating doctor: the doctor responsible for the primary treatment for clients 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
- E.1 Local 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.

**Administrative attributes**

- Source document* BreastScreen Australia data dictionary, version 1.1
- Source organisation* BreastScreen Australia

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## A.7 Machine identifier

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*Admin. status*            CURRENT

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                Identifying code of the mammography machine used to screen the client.

*Context*                    This data element is used to identify the mammography machine and modality (analogue or digital) used to screen the client

### Relational and representational attributes

<i>Datatype</i>	Alpha numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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<i>Data domain</i>	Number of machine used for initial screening images Number of machine used for technical repeat images
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*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*

<i>Related data elements</i>	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 1.1

*Source organisation*    BreastScreen Australia



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## A.8 Estimated date flag

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*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 (e.g. 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

<i>Datatype</i>	Alphabetic	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 0	<i>Max.</i> 3	<i>Representational layout</i>	AAA
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<i>Data domain</i>	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

<i>Related data elements</i>	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 woman 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 woman notified in writing of assessment results
- D.13.2 Date woman 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
- G.2 Date of commencement of treatment
- H.1 Date of death

*Related NAS  
Measures*

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## A.9 State identifier

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1	New South Wales
	2	Victoria
	3	Queensland
	4	South Australia
	5	Western Australia
	6	Tasmania
	7	Northern Territory
	8	Australian Capital 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.

*Verification rules*

*Related data elements*

*Related NAS Measures*

### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*Source organisation* Australian Institute of Health and Welfare

## B—Client segment

Data dictionary version 1.1		Data dictionary version 1	
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
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—relationship
B.6.3	Family history of breast cancer—age	B.6.3	Family history—age
B.6.4	Family history of breast cancer—laterality	B.6.4	Family history—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—year
B.7.3	Previous history of breast cancer—laterality	B.7.3	Previous history—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 and Territory program
B.9.2	Round number—national program	B.9.2	Round—national program
B.10	Symptom status	B.10	Symptom status
B.11	General practitioner flag	B.11	General practitioner flag

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## B.1 Name

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* A set of descriptors identifying each woman allocated a Client identifier number, using title, surname and other names of the woman at the time of registration, and surname at birth.

*Context* Data linkage, administrative purposes and individual identification.

### Relational and representational attributes

<i>Datatype</i>	Character	<i>Representational form</i>	TEXT
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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*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 woman'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 1.1

*Source organisation*        BreastScreen Australia

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## B.2 Date of birth

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### Identifying and definitional attributes

<i>Data element name</i>	Date of birth
<i>Definition</i>	The date of birth of the person.

### Value domain attributes

<i>Representational class</i>	Date
<i>Data type</i>	Date/Time
<i>Format</i>	DDMMYYYY
<i>Maximum character length</i>	8

### Data element attributes

#### Collection and usage attributes

<i>Guide for use</i>	<p>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.</p> <p>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 July 1 1950 the date should be recorded as 01071950 as specified in the representational layout.</p> <p>It is recommended that in cases where all components of <i>Date of birth</i> are not known or where an estimate is arrived at from age, a valid date be used together with the <i>A.8 Estimated date flag</i> to indicate that it is an estimate.</p> <p>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 woman is 40 years or over, record the date of birth as 99/99/9999.</p>
<i>Comment</i>	<p>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.</p>

#### Source and reference attributes

<i>Origin</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia

## Relational attributes

<i>Verification rules</i>	<p>This field must:</p> <ul style="list-style-type: none"> <li>• be ≤C.2 Date of first attendance for this episode</li> <li>• not be null</li> </ul>
<i>Related data elements</i>	<p>Date of birth can be used as an aid to uniquely identify a client if other identifying information is missing or in question.</p> <p>Used with C.2 Date of first attendance for this episode to calculate a woman's age.</p>
<i>Related NAS Measures</i>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>(a) screened</p> <p>(b) recalled</p>



- 2.1.1 (a)  $\geq 50$  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)  $\geq 50$  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 ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) invasive breast.
- 2.1.3 (c)  $\geq 25$  per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15\text{mm}$ ) 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.
- 2.2.1 (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.
- 2.3.1 (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.

2.3.2 (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.

2.6.1 (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)  $\leq 10\%$  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.

2.6.4 (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.

2.6.5 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.

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## B.3.1 Area of usual residence (SA2)

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*Admin. status*      SUPERSEDES      B.3.1 Area of usual residence

### 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)  $\geq 70\%$  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

<i>Source document</i>	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.
<i>Source organisation</i>	ABS
<i>Comments</i>	<p>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.</p> <p>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.</p>

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## B.3.2 Postcode of usual residence

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 4	<i>Max.</i> 4	<i>Representational layout</i>	NNNN
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*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](http://www.auspost.com.au)  
  
If a woman provides a postal address, the postcode of actual usual residence should be collected, if different.  
  
May be collected as part of the woman'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)  $\geq 70\%$  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.



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## B.4 Main language other than English spoken at home

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<i>Admin. status</i>	SUPERSEDES	B.4 Main language other than English spoken at home
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### Identifying and definitional attributes

<i>Data element type</i>	DATA ELEMENT
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<i>Definition</i>	The language reported by a person as the main language other than English spoken by a person in his/her 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.
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<i>Context</i>	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.
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### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 2 <i>Max.</i> 4	<i>Representational layout</i>	NNNN
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<i>Data domain</i>	Refer to the ABS Australian Standard Classification of Languages 2005 for details.
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<i>Guide for use</i>	<p>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.</p>
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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.

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## B.5 Indigenous status

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*Admin. status*                      SUPERSEDES                      B.5 Indigenous status

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                      Whether a woman 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 women 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, i.e. 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 (i.e. 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' (i.e. 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 18 February 2014  
< <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.

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## B.6.1 Family history of breast cancer

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Whether a first degree female relative of the woman 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 woman is at higher than average risk of contracting breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Yes
	2. No

*Guide for use* A first degree female relative is a mother, sister or daughter.

This information is based on the client'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 1.1

*Source organisation* BreastScreen Australia

*Comments* In conjunction with related data elements, may be used for selecting women 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.





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

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*Admin. status*      SUPERSEDES      B.6.3 Family history—age

### Identifying and definitional attributes

*Data element type*      DATA ELEMENT

*Definition*      Age (when diagnosed) of the person in the client'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 woman is at higher than average risk of contracting breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	Quantitative value
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<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 3	<i>Representational layout</i>	NNN
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*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 client's self-report and is retained for each visit.

                             If the woman does not know the exact age, she 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 1.1

*Source organisation*    BreastScreen Australia

*Comments*

In conjunction with related data elements, may be used for selecting women 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.

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## B.6.4 Family history of breast cancer—laterality

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*Admin. status*                      SUPERSEDES                      B.6.4 Family history—laterality

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                                      Laterality of the breast cancer diagnosed in the client'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 woman is at higher than average risk of contracting breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 client'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 1.1

*Source organisation*                      BreastScreen Australia

*Comments*                                      In conjunction with related data elements, may be used for selecting women 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.

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## B.7.1 Previous history of breast cancer

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*Admin. status*                CURRENT

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                    Whether or not the client 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 women 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 woman is at higher than average risk of contracting breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.        Yes
	2.        No

*Guide for use*                This information is based on the client'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.

2.3.2 (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*            BreastScreen Australia data dictionary, version 1.1

<i>Source organisation</i>	BreastScreen Australia
<i>Comments</i>	<p>In conjunction with related data elements, may be used for selecting women for annual rescreen.</p> <p>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 <i>Previous history (B.7.1 to B.7.3)</i>, for each visit is retained.</p>





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## B.7.3 Previous history of breast cancer—laterality

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*Admin. status*                      SUPERSEDES                      B.7.3 Previous history—laterality

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                                      Laterality of the client'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

<i>Datatype</i>	Character	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 1	<i>Representational layout</i>	A
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<i>Data domain</i>	L            Left
	R            Right
	B            Both
	U            Unknown

*Guide for use*                      This information is based on the client'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 1.1

*Source organisation*                      BreastScreen Australia

*Comments*                                      In conjunction with related data elements, may be used for selecting women 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.

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## B.8.1 Mammographic history at first screening visit

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

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

*Context* This data element is used to determine whether a client 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 woman has had a screening mammogram within the BreastScreen Program in another State and Territory.

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

Code '3' (Yes, unknown) means that the woman 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 woman has never had a mammogram.

This information is based on the client's self-report at the first visit.

#### *Verification rules*

<i>Related data elements</i>	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 1.1

*Source organisation*    BreastScreen Australia

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## B.8.2 Mammographic history—year

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The year in which the presenting woman 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 client 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 4	<i>Max.</i> 4	<i>Representational layout</i>	YYYY
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*Data domain* Valid year

*Guide for use* This information is based on the client'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 1.1

*Source organisation* BreastScreen Australia



are diagnosed with invasive breast cancer.

2.1.1 (b)  $\geq 50$  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)  $\geq 35$  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 ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) invasive breast cancer.

2.1.3 (c)  $\geq 25$  per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) 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.

2.2.1 (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)  $\geq 12$  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)  $\geq 7$  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.

2.3.1 (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.

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.

2.6.4 (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.

2.6.5 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, a root cause analysis 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  $\leq 0.35\%$  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  $\leq 0.16\%$  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.

3.1.6 All women with impalpable lesions undergoing excision have specimen imaging recorded.

3.1.7  $\geq 95\%$  of all lesions are correctly identified at first excision.

3.1.8 (a)  $\geq 85\%$  of invasive breast cancers or DCIS are diagnosed without the need for excision.

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 without the need for excision.

4.1.1 (a)  $\geq 90\%$  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  $\geq 90\%$  of women have documented notification of the results of screening within 14 calendar days of the date of screening.

4.2.1 (a)  $\geq 90\%$  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.

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

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

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

4.2.5  $\geq 95\%$  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  $\geq 95\%$  of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

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

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*      BreastScreen Australia

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## B.9.2 Round number—national program

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Whether the most recent screening for a particular woman 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 client.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	NUMBER
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 2	<i>Representational layout</i>	NN
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<i>Data domain</i>	1.	First round in the National Program
	2.	Subsequent round in the National Program
	9.	Unknown

*Guide for use* If a woman 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*

<i>Related data elements</i>	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 1.1

*Source organisation* BreastScreen Australia

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## B.10 Symptom status

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*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 woman is aware prior to screening and which she reports at the time of screening.

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 client's self-report and is retained for each visit. Indicate which symptom(s) she reports.

### 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.

2.3.2 (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)  $\leq 15$  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*      BreastScreen Australia data dictionary, version 1.1

*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.

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## B.11 General practitioner flag

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*Admin. status*            CURRENT

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                Whether the woman nominated a general practitioner to receive the results of her visit to the screening and assessment service.

*Context*                    This data element is used to identify whether communication of the woman's results to the woman's general practitioner is required.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.        Yes
	2.        No

*Guide for use*            This information is obtained from the client at each screening visit.

#### *Verification rules*

<i>Related data elements</i>	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 1.1

*Source organisation*    BreastScreen Australia

## C—Screening visit segment

Data dictionary version 1.1		Data dictionary version 1	
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 films 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 woman 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		

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## C.1 Booking date

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date an appointment was made by the woman, or someone on her behalf.

*Context* Used for monitoring and planning access, participation and outcome of screening services.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
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<i>Field size</i>	<i>Min.</i> 8	<i>Max.</i> 8	<i>Representational layout</i>	DDMMYYYY
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*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 woman, or someone on her 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

<i>Related data elements</i>	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 1.1

*Source organisation* BreastScreen Australia

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## C.2 Date of first attendance for this episode

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date the presenting woman first attended for screening, this episode.

*Context* Used for monitoring and planning access, participation and outcome of screening.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
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<i>Field size</i>	<i>Min.</i> 8	<i>Max.</i> 8	<i>Representational layout</i>	DDMMYYYY
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*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 client 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

<i>Related data elements</i>	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)  $\geq 70\%$  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)  $\geq 75\%$  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)  $\geq 90\%$  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)  $\geq 50$  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)  $\geq 35$  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 ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) invasive breast cancer.

2.1.3 (c)  $\geq 25$  per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) 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.
- 2.2.1 (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)  $\geq 12$  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)  $\geq 7$  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.
- 2.3.1 (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)  $\leq 15$  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.
- 2.5.1 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  $\leq 2\%$  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)  $\leq 10\%$  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.

2.6.4 (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.

2.6.5 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  $\leq 0.35\%$  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  $\leq 0.16\%$  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)  $\geq 90\%$  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  $\geq 90\%$  of women have a documented notification of the results of screening within 14 calendar days of the date of screening.

4.2.1 (a)  $\geq 90\%$  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  $\geq 95\%$  of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.

5.1.2  $\geq 95\%$  of data dictionary compliant primary treatment information is

received by the Service and/or SCU.

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## C.3.1 Total number of images used

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*Admin. status*                SUPERSEDES                C.3.1 Total number of films used

### Identifying and definitional attributes

*Data element type*                DATA ELEMENT

*Definition*                        The number of images used to screen a woman during her 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 client.

### 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  $\leq 2\%$  of all screening images.

### Administrative attributes

*Source document*                BreastScreen Australia data dictionary, version 1.1

*Source organisation*                BreastScreen Australia

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## C.3.2 Technical repeat status

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. No technical repeat performed—not required
	2. No technical repeat performed—woman 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 client requiring assessment, i.e. a true 'recall to assessment'. Screening is not completed until a set of technically satisfactory images is available for reading.

Women 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 client.

### Verification rules

<i>Related data elements</i>	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 1.1

*Source organisation*    BreastScreen Australia

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### C.3.3 Number of technical repeats

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	Quantitative value
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 2	<i>Representational layout</i>	NN
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*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 client requiring assessment, i.e. 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  $\leq 2\%$  of all screening images

#### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*Source organisation* BreastScreen Australia



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## C.8 Annual screening flag

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*Admin. status* PROPOSED

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Identifies whether the woman is recommended for annual routine screening.

*Context* This data element identifies women who are recommended for annual routine screening. This is as a result of the characteristics of the woman (for example, a personal history of breast cancer).

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Yes
	2. No

*Guide for use* The annual screening flag should be used as a 'high-risk' flag, identifying women who are at considerably higher risk for breast cancer.

This flag is not intended to be used for women who may receive a 'one off' recommendation to return in 12 months; rather, it is a permanent flag attributed to the woman.

*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*

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 ( $\leq 15\text{mm}$ ) 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.

2.2.3 (a) 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.

2.2.3 (b) The Service and/or SCU monitors and reports the number of women aged 50–69 years who attend annually for screening, who are diagnosed with DCIS.

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)  $\leq 10\%$  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.

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*      BreastScreen Australia

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## C.5 Recommendation—screening

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The recommended action following the client'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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	<ol style="list-style-type: none"><li>1. Routine rescreen 2 years</li><li>2. Routine rescreen 1 year</li><li>3. To assessment centre for mammographic recall only</li><li>4. To assessment centre for other reasons (non-mammographic)</li><li>5. To assessment centre for combined recall.</li></ol>
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*Guide for use* This data element is based on the combined screening mammogram reading results and State and Territory policy on assessment of symptomatic women 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, clients in high risk categories (as defined by the State and Territory) are recommended for rescreening at one year.

To assessment centre:

If a client 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 clients 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
- 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)  $\geq 75\%$  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)  $\geq 90\%$  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 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.
  - (b) recalled
- 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)  $\leq 15$  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.
- 2.6.3 (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.
- 2.6.4 (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.
- 2.6.5 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)  $\geq 90\%$  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 1.1

*Source organisation*    BreastScreen Australia

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## C.6 Date woman notified of screening results

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date the woman was first notified of the outcome of her screening visit(s) in writing.

*Context* Used for monitoring and planning access, participation and outcome of screening.

### Relational and representational attributes

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

*Guide for use* When the mammogram outcome is suspicious, the woman is usually notified of her screening results both verbally and in writing by mail. The notification date for this data element 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 woman was notified on 1 July 2000 the Date woman 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 woman 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

<i>Related data elements</i>	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

<i>Related NAS Measures</i>	4.1.2	≥90% of women have documented notification of the results of screening within 14 calendar days of the date of screening.
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### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*Source organisation* BreastScreen Australia

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## C.7.1 Letter to general practitioner about screening results

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*Admin. status*            CURRENT

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                Whether or not a letter about the outcome of the woman's attendance for screening was sent to her general practitioner.

*Context*                    Used for monitoring and planning access, participation and outcome of screening.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.        Yes
	2.        No

*Guide for use*            Indicate whether or not the woman's nominated general practitioner was sent a letter about the results of her 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*

<i>Related data elements</i>	B.11    General practitioner flag
	C.6     Date woman notified of screening results
	C.7.2   Letter to general practitioner—date

*Related NAS Measures*

### Administrative attributes

*Source document*        BreastScreen Australia data dictionary, version 1.1

*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 woman's attendance for screening was sent to her 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 woman's nominated general practitioner was sent written advice, either by hard copy letter or electronically, about the results of her 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 woman 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 1.1

*Source organisation* BreastScreen Australia



## C.8 Annual screening flag

*Admin. status* PROPOSED

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Identifies whether the woman is recommended for annual routine screening.

*Context* This data element identifies women who are recommended for annual routine screening. This is as a result of the characteristics of the woman (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 women who are at considerably higher risk for breast cancer.

There are 3 circumstances that denote that a woman is at higher risk, and is therefore recommended for annual routine screening: personal history of invasive breast cancer, family history of invasive breast cancer and presence or history of pre-cancerous lesion (e.g. papilloma, radial scar, atypical lesion).

This flag is not intended to be used for women who may receive a 'one off' recommendation to return in 12 months; rather, it is a permanent flag attributed to the woman.

*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*

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 ( $\leq 15$ mm) 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.

2.2.3 (a) 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.

2.2.3 (b) The Service and/or SCU monitors and reports the number of women aged 50-69 years who attend annually for screening, who are diagnosed with DCIS.

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)  $\leq 10\%$  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.

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*      BreastScreen Australia

## D—Assessment visit segment

Data dictionary version 1.1		Data dictionary version 1	
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.3.1	Nature of mammographic lesion(s) to be assessed	D.3.1	Nature of mammographic lesions to be assessed
D.3.2	Nature of mammographic lesion(s) to be assessed—side	D.3.2	Nature of mammographic lesions 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	Result of ultrasound
D.7.2	Description of ultrasound lesion	D.8	Description of ultrasound lesion
D.8.1	Percutaneous needle biopsy performed		
D.8.2	Percutaneous needle biopsy guidance method	D.9.1	Fine needle cytology method
D.8.3	Percutaneous needle biopsy result	D.9.2	Fine needle cytology result
		D.10.1	Core biopsy method
		D.10.2	Core biopsy result
D.9	Other procedures performed	D.11	Other assessment procedures performed
D.10	Final result of assessment visit	D.12	Final result of assessment visit
D.11.1	Recommendation—assessment	D.13.1	Recommendation—assessment

D.11.2	Recommendation—number of months	D.13.2	Recommendation—number of months
D.11.3	Date recommendation made	D.13.3	Date recommendation made
D.11.4	Assessment visit—date	D.13.4	Assessment visit—date
D.11.5	Results visit—date		
D.12	Discharge from BreastScreen Australia following assessment	D.14	Discharge from program following assessment
D.13.1	Date woman notified in writing of assessment results	D.15	Date woman notified of assessment results
D.13.2	Date woman notified verbally of biopsy results		
D.14.1	Letter to general practitioner about assessment results	D.16.1	Letter to general practitioner about assessment results
D.14.2	Letter to general practitioner about assessment results—date	D.16.2	Letter to general practitioner about assessment results—date

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## D.1 Reason for assessment

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The reason the presenting woman is attending the assessment clinic.

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	<ol style="list-style-type: none"><li>1. Suspicious mammogram and/or signs/symptoms at screen</li><li>2. Early review</li><li>3. Interval signs/symptoms</li><li>4. Other, please specify</li></ol>
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*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 woman 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 client who has been screened previously in BreastScreen Australia. The client is attending before her next screening episode is due to commence (as determined by her routine re-screening interval), and has clinical signs or symptoms. This occurs after the previous screening episode is complete; if cancer is found it would be counted as an interval cancer.

Code 4, Other, includes other reasons for recalling women 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 women who have attended for assessment.

*Verification rules*

<i>Related data elements</i>	C.5 Recommendation—screening
	D.11.1 Recommendation—assessment
	F.1.3 Cancer diagnosed in BreastScreen Australia status
<i>Related NAS Measures</i>	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.
	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**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia

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## D.2.1 Attendance for assessment

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Whether or not the woman attended for assessment.

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Yes
	2. No
	9. Unknown

*Guide for use*

If No then the episode would be closed if  $\geq 6$  months from the screening date and no further data elements completed.

Code 9 may be used if it is unknown whether the woman 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 women who have attended for assessment.

### Verification rules

<i>Related data elements</i>	A.3 Assessment unit identifier
	D.2.2 Date of first attendance for assessment
	D.2.3 Date first offered appointment for assessment

<i>Related NAS Measures</i>	3.3.2 $\geq 95\%$ of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit.
	4.2.2 $\geq 95\%$ 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 1.1

*Source organisation*      BreastScreen Australia

*Comments*              The location of the screening visit determines the attribution of the outcome of assessment. If a woman 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.



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## D.2.2 Date of first attendance for assessment

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date the woman first attended for assessment, for this episode.

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
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<i>Field size</i>	<i>Min.</i> 8	<i>Max.</i> 8	<i>Representational layout</i>	DDMMYYYY
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*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 client 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 women 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.

## **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## D.2.3 Date first offered appointment for assessment

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*Admin. status* PROPOSED

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date the woman is offered an appointment for assessment, for this episode.

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
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<i>Field size</i>	<i>Min.</i> 8	<i>Max.</i> 8	<i>Representational layout</i>	DDMMYYYY
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*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 client 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 women 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* Developed for The BreastScreen Australia data dictionary, version 1.1

*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).

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

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 (i.e. the client 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 women 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**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia
<i>Comments</i>	The definitions under the 'Guide for use' were supplied by Dr J. Cawson.

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

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*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

<i>Datatype</i>	Character	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	A
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<i>Data domain:</i>	R	Right
	L	Left

*Guide for use* Collect data for up to two mammographic lesions.  
Recorded for all women who have mammographic workup at assessment.  
For suggested coding, see *A.5 Lesion number*.

### Verification rules

<i>Related data elements</i>	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 1.1

*Source organisation* BreastScreen Australia

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

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 women who have clinical symptoms/signs assessed.

More than one code may be reported.

### Verification rules

<i>Related data elements</i>	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 1.1

*Source organisation* BreastScreen Australia

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## 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

<i>Datatype</i>	Character	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	A
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<i>Data domain</i>	R	Right
	L	Left

*Guide for use* Recorded for all women 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 1.1

*Source organisation* BreastScreen Australia



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## D.5 Result of mammography

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The result of further mammography done after the recommendation 'to assessment centre' was made at the screening visit (see C.5 *Recommendation—screening*).

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 women who have mammographic workup at assessment.

Collect the above for up to two mammographic lesions and additional clinical lesions.

