


**BreastScreen Victoria**  
Annual Statistical Report



2004



# BreastScreen Victoria

Caring about Women

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**BreastScreen**  
**AUSTRALIA**

A joint Australian, State and Territory Government Program

## Contents

Introduction	2
Executive Summary	3
Technical Notes	4
Definition of Terms used in the Report	5
Figure 1 - Summary of outcomes for all women attending for breast cancer screening in 2004	7
Figure 2 - Summary of outcomes by screening round for all women attending for breast cancer screening in 2004	8
Screening Attendance	9
Screening Outcome	10
Assessment Procedures Performed	11
Assessment Outcome	13
Cancer Detection	15
Surgical Treatment	19
Interval Cancers	23

## Introduction

BreastScreen Victoria is an accredited part of BreastScreen Australia, a national program jointly funded by the state and federal governments that invites women aged 50-69 who do not have any breast symptoms or changes to have a free screening mammogram once every two years. The Program aims to reduce deaths from breast cancer through early detection of the disease.

Around 75% of all breast cancers occur in women over the age of 50. Current research shows that screening has the greatest potential to reduce mortality from breast cancer in women aged 50-69 years. This is the reason why women in that age group are primarily targeted for screening. Although women in their 40s and over 70 are outside the BreastScreen program's target age range, they are still at risk of breast cancer and are eligible for free screening mammograms with BreastScreen Victoria.

BreastScreen Victoria is made up of two components: the Coordination Unit and the Screening and Assessment Services. The Coordination Unit is an independently incorporated association which administers funding for eight Screening and Assessment Services, manages the centralised appointment registry, coordinates the Mobile Screening Service, manages client screening and assessment data, develops and reviews Program policy, monitors service provision, coordinates special projects and supports state-wide recruitment. The Screening and Assessment Services

provide all clinical services from the initial screening mammogram to any further procedures required to the point of diagnosis. Screening is conducted at more than 60 fixed and mobile screening sites across metropolitan and regional Victoria, thus ensuring accessibility to all Victorian women.

The BreastScreen Australia Quality Improvement Program ensures that all BreastScreen services delivered in Victoria operate under and comply with national standards. Performance monitoring and evaluation against the standards is conducted quarterly by the State Accreditation Committee and the National Quality Management Committee. Screening and Assessment Services are assessed regularly by an independent multidisciplinary team.

The Annual Statistical Report provides summary data on women who attended for screening and/or assessment in the Victorian program during 2004 and the results of their screening and/or assessment. This report is produced annually and presents data consistent with previous years so that figures can be compared between the reported screening years. The simple descriptive statistics contained in this report are intended to provide a snapshot of BreastScreen Victoria's operational activity and cancer detection for 2004. Where relevant, the exclusions and limitations of the data presented are noted.

Further information about BreastScreen Victoria is available on our website: [www.breastscreen.org.au](http://www.breastscreen.org.au)

## Executive Summary

During 2004, a total of 198,753 women attended for screening at BreastScreen Victoria. Women in the 50-69 year old target age group made up 77.82% of women screened, with 84.2% of all women returning for their second, or subsequent, screen.

Of the 198,753 women screened, 94.2% received results indicating that no signs of breast cancer had been detected after their screen. 5.8% of women were required to have further tests at assessment and 9.6% (1,112 women) who underwent further assessment were found to have a malignant lesion.

Most women who underwent assessment (67%) were able to receive an outcome after further imaging. Only 2.2% of women required a surgical open biopsy to achieve a diagnosis.

Of the 1,101 women diagnosed with screen-detected breast cancer during 2004, 884 (80.3%) were invasive cancers and 217 (19.7%) were Ductal Carcinoma In-Situ (DCIS).

The National Accreditation Standards have specific cancer detection requirements for both invasive breast cancer and DCIS. The standards relating to detection of invasive cancer were achieved in 2004 for both first screening round (54.8 per 10,000) and subsequent screening rounds (40.1 per 10,000). Additionally, the standard for DCIS detection rates was achieved for 2004, with first screening round (15.7 per 10,000) and subsequent screening round (9.5 per 10,000).

Tumor size is also an important factor for the Program as it aims to detect invasive cancers when they are small and low grade – prior to their spread to the regional lymph nodes. In 2004, 63.6% of the invasive cancers detected were less than 15mm in size.

## Technical Notes

The 2004 Annual Statistical Report contains all screening episodes performed by BreastScreen Victoria (BSV) on women aged over 40 years of age during the 2004 calendar year, across all eight Screening and Assessment Services. Clients screened interstate are included in the assessment outcome figures, as their assessment occurred within the Victorian Program.

For the purposes of this Report, women/client screened refers to the number of screening appointments attended, not individual women. For example, if a client on annual recall attends two screening appointments within the 12-month reporting period, both screenings would be counted in the screening totals for that year.

All clients' screening and assessment data is entered into the BreastScreen Victoria Client Information System by data services staff based at each Screening and Assessment Service (SAS). Data is then extracted centrally by the Information Services team from the data warehouse using Business Objects software. The availability of data items varies depending on: where in the screening and assessment cycle the data is coming from, whether the data is from within the Program, or whether the data is obtained outside the Program (e.g. the provision of histology information following surgery).

