

BreastScreen Aotearoa

**INDEPENDENT MONITORING REPORT
JULY-DECEMBER, 2004**

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EXECUTIVE SUMMARY

BreastScreen Aotearoa (BSA) has offered government funded biennial mammography screening for all NZ women aged 50-64 years since 1999. In July, 2004 the target age group was extended to include women aged 45-49 years and 65-69 years. This Internal Analysis Report includes the first 6 months of data for these additional age groups. For women aged 45-49 years and 65-69 years, a two year period has not yet elapsed, and the biennial data presented relates only to women 50-64 years.

1. Coverage

BSA screened 63,770 women aged 45-69 years over the 6 month period from July to December, 2004. There were 640 women screened aged 45-49 years, 48,115 women aged 50-64 years, and 15,015 women aged 65-69 years. For women aged 50-64 years, the biennial participation rate was 63%, which was below the target of 70%. Of biennial screens, 23% were initial screens and 77% were subsequent screens.

The re-screen rate for the six month period for women aged 50-64 years was 86% within 27 months (target value >85%), and 81% within 20-24 months (target value >75%). This is a commendable result, with no lead providers more than 5 percentage points below target.

For women aged 50-64 years a significantly lower biennial participation rate was evident for the eligible Maori and Pacific Islander populations (44% and 43% respectively), compared with other remaining ethnic groups combined (65%).

2. Provision of quality screening and assessment

Most targets were met for indicators relating to the provision of quality screening and assessment for each age group for the previous 6 month period. Referral to assessment rates ranged from 7-9% for initial screens for women aged 45-69 (target value <10%), and from 3-4% for subsequent screens in women 50-64 and 65-69 years only (target value <5%). For women 50-64 years the two year referral to assessment rate was 9% for initial screens and 3% for subsequent screens.

False positive rates ranged from 6-8% for initial screens for women aged 45-69 years (target value <9%), and from 2-3% for subsequent screens for women 50-64 and 65-69 years only (target value <4%). The positive predictive value (PPV) for the program (target $\geq 9\%$) for the previous 6 months for initial screens was 4% for women 45-49 years, 10% for women 50-64 years, and 13% for women 65-69 years. For subsequent screens the PPV was 16% and 23% for women 50-64 years and 65-69 years respectively.

Expected targets were not met for a number of indicators. The proportion of women who had to return for further films to complete their screening episode (technical recall rate) for mobile screening units was statistically above the target value of <3%. There was variation across lead providers, with technical recall rates higher for some lead providers. Overall technical recall rates were 2.8% for women aged 45-49 years, 3.3% for women 50-64 years, and 4.0% for women aged 65-69 years. The two year rate for women 50-64 years was 4% which was also above the target value.

The target for benign biopsies which weigh <30g also was not reached for women 50-64 years. The 2 year proportion for this group was 66% which was statistically below the >90% target value. Data on women 45-49 year and 65-69 years are not yet available.

3. Early detection of DCIS or invasive breast cancer

Most targets were met for indicators relating to early detection of DCIS or invasive breast cancers. Where estimates were marginal, the 95% confidence interval (either lower or upper bound) contained the target value. Invasive cancers and DCIS are not currently reported separately by age group for the 6 month period or for a biennium.

Separate biennial cancer detection rates for invasive cancers and DCIS can be derived from the current data extract for women 50-64 years only. The BSA biennial invasive cancer detection rate for women aged 50-64 years was 5.9 per 1,000 women screened for initial screens (statistically lower than the target value of ≥ 6.9), and 4.0 per 1,000 for subsequent

screens (slightly above the target value of ≥ 3.45). This represented 907 invasive cancers detected by BSA for the previous 2 year period.