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

<i>Related data elements</i>	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 1.1

*Source organisation*    BreastScreen Australia

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## D.6.1 Result of clinical examination

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The result of the clinical examination done after the recommendation 'to assessment centre' was made at the screening visit (see C.5 *Recommendation—screening*).

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 women after clinical examination at assessment.

Collect the above for up to two mammographic lesions and additional clinical lesions.

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

<i>Related data elements</i>	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 1.1

*Source organisation*    BreastScreen Australia

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## D.6.2 Correspondence of clinical examination to mammographic abnormality

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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*Data domain:*

1. Yes
2. No

*Guide for use*

Collected for all women after clinical examination at assessment.

Collect for up to two lesions corresponding to *D.6.1 Result of clinical examination*.

### 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 1.1

*Source organisation* BreastScreen Australia

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## D.7.1 Result of ultrasound

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*Admin. status*                      SUPERSEDES                      D.7 Result of ultrasound

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                      The result of the Ultrasound done after the recommendation 'to assessment centre' was made at the screening visit (see *C.5 Recommendation—screening*).

*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 women who have ultrasound at assessment.  
  
Report one code only for each lesion.  
  
Collect the above for up to two mammographic lesions and additional clinical lesions.  
  
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 1.1

*Source organisation*    BreastScreen Australia

### D.7.2 Description of ultrasound lesion

### D.8 Description of ultrasound lesion

## Identifying and definitional attributes

<i>Data element type</i>	DATA ELEMENT
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**Definition** The description of the lesion based on ultrasound findings.

<i>Context</i>	Used for monitoring the assessment and diagnosis of breast cancer.
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## Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	1	<i>Max.</i>	1	<i>Representational layout</i>	N
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<i>Data domain</i>	
0.	Not done
1.	Normal breast
2.	Cystic
3.	Solid, probably benign
4.	Solid, probably malignant
5.	Indeterminate
6.	Other, please specify
9.	Unknown

<i>Guide for use</i>	<p>Collected for all women who have ultrasound at assessment.</p> <p>Report one code only for each lesion.</p> <p>Indicate [0] not done, or one classification from [1] to [9].</p> <p>For suggested coding of lesions, see <i>A.5 Lesion number</i>.</p> <p>Collect for up to two lesions corresponding to <i>D.7.1 Result of ultrasound</i>.</p>
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### Verification rules

<i>Related data</i>	A.5	Lesion number
<i>elements</i>	D.7.1	Result of ultrasound

### Related NAS Measures

## Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.1

Source organisation BreastScreen Australia



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## D.8.1 Percutaneous needle biopsy performed

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*Admin. status* PROPOSED

### 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.	Yes, fine needle aspiration
	2.	Yes, core biopsy, non-vacuum assisted
	3	Yes, core biopsy, vacuum assisted
	4.	No— woman's decision
	5.	No— clinical decision
	9.	Unknown

*Guide for use* Record whether a percutaneous needle biopsy was performed.  
Collected for all women 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

<i>Related data elements</i>	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 1.1

*Source organisation* BreastScreen Australia

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## D.8.2 Percutaneous needle biopsy guidance method

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*Admin. status*                SUPERSEDES                D.9.1 Fine needle cytology method  
D.10.1 Core biopsy method

### 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 1	<i>Representational layout</i>	N
<i>Data domain</i>	1.        Palpation 2.        Ultrasound 3.        Mammographic—stereotactic 9.        Unknown		
<i>Guide for use</i>	This data element should have a system prompt for needle biopsy operator provider code (to be coded in <i>A.6 Service provider identifier</i> ).  Collected for all women who have a percutaneous needle biopsy performed at assessment.  Report one code for each percutaneous needle biopsy procedure.		
<i>Verification rules</i>	D.8.1 Percutaneous biopsy performed = 1 or 2 or 3		
<i>Related data elements</i>	A.5        Lesion number A.6        Service provider identifier D.8.1      Percutaneous needle biopsy performed D.8.3      Percutaneous needle biopsy result		
<i>Related NAS Measures</i>	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 1.1

*Source organisation*            BreastScreen Australia

## D.8.3 Percutaneous needle biopsy result

<i>Admin. status</i>	SUPERSEDES	D.9.2 Fine needle cytology results D.10.2 Core biopsy result
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### Identifying and definitional attributes

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 2	<i>Representational layout</i>	N
<i>Data domain</i>	1. Inadequate specimen (specify reason) 2. Benign 3. Atypical/equivocal 4. Suspicious 5. Malignant 9. Unknown		
<i>Guide for use</i>	<p>In case of inadequate specimen, record reasons (may be recorded in the percutaneous needle biopsy report).</p> <p>This data element should have a system prompt for percutaneous needle biopsy interpreter provider code (to be coded in <i>A.6 Service provider identifier</i>).</p> <p>Collected for all women who have a percutaneous needle biopsy performed at assessment.</p> <p>Report one code only for each needle biopsy procedure.</p> <p>Indicate one opinion from [1] to [5] for each procedure. Unknown [9] to be used only after attempts to seek a result have failed.</p> <p>Specify reason if code = 1 (inadequate specimen).</p> <p>Collect data for up to 2 lesions, corresponding to <i>Percutaneous needle biopsy guidance method (D.8.2)</i>.</p> <p>For suggested coding of lesions, see <i>A.5 Lesion number</i>.</p>		
<i>Verification rules</i>	Blank if <i>D.8.2 Percutaneous needle biopsy result</i> is blank		
<i>Related data elements</i>	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, a root cause analysis 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 1.1

*Source organisation*    BreastScreen Australia

### D.9 Other procedures performed

<i>Admin. status</i>	SUPERSEDES	D.11 Other assessment procedures performed
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## Identifying and definitional attributes

<i>Data element type</i>	DATA ELEMENT
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*Definition* Whether other procedures were used to assess the mammographic lesion(s).

<i>Context</i>	Used for monitoring the assessment and diagnosis of breast cancer.
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## Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	1	<i>Max.</i>	1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.	Cyst aspiration
	2.	Other, please specify

*Guide for use* Recorded for all women 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').

Code for up to two lesions.

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

## Verification rules

<i>Related data elements</i>	A.5	Lesion number
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### Related NAS Measures

### Administrative attributes

Source document BreastScreen Australia data dictionary, version 1.1

Source organisation BreastScreen Australia

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## D.10 Final result of assessment visit

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*Admin. status*                      SUPERSEDES                      D.12 Final result of assessment visit

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                                      The combined result of all procedures carried out during the assessment of a woman.

*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 women 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%.

### Administrative attributes

*Source document*                      BreastScreen Australia data dictionary, version 1.1

*Source organisation*                      BreastScreen Australia

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## D.11.1 Recommendation—assessment

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*Admin. status*                      SUPERSEDES                      D.13.1 Recommendation—assessment

### 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.        Routine rescreen at 2 years 2.        Routine rescreen at 1 year 3.        Early review 4.        Definitive treatment for cancer 5.        Diagnostic open biopsy
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*Guide for use*                      Code 3, Early review is the recall of a woman 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 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.

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 woman's/doctor's decision or State and Territory policy.

Examples include:

Some services have a policy not to invite clients 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 woman, whose FNA/Core biopsy result is highly suspicious or malignant, but she is 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 women 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
- 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)  $\geq 75\%$  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)  $\geq 90\%$  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.
- 2.3.1 (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)  $\leq 15$  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.
- 2.6.7  $< 0.2\%$  women who attend for screening are recommended for early



review for further assessment.

3.1.4  $\leq 0.35\%$  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  $\leq 0.16\%$  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)  $\geq 85\%$  of invasive breast cancers or DCIS are diagnosed without the need for excision.

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 without the need for excision.

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

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

4.2.5  $\geq 95\%$  of women complete all assessment within 15 calendar days.

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

## **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*      BreastScreen Australia

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## D.11.2 Recommendation—number of months

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*Admin. status*                      SUPERSEDES                      D.13.2 Recommendation—number of months

### Identifying and definitional attributes

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	Quantitative value
<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 2	<i>Representational layout</i>	NN
<i>Data domain</i>	Number of months		
<i>Guide for use</i>	<p>Early review is the recall of a woman 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 visit is complete and cancers found are considered to be interval cancers.</p> <p>Collected following completion of assessment for all women who are recommended to return to assessment for early review.</p>		
<i>Verification rules</i>	Number of months is to be entered only if entry for <i>D.11.1 Recommendation—assessment</i> is code 3.		
<i>Related data elements</i>	D.11.1 Recommendation—assessment		
<i>Related NAS Measures</i>	<p>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.</p> <p>2.3.1 (b) &lt;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.</p> <p>2.6.7 &lt;0.2% women who attend for screening are recommended for early review for further assessment.</p>		

## **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## D.11.3 Date recommendation made

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*Admin. status*                      SUPERSEDES                      D.13.3 Date recommendation made

### 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 women 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.

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

3.3.2 ≥ 95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment

visit.

4.2.2  $\geq 95\%$  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 1.1

*Source organisation*      BreastScreen Australia

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## D.11.4 Assessment visit—date

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*Admin. status*                      SUPERSEDES                      D.13.4 Assessment visit—date

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                                      The date the woman 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 woman makes within an assessment episode.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
<i>Field size</i>	<i>Min.</i> 8 <i>Max.</i> 8	<i>Representational layout</i>	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 woman attended for each assessment visit. For example, a woman 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 woman returns to the assessment clinic for an appointment with the counsellor only, for example to receive her 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*                                      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, a root cause analysis 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%.

3.1.6 All women with impalpable lesions undergoing excision have specimen imaging recorded.

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 without the need for excision.

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 without the need for excision.

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 1.1

*Source organisation*      BreastScreen Australia

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## D.11.5 Results visit—date

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*Admin. status* PROPOSED

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date the woman 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 woman makes within an assessment episode.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
<i>Field size</i>	<i>Min.</i> 8 <i>Max.</i> 8	<i>Representational layout</i>	DDMMYYYY
<i>Data domain</i>	Valid date		
<i>Guide for use</i>	This data element is coded for each visit in which a woman receives results of her assessment. There should be no procedures performed at this visit. Collected following the woman'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 1.1

*Source organisation* BreastScreen Australia



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## D.12 Discharge from BreastScreen Australia following assessment

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*Admin. status*                      SUPERSEDES                      D.14 Discharge from program following assessment

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                                      Whether or not a woman 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.        Yes
	2.        No

*Guide for use*                      If the woman has been discharged from BreastScreen Australia she will not receive a routine recall invitation. A 'Yes' code includes women discharged permanently from BreastScreen Australia as well as those women suspended from BreastScreen Australia for some years (for example, some services reinvite women 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 woman 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 women diagnosed with cancer from the FNA/Core biopsy and not recommended for open biopsy.

Women may be discharged for other reasons, being either the woman's own decision or the service's recommendation, for example discharge due to a pre-malignant lesion.

Collected for all women who have attended for assessment.

*Verification rules*

*Related data elements*

*Related NAS Measures*

## **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## D.13.1 Date woman notified in writing of assessment results

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*Admin. status*                      SUPERSEDES                      D.15 Date woman notified of assessment results

### Identifying and definitional attributes

*Data element type*                      DATA ELEMENT

*Definition*                                      The date the woman was first notified in writing of the outcome of her 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 woman is usually notified of her assessment results verbally (in person or by phone). A letter may be handed to her at the same time, or it may be sent to her 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 woman was notified on 1 July 2000 the Date woman notified of assessment results should be recorded as 01072000 as specified in the representational layout.

Collected for all women who have attended for assessment.

It is recommended that in cases where all components of the *Date woman 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 1.1

*Source organisation*    BreastScreen Australia

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## D.13.2 Date woman notified verbally of biopsy results

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date the woman was verbally notified of the outcome of her cytology or pathology assessment result(s).

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

### Relational and representational attributes

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

*Guide for use* The woman is usually notified of her assessment results verbally (in person or by phone). This notification date is the date on which the woman was notified of her results verbally. How the woman 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 woman was notified on 1 July 2000 the Date woman notified of assessment results should be recorded as 01072000 as specified in the representational layout.

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

It is recommended that in cases where all components of *Date woman 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 1.1

*Source organisation*    BreastScreen Australia



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

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<i>Admin. status</i>	SUPERSEDES	D.16.2 Letter to general practitioner about assessment results—date
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### Identifying and definitional attributes

<i>Data element type</i>	DATA ELEMENT
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<i>Definition</i>	The date the letter about the outcome of the woman's attendance for assessment was sent to her general practitioner.
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<i>Context</i>	Used for monitoring the assessment and diagnosis of breast cancer.
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### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
<i>Field size</i>	<i>Min.</i> 8	<i>Max.</i> 8	<i>Representational layout</i> DDMMYYYY

<i>Data domain</i>	Valid date
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<i>Guide for use</i>	Indicate on which date the woman's nominated general practitioner was sent a letter or was contacted electronically about the results of her attendance(s) at the assessment unit.
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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 women 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.

<i>Verification rules</i>	This date is to be entered only if entry for <i>D.14.1 Letter to general practitioner about assessment results</i> is code 1 (yes).
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<i>Related data elements</i>	A.8 Estimated date flag B.11 General practitioner flag D.13.1 Date woman notified in writing of assessment results D.13.2 Date woman notified verbally of biopsy results D.14.1 Letter to general practitioner about assessment results
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<i>Related NAS Measures</i>	
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## **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

## E—Local excision of lesion segment

Data dictionary version 1.1		Data dictionary version 1	
E.1	Local excision performed	E.1	Local excision performed
E.2	Date excision performed	E.2	Date local excision performed
E.3	Funding of local excision	E.3	Funding of local excision
E.4.1	Marking method	E.4	Marking method
E.4.2	Localisation technique	E.5	Localisation technique
E.5	Palpability of lesion		
E.6	Frozen section	E.6	Frozen section
E.7	Specimen x-ray	E.7	Specimen x-ray
E.8.1	Lesion removal	E.8.1	Lesion identified in specimen
E.8.2	Further surgery recommended	E.8.2	Further surgery recommended
E.9	Local excision result	E.9	Local 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 local excision	E.13	Discharge from Program following local excision

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## E.1 Local excision performed

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Whether or not a local excision was performed for a woman recommended for diagnostic open biopsy or treatment.

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Yes
	2. No

*Guide for use* Record whether local 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 local excision*

The decision not to perform the excision may be the woman's or the surgeon's.

If the woman 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 women recommended for diagnostic open biopsy or treatment.

### Verification rules

<i>Related data elements</i>	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 local excision

<i>Related NAS Measures</i>	3.1.1 <5% of all percutaneous needle biopsies of malignant breast lesions are classified as benign or inadequate/insufficient.
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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, a root cause analysis 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  $\leq 0.35\%$  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  $\leq 0.16\%$  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.

3.1.6 All women with impalpable lesions undergoing excision have specimen imaging recorded.

3.1.7  $\geq 95\%$  of all lesions are correctly identified at first excision.

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

## **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*      BreastScreen Australia

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## E.2 Date excision performed

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The date on which the local excision was performed.

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

### Relational and representational attributes

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

*Guide for use*

If the woman 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 client underwent surgery on 1 July 2000 the Date excision performed should be recorded as 01072000 as specified in the representational layout.

Collected for all women who had a local 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 1.1

*Source organisation* BreastScreen Australia

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## E.3 Funding of local excision

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*Admin. status*            CURRENT

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                Whether or not the local 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.        Yes—funded within BreastScreen Australia
	2.        No—funded outside BreastScreen Australia

*Guide for use*            If the woman underwent surgery more than once, this data element is to be collected for each occasion of surgery.

Collected for all women who had a local 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 1.1

*Source organisation*    BreastScreen Australia



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## E.4.2 Localisation technique

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*Admin. status*                      SUPERSEDES                      E.5 Localisation technique

### 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

*Guide for use*                                      If hookwire or carbon method is used, then record technique used (one category). If method is none, technique is not collected.  
  
Collected for all women who had a local excision performed.  
  
Collect for up to two lesions corresponding to *E.4.1 Marking method*.

*Verification rules*                                      ‘Localisation technique’ is to be entered only if entry for *E.4.1 Marking method* is ‘Hookwire/needle’ or ‘Carbon’.

*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 1.1

*Source organisation*                      BreastScreen Australia



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## E.5 Palpability of lesion

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*Admin. status* PROPOSED

### 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Palpable
	2. Impalpable
	9. Unknown

*Guide for use* Collected for all women who had a local excision performed.  
Collect for up to two lesions.

#### Verification rules

<i>Related data elements</i>	A.5 Lesion number
	E.4.1 Marking method
	E.4.2 Localisation technique

<i>Related NAS Measures</i>	3.1.6 All women with impalpable lesions undergoing excision have specimen imaging recorded.
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### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*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*<sup>†</sup> to make it clear that, even if the lesion subsequently becomes palpable at surgery, it should be classified as impalpable (and is therefore relevant for NAS Measure 3.1.6 which requires specimen imaging to be recorded if any lesion that was impalpable at assessment and becomes palpable during an operation or if a lesion is localised intraoperatively).

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## E.6 Frozen section

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Yes
	2. No

*Guide for use* Collected for all women who had a local excision performed.  
Collect for up to two lesions corresponding to *E.4.1 Marking method*.

#### Verification rules

<i>Related data elements</i>	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 1.1

*Source organisation* BreastScreen Australia

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## E.7 Specimen imaging

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*Admin. status*            CURRENT

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                Whether or not a specimen image was obtained during surgical excision.

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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1.        Yes
	2.        No

*Guide for use*            Collected for all women who had a local excision performed.  
Collect for up to two lesions corresponding to *E.4.1 Marking method*.

#### *Verification rules*

<i>Related data elements</i>	A.5        Lesion number
	E.4.1      Marking method
	E.8.2      Further surgery recommended

<i>Related NAS Measures</i>	3.1.6 All women with impalpable lesions undergoing excision have specimen imaging recorded.
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### Administrative attributes

*Source document*        BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## E.8.1 Lesion removal

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*Admin. status*                SUPERSEDES                E.8.1 Lesion identified in specimen

### Identifying and definitional attributes

*Data element type*                DATA ELEMENT

*Definition*                        Whether the screen detected lesion has been removed through needle biopsy or surgery.

*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*                        Generally, the answer will be based on specimen imaging (although sometimes small lesions may be removed by needle biopsy). 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.  
  
Collect for up to two lesions corresponding to *E.4.1 Marking method*.  
Collected for all women who had a local excision performed.

### 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 1.1

*Source organisation*                BreastScreen Australia

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## E.8.2 Further surgery recommended

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*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 Local excision performed*

*E.2 Date local excision performed*

*E.3 Funding of local excision*

*E.4.1 Marking method*

*E.4.2 Localisation technique*

*E.6 Frozen section*

*E.7 Specimen x-ray*

before completing the data element *E.9 Local excision result*.

Collected for all women who had a local excision performed where *E.8.1 Lesion Removal* is 'No'.

Collect for up to two lesions.

*Verification rules* This data element applies only where *E.8.1 Lesion Removal* is 'No'

*Related data elements*

- A.4 Surgical unit identifier
- A.6 Service provider identifier
- E.1 Local excision performed
- E.2 Date local excision performed
- E.3 Funding of local excision
- E.4.1 Marking method
- E.4.2 Localisation technique

- E.6 Frozen section
- E.7 Specimen x-ray
- E.8.1 Lesion removal

*Related NAS  
Measures*

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1  
*Source organisation*    BreastScreen Australia

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## E.9 Local excision result

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Whether lesion(s) for which a woman underwent local excision was/were malignant or non-malignant.

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Malignant
	2. Non malignant
	3. No definitive result

*Guide for use* Malignant includes DCIS. 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 local excision (i.e. 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 woman's or the surgeon's.

Collected for all women who had a local excision performed.

Collect for up to two lesions.

### Verification rules

<i>Related data elements</i>	A.5 Lesion number
	E.11 Date of definitive diagnosis
	F.3 Histopathology of non-malignant lesions
	F.4 Histopathology of malignant lesions

<i>Related NAS Measures</i>	5.1.1 ≥95% of data dictionary compliant surgical histopathology information is received by the Service and/or SCU.
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### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*Source organisation* BreastScreen Australia



<i>Admin. status</i>	CURRENT
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## Identifying and definitional attributes

<i>Data element type</i>	DATA ELEMENT
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**Definition** Number of occasions on which a woman underwent surgery before a definitive histological diagnosis was made.