Not all of the data items required to produce the Annual Statistical Report are available by the end of the screening reporting period. This means that all of the tables in the Report are not able to be populated

with data at the same time. It is estimated that at the end of the reporting period, data items included in a given year's statistical report will be available within the following timeframes:

### **Attendance and Screening Outcome**

Mid next calendar year

### **Assessment Outcome**

End of next calendar year

### **Assessment Procedures**

End of next calendar year

### **Cancer Detection**

End of next calendar year

### **Surgical Treatment**

End of next calendar year

### **Interval Cancer**

3<sup>1</sup>/<sub>2</sub> calendar years

The range of variables used to create the data in this Report is extensive. Detailed technical notes have been created to ensure consistency in the approach to the extraction of data for each of the reporting years.

Notes are provided for each table to detail inclusions and exclusions from the dataset which are relevant for that individual table.

## Definition of Terms used in the Report

### Attendance

Presentation by a woman for a screening appointment.

### Screening

Examination, or testing, of a large number of people who have no symptoms of a particular disease, to identify anyone who may have that disease. This enables the disease to be treated at an early stage.

### Screening Round

A complete screening (and/or assessment cycle) within the Program.

### First Screen / First-Round Women

The client's first complete screening cycle within the Program.

### Subsequent Screens / Subsequent-Round Women

The client attends for a second or subsequent screening cycle within the Program.

### Screening Outcome

Following the completion of the screening episode, two Radiologists will review the images and determine the outcome for the client.

### Assessment Recommended

When the recommendation is that the client has further assessment procedures performed.

### Routine Rescreen Recommended

When the recommendation is that the client is invited back for screening within the BreastScreen Program. This may be within 24-27 months of a previous mammogram, or earlier if the client is considered high risk.

### Assessment

Review by a BSV multidisciplinary team (including surgeons, pathologists, radiologists, nurses, radiographers and nurse counsellors) who examine the screening results and decide upon appropriate further investigations. These can include magnified X-rays, ultrasound, clinical examination, fine needle aspiration and core biopsy.

### Assessment Procedures Performed

At the assessment appointment a number of possible assessment procedures can be performed. There is no requirement that all procedures are performed for each client, just those that are appropriate for the lesions identified. This information relates to assessment performed inside of BSV.

### Imaging

Magnified images are taken of the areas of concern.

### Clinical Examination

Physical examination of the breast and axilla by a surgeon.

### Fine Needle Aspiration (FNA)

Taking a sample of cells from breast tissue using a needle. This tissue is then examined by a pathologist.

### Core Biopsy

The removal of a core of breast tissue using an automated device. This may be undertaken with the assistance of stereotaxis, or ultrasound, to accurately locate and sample the lesion of concern. This tissue is then examined by a pathologist.

### Open Biopsy

Surgical procedure performed after the completion of the assessment process whereby a tissue sample is removed from the breast under anaesthetic.

### Data Unavailable

The assessment data for these clients is not available due to migration issues caused by the changeover to the new client information system.

### Assessment Outcome

Following the completion of the assessment episode, the outcome is determined for each client. The outcome is calculated for clients assessed both within, and outside of, BSV.

### No Malignant Lesion

The lesions identified were benign.

### Malignant Lesion

The lesion was identified as being breast cancer or 'other' cancers discovered in the breast tissue.

### Other

The client was recommended for early review or the assessment outcome has not been able to be determined.

## Definition of Terms used in the Report (continued)

### Outcome Undetermined

Includes clients who were awaiting early review but have now been discharged for some reason.

### Cancer Detection

When a malignancy is identified during assessment, the lesions are classified according to their pathology.

### Invasive Cancer

A primary malignancy invading surrounding tissue within the breast.

### DCIS

Ductal Carcinoma in Situ (DCIS) is an abnormal proliferation of cells in the mammary ducts. While cells display abnormal cytological features similar to those of invasive breast cancer, unlike invasive breast cancer, DCIS is confined within the duct system. If left untreated, DCIS may increase the risk of developing invasive breast cancer in the future.

### Rate per 10,000

The number of women who are diagnosed with an invasive breast cancer for every 10,000 women aged 50-69 years who attend for screening in a defined 12 month period.

### Surgical Treatment

Following diagnosis there are a number of possible surgical treatments that can be performed. This information relates to the most significant surgery performed for each client and relates to surgical treatment performed outside of BSV.

### No Surgery

No surgical treatment is performed.

### Breast Conserving Surgery

Surgery where the breast cancer is excised, together with a margin of normal breast tissue. The whole breast is not removed.

### Mastectomy

Surgical removal of the whole breast.

### Interval Cancer

Any invasive breast cancer diagnosed in the interval following a negative screening episode and before the next scheduled screening episode.

This includes:

- Invasive breast cancers diagnosed at early review, or in the interval between assessment and early review where the recommendation for early review is six months or more from the screening date.
- Invasive breast cancers diagnosed at open biopsy if the date of diagnosis is  $\geq 6$  months from the date of screening.
- Invasive breast cancers diagnosed at early rescreen are classified as interval breast cancers if the woman presents with a breast lump and/or clear or blood-stained nipple discharge in the breast in which the breast cancer was diagnosed.
- Invasive breast cancers diagnosed during the screening interval between a negative screening episode and the next screening episode of a woman who is on annual rescreen are only included as interval breast cancers for the year of screen, 0- $<12$  months.
- Invasive breast cancers diagnosed between 6-24 months after recommendation is made for assessment and the woman fails to attend.
- Invasive breast cancers diagnosed outside the Program within 24 months of a negative screen.