The biennial cancer detection rate - invasive and DCIS combined - for women aged 50-64 years was 8.1 per 1,000 for initial screens (statistically higher than the target value of ≥ 6.9 per 1,000) and 5.0 per 1,000 for subsequent screens (statistically higher than the target value of ≥ 3.45 per 1,000). This represented 1,173 cancers detected through BSA for the 2 year period. The proportion of DCIS of all cancers for this age group over the previous biennium was 24%, ranging from 11% to 31% across lead providers. The BSA proportion of node negative cancers (of all invasive cancers) was 76% for initial screens and 77% for subsequent screens.

A total of 402 cases of invasive cancer and DCIS were detected through BSA in the previous 6 months for initial and subsequent screens combined. The BSA cancer detection rate for the six month period by age-group (DCIS and invasive combined) for initial screens was 3.1 per 1,000 women screened for women 45-49 years, 8.2 for women 50-64 years, and 9.4 for women 65-69 years. For subsequent screens the cancer detection rate was 4.9 for women aged 50-64 years and 8.5 per 1,000 for women aged 65-69 years. For all women the cancer detection rate for both initial and subsequent screens exceeded or approached the expected target. Confidence intervals of estimates for age-specific rates included the target value of ≥ 6.9 per 1,000 for initial screens and ≥ 3.45 per 1,000 for subsequent screens.

For women 50-64 years the overall proportion of screen detected invasive cancers ≤ 10 mm in size for the previous 2 period was 28% for initial screens and 38% for subsequent screens. The corresponding detection rates per 10,000 women screened for invasive cancers ≤ 10 mm was 16.6 for initial screens (target value ≥ 17.3 per 10,000 screens) and 15.5 for subsequent screens (target value ≥ 10.5 per 10,000 screens).

The expected target value was not reached for overall detection rates of invasive cancers ≤ 15 mm in size for initial screens for the previous biennium (women 50-64 years only). The overall proportion of invasive cancers ≤ 15 mm for this age group was 43% which was statistically below the target value of $>50\%$. The detection rate per 10,000 women screened for this indicator was 25.5 which was also statistically below the target of >34.5 per 10,000.

4. Treatment

The majority of targets (where available) were not met for indicators relating to treatment. Treatment data in this data extract was restricted to women aged 50-64 years for the previous 2 year period.

Target values were met for DCIS cases and invasive cases having breast conserving surgery (BCS). The overall proportion of screen detected DCIS having BCS was 77% and for invasive cancers having BCS was 64%, which was greater than the target value of $>50\%$

The overall proportion of invasive cancers having a surgical axillary procedure was 91.0%, which was statistically below the target value of 95%, although the magnitude of this difference was less than 5%. There was variation across lead providers.

The overall proportion of women who had surgery for DCIS who did not have an axillary dissection was 76%, which was statistically lower than the target of 95%

The overall proportion of women diagnosed with invasive cancer who had BCS, who went on to have radiotherapy was 92%, which was statistically lower than the target of $>95\%$, although the magnitude of this difference was less than 5%.

5. Provision of an appropriate and acceptable service

The majority of targets for indicators relating to the provision of an appropriate and acceptable service were not met, although in many cases the magnitude of the difference was less than 5%. A number of indicators were also marginal, with 95% confidence intervals containing the target value.

The overall proportion of women in the previous 6 month period who were notified of screening results within 10 working days was 93% for 45-49 years, 96% for women 50-64 years, and 97% for women 65-69 years. For women 50-64 years, the biennial proportion of 97% was statistically higher than the target value.

The overall proportion of women offered a first assessment within 15 working days was statistically lower than the target value of 90% for women 50-64 and 65-69 years, although the magnitude of the difference was less than 5 percentage points. For women 45-49 years the percentage was 89%, for women 50-64 years the percentage was 85%, and for women 65-69 years the percentage was 87%. The 2 year rate for women 50-64 years (88%) was also statistically lower than the target value.

The proportion of women receiving an open biopsy (of those who required an open biopsy) for women aged 50-64 and 65-69 years also was statistically lower than the target value of 90% for the previous 6 month period. The overall proportion was 76% for women 50-64 years, and 63% for women 65-69 years. The biennial proportion for women 50-64 years was 77% which was statistically below the target value.

