

BreastScreen WA

Annual Statistical Report

2002/2003

2003/2004

BreastScreen
AUSTRALIA

A joint Commonwealth/State and Territory Program

BreastScreen
WA
WA's only accredited screening service

GOVERNMENT OF
WESTERN AUSTRALIA
Department of
Health

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Foreword

BreastScreen WA has pleasure in presenting the Annual Statistical Report for the periods 2002/2003 and 2003/2004.

In 2002 the revised National Accreditation Standards were endorsed by BreastScreen Australia. Implementation of the new Standards necessitated that the service undergo a major review of policies and procedures to ensure the program complied with the new wide-ranging and expanded performance measures.

The program underwent both a successful data audit in May 2003 and a successful external accreditation site visit in October 2003 and was granted four-year accreditation in February 2004 by the BreastScreen Australia National Quality Management Committee.

As part of its review of activities, and in keeping with the focus of the new National Accreditation Standards, a comprehensive quality improvement review was undertaken by the service in preparation for accreditation. A new Quality Improvement Committee, approved under the Health Service (Quality Improvement) Act 1994, was established to undertake and monitor quality improvement activities service-wide, including clinical audits.

During 2003/2004, BreastScreen WA implemented a revised complaints management system with improved complaint recognition and reporting. Staff training was undertaken to enhance complaint recognition, reporting and management. It also implemented reporting of client clinical incidents as part of the Australian Incident Monitoring System.

Pressure on clinic capacity due to growing demand in the Fremantle area saw the January 2003 opening of the relocated Fremantle Clinic to larger premises at City House 22 Queen Street allowing a second mammogram machine.

Five mammogram machines at the Cannington and Mirrabooka clinics and the Outer Metropolitan, South East, and South West mobiles were replaced, ensuring a high quality technologically advanced mammographic service was available to Western Australia women.

In 2003 BreastScreen WA, in conjunction with the Cervical Cancer Screening Program, established an Indigenous Women's Reference Group comprised of indigenous health worker representatives from rural, remote and metropolitan communities. Following Indigenous community consultation, a statewide training package, containing culturally-sensitive health promotional resources and strategies, was developed to assist Aboriginal health workers to educate Aboriginal women about the benefits of regular cervical and breast cancer screening. A range of new Indigenous client health promotion resources was also developed.

A GP Liaison Officer was appointed in 2002 to promote awareness of breast cancer screening issues amongst GPs, to develop networks with the Divisions of General Practice and facilitate their collaboration and support of the Program. Courses have been developed to increase the GP's ability to diagnose and manage breast diseases in the community. These GP Up-skilling Courses, conducted as supervised Clinical Attachments at the breast assessment clinics, involve GPs attending five sessions to sit in with either a breast physician or breast surgeon.

Other key achievements during this period included the establishment of a new website, including extensive client information translated into 16 languages.

As Medical Director, I would like to thank the staff of the screening services, central co-ordinating unit and assessment centres for their enthusiasm, commitment, hard work and resourcefulness which allowed the service to grow and thrive during the reporting period.



Dr Elizabeth J Wylie (MBBS FRANZCR)

March 2007

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About this Report

This BreastScreen WA Annual Statistical Report presents data for the program for two 12 month periods - from the 1st July 2002 to 30th June 2003 and from the 1st July 2003 to 30th June 2004. Data is presented side by side for each 12-month reporting interval, with some figures showing trend data over selected time periods. The Report includes information on the number of screens, the characteristics of the screened population, details of the assessments of any abnormality detected such as the procedures used and their outcomes, the pathology, size and metastatic status of identified cancers, and overall cancer detection rates.

The data is presented by age group or by screening round, with results for the target age group (50-69 years) highlighted. Throughout the Report, first screens refer to the first screen with BreastScreen WA even though some of these women may have had a previous screen outside the WA program. Subsequent screens include all those subsequent to the first screen for the time period reported.

BreastScreen WA's performance against a selected number of National Accreditation Standards is also presented. Compliance with these standards is critical to the success of the screening program and to the standard of care and quality of service BreastScreen WA offers the women of Western Australia.

General population statistics used as denominators for participation rates were drawn from the Australian Bureau of Statistics 2002 and 2003 Estimated Resident Population tables. The 2001 Census data was used to derive target population figures for Indigenous women from Aboriginal or Torres Strait Islander background, and for women who speak a language other than English at home, referred to here as women from culturally and linguistically diverse backgrounds (CALD).

BreastScreen WA thanks all staff and sessional clinicians for their commitment and dedication in helping the program attain the highest of standards and for the quality of the data collected and maintained in the Registry. Thanks also to the members of the State Accreditation Committee and others who have assisted in the production of this Report.

BreastScreen WA

BreastScreen WA is a statewide population-based breast cancer screening service which is part of the national mammographic screening program, BreastScreen Australia, aimed at reducing morbidity and mortality from breast cancer through early detection of the disease. The program provides free high quality screening at 2-yearly intervals and targets asymptomatic women aged 50 to 69 years. Women aged 40-49 and over 70 years are also eligible to participate. Assessment of screen-detected lesions up to and including a definitive diagnosis of breast cancer or referral for diagnostic open biopsy is also part of the program.

To achieve BreastScreen Australia's aims it is critical for all services to maintain high standards of program management and service delivery. The National Accreditation Standards, revised in 2002, are a wide-ranging and comprehensive set of standards with a strong quality improvement focus and cover recruitment, screening services, follow-up of women with abnormalities, assessment services, data management and service management. Accreditation with BreastScreen Australia requires services to be compliant with the Standards, and in October 2003 BreastScreen WA achieved full four-year re-accreditation.

Service provision

The program aims to make the screening service available and accessible to all eligible women in Western Australia. There are seven clinics in the Perth metropolitan area and one mobile unit covering the south-eastern outer metropolitan area. Three mobile units service the south west, south eastern and northern regions of the state within a two-year cycle, visiting towns from Kununurra to Esperance and east to Laverton for periods ranging from a few days to twelve months (see Figures 1 and 2).

Women are invited to the program from the age of 50 years. Most women are screened every 2 years and sent a reminder letter when they are due. Only those women at high risk of developing breast cancer, such as those with a significant family history of breast cancer, a history of breast or ovarian cancer or other high risk breast changes, are invited for annual screens.

The State Coordination Unit (SCU) in Perth manages the appointment bookings, coordinating them with recruitment initiatives, clinic capacities and schedules, and is responsible for film reading, record and data handling and for mailing all invitation, reminder and result letters. The SCU also manages and reports on the financial aspects of the program, monitors and reports on program performance internally and to State and Commonwealth directorates and produces and coordinates the dissemination of all promotional materials.

BreastScreen WA provides assessment of screen-detected abnormalities up to definitive diagnosis at its two accredited assessment clinics located at Royal Perth Hospital and Sir Charles Gairdner Hospital. Breast Assessment Nurses inform women and their nominated general practitioner of the need for further assessment, organise appointments at the program assessment centres and offer support and advice to women regarding their assessment visit. Metropolitan clients are invited to attend one of the two assessment centres in Perth, whilst country clients may have their diagnostic further views done on the mobile unit. Some women choose to be assessed privately, outside the program, under the direction of their general practitioner. Information regarding the outcome of all assessments, including any treatments for cancer, is recorded on the database. Any anomalies or failures to attend for assessment are followed up by the service. The management of breast cancers detected during screening is not part of the BreastScreen WA program. However, information is collected for all cases of screen-detected cancers.

A range of recruitment strategies is developed by the SCU in consultation with consumer and health professional reference groups. Specific strategies are devised for recruitment through general practitioners and community groups, and for recruiting Indigenous women, those from culturally and linguistically diverse backgrounds and for women living in rural and remote regions of the state. Presentations are regularly made to ethnic groups and publications are available in a wide range of languages.

The service provides information and training to health professionals through educational activities such as a biennial breast cancer conference, communications workshops for general practitioners, and breast disease courses involving general practitioner attendance at 8 to 10 clinical sessions at the service's multidisciplinary breast assessment clinics. Screening-related articles are occasionally published in medical practitioner newsletters or journals and the service employs a GP Liaison Officer to assist in building partnerships with this group of health professionals.

Building strong alliances with the community and with health professionals is an important part of delivering a quality health service. It assists the service in providing accessible, acceptable and excellent health care, and in responding to and meeting the challenges of changing community needs and technical and medical developments.

Quality improvement

Accreditation with BreastScreen Australia involves thorough and regular review of all practices and outcomes in relationship to compliance with the National Accreditation Standards. Frequent auditing of processes and outcomes of both screening and assessment forms part of the program's routine quality improvement activities. Comprehensive and confidential individual performance management for radiologists is a particularly important part of the program's

BreastScreen WA

activities, and is conducted quarterly by the Medical Director. Ongoing staff training, quality assurance of data held by the program and equipment and IT programming improvements are also part of the process of ensuring that BreastScreen WA offers the best possible standard of care and service to all women who take part in the program.

BreastScreen WA established a Quality Improvement Committee in early 2002 under the auspices of the Health Services (Quality Improvement) Act 1994. The Act grants special immunities and protections, including qualified privilege, for all activities and information gathered by the Committee. The main role of the Committee is to audit clinical and administrative practices, assess new technologies and oversee compliance with National Accreditation Standards with the aim of continually improving mammography screening services to the women of Western Australia. The Quality Improvement Committee's Annual Report to the Minister for Health reflects the service's focus on improving clinical and administrative practices.

BreastScreen WA

Figure 1: Map of WA showing the towns visited by the mobile screening units

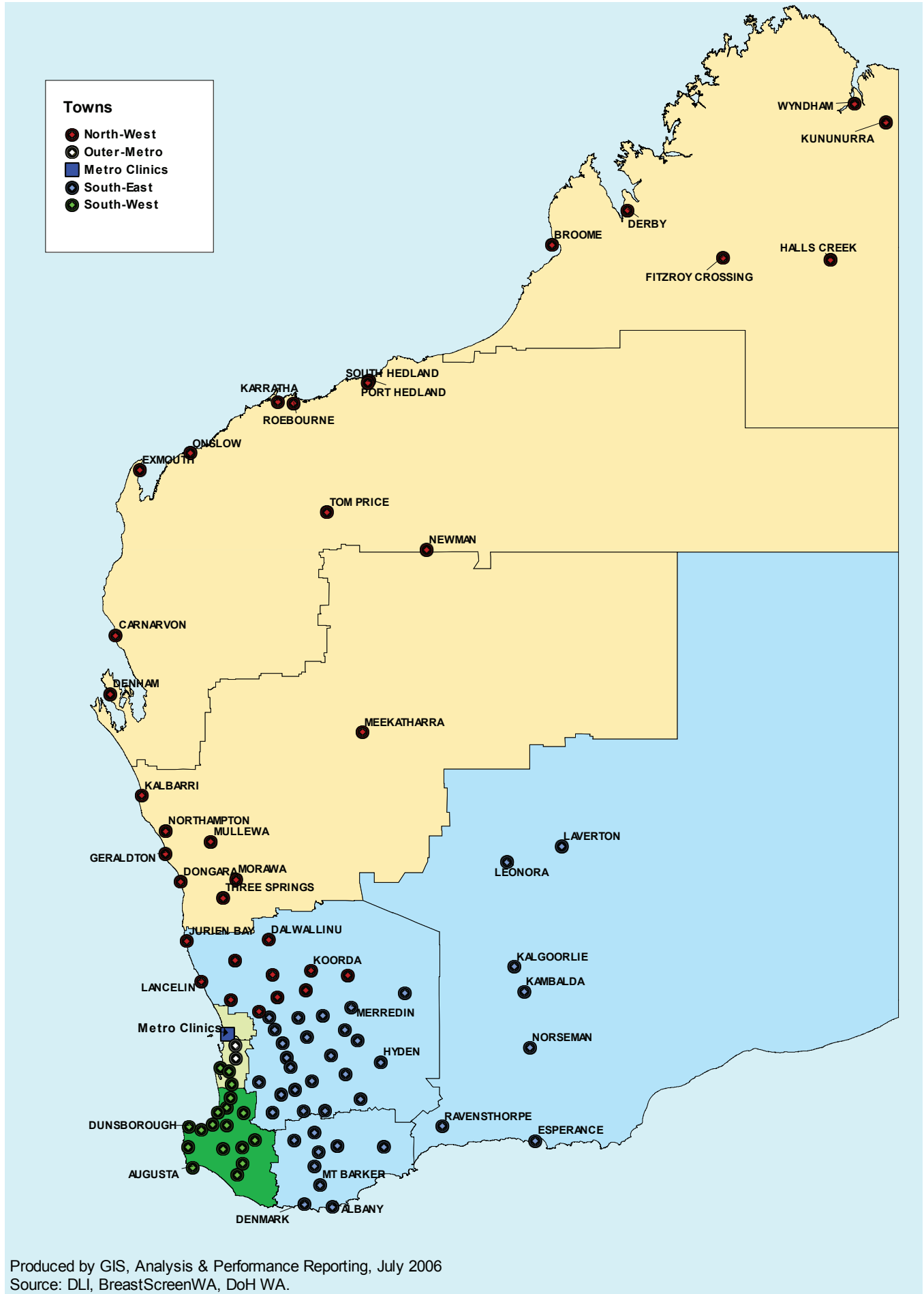
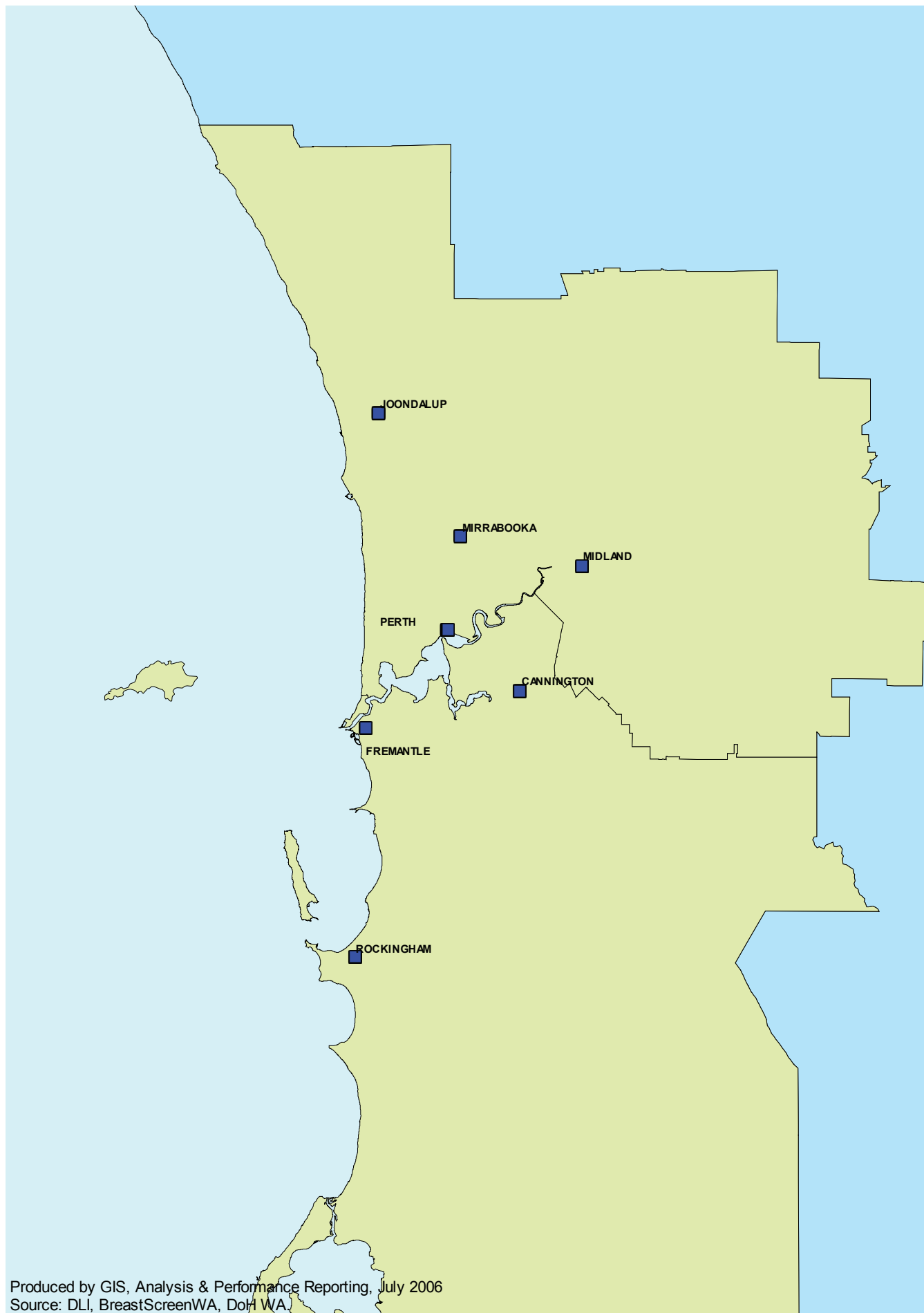


Figure 2: Map showing the locations of the 7 fixed site clinics in the Perth metropolitan area



Produced by GIS, Analysis & Performance Reporting, July 2006
Source: DLI, BreastScreenWA, DoH WA

BreastScreen WA Key Results for 2002/2003 and 2003/2004

Attendance

- BreastScreen WA performed 70,798 screens in 2002/03 and 80,315 screens in 2003/04. The percentage of women in the 50-69 years target age group was 77.6% and 77.8%, respectively.
- The participation rate for women aged 50 to 69 years was 54.9% for the 24-month period to June 2003, and increased by 1.7% to 56.6% for the 24-month period to June 2004.
- Of the women in the target age group, 58.2% of those screened in 2000/01 and 61.9% of those screened in 2001/02 returned for a rescreen within 27 months. Similarly, 73.7% and 77% subsequent screens in 2000/01 and 2001/02, respectively, returned for a rescreen within 27 months.