<i>Context</i>	Used for monitoring the assessment and diagnosis of breast cancer.
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## Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	Quantitative value
Integer	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100		
Real	1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 10.0		
Complex	1+2i, 1+3i, 1+4i, 1+5i, 1+6i, 1+7i, 1+8i, 1+9i, 1+10i, 1+11i, 1+12i, 1+13i, 1+14i, 1+15i, 1+16i, 1+17i, 1+18i, 1+19i, 1+20i, 1+21i, 1+22i, 1+23i, 1+24i, 1+25i, 1+26i, 1+27i, 1+28i, 1+29i, 1+30i, 1+31i, 1+32i, 1+33i, 1+34i, 1+35i, 1+36i, 1+37i, 1+38i, 1+39i, 1+40i, 1+41i, 1+42i, 1+43i, 1+44i, 1+45i, 1+46i, 1+47i, 1+48i, 1+49i, 1+50i, 1+51i, 1+52i, 1+53i, 1+54i, 1+55i, 1+56i, 1+57i, 1+58i, 1+59i, 1+60i, 1+61i, 1+62i, 1+63i, 1+64i, 1+65i, 1+66i, 1+67i, 1+68i, 1+69i, 1+70i, 1+71i, 1+72i, 1+73i, 1+74i, 1+75i, 1+76i, 1+77i, 1+78i, 1+79i, 1+80i, 1+81i, 1+82i, 1+83i, 1+84i, 1+85i, 1+86i, 1+87i, 1+88i, 1+89i, 1+90i, 1+91i, 1+92i, 1+93i, 1+94i, 1+95i, 1+96i, 1+97i, 1+98i, 1+99i, 1+100i		
String	"1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31", "32", "33", "34", "35", "36", "37", "38", "39", "40", "41", "42", "43", "44", "45", "46", "47", "48", "49", "50", "51", "52", "53", "54", "55", "56", "57", "58", "59", "60", "61", "62", "63", "64", "65", "66", "67", "68", "69", "70", "71", "72", "73", "74", "75", "76", "77", "78", "79", "80", "81", "82", "83", "84", "85", "86", "87", "88", "89", "90", "91", "92", "93", "94", "95", "96", "97", "98", "99", "100"		
Boolean	True, False		
Category	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100		

Field size	Min.	Max.	Representational layout	N
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<i>Data domain</i>	Number of occasions
1. <i>General health</i>	1
2. <i>Physical health</i>	1
3. <i>Mental health</i>	1
4. <i>Life satisfaction</i>	1
5. <i>Physical functioning</i>	1
6. <i>Role limitations due to physical problems</i>	1
7. <i>Role limitations due to emotional problems</i>	1
8. <i>Energy/fatigue</i>	1
9. <i>Emotional well-being</i>	1
10. <i>General health</i>	1
11. <i>Physical health</i>	1
12. <i>Mental health</i>	1
13. <i>Life satisfaction</i>	1
14. <i>Physical functioning</i>	1
15. <i>Role limitations due to physical problems</i>	1
16. <i>Role limitations due to emotional problems</i>	1
17. <i>Energy/fatigue</i>	1
18. <i>Emotional well-being</i>	1
19. <i>General health</i>	1
20. <i>Physical health</i>	1
21. <i>Mental health</i>	1
22. <i>Life satisfaction</i>	1
23. <i>Physical functioning</i>	1
24. <i>Role limitations due to physical problems</i>	1
25. <i>Role limitations due to emotional problems</i>	1
26. <i>Energy/fatigue</i>	1
27. <i>Emotional well-being</i>	1
28. <i>General health</i>	1
29. <i>Physical health</i>	1
30. <i>Mental health</i>	1
31. <i>Life satisfaction</i>	1
32. <i>Physical functioning</i>	1
33. <i>Role limitations due to physical problems</i>	1
34. <i>Role limitations due to emotional problems</i>	1
35. <i>Energy/fatigue</i>	1
36. <i>Emotional well-being</i>	1
37. <i>General health</i>	1
38. <i>Physical health</i>	1
39. <i>Mental health</i>	1
40. <i>Life satisfaction</i>	1
41. <i>Physical functioning</i>	1
42. <i>Role limitations due to physical problems</i>	1
43. <i>Role limitations due to emotional problems</i>	1
44. <i>Energy/fatigue</i>	1
45. <i>Emotional well-being</i>	1
46. <i>General health</i>	1
47. <i>Physical health</i>	1
48. <i>Mental health</i>	1
49. <i>Life satisfaction</i>	1
50. <i>Physical functioning</i>	1
51. <i>Role limitations due to physical problems</i>	1
52. <i>Role limitations due to emotional problems</i>	1
53. <i>Energy/fatigue</i>	1
54. <i>Emotional well-being</i>	1
55. <i>General health</i>	1
56. <i>Physical health</i>	1
57. <i>Mental health</i>	1
58. <i>Life satisfaction</i>	1
59. <i>Physical functioning</i>	1
60. <i>Role limitations due to physical problems</i>	1
61. <i>Role limitations due to emotional problems</i>	1
62. <i>Energy/fatigue</i>	1
63. <i>Emotional well-being</i>	1
64. <i>General health</i>	1
65. <i>Physical health</i>	1
66. <i>Mental health</i>	1
67. <i>Life satisfaction</i>	1
68. <i>Physical functioning</i>	1
69. <i>Role limitations due to physical problems</i>	1
70. <i>Role limitations due to emotional problems</i>	1
71. <i>Energy/fatigue</i>	1
72. <i>Emotional well-being</i>	1
73. <i>General health</i>	1
74. <i>Physical health</i>	1
75. <i>Mental health</i>	1
76. <i>Life satisfaction</i>	1
77. <i>Physical functioning</i>	1
78. <i>Role limitations due to physical problems</i>	1
79. <i>Role limitations due to emotional problems</i>	1
80. <i>Energy/fatigue</i>	1
81. <i>Emotional well-being</i>	1
82. <i>General health</i>	1
83. <i>Physical health</i>	1
84. <i>Mental health</i>	1
85. <i>Life satisfaction</i>	1
86. <i>Physical functioning</i>	1
87. <i>Role limitations due to physical problems</i>	1
88. <i>Role limitations due to emotional problems</i>	1
89. <i>Energy/fatigue</i>	1
90. <i>Emotional well-being</i>	1
91. <i>General health</i>	1
92. <i>Physical health</i>	1
93. <i>Mental health</i>	1
94. <i>Life satisfaction</i>	1
95. <i>Physical functioning</i>	1
96. <i>Role limitations due to physical problems</i>	1
97. <i>Role limitations due to emotional problems</i>	1
98. <i>Energy/fatigue</i>	1
99. <i>Emotional well-being</i>	1
100. <i>General health</i>	1
101. <i>Physical health</i>	1
102. <i>Mental health</i>	1
103. <i>Life satisfaction</i>	1
104. <i>Physical functioning</i>	1
105. <i>Role limitations due to physical problems</i>	1
106. <i>Role limitations due to emotional problems</i>	1
107. <i>Energy/fatigue</i>	1
108. <i>Emotional well-being</i>	1
109. <i>General health</i>	1
110. <i>Physical health</i>	1
111. <i>Mental health</i>	1
112. <i>Life satisfaction</i>	1
113. <i>Physical functioning</i>	1
114. <i>Role limitations due to physical problems</i>	1
115. <i>Role limitations due to emotional problems</i>	1
116. <i>Energy/fatigue</i>	1
117. <i>Emotional well-being</i>	1
118. <i>General health</i>	1
119. <i>Physical health</i>	1
120. <i>Mental health</i>	1
121. <i>Life satisfaction</i>	1
122. <i>Physical functioning</i>	1
123. <i>Role limitations due to physical problems</i>	1
124. <i>Role limitations due to emotional problems</i>	1
125. <i>Energy/fatigue</i>	1
126. <i>Emotional well-being</i>	1
127. <i>General health</i>	1
128. <i>Physical health</i>	1
129. <i>Mental health</i>	1

*Guide for use* The number of occasions is based on separate days on which the woman underwent surgery. Collected for all women who had a local excision performed.

### Verification rules

*Related data elements*

### Related NAS Measures

### Administrative attributes

*Source document*      BreastScreen Australia data dictionary, version 1.1

Source organisation BreastScreen Australia

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## E.11 Date of definitive diagnosis

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*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

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

*Guide for use* If local excision was recommended but not performed, or entry for *E.9 Local 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

<i>Related data elements</i>	A.8	Estimated date flag
	D.12	Discharge from BreastScreen Australia following assessment
	E.1	Local excision performed
	E.9	Local excision result

*Related NAS Measures*

### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*Source organisation* BreastScreen Australia

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## E.12 Recommendation—definitive

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* The definitive recommendation given to the woman, following excision of lesion(s).

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

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 local excision although the recommendation may not be adhered to due to a woman's/doctor's decision or State and Territory policy. Examples include:

Some services have a policy not to invite clients 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 woman too frail to undergo surgery—in this case code 4 is used.

Some services may discharge women 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 local excision*.

Collected for all women 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*

<i>Related data elements</i>	C.8	Annual screening flag
	D.12	Discharge from BreastScreen Australia following assessment
	E.1	Local excision performed
	E.13	Discharge from BreastScreen Australia following local excision
<i>Related NAS Measures</i>	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.
	2.3.1 (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.
	2.6.7	<0.2% 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

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia

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## E.13 Discharge from BreastScreen Australia following local excision

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Whether or not a woman was discharged from BreastScreen Australia following the outcome of *E.12 Recommendation—Definitive*.

*Context*

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Yes
	2. No

*Guide for use* If the woman has been discharged from BreastScreen Australia; she will not receive a routine recall invitation. A 'Yes' code includes women discharged permanently from BreastScreen Australia as well as those women suspended from BreastScreen Australia for some years (for example, some services reinvite women diagnosed with breast cancer after five years).

In most cases, women discharged will be those with cancer. However, women may be discharged for other reasons, being either the woman's own decision or the service's recommendation, for example discharge due to a pre-malignant lesion.

Collected for all women 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*

<i>Related data elements</i>	D.12 Discharge from BreastScreen Australia following assessment
	E.1 Local excision performed
	E.12 Recommendation—definitive

*Related NAS Measures*

### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*Source organisation* BreastScreen Australia

## F—Histopathology segment

Data dictionary version 1.1		Data dictionary version 1	
F.1.1	Reason for histopathology	F.1.1	Reason for histopathology
F.1.2	Date of diagnosis	F.1.2	Date of diagnosis
F.1.3	Cancer diagnosed in BreastScreen Australia	F.1.3	Cancer diagnosed in Program
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 identifier number	F.7	Dominant lesion identifier number

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## F.1.1 Reason for histopathology

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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*Data domain*

- Interval cancer or cancer in a non-attender for rescreen
- 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 women 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-interval invasive 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 woman 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 woman 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:

- Women who have been sent one or more invitations for rescreening, but have failed to attend or declined.

- Women 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 woman had cancer diagnosed in BreastScreen Australia (*F.1.3 Cancer diagnosed in BreastScreen Australia*).

Collected from histopathology information for all women 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

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)  $\geq 50$  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)  $\geq 35$  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 ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) invasive breast cancer.

2.1.3 (c)  $\geq 25$  per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) 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.

2.2.1 (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)  $\geq 12$  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)  $\geq 7$  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.

2.3.1 (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)  $\leq 15$  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.

2.6.5 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)  $\geq 85\%$  of invasive breast cancers or DCIS are diagnosed without the need for excision.

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 without the need for excision.

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

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

## **Administrative attributes**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia
<i>Comments</i>	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.

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## F.1.2 Date of diagnosis of interval cancer

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*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

<i>Datatype</i>	Numeric		<i>Representational form</i>	DATE
<i>Field size</i>	<i>Min.</i> 8	<i>Max.</i> 8	<i>Representational layout</i>	DDMMYYYY
<i>Data domain</i>	Valid date			
<i>Guide for use</i>	<p>This data element is completed for all non-screen-detected cancers diagnosed, within or outside BreastScreen Australia, in women ever screened in BreastScreen Australia.</p> <p>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.</p> <p>For definitions of interval cancer and non-attender for rescreen, see <i>F.1.1 Reason for histopathology</i>.</p> <p>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.</p> <p>Collected from histopathology information for all women referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.</p> <p>It is recommended that in cases where all components of <i>Date of diagnosis</i> are not known, a valid date be used together with <i>A.8 Estimated date flag</i> to indicate that it is an estimate.</p>			
<i>Verification rules</i>	<p><i>Date of diagnosis</i> is to be entered only if entry for <i>F.1.1 Reason for histopathology</i> is 'interval cancer or cancer in a non-attender for rescreen' (code 1).</p>			

<i>Related data elements</i>	A.8	Estimated date flag
	F.1.1	Reason for histopathology
	F.1.3	Cancer diagnosed in BreastScreen Australia
<i>Related NAS Measures</i>	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**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	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 woman will have attended between 0 and 24 months of her previous screening episode with interval signs/symptoms (refer to *D.1 Reason for assessment*).

If 'No', the woman will have had breast cancer detected within 0 and 24 months of her previous screening episode outside BreastScreen Australia or she 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 women 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

*Related NAS Measures*

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 1.1

*Source organisation*    BreastScreen Australia

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## F.2.1 Axillary dissection

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 women referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Code for up to two lesions.

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

<i>Related data elements</i>	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 1.1

*Source organisation*    BreastScreen Australia



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## F.2.2 Sentinel node biopsy performed

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Yes
	2. No
	9. Unknown

*Guide for use* Collected from histopathology information for all women referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Code for up to two lesions corresponding to *F.2.1 Axillary dissection*.

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

#### Verification rules

<i>Related data elements</i>	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 1.1

*Source organisation* BreastScreen Australia

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## F.2.3 Axillary dissection—total number of nodes

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*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 women referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Code for up to two lesions corresponding to *F.2.1 Axillary dissection*.

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 1.1

*Source organisation* BreastScreen Australia

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## F.2.4 Axillary dissection—number of nodes positive

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	Quantitative value
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 2	<i>Representational layout</i>	NN
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*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*).

Collected from histopathology information for all women referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Code for up to two lesions corresponding to *F.2.1 Axillary dissection*.

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 1.1

*Source organisation* BreastScreen Australia



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).

Code for up to two lesions.

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 Local 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, a root cause analysis on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU

3.1.4  $\leq 0.35\%$  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  $\leq 0.16\%$  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 1.1

*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.

The separate coding of pleomorphic lobular carcinoma in situ allows for this rare lesion to contribute to the non-invasive breast malignancy ductal carcinoma in situ category for BreastScreen Australia reporting purposes if this is desired, which may be appropriate given that current management recommendations for pleomorphic lobular carcinoma in situ are similar to those for ductal carcinoma in situ.

## F.4 Histopathology of malignant lesions

*Admin. status* SUPERSEDES F.4 Histopathology of malignant lesions

### 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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
<i>Field size</i>	<i>Min.</i> 3 <i>Max.</i> 4	<i>Representational layout</i>	NN.N
<i>Data domain</i>	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)		
<i>Guide for use</i>	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.

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 women 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.

Code for up to two lesions.

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 Local 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)  $\geq 50$  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)  $\geq 35$  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 ( $\leq 15$ mm) 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 ( $\leq 15$ mm) invasive breast cancer.
- 2.1.3 (c)  $\geq 25$  per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15$ mm) 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 ( $\leq 15$ mm) 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.
- 2.2.1 (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)  $\geq 12$  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)  $\geq 7$  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.

2.3.1 (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)  $\leq 15$  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.

2.6.5 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, a root cause analysis 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  $\leq 0.35\%$  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  $\leq 0.16\%$  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)  $\geq 85\%$  of invasive breast cancers or DCIS are diagnosed without the need for excision.

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 without the need for excision.

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

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

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*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.

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## F.5 Size of tumour

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*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 women referred for treatment or for diagnostic open biopsy at assessment, or for interval cancers, after diagnostic or therapeutic treatment procedures have been performed.

Collect for up to two lesions.

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

### **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## F.6 Histological grade

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*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, interval breast cancers.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 women 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.

Code for up to two lesions.

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

### Verification rules

<i>Related data elements</i>	A.5 Lesion number
	A.6 Service provider identifier

*Related NAS Measures*

### Administrative attributes

*Source document* BreastScreen Australia data dictionary, version 1.1

*Source organisation* BreastScreen Australia

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## F.7 Dominant lesion identification number

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*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

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 2	<i>Max.</i> 2	<i>Representational layout</i>	AN
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*Data domain* Lesion number

*Guide for use* For lesions tracked through the Assessment and Local Excision Segments record the lesion number that turns out to be the most significant.

Collected from histopathology information for all women 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)  $\geq 50$  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)  $\geq 35$  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 ( $\leq 15$ mm) 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 ( $\leq 15$ mm) invasive breast cancer.

2.1.3 (c)  $\geq 25$  per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) 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.

2.2.1 (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)  $\geq 12$  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)  $\geq 7$  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.

3.1.4  $\leq 0.35\%$  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  $\leq 0.16\%$  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)  $\geq 85\%$  of invasive breast cancers or DCIS are diagnosed without the need for excision.

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 without the need for excision.

## **Administrative attributes**

*Source document*      BreastScreen Australia data dictionary, version 1.1

*Source organisation*      BreastScreen Australia

## G—Primary treatment segment

Data dictionary version 1.1		Data dictionary version 1	
G.1	Nature of primary treatment	G.1	Primary treatment form
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	Adjuvant radiotherapy
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



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## G.1 Nature of primary treatment

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*Admin. status*                SUPERSEDES                G.1 Primary treatment form

### Identifying and definitional attributes

*Data element type*        DATA ELEMENT

*Definition*                    The nature of primary treatment.

*Context*                        Used for monitoring collection of treatment information about women 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*                Collected from histopathology information for all women 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 1.1

*Source organisation*        BreastScreen Australia

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## G.2 Date of commencement of treatment

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*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 women with breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
<i>Field size</i>	<i>Min.</i> 8 <i>Max.</i> 8	<i>Representational layout</i>	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 women referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.

Recorded for all women 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

<i>Related data elements</i>	A.8    Estimated date flag
	E.2    Date excision performed

*Related NAS Measures*

### Administrative attributes

*Source document*        BreastScreen Australia data dictionary, version 1.1

*Source organisation*    BreastScreen Australia

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## G.3 Side of malignancy

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* DATA ELEMENT

*Definition* Whether the malignancy for which the woman 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 women with breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	1. Left
	2. Right
	3. Both

*Guide for use* Collected from histopathology information for all women 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 1.1

*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 women with breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	<ol style="list-style-type: none"> <li>1. No surgery—woman's decision</li> <li>2. No surgery—surgeon's decision</li> <li>3. Level II/III Axillary Dissection</li> <li>4. Level I Axillary Dissection</li> <li>5. Axillary Node Sampling (non-directed)</li> <li>6. Sentinel Node Biopsy</li> <li>7. Complete local excision</li> <li>8. Total mastectomy</li> <li>9. Unknown</li> </ol>
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*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 describes the definitive surgical treatment, for example if a local excision is performed and this is followed by a mastectomy, code 8 (Total mastectomy) is used. Axillary dissection or node sampling should only be coded if this was the definitive treatment (i.e. no excision or mastectomy performed).

Collected from histopathology information for all women 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 1.1

*Source organisation*    BreastScreen Australia

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## G.5.1 Radiotherapy

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*Admin. status*                SUPERSEDES                G.5 Adjuvant radiotherapy

### 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 women 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 women 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 1.1

*Source organisation*                                BreastScreen Australia

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## G.5.2 Chemotherapy

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*Admin. status* PROPOSED

### 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 women with breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1	<i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 women 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 1.1

*Source organisation* BreastScreen Australia

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## G.6.1 Metastasis—distant

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*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 women with breast cancer.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 1	<i>Representational layout</i>	N
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<i>Data domain</i>	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 women referred for treatment or for diagnostic open biopsy at assessment, after diagnostic or therapeutic treatment procedures have been performed.

#### *Verification rules*

<i>Related data elements</i>	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 1.1

*Source organisation*        BreastScreen Australia



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## 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 women 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 women 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 1.1

*Source organisation* BreastScreen Australia

## H—Death segment

Data dictionary version 1.1		Data dictionary version 1	
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 woman's date of death

*Context*

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	DATE
<i>Field size</i>	<i>Min.</i> 8 <i>Max.</i> 8	<i>Representational layout</i>	DDMMYYYY

*Data domain* Valid date

*Guide for use* Record the date the woman 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 woman 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 1.1

*Source organisation* BreastScreen Australia

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## 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 woman.

*Context*

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	CODE
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<i>Field size</i>	<i>Min.</i>	<i>Max.</i>	<i>Representational layout</i>
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<i>Data domain</i>	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 1.1

*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

Indicator 2—Rescreening

Indicator 3—Recall to assessment

Indicator 4—Invasive breast cancer detection

Indicator 5—Ductal carcinoma in situ detection

Indicator 6a—Interval cancers

Indicator 6b—Program sensitivity

Indicator 7a—Invasive breast cancer incidence

Indicator 7b—Ductal carcinoma in situ incidence

Indicator 8—Mortality

## Indicator 1—Participation

*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* Performance indicator

*Definition* Percentage of women 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*

$$\frac{\text{Number of women screened by age group}}{\text{ABS ERP by age group}} \times 100$$

*Numerator* The number of individual women 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.

<i>Data collection</i>	Australian Bureau of Statistics
<i>Source</i>	ABS Estimated Resident Population
<i>Specifications</i>	<ul style="list-style-type: none"> <li>Count is of individual women, not screening episodes.</li> <li>If a woman has been screened more than once in a 24-month period, then only the last screening episode is to be counted.</li> <li>Indicator is expressed per 100 women in the population.</li> <li>Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li> <li>Age is determined by subtracting date of birth from date of first attendance for this episode.</li> <li>Data are presented by the following stratifications: <ul style="list-style-type: none"> <li>State/Territory</li> <li>Remoteness area</li> <li>Socioeconomic status</li> <li>Indigenous status</li> <li>Main language spoken at home</li> </ul> </li> </ul>

## Administrative attributes

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia
<i>Comments</i>	<p><b>Remoteness area</b></p> <p>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.</p> <p>The calculation of this measure will produce five results for the five different remoteness areas.</p> <p>See Appendix 2 for more information.</p> <p><b>Socioeconomic status</b></p> <p>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.</p> <p>The calculation of this measure will produce five results (low to high</p>

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 women 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, women 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 women 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*

$$\frac{\text{Number of women who returned for a screen within 27 months by age group}}{\text{Number of women who were screened whose screening outcome was a recommendation to return for screening in two years by age group}} \times 100$$

*Numerator* The number of women 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

<i>Data element</i>	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
<i>Denominator</i>	The number of women who were screened in the relevant index year whose screening outcome was a recommendation to return for screening, stratified by age group.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Source</i>	BreastScreen Australia
<i>Data element</i>	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
<i>Specifications</i>	<ul style="list-style-type: none"> <li>• Age is age at the time of screen in the index year.</li> <li>• Screening round classified as ‘First round’, ‘Second round’ or ‘Third and subsequent rounds’.</li> <li>• Indicator is expressed per 100 women.</li> <li>• Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li> <li>• In principle the denominator for this rate should be adjusted to remove women who either died or developed an interval cancer after their screen in the index year. However, this would be too complex to collect.</li> <li>• Data are presented by the following stratifications: <ul style="list-style-type: none"> <li>– Screening round (first, second and third and subsequent)</li> <li>– State/Territory</li> </ul> </li> </ul>

## Administrative attributes

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia

## Indicator 3—Recall to assessment

*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* Performance indicator

*Definition* The proportion of all women 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 women screened, by unnecessary recall to assessment or investigations. An effective breast cancer screening program will limit any unnecessary investigations by minimising the proportion of women 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*

$$\frac{\text{Number of women who were recalled for assessment by age group}}{\text{Number of women screened by age group}} \times 100$$

*Numerator* The number of women 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

<i>Denominator</i>	The number of women screened in a given calendar year.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Source</i>	BreastScreen Australia
<i>Data element</i>	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
<i>Specifications</i>	<ul style="list-style-type: none"> <li>Recall for assessment counts: <ul style="list-style-type: none"> <li>a) mammographic recall only (C.5 = 3 or 5)</li> <li>b) recall for other reasons (non–mammographic) (C.4 = 4) and/or</li> <li>c) combined recall (C.5 = 3 &amp; 4 &amp; 5)</li> </ul> </li> <li>Screening round should be classified as ‘First round’ and ‘Subsequent rounds’</li> <li>Indicator is expressed per 100 women.</li> <li>Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li> <li>Data are presented by the following stratifications: <ul style="list-style-type: none"> <li>– Screening round (first and subsequent)</li> <li>– State/Territory</li> </ul> </li> </ul>

### **Administrative attributes**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia

## Indicator 4—Invasive breast cancer detection

*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* Performance indicator

*Definition* The number of women with invasive breast cancer detected through BreastScreen Australia per 10,000 women 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  $\leq 15$  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 women screened in BreastScreen Australia.