The proportion of women who received their final diagnostic biopsy results within 5 working days was also statistically below the target value of 90% for women aged 50-64 and 65-69 years, however the magnitude of the difference was less than 5 percentage points. The overall proportion was 87% for women 50-64 years, and 85% for women aged 65-69 years, both slightly lower than the target value of 90%.

6. Conclusion

BSA is a population-based mammography screening program that has participation rates across the target age group 45-69 years approaching the target of 70%, notwithstanding the recent age extension into the 45-49 and 65-69 year age groups. Overall, targets for key indicators are being exceeded, or are close to being achieved (for indicators that are marginal, the 95% confidence interval usually contain the target value). There is also variation for some indicators across lead providers. Areas where target values were not met by BSA in the period covered in this report, and where differences between observed and expected values were of greatest magnitude, included (1) biennial invasive cancer detection rates for initial screens for women aged 50-64 years (2) technical recall rates for mobile screening units; (3) benign biopsies which weigh <30g; (4) invasive cancer detection rates for cancers <=15mm in size; (5) and the proportion of women receiving specific treatments (surgical axillary procedures, radiotherapy). There were statistically significant differences between observed and target values for a number of other indicators, however the magnitude of these differences were small (<5%) and may not be a difference of practical significance. These indicators included the time taken to offer women assessments; the proportion of women offered open biopsies; and the time taken to notify women of final biopsy results.

1. COVERAGE

1.a.1. Overall coverage of eligible women aged 45-69 years.

Description: This is a population-based measure of the percentage of women in the target age group (45-49, 50-64, 65-69 years) who have had a screening mammogram in the programme

Target: >= 70% of eligible women receive a screen within the program in the most recent 24month period

Table 1a.1 Overall coverage of eligible women

Lead Provider	Eligible Population*	Last 6 Months		Last 2 Years	
		Jul 2004 to Dec 2004		Jan 2003 to Dec 2004	
		Number of Women Screened	Coverage %	Number of Women Screened	Coverage %
<i>45-49 years</i>					
BSAN	52145	54	0.1%	58	
BSM	22405	106	0.5%	106	
BSCtoC	19075	4	0.0%	4	
BSC	15750	44	0.3%	44	
BSS	24990	2	0.0%	2	
BSHC	10360	430	4.2%	430	
BSA Total	144725	640	0.4%	644	
<i>50-64 years</i>					
BSAN	114210	14514	12.7%	61052	53.5%
BSM	51575	7644	14.8%	31273	60.6%
BSCtoC	44175	5654	12.8%	26495	60.0%
BSC	35660	4456	12.5%	21378	59.9%
BSS	58795	11512	19.6%	48192	82.0%
BSHC	23865	4335	18.2%	17276	72.4%
BSA Total	328280	48115	14.7%	205666	62.6%
<i>65-69 years</i>					
BSAN	23365	3620	15.5%	4298	
BSM	11935	3086	25.9%	3546	
BSCtoC	10335	2384	23.1%	2681	
BSC	7445	1871	25.1%	2094	
BSS	12980	3218	24.8%	3579	
BSHC	5625	836	14.9%	982	
BSA Total	71685	15015	20.9%	17180	

Note: Eligible population is based on the 2004 projected population; Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Discrepancies between the numbers of screens in the 'Last 6 months' columns and the 'Last 2 years' column for women aged 45-49 and 65-69 years throughout this report are due to rounding of the age of women - prior to the age extension women aged slightly above or below the target age group of 50-64 (e.g. 49.9 years or 64.9 years) were rounded to be included in the target age group of 50-64 years. After the age extension in July 2004, these women are included retrospectively in the 45-49 years or 65-69 year age-group as appropriate.

Overall coverage of eligible women aged 45-49 years.

Screening in this age group commenced in July 2004, and consequently the 6 monthly screening rate for the period July 2004 to December 2004 across lead providers is lower for the this age-group compared to older ages. The BSA program participation rate for this period was 0.4% with coverage across lead providers ranging from 0.0% to 4.2%. It is anticipated that coverage rates will increase as the program matures for this age-group. The biennial participation rates in this table cannot be interpreted, as a biennium for this group has not yet elapsed.