### Year 1

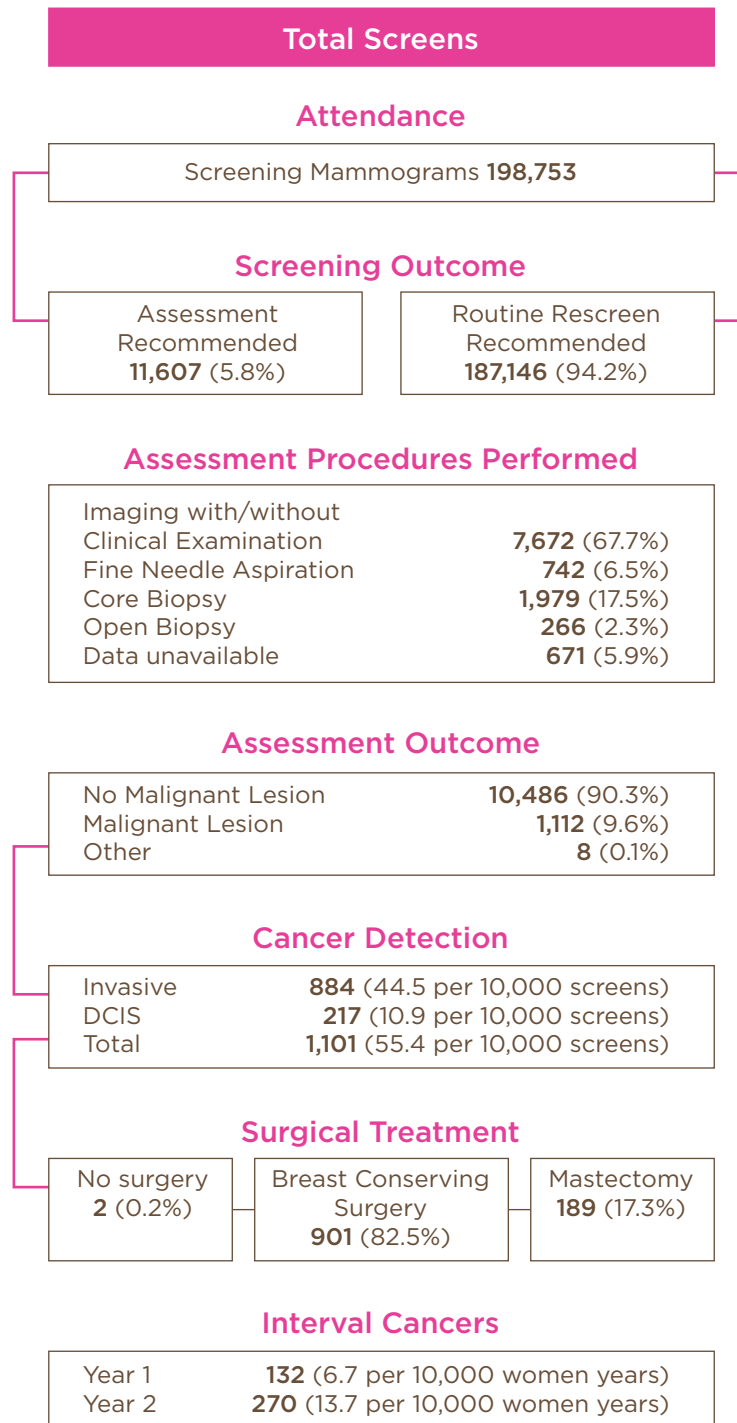
The interval cancer rate for the first 12 months after the woman's 2004 screen.

### Year 2

The interval cancer rate for the second 12 months after the woman's 2004 screen.



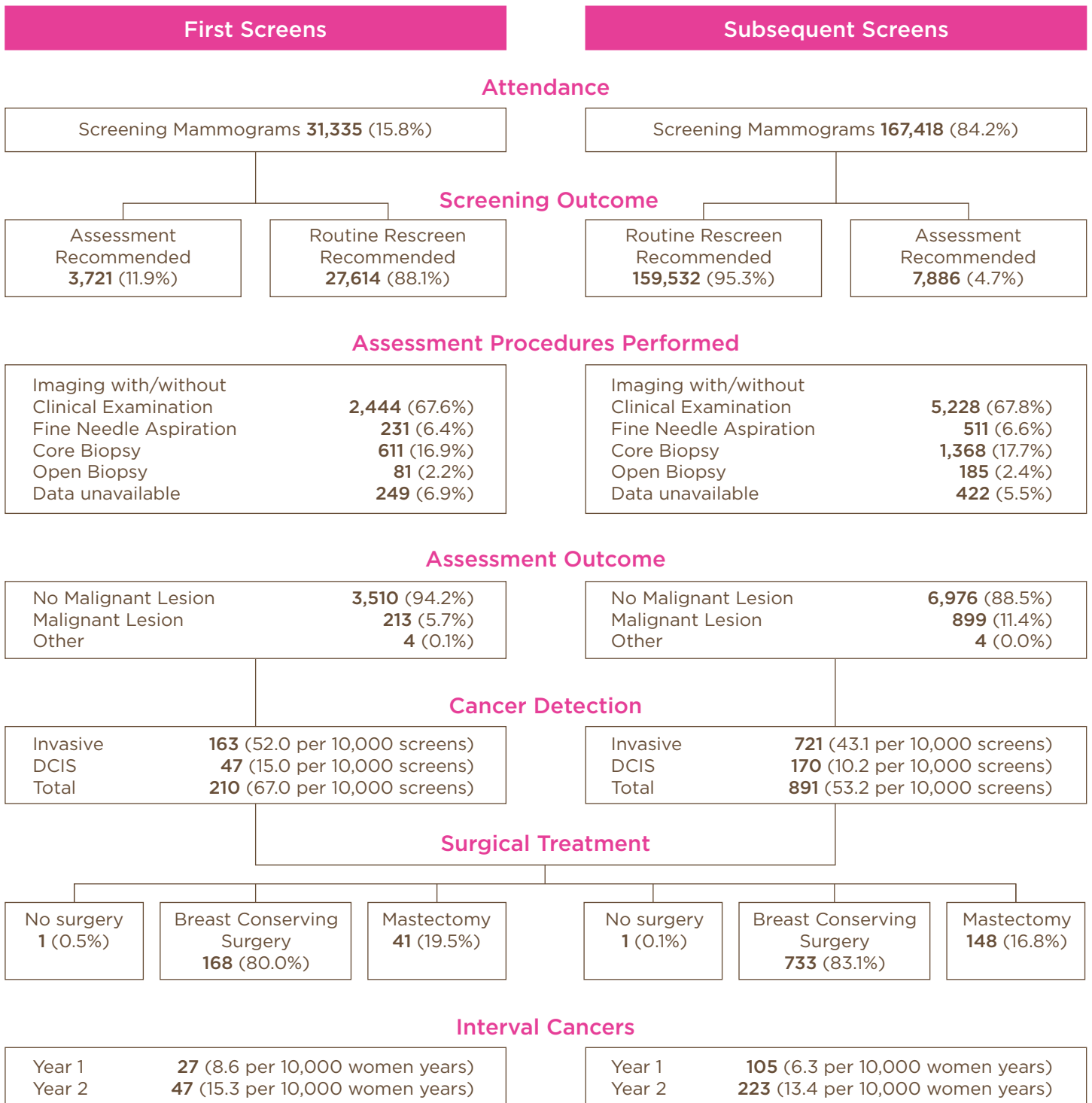
**Figure 1 – Summary of outcomes for all women attending for breast cancer screening in 2004<sup>1,2</sup>**