### Relational and representational attributes

<i>Datatype</i>	Numeric	<i>Representational form</i>	Quantitative value
<i>Field size</i>	<i>Min.</i> 1 <i>Max.</i> 5	<i>Representational layout</i>	NN
<i>Data domain</i>	Rate		

$$\frac{\text{Number of women with invasive breast cancer by age group}}{\text{Number of women screened by age group}} \times 10,000$$
  

$$\frac{\text{Number of women with small ( $\leq 15$  mm) invasive breast cancer by age group}}{\text{Number of women screened by age group}} \times 10,000$$

*Numerator* The number of women with all size as well as small diameter ( $\leq 15$  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
<i>Denominator</i>	The number of women screened by BreastScreen Australia over the relevant 12 months by age group.	
<i>Data collection</i>	BreastScreen Australia data dictionary	
<i>Source</i>	BreastScreen Australia	
<i>Data element</i>	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
<i>Specifications</i>	<ul style="list-style-type: none"> <li>Count is of individual women, not tumours.</li> <li>Include invasive tumours only.</li> <li>Indicator is expressed per 10,000 women screened.</li> <li>Use a woman's last screen in the 12-month period.</li> <li>A small cancer is one that is pathologically defined as <math>\leq 15</math> mm.</li> <li>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.</li> <li>Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li> <li>If a small invasive breast cancer was detected for a woman at separate screening episodes during the reporting period, both cases should be included in the numerator.</li> <li>Microinvasive tumours are included.</li> <li>Cancer detected at early review is excluded.</li> <li>Invasive cancer diagnosed at early rescreen where the woman presents with a breast lump and/or clear or blood-stained nipple discharge in the breast in which the cancer was diagnosed is excluded.</li> <li>Paget's disease is only included if an invasive component is present.</li> <li>Data are presented by the following stratifications: <ul style="list-style-type: none"> <li>Tumour size: <math>\leq 15</math> mm and all sizes</li> <li>Screening round (first and subsequent)</li> <li>State/Territory</li> </ul> </li> </ul>	

## Administrative attributes

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	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 women diagnosed with ductal carcinoma in situ per 10,000 women 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* Women 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*

$$\frac{\text{Number of women with DCIS by age group}}{\text{Number of women screened by age group}} \times 10,000$$

*Numerator* The number of women 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 women screened by BreastScreen Australia over the relevant

	12 months by age group.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Source</i>	BreastScreen Australia
<i>Data element</i>	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
<i>Specifications</i>	<ul style="list-style-type: none"> <li>Count is of individual women, not tumours.</li> <li>Indicator is expressed per 10,000 women screened.</li> <li>Symptomatic women are included in both the numerator and the denominator.</li> <li>In case of a simultaneous diagnosis of DCIS and LCIS, the case should be counted as DCIS.</li> <li>In case of a simultaneous diagnosis of DCIS and invasive disease, the case should be counted as invasive.</li> <li>If there is a microinvasive lesion in the presence of DCIS, the lesion with the microinvasion is the dominant lesion over DCIS.</li> <li>Only the first case of DCIS in a woman should be counted.</li> <li>Data are presented by the following stratifications: <ul style="list-style-type: none"> <li>Screening round (first and subsequent)</li> <li>State/Territory</li> </ul> </li> </ul>

### **Administrative attributes**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia



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## Indicator 6a—Interval cancers

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*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* Performance indicator

*Definition* The number of invasive breast cancers detected in women screened through BreastScreen Australia that arise during an interval between two screening rounds, per 10,000 women-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. Women who have their cancer diagnosed as an interval cancer may have a poorer outcome compared to women 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*

$$\frac{\text{Number of interval invasive breast cancers by age group}}{\text{Number of women—years at risk by age group}} \times 10,000$$

*Numerator* The number of women 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
	F.4	Histopathology of malignant lesions
<i>Denominator</i>	The number of women–years at risk in the specified period by age group.	
<i>Data collection</i>	BreastScreen Australia data dictionary	
<i>Source</i>	BreastScreen Australia	
<i>Data element</i>	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
<i>Specifications</i>	<ul style="list-style-type: none"> <li>Count is of individual women, not tumours.</li> <li>Include invasive tumours only.</li> <li>Indicator is expressed per 10,000 women screened.</li> <li>Screening round should be classified as ‘First round’ and ‘Subsequent rounds’.</li> <li>Data are presented by the following stratifications: <ul style="list-style-type: none"> <li>Time since screening (0–364 days and 365–729 days)</li> <li>Screening round (first and subsequent)</li> <li>State/Territory</li> </ul> </li> <li>See NAS Measures 2.3.1 and 2.3.2 for definitions of interval cancers.</li> </ul>	

<i>Collection methods</i>	<p>Data are collected on the women screened through BreastScreen Australia and the interval cancers are identified by linking this information with that of the State and Territory cancer registries.</p> <p>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 women 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:</p> <ul style="list-style-type: none"> <li>• first name</li> <li>• last name</li> <li>• date of birth</li> <li>• address (including number, street, suburb/town and postcode in separate fields)</li> <li>• date of cancer diagnosis</li> <li>• date of last contact (and date of death if separate field to date of last contact)</li> </ul> <p>Other variables suggested for matching include:</p> <ul style="list-style-type: none"> <li>• second given name</li> <li>• alias and/or maiden name</li> <li>• tumour details (including histology, laterality, behaviour, staging (TNM), grade)</li> </ul> <p>Additional information required from the BreastScreen Australia databases include:</p> <ul style="list-style-type: none"> <li>• date of screen</li> <li>• outcome of screening episode (routine recall, lesion detected or early review).</li> </ul>
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## **Administrative attributes**

<i>Source document</i>	BreastScreen Australia data dictionary, version 1.1
<i>Source organisation</i>	BreastScreen Australia

## Indicator 6b—Program sensitivity

*Admin. status* CURRENT

### Identifying and definitional attributes

*Data element type* Performance indicator

*Definition* The percentage of women with screen-detected invasive breast cancer amongst all Program-screened women 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 women 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
- F.1.3 Cancer diagnosed in BreastScreen Australia
- F.4 Histopathology of malignant lesions

<i>Denominator</i>	The number of women with screen-detected invasive breast cancer plus the number of Program-screened women with interval invasive breast cancer in the specified period by age group.
<i>Data collection</i>	BreastScreen Australia and State and Territory Cancer registries
<i>Source</i>	BreastScreen Australia and State and Territory Cancer registries
<i>Data element</i>	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
<i>Specifications</i>	<ul style="list-style-type: none"> <li>Count is of individual women, not tumours.</li> <li>Include invasive tumours only.</li> <li>Screen detected cancers are as defined for Indicator 4.</li> <li>Interval cancers are defined as for Indicator 6a.</li> <li>Indicator is expressed as a percentage</li> <li>Screening round should be classified as 'First round' and 'Subsequent rounds'.</li> <li>Data are presented by the following stratifications: <ul style="list-style-type: none"> <li>Time since screening (0–364 days and 365–729 days)</li> <li>Screening round (first or subsequent)</li> <li>State/Territory</li> </ul> </li> </ul>
<i>Collection methods</i>	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

<i>Source document</i>	BreastScreen Australia data dictionary, version1.1
<i>Source organisation</i>	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 1.1

*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 woman 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 1.1

*Source organisation*    BreastScreen Australia

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## Indicator 8—Mortality

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*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 1.1

*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.

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 women 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 women 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 women 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) 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) 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 woman has multiple visits, it is important to include all visits associated with that round.

# NAS Measures—Data Specifications

## NAS Measures—Data Specifications

### 1. Access and Participation Standard

#### **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. ....	233
NAS Measure 1.1.1 (b) ≥70% of women aged 50–69 years participate in screening in the most recent 24-month period. ....	235
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. ....	237
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. ....	239
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. ....	241
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. ....	243

#### **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) 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 socio-economic backgrounds. ....	245
NAS Measure 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 socio-economic backgrounds. ....	247
NAS Measure 1.2.2 The Service and/or SCU monitors the proportion of all women in the Service who are screened and recalled for assessment, aged 40–49 years and 75 years and over.	
(a) women who are screened .....	261
(b) women who are recalled for assessment .....	263

## 2. Cancer Detection Standard

### Criterion 2.1—The Service and/or SCU maximises the detection of invasive breast cancer in the target 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. ....	265
NAS Measure 2.1.1 (b) $\geq 50$ per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with invasive breast cancer. ....	267
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. ....	269
NAS Measure 2.1.2 (b) $\geq 35$ per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with invasive breast cancer. ....	271
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 ( $\leq 15\text{mm}$ ) invasive breast cancer. ....	273
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 ( $\leq 15\text{mm}$ ) invasive breast cancer. ....	275
NAS Measure 2.1.3 (c) $\geq 25$ per 10,000 women aged 50–69 years who attend for screening are diagnosed with small ( $\leq 15\text{mm}$ ) invasive breast cancer. ....	278
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. ....	281
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 ( $\leq 15\text{mm}$ ) invasive breast cancer. ....	283
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. ....	286

### 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. ....	288
NAS Measure 2.2.1 (b) $\geq 12$ per 10,000 women aged 50–69 years who attend for their first screening episode are diagnosed with DCIS. ....	290
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. ....	292
NAS Measure 2.2.2 (b) $\geq 7$ per 10,000 women aged 50–69 years who attend for their second or subsequent screening episode are diagnosed with DCIS. ....	294
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. ....	296

**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 0–12 months following a negative screening episode. ....	298
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 0–12 months following a negative screening episode. ....	304
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 13–24 months following a negative screening episode. ....	310
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 13–24 months following a negative screening episode. ....	315

**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. ....	320
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**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. ....	321
NAS Measure 2.5.2 The overall repeat rate for the Service and/or SCU is ≤2% of all screening images. ....	323

**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. ....	325
NAS Measure 2.6.1 (b) ≤10% of women aged 50–69 years attend for annual screening. ....	327
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. ....	329
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. ....	331
NAS Measure 2.6.3 (b) <10% of women aged 50–69 years who attend for their first screening episode are recalled for assessment. ....	333
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. ....	335
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. ....	337
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. ....	339

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. ....	342
NAS Measure 2.6.7 <0.2% of women who attend for screening are recommended for early review for further assessment. ....	345

### 3. Assessment Standard

#### 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. ....	347
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. ....	349
NAS Measure 3.1.3 The absolute sensitivity of a diagnosis of breast cancer based on percutaneous needle biopsy is >90%. ....	351
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. ....	353
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. ....	355
NAS Measure 3.1.6 All women with palpable lesions undergoing excision have specimen imaging recorded. ....	357
NAS Measure 3.1.7 ≥95% of all lesions are correctly identified at first excision. ....	359
NAS Measure 3.1.8 (a) ≥85% of invasive breast cancers or DCIS are diagnosed without the need for excision. ....	361
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 without the need for excision. ....	363

### 4. Timeliness Standard

#### 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). ....	365
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). ....	367
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. ....	369

#### 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. ....	371
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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%. ....	373
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. ....	375
NAS Measure 4.2.2 ≥95% of women not requiring percutaneous needle biopsy at assessment receive a definitive recommendation at their first assessment visit. ....	377
NAS Measure 4.2.3 ≥95% of women require no more than two procedural assessment visits to receive a definitive recommendation from assessment.....	379
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.....	381
NAS Measure 4.2.5 ≥95% of women complete all assessment within 15 calendar days.	383
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. ....	385

## **5. Data Management and Information Systems Standard**

### **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. ....	387
NAS Measure 5.1.2 ≥95% of data dictionary compliant primary treatment information is received by the Service and/or SCU.....	389



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## 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women 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
<i>Denominator</i>	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.
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of individual women, not screening episodes.</li><li>• If a woman has been screened more than once in a 24-month period, then only the last screening episode is to be counted.</li></ul>

- Both symptomatic and asymptomatic women to be counted in the numerator.
- Age is calculated as the age at the date of first attendance for the screening episode selected.
- Interstate women are excluded from the numerator.

*Algorithm*

$$\frac{[A.1 \ \& \ ((\text{last C.2 between start date \& end date}) \ \& \ (\text{last C.2—B.2} \geq 50 \ \& \ \leq 74) \ \& \ (\text{B.3.1 or B.3.2 for Service and/or SCU catchment area}))]}{\text{ABS ERP}} \times 100$$

*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.

*Former NAS*

1.1.1

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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women 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
<i>Denominator</i>	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.
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of individual women, not screening episodes.</li><li>• If a woman has been screened more than once in a 24-month period, then only the last screening episode is to be counted.</li><li>• Both symptomatic and asymptomatic women to be counted in the numerator.</li></ul>

- Age is calculated as the age at the date of first attendance for the screening episode selected.
- Interstate women are excluded from the numerator.

*Algorithm*

$$\frac{[A.1 \ \& \ ((\text{last C.2 between start date \& end date}) \ \& \ (\text{last C.2—B.2} \geq 50 \ \& \ \leq 69) \ \& \ (\text{B.3.1 or B.3.2 for Service and/or SCU catchment area}))]}{\text{ABS ERP}} \times 100$$

*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.

*Former NAS*

1.1.1

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data, including 27 months of follow-up data, are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women aged 50–72 years who attend for their first screening episode and then return within 27 months.  A.1, B.9.1, C.2
<i>Denominator</i>	Number of individual women 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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period (index year).</li><li>• Count is of individual women as a woman can only have one first screening episode.</li><li>• Women aged 50–72 years only are included instead of women aged 50–74 years because of policy variations between programs in relation to the age</li></ul>

that women 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 women 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 women 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

$$\frac{[(A.1 \text{ \& } B.9.1 \text{ \& } ((C.2 \text{ for } B.9.1=2) - (C.2 \text{ for } B.9.1=1)) \leq 821 \text{ days})]}{[A.1 \text{ \& } B.9.1=1 \text{ \& } ((C.2 \text{ between start date \& end date) \& (C.2 - B.2} \geq 50 \text{ \& } \leq 72) \text{ \& } (C.5 \text{ or } D.11.1 \text{ or } E.12=1 \text{ or } 2)) \text{ at } A.2]} \times 100$$

#### Notes

- Indicator is expressed as a proportion of all women 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 women rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- In principle the denominator should be adjusted to remove women 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 women recommended for rescreen, which only excludes women who were diagnosed with a screen-detected breast cancer at their previous screen.

Former NAS 1.2.1

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## 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.**

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#### Data Dictionary Measure

The percentage of women aged 50–67 years who are rescreened within 27 months of their first screening episode.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data, including 27 months of follow-up data, are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women aged 50–67 years who attend for their first screening episode and then return within ≤27 months.  A.1, B.9.1, C.2
<i>Denominator</i>	Number of individual women 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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period (index year).</li><li>• Count is of individual women as a woman can only have one first screening episode.</li><li>• Women aged 50–67 years only are included instead of women aged 50–69 years because of policy variations between programs in relation to the age that women continue to be reinvited for rescreening.</li></ul>

- 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 women 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 women 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

$$\frac{[(A.1 \text{ \& } B.9.1 \text{ \& } ((C.2 \text{ for } B.9.1=2) - (C.2 \text{ for } B.9.1=1)) \leq 821 \text{ days})]}{[A.1 \text{ \& } B.9.1=1 \text{ \& } ((C.2 \text{ between start date \& end date) \& (C.2 - B.2 \geq 50 \text{ \& } \leq 67) \text{ \& } (C.5 \text{ or } D.11.1 \text{ or } E.12=1 \text{ or } 2)) \text{ at } A.2]} \times 100$$

#### Notes

- Indicator is expressed as a proportion of all women 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 women rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- In principle the denominator should be adjusted to remove women 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 women recommended for rescreen, which only excludes women who were diagnosed with a screen-detected breast cancer at their previous screen.

#### Former NAS

1.2.1



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## 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.**

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#### Data Dictionary Measure

The percentage of women aged 50–72 years who attend for subsequent rescreens within 27 months of their previous screening episode.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which 27 months of follow-up data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of women aged 50–72 years who attend for a second or subsequent screening episode and return within $\leq 27$ months.  A.1, B.9.1, C.2
<i>Denominator</i>	Number of women 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
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period (index year).</li><li>• Count is of women.</li><li>• Women aged 50–72 years only are included instead of women aged 50–74 years because of policy variations between programs in relation to the age that women continue to be reinvited for rescreening.</li></ul>

- 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 women 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 women 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

$$\frac{[A.1 \ \& \ B.9.1 \ ((C.2 \ \text{for} \ B.9.1=(x+1))-(\text{last} \ C.2 \ \text{for} \ B.9.1=x)) \leq 821 \ \text{days}]}{[A.1 \ \& \ B.9.1=x \ \& \ ((\text{last} \ C.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 72) \ \& \ (C.5 \ \text{or} \ D.11.1 \ \text{or} \ E.12=1 \ \text{or} \ 2)) \ \text{at} \ A.2]} \times 100$$

where x = index year round number of 2 or more

#### Notes

- Indicator is expressed as a proportion of women 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 women rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- Count each woman once.
- In principle the denominator should be adjusted to remove women 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 women recommended for rescreen, which only excludes women who were diagnosed with a screen-detected breast cancer at their previous screen.

Former NAS 1.2.2

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## 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.**

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#### Data Dictionary Measure

The percentage of women aged 50–67 years who attend for subsequent rescreens within 27 months of their previous screening episode.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which 27 months of follow-up data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of women 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
<i>Denominator</i>	Number of women 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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period (index year).</li><li>• Count is of women in the reference period.</li><li>• Women aged 50–67 years only are included instead of women aged 50–69 years because of policy variations between programs in relation to the age that women continue to be reinvited for rescreening.</li><li>• Calculate the denominator first. The numerator is a subset of the denominator,</li></ul>

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 women 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 women 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

$$\frac{[A.1 \ \& \ B.9.1 \ ((C.2 \text{ for } B.9.1=(x+1))-(\text{last } C.2 \text{ for } B.9.1=x)) \leq 821 \text{ days}]}{[A.1 \ \& \ B.9.1=x \ \& \ ((\text{last } C.2 \text{ between start date \& end date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 67) \ \& \ (C.5 \text{ or } D.11.1 \text{ or } E.12=1 \text{ or } 2)) \text{ at } A.2]} \times 100$$

where x = index year round number of 2 or more.

#### Notes

- Indicator is expressed as a proportion of women 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 women rescreened at another Service and/or SCU within BreastScreen Australia in the numerator.
- Count each woman once.
- In principle the denominator should be adjusted to remove women 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 women recommended for rescreen, which only excludes women who were diagnosed with a screen-detected breast cancer at their previous screen.

#### Former NAS

1.2.2

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## 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:

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual Aboriginal and Torres Strait Islander women 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
<i>Denominator</i>	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).
<i>Formula</i>	Numerator / Denominator x 100

<i>Specifications</i>	<ul style="list-style-type: none"> <li>• Select on reference period.</li> <li>• Count is of individual women, not screening episodes.</li> <li>• If a woman has been screened more than once in a 24-month period, then only the last screening episode is to be counted.</li> <li>• Age calculated as at the date of first attendance for the screening episode selected.</li> <li>• Both symptomatic and asymptomatic women to be counted in the numerator.</li> <li>• Women for whom Indigenous status is not stated or missing are excluded from the numerator.</li> </ul>
<i>Algorithm</i>	$\frac{[A.1 \ \& \ ((\text{last C.2 between start date \& end date}) \ \& \ (\text{B.5=1 or 2 or 3}) \ \& \ (\text{last C.2—B.2} \geq 50 \ \& \ \leq 74) \ \& \ (\text{B.3.1 or B.3.2 for Service and/or SCU catchment area}))]}{\text{ABS population as specified in denominator above}} \times 100$
<i>Notes</i>	<ul style="list-style-type: none"> <li>• Indicator is expressed as a proportion of Aboriginal and Torres Strait Islander women in the population.</li> <li>• The calculation of this measure will produce one result.</li> </ul>
<i>Former NAS</i>	1.3.5 (b)

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## 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:

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual Aboriginal and Torres Strait Islander women 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
<i>Denominator</i>	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).
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$

<i>Specifications</i>	<ul style="list-style-type: none"> <li>• Select on reference period.</li> <li>• Count is of individual women, not screening episodes.</li> <li>• If a woman has been screened more than once in a 24-month period, then only the last screening episode is to be counted.</li> <li>• Age calculated as at the date of first attendance for the screening episode selected.</li> <li>• Both symptomatic and asymptomatic women to be counted in the numerator.</li> <li>• Women for whom Indigenous status is not stated or missing are excluded from the numerator.</li> </ul>
<i>Algorithm</i>	$\frac{[A.1 \text{ \& (last C.2 between start date \& end date) \& (B.5=1 or 2 or 3) \& (last C.2—B.2\geq 50 \& \leq 69) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area)]}{\text{ABS population as specified in denominator above}} \times 100$
<i>Notes</i>	<ul style="list-style-type: none"> <li>• Indicator is expressed as a proportion of Aboriginal and Torres Strait Islander women in the population.</li> <li>• The calculation of this measure will produce one result.</li> </ul>
<i>Former NAS</i>	1.3.5 (b)



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## 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:**

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women 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
<i>Denominator</i>	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.
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$
<i>Specifications</i>	<ul style="list-style-type: none"><li>Count is of individual women, not screening episodes.</li></ul>

- Select on reference period.
- If a woman 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 women to be counted in the numerator.
- Women for whom language spoken at home is not stated or missing are excluded from the numerator.

*Algorithm*

$$\frac{[A.1 \text{ \& (last C.2 between start date \& end date) \& (B.4 \neq 'English') \& (last C.2—B.2 \geq 50 \& \leq 74) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area)]}{\text{ABS population as specified in denominator above}} \times 100$$

*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 2 for more information.

*Former NAS*

1.3.5 (a)

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## 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:**

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women 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
<i>Denominator</i>	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.
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$
<i>Specifications</i>	<ul style="list-style-type: none"><li>Count is of individual women, not screening episodes.</li></ul>

- Select on reference period.
- If a woman 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 women to be counted in the numerator.
- Women for whom language spoken at home is not stated or missing are excluded from the numerator.

*Algorithm*

$$\frac{[A.1 \text{ \& (last C.2 between start date \& end date) \& (B.4 \neq 'English') \& (last C.2—B.2 \geq 50 \& \leq 69) \& (B.3.1 or B.3.2 for Service and/or SCU catchment area)]}{\text{ABS population as specified in denominator above}} \times 100$$

*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.
- For more information see Appendix 2.

*Former NAS*

1.3.5 (a)

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## 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:**

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women 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
<i>Denominator</i>	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 women, not screening episodes.
  - If a woman 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 women to be counted in the numerator.
  - Each woman is to be counted only once, regardless of whether she has more than one screening episode in the 24 month period.

*Algorithm*

$$\frac{[A.1 \text{ \& (last C.2 between start date \& end date) \& (last C.2—B.2} \geq 50 \text{ \& } \leq 74) \text{ \& (B.3.1 or B.3.2 = corresponding ASGS RA classification in Service and/or SCU catchment area)}]}{\text{ABS population as specified in denominator above}} \times 100$$

- 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 2 for more information.

*Former NAS* 1.3.5 (c)

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## 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:**

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of individual women 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
<i>Denominator</i>	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 women, not screening episodes.
- If a woman 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 women to be counted in the numerator.
- Each woman is to be counted only once, regardless of whether she has more than one screening episode in the 24-month period.

*Algorithm*

$$\frac{[A.1 \text{ \& (last C.2 between start date \& end date) \& (last C.2—B.2} \geq 50 \text{ \& } \leq 69) \text{ \& (B.3.1 or B.3.2 = corresponding ASGS RA classification in Service and/or SCU catchment area)}]}{\text{ABS population as specified in denominator above}} \times 100$$

*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 2 for more information.