Overall coverage of eligible women aged 50-64 years.

The BSA program coverage in the July 2004 to December 2004 period decreased to 14.7% (compared with 18.1% in the previous reporting period), which resulted in a marginal decrease in the 2 year biennial rate from 64.6% in the previous period to 62.6%. The decrease in the biennial participation rate can partly be attributed to the increase in the denominator which is now based on the 2004 projected population (Appendix A), unlike the previous report which used the 2003 population. This is also consistent with similar decreases across lead providers.

Overall coverage of eligible women aged 65-69 years.

Screening in this age group commenced in July, 2004. Participation rates for the 6 month period are of a similar magnitude to the 50-64 year age group. The BSA program participation rate for the 6 month period was 20.9%, with participation rates

across lead providers ranging from 14.9% to 25.9%. The BSA participation rate for this period was approximately 5% higher than the 50-64 year age group. The biennial participation rates in this table cannot be interpreted, as a biennium for this group has not yet elapsed.

1.a.2. The percentage of screens that are initial and subsequent screens

Table 1a.2 The percentage of screens that are Initial (Prevalent) and Subsequent (Incident)

Lead Provider	Jan 2003 to Dec 2004				Total Screens
	Initial (Prevalent) Screens		Subsequent (Incident) Screens		
	Number of Women Screened	Initial (Prevalent) %	Number of Women Screened	Subsequent (Incident) %	
<i>45-49 years</i>					
BSAN	56	97%	2	3%	58
BSM	106	100%	0	0%	106
BSCtoC	4	100%	0	0%	4
BSC	44	100%	0	0%	44
BSS	2	100%	0	0%	2
BSHC	430	100%	0	0%	430
BSA Total	642	100%	2	0%	644
<i>50-64 years</i>					
BSAN	15337	25%	45715	75%	61052
BSM	6799	22%	24474	78%	31273
BSCtoC	6056	23%	20439	77%	26495
BSC	5481	26%	15897	74%	21378
BSS	10256	21%	37936	79%	48192
BSHC	3284	19%	13992	81%	17276
BSA Total	47213	23%	158453	77%	205666
<i>65-69 years</i>					
BSAN	556	13%	3742	87%	4298
BSM	172	5%	3374	95%	3546
BSCtoC	235	9%	2446	91%	2681
BSC	153	7%	1941	93%	2094
BSS	285	8%	3294	92%	3579
BSHC	9	1%	973	99%	982
BSA Total	1410	8%	15770	92%	17180

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

The rates presented in Table 1.a.2 are relative proportions of total women screened. An alternative indicator would be a population-based screening rate which would comprise the number of women screened (for initial and subsequent) divided by the total number of eligible women in the population.

The percentage of screens that are initial and subsequent screens, women aged 45-49 years

Screening in this age group commenced in July 2004, and therefore initial screens represent the total of all screens in this age-group.

The percentage of screens that are initial and subsequent screens, women aged 50-64 years

Of the total number of screens for the biennium concluding in Dec 2004, 23% were initial screens and 77% were subsequent screens with little variation by lead provider. Both the initial and subsequent proportions are slightly lower than for the previous 6 month period. It is also expected that the initial screening rate will decrease further as a proportion of total screens as the program matures, as a greater proportion of women will return to the program for subsequent screens. Future initial screening rates should stabilise at a level reflecting the number of women who age into the target age group of the program. The relative proportion of initial and subsequent screens influences results, such as cancer detection rates, since there is lower detection in incident screens.

The percentage of screens that are initial and subsequent screens, women aged 65-69 years

Screening in this age group commenced in July 2004. The majority of screens in this age group were subsequent screens (92% overall), with little variation by lead provider. Only 8% of screens in this age group were initial screens, ranging from 1% to 13% across lead providers.