1 The source tables used may exclude data for a small number of women. Details are provided in notes for each table.

2 In all tables, percentages may not add up to 100% due to rounding.

**Figure 2 - Summary of outcomes by screening round for all women attending for breast cancer screening in 2004<sup>1,2</sup>**



1 The source tables used may exclude data for a small number of women. Details are provided in notes for each table.

2 In all tables, percentages may not add up to 100% due to rounding.

## Screening Attendance

A total of 198,753 screening mammograms were performed by BreastScreen Victoria during 2004. 15.8% of these women attended for their first screening mammogram with the Program and the remaining 84.2% attended for their second or subsequent mammogram.

The target age group for the Program is women aged 50-69 as current research shows that breast cancer screening is most effective in detecting early breast cancer in this age group. Ensuring that we

maintain a higher proportion of screening activity within the target age group is an important focus of the Program. In 2004, 154,578 or 77.8% of screening activity was for women in the target age group.

The breakdown of screening round by age demonstrates that women attending for their first screening mammogram tend to be younger than those attending for subsequent screening round mammograms.

All Women							
Age at screening	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Total women screened	15,214	92,076	62,502	28,006	955	198,753	154,578
Percentage of screening	7.7%	46.3%	31.4%	14.1%	0.5%	100%	77.8%

First Round Women								
Age at screening	40-49	50-59	60-69	70-79	80+	Total	% of ALL women screened	Target age group 50-69
Total women screened	9,657	19,153	1,825	568	132	31,335	15.8%	20,978
Percentage of screening	30.8%	61.1%	5.8%	1.8%	0.4%	100%		67.0%

Subsequent Round Women								
Age at screening	40-49	50-59	60-69	70-79	80+	Total	% of ALL women screened	Target age group 50-69
Total women screened	5,557	72,923	60,677	27,438	823	167,418	84.2%	133,600
Percentage of screening	3.3%	43.6%	36.2%	16.4%	0.5%	100%		79.8%

**Inclusions:**

Number of screening appointments performed in Victoria during the period 1/1/2004 and 31/12/2004.

Women were aged >=40 years of age at the time of screening appointment.

The woman attended the screening appointment and the readings data is complete.

## Screening Outcome

Following completion of the screening episode, a screening outcome is determined for each woman. Each woman is either recommended to be routinely rescreened within the Program at the appropriate screening interval (yearly for high risk women and biennially for all other women) or recommended to attend for assessment. Reasons that women are recalled to assessment include abnormal mammography and symptoms of possible breast cancer.

Across all age groups screened in 2004, 187,146 (94.2%) women were recommended for routine

rescreen and 11,607 (5.8%) of women screened were recommended to attend for assessment.

The National Accreditation Standard relating to recall rates for women aged 50-69 is designed to minimise women undergoing unnecessary investigations. This Standard states that recall rates are <10% for women attending for their first screen and <5% for women attending for a subsequent screen. In 2004 the recall rate for the first screening round was 11.7% and for subsequent screening rounds was 4.6%.

All Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Routine Rescreen	13,595 89.4%	86,191 93.6%	59,719 95.5%	26,755 95.5%	886 92.8%	187,146 94.2%	145,910 94.4%
Assessment Recommended	1,619 10.6%	5,885 6.4%	2,783 4.5%	1,251 4.5%	69 7.2%	11,607 5.8%	8,668 5.6%
Total	15,214 100%	92,076 100%	62,502 100%	28,006 100%	955 100%	198,753 100%	154,578 100%

First Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Routine Rescreen	8,472 87.7%	16,899 88.2%	1,622 88.9%	508 89.4%	113 85.6%	27,614 88.1%	18,521 88.3%
Assessment Recommended	1,185 12.3%	2,254 11.8%	203 11.1%	60 10.6%	19 14.4%	3,721 11.9%	2,457 11.7%
Total	9,657 100%	19,153 100%	1,825 100%	568 100%	132 100%	31,335 100%	20,978 100%

Subsequent Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Routine Rescreen	5,123 92.2%	69,292 95.0%	58,097 95.7%	26,247 95.7%	773 93.9%	159,532 95.3%	127,389 95.4%
Assessment Recommended	434 7.8%	3,630 5.0%	2,580 4.3%	1,191 4.3%	50 6.1%	7,886 4.7%	6,211 4.6%
Total	5,557 100%	72,923 100%	60,677 100%	27,438 100%	823 100%	167,418 100%	133,600 100%

**Inclusions:**

Number of screening appointments performed in Victoria during the period 1/1/2004 and 31/12/2004.

Women were aged >=40 years of age at the time of screening appointment.

The woman attended the screening appointment and the readings data is complete.

## Assessment Procedures Performed

When a woman attends for an assessment appointment there is a range of further investigations which may be performed to determine if she has a malignancy. The procedures are detailed in the tables below. Each woman is counted only once against the most significant assessment procedure performed.

Overall, 11,330 women were screened and had their assessment at BreastScreen Victoria during 2004. Due to difficulties experienced with the extraction of data from BreastScreen Victoria's new client information system, the procedures performed for 671 (5.9%) of the assessed women are not able to be reported here.

It is important that the Program is able to reach a diagnosis without the need for an open diagnostic

biopsy being performed. The majority of women having an assessment visit during 2004 had an assessment outcome determined without the need for an invasive procedure being performed.

Just over 17% of women assessed in 2004 had a core biopsy performed as their most significant procedure. Just under 7% of women had a fine needle aspiration, while only 2% of women had an open biopsy as their most significant assessment procedure. The remaining 67% of women had an assessment visit that involved further imaging, including magnified mammography and/or ultrasound examination.

The proportion of assessment procedures performed is consistent between first and subsequent screening rounds.

All women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Open Biopsy	38 2.4%	124 2.2%	72 2.6%	31 2.5%	1 1.5%	266 2.3%	196 2.3%
Core Biopsy	221 14.1%	921 16.0%	552 20.2%	266 21.9%	19 29.2%	1,979 17.5%	1,473 17.4%
FNA	107 6.8%	404 7.0%	154 5.6%	72 5.9%	5 7.7%	742 6.5%	558 6.6%
Imaging (with or without clinical examination)	1,053 67.2%	3,963 68.9%	1,832 67.2%	788 64.7%	36 55.4%	7,672 67.7%	5,795 68.3%
Data unavailable	147 9.4%	343 6.0%	117 4.3%	60 4.9%	4 6.2%	671 5.9%	460 5.4%
Total	1,566 100%	5,755 100%	2,727 100%	1,217 100%	65 100%	11,330 100%	8,482 100%

## Assessment Procedures Performed (continued)

First Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Open Biopsy	30 2.6%	43 2.0%	6 3.1%	2 3.4%	0	81 2.2%	49 2.0%
Core Biopsy	174 15.2%	365 16.6%	55 28.1%	13 22.0%	4 23.5%	611 16.9%	420 17.5%
FNA	72 6.3%	145 6.6%	9 4.6%	4 6.8%	1 5.9%	231 6.4%	154 6.4%
Imaging (with or without clinical examination)	759 66.3%	1,518 69.0%	120 61.2%	36 61.0%	11 64.7%	2,444 67.6%	1,638 68.4%
Data unavailable	109 9.5%	129 5.9%	6 3.1%	4 6.8%	1 5.9%	249 6.9%	135 5.6%
Total	1,144 100%	2,200 100%	196 100%	59 100%	17 100%	3,616 100%	2,396 100%

Subsequent Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Open Biopsy	8 1.9%	81 2.3%	66 2.6%	29 2.5%	1 2.1%	185 2.4%	147 2.4%
Core Biopsy	47 11.1%	556 15.6%	497 19.6%	253 21.8%	15 31.3%	1,368 17.7%	1,053 17.3%
FNA	35 8.3%	259 7.3%	145 5.7%	68 5.9%	4 8.3%	511 6.6%	404 6.6%
Imaging (with or without clinical examination)	294 69.7%	2,445 68.8%	1,712 67.6%	752 64.9%	25 52.1%	5,228 67.8%	4,157 68.3%
Data unavailable	38 9.0%	214 6.0%	111 4.4%	56 4.8%	3 6.3%	422 5.5%	325 5.3%
Total	422 100%	3,555 100%	2,531 100%	1,158 100%	48 100%	7,714 100%	6,086 100%

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.

Women were aged >=40 years of age at the time of screening appointment.

Assessment was attended in the BreastScreen Victoria Program.

**Exclusions:**

Women who attended assessment but did not have any assessment procedures performed.

Women screened by BreastScreen Victoria but assessed outside of the Program.

671 clients have data which is unavailable due to data system change-over.

## Assessment Outcome

Following completion of the assessment process a final assessment outcome is determined for each woman. For those women assessed by the Program during 2004, a total of 1,112 (9.6%) women were found to have a malignant lesion, while 10,486 (90.3%) were found to have no malignant lesion.

The proportion of first round women in the target age group of 50-69 who were found to have a malignancy was 6.1% compared to subsequent

round women which was 10.7%. The proportion of younger women in the first round group is much higher and this appears to have an impact on the cancer detection rates for the target age group of this group.