Demography

- Of all women screened in 2002/03 and 2003/04, 17.6% and 16.8%, respectively, were attending for their first screen.
- Metropolitan residents made up 73.5% of women aged 50-69 years in 2002/03 and 75.7% in 2003/04.
- Indigenous women made up 0.9% (645) of screens in 2002/03 and 1.2% (949) in 2003/04.
- The proportion of culturally and linguistically diverse women was 12.7% (8,984) in 2002/03 and 12.9% (10,378) in 2003/04.
- A family history of breast cancer was reported by 17.8% of all women screened in 2002/03 and 17.6% in 2003/04.

Recall to assessment

- In 2002/03, 5.2% (3,698) of women were recalled to assessment - 11.8% of initial screens and 3.8% of subsequent screens. In 2003/04, 4.8% (3,829) of all women were recalled - 11.1% of initial screens and 3.5% of subsequent.
- 4.6% of women in the target age group in 2002/03, and 4.1% in 2003/04, were recalled for assessment.

Assessment procedures

- On average, each woman recalled for assessment underwent two assessment procedures. Women requiring only further mammographic views, clinical examination and/or ultrasound to confirm an outcome of no significant abnormality comprised 61.6% of those assessed in 2002/03 and 62.2% in 2003/04.
- The majority of women assessed had a benign outcome - 86.7% in 2002/03 and 86.9% in 2003/04.
- Of the 169 diagnostic open biopsies (DOBs) performed in 2002/03, 24.3% indicated a malignant lesion. In the following year 20.4% of the 142 DOBs indicated a malignant lesion.
- Of the 469 screen-detected breast cancers in 2002/03, 37.5% were diagnosed by fine needle aspiration, 53.9% by core biopsy and 8.3% by surgical biopsy. Of the 477 screen-detected breast cancers in 2003/04, 39.4% were diagnosed by FNA, 53.0% by core biopsy and 5.9% by surgical biopsy.

Breast cancer detection

- Of the 468 screen-detected breast cancers of known pathology in 2002/03, 344 (73.5%) were invasive and 124 (26.5%) were ductal carcinoma *in situ* (DCIS). In 2003/04, of 475 cancers, 367 (77.3%) were invasive and 108 (22.7%) were DCIS.
- The invasive cancer detection rate was 72 per 10,000 women aged 50-69 years who were having their first screen in both 2002/03 and 2003/04. For women in the target age group having subsequent screens, the rates were 48 per 10,000 and 44 per 10,000, respectively.
- In 2002/03 and 2003/04, interval cancer rates for women in the target age group were 7.5 and 4.5 per 10,000, respectively, for the 12 months following a normal mammogram.

Small invasive cancer detection

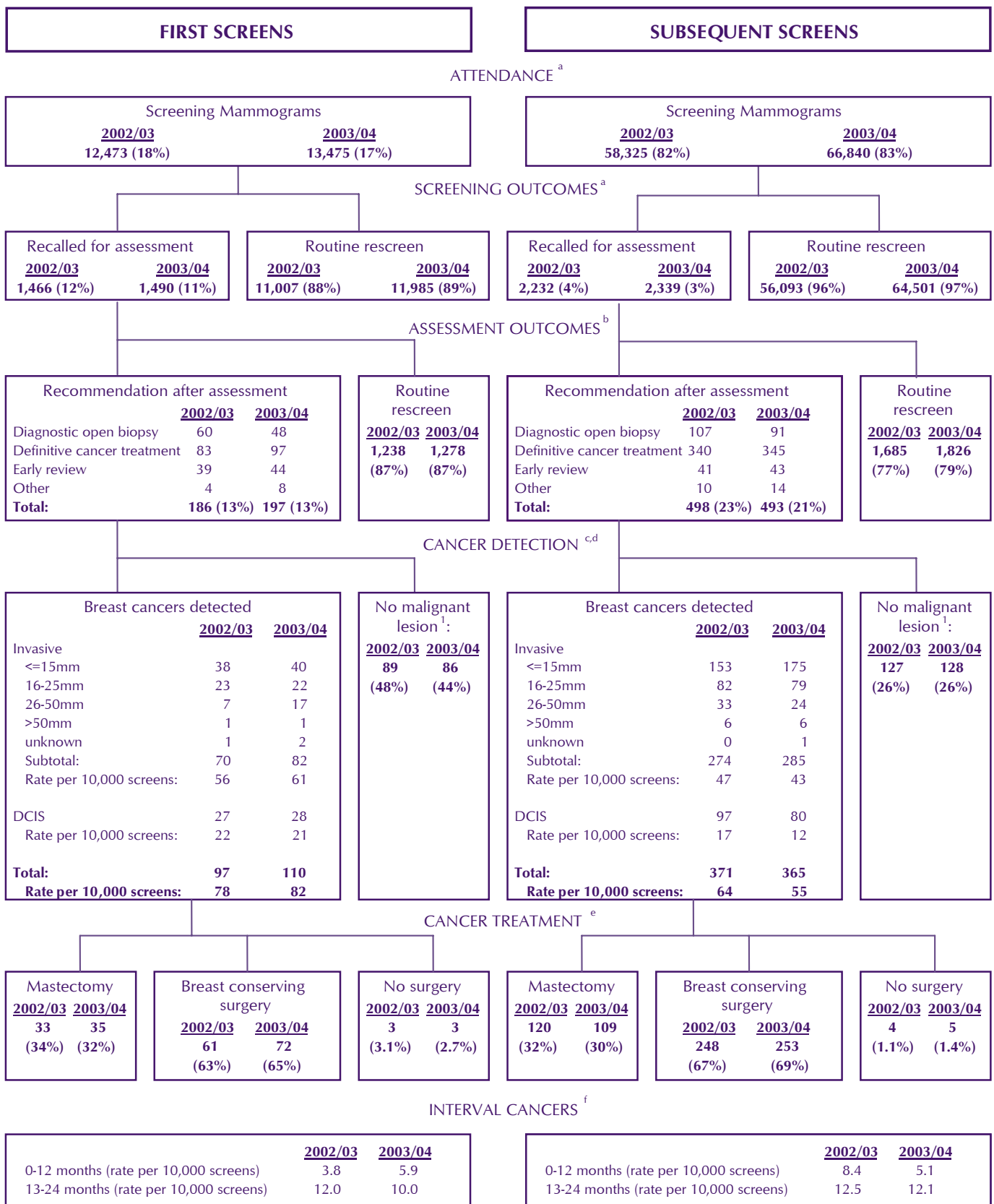
- Where the size of the invasive cancer was known in 2002/03, 55.7% were 15mm or less. The small invasive cancer detection rate was 29 per 10,000 women screened in the 50-69 year age group. Of the 364 invasive cancers of known size in 2003/04, 59.1% were ≤ 15 mm with a rate of 28 per 10,000 women in the target age group.

Treatment

- Most women chose breast-conserving surgery - 65.8% in 2002/03 and 68.1% in 2003/04. In 2002/03, 34% of women with invasive cancer, and 29% with *in situ* cancer, had a mastectomy. In 2003/04 the figures were 30.2% and 30.6%, respectively.

BreastScreen WA Key Results for 2002/2003 and 2003/2004

The flowchart below summarises the outcomes of screening and assessment for women who attended for a screen from July 2002 to June 2004. It displays the information in two streams according to screening round - first screens or subsequent screens, for each 12 month financial year period from July to June.



SOURCE: a Table 14; b Table 17; c Table 21; d Table 23; e Table 27; f Table 31; 1 Benign outcome after diagnostic open biopsy, early review or other

Participation Rates

The BreastScreen program aims to achieve a greater than or equal to 70% participation rate for women in the target group of 50 to 69 years. Early detection leads to prompt intervention, resulting in a significant reduction of breast cancer-related morbidity and mortality. The participation rate is measured as the proportion of women in the target age group screened at least once over a 24-month period.

There was a 1.7% increase in the overall participation rate of women aged 50 to 69 years from 54.9% in 2001-2003 to 56.6% in 2002-2004 as shown in Table 1. This growth has been driven by the increase in the participation of metropolitan women, as the country participation has remained unchanged for several years. In 2001-2003, the participation rate of country women in the target age group was 5.2% higher than for metropolitan women. By 2002-2004, the gap had narrowed to only 1.2% higher, reflecting the growing participation of these women in the metropolitan area. In 2003, the metropolitan Fremantle clinic moved to larger premises which allowed for greater screening capacity. For the participation to increase, the number of women screened must outstrip the population growth. The target population grew by 3.4% over this period.

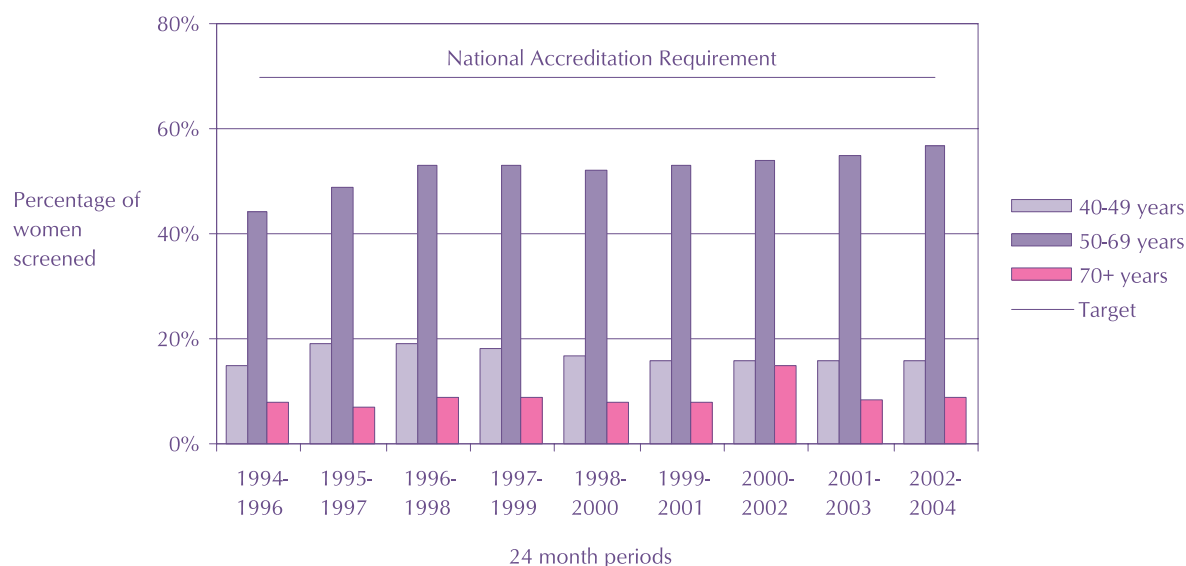
Table 1: Participation rates by place of residence by age , July 2001 to June 2003 and July 2002 to June 2004

Place of residence	Age group			Total
	40-49	50-69	70+	
2001-2003				
METROPOLITAN				
Number of women screened	16,511	74,477	4,987	95,975
Estimated female resident population	109,075	139,036	67,106	315,217
<i>% population screened</i>	15.1%	53.6%	7.4%	30.4%
COUNTRY				
Number of women screened	6,504	27,694	2,357	36,555
Estimated female resident population	37,162	47,064	19,605	103,831
<i>% population screened</i>	17.5%	58.8%	12.0%	35.2%
TOTAL				
Number of women screened	23,015	102,171	7,344	132,530
Estimated female resident population	146,237	186,100	86,711	419,048
<i>% population screened</i>	15.7%	54.9%	8.5%	31.6%
2002-2004				
METROPOLITAN				
Number of women screened	17,280	80,956	5,552	103,788
Estimated female resident population	110,801	143,856	68,889	323,546
<i>% population screened</i>	15.6%	56.3%	8.1%	32.1%
COUNTRY				
Number of women screened	6,432	28,008	2,373	36,813
Estimated female resident population	38,196	48,674	20,023	106,893
<i>% population screened</i>	16.8%	57.5%	11.9%	34.4%
TOTAL				
Number of women screened	23,712	108,964	7,925	140,601
Estimated female resident population	148,997	192,530	88,912	430,439
<i>% population screened</i>	15.9%	56.6%	8.9%	32.7%

Participation Rates

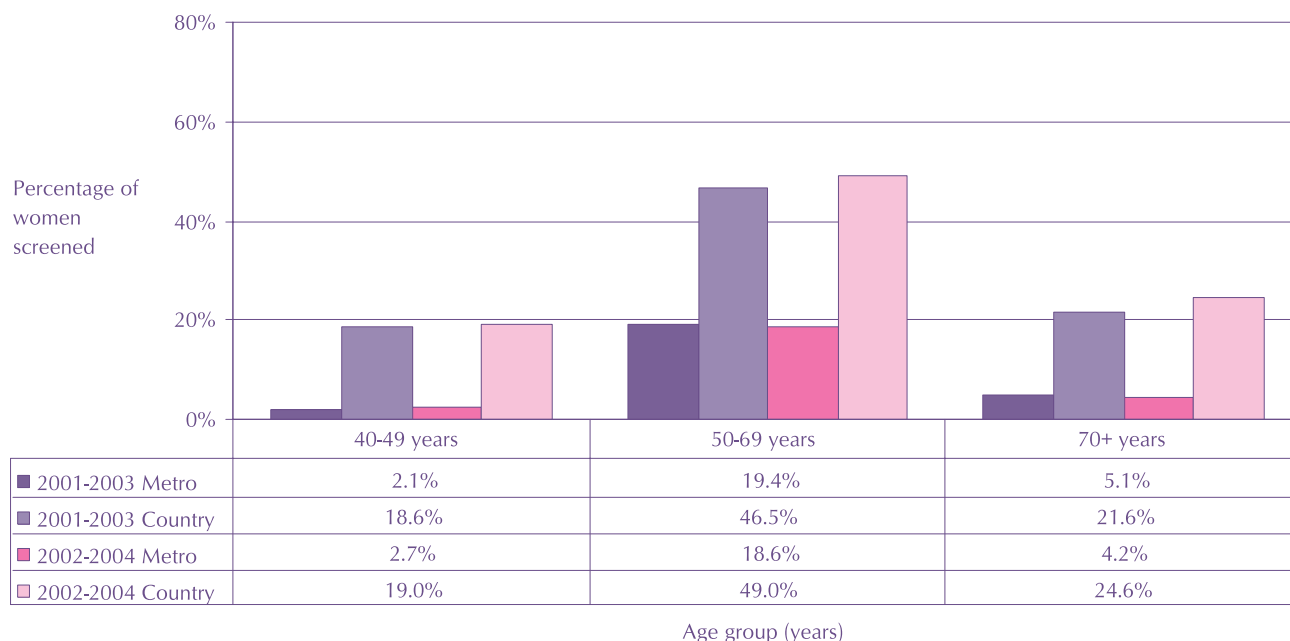
Figure 3 shows that from 1994-1996 to 2002-2004 there has been a steady increase in participation rates for women aged 50-69 years.