1.a.3. The percentage of Women Screened by Type of Screening Unit

Table 1a.3 The percentage of Women Screened by Type of Screening Unit

Lead Provider	Jan 2003 to Dec 2004				Total Screens
	Fixed Site		Mobile Site		
	Number of Women Screened	Fixed %	Number of Women Screened	Mobile %	
<i>45-49 years</i>					
BSAN	13	22%	45	78%	58
BSM	2	2%	104	98%	106
BSCtoC	4	100%	0	0%	4
BSC	18	41%	26	59%	44
BSS	2	100%	0	0%	2
BSHC	251	58%	179	42%	430
BSA Total	290	45%	354	55%	644
<i>50-64 years</i>					
BSAN	52388	86%	8664	14%	61052
BSM	23233	74%	8040	26%	31273
BSCtoC	20982	79%	5513	21%	26495
BSC	14555	68%	6823	32%	21378
BSS	41784	87%	6408	13%	48192
BSHC	11587	67%	5689	33%	17276
BSA Total	164529	80%	41137	20%	205666
<i>65-69 years</i>					
BSAN	3500	81%	798	19%	4298
BSM	2881	81%	665	19%	3546
BSCtoC	2295	86%	386	14%	2681
BSC	1529	73%	565	27%	2094
BSS	3021	84%	558	16%	3579
BSHC	590	60%	392	40%	982
BSA Total	13816	80%	3364	20%	17180

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

The proportion of screens performed at fixed sites and mobile units depends on the geography, and policies of various services, and subsequently there is a degree of variation across lead providers for this indicator. As noted in discussion of previous coverage indicators, the 45-49 year age group and the 65-69 year age group commenced screening in July, 2004. Thus, the biennium presented in Table 1.a.3 (January 2003 to Dec 2004) is incomplete for these age-groups

The percentage of women screened by type of screening unit, women aged 45-49 years

For the 6 month period July, 2004 to December, 2004 the BSA program proportions for fixed and mobile screening sites was 45% and 55% respectively. These proportions differed from older age groups. There was variability across lead providers reflecting small numbers of screens.