*Former NAS* 1.3.5 (c)



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## 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:**

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	<p>Number of individual women 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).</p> <p>Use the latest ABS Census Socio-Economic Indexes for Areas (SEIFA) Index of IRSD to map SA2 to socioeconomic quintiles.</p> <p>Apply the mapping of SA2 to socioeconomic quintiles to the number of individual women screened aged 50–74 years to determine women screened for each quintile.</p> <p>A.1, B.2, B.3.1 or B.3.2, C.2</p>
<i>Denominator</i>	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>

<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"> <li>• Select on reference period.</li> <li>• Count is of individual women, not screening episodes.</li> <li>• Each woman is to be counted only once, regardless of whether she has more than one screening episode in the 24-month period. If a woman has been screened more than once in a 24-month period, then only the last screening episode is to be counted.</li> <li>• Age is calculated as the age at the screening episode selected.</li> <li>• Both symptomatic and asymptomatic women to be counted in the numerator.</li> </ul>
<i>Algorithm</i>	$\frac{[A.1 \text{ \& (last C.2 between start date \& end date) \& (last C.2—B.2} \geq 50 \text{ \& } \leq 74) \text{ \& (B.3.1 or B.3.2 = corresponding SEIFA index classification in Service and/or SCU catchment area)}]}{\text{ABS population as specified in denominator above}} \times 100$
<i>Notes</i>	<ul style="list-style-type: none"> <li>• Indicator is expressed as a proportion of women in the population.</li> <li>• 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.</li> <li>• The calculation of this measure will produce five results (low to high socioeconomic status across five quintiles).</li> <li>• See Appendix 2 for more information.</li> </ul>
<i>Former NAS</i>	<ul style="list-style-type: none"> <li>• 1.3.5 (d)</li> </ul>

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## 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:**

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#### 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.

<i>Reference period</i>	The most recent 24-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	<p>Number of individual women 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).</p> <p>Use the latest ABS Census Socio-Economic Indexes for Areas (SEIFA) IRSD to map SA2 to socioeconomic quintiles.</p> <p>Apply the mapping of SA2 to socioeconomic quintiles to the number of individual women screened aged 50–69 years to determine women screened for each quintile.</p> <p>A.1, B.2, B.3.1 or B.3.2, C.2</p>
<i>Denominator</i>	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 women, not screening episodes.
- Each woman is to be counted only once, regardless of whether she has more than one screening episode in the 24-month period. If a woman 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 women to be counted in the numerator.

*Algorithm*

$$\frac{[A.1 \text{ \& (last C.2 between start date \& end date) \& (last C.2—B.2} \geq 50 \text{ \& } \leq 69) \text{ \& (B.3.1 or B.3.2 = corresponding SEIFA index classification in Service and/or SCU catchment area)}]}{\text{ABS population as specified in denominator above}} \times 100$$

*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 2.

*Former NAS* 1.3.5 (d)

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## 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 in the Service who are screened and recalled for assessment, aged 40–49 years and 75 years and over.

**(a) women who are screened:**

---

#### Data Dictionary Measure

The proportion of women screened who were aged 40–49 years and 75 years and over in the most recent 12-month period for which data are available.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.	
<i>Data collection</i>	BreastScreen Australia data dictionary	
<i>Data source</i>	State and territory BreastScreen registers	
<i>Data elements</i>	A.1	Client identifier number
	A.2	Screening unit identifier
	B.2	Date of birth
	C.2	Date of first attendance for this episode
<i>Numerator</i>	(i)	Number of screening episodes among women aged 40–49 years.
	(ii)	Number of screening episodes among women aged 75 years and over.
	A.1, A.2, B.2, C.2	
<i>Denominator</i>	Total number of screening episodes.	
	A.1, A.2, C.2	
<i>Formula</i>	Numerator / Denominator x 100	
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• The intent of this element is to monitor the impact out of target age group women are having on resources. Accordingly, the count is of screening episodes and not women.</li><li>• 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</li></ul>	

the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- Age is calculated on date of last screening episode in this period.
- Women 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)

$$\frac{[A.1 \text{ \& (C.2—B.2} \geq 40 \text{ \& } \leq 49) \text{ at A.2}]}{[A.1 \text{ \& (C.2 between start date \& end date) at A.2}]} \times 100$$

Standard 1.2.2 (a) (ii)

$$\frac{[A.1 \text{ \& (C.2—B.2} \geq 75) \text{ at A.2}]}{[A.1 \text{ \& (C.2 between start date \& end date) at A.2}]} \times 100$$

#### Notes

- Indicator is expressed as a proportion of screening episodes.
- The calculation of this measure will produce two results.

#### Former NAS

1.1.2

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## 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 in the Service who are screened and recalled for assessment, aged 40–49 years and 75 years and over.

**(b) women who are recalled for assessment:**

---

#### Data Dictionary Measure

The proportion of women recalled for assessment screened who were aged 40–49 years and 75 years and over in the most recent 12-month period for which data are available.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	(i) Number of screening episodes among women aged 40–49 years recalled to an assessment centre for a mammographic recall (C.5 = 3 or 5). (ii) Number of screening episodes among women aged 75 years and over recalled to an assessment centre for a mammographic recall (C.5 = 3 or 5). A.1, B.2, B.9.1, C.2
<i>Denominator</i>	Number of screening episodes among women recalled to an assessment centre for a mammographic recall (C.5 = 3 or 5). A.1, A.2, B.9.1, C.2, C.5
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>Select on reference period.</li><li>The intent of this element is to monitor the impact out of target age group</li></ul>

women are having on resources. Accordingly, the count is of screening episodes and not women.

- 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 women 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).
- Women 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)

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (C.2-B.2 \geq 40 \ \& \ \leq 49)]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.5=3 \ \text{or} \ 5) \ \& \ (C.2 \ \text{between start date \ \& \ end date})) \ \text{at} \ A.2]} \times 100$$

Standard 1.2.2 (b) (ii)

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (C.2-B.2 \geq 75)]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.5=3 \ \text{or} \ 5) \ \& \ (C.2 \ \text{between start date \ \& \ end date})) \ \text{at} \ A.2]} \times 100$$

#### Notes

- Indicator is expressed as a proportion of screening episodes among women recalled for assessment.
- The calculation of this measure will produce two results.

#### Former NAS

2.6.3



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## 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 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–74 years attending for their first screening episode who are diagnosed with invasive breast cancer.</div> <div>A.1, B.9.1, F.1.1, F.4, F.7</div>
<i>Denominator</i>	<div>Number of women aged 50–74 years attending for their first screening episode.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of individual women as a woman can only have one first screening episode.</li><li>• 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</li></ul>

the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic women 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ ((F.1.1=2) \ \& \ (F.7 = (F.4=1.1 \ \text{to} \ 1.10)))]}{[A.1 \ \& \ B.9.1=1 \ \& \ ((C.2 \ \text{between start date \& end date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 74)) \ \text{at} \ A.2]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.1.1

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## 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 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–69 years attending for their first screening episode who are diagnosed with invasive breast cancer.</div> <div>A.1, B.9.1, F.1.1, F.4, F.7</div>
<i>Denominator</i>	<div>Number of women aged 50–69 years attending for their first screening episode.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of individual women as a woman can only have one first screening episode.</li><li>• 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.</li></ul>

- Both symptomatic and asymptomatic women 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ ((F.1.1=2) \ \& \ (F.7 = (F.4=1.1 \ \text{to} \ 1.10))))]}{[A.1 \ \& \ B.9.1=1 \ \& \ ((C.2 \ \text{between start date \& end date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 69)) \ \text{at} \ A.2]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.1.1

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## 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 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–74 years attending for a second or subsequent screening episode who are diagnosed with an invasive breast cancer.</div> <div>A.1, B.9.1, F.1.1, F.4, F.7</div>
<i>Denominator</i>	<div>Number of women aged 50–74 years attending for a second or subsequent screening episode.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• 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</li></ul>

the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic women 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 woman has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite women for rescreening after a diagnosis of breast cancer and a woman attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that woman at separate screening episodes during that period. While a rare event, if breast cancer was detected for a woman 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \text{ \& B.9.1} \geq 2 \text{ \& ((F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10))))]}{[A.1 \text{ \& B.9.1} \geq 2 \text{ \& ((C.2 between start date \& end date) \& (C.2—B.2} \geq 50 \text{ \& } \leq 74)) \text{ at A.2}]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.1.2

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## 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 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.**

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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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 identifier number
<i>Numerator</i>	Number of women 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
<i>Denominator</i>	Number of women aged 50–69 years attending for a second or subsequent screening episode.  A.1, A.2, B.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• 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.</li><li>• Both symptomatic and asymptomatic women to be counted in both the</li></ul>

numerator and the denominator.

- Age calculated as at the date of first attendance for the screening episode selected (C.2—B.2).
- If a woman has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite women for rescreening after a diagnosis of breast cancer and a woman attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that woman at separate screening episodes during that period. While a rare event, if breast cancer was detected for a woman 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \text{ \& } B.9.1 \geq 2 \text{ \& } ((F.1.1=2) \text{ \& } (F.7 = (F.4=1.1 \text{ to } 1.10))))]}{[A.1 \text{ \& } B.9.1 \geq 2 \text{ \& } ((C.2 \text{ between start date \& end date) \& (C.2—B.2} \geq 50 \text{ \& } \leq 69)) \text{ at A.2}]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.1.2



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## 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 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 ( $\leq 15$ mm) 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 ( $\leq 15$ mm) invasive breast cancer per 10,000 women screened.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.2</div>Date of birth</div> <div><div>B.9.1</div>Round number—State/Territory program</div> <div><div>C.2</div>Date of first attendance for this episode</div> <div><div>F.1.1</div>Reason for histopathology</div> <div><div>F.4</div>Histopathology of malignant lesion</div> <div><div>F.5</div>Size of tumour</div> <div><div>F.7</div>Dominant lesion identifier number</div>

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 women 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).
- 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ (F.1.1=2) \ \& \ (F.7 = (F.4=1.1 \ \text{to} \ 1.10 \ \& \ F.5 \leq 15)))]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between start date} \ \& \ \text{end date}) \ \& \ (C.2—B.2 \geq 50 \ \& \ \leq 74) \ \text{at} \ A.2]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- When micro-invasion is noted, size should be stated as ≤1mm.
- The calculation of this measure will produce one result.

*Former NAS*

2.2.1

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## 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 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 ( $\leq 15\text{mm}$ ) 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 ( $\leq 15\text{mm}$ ) invasive breast cancer per 10,000 women screened.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 identifier number
<i>Numerator</i>	Number of women aged 50–74 years attending for a second or subsequent screening episode who are diagnosed with small ( $\leq 15\text{mm}$ in diameter) invasive breast cancer.  A.1, B.9.1, F.1.1, F.4, F.5, F.7
<i>Denominator</i>	Number of women aged 50–74 years attending for a second or subsequent screening episode.  A.1, A.2, B.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• 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</li></ul>

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 women 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 woman has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite women for rescreening after a diagnosis of breast cancer and a woman attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that woman at separate screening episodes during that period. While a rare event, if breast cancer was detected for a woman 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

#### Algorithm

$$\frac{[A.1 \text{ \& \> B.9.1} \geq 2 \text{ \& ((F.1.1=2) \& (F.7 = (F.4=1.1 to 1.10 \& F.5 \leq 15)))]}{[A.1 \text{ \& \> B.9.1} \geq 2 \text{ \& ((C.2 between start date \& end date) \& (C.2—B.2} \geq 50 \text{ \& } \leq 74)) \text{ at A.2}]} \times 10,000$$

#### Notes

- Indicator is expressed per 10,000 women screened.

- When micro-invasion is noted, size should be stated at  $\leq 1\text{mm}$ .
- The calculation of this measure will produce one result.

*Former NAS* 2.2.1

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## 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 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.5</div><div>Size of tumour</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–69 years who attend for screening who are diagnosed with small (≤15mm in diameter) invasive breast cancer.</div> <div>A.1, B.9.1, F.1.1, F.4, F.5, F.7</div>
<i>Denominator</i>	<div>Number of women aged 50–69 years who attend for screening.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• Do not disaggregate by screening round but use all screening rounds.</li><li>• 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</li></ul>

the denominator are not restated in the numerator.

- Both symptomatic and asymptomatic women 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 woman has two screening episodes that meet the criteria both should be counted. Further, if BreastScreen Australia's policy is to invite women for rescreening after a diagnosis of breast cancer and a woman attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that woman at separate screening episodes during that period. While a rare event, if breast cancer was detected for a woman 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \text{ \& B.9.1 \& } ((F.1.1=2) \text{ \& } (F.7= (F.4=1.1 \text{ to } 1.10 \text{ \& } F.5 \leq 15)))]}{[A.1 \text{ \& B.9.1 \& (C.2 between start date \& end date) \& (C.2—B.2} \geq 50 \text{ \& } \leq 69) \text{ at A.2}]} \times 10,000$$

<i>Notes</i>	<ul style="list-style-type: none"> <li>• Indicator is expressed per 10,000 women screened.</li> <li>• The calculation of this measure will produce one result.</li> <li>• When micro-invasion is noted, size should be stated as <math>\leq 1\text{mm}</math></li> </ul>
<i>Former NAS</i>	2.2.1



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## 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 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.**

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#### Data Dictionary Measure

The number of women aged 50–74 years who attend annually for screening who are diagnosed with invasive breast cancer per 10,000 women screened.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of attendance for this episode</div></div> <div><div>C.8</div><div>Annual screening flag</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–74 years recommended and attending for annual rescreening who are diagnosed with invasive breast cancer.</div> <div>A.1, B.9.1, C.2, F.1.1, F.4, F.7</div>
<i>Denominator</i>	<div>Number of women aged 50–74 years recommended for annual rescreening who attend for screening in the reference period.</div> <div>A.1, A.2, B.2, B.9.1, C.2, C.8</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• Annual screening is determined by characteristics of the woman at the time of screening (for example, a strong family history of breast cancer or a personal history of breast cancer), which necessitates that this counts women not</li></ul>

screening episodes.

- 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 women 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If a woman has been screened more than once in the reference period, then only the last screening episode is to be selected.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ (((C.2 \ \text{for} \ B.9.1=(x+1))-(C.2 \ \text{for} \ B.9.1=x)) \leq 15 \ \text{months}) \ \& \ (F1.1=2 \ (F.7=(F.4=1.1 \ \text{to} \ 1.10))))]}{[A.1 \ \& \ B.9.1>1 \ ((C.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \& \ (C.8=1 \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 74))) \ \text{at} \ A.2]} \times 10,000$$

Where x = index year round number of 1 or more

*Notes*

- Indicator is expressed per 10,000 women attending for annual rescreening.
- The calculation of this measure will produce one result.

*Former NAS*

New

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## 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 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 ( $\leq 15$ mm) invasive breast cancer.**

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#### Data Dictionary Measure

The number of women aged 50–74 years who attend annually for screening who are diagnosed with small ( $\leq 15$ mm) invasive breast cancer per 10,000 women screened.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.2</div>Date of birth</div> <div><div>B.9.1</div>Round—State/Territory program</div> <div><div>C.2</div>Date of first attendance for this episode</div> <div><div>C.8</div>Annual screening flag</div> <div><div>F.1.1</div>Reason for histopathology</div> <div><div>F.4</div>Histopathology of malignant lesion</div> <div><div>F.5</div>Size of tumour</div> <div><div>F.7</div>Dominant lesion identifier number</div>

screening (for example, a strong family history of breast cancer or a personal history of breast cancer), which necessitates that this counts women not screening episodes.

- 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 women 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If a woman has been screened more than once in the reference period, then only the last screening episode is to be selected.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (((C.2 \ \text{for} \ B.9.1=(x+1))-(C.2 \ \text{for} \ B.9.1=x)) \leq 15 \ \text{months}) \ \& \ ((F1.1=2) \ \& \ (F.7=(F.4=1.1 \ \text{to} \ 1.10 \ \& \ F.5 \leq 15)))]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \& \ (C.8=1) \ \& \ (\text{last} \ C.2-B.2 \geq 50 \ \& \ \leq 74)) \ \text{at} \ A.2]} \times 10,000$$

Where x = index year round number 1 or more.

<i>Notes</i>	<ul style="list-style-type: none"> <li>• Indicator is expressed per 10,000 women attending for annual rescreening.</li> <li>• When micro-invasion is noted, size should be stated at <math>\leq 1\text{mm}</math>.</li> <li>• The calculation of this measure will produce one result.</li> </ul>
<i>Former NAS</i>	New

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## 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 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.**

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#### Data Dictionary Measure

The number of women aged 40–49 years who attend annually for screening who are diagnosed with invasive breast cancer per 10,000 women screened.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of attendance for this episode</div></div> <div><div>C.8</div><div>Annual screening flag</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 40–49 years recommended and attending for annual rescreening who are diagnosed with invasive breast cancer.</div> <div>A.1, B.9.1, C.2, F.1.1, F.4, F.7</div>
<i>Denominator</i>	<div>Number of women aged 40–49 years recommended for annual rescreening who attend for screening in the reference period.</div> <div>A.1, A.2, B.2, B.9.1, C.2, C.8</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• Annual screening is determined by characteristics of the woman at the time of screening (for example, a strong family history of breast cancer or a personal history of breast cancer), which necessitates that this counts women not</li></ul>

screening episodes.

- 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 women 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If a woman has been screened more than once in the reference period, then only the last screening episode is to be selected.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women who present at assessment with interval signs and symptoms.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ (((C.2 \ \text{for} \ B.9.1=(x+1))-(C.2 \ \text{for} \ B.9.1=x)) \leq 15 \ \text{months}) \ \& \ (F1.1=2 \ (F.7=(F.4=1.1 \ \text{to} \ 1.10))))]}{[A.1 \ \& \ B.9.1 \ ((C.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \& \ (C.8=1 \ \& \ (C.2-B.2 \geq 40 \ \& \ \leq 49))) \ \text{at} \ A.2]} \times 10,000$$

Where x = index year round number 1 or more.

*Notes*

- Indicator is expressed per 10,000 women attending for annual rescreening.
- The calculation of this measure will produce one result.

*Former NAS*

New

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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 identifier number
<i>Numerator</i>	Number of women 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,
<i>Denominator</i>	Number of women aged 50–74 years attending for their first screening episode.  A.1, A.2, B.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of individual women as a woman can only have one first screening episode.</li><li>• 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</li></ul>



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 women to be counted in both the numerator and the denominator.
- A woman 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 women 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.
- Women 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*

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ ((F.1.1=2) \ \& \ (F.7 = (F.4=2.1 \ \text{to} \ 2.4)))]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between start date} \ \& \ \text{end date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 74) \ \text{at} \ A.2]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.3.1

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div><div>A.2</div><div>Screening unit identifier</div><div>B.2</div><div>Date of birth</div><div>B.9.1</div><div>Round number—State/Territory program</div><div>C.2</div><div>Date of first attendance for this episode</div><div>F.1.1</div><div>Reason for histopathology</div><div>F.4</div><div>Histopathology of malignant lesion</div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–69 years attending for their first screening episode who are diagnosed with DCIS.</div> <div>A.1, B.9.1, F.1.1, F.4, F.7,</div>
<i>Denominator</i>	<div>Number of women aged 50–69 years attending for their first screening episode.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of individual women as a woman can only have one first screening episode.</li><li>• 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.</li></ul>

- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- A woman 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 women 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.
- Women 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*

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ ((F.1.1=2) \ \& \ (F.7 = (F.4=2.1 \ \text{to} \ 2.4)))]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2—B.2 \geq 50 \ \& \ \leq 69) \ \text{at} \ A.2]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.3.1

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–74 years attending for a subsequent screening episode who are diagnosed with DCIS.</div> <div>A.1, B.9.1, F.1.1, F.4, F.7</div>
<i>Denominator</i>	<div>Number of women aged 50–74 years attending for a subsequent screening episode.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 10,000$
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• 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</li></ul>

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 women to be counted in both the numerator and the denominator.
- If a woman has two screening episodes that meet the criteria both should be counted. Further, if, BreastScreen Australia's policy is to invite women for rescreening after a diagnosis of breast cancer and a woman attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that woman at separate screening episodes during that period. While a rare event, if breast cancer was detected for a woman 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 women 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.
- Women 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*

$$\frac{[A.1 \text{ \& } B.9.1 \geq 2 \text{ \& } ((F.1.1=2) \text{ \& } (F.7 = (F.4=2.1 \text{ to } 2.4))))]}{[A.1 \text{ \& } B.9.1 \geq 2 \text{ \& } (C.2 \text{ between start date \& end date) \& } (C.2 - B.2 \geq 50 \text{ \& } \leq 74) \text{ at } A.2]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.3.2

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesion</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>
<i>Numerator</i>	<div>Number of women aged 50–69 years attending for a subsequent screening episode who are diagnosed with DCIS.</div> <div>A.1, B.9.1, F.1.1, F.4, F.7</div>
<i>Denominator</i>	<div>Number of women aged 50–69 years attending for a subsequent screening episode.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• 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.</li></ul>

- Age calculated as at the date of first attendance for the screening episode selected.
- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- If a woman has two screening episodes that meet the criteria both should be counted. Further, if, BreastScreen Australia's policy is to invite women for rescreening after a diagnosis of breast cancer and a woman attends within the same reporting period, it will be necessary to identify if more than one breast cancer was diagnosed for that woman at separate screening episodes during that period. While a rare event, if breast cancer was detected for a woman 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 women 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.
- Women 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*

$$\frac{[A.1 \text{ \& } B.9.1 \geq 2 \text{ \& } ((F.1.1=2) \text{ \& } (F.7 = (F.4=2.1 \text{ to } 2.4)))]}{[A.1 \text{ \& } B.9.1 \geq 2 \text{ \& } (C.2 \text{ between start date \& end date) \& } (C.2 - B.2 \geq 50 \text{ \& } \leq 69) \text{ at } A.2]} \times 10,000$$

*Notes*

- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.3.2

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## 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.**

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#### Data Dictionary Measure

The number of women aged 50–74 years who attend annually for screening who are diagnosed with DCIS per 10,000 women screened.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.2</div>Date of birth</div> <div><div>B.9.1</div>Round—State/Territory program</div> <div><div>C.2</div>Date of first attendance for this episode</div> <div><div>C.8</div>Annual screening flag</div> <div><div>F.1.1</div>Reason for histopathology</div> <div><div>F.4</div>Histopathology of malignant lesion</div> <div><div>F.7</div>Dominant lesion identifier number</div>



- 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 women 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 women 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.
- Women 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*

$$\frac{[A.1 \ \& \ B.9.1 \geq 2 \ (((C.2 \text{ for } B.9.1=(x+1)) - (C.2 \text{ for } B.9.1=x)) \leq 15 \text{ months}) \ \& \ (F1.1=2 \ (F.7=(F.4=2.1 \text{ to } 2.4))))]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.2 \text{ between start date \ \& \ end date}) \ \& \ (C.8=1 \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 74))) \text{ at } A.2]} \times 10,000$$

Where x = index year round number of 1 or more.

*Notes*

- Indicator is expressed per 10,000 women attending for annual rescreening.
- The calculation of this measure will produce one result.

*Former NAS*

New

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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.	
<i>Data collection</i>	BreastScreen Australia data dictionary	
<i>Data source</i>	State and territory BreastScreen registers	
<i>Data elements</i>	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
	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 women, the next screening episode will occur around 24 months after her previous negative screening episode, as the recommended screening interval for most women in BreastScreen Australia is 24 months. The exception to this is women on annual screens, for whom the next screening episode will occur around 12 months after her 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 women that exist in each State and Territory.