Figure 3: Participation rates by age from 1994-1996 to 2002-2004



The participation rate for Indigenous women in the target age group living in the metropolitan area was particularly low with 19.4% in 2001-2003 and 18.6% in 2002-2004, as shown in Figure 4. In contrast, Indigenous participation in the country was more than double the metropolitan rate with 46.5% and 49.0%, respectively.

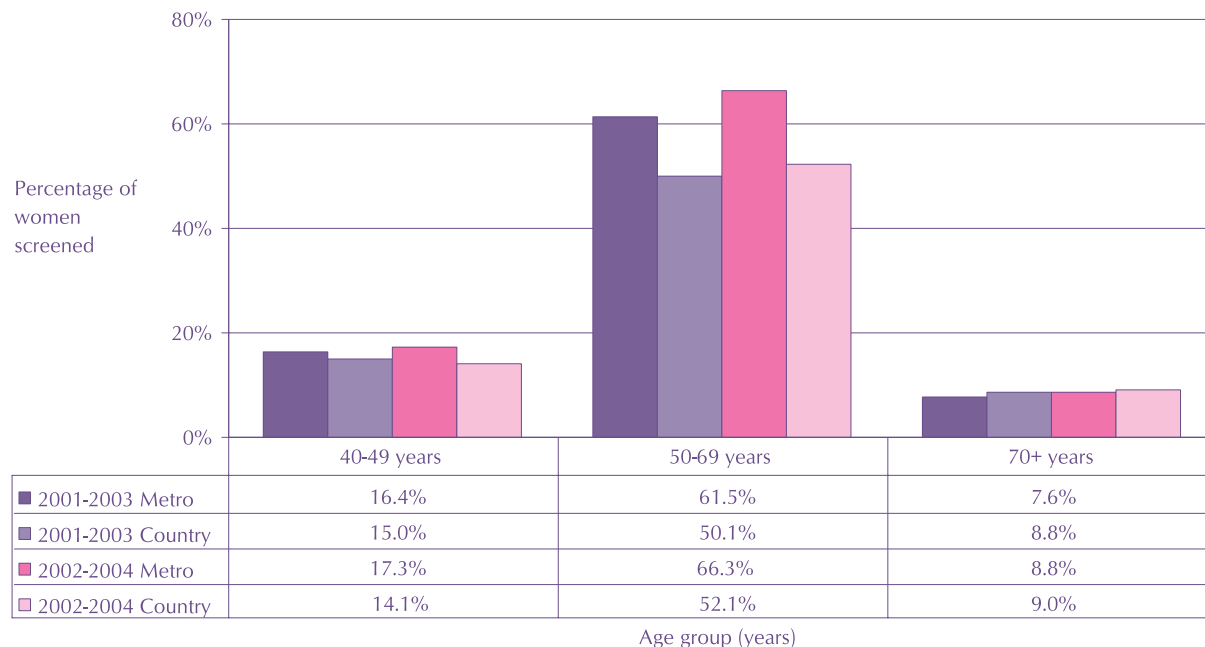
Figure 4: Participation rates of Indigenous women by place of residence and by age, July 2001 to June 2004



Participation Rates

The participation rate of culturally and linguistically diverse women (CALD) aged between 50 and 69 years and living in the metropolitan area was higher than the overall participation rate, reaching 61.5% in 2001-2003 and 66.3% in 2002-2004 (Figure 5). Fewer CALD women living in the country participated in the screening program compared with those in the metropolitan area in both 2001-2003 (50.1%) and 2002-2004 (52.1%).

Figure 5: Participation rates of CALD women by place of residence and by age, July 2001 to June 2004



The continuous challenge for BreastScreen WA is to promote the Service, have adequate capacity to accommodate the screenings and reach the target participation rate in a cost-effective way. Strategies are in place to encourage participation and cater for the needs of Indigenous women, CALD women, women with physical disabilities and those from rural areas or lower socioeconomic background. Invitation letters, printed materials in a range of languages, advertisements, interpreter services, community education and liaison with health professionals and extensive mobile unit coverage are examples of such operational strategies.

Characteristics of Women Screened

Demographic information such as place of residence, indigenous status and cultural background is collected to cater for any special needs required at screening and to provide information about the service's clientele. When a woman attends for a screening appointment, information is collected regarding personal history of breast cancer, family history of breast cancer, breast symptoms such as a lump or nipple discharge, presence of breast prostheses or use of hormone replacement therapy, as these may influence the interpretation of the films and the screening outcome.

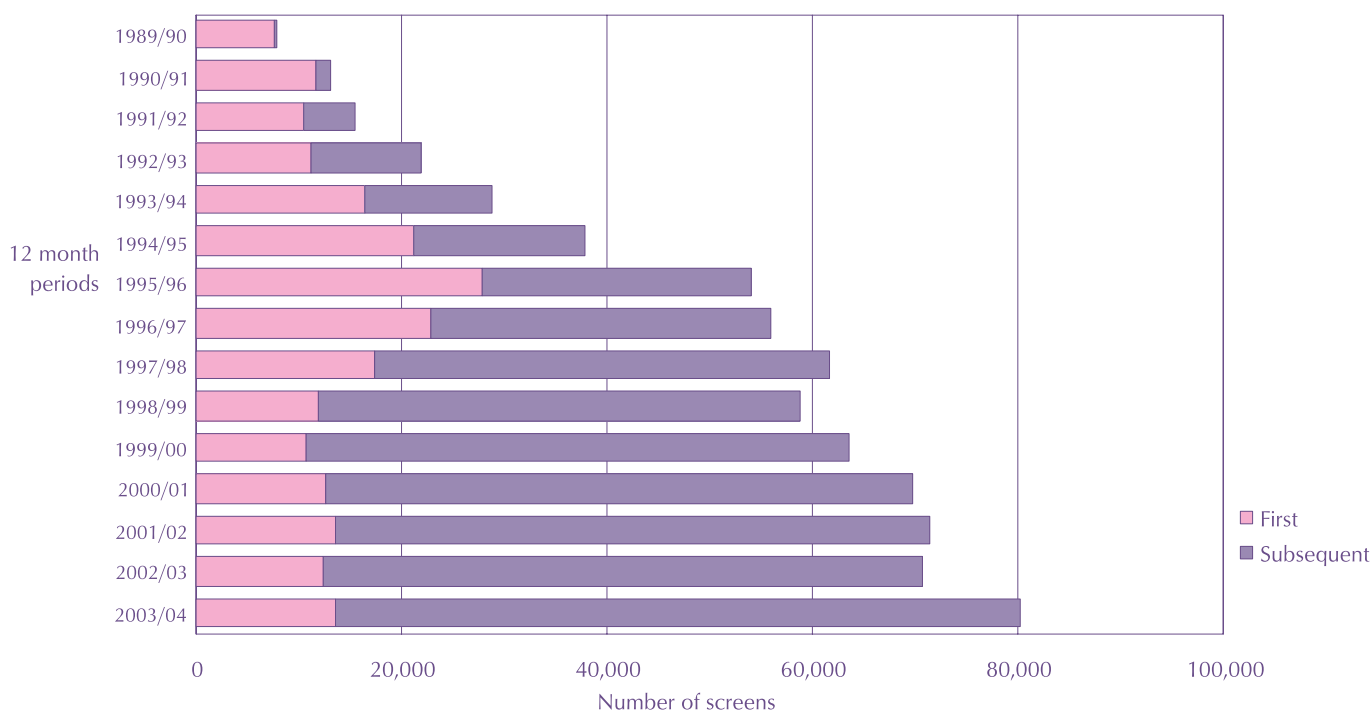
Type of Attendance

The number attending for screening has increased by almost 10,000 women from 2002/03 to 2003/04 as shown in both Table 2 and Figure 6. The proportion of women screened who are in the target age group has remained steady since 2001/02 (76.9%) - 77.6% in 2002/03 and 77.8% in 2003/04. In 2002/03 first screens made up 17.6% of all screens and in 2003/04 they made up 16.8% of all screens.

Table 2: Number of screens by round by age, July 2002 to June 2003 and July 2003 to June 2004

Type of Attendance	Age group						50-69	All ages
	<40	40-49	50-59	60-69	70-79	80+		
2002/03								
First screens	7	4,942	6,059	1,141	264	60	7,200	12,473
% of first screen	0.1%	39.6%	48.6%	9.1%	2.1%	0.5%	57.7%	100%
Subsequent screens	2	6,831	26,824	20,897	3,492	279	47,721	58,325
% of subsequent screen	0.0%	11.7%	46.0%	35.8%	6.0%	0.5%	81.8%	100%
TOTAL	9	11,773	32,883	22,038	3,756	339	54,921	70,798
% of all screens	0.0%	16.6%	46.4%	31.1%	5.3%	0.5%	77.6%	100%
2003/04								
First screens	10	5,749	6,271	1,121	250	74	7,392	13,475
% of first screens	0.1%	42.7%	46.5%	8.3%	1.9%	0.5%	54.9%	100%
Subsequent screens	5	7,494	31,161	23,936	3,938	306	55,097	66,840
% of subsequent screens	0.0%	11.2%	46.6%	35.8%	5.9%	0.5%	82.4%	100%
TOTAL	15	13,243	37,432	25,057	4,188	380	62,489	80,315
% of all screens	0.0%	16.5%	46.6%	31.2%	5.2%	0.5%	77.8%	100%

Figure 6: Number of screens by round by 12-month period between 1989/90 and 2003/04



Characteristics of Women Screened

Area of Residence

Table 3 shows that around three quarters of women screened in 2002/03 and 2003/04 resided in the metropolitan area. There was a 2.2% increase over this period in the proportion of metropolitan women screened in the target age group from 73.5% to 75.7%. The proportion of rural women aged 50-69 years being screened has fallen from 27.3% in 2001/02 to 26.4% in 2002/03 to 24.2% in 2003/04. Although the annual screening throughput in country areas is affected by the mobile unit schedules, declining population in some country areas, not necessarily reflected in the estimated population denominator, may also influence the figures.

Table 3: Number of women screened by place of residence by age, July 2002 to June 2003 and July 2003 to June 2004

Place of Residence	<40		40-49		Age group 50-69		70+		All ages	
	No.	%	No.	%	No.	%	No.	%	No.	%
2002/03										
METROPOLITAN	0	0.0%	8,626	73.3%	40,365	73.5%	2,754	67.3%	51,745	73.1%
COUNTRY	9	100.0%	3,135	26.6%	14,520	26.4%	1,339	32.7%	19,003	26.8%
Interstate/Unknown	0	0.0%	12	0.1%	36	0.1%	2	0.0%	50	0.1%
TOTAL	9	100%	11,773	100%	54,921	100%	4,095	100%	70,798	100%
2003/04										
METROPOLITAN	0	0.0%	9,675	73.1%	47,283	75.7%	3,402	74.5%	60,360	75.2%
COUNTRY	15	100.0%	3,550	26.8%	15,135	24.2%	1,162	25.4%	19,862	24.7%
Interstate/Unknown	0	0.0%	18	0.1%	71	0.1%	4	0.1%	93	0.1%
TOTAL	15	100%	13,243	100%	62,489	100%	4,568	100%	80,315	100%

Characteristics of Women Screened

Indigenous Women

In the 2001 Census, 1.4% (6,053) of all Western Australian women over the age of 40 years identified themselves as being of Aboriginal or Torres Strait Islander (ATSI) descent, with 41% being in the screening program target age group of 50 to 69 years and 68% living in rural and remote areas.¹

Over the two reporting periods there was a substantial rise in the total number of Indigenous women screened, from 645 (0.9% of all screens) in 2002/03 to 949 (1.2% of all screens) in 2003/04, as shown in Table 4. This difference most likely reflects the mobile unit schedules, where population make-up will vary across their routes over the two-year cycle. Nevertheless, these proportions in the screened population were lower than the proportion of ATSI women of the same age range in the general population calculated in the 2001 Census.

The proportion of ATSI women in the target age group increased from 62.0% to 66.9% of all ATSI women screened over the reporting periods, and was lower than that of non-indigenous women (77.7% and 77.9%, respectively) in both years. Women aged 40-49 made up a higher proportion of the ATSI screened population than they did in non-ATSI women, around 25% compared with 16%, respectively, for both reporting periods.

Table 4: Number of women screened by Indigenous status by age, July 2002 to June 2003 and July 2003 to June 2004

Indigenous Status	Age group				All ages	% of all women
	<40	40-49	50-69	70+		
2002/03						
ABORIGINAL OR TORRES STRAIT ISLANDER (ATSI) WOMEN						
Number of women screened	1	165	400	79	645	0.9%
% of women screened	0.2%	25.6%	62.0%	12.2%	100%	
NON-ABORIGINAL OR TORRES STRAIT ISLANDER (ATSI) WOMEN						
Number of women screened	8	11,608	54,521	4,016	70,153	99.1%
% of women screened	0.0%	16.5%	77.7%	5.7%	100%	
ALL WOMEN						
Number of women screened	9	11,773	54,921	4,095	70,798	100%
% of women screened	0.0%	16.6%	77.6%	5.8%	100%	
2003/04						
ABORIGINAL OR TORRES STRAIT ISLANDER (ATSI) WOMEN						
Number of women screened	1	240	635	73	949	1.2%
% of women screened	0.1%	25.3%	66.9%	7.7%	100%	
NON-ABORIGINAL OR TORRES STRAIT ISLANDER (ATSI) WOMEN						
Number of women screened	14	13,003	61,854	4,495	79,366	98.8%
% of women screened	0.0%	16.4%	77.9%	5.7%	100%	
ALL WOMEN						
Number of women screened	15	13,243	62,489	4,568	80,315	100%
% of women screened	0.0%	16.5%	77.8%	5.7%	100%	

¹ Australian Bureau of Statistics, Census of Population and Housing 2001.

Characteristics of Women Screened

Women Speaking a Language Other than English at Home

According to the 2001 Census, 12% of West Australian women over the age of 40 years are from culturally and linguistically diverse (CALD) backgrounds, speaking a language other than English at home. Of the women screened in 2002/03, 12.7% were of CALD background, and in 2003/04 12.9% were of CALD background (Table 5), indicating that they are well represented in the Service's screened population.

Of the CALD women, those in the target age group made up around 78% in both reporting years. This was not greatly different from the proportion in that age group speaking English at home.

Table 5: Number of women screened by language spoken at home by age, July 2002 to June 2003 and July 2003 to June 2004

CALD Status	Age group				All ages	% of all women
	<40	40-49	50-69	70+		
2002/03						
WOMEN SPEAKING LANGUAGE OTHER THAN ENGLISH AT HOME						
Number of women screened	0	1,534	7,016	434	8,984	12.7%
% of women screened	0.0%	17.1%	78.1%	4.8%	100%	
WOMEN SPEAKING ENGLISH AT HOME						
Number of women screened	9	10,239	47,905	3,661	61,814	87.3%
% of women screened	0.0%	16.6%	77.5%	5.9%	100%	
ALL WOMEN						
Number of women screened	9	11,773	54,921	4,095	70,798	100%
% of women screened	0.0%	16.6%	77.6%	5.8%	100%	
2003/04						
WOMEN SPEAKING LANGUAGE OTHER THAN ENGLISH AT HOME						
Number of women screened	0	1,670	8,154	554	10,378	12.9%
% of women screened	0.0%	16.1%	78.6%	5.3%	100%	
WOMEN SPEAKING ENGLISH AT HOME						
Number of women screened	15	11,573	54,335	4,014	69,937	87.1%
% of women screened	0.0%	16.5%	77.7%	5.7%	100%	
ALL WOMEN						
Number of women screened	15	13,243	62,489	4,568	80,315	100%
% of women screened	0.0%	16.5%	77.8%	5.7%	100%	

Characteristics of Women Screened

Table 6 shows the most common language spoken at home amongst women who attended screens in 2002/03 and 2003/04. Languages other than English commonly spoken at home are Italian, Chinese languages, Netherlandic, Croatian, German and Polish. Women speaking all other languages made up less than 7% of the total number of screens.