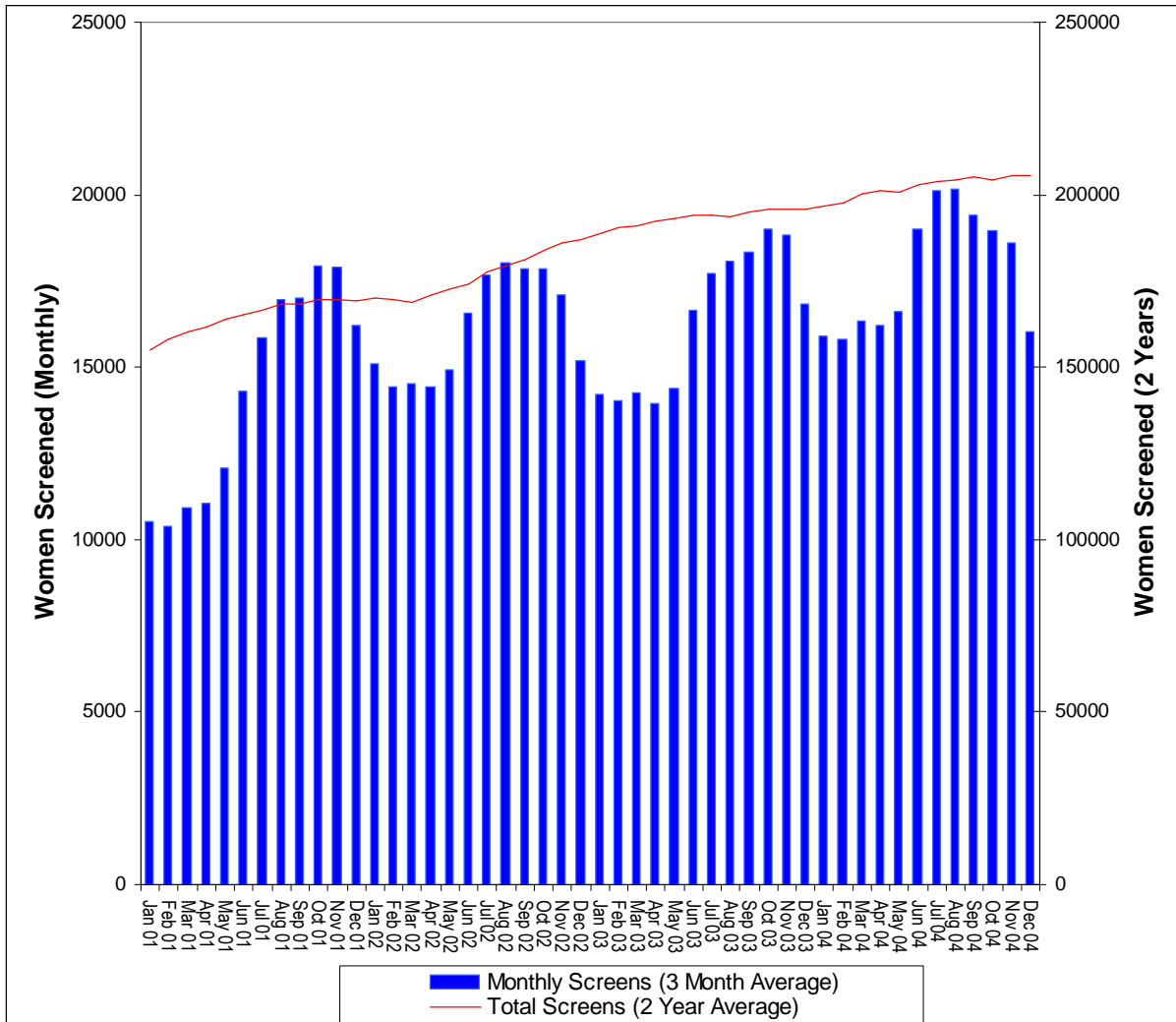
The percentage of women screened by type of screening unit, women aged 50-64 years

For the biennium January 2003 to December 2004, 80% of BSA screens were conducted fixed sites and 20% of BSA screens were conducted at mobile vans.

The percentage of women screened by type of screening unit, women aged 65-69 years

For the 6 month period July, 2004 to December, 2004, the same overall proportions were evident for the older age group as for the biennial rate in the 50-64 year age group. The proportion of overall screens for fixed and mobile sites was 80% and 20% respectively.

Graph 1.a. Overall Number of Screens by Month and Cumulative 24 Month Total, women aged 50-64 years



Comment:

The 3 monthly variation in screening numbers shows similar pattern to previous years with lesser numbers in December and January than other months. This is presumably related to service factors (equipment maintenance, staff leave, etc) and client factors (vacation period).

1.a.4 Age-specific coverage of women aged 50-64 years

Table 1a.4 Coverage of 50-64 year old eligible women by age group

Lead Provider	Eligible Population*	Last 6 Months		Last 2 Years	
		Jul 2004 to Dec 2004		Jan 2003 to Dec 2004	
		Number of Women Screened	Coverage %	Number of Women Screened	Coverage %
<i>50-54 years</i>					
BSAN	44870	5960	13.3%	22996	51.3%
BSM	19495	2652	13.6%	11210	57.5%
BSCtoC	16810	2402	14.3%	9695	57.7%
BSC	13725	1866	13.6%	7980	58.1%
BSS	22435	4887	21.8%	19431	86.6%
BSHC	8975	1649	18.4%	6599	73.5%
BSA Total	126310	19416	15.4%	77911	61.7%
<i>55-59 years</i>					
BSAN	39290	4959	12.6%	21874	55.7%
BSM	17485	2908	16.6%	10739	61.4%
BSCtoC	14990	1876	12.5%	9415	62.8%
BSC	12460	1503	12.1%	7619	61.1%
BSS	20435	3776	18.5%	16419	80.3%
BSHC	8265	1452	17.6%	5861	70.9%
BSA Total	112925	16474	14.6%	71927	63.7%
<i>60-64 years</i>					
BSAN	30050	3595	12.0%	16182	53.9%
BSM	14595	2084	14.3%	9324	63.9%
BSCtoC	12375	1376	11.1%	7385	59.7%
BSC	9475	1087	11.5%	5779	61.0%
BSS	15925	2849	17.9%	12342	77.5%
BSHC	6625	1234	18.6%	4816	72.7%
BSA Total	89045	12225	13.7%	55828	62.7%