### **Interval cancers diagnosed outside BreastScreen Australia**

The majority of interval cancers are detected outside BreastScreen Australia. In this scenario, following the completion of a negative screening episode, if a woman develops signs or symptoms of breast cancer, she will typically visit her General Practitioner and from there be assessed privately in a diagnostic clinic. If it is found that she has 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 women outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of her previous negative screen (or within 364 days of the date of attendance of her previous negative screen for women on annual screens), this will be categorised as an interval cancer.

### **Interval cancers diagnosed within BreastScreen Australia— early rescreen**

More rarely, if a woman develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather attending a private diagnostic clinic, she may return to BreastScreen Australia early to have her breast symptoms assessed through the Program.

This is called an 'early rescreen' if her date of attendance for this screen is <730 days after the date of attendance of her previous screen (or <365 days after the date of attendance of her previous screen for women on annual screens).

If a woman attends BreastScreen Australia <730 days after the date of attendance of her 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 women who attend BreastScreen Australia <730 days after the date of attendance of her 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 woman at early rescreen). Women with no breast symptoms are likely to be attending an early rescreen because it is more convenient for her 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 women differ across States and Territories; some will redirect women with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a woman 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 private diagnostic clinic or through BreastScreen Australia.

#### **Interval cancers diagnosed within BreastScreen Australia— early review**

Also rarely, women who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a woman 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.

<i>Numerator</i>	<p>Sum all cases i to iii to derive the numerator.</p> <ol style="list-style-type: none"> <li>The number of women 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 &lt;365 days after the date of attendance of their previous screening episode</li> <li>The number of women aged 50–74 years with an invasive breast cancer diagnosed by BreastScreen Australia at early rescreen &lt;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.</li> <li>The number of women aged 50–74 years with an invasive breast cancer diagnosed by BreastScreen Australia at early review ≥183 days and &lt;365 days after the date of attendance of their previous screening episode.</li> </ol> <p>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</p>
<i>Denominator</i>	<p>The number of women-years at risk in the specified period for women aged 50–74 years.</p> <p>This is all women 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.</p> <p>A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12</p>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<p><b>Numerator—interval invasive breast cancers</b></p> <ul style="list-style-type: none"> <li>Invasive cancers diagnosed outside BreastScreen Australia in screened women with a previous negative screening episode and a date of diagnosis &lt;365 days after the date of attendance of their previous screening episode.</li> <li>Invasive cancer detected through BreastScreen Australia at early rescreen &lt;365 days after the date of attendance of a previous negative screening episode where the woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.</li> <li>Invasive cancers detected through BreastScreen Australia at early review ≥183 days and &lt;365 days after the date of attendance of their previous screening episode.</li> </ul> <p>Inclusions:</p> <ul style="list-style-type: none"> <li>Tumours should be recorded and sized as invasive cancers if they include any invasive component.</li> <li>Micro-invasive tumours to be included.</li> <li>If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.</li> <li>Paget's disease is only included if an invasive component is present.</li> </ul> <p>Exclusions:</p> <ul style="list-style-type: none"> <li>Invasive breast cancer detected through BreastScreen Australia at early review &lt;183 days from date of attendance of their previous screening episode.</li> </ul>

### Denominator—women-years at risk

- All women screened aged 50–74 years who 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.
- Women 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.
- Women 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 women 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 women, not lesions.
- Age calculated on date of attendance of last screening episode in the reference period.
- Exclude women 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)

$$\frac{[A.1 \& B.9.1 \& ((C.5=1 \text{ or } 2) \text{ or } (if \ C.5=3 \text{ or } 4 \text{ or } 5 \& D.11.1=1 \text{ or } 2)) \text{ or } (if \ D.11.1=4 \text{ or } 5 \& E.12=1 \text{ or } 2) \& ((F.1.1=1 \& (F.1.2-C.2<365 \text{ days}) \& (F.4=1.1 \text{ to } 1.10)))]}{x \ 10,000}$$

#### 2.3.1 (a) (ii)

$$\frac{[A.1 \& B.9.1 \& (((C.5=1 \text{ or } 2) \text{ or } ((C.5=4 \text{ or } 5 \& D.11.1=1 \text{ or } 2) \text{ or } (if \ D.11.1=4 \text{ or } 5 \& E.12=1 \text{ or } 2) \& (next \ B.9.1 \text{ and } C.2<365 \text{ days})) \& where \ ((B.10=1 \text{ or } 2 \text{ or } 3 \text{ for } A.5) \& (F.4=1.1 \text{ to } 1.10 \text{ for same } A.5))) \text{ at } A.2 \& (F.1.2-C.2 < 365 \text{ days})]}{x \ 10,000}$$

#### 2.3.1 (a) (iii)

$$\frac{[A.1 \& B.9.1 \& (((D.1=2 \& D.11.1=4 \text{ or } 5) \& (F.4=1.1 \text{ to } 1.10)) \text{ or } if \ ((D.11.1=3) \& ((F.1.2 \text{ between } D.11.3 \& (D.11.3 + D.11.2) \text{ where } (D.11.3-C.2 + D.11.2 \geq 183 \text{ days}))) \text{ at } A.2]}{x \ 10,000}$$

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[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)) 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 woman's previous screening episode for women on two-yearly screens, or a rescreen with a date of attendance <365 days after the date of attendance of a woman's previous screening episode for women on annual screens.
- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.
- There is variability across jurisdictions as to whether symptomatic women 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 women 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.

*Former NAS*

2.4.2 (a)

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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.	
<i>Data collection</i>	BreastScreen Australia data dictionary	
<i>Data source</i>	State and territory BreastScreen registers	
<i>Data elements</i>	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
	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 women, the next screening episode will occur around 24 months after her previous negative screening episode, as the recommended screening interval for most women in BreastScreen Australia is 24 months. The exception to this is women on annual screens, for whom the next screening episode will occur around 12 months after her 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 women that exist in each State and Territory.

### **Interval cancers diagnosed outside BreastScreen Australia**

The majority of interval cancers are detected outside BreastScreen Australia. In this scenario, following the completion of a negative screening episode, if a woman develops signs or symptoms of breast cancer, she will typically visit her General Practitioner and from there be assessed privately in a diagnostic clinic. If it is found that she has 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 women outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of her previous negative screen (or within 364 days of the date of attendance of her previous negative screen for women on annual screens), this will be categorised as an interval cancer.

### **Interval cancers diagnosed within BreastScreen Australia— early rescreen**

More rarely, if a woman develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather attending a private diagnostic clinic, she may return to BreastScreen Australia early to have her breast symptoms assessed through the Program.

This is called an 'early rescreen' if her date of attendance for this screen is <730 days after the date of attendance of her previous screen (or <365 days after the date of attendance of her previous screen for women on annual screens).

If a woman attends BreastScreen Australia <730 days after the date of attendance of her 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 women who attend BreastScreen Australia <730 days after the date of attendance of her 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 woman at early rescreen). Women with no breast symptoms are likely to be attending an early rescreen because it is more convenient for her 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 women differ across States and Territories; some will redirect women with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a woman 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 private diagnostic clinic or through BreastScreen Australia.

#### **Interval cancers diagnosed within BreastScreen Australia— early review**

Also rarely, women who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a woman 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 women 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 women 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 women 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 women-years at risk in the specified period for women aged 50–69 years.

This is all women 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 women 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 woman 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.

**Denominator—women-years at risk**

- All women screened aged 50–69 years who 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.
- Women 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.
- Women 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 women 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 women, not lesions.

- Age calculated on date of attendance of last screening episode in the reference period.
- Exclude women 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 (b) (i)

$$\frac{[A.1 \& B.9.1 \& ((C.5=1 \text{ or } 2) \text{ or } (if \ C.5=3 \text{ or } 4 \text{ or } 5 \& D.11.1=1 \text{ or } 2)) \text{ or } (if \ D.11.1=4 \text{ or } 5 \& E.12=1 \text{ or } 2) \& ((F.1.1=1 \& (F.1.2-C.2<365 \text{ days}) \& (F.4=1.1 \text{ to } 1.10)))]}{x \ 10,000}$$

#### 2.3.1 (b) (ii)

$$\frac{[A.1 \& B.9.1 \& (((C.5=1 \text{ or } 2) \text{ or } ((C.5=4 \text{ or } 5 \& D.11.1=1 \text{ or } 2) \text{ or } (if \ D.11.1=4 \text{ or } 5 \& E.12=1 \text{ or } 2) \& (next \ B.9.1 \text{ and } C.2<365 \text{ days})) \& where \ ((B.10=1 \text{ or } 2 \text{ or } 3 \text{ for } A.5) \& (F.4=1.1 \text{ to } 1.10 \text{ for same } A.5))) \text{ at } A.2 \& (F.1.2-C.2 <365 \text{ days})]}{x \ 10,000}$$

#### 2.3.1 (b) (iii)

$$\frac{[A.1 \& B.9.1 \& (((D.1=2 \& D.11.1=4 \text{ or } 5) \& (F.4=1.1 \text{ to } 1.10)) \text{ or } if \ ((D.11.1=3) \& ((F.1.2 \text{ between } D.11.3 \& (D.11.3 + D.11.2) \text{ where } (D.11.3-C.2 + D.11.2 \geq 183 \text{ days}))) \text{ at } A.2]}{x \ 10,000}$$

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$$[A.1 \& B.9.1 \& ((C.2 \text{ between start \& end date}) \& (C.2-B2 \geq 50 \& \leq 69) \& (B.7.1=2) \& (C.5, D.11.1 \text{ or } E.12=1 \text{ or } 2)) \text{ at } A.2]$$

### Notes

- Early rescreen is defined as a rescreen with a date of attendance <730 days after the date of attendance of a woman's previous screening episode for women on two-yearly screens, or a rescreen with a date of attendance <364 days after the date of attendance of a woman's previous screening episode for women on annual screens.
- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.
- There is variability across jurisdictions as to whether symptomatic women 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 women 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.

*Former NAS*

2.4.2 (a)

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## 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.**

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#### 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
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 women, the next screening episode will occur around 24 months after her previous negative screening episode, as the recommended screening interval for most women in BreastScreen Australia is 24 months. The exception to this is women on annual screens, for whom the next screening episode will occur around 12 months after her 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 women that exist in each State and Territory.

### **Interval cancers diagnosed outside BreastScreen Australia**

The majority of interval cancers are detected outside BreastScreen Australia. In this scenario, following the completion of a negative screening episode, if a woman develops signs or symptoms of breast cancer, she will typically visit her General Practitioner and from there be assessed privately in a diagnostic clinic. If it is found that she has 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 women outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of her previous negative screen (or within 364 days of the date of attendance of her previous negative screen for women on annual screens), this will be categorised as an interval cancer.

### **Interval cancers diagnosed within BreastScreen Australia— early rescreen**

More rarely, if a woman develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather attending a private diagnostic clinic, she may return to BreastScreen Australia early to have her breast symptoms assessed through the Program.

This is called an 'early rescreen' if her date of attendance for this screen is <730 days after the date of attendance of her previous screen (or <365 days after the date of attendance of her previous screen for women on annual screens).

If a woman attends BreastScreen Australia <730 days after the date of attendance of her 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 women who attend BreastScreen Australia <730 days after the date of attendance of her 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 woman at early rescreen). Women with no breast symptoms are likely to be attending an early rescreen because it is more convenient for her 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 women differ across States and Territories; some will redirect women with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a woman 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 private diagnostic clinic or through BreastScreen Australia.

#### **Interval cancers diagnosed within BreastScreen Australia— early review**

Also rarely, women who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a woman 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 women 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 women 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



<i>Denominator</i>	<p>The number of women-years at risk in the specified period for women aged 50–74 years.</p> <p>This is all women 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.</p> <p>A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12</p>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<p><b>Numerator—interval invasive breast cancers</b></p> <ul style="list-style-type: none"> <li>Invasive cancers diagnosed outside BreastScreen Australia in screened women with a previous negative screening episode and a date of diagnosis ≥365 days and &lt;730 days after the date of attendance of their previous screening episode.</li> <li>Invasive cancer detected through BreastScreen Australia at early rescreen ≥365 days and &lt;730 days after the date of attendance of a previous negative screening episode where the woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.</li> </ul> <p>Inclusions:</p> <ul style="list-style-type: none"> <li>Tumours should be recorded and sized as invasive cancers if they include any invasive component.</li> <li>Micro-invasive tumours to be included.</li> <li>If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.</li> <li>Paget's disease is only included if an invasive component is present.</li> </ul> <p><b>Denominator—women-years at risk</b></p> <ul style="list-style-type: none"> <li>All women screened aged 50–74 years who 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.</li> <li>Women 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.</li> <li>Women 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.</li> </ul> <p>To calculate women years at risk</p> <ul style="list-style-type: none"> <li>Select on reference period</li> <li>Use A.1 and B.9.1 to ensure correct linking of data elements.</li> <li>Count is of individual women, not lesions.</li> <li>Age calculated on date of attendance of last screening episode in the reference period.</li> <li>Exclude women with a previous history of breast cancer.</li> </ul> <p><b>Other</b></p> <p>Calculate the denominator first. The numerator is a subset of the denominator, i.e.</p>

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)

$$\frac{[A.1 \& B.9.1 \& ((C.5=1 \text{ or } 2) \text{ or } (if \ C.5=3 \text{ or } 4 \text{ or } 5 \& D.11.1=1 \text{ or } 2)) \text{ or } (D.11.1=4 \text{ or } 5 \& E.12=1 \text{ or } 2)) \& ((F.1.1=1 \& (F.1.2—C.2 \geq 365 \text{ days} \& < 730 \text{ days}) \& (F.4=1.1 \text{ to } 1.10)))]}{x \ 10,000}$$

2.3.2 (a) (ii)

$$\frac{[A.1 \& B.9.1 \& (((C.5=1) \text{ or } (C.5=4 \text{ or } 5 \& D.11.1=1) \text{ or } (D.11.1=4 \text{ or } 5 \& E.12=1)) \& (\text{next B.9.1 and C.2} \geq 365 \text{ days} \& < 730 \text{ days}) \& \text{where } ((B.10=1 \text{ or } 2 \text{ or } 3 \text{ for A.5}) \& (F.4=1.1 \text{ to } 1.10 \text{ for same A.5}) \& (F.1.2—C.2 \geq 365 \text{ days} \& < 730 \text{ days}))) \text{ at A.2}]}{x \ 10,000}$$

$$[A.1 \& B.9.1 \& ((C.2 \text{ between start \& end date}) \& (C.2—B2 \geq 50 \& \leq 74) \& (B.7.1=2) \& ((C.5=1) \text{ or } (if \ C.5=3 \text{ or } 4 \text{ or } 5 \text{ then } D.11.1=1) \text{ or } (if \ D.11.1=4 \text{ or } 5 \text{ then } E.12=1)))] \text{ at A.2}]$$

*Notes*

- Early rescreen is defined as a rescreen with a date of attendance <730 days after the date of attendance of a woman's previous screening episode for women on two-yearly screens, or a rescreen with a date of attendance <364 days after the date of attendance of a woman's previous screening episode for women on annual screens.
- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.
- There is variability across jurisdictions as to whether symptomatic women 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 women 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.

*Former NAS*

2.4.2 (b)

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## 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.**

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#### 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
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 women, the next screening episode will occur around 24 months after her previous negative screening episode, as the recommended screening interval for most women in BreastScreen Australia is 24 months. The exception to this is women on annual screens, for whom the next screening episode will occur around 12 months after her 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 women that exist in each State and Territory.

### **Interval cancers diagnosed outside BreastScreen Australia**

The majority of interval cancers are detected outside BreastScreen Australia. In this scenario, following the completion of a negative screening episode, if a woman develops signs or symptoms of breast cancer, she will typically visit her General Practitioner and from there be assessed privately in a diagnostic clinic. If it is found that she has 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 women outside BreastScreen Australia. If this cancer was diagnosed within 729 days of the date of attendance of her previous negative screen (or within 364 days of the date of attendance of her previous negative screen for women on annual screens), this will be categorised as an interval cancer.

### **Interval cancers diagnosed within BreastScreen Australia— early rescreen**

More rarely, if a woman develops signs or symptoms of breast cancer following the completion of a negative screening episode, rather attending a private diagnostic clinic, she may return to BreastScreen Australia early to have her breast symptoms assessed through the Program.

This is called an 'early rescreen' if her date of attendance for this screen is <730 days after the date of attendance of her previous screen (or <365 days after the date of attendance of her previous screen for women on annual screens).

If a woman attends BreastScreen Australia <730 days after the date of attendance of her 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 women who attend BreastScreen Australia <730 days after the date of attendance of her 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 woman at early rescreen). Women with no breast symptoms are likely to be attending an early rescreen because it is more convenient for her 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 women differ across States and Territories; some will redirect women with symptoms down a diagnostic pathway outside BreastScreen Australia, whereas others will accept a woman 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 private diagnostic clinic or through BreastScreen Australia.

#### **Interval cancers diagnosed within BreastScreen Australia— early review**

Also rarely, women who attend BreastScreen Australia for early review may have an invasive breast cancer detected. Early review is the recall of a woman 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.

- iii. The number of women 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  $\geq 365$  days and <730 days after the date of attendance of their previous screening episode.
- iv. The number of women aged 50–69 years with an invasive breast cancer diagnosed by BreastScreen Australia at early rescreen  $\geq 365$  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

<i>Denominator</i>	<p>The number of women-years at risk in the specified period for women aged 50–74 years.</p> <p>This is all women 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.</p> <p>A.1, A.2, B.2, B.7.1, B.9.1, C.2, C.5, D.11.1, E.12</p>
<i>Formula</i>	Numerator / Denominator x 10,000
<i>Specifications</i>	<p><b>Numerator—interval invasive breast cancers</b></p> <ul style="list-style-type: none"> <li>Invasive cancers diagnosed outside BreastScreen Australia in screened women with a previous negative screening episode and a date of diagnosis <math>\geq 365</math> days and <math>&lt; 730</math> days after the date of attendance of their previous screening episode.</li> <li>Invasive cancer detected through BreastScreen Australia at early rescreen <math>\geq 365</math> days and <math>&lt; 730</math> days after the date of attendance of a previous negative screening episode where the woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.</li> </ul> <p>Inclusions:</p> <ul style="list-style-type: none"> <li>Tumours should be recorded and sized as invasive cancers if they include any invasive component.</li> <li>Micro-invasive tumours to be included.</li> <li>If there is micro-invasion in the presence of DCIS, the lesion with micro-invasion is the dominant lesion over DCIS.</li> <li>Paget's disease is only included if an invasive component is present.</li> </ul> <p><b>Denominator—women-years at risk</b></p> <ul style="list-style-type: none"> <li>All women screened aged 50–69 years who 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.</li> <li>Women 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.</li> <li>Women 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.</li> </ul> <p>To calculate women years at risk</p> <ul style="list-style-type: none"> <li>Select on reference period</li> <li>Use A.1 and B.9.1 to ensure correct linking of data elements.</li> <li>Count is of individual women, not lesions.</li> <li>Age calculated on date of attendance of last screening episode in the reference period.</li> <li>Exclude women with a previous history of breast cancer.</li> </ul> <p><b>Other</b></p> <p>Calculate the denominator first. The numerator is a subset of the denominator, i.e.</p>

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)

$$\frac{[A.1 \& B.9.1 \& ((C.5=1 \text{ or } 2) \text{ or } (if \ C.5=3 \text{ or } 4 \text{ or } 5 \& D.11.1=1 \text{ or } 2)) \text{ or } (D.11.1=4 \text{ or } 5 \& E.12=1 \text{ or } 2)) \& ((F.1.1=1 \& (F.1.2—C.2 \geq 365 \text{ days} \& < 730 \text{ days}) \& (F.4=1.1 \text{ to } 1.10)))]}{x \ 10,000}$$

2.3.2 (b) (ii)

$$\frac{[A.1 \& B.9.1 \& (((C.5=1) \text{ or } (C.5=4 \text{ or } 5 \& D.11.1=1) \text{ or } (D.11.1=4 \text{ or } 5 \& E.12=1))) \& (next \ B.9.1 \text{ and } C.2 \geq 365 \text{ days} \& < 730 \text{ days}) \& where \ ((B.10=1 \text{ or } 2 \text{ or } 3 \text{ for } A.5) \& (F.4=1.1 \text{ to } 1.10 \text{ for same } A.5) \& (F.1.2—C.2 \geq 365 \text{ days} \& < 730 \text{ days}))) \text{ at } A.2]}{x \ 10,000}$$

$$[A.1 \& B.9.1 \& ((C.2 \text{ between start \& end date}) \& (C.2—B2 \geq 50 \& \leq 69) \& (B.7.1=2) \& ((C.5=1) \text{ or } (if \ C.5=3 \text{ or } 4 \text{ or } 5 \text{ then } D.11.1=1) \text{ or } (if \ D.11.1=4 \text{ or } 5 \text{ then } E.12=1)))) \text{ at } A.2]$$

*Notes*

- Early rescreen is defined as a rescreen with a date of attendance <730 days after the date of attendance of a woman's previous screening episode for women on two-yearly screens, or a rescreen with a date of attendance <364 days after the date of attendance of a woman's previous screening episode for women on annual screens.
- Indicator is expressed per 10,000 women screened.
- The calculation of this measure will produce one result.
- There is variability across jurisdictions as to whether symptomatic women 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 women 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.