Table 6: Attendance by age and major languages spoken at home, July 2002 to June 2003 and July 2003 to June 2004

Language spoken at home	Attendance by age group									
	<40		40-49		50-69		70+		All ages	
	2002/03	2003/04	2002/03	2003/04	2002/03	2003/04	2002/03	2003/04	2002/03	2003/04
English	9	15	10,214	11,490	47,828	54,130	3,645	3,978	61,696	69,613
	100.0%	100.0%	86.8%	86.8%	87.1%	86.6%	89.0%	87.1%	87.1%	86.7%
Italian	0	0	224	246	1,821	1,949	162	198	2,207	2,393
	0.0%	0.0%	1.9%	1.9%	3.3%	3.1%	4.0%	4.3%	3.1%	3.0%
Chinese	0	0	114	130	464	563	11	15	589	708
	0.0%	0.0%	1.0%	1.0%	0.8%	0.9%	0.3%	0.3%	0.8%	0.9%
Netherlandic	0	0	35	35	399	396	44	69	478	500
	0.0%	0.0%	0.3%	0.3%	0.7%	0.6%	1.1%	1.5%	0.7%	0.6%
Croatian	0	0	57	76	361	452	20	31	438	559
	0.0%	0.0%	0.5%	0.6%	0.7%	0.7%	0.5%	0.7%	0.6%	0.7%
German	0	0	59	60	338	384	35	50	432	494
	0.0%	0.0%	0.5%	0.5%	0.6%	0.6%	0.9%	1.1%	0.6%	0.6%
Polish	0	0	83	67	287	338	16	27	386	432
	0.0%	0.0%	0.7%	0.5%	0.5%	0.5%	0.4%	0.6%	0.5%	0.5%
Cantonese	0	0	104	125	276	309	10	12	390	446
	0.0%	0.0%	0.9%	0.9%	0.5%	0.5%	0.2%	0.3%	0.6%	0.6%
Macedonian	0	0	44	42	257	256	11	13	312	311
	0.0%	0.0%	0.4%	0.3%	0.5%	0.4%	0.3%	0.3%	0.4%	0.4%
French	0	0	37	25	251	263	21	16	309	304
	0.0%	0.0%	0.3%	0.2%	0.5%	0.4%	0.5%	0.4%	0.4%	0.4%
Vietnamese	0	0	93	100	236	305	6	9	335	414
	0.0%	0.0%	0.8%	0.8%	0.4%	0.5%	0.1%	0.2%	0.5%	0.5%
Greek	0	0	34	39	205	268	13	12	252	319
	0.0%	0.0%	0.3%	0.3%	0.4%	0.4%	0.3%	0.3%	0.4%	0.4%
Spanish	0	0	58	53	197	256	10	21	265	330
	0.0%	0.0%	0.5%	0.4%	0.4%	0.4%	0.2%	0.5%	0.4%	0.4%
Tagalog (Filipino)	0	0	50	81	152	217	3	2	205	300
	0.0%	0.0%	0.4%	0.6%	0.3%	0.3%	0.1%	0.0%	0.3%	0.4%
Aboriginal Languages	0	0	25	83	77	205	16	36	118	324
	0.0%	0.0%	0.2%	0.6%	0.1%	0.3%	0.4%	0.8%	0.2%	0.4%
Other	0	0	542	591	1,772	2,198	72	79	2,386	2,868
	0.0%	0.0%	4.6%	4.5%	3.2%	3.5%	1.8%	1.7%	3.4%	3.6%
Total	9	15	11,773	13,243	54,921	62,489	4,095	4,568	70,798	80,315
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Characteristics of Women Screened

Country of Birth

Table 7 shows that 59% of women who attended screening were born in Australia. Of those whose country of origin was other than Australia, England had the greatest proportion with 16.2% in 2002/03 and 15.9% in 2003/04.

Table 7: Attendance by age and country of birth, July 2002 to June 2003 and July 2003 to June 2004

Country of origin	Attendance by age group									
	<40		40-49		50-69		70+		All ages	
	2002/03	2003/04	2002/03	2003/04	2002/03	2003/04	2002/03	2003/04	2002/03	2003/04
Australia	8	12	7,381	8,366	31,897	36,266	2,767	2,923	42,053	47,567
	88.9%	80.0%	62.7%	63.2%	58.1%	58.0%	67.6%	64.0%	59.4%	59.2%
England	0	0	1,548	1,706	9,343	10,376	594	728	11,485	12,810
	0.0%	0.0%	13.1%	12.9%	17.0%	16.6%	14.5%	15.9%	16.2%	15.9%
Italy	0	0	125	129	1,766	1,867	153	179	2,044	2,175
	0.0%	0.0%	1.1%	1.0%	3.2%	3.0%	3.7%	3.9%	2.9%	2.7%
Scotland	0	0	193	235	1,173	1,457	68	91	1,434	1,783
	0.0%	0.0%	1.6%	1.8%	2.1%	2.3%	1.7%	2.0%	2.0%	2.2%
New Zealand	1	3	341	415	1,005	1,128	26	28	1,373	1,574
	11.1%	20.0%	2.9%	3.1%	1.8%	1.8%	0.6%	0.6%	1.9%	2.0%
Malaysia	0	0	212	235	772	970	19	29	1,003	1,234
	0.0%	0.0%	1.8%	1.8%	1.4%	1.6%	0.5%	0.6%	1.4%	1.5%
Netherlands	0	0	54	49	909	871	63	98	1,026	1,018
	0.0%	0.0%	0.5%	0.4%	1.7%	1.4%	1.5%	2.1%	1.4%	1.3%
India	0	0	108	96	765	778	41	40	914	914
	0.0%	0.0%	0.9%	0.7%	1.4%	1.2%	1.0%	0.9%	1.3%	1.1%
Germany	0	0	69	81	625	770	36	57	730	908
	0.0%	0.0%	0.6%	0.6%	1.1%	1.2%	0.9%	1.2%	1.0%	1.1%
South Africa	0	0	163	180	431	560	19	21	613	761
	0.0%	0.0%	1.4%	1.4%	0.8%	0.9%	0.5%	0.5%	0.9%	0.9%
Yugoslavia, Federal Republic of	0	0	48	49	308	411	18	30	374	490
	0.0%	0.0%	0.4%	0.4%	0.6%	0.7%	0.4%	0.7%	0.5%	0.6%
Singapore	0	0	119	138	357	433	8	16	484	587
	0.0%	0.0%	1.0%	1.0%	0.7%	0.7%	0.2%	0.4%	0.7%	0.7%
Ireland	0	0	66	70	376	418	16	14	458	502
	0.0%	0.0%	0.6%	0.5%	0.7%	0.7%	0.4%	0.3%	0.6%	0.6%
Vietnam	0	0	119	131	302	381	6	10	427	522
	0.0%	0.0%	1.0%	1.0%	0.5%	0.6%	0.1%	0.2%	0.6%	0.6%
Philippines	0	0	95	136	242	378	4	2	341	516
	0.0%	0.0%	0.8%	1.0%	0.4%	0.6%	0.1%	0.0%	0.5%	0.6%
Other	0	0	1,132	1,227	4,650	5,425	257	302	6,039	6,954
	0.0%	0.0%	9.6%	9.3%	8.5%	8.7%	6.3%	6.6%	8.5%	8.7%
Total	9	15	11,773	13,243	54,921	62,489	4,095	4,568	70,798	80,315
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Characteristics of Women Screened

Personal History of Breast Cancer

Women with a personal history of breast cancer whether diagnosed at a previous screen with BreastScreen WA or detected outside the program are invited for annual routine screen. Table 8 shows that in 2002/03 and 2003/04 the service screened a similar proportion of women with personal history of breast cancer - 1,226 (1.7%) and 1,511 (1.9%), respectively.

Table 8: Number of screens where women reported personal history of breast cancer by age, July 2002 to June 2003 and July 2003 to June 2004

	Age group														All ages		
	<40		40-49		50-59		60-69		70-79		80+		50-69			No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
2002/03																	
Personal history	0	0.0%	60	0.5%	381	1.2%	559	2.5%	186	5.0%	40	11.8%	940	1.7%	1,226	1.7%	
No personal history	9	100.0%	11,713	99.5%	32,502	98.8%	21,479	97.5%	3,570	95.0%	299	88.2%	53,981	98.3%	69,572	98.3%	
ALL WOMEN SCREENED	9	100%	11,773	100%	32,883	100%	22,038	100%	3,756	100%	339	100%	54,921	100%	70,798	100%	
2003/04																	
Personal history	0	0.0%	60	0.5%	530	1.4%	642	2.6%	235	5.6%	44	11.6%	1,172	1.9%	1,511	1.9%	
No personal history	15	100.0%	13,183	99.5%	36,902	98.6%	24,415	97.4%	3,953	94.4%	336	88.4%	61,317	98.1%	78,804	98.1%	
ALL WOMEN SCREENED	15	100%	13,243	100%	37,432	100%	25,057	100%	4,188	100%	380	100%	62,489	100%	80,315	100%	

Family History of Breast Cancer

Women were considered to have a higher risk of breast cancer if one or more of their first degree relatives (mother, sister, daughter, father, brother or son) were diagnosed with breast cancer. In the period covered by this Report, these women were invited annually for a screen. The Table below shows that 17.8% of women (12,602) in 2002/03 and 17.6% of women (14,136) in 2003/04 indicated a family history of breast cancer.

Table 9: Number of screens where women reported a family history of breast cancer by age, July 2002 to June 2003 and July 2003 to June 2004

	Age group														All ages		
	<40		40-49		50-59		60-69		70-79		80+		50-69			No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
2002/03																	
Family history	8	88.9%	2,226	18.9%	5,284	16.1%	4,109	18.6%	884	23.5%	91	26.8%	9,393	17.1%	12,602	17.8%	
No family history	1	11.1%	9,547	81.1%	27,599	83.9%	17,929	81.4%	2,872	76.5%	248	73.2%	45,528	82.9%	58,196	82.2%	
ALL WOMEN SCREENED	9	100%	11,773	100%	32,883	100%	22,038	100%	3,756	100%	339	100%	54,921	100%	70,798	100%	
2003/04																	
Family history	13	86.7%	2,564	19.4%	5,897	15.8%	4,590	18.3%	975	23.3%	97	25.5%	10,487	16.8%	14,136	17.6%	
No family history	2	13.3%	10,679	80.6%	31,535	84.2%	20,467	81.7%	3,213	76.7%	283	74.5%	52,002	83.2%	66,179	82.4%	
ALL WOMEN SCREENED	15	100%	13,243	100%	37,432	100%	25,057	100%	4,188	100%	380	100%	62,489	100%	80,315	100%	

Since March 2006 women who have only one first degree relative with breast cancer, and where that cancer was diagnosed at age 50 or more, will be returned to biennial screening as they are deemed not to have a significant family history of breast cancer. The remainder will continue to be offered annual screening.

Characteristics of Women Screened

Women Reporting Symptoms at Screen

If a significant symptom such as a breast lump or nipple discharge (blood stained, clear or non-specific discharge) is mentioned at the time of booking, the woman is encouraged to consult her general practitioner first for a clinical examination. Women who present at screening with a symptom will be screened. Following a normal screen, they are followed up to encourage the investigation of the symptom. An appointment at Royal Perth Hospital or Sir Charles Gairdner Hospital assessment centres may be offered if the symptom has not been investigated by a GP.

Fewer than 1% of women reported a significant breast symptom at the time of screening as shown in Table 10. Women in the 40-49 year age group reported the highest proportion of symptoms, predominantly a lump, with 1.4% in 2002/03 and 1.7% in 2003/04. The category 'Pain/other' includes new, prolonged and/or severe pain or any other symptoms which are not considered significant.

Table 10: Number of screens where women reported symptoms by age, July 2002 to June 2003 and July 2003 to June 2004

	Age group						50-69	All ages
	<40	40-49	50-59	60-69	70-79	80+		
2002/03								
SYMPTOMS REPORTED								
Breast lump	1	137	201	59	11	2	260	411
Nipple discharge	0	21	26	17	3	1	43	68
Breast lump + nipple discharge	0	1	1	0	0	0	1	2
Sub-total	1	159	228	76	14	3	304	481
% Sub-total	11.1%	1.4%	0.7%	0.3%	0.4%	0.9%	0.6%	0.7%
Pain / other	0	39	86	66	13	3	152	207
% Pain / other	0.0%	0.3%	0.3%	0.3%	0.3%	0.9%	0.3%	0.3%
Total Symptoms	1	198	314	142	27	6	456	688
NO SYMPTOMS REPORTED	8	11,575	32,569	21,896	3,729	333	54,465	70,110
% of no symptoms reported	88.9%	98.3%	99.0%	99.4%	99.3%	98.2%	99.2%	99.0%
ALL WOMEN SCREENED	9	11,773	32,883	22,038	3,756	339	54,921	70,798
% of all women screened	100%	100%	100%	100%	100%	100%	100%	100%
2003/04								
SYMPTOMS REPORTED								
Breast lump	1	176	260	101	20	3	361	561
Nipple discharge	0	45	32	23	1	0	55	101
Breast lump + nipple discharge	0	2	2	0	0	0	2	4
Sub-total	1	223	294	124	21	3	418	666
% Sub-total	6.7%	1.7%	0.8%	0.5%	0.5%	0.8%	0.7%	0.8%
Pain / other	0	62	89	71	12	3	160	237
% Pain / other	0.0%	0.5%	0.2%	0.3%	0.3%	0.8%	0.3%	0.3%
Total Symptoms	1	285	383	195	33	6	578	903
NO SYMPTOMS REPORTED	14	12,958	37,049	24,862	4,155	374	61,911	79,412
% of no symptoms reported	93.3%	97.8%	99.0%	99.2%	99.2%	98.4%	99.1%	98.9%
ALL WOMEN SCREENED	15	13,243	37,432	25,057	4,188	380	62,489	80,315
% of all women screened	100%	100%	100%	100%	100%	100%	100%	100%

Characteristics of Women Screened

Hormone Replacement Therapy Use

Hormone replacement therapy (HRT) use is associated with increased breast density, making interpretation of the breast x-ray more difficult. Information is collected at screening regarding any HRT use over the last six months. The use of HRT has fallen 6.2% in the screened population from 27.7% in 2002/03 to 21.5% in 2003/04 (Table 11). A similar trend was reported for women in the target age group with a drop from 31.2% to 24.1% in HRT use over this time period. HRT use was greatest in the 50-69 year age group.

Table 11: Number of screens where women reported using HRT by age, July 2002 to June 2003 and July 2003 to June 2004

	Age group															
	<40		40-49		50-59		60-69		70-79		80+		50-69		All ages	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
2002/03																
HRT reported	0	0.0%	1,591	13.5%	10,604	32.2%	6,545	29.7%	863	23.0%	42	12.4%	17,149	31.2%	19,645	27.7%
No HRT reported	9	100.0%	10,182	86.5%	22,279	67.8%	15,493	70.3%	2,893	77.0%	297	87.6%	37,772	68.8%	51,153	72.3%
ALL WOMEN SCREENED	9	100%	11,773	100%	32,883	100%	22,038	100%	3,756	100%	339	100%	54,921	100%	70,798	100%
2003/04																
HRT reported	0	0.0%	1,462	11.0%	9,509	25.4%	5,557	22.2%	699	16.7%	42	11.1%	15,066	24.1%	17,269	21.5%
No HRT reported	15	100.0%	11,781	89.0%	27,923	74.6%	19,500	77.8%	3,489	83.3%	338	88.9%	47,423	75.9%	63,046	78.5%
ALL WOMEN SCREENED	15	100%	13,243	100%	37,432	100%	25,057	100%	4,188	100%	380	100%	62,489	100%	80,315	100%

Women with Breast Implants

Screening of women with breast implants is more complex. It requires special compression techniques and more views to be taken, and makes mammography less effective in breast cancer detection. Women are sent a pamphlet containing information about mammography and breast implants prior to their screen. In addition to the standard consent form, women are given another form that outlines the difficulties in screening and detecting abnormalities in breasts with implants. The notification of screening results to the women and their nominated GP contains advice about regular clinical breast examination. Table 12 shows that 0.9% of screens were in women with breast implants in both 2002/03 (661) and 2003/04 (692).