Across first and subsequent round women the cancer detection rate for the target age group of 50-69 is 9.4% of assessed women.

All Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
No Malignant lesion	1,552 95.9%	5,430 92.2%	2,415 86.8%	1,039 83.1%	50 72.5%	10,486 90.3%	7,845 90.5%
Malignant	66 4.1%	453 7.7%	364 13.1%	210 16.8%	19 27.5%	1,112 9.6%	817 9.4%
Other	0	0	0	1 0.1%	0	1 0.0%	0
Outcome undetermined	0	4 0.1%	2 0.1%	1 0.1%	0	7 0.1%	6 0.1%
Total	1,618 100%	5,887 100%	2,781 100%	1,251 100%	69 100%	11,606 100%	8,668 100%

First Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
No Malignant lesion	1,133 95.6%	2,134 94.6%	174 84.9%	53 85.5%	16 84.2%	3,510 94.2%	2,308 93.8%
Malignant	52 4.4%	120 5.3%	30 14.6%	8 12.9%	3 15.8%	213 5.7%	150 6.1%
Outcome undetermined	0	2 0.1%	1 0.5%	1 1.6%	0	4 0.1%	3 0.1%
Total	1,185 100%	2,256 100%	205 100%	62 100%	19 100%	3,727 100%	2,461 100%

## Assessment Outcome (continued)

Subsequent Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
No Malignant lesion	419 96.8%	3,296 90.8%	2,241 87.0%	986 82.9%	34 68.0%	6,976 88.5%	5,537 89.2%
Malignant	14 3.2%	333 9.2%	334 13.0%	202 17.0%	16 32.0%	899 11.4%	667 10.7%
Other	0	0	0	1 0.1%	0	1 0.0%	0
Outcome undetermined	0	2 0.1%	1 0.0%	0	0	3 0.0%	3 0.0%
Total	433 100%	3,631 100%	2,576 100%	1,189 100%	50 100%	7,879 100%	6,207 100%

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.

Women aged >=40 years of age at the time of screening appointment.

Assessment was recommended following screening by the BreastScreen Victoria Program.

Assessment was attended either within the BreastScreen Victoria Program or by another organisation.

Includes women screened interstate but assessed within BreastScreen Victoria.

**Exclusions:**

Women who were recommended for assessment but were not assessed.



## Cancer Detection

Of the women screened by BreastScreen Victoria during 2004 and recommended for assessment, a total of 1,101 women were diagnosed with breast cancer. Of these screen-detected cancers, 884 (80.3%) were invasive cancers and 217 (19.7%) were Ductal Carcinoma In-Situ (DCIS).

The National Accreditation Standards have specific cancer detection requirements for both invasive breast cancer and DCIS. These standards state that invasive cancer detection rates should be greater than or equal to 50 women per 10,000 for women aged 50-69 years who attend for their first screen, and greater than or equal to 35 women per 10,000 women attending for a subsequent screen. In 2004 the invasive cancer detection rate for the first screening round was 54.8 per 10,000 and for the subsequent screening rounds it was 40.1 per 10,000.

For DCIS the detection rates for the National Accreditation Standards are greater than or equal to 12 women per 10,000 women aged 50-69 years who attend for their first screen, and greater than or equal to 7 women per 10,000 women attending for a subsequent screen. In 2004, 15.7 women per 10,000 were diagnosed with DCIS in the first screening round and 9.5 per 10,000 in the subsequent screening round.

BreastScreen Victoria aims to detect invasive cancers when they are small and low grade, prior to spread to the regional lymph nodes. In 2004, 295 (33.4%) of the invasive cancers detected in the Program were  $\leq 10$ mm in size. Overall, 562 (63.6%) of the invasive cancers were  $\leq 15$ mm in size.

### Invasive Cancers

All Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Total Invasive Cancer (excl interval)	49	354	297	167	17	884	651
Rate per 10,000 (excl int cancer)	32.2	38.4	47.5	59.6	177.6	44.5	42.1

First Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Total Invasive Cancer (excl interval)	39	93	22	7	2	163	115
Rate per 10,000 (excl int cancer)	40.4	48.6	120.5	123.2	149.3	52.0	54.8

Subsequent Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Total Invasive Cancer (excl interval)	10	261	275	160	15	721	536
Rate per 10,000 (excl int cancer)	18.0	35.8	45.3	58.3	182.3	43.1	40.1

**Inclusions:**

- Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.
- Women aged  $\geq 40$  years of age at the time of screening appointment.
- Women screened within BreastScreen Victoria.

**Exclusions:**

- Women who were diagnosed with an interval cancer.

## Cancer Detection (continued)

### DCIS

All Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
DCIS (excl interval)	17	95	65	38	2	217	160
Rate per 10,000 (excl int cancer - DCIS)	11.2	10.3	10.4	13.6	20.9	10.9	10.4

First Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
DCIS (excl interval)	13	25	8	0	1	47	33
Rate per 10,000 (excl int cancer - DCIS)	13.5	13.1	43.8	0	74.6	15.0	15.7

Subsequent Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
DCIS (excl interval)	4	70	57	38	1	170	127
Rate per 10,000 (excl int cancer - DCIS)	7.2	9.6	9.4	13.8	12.2	10.2	9.5

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.  
 Women aged  $\geq 40$  years of age at the time of screening appointment.  
 Women screened within BreastScreen Victoria.

**Exclusions:**

Women who were diagnosed with an interval cancer.