*Former NAS*

2.4.2 (b)

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## 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.**

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#### Data Dictionary Measure

The number of mammographic screening cases read by readers per year.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	A.1 Client identifier number A.6 Service provider identifier
<i>Numerator</i>	The number of cases read by each reader. A.1, A.6
<i>Denominator</i>	Not applicable
<i>Formula</i>	Number of cases read by each reader.
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of number of cases read.</li><li>• Cases of both symptomatic and asymptomatic women to be counted.</li><li>• To identify all images read, select from all relevant services, as a reader may read for more than one service.</li></ul>
<i>Algorithm</i>	For each A.6 ( $\Sigma$ A.1)
<i>Notes</i>	<ul style="list-style-type: none"><li>• Indicator is expressed as the number of cases read per reader.</li><li>• The result of this calculation should be presented as two components:<ul style="list-style-type: none"><li>– number of images read by each reader</li><li>– the number of readers who meet the measure.</li></ul></li></ul>
<i>Former NAS</i>	2.12.3



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## 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.**

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#### Data Dictionary Measure

The percentage of women in any 12-month period who have up to 4 images per screen, including technical repeats.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	The number of screening episodes among women where the woman have up to 4 images per screen.  A.1, C.3.1
<i>Denominator</i>	Number of screening episodes among women.  A.1, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count all screening episodes for each woman in the reference period.</li><li>• Technical repeats to be included with total number of images.</li><li>• The calculation gives the per cent of women who had up to 4 images per screen.</li><li>• Where this element is unmet, the Service and/or SCU will provide additional information on the dosage used.</li></ul>
<i>Algorithm</i>	$\frac{\text{For each A.1 (C.3.1 > 0 and < 4)}}{[\text{A.1 \& B.9.1 \& (C.2 between start date \& end date)}]} \times 100$

<i>Notes</i>	<ul style="list-style-type: none"> <li>Indicator is expressed as a proportion of screening episode.</li> <li>The calculation of this measure will produce one result.</li> </ul>
<i>Former NAS</i>	New

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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	The total number of images repeated due to technically unsatisfactory images at the screening visit.  A.2, C.2, C.3.3
<i>Denominator</i>	The total number of images taken to screen a woman at her screening visit(s).  A.2, C.2, C.3.1
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of images, not screening visits or women.</li><li>• Only images taken or repeated at screening to be counted (not assessment images).</li><li>• Repeat images taken at the initial visit and at any technical repeat visit are to be counted.</li><li>• Technical repeats include those initiated by the radiographer and those requested by the reader(s).</li><li>• Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li></ul>

<i>Algorithm</i>	$\frac{(((\text{C.2 between start date \& end date}) \& (\Sigma \text{ C.3.3})) \text{ at A.2})}{(((\text{C.2 between start date \& end date}) \& (\Sigma \text{ C.3.1})) \text{ at A.2})} \times 100$	
<i>Notes</i>	<ul style="list-style-type: none"> <li>• Indicator is expressed as a proportion of images.</li> <li>• The calculation of this measure will produce one result.</li> </ul>	
<i>Former NAS</i>	2.10.3	

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## 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.**

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#### Data Dictionary Measure

The percentage of women aged 50–74 years who attend for annual screening.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>C.8</div><div>Annual screening flag</div></div>
<i>Numerator</i>	<div>Number of women aged 50–74 years recommended for annual rescreening who attend for screening in the reference period.</div> <div>A.1, B.9.1, C.8</div>
<i>Denominator</i>	<div>Number of women aged 50–74 years who attend for screening.</div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is women.</li><li>• Age calculated as at the date of first attendance for the screening episode selected.</li><li>• 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.</li><li>• Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li></ul>

- Where a woman has two screening episodes in the reference period, select the last screen.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (C.8=1)]}{[A.1 \ \& \ B.9.1 \ \& \ ((\text{last } C.2 \text{ between start date \& end date}) \ \& \ (\text{last } C.2 - B.2 \geq 50 \ \& \ \leq 74)) \text{ at } A.2]} \times 100$$

*Notes*

- This indicator is expressed per 100 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

1.5.1

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## 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.**

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#### Data Dictionary Measure

The percentage of women aged 50–69 years who attend for annual screening.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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.8 Annual screening flag
<i>Numerator</i>	Number of women aged 50–69 years recommended for annual rescreening who attend for screening in the reference period.  A.1, B.9.1, C.8
<i>Denominator</i>	Number of women aged 50–69 years who attend for screening.  A.1, A.2, B.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• Age calculated as at the date of first attendance for the screening episode selected.</li><li>• 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.</li><li>• Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li><li>• Where a woman has two screening episodes in the reference period, select</li></ul>

the last screen.

*Algorithm*

$$\frac{[A.1 \text{ \& B.9.1 \& (C.8=1)]}}{[A.1 \text{ \& B.9.1 \& ((last C.2 between start date \& end date) \& (last C.2—B.2 \geq 50 \& \leq 69)) at A.2]}} \times 100$$

*Notes*

- This indicator is expressed per 100 women screened.
- The calculation of this measure will produce one result.

*Former NAS*

1.5.1



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## 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.**

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#### Data Dictionary Measure

The percentage of women who attend for annual screening, aged 40–49 years and 75 years and over.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>C.8</div><div>Annual screening flag</div></div>
<i>Numerator</i>	<div><div>i.</div><div>Number of women aged 40–49 years recommended for annual rescreening who attend for screening.</div></div> <div><div>ii.</div><div>Number of women aged 75 years recommended for annual rescreening who attend for screening.</div></div> <div>A.1, B.9.1, C.8</div>
<i>Denominator</i>	<div><div>i.</div><div>Number of women aged 40–49 years who attend for screening.</div></div> <div><div>ii.</div><div>Number of women aged 75 years and over who attend for screening.</div></div> <div>A.1, A.2, B.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• Reference period based on date of first attendance for screening.</li><li>• Age calculated as at the date of first attendance for the screening episode selected.</li><li>• Calculate the denominator first. The numerator is a subset of the denominator,</li></ul>

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 women to be counted in the numerator and the denominator.
- Where a woman has two screening episodes in the reference period, select the last screen.

*Algorithm*

2.6.2 (i)

$$\frac{[A.1 \& B.9.1 \& C.8=1]}{[A.1 \& B.9.1 \& ((\text{last } C.2 \text{ between start date \& end date}) \& (\text{last } C.2 - B.2 \geq 40 \& \leq 49)) \text{ at } A.2]} \times 100$$

2.6.2 (ii)

$$\frac{[A.1 \& B.9.1 \& C.8=1]}{[A.1 \& B.9.1 \& ((\text{last } C.2 \text{ between start date \& end date}) \& (\text{last } C.2 - B.2 \geq 75)) \text{ at } A.2]} \times 100$$

*Notes*

- Indicator is expressed per 100 women screened.
- The calculation of this measure will produce two results.

*Former NAS*

1.5.2

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## 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.**

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#### Data Dictionary Measure

The percentage of women aged 50–74 who attend for their first screening episode and are recalled for assessment.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.2</div>Date of birth</div> <div><div>B.9.1</div>Round number—State/Territory program</div> <div><div>C.2</div>Date of first attendance for this episode</div> <div><div>C.5</div>Recommendation—screening</div>

- 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 women to be counted in both the numerator and the denominator.

*Algorithm*

2.6.3 (a) (i)

$$\frac{[A.1 \text{ \& B.9.1=1 \& (C.5=3 or 5)]}}{[A.1 \text{ \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2\geq 50 \& \leq 74) at A.2]}} \times 100$$

2.6.3 (a) (ii)

$$\frac{[A.1 \text{ \& B.9.1=1 \& (C.5=4)]}}{[A.1 \text{ \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2\geq 50 \& \leq 74) at A.2]}} \times 100$$

2.6.3 (a) (iii)

$$\frac{[A.1 \text{ \& B.9.1=1 \& (C.5=3 or 4 or 5)]}}{[A.1 \text{ \& B.9.1=1 \& (C.2 between start date \& end date) \& (C.2—B.2\geq 50 \& \leq 74) at A.2]}} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women screened.
- The calculation of this measure will produce three results for recall to assessment (mammographic recall, recall for other reasons and combined recall).

*Former NAS*

2.6.1

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## 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 who attend for their first screening episode are recalled for assessment.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of women aged 50–69 years who attend for their first screening episode and who are recalled for assessment because of (separately): i. mammographic recall only (C.5=3 and 5), and ii. recall for other reasons (non-mammographic) (C.5=4) and/or iii. combined recall (C.5=3 and 4 and 5) A.1, B.9.1, C.5
<i>Denominator</i>	Number of women aged 50–69 years who attend for their first screening episode. A.1, A.2, B.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period is based on the date of the first attendance for screening.</li><li>• Count is of women as a woman can only have one first screening episode.</li><li>• Age calculated as at the date of first attendance for the screening episode selected.</li><li>• Calculate the denominator first. The numerator is a subset of the denominator,</li></ul>

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 women to be counted in both the numerator and the denominator.

*Algorithm*

2.6.3 (b) (i)

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ (C.5=3 \ \text{or} \ 5)]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 69) \ \text{at} \ A.2]} \times 100$$

2.6.3 (b) (ii)

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ (C.5=4)]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 69) \ \text{at} \ A.2]} \times 100$$

2.6.3 (b) (iii)

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ (C.5=3 \ \text{or} \ 4 \ \text{or} \ 5)]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 69) \ \text{at} \ A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women screened.
- The calculation of this measure will produce three results for recall to assessment (mammographic recall, recall for other reasons and combined recall).

*Former NAS*

2.6.1

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.2</div>Date of birth</div> <div><div>B.9.1</div>Round number—State/Territory program</div> <div><div>C.2</div>Date of first attendance for this episode</div> <div><div>C.5</div>Recommendation—screening</div>

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 women 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 woman 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) (i)

$$\frac{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.5 = 3 \ \text{or} \ 5)]}{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2 - B.2 \geq 50 \ \& \ \leq 74) \ \text{at} \ A.2]} \times 100$$

2.6.4 (a) (ii)

$$\frac{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.5 = 4)]}{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2 - B.2 \geq 50 \ \& \ \leq 74) \ \text{at} \ A.2]} \times 100$$

2.6.4 (a) (iii)

$$\frac{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.5 = 3 \ \text{or} \ 4 \ \text{or} \ 5)]}{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2 - B.2 \geq 50 \ \& \ \leq 74) \ \text{at} \ A.2]} \times 100$$

#### Notes

- Indicator is expressed as a proportion of women who are recalled for assessment.
- The calculation of this measure will produce three results for recall to assessment (mammographic recall, recall for other reasons and combined recall).

#### Former NAS

2.6.2



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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of women aged 50–69 years who attend for their second or subsequent screening episode who are recalled for assessment because of (separately): <ul style="list-style-type: none"><li>i. mammographic recall only (C.5=3 and 5), and</li><li>ii. recall for other reasons (non-mammographic) (C.5=4) and/or</li><li>iii. combined recall (C.5=3 and 4 and 5).</li></ul> A.1, B.9.1, C.5
<i>Denominator</i>	Number of women aged 50–69 years who attend for their second or subsequent screening episode. A.1, A.2, B.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period is based on the date of first attendance for screening.</li><li>• Count is of women who are recalled for assessment.</li><li>• 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</li></ul>

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 women 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 woman 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) (i)

$$\frac{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.5 = 3 \ \text{or} \ 5)]}{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2 - B.2 \geq 50 \ \& \ \leq 69) \ \text{at} \ A.2]} \times 100$$

2.6.4 (b) (ii)

$$\frac{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.5 = 4)]}{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2 - B.2 \geq 50 \ \& \ \leq 69) \ \text{at} \ A.2]} \times 100$$

2.6.4 (b) (iii)

$$\frac{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.5 = 3 \ \text{or} \ 4 \ \text{or} \ 5)]}{[A.1 \ \& \ B.9.1 > 1 \ \& \ (C.2 \ \text{between start date \& end date}) \ \& \ (C.2 - B.2 \geq 50 \ \& \ \leq 69) \ \text{at} \ A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women who are recalled for assessment.
- The calculation of this measure will produce three results for recall to assessment (mammographic recall, recall for other reasons and combined recall).

*Former NAS*

2.6.2

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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>C.5</div><div>Recommendation—screening</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesions</div></div>
<i>Numerator</i>	<div>Number of women 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.</div> <div>A.1, B.9.1, F.1.1, F.4</div>
<i>Denominator</i>	<div>Number of women aged 50–74 years who attend for their first screening episode who are recalled for assessment.</div> <div>A.1, A.2, B.2, B.9.1, C.2, C.5</div>
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women as a woman can only have one first screening episode.</li><li>• 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</li></ul>

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 women 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women 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*

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ ((F.1.1=2) \ \& \ (F.4=1.1 \ \text{to} \ 1.10 \ \text{or} \ 2.1 \ \text{to} \ 2.4))]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 74) \ \& \ (C.5=3) \ \text{at} \ A.2]} \times 100$$

<i>Notes</i>	<ul style="list-style-type: none"> <li>Indicator is expressed as a proportion of women recalled to assessment.</li> <li>The calculation of this measure will produce one result for the positive predictive value of a screen for detecting invasive breast cancer or DCIS.</li> </ul>
<i>Former NAS</i>	New

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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>B.2</div><div>Date of birth</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>C.5</div><div>Recommendation—screening</div></div> <div><div>F.1.1</div><div>Reason for histopathology</div></div> <div><div>F.4</div><div>Histopathology of malignant lesions</div></div>
<i>Numerator</i>	<div>Number of women 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.</div> <div>A.1, B.9.1, F.1.1, F.4</div>
<i>Denominator</i>	<div>Number of women aged 50–74 years who attend for a second or subsequent screening episode and are recalled to assessment.</div> <div>A.1, A.2, B.2, B.9.1, C.2, C.5</div>
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• 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</li></ul>

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 women 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 woman at separate screening episodes during the reporting period, both cases of breast cancer should be included in the numerator.
- If a woman 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 women screened by the Service and/or SCU even if they are assessed elsewhere.
- If the woman 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 woman presents with a breast lump and/or clear or blood stained nipple discharge in the breast in which the cancer was diagnosed.
- Women 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*

$$\frac{[A.1 \ \& \ B.9.1>1 \ \& \ ((F.1.1=2) \ \& \ (F.4=1.1 \ \text{to} \ 1.10 \ \text{or} \ 2.1 \ \text{to} \ 2.4))]}{[A.1 \ \& \ B.9.1>1 \ \& \ (C.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \& \ (C.2-B.2 \geq 50 \ \& \ \leq 74) \ \& \ (C.5=3) \ \text{at} \ A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women 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.

*Former NAS*

New



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## 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.**

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#### Data Dictionary Measure

The percentage of women who attend for screening who are recommended for early review for further assessment.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>A.3</div><div>Assessment unit identifier</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for this episode</div></div> <div><div>D.11.1</div><div>Recommendation—assessment</div></div> <div><div>D.11.2</div><div>Recommendation—number of months</div></div> <div><div>D.11.3</div><div>Date recommendation made</div></div> <div><div>D.11.4</div><div>Assessment visit—date</div></div> <div><div>E.12</div><div>Recommendation—definitive</div></div>
<i>Numerator</i>	<div>Number of women who attend for screening who are recommended for early review.</div> <div>A.1, A.3, B.9.1, C.2, D.11.1, D.11.2, D.11.3, D.11.4, E.12</div>
<i>Denominator</i>	<div>Number of women who attend for screening.</div> <div>A.1, A.2, B.9.1, C.2</div>
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• Reference period is based on the date of the first attendance for screening.</li><li>• 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</li></ul>

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 women to be counted in both the numerator and the denominator.
- A.3—Assessment unit identifier in this instance includes all women screened and assessed by the Service and/or SCU. Women 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 woman has more than one screening and assessment episode during the period, both episodes are included.
- Women who are recommended for early review after an excision should be included in the numerator.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (D.11.1=3 \ \text{where} \ (D.11.2 + D.11.3 - C.2 \leq 365 \ \text{days})) \ \&/or \ (E.12=3 \ \& \ D.11.4 - C.2 \leq 365 \ \text{days}) \ \text{at} \ A.3]}{[A.1 \ \& \ B.9.1 \ \& \ (C.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \text{at} \ A.2]} \times 100$$

*Notes*

- Indicator is expressed per 100 women screened.
- Early review is the recall of a woman 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 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 women on early review are to be included in the calculation.

*Former NAS*

2.22.1

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### 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.**

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##### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 Local excision performed F.4 Histopathology of malignant lesions G.4 Surgical treatment
<i>Numerator</i>	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
<i>Denominator</i>	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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of fine needle aspiration and core biopsy procedures performed.</li><li>• Where multiple fine needle aspiration or core biopsy procedures that yielded an inadequate result were performed include all procedures.</li><li>• The reference period is based on the first date of attendance for assessment.</li></ul>

- Note that all the data elements specified in the denominator are not restated in the numerator.
- Both symptomatic and asymptomatic women 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 women 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 local excision results, the final diagnosis is made on the malignant cytology.
- Interval cancers are not included.

#### Algorithm

$$\frac{[A.1 \& B.9.1 \& (D.8.3=1 \text{ or } 2) \& (F.4=1.1 \text{ to } 1.10 \text{ or } 2.1 \text{ to } 2.4)]}{[A.1 \& B.9.1 \& (D.11.4 \& (D.8.3=\text{not null}) \& (E.1=1 \& F.4=1.1 \text{ to } 1.10 \text{ or } 2.1 \text{ to } 2.4) + (D.8.3=5 \& D.10) \text{ where } E.1=2 \& (G.4=\text{not null})) \text{ at } A.3]} \times 100$$

#### 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.

#### Former NAS

New

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### 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

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, a root cause analysis on 100% of false positive cancer diagnoses is conducted by the Service and/or SCU**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 Local excision performed F.3 Histopathology of non-malignant lesions F.4 Histopathology of malignant lesions
<i>Numerator</i>	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
<i>Denominator</i>	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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of fine needle aspiration and core biopsy procedures performed.</li></ul>

- 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 women 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 women 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

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((D.8.3=5) \ \& \ (F.3=\text{not null} \ \& \ F.4=\text{null}))]}{[A.1 \ \& \ B.9.1 \ \& \ (D.11.4 \ \& \ (D.8.3=\text{not null}) \ \& \ (E.1=1 \ \& \ F.3=\text{not null} \ \& \ F.4 = \text{null})) \ \text{at} \ A.3]} \times 100$$

#### 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 client.
- 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. 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 client 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.

#### Former NAS

New

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### 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%.**

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##### **Data Dictionary Measure**

The number of percutaneous needle biopsies with a malignant biopsy result and returning a malignant result on final histology plus all cases called malignant on biopsy and never confirmed by final histology but were clinically presumed to be malignant, as a percentage of all percutaneous needle biopsies returning a final malignant histology result plus all procedures where the lesion was called malignant on biopsy and never confirmed by final histology but were clinically presumed to be malignant.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial years) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 Local excision performed F.4 Histopathology of malignant lesions G.4 Surgical treatment
<i>Numerator</i>	Number of percutaneous needle biopsies with a malignant result and confirmed as malignant 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, B.9.1, D.8.3, D.10, E.1, F.4, G.4
<i>Denominator</i>	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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li></ul>

- Count is of fine needle aspiration and core biopsy procedures performed.
- The reference period is based on first attendance date for assessment.
- Where a woman 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 women 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 women 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 local excision results, the final diagnosis is made on the malignant cytology.

*Algorithm*

$$\frac{[A.1 \& B.9.1 \& ((D.8.3=5) \& (E.1=1 \& F.4=1.1 \text{ to } 1.10 \text{ or } 2.1 \text{ to } 2.4)) + ((D.8.3=5 \& D.10=5) \text{ where } (E.1=2 \& G.4=\text{not null}))]}{[A.1 \& B.9.1 \text{ where } (D.11.4 \& D.8.3=\text{not null} \& (E.1=1 \& F.4 =1.1 \text{ to } 1.10 \text{ or } 2.1 \text{ to } 2.4)) + ((D.8.3=5 \& D.10=5) \text{ where } (E.1=2 \& (G.4=\text{not null})))] \text{ at A.3]} \times 100$$

*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.

*Former NAS*

New



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### 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.**

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##### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 Local excision performed F.3 Histopathology of non-malignant lesions F.4 Histopathology of malignant lesions F.7 Dominant lesion identifier number
<i>Numerator</i>	Number of women 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
<i>Denominator</i>	Number of women who attended for their first screening episode.  A.1, A.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of individual women, not screening episodes as a woman can only have one first screening episode.</li><li>• 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</li></ul>

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 (i.e. women screened during the reporting period) but includes only those women assessed by the Service and/or SCU.
- Both symptomatic and asymptomatic women 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 women screened and assessed by the Service and/or SCU. Women screened elsewhere and assessed by the Service and/or SCU are excluded. Assessments performed outside the Service and/or SCU are to be excluded.
- Women who are found to have a malignant lesion that is not invasive breast cancer or DCIS are not included in the numerator.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1=1 \ \& \ ((D.11.1=5 \ \text{at} \ A.3) \ \& \ (E.1=1 \ \& \ F.7 \ \text{where} \ (F.3=\text{not null} \ \text{and} \ F.4=\text{null}))]}{[A.1 \ \& \ B.9.1=1 \ \& \ (C.2 \ \text{between start date} \ \& \ \text{end date}) \ \text{at} \ A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.8.1

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### 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div><div>Client identifier number</div></div> <div><div>A.2</div><div>Screening unit identifier</div></div> <div><div>A.3</div><div>Assessment unit identifier</div></div> <div><div>B.9.1</div><div>Round number—State/Territory program</div></div> <div><div>C.2</div><div>Date of first attendance for screening</div></div> <div><div>D.11.1</div><div>Recommendation—assessment</div></div> <div><div>E.1</div><div>Local excision performed</div></div> <div><div>F.3</div><div>Histopathology of non-malignant lesion</div></div> <div><div>F.4</div><div>Histopathology of malignant lesions</div></div> <div><div>F.7</div><div>Dominant lesion identifier number</div></div>

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 (i.e. women screened during the reporting period) but includes only those women assessed by the Service and/or SCU.
- Both symptomatic and asymptomatic women 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 women screened and assessed by the Service and/or SCU. Women screened elsewhere and assessed by the Service and/or SCU are excluded. Assessments performed outside the Service and/or SCU are to be excluded.
- Women 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 woman 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*

$$\frac{[A.1 \ \& \ B.9.1 \geq 2 \ \& \ ((D.11.1=5 \text{ at } A.3) \ \& \ (E.1=1 \ \& \ F.7 \text{ where } (F.3=\text{not null and } F.4=\text{null}))]}{[A.1 \ \& \ B.9.1 \geq 2 \ \& \ (C.2 \text{ between start date \& end date}) \text{ at } A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women screened.
- The calculation of this measure will produce one result.

*Former NAS*

2.8.2

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### 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 3.1.6**

**All women with impalpable lesions undergoing excision have specimen imaging recorded.**

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##### **Data Dictionary Measure**

The percentage of women with impalpable lesions at assessment undergoing excision who had specimen imaging recorded.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 Local excision performed E.5 Palpability of lesion E.7 Specimen x-ray
<i>Numerator</i>	Number of women undergoing excision with specimen imaging recorded. A.1, A.5, B.9.1, E.7
<i>Denominator</i>	Number of women with impalpable lesions at assessment who undergo excision. A.1, A.3, A.5, B.9.1, D.11.4, E.1, E.5
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period is based on assessment date.</li><li>• Count is of women.</li><li>• Includes diagnostic open biopsy and treatment excisions. If a woman has a mastectomy, then specimen imaging may not be performed.</li><li>• Imaging may include x-ray or ultrasound.</li><li>• 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.</li></ul>

- The reference period is established by selecting D.2.2—Date of first attendance for assessment (between start date and end date).
- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- A.3 includes women assessed by the Service and/or SCU even if screened elsewhere.
- This measure relates to women assessed by the Service and/or SCU as the Service and/or SCU may be able to influence the performance of this procedure.
- If E.5 Palpability of lesion at assessment is not available, impalpable lesions can be identified through E.4.1—Marking method if the lesion has been localised. However, in some instances, palpable lesions are also localised, and impalpable lesions will not require marking.
- If a woman has a mastectomy, then specimen imaging may not be performed.
- Where a woman has multiple lesions undergoing excision a woman is only counted in the numerator if specimen imaging was recorded for all the lesions. The woman would only be counted once in the denominator.
- The measure relates to specimen imaging being 'recorded', rather than specimen imaging being 'performed' to ensure that the image is retained rather than just taken. Pathology received is sufficient to indicate that imaging was recorded.

*Algorithm*

$$\frac{[A.1 \text{ \& B.9.1 \& A.5 where E.7=1}]}{[A.1 \text{ \& B.9.1 \& D.11.4 \& (E.1=1 \& A.5 where (E.5=2)) at A.3]}} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women with impalpable lesions at assessment who undergo excision.
- In some instances palpable lesions may also be localised which means that some palpable lesions may be counted in this element.
- The calculation of this measure will produce one result.
- Specimen imaging is to be undertaken and recorded for a lump that is impalpable pre-operatively.
- Specimen imaging is to be undertaken and recorded for any intra-operative localised procedure for impalpable lesions.
- Specimen imaging is to be undertaken and recorded if a lump becomes palpable during an operation.