Table 12: Number of screens where women had breast implants by age, July 2002 to June 2003 and July 2003 to June 2004

	Age group															
	<40		40-49		50-59		60-69		70-79		80+		50-69		All ages	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
2002/03																
Breast implants	0	0.0%	131	1.1%	390	1.2%	132	0.6%	7	0.2%	1	0.3%	522	1.0%	661	0.9%
No breast implants	9	100.0%	11,642	98.9%	32,493	98.8%	21,906	99.4%	3,749	99.8%	338	99.7%	54,399	99.0%	70,137	99.1%
ALL WOMEN SCREENED	9	100%	11,773	100%	32,883	100%	22,038	100%	3,756	100%	339	100%	54,921	100%	70,798	100%
2003/04																
Breast implants	0	0.0%	115	0.9%	424	1.1%	148	0.6%	5	0.1%	0	0.0%	572	0.9%	692	0.9%
No breast implants	15	100.0%	13,128	99.1%	37,008	98.9%	24,909	99.4%	4,183	99.9%	380	100.0%	61,917	99.1%	79,623	99.1%
ALL WOMEN SCREENED	15	100%	13,243	100%	37,432	100%	25,057	100%	4,188	100%	380	100%	62,489	100%	80,315	100%

Rescreen Rates

The recommended interval for screening is two years. Annual screening is only recommended for women who have a family history of breast cancer, personal history of breast cancer or have previously been diagnosed with high risk breast changes such as atypical hyperplasias. The data in Table 13 includes women who have either a yearly or 2-yearly rescreen recommendation.

The National Accreditation Standards require that at least 75% of women in the target age group screened for the first time, and at least 90% of women in the target age group participating in their second or subsequent screen, return for a rescreen within 27 months. The 27 months period is set to allow time for women to respond to their rescreen letters. Table 13 shows that for screens in 2000/01, 58.2% of women in the target age group having their first screens, and 73.7% of women having second or subsequent screens, returned for a rescreen within 27 months. In 2001/02, 61.9% of women in the target age group having their first screens, and 77.0% of those having second or subsequent screens, returned for a rescreen within 27 months.

Table 13: Number of women who returned for a rescreen within 27 months of their 2000/01 and 2001/02 screen

Type of screening	Age group			Total
	40-49	50-69	70+	
2000/01				
FIRST SCREENS				
No. of women screened 2000/01	5,477	6,502	530	12,509
No. of women attending rescreening	3,123	3,787	70	6,980
<i>% of women rescreened</i>	57.0%	58.2%	13.2%	55.8%
SUBSEQUENT SCREENS				
No. of women screened 2000/01	6,760	46,406	3,624	56,790
No. of women attending rescreening	5,001	34,221	1,451	40,673
<i>% of women rescreened</i>	74.0%	73.7%	40.0%	71.6%
TOTAL				
No. of women screened 2000/01	12,237	52,908	4,154	69,299
No. of women attending rescreening	8,124	38,008	1,521	47,653
<i>% of women rescreened</i>	66.4%	71.8%	36.6%	68.8%
2001/02				
FIRST SCREENS				
No. of women screened 2001/02	5,230	7,831	384	13,445
No. of women attending rescreening	3,103	4,844	63	8,010
<i>% of women rescreened</i>	59.3%	61.9%	16.4%	59.6%
SUBSEQUENT SCREENS				
No. of women screened 2001/02	7,349	46,681	3,462	57,492
No. of women attending rescreening	5,568	35,937	1,537	43,042
<i>% of women rescreened</i>	75.8%	77.0%	44.4%	74.9%
TOTAL				
No. of women screened 2001/02	12,579	54,512	3,846	70,937
No. of women attending rescreening	8,671	40,781	1,600	51,052
<i>% of women rescreened</i>	68.9%	74.8%	41.6%	72.0%

Outcomes of Screening

On completion of the screening film reading, the outcome will either be assessment required or return to routine rescreen. Referral for assessment is recommended if a suspicious lesion is found or a significant symptom reported at screen had not been previously investigated by the woman's general practitioner.

The National Accreditation Standards performance measure is that < 10% of women aged 50-69 years who attend for their first screen and < 5% of women aged 50-69 years who attend for their second or subsequent screen are recalled for assessment. The rationale for keeping recall rates low is to prevent any unnecessary concern for the woman, without increasing significantly the chance of missing an important lesion. According to results in Table 14, the majority of women screened were referred for routine rescreening. In 2002/03, 11% of women aged 50-69 years attending for their first screens were referred for assessment. In 2003/04, 10.4% of first screen target age women were referred. Of those women attending their second or subsequent screens, 3.7% in 2002/03 and 3.3% in 2003/04 were referred for assessment.

Table 14: Outcomes of screening by round by age, July 2002 to June 2003 and July 2003 to June 2004

Outcomes of screening	Age group					50-69		All ages	
	<40	40-49	50-59	60-69	70+	No.	%	No.	%
2002/03									
FIRST SCREENS									
Routine rescreening	7	4,309	5,365	1,043	283	6,408	89.0%	11,007	88.2%
Referred for assessment	0	633	694	98	41	792	11.0%	1,466	11.8%
Sub-total	7	4,942	6,059	1,141	324	7,200	100%	12,473	100%
SUBSEQUENT SCREENS									
Routine rescreening	2	6,506	25,781	20,190	3,614	45,971	96.3%	56,093	96.2%
Referred for assessment	0	326	1,040	709	157	1,749	3.7%	2,232	3.8%
Sub-total	2	6,832	26,821	20,899	3,771	47,720	100%	58,325	100%
ALL SCREENS									
Routine rescreening	9	10,815	31,146	21,233	3,897	52,379	95.4%	67,100	94.8%
Referred for assessment	0	959	1,734	807	198	2,541	4.6%	3,698	5.2%
TOTAL	9	11,774	32,880	22,040	4,095	54,920	100%	70,798	100%
2003/04									
FIRST SCREENS									
Routine rescreening	9	5,056	5,608	1,018	294	6,626	89.6%	11,985	88.9%
Referred for assessment	1	693	663	103	30	766	10.4%	1,490	11.1%
Sub-total	10	5,749	6,271	1,121	324	7,392	100%	13,475	100%
SUBSEQUENT SCREENS									
Routine rescreening	4	7,089	30,063	23,232	4,113	53,295	96.7%	64,501	96.5%
Referred for assessment	1	405	1,098	704	131	1,802	3.3%	2,339	3.5%
Sub-total	5	7,494	31,161	23,936	4,244	55,097	100%	66,840	100%
ALL SCREENS									
Routine rescreening	13	12,145	35,671	24,250	4,407	59,921	95.9%	76,486	95.2%
Referred for assessment	2	1,098	1,761	807	161	2,568	4.1%	3,829	4.8%
TOTAL	15	13,243	37,432	25,057	4,568	62,489	100%	80,315	100%

Outcomes of Assessment

Assessment Procedures

When a woman is recommended for assessment, an appointment is offered at one of the program's assessment centres located at either Royal Perth Hospital or Sir Charles Gairdner Hospital. Alternatively, she may choose to be assessed privately. Women screened in the country areas are offered diagnostic further views on the mobile screening units. If further investigation is required, the woman is advised to attend the metropolitan assessment centres for further work up or have the lesion assessed privately via her GP. Procedures undertaken to assess a lesion or symptom include special magnified mammographic views, clinical examination, ultrasound, needle biopsy or surgical biopsy. All women, including those privately assessed, will be followed up to ensure a satisfactory outcome is achieved.

Diagnostic x-rays outside the program are classified as 'other mammography' as the full details of the films could not be obtained. 'Other mammography' may also include x-rays taken after an excision or needle biopsy, or x-rays taken at an early review visit.

In 2002/03 3,607 (5.1%) women, and in 2003/04 3,794 (4.7%) women, had one or more procedures as shown in Table 15. The number of women who had procedures at assessment does not equal the number of women referred as some women chose not to be assessed. A woman may have more than one procedure during her visit or more than one lesion assessed using different techniques. The average number of investigations per woman was two procedures, for both reporting years. Clinical examination and ultrasound remain the most common assessment procedures undertaken, making up 50.6% of all procedures in 2002/03 and 52.9% in 2003/04. Diagnostic open biopsy was carried out if the other procedures could not provide a definitive result.

Table 15: Assessment procedures performed by round, July 2002 to June 2003 and July 2003 to June 2004

Procedure	First screens		Subsequent screens		All screens	
	No.	%	No.	%	No.	%
2002/03						
Diagnostic Further Views	516	19.1%	772	18.2%	1,288	18.6%
Clinical examination	672	24.8%	1,103	26.1%	1,775	25.6%
Ultrasound	720	26.6%	1,013	23.9%	1,733	25.0%
Fine needle aspiration	242	8.9%	407	9.6%	649	9.4%
Core biopsy	412	15.2%	697	16.5%	1,109	16.0%
Other mammography	85	3.1%	131	3.1%	216	3.1%
Diagnostic open biopsy	61	2.3%	110	2.6%	171	2.5%
TOTAL PROCEDURES	2,708	100%	4,233	100%	6,941	100%
Total women attending for assessment	1,424		2,183		3,607	
Average number of investigations per woman	1.9		1.9		1.9	
2003/04						
Diagnostic Further Views	466	16.6%	757	17.2%	1,223	16.9%
Clinical examination	660	23.4%	1,140	25.9%	1,800	24.9%
Ultrasound	844	30.0%	1,178	26.7%	2,022	28.0%
Fine needle aspiration	270	9.6%	442	10.0%	712	9.9%
Core biopsy	424	15.1%	685	15.6%	1,109	15.4%
Other mammography	102	3.6%	107	2.4%	209	2.9%
Diagnostic open biopsy	49	1.7%	96	2.2%	145	2.0%
TOTAL PROCEDURES	2,815	100%	4,405	100%	7,220	100%
Total women attending for assessment	1,475		2,319		3,794	
Average number of investigations per woman	1.9		1.9		1.9	

Outcomes of Assessment

The Definitive Diagnostic Procedure

A combination of procedures is usually required to reach a definitive decision at assessment. Data in Table 16 indicate the procedure undertaken before a return to normal screening was recommended or a definitive diagnosis was attained. In 2002/03 3,606 women, and in 2003/04 3,794 women, had one or more assessment procedures. One woman in 2002/03 did not have a definitive diagnosis from any of the procedures listed as she was undergoing chemotherapy treatment for other cancer metastases. In 2002/03 61.6%, and in 2003/04 62.2% of women required only further (diagnostic) views, clinical examination or ultrasound to reach a definitive outcome. For the two reporting years a fine needle or a core biopsy was required by 33.8% and 34.1%, and a diagnostic open biopsy by 4.7% and 3.8%, respectively, before a definitive diagnosis of benign or malignant was reached.

Outcomes of Assessment

Table 16: Procedures giving a definitive diagnosis by round by age, July 2002 to June 2003 and July 2003 to June 2004

Procedure	Age group						50-69	All ages
	<40	40-49	50-59	60-69	70-79	80+		
2002/03								
FURTHER VIEWS ONLY (FV)								
First screens	0	228	246	32	12	1	278	519
Subsequent screens	0	148	372	218	33	3	590	774
Sub-total	0	376	618	250	45	4	868	1,293
% of Sub-total	0.0%	40.4%	36.7%	31.4%	25.3%	23.5%	35.0%	35.9%
CLINICAL EXAMINATION (CE) +/- FV								
First screens	0	33	20	2	0	1	22	56
Subsequent screens	0	14	49	23	8	1	72	95
Sub-total	0	47	69	25	8	2	94	151
% of Sub-total	0.0%	5.0%	4.1%	3.1%	4.5%	11.8%	3.8%	4.2%
ULTRASOUND (US) +/- FV, CE								
First screens	0	161	147	18	4	2	165	332
Subsequent screens	0	72	199	145	26	0	344	442
Sub-total	0	233	346	163	30	2	509	774
% of Sub-total	0.0%	25.0%	20.5%	20.5%	16.9%	11.8%	20.5%	21.5%
FINE NEEDLE ASPIRATION (FNA) +/- FV, CE, US, OM								
First screens	0	65	59	7	2	0	66	133
Subsequent screens	0	23	98	74	17	1	172	213
Sub-total	0	88	157	81	19	1	238	346
% of Sub-total	0.0%	9.5%	9.3%	10.2%	10.7%	5.9%	9.6%	9.6%
CORE BIOPSY (CB) +/- FV, CE, US, OM, FNA								
First screens	0	109	167	29	13	5	196	323
Subsequent screens	0	46	246	205	51	2	451	550
Sub-total	0	155	413	234	64	7	647	873
% of Sub-total	0.0%	16.6%	24.5%	29.4%	36.0%	41.2%	26.1%	24.2%
DIAGNOSTIC OPEN BIOSY (DOB) +/- any of the above procedures								
First screens	0	22	32	7	0	0	39	61
Subsequent screens	0	10	50	35	12	1	85	108
Sub-total	0	32	82	42	12	1	124	169
% of Sub-total	0.0%	3.4%	4.9%	5.3%	6.7%	5.9%	5.0%	4.7%
TOTAL								
First screens	0	618	671	95	31	9	766	1,424
Subsequent screens	0	313	1,014	700	147	8	1,714	2,182
ALL SCREENS	0	931	1,685	795	178	17	2,480	3,606
% Total	-	100%	100%	100%	100%	100%	100%	100%
2003/04								
FURTHER VIEWS ONLY (FV)								
First screens	1	225	211	32	3	0	243	472
Subsequent screens	1	158	348	216	36	1	564	760
Sub-total	2	383	559	248	39	1	807	1,232
% of Sub-total	100.0%	35.4%	31.9%	31.0%	27.5%	5.9%	31.6%	32.5%
CLINICAL EXAMINATION (CE) +/- FV								
First screens	0	20	21	1	0	0	22	42
Subsequent screens	0	15	50	20	4	0	70	89
Sub-total	0	35	71	21	4	0	92	131
% of Sub-total	0.0%	3.2%	4.1%	2.6%	2.8%	0.0%	3.6%	3.5%
ULTRASOUND (US) +/- FV, CE								
First screens	0	216	184	28	3	2	212	433
Subsequent screens	0	124	276	140	20	0	416	560
Sub-total	0	340	460	168	23	2	628	993
% of Sub-total	0.0%	31.5%	26.3%	21.0%	16.2%	11.8%	24.6%	26.2%
FINE NEEDLE ASPIRATION (FNA) +/- FV, CE, US, OM								
First screens	0	61	61	4	5	3	65	134
Subsequent screens	0	30	107	86	14	2	193	239
Sub-total	0	91	168	90	19	5	258	373
% of Sub-total	0.0%	8.4%	9.6%	11.2%	13.4%	29.4%	10.1%	9.8%
CORE BIOPSY (CB) +/- FV, CE, US, OM, FNA								
First screens	0	136	162	35	9	3	197	345
Subsequent screens	0	63	262	206	39	6	468	576
Sub-total	0	199	424	241	48	9	665	921
% of Sub-total	0.0%	18.4%	24.2%	30.1%	33.8%	52.9%	26.1%	24.3%
DIAGNOSTIC OPEN BIOSY (DOB) +/- any procedures above								
First screens	0	23	21	4	1	0	25	49
Subsequent screens	0	10	48	29	8	0	77	95
Sub-total	0	33	69	33	9	0	102	144
% of Sub-total	0.0%	3.1%	3.9%	4.1%	6.3%	0.0%	4.0%	3.8%
TOTAL								
First screens	1	681	660	104	21	8	764	1,475
Subsequent screens	1	400	1,091	697	121	9	1,788	2,319
ALL SCREENS	2	1,081	1,751	801	142	17	2,552	3,794
% Total	100%	100%	100%	100%	100%	100%	100%	100%

Outcomes of Assessment

Recommendation after Assessment

At the completion of the radiological, clinical and needle biopsy stage of assessment, women are given an overall recommendation to return to normal screening, asked to return for a review of the lesion in 6 month's time (early review), recommended for surgical biopsy or referred to have definitive treatment for a malignancy. Those who chose therapeutic excision for a benign lesion, did not complete their assessments or had a leaking prosthesis where they will be under the future care of the surgeon were classified as "Other" in the accompanying Table 17.