## Cancer Detection (continued)

### Invasive Cancers and DCIS

All Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Total cancer count - invasive and DCIS	66	449	362	205	19	1,101	811
Rate per 10,000 - total cancers (excl int cancer)	43.4	48.8	57.9	73.2	198.5	55.4	52.5

First Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Total cancer count - invasive and DCIS	52	118	30	7	3	210	148
Rate per 10,000 - total cancers (excl int cancer)	53.9	61.6	164.4	123.2	223.9	67.0	70.6

Subsequent Round Women	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Total cancer count - invasive and DCIS	14	331	332	198	16	891	663
Rate per 10,000 - total cancers (excl int cancer)	25.2	45.4	54.7	72.2	194.4	53.2	49.6

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.  
 Women aged >=40 years of age at the time of screening appointment.  
 Women screened within BreastScreen Victoria.

**Exclusions:**

Women who were diagnosed with an interval cancer.

## Cancer Detection (continued)

### Invasive Cancers and DCIS by size

	Invasive					DCIS	Total (Invasive & DCIS)
	<=10 mm	11-15 mm	>15 mm	Unknown	Total		
First Round Women	49	38	72	4	163	47	210
Subsequent Round Women	246	229	239	7	721	170	891
Total	295	267	311	11	884	217	1,101
Percentage	33.4%	30.2%	35.2%	1.2%	100%		

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.  
 Women aged >=40 years of age at the time of screening appointment.  
 Women screened within BreastScreen Victoria.

**Exclusions:**

Women who were diagnosed with an interval cancer.

## Surgical Treatment

Surgical treatment is performed outside of the BreastScreen Program. It is therefore required that surgical treatment data is followed up with the woman's surgeon by the data staff at each screening and assessment service. Of the 1,101 women diagnosed with breast cancer by the Program during 2004, surgical treatment data is available for all but 9 women (7 women diagnosed with invasive cancers and 2 with DCIS). A further 2 women elected to have no surgical treatment.

Breast conserving surgery was performed for 723 (82.4%) of the women diagnosed with invasive cancer and 82.8% (178) of the women with DCIS. First round women had higher rates of mastectomy (19.5%) than subsequent round women (16.8%).

For the women in the target age group of 50-69, 671 (83.5%) had breast conserving surgery; a slightly higher rate than that reported for all women (82.5%).

### All Surgical Treatment

All Women							Target age group 50-69
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	
Mastectomy	14 21.2%	68 15.3%	63 17.5%	37 18.2%	7 36.8%	189 17.3%	131 16.3%
Breast Conserving Surgery	52 78.8%	375 84.3%	296 82.5%	166 81.8%	12 63.2%	901 82.5%	671 83.5%
No Surgery	0	2 0.4%	0	0	0	2 0.2%	2 0.2%
Total	66 100%	445 100%	359 100%	203 100%	19 100%	1,092 100%	804 100%

First Round Women							Target age group 50-69
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	
Mastectomy	11 21.2%	21 17.8%	6 20.0%	2 28.6%	1 33.3%	41 19.5%	27 18.2%
Breast Conserving Surgery	41 78.8%	96 81.4%	24 80.0%	5 71.4%	2 66.7%	168 80.0%	120 81.1%
No Surgery	0	1 0.8%	0	0	0	1 0.5%	1 0.7%
Total	52 100%	118 100%	30 100%	7 100%	3 100%	210 100%	148 100%

## Surgical Treatment (continued)

### All Surgical Treatment

Subsequent Round Women							
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Mastectomy	3 21.4%	47 14.4%	57 17.3%	35 17.9%	6 37.5%	148 16.8%	104 15.9%
Breast Conserving Surgery	11 78.6%	279 85.3%	272 82.7%	161 82.1%	10 62.5%	733 83.1%	551 84.0%
No Surgery	0	1 0.3%	0	0	0	1 0.1%	1 0.2%
Total	14 100%	327 100%	329 100%	196 100%	16 100%	882 100%	656 100%

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.  
 Women aged  $\geq 40$  years of age at the time of screening appointment.  
 Women screened within BreastScreen Victoria.

**Exclusions:**

Women who were diagnosed with an interval cancer.

## Surgical Treatment (continued)

### Invasive Cancer

All Women							Target age group 50-69
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	
Mastectomy	11 22.4%	51 14.6%	54 18.3%	30 18.1%	6 35.3%	152 17.3%	105 16.3%
Breast Conserving Surgery	38 77.6%	297 84.9%	241 81.7%	136 81.9%	11 64.7%	723 82.4%	538 83.4%
No Surgery	0	2 0.6%	0	0	0	2 0.2%	2 0.3%
Total	49 100%	350 100%	295 100%	166 100%	17 100%	877 100%	645 100%

First Round Women							Target age group 50-69
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	
Mastectomy	10 25.6%	17 18.3%	4 18.2%	2 28.6%	0	33 20.2%	21 18.3%
Breast Conserving Surgery	29 74.4%	75 80.6%	18 81.8%	5 71.4%	2 100%	129 79.1%	93 80.9%
No Surgery	0	1 1.1%	0	0	0	1 0.6%	1 0.9%
Total	39 100%	93 100%	22 100%	7 100%	2 100%	163 100%	115 100%

Subsequent Round Women							Target age group 50-69
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	
Mastectomy	1 10.0%	34 13.2%	50 18.3%	28 17.6%	6 40.0%	119 16.7%	84 15.8%
Breast Conserving Surgery	9 90.0%	222 86.4%	223 81.7%	131 82.4%	9 60.0%	594 83.2%	445 84.0%
No Surgery	0	1 0.4%	0	0	0	1 0.1%	1 0.2%
Total	10 100%	257 100%	273 100%	159 100%	15 100%	714 100%	530 100%

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.  
 Women aged >=40 years of age at the time of screening appointment.  
 Women screened within BreastScreen Victoria.