*Former NAS*

2.21.2

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### 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.**

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##### **Data Dictionary Measure**

The percentage of all lesions which are correctly identified at first excision through correlation of final pathology with specimen radiography findings and with screening assessment results.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 Local excision performed E.2 Date local excision performed E.8.1 Lesion removal
<i>Numerator</i>	Number of lesions correctly identified at first excision. A.1, A.5, B.9.1, E.2, E.8.1
<i>Denominator</i>	Number of lesions undergoing excision. A.1, A.3, A.5, B.9.1, D.11.4, E.1
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period is based on assessment date.</li><li>• Count is of lesions.</li><li>• 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.</li><li>• Both symptomatic and asymptomatic women to be counted in the numerator and the denominator.</li><li>• A.3 includes women assessed by the Service and/or SCU even if screened elsewhere.</li></ul>

- This measure relates to women assessed by the Service and/or SCU as the Service and/or SCU may be able to influence the performance of this procedure.

*Algorithm*

$$\frac{[A.1 \text{ \& B.9.1 \& (each A.5 where E.8.1=1) at first E.2}]}{[A.1 \text{ \& B.9.1 \& D.11.4 \& (E.1=1 \& each A.5 ) at A.3}]} \times 100$$

*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.

*Former NAS*

2.21.3



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### 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 without the need for excision.

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##### Data Dictionary Measure

The total number of invasive breast cancers or DCIS diagnosed without the need for excision expressed as a percentage of total breast cancers or DCIS diagnosed.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.3</div>Assessment unit identifier</div> <div><div>B.9.1</div>Round number—State/Territory program</div> <div><div>D.11.1</div>Recommendation—assessment</div> <div><div>D.11.4</div>Assessment visit—date</div> <div><div>F.1.1</div>Reason for histopathology</div> <div><div>F.4</div>Histopathology of malignant lesion</div> <div><div>F.7</div>Dominant lesion identification number</div>

proportion of invasive breast cancers and DCIS diagnosed pre-operatively.

- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- A.3 includes all women 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 women 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 woman has more than one assessment episode which results in a cancer being detected. In this instance, both episodes are counted.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (D.11.1=4)]}{[A.1 \ \& \ B.9.1 \ \& \ D.11.4 \ \& \ ((F.1.1=2 \ \& \ (F.7 = (F.4=1.1 \ \text{to} \ 1.10 \ \text{or} \ 2.1 \ \text{to} \ 2.4))) \ \text{at} \ A.3]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women diagnosed with breast cancer.
- The calculation of this measure will produce one result.

*Former NAS*

2.7.1

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### 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 without the need for excision.**

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#### **Data Dictionary Measure**

The proportion of breast cancers that are diagnosed preoperatively that are invasive breast cancer and DCIS.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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.4 Histopathology of malignant lesion F.7 Dominant lesion identification number
<i>Numerator</i>	i. Invasive breast cancer  Number of women assessed by the Service and/or SCU who had an invasive breast cancer that was diagnosed preoperatively.  ii. DCIS  Number of women assessed by the Service and/or SCU who had a DCIS that was diagnosed preoperatively.  A.1, B.9.1, F.4
<i>Denominator</i>	Number of women 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.4, F.7
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women with an invasive cancer or DCIS detected.</li><li>• Calculate the denominator first. The numerator is a subset of the denominator,</li></ul>

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 based on assessment date.
- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- A.3 includes all women 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 women 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 woman meets the criteria in separate screening episodes, include both screening episodes.

#### Algorithm

NAS Measure 3.2.9 (b) (i) Of the cancers and DCIS diagnosed pre-operatively, what proportion were invasive breast cancer?

$$\frac{[A.1 \text{ \& B.9.1 \& F.4=1.1 to 1.10}]}{[A.1 \text{ \& B.9.1 \& D.11.4 \& (D.11.1=4) \& (F.1.1=2 \& (F.7 = (F.4=1.1 to 1.10 or 2.1 to 2.4)))} \text{ at A.3}]} \times 100$$

NAS Measure 3.2.9 (b) (ii) Of the cancers and DCIS diagnosed pre-operatively, what proportion were DCIS?

$$\frac{[A.1 \text{ \& B.9.1 \& F.4=2.1 to 2.4}]}{[A.1 \text{ \& B.9.1 \& D.11.4 \& (D.11.1=4) \& (F.1.1=2 \& (F.7 = (F.4=1.1 to 1.10 or 2.1 to 2.4)))} \text{ at A.3}]} \times 100$$

#### Notes

- Indicator is expressed as a proportion of women diagnosed with breast cancer.
- The calculation of this measure will produce two results (one for invasive breast cancers and one for DCIS).

#### Former NAS

New

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## 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).**

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#### Data Dictionary Measure

The percentage of women who attend for a screening appointment within 28 calendar days of their booking date.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of women 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
<i>Denominator</i>	Number of women 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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women.</li><li>• 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.</li><li>• Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li></ul>

- This measure relates to fixed screening sites only.
- Where a woman has more than one screening episode in the reference period count all screening episodes.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((C.2 - C.1) \leq 28 \text{ days})]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.2 \text{ between start date \& end date}) \ \& \ ((C.2 - B.2) \geq 50 \ \& \ \leq 74) \text{ at } A.2 = \text{'fixed site'})]} \times 100$$

*Notes*

- NAS Measures 4.1.1 (a) and (b) are the only measures within 'Criteria 4.1– The Service and/or SCU ensures that women progress through the screening pathway in a timely manner' that is restricted to women aged 50–74 years. The rationale for this is that the requirement that women attend for a screening appointment within 28 calendar days of their booking date should only apply to women in the target group (50-74); however once women 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 women 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, calculate NAS Measure 4.1.1 (b).

*Former NAS*

3.7.1

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## 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).

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#### Data Dictionary Measure

The number of days taken between booking and attending for 90% of women.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.2</div>Date of birth</div> <div><div>B.9.1</div>Round number—State/Territory program</div> <div><div>C.1</div>Booking date</div> <div><div>C.2</div>Date of first attendance for this episode</div>

- This measure relates to fixed screening sites only.
- This algorithm calculates the total number of days for each screening episode between a woman's booking date and screening date.
- Where a woman has more than one screening episode in the reference period count all screening episodes.

*Algorithm*

$$\frac{\sum \text{number of women screened (A.1 \& B.9.1)} \\ \text{for each interval (in days) between C.2 and C.1}}{[\text{A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& ((C.2 - B.2 \geq 50 \& \leq 74) at A.2 = 'fixed site'))]}]} \times 100$$

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 women progress through the screening pathway in a timely manner' that is restricted to women aged 50–74 years. The rationale for this is that the requirement that women attend for a screening appointment within 28 calendar days of their booking date should only apply to women in the target group (50–74); however once women 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.

*Former NAS*

New



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## 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.**

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#### 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 woman notified of screening results
<i>Numerator</i>	Number of screening episodes where women have a documented notification of their results within 14 calendar days of the screening visit. A.1, B.9.1, C.2, C.6
<i>Denominator</i>	Number of screening episodes. A.1, A.2, B.9.1, C.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of screening episodes, not women. If a woman has more than one screening episode during the period, then all screening episodes are included.</li><li>• 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.</li><li>• Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.</li><li>• This measure relates to all women screened including those recalled to</li></ul>

assessment.

- Documented notification refers to contact with the woman, for example by a phone call in which the woman 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 woman is contacted verbally.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((C.6 - C.2) \leq 14 \text{ days})]}{[A.1 \ \& \ B.9.1 \ \& \ (C.2 \text{ between start date \& end date) at A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of screening episodes.
- The calculation of this measure will produce one result.

*Former NAS*

3.8.1

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	A.1 Client identifier number A.2 Assessment 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.
<i>Numerator</i>	Number of women 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
<i>Denominator</i>	Number of women requiring assessment as a result of their screening visit.  A.1, A.2, B.9.1, C.2, C.5
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of screening episodes in the reference period.</li><li>• There may be cases where a woman has two screening episodes in which she attended assessment in the one reference period. Where this is the case both screening episodes should be counted.</li><li>• 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.</li></ul>

- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- Exclude women who are screened by the Service and/or SCU but are assessed outside the Service and/or SCU.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((D.2.2 - C.2) \leq 28 \text{ days})]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.2 \text{ between start date \& end date}) \ \& \ (C.5 = 3 \text{ or } 4 \text{ or } 5)) \text{ at } A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of screening episodes among women attending 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.

*Former NAS*

3.7.2

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## 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%.

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#### Data Dictionary Measure

The number of days the Service and/or SCU takes to achieve 90%.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	A.1 Client identifier number A.2 Assessment 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.
<i>Numerator</i>	Number of days taken for 90% of women requiring assessment to attend for assessment.  A.1, B.9.1, C.2, D.2.2
<i>Denominator</i>	Number of women requiring assessment as a result of their screening visit.  A.1, A.2, B.9.1, C.2, C.5
<i>Formula</i>	Minimum number of days from screening date to assessment date where  $\text{Numerator} / \text{Denominator} \times 100 = 90\% \text{ is achieved}$
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of screening episodes among women assessed, determined for each consecutive interval (in days) from screening date to assessment date. The cumulative count of women for each interval as a percentage of total women requiring assessment is determined until 90% of total women screened is reached. At the 90% mark, the interval (in days) represents the waiting time from screening to assessment before 90% of women attending for assessment is achieved.</li><li>• An alternative method of calculating this sub element is to export all screening appointments along with the number of days from booking to appointment</li></ul>

from lowest to highest then note the time taken to achieve 90% from booking date to screening date.

- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- Exclude women who are screened by the Service and/or SCU but are assessed outside the Service and/or SCU.

*Algorithm*

$$\frac{[\sum \text{number of women assessed (A.1 \& B.9.1) for each interval (in days) between C.2 and D.2.2}]}{[\text{A.1 \& B.9.1 \& ((C.2 between start date \& end date) \& (C.5=3 or 4 or 5)) at A.2}]} \times 100$$

Calculate n (number of days) where algorithm = 90%

*Notes*

- Indicator is expressed as a proportion of screening episodes among women requiring assessment.
- Calculation of this measure will produce one result.

*Former NAS*

New

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## 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.

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#### Data Dictionary Measure

The percentage of women who were offered assessment within 28 calendar days of their screening visit.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	A.1 Client identifier number A.2 Assessment 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
<i>Numerator</i>	Number of women requiring assessment who are offered assessment within 28 calendar days of their screening visit. A.1, B.9.1, C.2, D.2.3
<i>Denominator</i>	Number of women requiring assessment as a result of their screening visit. A.1, A.2, B.9.1, C.2, C.5
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is women.</li><li>• While a rare event if a woman has two separate screening episodes during the reference period include both.</li><li>• Both symptomatic and asymptomatic women to be counted in the numerator and the denominator.</li><li>• Exclude women who are screened by the Service and/or SCU but are assessed outside the Service and/or SCU.</li></ul>

<i>Algorithm</i>	$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((D2.3 - C.2) \leq 28 \text{ days})]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.2 \text{ between start date \& end date) \& (C.5=3 or 4 or 5)) \text{ at A.2}]} \times 100$
<i>Notes</i>	<ul style="list-style-type: none"> <li>• Indicator is expressed as a proportion of women requiring assessment.</li> <li>• Calculation of this measure will produce one result.</li> <li>• Currently not all state and territory BreastScreen registers contain the data fields required to calculate this measure.</li> </ul>
<i>Former NAS</i>	New



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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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.11.3 Date recommendation made
<i>Numerator</i>	Number of women 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.11.3
<i>Denominator</i>	Number of women 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
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period is based on date of first visit to assessment</li><li>• Count is of women assessed who did not require a percutaneous needle biopsy (women 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).</li></ul>

- 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 women to be counted in both the numerator and the denominator.
- A.3 includes women 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*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((D.11.1=1 \ \text{or} \ 2 \ \text{or} \ 4 \ \text{or} \ 5) \ \& \ (D.2.2=D.11.3))]}{[A.1 \ \& \ B.9.1 \ \& \ (D.2.2 \ \text{between} \ \text{start} \ \text{date} \ \& \ \text{end} \ \text{date}) \ \& \ (D.2.1=1 \ \& \ (\text{each} \ A.5 \ \text{where} \ D.8.1=5)) \ \text{at} \ A.3]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women assessed not requiring percutaneous needle biopsy.
- It is assumed that a woman is told of her outcome at her first assessment visit where no percutaneous needle biopsy is required.
- The calculation of this measure will produce one result.

*Former NAS*

2.20.3

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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
<i>Numerator</i>	Number of women 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,
<i>Denominator</i>	Number of women who attend for assessment.  A.1, A.3, B.9.1, D.1, D.2.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period is based on assessment date.</li><li>• Count is of women assessed.</li><li>• The intent of this element is that a woman should require no more than two procedural visits and one results visit.</li><li>• 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</li></ul>

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 women 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 women 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, i.e. 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.
- Women 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*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ D.2.2 \ \& \ ((\text{Count of D.11.4} \leq 2) \ \& \ \text{last D.11.1}=1 \ \text{or} \ 2 \ \text{or} \ 4 \ \text{or} \ 5)]}{[A.1 \ \& \ B.9.1 \ \& \ (\text{first D.2.2 between start date \& end date and D.1} < > 2) \ \text{at first A.3}]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women assessed.
- The calculation of this measure will produce one result.

*Former NAS*

2.20.1

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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 woman notified verbally of biopsy result
<i>Numerator</i>	Number of percutaneous needle biopsies performed where the woman 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
<i>Denominator</i>	Number of percutaneous needle biopsies performed. A.1, A.3, B.9.1, D.8.3, D.11.4
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period based on date of first attendance for assessment.</li><li>• Count is of all percutaneous needle biopsy procedures.</li><li>• Where a woman has multiple procedures, count each procedure.</li><li>• 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.</li></ul>

- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- A.3 includes women assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ \text{for each } D.8.3=\text{not null} \ (D.13.2-D.11.4 \leq 7 \text{calendar days})]}{[A.1 \ \& \ B.9.1 \ \& \ \text{each } (D.8.3=\text{not null}) \ \& \ D.11.4 \ \text{at } A.3]} \times 100$$

*Notes*

Indicator is expressed as a proportion of all percutaneous needle biopsy procedures.

The calculation of this measure will produce one result.

If a woman 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 woman was notified verbally of her 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 women for each procedure.

A new data dictionary Data element D.13.2 *Date woman notified verbally of biopsy results* was created for use in calculating this NAS Measure.

*Former NAS*

3.8.3 (a) / 3.8.3 (b)

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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.13.1 Date woman notified in writing of assessment results D.13.2 Date woman notified verbally of biopsy results
<i>Numerator</i>	Number of women 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, D.13.2
<i>Denominator</i>	Number of women who attend for assessment.  A.1, A.3, B.9.1, D.1, D.2.2
<i>Formula</i>	Numerator / Denominator x 100
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Count is of women assessed.</li><li>• 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.</li><li>• Reference period is based on assessment date associated with that round.</li><li>• Both symptomatic and asymptomatic women to be counted both in the</li></ul>

numerator and denominator.

- A.3 includes all women assessed by the Service and/or SCU even if screened elsewhere.
- Women who had mobile assessments or 'step down' assessments should not be included.
- Definitive outcome is identified from the last assessment recommendation, i.e. 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*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((D.11.1=1 \ \text{or} \ 2 \ \text{or} \ 4 \ \text{or} \ 5) \ \& \ (D.11.1 \ \text{or} \ D.13.1 \ \text{or} \ D.13.2 \text{---} D.2.2 \leq 15 \ \text{days}))]}{[A.1 \ \& \ B.9.1 \ \& \ (\text{first } D.2.2 \ \text{between start date \& end date}) \ \& \ (D.1 <> 2) \ \text{at first } A.3]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women assessed.
- The calculation of this measure will produce one result.

*Former NAS*

2.20.2



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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	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.11.3 Date recommendation made D.11.4 Assessment visit—date D.13.1 Date woman notified in writing of assessment results
<i>Numerator</i>	Number of women 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
<i>Denominator</i>	Number of women who attend for assessment.  A.1, A.3, B.9.1, D.2.1, D.11.4
<i>Formula</i>	$\text{Numerator} / \text{Denominator} \times 100$
<i>Specifications</i>	<ul style="list-style-type: none"><li>• Select on reference period.</li><li>• Reference period is based on assessment date.</li><li>• Count is of women assessed.</li><li>• 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.</li><li>• The reference period is established by selecting D.2.2—Date of first</li></ul>

attendance for assessment (between start date and end date).

- Both symptomatic and asymptomatic women to be counted in both the numerator and the denominator.
- A.3 includes women assessed by the Service and/or SCU even if screened elsewhere. Procedures performed outside the Service and/or SCU are to be excluded.

*Algorithm*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (D.13.1\text{---}D.11.3 \leq 14 \text{ days})]}{[A.1 \ \& \ B.9.1 \ \& \ (D.11.4 \ \& \ D.2.1=1) \text{ at A.3}]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women assessed.
- The calculation of this measure will provide one result.

*Former NAS*

3.8.6

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.9.1</div>Round number—State/Territory program</div> <div><div>C.2</div>Date of first attendance for this episode</div> <div><div>E.1</div>Local excision performed</div> <div><div>E.9</div>Local excision result</div> <div><div>E.12</div>Recommendation—definitive</div> <div><div>F.1.1</div>Reason for histopathology</div> <div><div>F.1.3</div>Cancer diagnosed in BreastScreen Australia</div> <div><div>F.4</div>Histopathology of malignant lesion</div> <div><div>G.4</div>Surgical treatment</div>

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 women to be counted in both the numerator and the denominator.
- This measure relates to women 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, i.e. early rescreen of a symptomatic woman 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*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ (G.4 \text{ not null})]}{[A.1 \ \& \ B.9.1 \ \& \ ((C.2 \text{ between start date \& end date}) \ \& \ ((F.1.1=2 \text{ or } (F.1.1=1 \ \& \ F.1.3=1)) \ \& \ (F.4=1.1 \text{ to } 1.10 \text{ or } 2.1 \text{ to } 2.4)) \text{ if } (E.12=4 \ \& \ E.1=1 \ \& \ E.9=1)) \text{ at } A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women diagnosed with breast cancer and who have had surgery.
- The calculation of this measure will provide one result.

*Former NAS*

2.24.3

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## 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.

<i>Reference period</i>	The most recent 12-month period (either calendar or financial year) for which data are available.
<i>Data collection</i>	BreastScreen Australia data dictionary
<i>Data source</i>	State and territory BreastScreen registers
<i>Data elements</i>	<div><div>A.1</div>Client identifier number</div> <div><div>A.2</div>Screening unit identifier</div> <div><div>B.9.1</div>Round number—State/Territory program</div> <div><div>C.2</div>Date of first attendance for this episode</div> <div><div>D.11.1</div>Recommendation—assessment</div> <div><div>F.1.1</div>Reason for histopathology</div> <div><div>F.1.3</div>Cancer diagnosed in BreastScreen Australia</div> <div><div>F.4</div>Histopathology of malignant lesion</div> <div><div>G.4</div>Surgical treatment</div> <div><div>G.5.1</div>Radiotherapy</div> <div><div>G.5.2</div>Chemotherapy</div>

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 women to be counted in both the numerator and the denominator.
- This measure relates to women 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 woman 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*

$$\frac{[A.1 \ \& \ B.9.1 \ \& \ ((G.4 \text{ not null}) \text{ or } (G.5.1 \text{ not null}) \text{ or } (G.5.2 \text{ not null}))]}{[A.1 \ \& \ B.9.1 \ \& \ (C.2 \text{ between start date \& end date}) \ \& \ (D.11.1=4 \text{ or } D.11.1=5 \text{ and } ((F.1.1=2 \text{ or } (F1.1=1 \ \& \ F.1.3=1)) \ \& \ (F.4=1.1 \text{ to } 1.10 \text{ or } 2.1 \text{ to } 2.4))) \text{ at } A.2]} \times 100$$

*Notes*

- Indicator is expressed as a proportion of women diagnosed with breast cancer.
- The calculation of this measure will provide one result.

*Former NAS*

2.24.4

## 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 1: 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.

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### «NAME»

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	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

<b>Name:</b>	A single or multi-word designation assigned to a data element. This appears in the heading for each unique data definition in the Dictionary.
<b>Status:</b>	The operational status (CURRENT, SUPERSEDES) of the data element.
<b>Data element type:</b>	<p>A data element may be either:</p> <ul style="list-style-type: none"><li>(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'.</li><li>(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.</li><li>(c) a DERIVED DATA ELEMENT—a data element for which values are derived by calculation using the values of other data elements.</li><li>(d) a COMPOSITE DATA ELEMENT—a data element where values represent a grouping of the values of other data elements in a specified order.</li></ul>
<b>Definition:</b>	A statement that expresses the essential nature of a data element and its differentiation from all other data elements.
<b>Context:</b>	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

<b>Data type:</b>	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).
<b>Representational form:</b>	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.

<b>Field size (minimum and maximum):</b>	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.
<b>Representational layout:</b>	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.
<b>Data domain:</b>	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).
<b>Guide for use (optional):</b>	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.
<b>Collection methods (optional):</b>	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.
<b>Related data elements (optional):</b>	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'.
<b>Related NAS Measures (optional):</b>	Shows relationships between the data element (or data concept) and other NAS Measures in the Dictionary.

## Administrative attributes

<b>Source document (optional):</b>	The document from which definitional or representational attributes originate.
<b>Source organisation:</b>	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.
<b>Comments (optional):</b>	Any additional explanatory remarks on the data element.

## **Appendix 2: 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). 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.

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 2011 is based on Census 2011 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 and previous years**

SEIFA 2011 consists of the same 4 indexes as used in 2006 and 2001.

SEIFA 2011 uses 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 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 2014). 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 women 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 woman to an assessment clinic for the purpose of all follow-up investigative procedures arising from a woman's attendance for screening up to and including cytological or histological diagnosis. This includes 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 woman'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 a woman 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 woman 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**.

**Eligible women:** Any woman aged 40 years or over.

**Excision:** Surgical removal by cutting, as of a tumour or a portion of a structure or organ.

**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:** Women 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:** Women 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 women, the next screening episode will occur around 24 months after her previous negative screening episode, as the recommended screening interval for most women in BreastScreen Australia is 24 months. The exception to this is women on annual screens, for whom the next screening episode will occur around 12 months after her 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 women 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):** A typical 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.

**Local excision:** An excision limited to the immediate area of the lesion in question.

**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 his/her 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.

**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.

**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 woman 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 woman fails to attend for technical recall or assessment within 6 months
- the woman dies.

**Screening mammography:** Mammography which is performed when a woman does not have signs or symptoms of disease.

**Second or subsequent screen:** Women 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 clinic:** A step-down assessment includes diagnostic further views and does not include clinical assessment, ultrasound or biopsy. A step-down clinic is a mobile clinic and not in the assessment centre setting. The aim of a step-down is convenience, as the woman does not need to travel into a city centre.

**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 woman for local excision of a lesion, unique within the state or territory.

**Target group:** Women 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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BreastScreen Australia 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.

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.