Table 17: Recommendation after assessment by round by age, July 2002 to June 2003 and July 2003 to June 2004

Recommendation	Age group						50-69		All ages	
	<40	40-49	50-59	60-69	70-79	80+	Screens	%	Screens	%
2002/03										
FIRST SCREENS										
Definitive Treatment for Cancer	0	13	51	12	5	2	63	8.2%	83	5.8%
Diagnostic Open Biopsy	0	22	31	7	0	0	38	5.0%	60	4.2%
Early Review	0	19	17	2	1	0	19	2.5%	39	2.7%
Other	0	2	1	1	0	0	2	0.3%	4	0.3%
Return to routine screening	0	562	571	73	25	7	644	84.1%	1,238	86.9%
Sub-total	0	618	671	95	31	9	766	100%	1,424	100%
SUBSEQUENT SCREENS										
Definitive Treatment for Cancer	0	13	142	143	40	2	285	16.6%	340	15.6%
Diagnostic Open Biopsy	0	10	47	35	14	1	82	4.8%	107	4.9%
Early Review	0	6	17	14	4	0	31	1.8%	41	1.9%
Other	0	4	3	3	0	0	6	0.3%	10	0.5%
Return to routine screening	0	280	806	505	89	5	1,311	76.4%	1,685	77.2%
Sub-total	0	313	1,015	700	147	8	1,715	100%	2,183	100%
ALL SCREENS										
Definitive Treatment for Cancer	0	26	193	155	45	4	348	14.0%	423	11.7%
Diagnostic Open Biopsy	0	32	78	42	14	1	120	4.8%	167	4.6%
Early Review	0	25	34	16	5	0	50	2.0%	80	2.2%
Other	0	6	4	4	0	0	8	0.3%	14	0.4%
Return to routine screening	0	842	1,377	578	114	12	1,955	78.8%	2,923	81.0%
TOTAL	0	931	1,686	795	178	17	2,481	100%	3,607	100%
2003/04										
FIRST SCREENS										
Definitive Treatment for Cancer	0	21	42	20	8	6	62	8.1%	97	6.6%
Diagnostic Open Biopsy	0	24	19	4	1	0	23	3.0%	48	3.3%
Early Review	0	16	25	3	0	0	28	3.7%	44	3.0%
Other	0	2	5	0	1	0	5	0.7%	8	0.5%
Return to routine screening	1	618	569	77	11	2	646	84.6%	1,278	86.6%
Sub-total	1	681	660	104	21	8	764	100%	1,475	100%
SUBSEQUENT SCREENS										
Definitive Treatment for Cancer	0	17	155	139	31	3	294	16.4%	345	14.9%
Diagnostic Open Biopsy	0	11	45	28	7	0	73	4.1%	91	3.9%
Early Review	0	11	20	9	3	0	29	1.6%	43	1.9%
Other	0	1	4	8	0	1	12	0.7%	14	0.6%
Return to routine screening	1	360	867	513	80	5	1,380	77.2%	1,826	78.7%
Sub-total	1	400	1,091	697	121	9	1,788	100%	2,319	100%
ALL SCREENS										
Definitive Treatment for Cancer	0	38	197	159	39	9	356	13.9%	442	11.6%
Diagnostic Open Biopsy	0	35	64	32	8	0	96	3.8%	139	3.7%
Early Review	0	27	45	12	3	0	57	2.2%	87	2.3%
Other	0	3	9	8	1	1	17	0.7%	22	0.6%
Return to routine screening	2	978	1,436	590	91	7	2,026	79.4%	3,104	81.8%
TOTAL	2	1,081	1,751	801	142	17	2,552	100%	3,794	100%

The majority of women, 81% in 2002/03 and 81.8% in 2003/04, had a benign outcome of assessment and were returned to routine screening. More women having first screens were returned to routine screening (86.9% and 86.6%, respectively) compared to those having subsequent screens (77.2% and 78.7%).

In 2002/03 and 2003/04, 80 and 87 women, respectively, were required to return in 6 months for review of their lesion. It is desirable that women receive a definitive outcome of assessment at their first visit and that assessment is completed within 14 days. The National Accreditation Standards state that no more than 0.2% of women who attend for screening are recommended for early review. For both reporting years, early reviews comprised only 0.11% of all screens. An early review recommendation is made usually because nothing suspicious was noted at work up but there was still concern that the lesion needed watching.

Outcomes of Assessment

The Definitive Diagnosis

Table 18 shows that of the women who attended assessment, 3,127 (86.7%) in 2002/03 and 3,296 (86.9%) in 2003/04 had benign outcomes, while 474 (13.1%) and 485 (12.8%) had malignant outcomes. For a large proportion of women with a benign outcome, a result was obtained after only requiring further views - 41.2% in 2002/03 and 37.1% in 2003/04.

In 2002/03, women attending for their first screen made up 39.5% of all women assessed and 20.6% of the breast cancers were detected in this screening group. In 2003/04 the proportions were similar: first screens made up 38.7% of all screens and 22.9% of the breast cancers. Four women in each year had non-breast cancers.

Table 18: Outcome of assessment by round, July 2002 to June 2003 and July 2003 to June 2004

Outcome	First screens			Subsequent screens			All screens		
	No.	%	% of total	No.	%	% of total	No.	%	% of total
2002/03									
BENIGN OUTCOMES									
After further views	516	38.9%		772	42.9%		1,288	41.2%	
After further assessment	810	61.1%		1,029	57.1%		1,839	58.8%	
Total	1,326	100%	93.1%	1,801	100%	82.5%	3,127	100%	86.7%
MALIGNANT OUTCOMES									
Malignant - breast	97	99.0%		373	99.2%		470	99.2%	
Malignant - other	1	1.0%		3	0.8%		4	0.8%	
Total	98	100%	6.9%	376	100%	17.2%	474	100%	13.1%
INCOMPLETE / UNKNOWN	0		0.0%	6		0.3%	6		0.2%
TOTAL OUTCOMES	1,424		100%	2,183		100%	3,607		100%
2003/04									
BENIGN OUTCOMES									
After further views	466	34.3%		757	39.1%		1,223	37.1%	
After further assessment	892	65.7%		1,181	60.9%		2,073	62.9%	
Total	1,358	100%	92.4%	1,938	100%	83.6%	3,296	100%	86.9%
MALIGNANT OUTCOMES									
Malignant - breast	110	99.1%		371	99.2%		481	99.2%	
Malignant - other	1	0.9%		3	0.8%		4	0.8%	
Total	111	100%	7.6%	374	100%	16.1%	485	100%	12.8%
INCOMPLETE / UNKNOWN	0		0.0%	6		0.3%	13		0.3%
TOTAL OUTCOMES	1,469		100%	2,318		100%	3,794		100%

Outcomes of Assessment

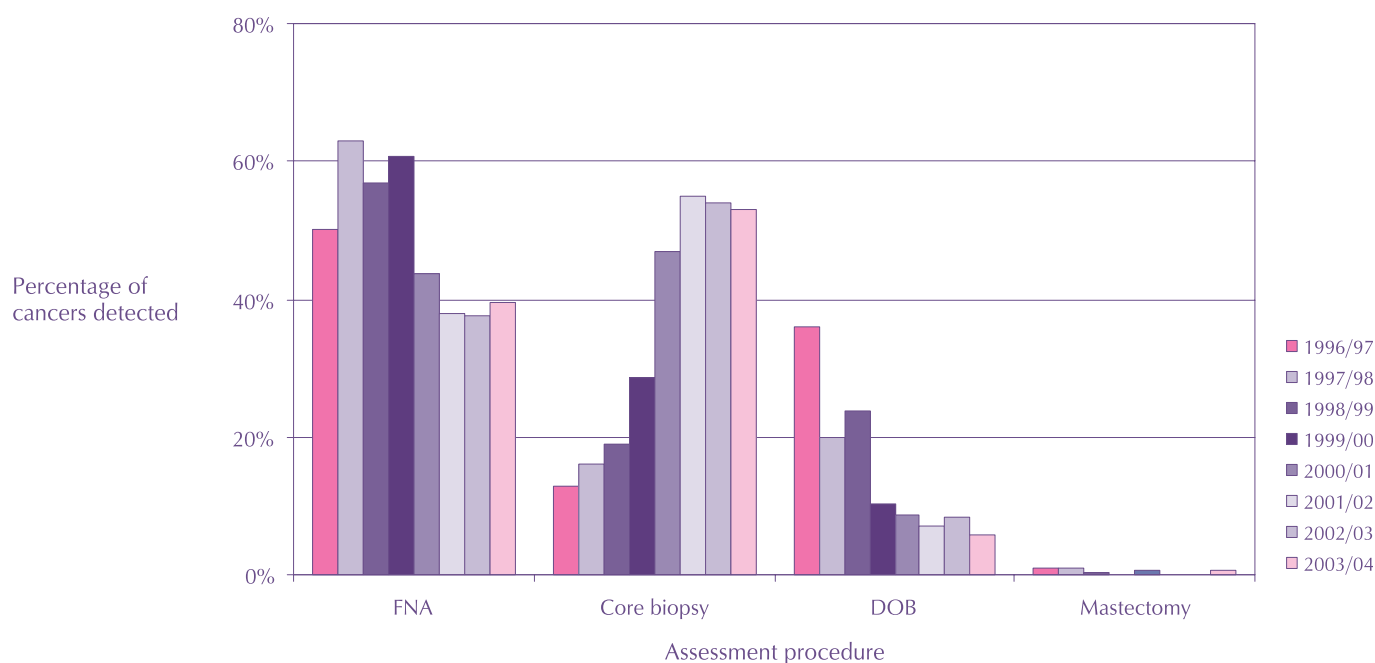
Procedure Yielding Pathological Diagnosis

The National Accreditation Standards require that $\geq 75\%$ of invasive cancers or DCIS be diagnosed without the need for diagnostic open biopsies. Table 19 below shows that 91.4% (2002/03) and 92.4% (2003/04) of breast cancers were identified using non-surgical diagnostic methods via fine needle aspiration or core biopsy. Only 8.3% and 5.9% of women, respectively, in the two reporting periods required surgical biopsies to confirm a diagnosis of cancer. Over the last eight years, from 1996/97 to 2003/04, diagnostic open biopsies as the definitive procedure for breast cancer diagnosis have fallen from 36% to 6%, whereas the proportion of cancers detected by core biopsies has progressively increased from 13% to 53% (Figure 7).

Table 19: Procedure yielding the definitive pathological diagnosis of breast cancer by round, July 2002 to June 2003 and July 2003 to June 2004

Procedure	First screens		Subsequent screens		All screens	
	No.	%	No.	%	No.	%
2002/03						
Fine needle aspiration	39	40.2%	137	36.8%	176	37.5%
Core biopsy	45	46.4%	208	55.9%	253	53.9%
Diagnostic open biopsy	12	12.4%	27	7.3%	39	8.3%
Mastectomy	0	0.0%	0	0.0%	0	0.0%
Other	1	1.0%	0	0.0%	1	0.2%
TOTAL BREAST CANCERS	97	100%	372	100%	469	100%
2003/04						
Fine needle aspiration	43	39.1%	145	39.5%	188	39.4%
Core biopsy	55	50.0%	198	54.0%	253	53.0%
Diagnostic open biopsy	10	9.1%	18	4.9%	28	5.9%
Mastectomy	0	0.0%	3	0.8%	3	0.6%
Other	2	1.8%	3	0.8%	5	1.0%
TOTAL BREAST CANCERS	110	100%	367	100%	477	100%

Figure 7: Method of pathological diagnosis 1996/97 to 2003/04



Outcomes of Assessment

Diagnostic Open Biopsy Outcomes

BreastScreen WA provides diagnostic open surgery at Royal Perth Hospital and Sir Charles Gairdner Hospital, or the woman may decide to have her surgery privately. Table 20 shows that 75.7% (2002/03) and 79.6% (2003/04) of all women having open biopsies were found to have benign lesions. The proportions were similar in the target age group, with 73.4% having a benign outcome in 2002/03 and 79.0% in 2003/04.

The National Accreditation Standards require that $\leq 4.0\%$ of women assessed after their first screen and $\leq 3.2\%$ of women assessed after their subsequent screen are found not to have invasive cancer or DCIS after a diagnostic open biopsy. Of the women assessed in 2002/03, 3.4% of first screens (48 women) and 3.7% of subsequent screens (80 women) had a benign outcome after a diagnostic open biopsy. Of the women assessed in 2003/04, 2.6% of first screens (38 women) and 3.2% of subsequent screens (75 women) had a benign outcome.

Table 20: Outcomes of diagnostic open biopsy (DOB) procedures by round by age, July 2002 to June 2003 and July 2003 to June 2004

Outcomes of DOB	Age group					50-69	All ages
	40-49	50-59	60-69	70-79	80+		
2002/03							
BENIGN OUTCOMES							
First screens	21	25	2	0	0	27	48
Subsequent screens	8	39	25	7	1	64	80
Sub-total	29	64	27	7	1	91	128
% of Sub-total	90.6%	78.0%	64.3%	58.3%	100.0%	73.4%	75.7%
MALIGNANT OUTCOMES							
First screens	1	7	5	0	0	12	13
Subsequent screens	2	11	10	5	0	21	28
Sub-total	3	18	15	5	0	33	41
% of Sub-total	9.4%	22.0%	35.7%	41.7%	0.0%	26.6%	24.3%
TOTAL DOBs PERFORMED							
First screens	22	32	7	0	0	39	61
Subsequent screens	10	50	35	12	1	85	108
TOTAL	32	82	42	12	1	124	169
% Total	100%	100%	100%	100%	100%	100%	100%
2003/04							
BENIGN OUTCOMES							
First screens	19	16	2	1	0	18	38
Subsequent screens	8	41	20	6	0	61	75
Sub-total	27	57	22	7	0	79	113
% of Sub-total	81.8%	83.8%	68.8%	77.8%	0.0%	79.0%	79.6%
MALIGNANT OUTCOMES							
First screens	4	4	2	0	0	6	10
Subsequent screens	2	7	8	2	0	15	19
Sub-total	6	11	10	2	0	21	29
% of Sub-total	18.2%	16.2%	31.3%	22.2%	0.0%	21.0%	20.4%
TOTAL DOBs PERFORMED							
First screens	23	20	4	1	0	24	48
Subsequent screens	10	48	28	8	0	76	94
TOTAL	33	68	32	9	0	100	142
% Total	100%	100%	100%	100%	-	100%	100%

Breast Cancer Detection

Cancer Detection Rates

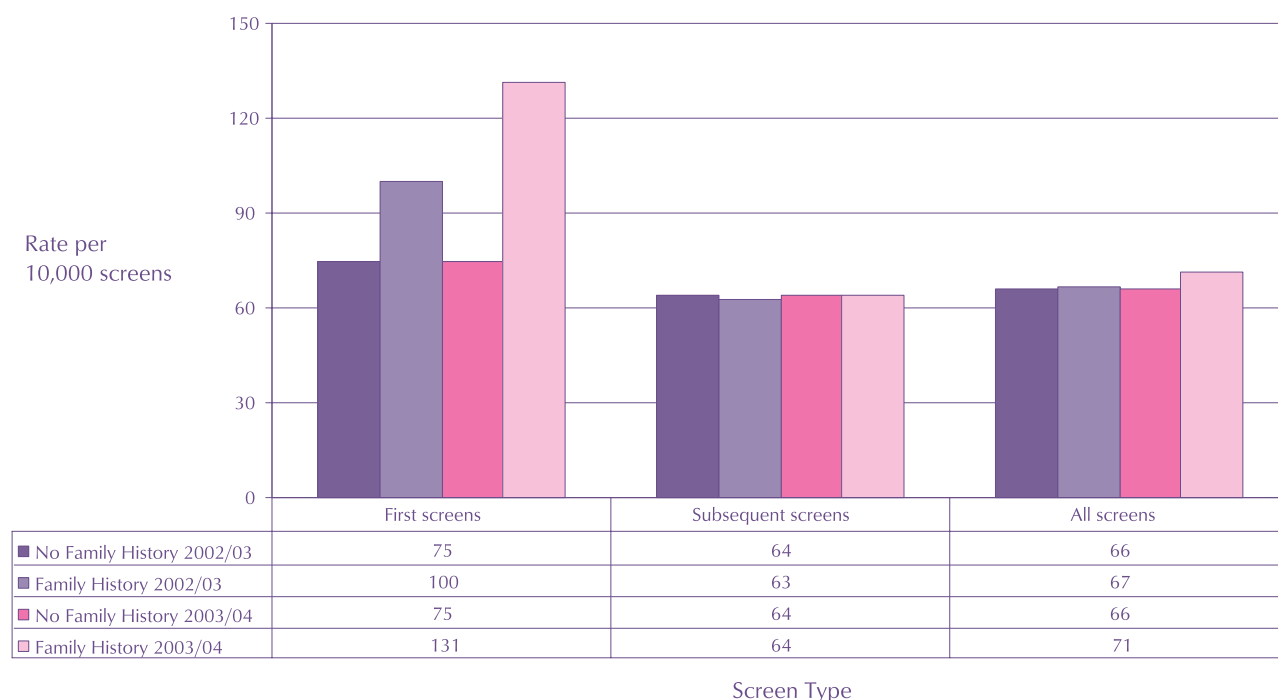
Table 21 shows the number of both invasive cancers and ductal carcinoma *in situ* (DCIS) detected in first and subsequent screens, by age group, and the rates per 10,000 screens. The BreastScreen program aims to detect at least 50 invasive cancers per 10,000 first screens and more than 35 per 10,000 subsequent screens in women aged between 50-69 years as key performance indicators of the screening program. The Program also aims to identify ≥ 12 DCIS per 10,000 first screens and ≥ 7 DCIS per 10,000 subsequent screens in target aged women.