**Exclusions:**

Women who were diagnosed with an interval cancer.

## Surgical Treatment (continued)

### DCIS

All Women							
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Mastectomy	3 17.6%	17 17.9%	9 14.1%	7 18.9%	1 50.0%	37 17.2%	26 16.4%
Breast Conserving Surgery	14 82.4%	78 82.1%	55 85.9%	30 81.1%	1 50.0%	178 82.8%	133 83.6%
No Surgery	0	0	0	0	0	0	0
Total	17 100%	95 100%	64 100%	37 100%	2 100%	215 100%	159 100%

First Round Women							
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Mastectomy	1 7.7%	4 16.0%	2 25.0%	0	1 100%	8 17.0%	6 18.2%
Breast Conserving Surgery	12 92.3%	21 84.0%	6 75.0%	0	0	39 83.0%	27 81.8%
No Surgery	0	0	0	0	0	0	0
Total	13 100%	25 100%	8 100%	0	1 100%	47 100%	33 100%

Subsequent Round Women							
Most Significant Surgery	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Mastectomy	2 50.0%	13 18.6%	7 12.5%	7 18.9%	0	29 17.3%	20 15.9%
Breast Conserving Surgery	2 50.0%	57 81.4%	49 87.5%	30 81.1%	1 100%	139 82.7%	106 84.1%
No Surgery	0	0	0	0	0	0	0
Total	4 100%	70 100%	56 100%	37 100%	1 100%	168 100%	126 100%

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.  
 Women aged >=40 years of age at the time of screening appointment.  
 Women screened within BreastScreen Victoria.

**Exclusions:**

Women who were diagnosed with an interval cancer.



## Interval Cancers

Interval cancers are breast cancers diagnosed in the interval following the woman’s screening mammogram and prior to the next scheduled screening examination. They are determined annually through a matching process between the BreastScreen Victoria client information system and the Victorian Cancer Registry and follow the national definition as specified in the BreastScreen Australia Data Dictionary.<sup>1</sup>

The Year 1 figure reports the breast cancer rate for the period between 0 and 12 months after their 2004 mammogram and Year 2 reports the rate for the period between 12 and 24 months after their 2004 mammogram. A total of 132 interval cancers were found in Year 1 and 270 in Year 2.

The National Accreditation Standards have specified an interval cancer rates for Year 1; a figure for Year

2 has not yet been determined. The standards state that <7.5 per 10,000 women who attend for screening are diagnosed with an invasive interval breast cancer in the period between 0 and less than 12 months following a negative screening episode. In 2004 for Year 1, 6.5 interval cancers occurred for each 10,000 women screened. For first round women the rate was 7.2 per 10,000 and 6.4 per 10,000 subsequent round women. The results for Year 2 are 14.1 per 10,000 for women in the target age group: 15.1 per 10,000 for first round women and 13.9 per 10,000 for subsequent round women.

The Year 1 and 2 interval breast cancer rates for first round women are higher than those reported for subsequent round women.

All Women							
Year 1	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Year 1 interval cancers	19	57	43	12	1	132	100
Year 1 screens performed	15,163	91,708	62,143	27,750	927	197,691	153,851
Year 1 interval cancer rate (per 10,000)	12.5	6.2	6.9	4.3	10.8	6.7	6.5
Year 2	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Year 2 interval cancers	23	121	95	31	0	270	216
Year 2 screens performed	15,125	91,368	61,819	27,604	925	196,841	153,187
Year 2 interval cancer rate (per 10,000)	15.2	13.2	15.4	11.2	0	13.7	14.1

Footnote:

1. BreastScreen Australia Data Dictionary 2005: Indicator 3a - Interval cancer rate. Pg. 155.

## Interval Cancers (continued)

First Round Women							
Year 1	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Year 1 interval cancers	12	14	1	0	0	27	15
Year 1 screens performed	9,639	19,092	1,807	545	131	31,214	20,899
Year 1 interval cancer rate (per 10,000)	12.5	7.3	5.5	0	0	8.6	7.2
Year 2							
Year 2	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Year 2 interval cancers	16	29	2	0	0	47	31
Year 2 screens performed	9,620	18,922	1,645	472	130	30,789	20,567
Year 2 interval cancer rate (per 10,000)	16.6	15.3	12.2	0	0	15.3	15.1
Subsequent Round Women							
Year 1	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Year 1 interval cancers	7	43	42	12	1	105	85
Year 1 screens performed	5,524	72,616	60,336	27,205	796	166,477	132,952
Year 1 interval cancer rate (per 10,000)	12.7	5.9	7.0	4.4	12.6	6.3	6.4
Year 2							
Year 2	40-49	50-59	60-69	70-79	80+	Total	Target age group 50-69
Year 2 interval cancers	7	92	93	31	0	223	185
Year 2 screens performed	5,505	72,446	60,174	27,132	795	166,052	132,620
Year 2 interval cancer rate (per 10,000)	12.7	12.7	15.5	11.4	0	13.4	13.9

**Inclusions:**

Where the woman's screening appointment was during the period 1/1/2004 and 31/12/2004.  
 Women aged >=40 years of age at the time of screening appointment.  
 Women screened within BreastScreen Victoria.

**Exclusions:**

Women with a previous diagnosis of breast cancer.