In 2002/03, 474 cancers were detected through the program. However, 4 were not cancers of the breast, one was an interval cancer (a breast cancer detected in the interval between screening) and the other was of unknown pathology (lymph node metastasis where the primary site was unknown). Of the 468 breast cancers with known pathology, 73.5% were identified as invasive and 26.5% were DCIS. Invasive cancer detection rates in the target age group were 72 per 10,000 first screens and 48 per 10,000 subsequent screens. DCIS detection rates for this age group were 32 per 10,000 first screens and 16 per 10,000 subsequent screens.

In 2003/04 485 cancers were detected of which 10 were not classified as screen detected breast cancers. Cases excluded were 2 breast cancers of unknown pathology (no surgery undertaken because of advanced breast cancer), 4 non-breast cancers and 4 interval cancers. Invasive cancers made up 77.3% and DCIS 22.7% of all cancers. In the target age group, the invasive cancer detection rates in women having their first screens were 72 per 10,000 and subsequent screens were 44 per 10,000. DCIS detection rates for the target age group were 23 per 10,000 first screens and 12 per 10,000 subsequent screens.

Cancer detection rates were higher in women with a family history of breast cancer having their first screen, as shown from 2002 to 2004 in Figure 8. Family history over these time periods was as defined on Page 17 of this report. The rate of breast cancer detection in first screens in 2002/03 in women without a family history of breast cancer was 75 per 10,000, compared with 100 per 10,000 for those with a family history. In 2003/04 the figures were 75 per 10,000 and 131 per 10,000, respectively. Across all screens the differences in detection rates were minor.

Figure 8: Breast cancer detection rates by family history status, July 2002 to June 2003 and July 2003 to June 2004



Breast Cancer Detection

Table 21: Breast cancer numbers and detection rates by round and by age, July 2002 to June 2003 and July 2003 to June 2004

Type of cancers	Age group					50-69	All ages
	40-49	50-59	60-69	70-79	80+		
2002/03							
NUMBER OF CANCERS							
INVASIVE CANCERS							
First screens	11	42	10	5	2	52	70
Subsequent screens	11	116	115	30	2	231	274
Sub-total	22	158	125	35	4	283	344
% of invasive cancers	73.3%	75.6%	71.8%	68.6%	100.0%	73.9%	73.5%
DCIS							
First screens	4	14	9	0	0	23	27
Subsequent screens	4	37	40	16	0	77	97
Sub-total	8	51	49	16	0	100	124
% of DCIS	26.7%	24.4%	28.2%	31.4%	0.0%	26.1%	26.5%
ALL BREAST CANCERS							
First screens	15	56	19	5	2	75	97
Subsequent screens	15	153	155	46	2	308	371
TOTAL	30	209	174	51	4	383	468
% of all cancers	100%	100%	100%	100%	100%	100%	100%
RATE PER 10,000 SCREENS							
INVASIVE CANCERS							
First screens	22.3	69.3	87.6	189.4	333.3	72.2	56.2
Subsequent screens	16.1	43.2	55.0	85.9	71.7	48.4	47.0
All screens	18.7	48.0	56.7	93.2	118.0	51.5	48.6
DCIS							
First screens	8.1	23.1	78.9	0.0	0.0	31.9	21.7
Subsequent screens	5.9	13.8	19.1	45.8	0.0	16.1	16.6
All screens	6.8	15.5	22.2	42.6	0.0	18.2	17.5
ALL BREAST CANCERS							
First screens	30.4	92.4	166.5	189.4	333.3	104.2	77.8
Subsequent screens	22.0	57.0	74.2	131.7	71.7	64.5	63.6
All screens	25.5	63.6	79.0	135.8	118.0	69.7	66.1
2003/04							
NUMBER OF CANCERS							
INVASIVE CANCERS							
First screens	18	36	17	7	4	53	82
Subsequent screens	13	128	117	24	3	245	285
Sub-total	31	164	134	31	7	298	367
% of invasive cancers	70.5%	78.8%	77.9%	73.8%	77.8%	78.4%	77.3%
DCIS							
First screens	7	12	5	2	2	17	28
Subsequent screens	6	32	33	9	0	65	80
Sub-total	13	44	38	11	2	82	108
% of DCIS	29.5%	21.2%	22.1%	26.2%	22.2%	21.6%	22.7%
ALL BREAST CANCERS							
First screens	25	48	22	9	6	70	110
Subsequent screens	19	160	150	33	3	310	365
TOTAL	44	208	172	42	9	380	475
% of all cancers	100%	100%	100%	100%	100%	100%	100%
RATE PER 10,000 SCREENS							
INVASIVE CANCERS							
First screens	31.3	57.4	151.7	280.0	540.5	71.7	60.9
Subsequent screens	17.3	41.1	48.9	60.9	98.0	44.5	42.6
All screens	23.4	43.8	53.5	74.0	184.2	47.7	45.7
DCIS							
First screens	12.2	19.1	44.6	80.0	270.3	23.0	20.8
Subsequent screens	8.0	10.3	13.8	22.9	0.0	11.8	12.0
All screens	9.8	11.8	15.2	26.3	52.6	13.1	13.4
ALL BREAST CANCERS							
First screens	43.5	76.5	196.3	360.0	810.8	94.7	81.7
Subsequent screens	25.4	51.3	62.7	83.8	98.0	56.3	54.6
All screens	33.2	55.6	68.6	100.3	236.8	60.8	59.2

Breast Cancer Detection

Histologic Type of Breast Cancers

The table below shows the various types of invasive and *in situ* breast cancers detected by screening round. The most common invasive cancers identified were invasive ductal not otherwise specified, making up 74.4% of all types in 2002/03 and 76.3% in 2003/04. Comedo and non-comedo DCIS types were the most common *in situ* cancers.

Table 22: Number of screen-detected cancers by histology by round, July 2002 to June 2003 and July 2003 to June 2004

Type of cancer	First screens		Subsequent screens		All screens	
	No.	%	No.	%	No.	%
2002/03						
INVASIVE CANCERS						
Invasive Ductal not otherwise specified	56	80.0%	200	73.0%	256	74.4%
Tubular	4	5.7%	15	5.5%	19	5.5%
Cribriform	0	0.0%	0	0.0%	0	0.0%
Mucinous (Colloid)	1	1.4%	8	2.9%	9	2.6%
Medullary	0	0.0%	0	0.0%	0	0.0%
Lobular Classical	3	4.3%	29	10.6%	32	9.3%
Lobular Variant	1	1.4%	8	2.9%	9	2.6%
Mixed Ductal/Lobular	5	7.1%	14	5.1%	19	5.5%
Phyllodes Tumour (Malignant)	0	0.0%	0	0.0%	0	0.0%
Total invasive cancers	70	100%	274	100%	344	100%
NON-INVASIVE CANCERS						
Comedo DCIS	11	40.7%	50	51.5%	61	49.2%
Non-comedo DCIS	13	48.1%	32	33.0%	45	36.3%
Mixed DCIS	3	11.1%	12	12.4%	15	12.1%
Other DCIS	0	0.0%	3	3.1%	3	2.4%
Total non-invasive cancers	27	100%	97	100%	124	100%
NON-BREAST CANCERS	1		4		4	
UNKNOWN PATHOLOGY	0		1		1	
TOTAL CANCERS	98		375		473	
2003/04						
INVASIVE CANCERS						
Invasive Ductal not otherwise specified	62	75.6%	218	76.5%	280	76.3%
Tubular	2	2.4%	15	5.3%	17	4.6%
Cribriform	0	0.0%	0	0.0%	0	0.0%
Mucinous (Colloid)	4	4.9%	4	1.4%	8	2.2%
Medullary	0	0.0%	1	0.4%	1	0.3%
Lobular Classical	6	7.3%	29	10.2%	35	9.5%
Lobular Variant	2	2.4%	5	1.8%	7	1.9%
Mixed Ductal/Lobular	6	7.3%	11	3.9%	17	4.6%
Phyllodes Tumour (Malignant)	0	0.0%	2	0.7%	2	0.5%
Total invasive cancers	82	100%	285	100%	367	100%
NON-INVASIVE CANCERS						
Comedo DCIS	12	42.9%	32	40.0%	44	40.7%
Non-comedo DCIS	13	46.4%	37	46.3%	50	46.3%
Mixed DCIS	2	7.1%	7	8.8%	9	8.3%
Other DCIS	1	3.6%	4	5.0%	5	4.6%
Total non-invasive cancers	28	100%	80	100%	108	100%
NON-BREAST CANCERS	0		1		1	
UNKNOWN PATHOLOGY	1		4		5	
TOTAL CANCERS	111		370		481	

Breast Cancer Detection

Size of Breast Cancer

The detection rate of small invasive cancers is a key performance indicator as the aim is to detect cancers when they are still small and localised to the breast. The National Accreditation Standard defines small invasive cancers as those ≤ 15 mm and sets a detection rate of at least 25 per 10,000 screens in the target age group of women. BreastScreen WA's small cancer detection rate for all age groups for both reporting years was 27 per 10,000 screens, as shown in Table 23.

Regardless of screening round, more than half of all invasive cancers were ≤ 15 mm; 54.3% and 48.8% of first screens and 55.8% and 61.4% of subsequent screens, in 2002/03 and 2003/04 respectively. In 2002/03, 29 small invasive cancers per 10,000 screens in women aged between 50-69 years were detected (Table 24). A similar rate was reported in 2003/04 with 28 per 10,000 detected in target age group women.

Table 23: Number of invasive breast cancers by size by round, July 2002 to June 2003 and July 2003 to June 2004

Type of cancer	First screens		Subsequent screens		All screens		Rate per 10,000 screens
	No.	%	No.	%	No.	%	
2002/03							
INVASIVE CANCERS							
≤ 15 mm	38	54.3%	153	55.8%	191	55.5%	27.0
16-25 mm	23	32.9%	82	29.9%	105	30.5%	14.8
26-50 mm	7	10.0%	33	12.0%	40	11.6%	5.6
>50 mm	1	1.4%	6	2.2%	7	2.0%	1.0
Size unknown	1	1.4%	0	0.0%	1	0.3%	0.1
TOTAL	70	100%	274	100%	344	100%	48.6
2003/04							
INVASIVE CANCERS							
≤ 15 mm	40	48.8%	175	61.4%	215	58.6%	26.8
16-25 mm	22	26.8%	79	27.7%	101	27.5%	12.6
26-50 mm	17	20.7%	24	8.4%	41	11.2%	5.1
>50 mm	1	1.2%	6	2.1%	7	1.9%	0.9
Size unknown	2	2.4%	1	0.4%	3	0.8%	0.4
TOTAL	82	100%	285	100%	367	100%	45.7

Table 24: Number of invasive breast cancers by size by age, July 2002 to June 2003 and July 2003 to June 2004

Type of cancer	Age group										All Ages		Rate per 10,000 screens (50-69 yr)		
	40-49		50-59		60-69		70-79		80+					50-69	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
2002/03															
INVASIVE CANCERS															
≤ 15 mm	15	68.2%	88	55.7%	71	56.8%	14	40.0%	3	75.0%	159	56.2%	191	55.5%	29.0
16-25 mm	6	27.3%	43	27.2%	39	31.2%	17	48.6%	0	0.0%	82	29.0%	105	30.5%	14.9
26-50 mm	1	4.5%	22	13.9%	12	9.6%	4	11.4%	1	25.0%	34	12.0%	40	11.6%	6.2
>50 mm	0	0.0%	5	3.2%	2	1.6%	0	0.0%	0	0.0%	7	2.5%	7	2.0%	1.3
Size unknown	0	0.0%	0	0.0%	1	0.8%	0	0.0%	0	0.0%	1	0.4%	1	0.3%	0.2
TOTAL	22	100%	158	100%	125	100%	35	100%	4	100%	283	100%	344	100%	51.5
2003/04															
INVASIVE CANCERS															
≤ 15 mm	14	45.2%	89	54.3%	88	65.7%	21	67.7%	3	42.9%	177	59.4%	215	58.6%	28.3
16-25 mm	9	29.0%	49	29.9%	36	26.9%	5	16.1%	2	28.6%	85	28.5%	101	27.5%	13.6
26-50 mm	7	22.6%	20	12.2%	7	5.2%	5	16.1%	2	28.6%	27	9.1%	41	11.2%	4.3
>50 mm	1	3.2%	4	2.4%	2	1.5%	0	0.0%	0	0.0%	6	2.0%	7	1.9%	1.0
Size unknown	0	0.0%	2	1.2%	1	0.7%	0	0.0%	0	0.0%	3	1.0%	3	0.8%	0.5
TOTAL	31	100%	164	100%	134	100%	31	100%	7	100%	298	100%	367	100%	47.7

Breast Cancer Detection

Nodal Status

Lymph nodes excised during surgery for screen-detected invasive or non-invasive cancers were investigated for evidence of metastases. In 2002/03, 12.1% of women diagnosed with DCIS had lymph nodes removed during surgery (Table 25). None of the 15 lymph nodes excised showed any metastasis. The same was evident the following year where 18 (16.7% of DCIS) lymph nodes were excised and none showed metastasis.

More than 90% of women with screen-detected invasive breast cancer had lymph nodes removed and of these, 27.2% showed metastases. As indicated in the table below, lymph nodes excised from larger sized (26-50 mm and >50 mm) invasive cancers showed that the cancer cells had spread; 57.9% and 33.3% (2002/03) and 53.7% and 50.0% (2003/04), respectively.

Table 25: Lymph node removal and metastatic status, July 2002 to June 2003 and July 2003 to June 2004

Type of cancer	No. of cancers (A)	No. where lymph nodes were excised (B)	% of cancers where lymph nodes were excised (B / A)	No. where lymph nodes had metastasis (C)	% of cancers where lymph nodes had metastasis (C / B)
2002/03					
NON-INVASIVE CANCERS					
Ductal carcinoma <i>in situ</i> (DCIS)	124	15	12.1%	0	0.0%
INVASIVE CANCERS					
<=15 mm	191	171	89.5%	27	15.8%
16-25 mm	105	101	96.2%	35	34.7%
26-50 mm	40	38	95.0%	22	57.9%
>50 mm	7	6	85.7%	2	33.3%
Size unknown	1	0	0.0%	0	0.0%
Total invasive breast cancers	344	316	91.9%	86	27.2%
NON-BREAST CANCERS	4	1	25.0%	0	0.0%
UNKNOWN PATHOLOGY	1	1	100.0%	1	100.0%
TOTAL CANCERS	473	333	70.4%	87	26.1%
2003/04					
NON-INVASIVE CANCERS					
Ductal carcinoma <i>in situ</i> (DCIS)	108	18	16.7%	0	0.0%
INVASIVE CANCERS					
<=15 mm	215	192	89.3%	28	14.6%
16-25 mm	101	98	97.0%	38	38.8%
26-50 mm	41	41	100.0%	22	53.7%
>50 mm	7	6	85.7%	3	50.0%
Size unknown	3	1	33.3%	1	100.0%
Total invasive breast cancers	367	338	92.1%	92	27.2%
NON-BREAST CANCERS	1	0	0.0%	0	0.0%
UNKNOWN PATHOLOGY	5	0	0.0%	0	0.0%
TOTAL CANCERS	481	356	74.0%	92	25.8%

Breast Cancer Detection

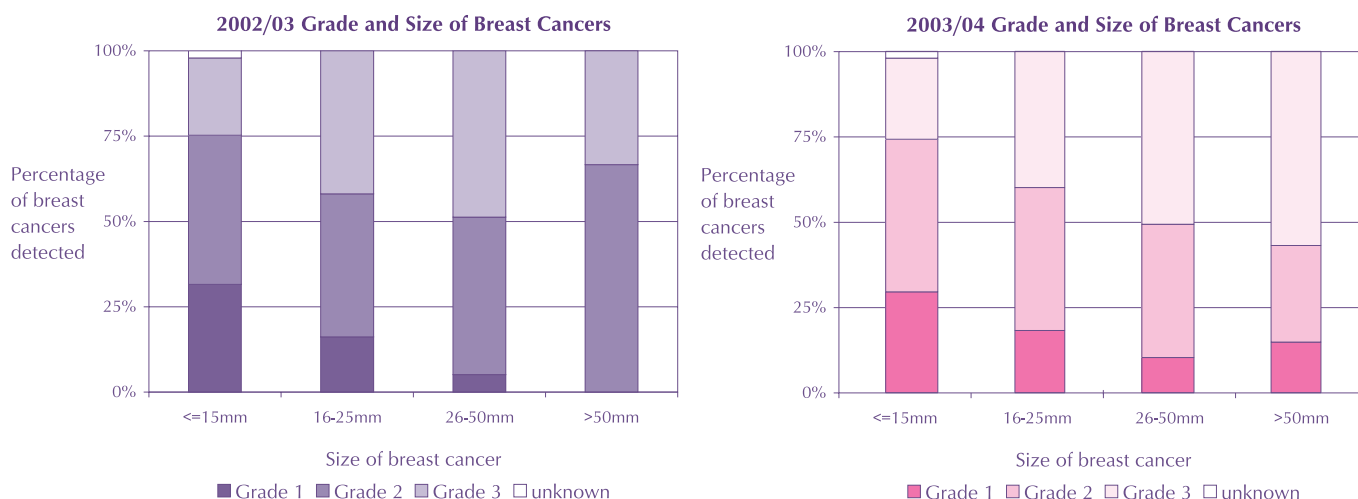
Grade of Cancers

The grading of cancers depends on the degree of cell differentiation. The higher the grade, the poorer the prognosis. Grade 1 tumours are well differentiated, Grade 2 moderately differentiated and Grade 3 poorly differentiated. Almost 50% of invasive breast cancers identified in 2002/03 (43.8%) and 2003/04 (42.8%) were Grade 2 cancers. Figure 9 demonstrates the association between the size of cancer and its grade.

Table 26: Number of invasive breast cancers by histological grade by size, July 2002 to June 2003 and July 2003 to June 2004

Histological grade	Size of invasive breast cancer									
	<=15mm		16-25mm		26-50mm		>50mm		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
2002/03										
Grade 1	60	31.6%	17	16.2%	2	5.1%	0	0.0%	79	23.2%
Grade 2	83	43.7%	44	41.9%	18	46.2%	4	66.7%	149	43.8%
Grade 3	43	22.6%	44	41.9%	19	48.7%	2	33.3%	108	31.8%
Unknown	4	2.1%	0	0.0%	0	0.0%	0	0.0%	4	1.2%
TOTAL INVASIVE BREAST CANCERS	190	100%	105	100%	39	100%	6	100%	340	100%
2003/04										
Grade 1	62	29.1%	18	17.8%	4	9.8%	1	14.3%	85	23.5%
Grade 2	95	44.6%	42	41.6%	16	39.0%	2	28.6%	155	42.8%
Grade 3	51	23.9%	41	40.6%	21	51.2%	4	57.1%	117	32.3%
Unknown	5	2.3%	0	0.0%	0	0.0%	0	0.0%	5	1.4%
TOTAL INVASIVE BREAST CANCERS	213	100%	101	100%	41	100%	7	100%	362	100%

Figure 9: Proportion of invasive breast cancers by histological grade by size, July 2002 to June 2003 and July 2003 to June 2004



Management of Breast Cancer

Breast Cancer Treatment

The management of breast cancers detected during screening is not part of the BreastScreen WA program. However, information is collected for all cases of screen-detected cancers. For both 2002/03 and 2003/04, approximately two thirds of women chose to have breast conserving surgery, regardless of screening round, as shown in Table 27.

Table 27: Number of surgical procedures for breast cancer treatment by round, July 2002 to June 2003 and July 2003 to June 2004

Surgical procedure for treatment	First screens		Subsequent screens		All screens	
	No.	%	No.	%	No.	%
2002/03						
Breast conserving surgery	61	62.9%	248	66.7%	309	65.9%
Mastectomy	33	34.0%	120	32.3%	153	32.6%
No surgery / unknown	3	3.1%	4	1.1%	7	1.5%
TOTAL BREAST CANCERS	97	100%	372	100%	469	100%
2003/04						
Breast conserving surgery	72	65.5%	253	68.9%	325	68.1%
Mastectomy	35	31.8%	109	29.7%	144	30.2%
No surgery / unknown	3	2.7%	5	1.4%	8	1.7%
TOTAL BREAST CANCERS	110	100%	367	100%	477	100%

Table 28 shows the type of breast cancer and the surgical procedure chosen by women. The table does not include cases where the pathology was unknown. Most women opted for breast conserving surgery regardless of whether the cancer type was invasive or *in situ*.

Table 28: Number of surgical procedures for breast cancer treatment by type of cancer, July 2002 to June 2003 and July 2003 to June 2004

Surgical procedure for treatment	Invasive cancers		DCIS		All cancers	
	No.	%	No.	%	No.	%
2002/03						
Breast conserving surgery	224	65.1%	84	67.7%	308	65.8%
Mastectomy	117	34.0%	36	29.0%	153	32.7%
No surgery / unknown	3	0.9%	4	3.2%	7	1.5%
TOTAL BREAST CANCERS	344	100%	124	100%	468	100%
2003/04						
Breast conserving surgery	251	68.4%	74	68.5%	325	68.4%
Mastectomy	111	30.2%	33	30.6%	144	30.3%
No surgery / unknown	5	1.4%	1	0.9%	6	1.3%
TOTAL BREAST CANCERS	367	100%	108	100%	475	100%

Management of Breast Cancer

For metropolitan residents, the trend towards breast conserving surgery grew over the two periods from 62.8% in 2002/03 to 68.6% in 2003/04. For women living in country areas the reverse was the case, with breast-conserving surgery falling from 75.9% of all treatment in 2002/03 to 66.7% in 2003/04

Table 29: Number of surgical procedures for breast cancer treatment by place of residence, July 2002 to June 2003 and July 2003 to June 2004

Surgical procedure for treatment	Metropolitan		Country		Total	
	No.	%	No.	%	No.	%
2002/03						
Breast conserving surgery	226	62.8%	82	75.9%	308	65.8%
Mastectomy	129	35.8%	24	22.2%	153	32.7%
No surgery / unknown	5	1.4%	2	1.9%	7	1.5%
TOTAL BREAST CANCERS	360	100%	108	100%	468	100%
2003/04						
Breast conserving surgery	243	68.6%	82	66.7%	325	68.1%
Mastectomy	104	29.4%	40	32.5%	144	30.2%
No surgery / unknown	7	2.0%	1	0.8%	8	1.7%
TOTAL BREAST CANCERS	354	100%	123	100%	477	100%

Management of Breast Cancer

Adjuvant Therapy

In both reporting years, the majority of women with breast cancer had adjuvant therapy, with radiotherapy, chemotherapy or Tamoxifen alone or in combination. Both Tamoxifen, an oestrogen reception blocking drug, and Arimidex, a drug which blocks oestrogen synthesis, were in use at this time but both have been included in the Tamoxifen counts.

Radiotherapy and Tamoxifen in combination was the most common post-surgical therapy, comprising 29.9% of all adjuvant therapies in 2002/03 and 30.3% in 2003/04, and the most common post-surgery therapy in women with invasive cancers. The most common adjuvant therapy for women with *in situ* cancers was radiotherapy alone.

Fewer than half of the women diagnosed with DCIS in both reporting years had adjuvant therapy. However, the proportion has grown in the past 4 years – from 38.2% (2000/01) to 40.3% (2002/03) and to 45.4% (2003/04).

Table 30: Adjuvant therapy for treatment of breast cancer by type of cancer, July 2002 to June 2003 and July 2003 to June 2004

Adjuvant therapy	Invasive cancers		DCIS		All cancers	
	No.	%	No.	%	No.	%
2002/03						
Chemotherapy	14	4.1%	0	0.0%	14	3.0%
Radiotherapy	28	8.1%	33	26.6%	61	13.0%
Tamoxifen ²	52	15.1%	10	8.1%	62	13.2%
Chemotherapy & Radiotherapy	21	6.1%	0	0.0%	21	4.5%
Chemotherapy & Tamoxifen	16	4.7%	0	0.0%	16	3.4%
Radiotherapy & Tamoxifen	133	38.7%	7	5.6%	140	29.9%
Chemotherapy & Radiotherapy & Tamoxifen	32	9.3%	0	0.0%	32	6.8%
Chemotherapy & Other	0	0.0%	0	0.0%	0	0.0%
Radiotherapy & Other	4	1.2%	0	0.0%	4	0.9%
Tamoxifen & Other	4	1.2%	0	0.0%	4	0.9%
Radiotherapy & Tamoxifen & Other	8	2.3%	0	0.0%	8	1.7%
Chemotherapy & Tamoxifen & Other	0	0.0%	0	0.0%	0	0.0%
Chemotherapy & Radiotherapy & Other	0	0.0%	0	0.0%	0	0.0%
Chemotherapy & Radiotherapy & Tamoxifen & Other	3	0.9%	0	0.0%	3	0.6%
Other	1	0.3%	0	0.0%	1	0.2%
None/Unknown	28	8.1%	74	59.7%	102	21.8%
TOTAL BREAST CANCERS	344	100%	124	100%	468	100%
2003/04						
Chemotherapy	19	5.2%	0	0.0%	19	4.0%
Radiotherapy	45	12.3%	36	33.3%	81	17.1%
Tamoxifen ²	40	10.9%	7	6.5%	47	9.9%
Chemotherapy & Radiotherapy	28	7.6%	0	0.0%	28	5.9%
Chemotherapy & Tamoxifen	12	3.3%	0	0.0%	12	2.5%
Radiotherapy & Tamoxifen	138	37.6%	6	5.6%	144	30.3%
Chemotherapy & Radiotherapy & Tamoxifen	24	6.5%	0	0.0%	24	5.1%
Chemotherapy & Other	0	0.0%	0	0.0%	0	0.0%
Radiotherapy & Other	2	0.5%	0	0.0%	2	0.4%
Tamoxifen & Other	0	0.0%	0	0.0%	0	0.0%
Radiotherapy & Tamoxifen & Other	0	0.0%	0	0.0%	0	0.0%
Chemotherapy & Tamoxifen & Other	0	0.0%	0	0.0%	0	0.0%
Chemotherapy & Radiotherapy & Other	0	0.0%	0	0.0%	0	0.0%
Chemotherapy & Radiotherapy & Tamoxifen & Other	0	0.0%	0	0.0%	0	0.0%
Other	0	0.0%	0	0.0%	0	0.0%
None/Unknown	59	16.1%	59	54.6%	118	24.8%
TOTAL BREAST CANCERS	367	100%	108	100%	475	100%

² includes Arimidex

Interval Cancers

Invasive breast cancers that are diagnosed in between a negative screening episode and the next scheduled screen are known as interval cancers. The term includes cancers diagnosed at early review after assessment. Information about interval cancers is obtained through a data matching process linking data from the WA Cancer Registry and BreastScreen WA and through notification by screening clients, surgeons or general practitioners.

Table 31: Interval cancer rates for screens from January to December 2001 and 2002 by round by age

Screen type and time since last screen	Age group					Total
	40-49	50-59	60-69	70	50-69	
2001						
FIRST SCREENS						
Cancers detected between 0-12 months						
Number of interval cancers	0	4	1	0	5	5
Number of women years at risk	5,449	5,755	1,420	488	7,175	13,112
Interval Cancer Rate	0.0	7.0	7.0	0.0	7.0	3.8
Cancers detected between 13-24 months						
Number of interval cancers	5	7	2	0	9	14
Number of women years at risk	4,830	5,203	1,251	395	6,454	11,679
Interval Cancer Rate	10.4	13.5	16.0	0.0	13.9	12.0
SUBSEQUENT SCREENS						
Cancers detected between 0-12 months						
Number of interval cancers	9	19	16	4	35	48
Number of women years at risk	7,296	26,280	20,217	3,456	46,497	57,249
Interval Cancer Rate	12.3	7.2	7.9	11.6	7.5	8.4
Cancers detected between 13-24 months						
Number of interval cancers	9	29	20	1	49	59
Number of women years at risk	5,725	22,016	16,670	2,674	38,686	47,085
Interval Cancer Rate	15.7	13.2	12.0	3.7	12.7	12.5
ALL SCREENS						
Cancers detected between 0-12 months						
Number of interval cancers	9	23	17	4	40	53
Number of women years at risk	12,745	32,035	21,637	3,944	53,672	70,361
Interval Cancer Rate	7.1	7.2	7.9	10.1	7.5	7.5
Cancers detected between 13-24 months						
Number of interval cancers	14	36	22	1	58	73
Number of women years at risk	10,555	27,219	17,921	3,069	45,140	58,764
Interval Cancer Rate	13.3	13.2	12.3	3.3	12.8	12.4
2002						
FIRST SCREENS						
Cancers detected between 0-12 months						
Number of interval cancers	5	3	0	0	3	8
Number of women years at risk	4,970	6,821	1,356	321	8,177	13,468
Interval Cancer Rate	10.1	4.4	0.0	0.0	3.7	5.9
Cancers detected between 13-24 months						
Number of interval cancers	3	8	1	0	9	12
Number of women years at risk	4,342	6,187	1,169	262	7,356	11,960
Interval Cancer Rate	6.9	12.9	8.6	0.0	12.2	10.0
SUBSEQUENT SCREENS						
Cancers detected between 0-12 months						
Number of interval cancers	6	14	7	1	21	28
Number of women years at risk	6,464	25,275	19,733	3,586	45,008	55,058
Interval Cancer Rate	9.3	5.5	3.5	2.8	4.7	5.1
Cancers detected between 13-24 months						
Number of interval cancers	10	24	19	1	43	54
Number of women years at risk	4,917	20,887	16,001	2,707	36,888	44,512
Interval Cancer Rate	20.3	11.5	11.9	3.7	11.7	12.1
ALL SCREENS						
Cancers detected between 0-12 months						
Number of interval cancers	11	17	7	1	24	36
Number of women years at risk	11,434	32,096	21,089	3,907	53,185	68,526
Interval Cancer Rate	9.6	5.3	3.3	2.6	4.5	5.3
Cancers detected between 13-24 months						
Number of interval cancers	13	32	20	1	52	66
Number of women years at risk	9,259	27,074	17,170	2,969	44,244	56,472
Interval Cancer Rate	14.0	11.8	11.6	3.4	11.8	11.7

Interval Cancers

Women recommended for annual screening are only at risk of interval cancers 0 to 12 months after a negative screen, and are therefore only included in the interval cancer count for those first 12 months. Those recommended for 2 yearly screening are included in the interval cancer count for both the first 12-month period as well as the 13 to 24 month period post-screening. Interval cancers rates per 10,000 screens are calculated as the number of interval breast cancers divided by the number of women years at risk.

The interval cancer rate is an important key performance indicator measuring the effectiveness of screening in identifying breast cancer. The National Accreditation Standards require that < 7.5 per 10,000 women in the target age will be diagnosed with invasive breast cancer in the 12 months following a negative screening episode. Table 31 shows the interval cancers detected for women screened in 2001 and 2002 and followed up for 24 months. The interval cancer rate for cancers detected up to 12 months in women aged 50-69 years was 7.5 per 10,000 women years at risk in 2001. This rate fell to 4.5 per 10,000 women years at risk in 2002.