Comment:

1.a.4. Coverage of 50-54 year old eligible women

The 6 monthly coverage (15.4%) has decreased compared to the previous period, and this has resulted in a slight decrease in the biennial rate (to 61.7% from 63.0%). As noted above, this is likely to be partly due to denominators for this period being based on 2004 estimates (not 2003) and reflect underlying population increases.

1.a.5. Coverage of 55-59 year old eligible women

The 6 monthly coverage (14.6%) has decreased compared to the previous period, and this has resulted in a decrease in the biennial rate (to 63.7% from 64.9%). As noted above, this is likely to be partly due to denominators for this period being based on 2004 estimates (not 2003) and reflect underlying population increases. There is some variation between lead providers with biennial rates ranging from 55.7% to 80.3%. However, denominators are the same as the previous report.

1.a.6. Coverage of 60-64 year old eligible women

The 6 monthly coverage (13.7%) has decreased compared to the previous period, and this has resulted in a decrease in the biennial rate (to 62.7% from 66.4%). As noted above, this is likely to be partly due to denominators for this period being based on 2004 estimates (not 2003) and reflect underlying population increases. There is some variation between lead providers.

1.a.7. Coverage by Ethnicity, Summary for last 2 years

Table 1a.7 Coverage by Ethnicity, Summary for last 2 years

Lead Provider	Jan 2003 to Dec 2004						Not Stated (% of Women Screened)
	Maori		Pacific		Other		
	Number of Women Screened	Coverage %	Number of Women Screened	Coverage %	Number of Women Screened	Coverage %	
<i>45-49 years</i>							
BSAN	11		3		43		2%
BSM	12		0		94		0%
BSCtoC	0		0		4		0%
BSC	2		0		39		7%
BSS	0		0		2		0%
BSHC	20		3		401		1%
BSA Total	45		6		583		2%
<i>50-64 years</i>							
BSAN	4843	49.3%	3745	44.1%	51938	54.2%	1%
BSM	2956	38.6%	255	48.6%	28043	64.6%	0%
BSCtoC	2076	34.9%	143	31.4%	23883	63.2%	1%
BSC	1075	41.0%	547	31.8%	19700	62.9%	0%
BSS	1502	70.4%	275	70.5%	46129	82.0%	1%
BSHC	495	52.4%	59	45.4%	16562	72.7%	1%
BSA Total	12947	44.4%	5024	42.9%	186255	64.8%	1%
<i>65-69 years</i>							
BSAN	279		186		3808		1%
BSM	186		11		3346		0%
BSCtoC	140		6		2508		1%
BSC	84		39		1965		0%
BSS	85		15		3459		1%
BSHC	18		2		951		1%
BSA Total	792		259		16037		1%

Comment:

Coverage by Ethnicity, Summary for last 2 years, 45-49 years

Screening in this age group commenced in July 2004, and as such the number of screens represent a 6 month period not a biennium.

Coverage by Ethnicity, Summary for last 2 years, 50-64 years

The biennial rate or January 2003 to December 2004 has decreased in each major ethnic group compared to the previous period (as noted previously, partly due to a change to the underlying denominator). Similar overall rates are evident for Maori and Pacific Islanders (approximately 43%). Rates in the 'other' ethnic group were higher (64.8%) than Maori and Pacific Islander groups. There is a wide variation in rates by lead provider for Maori and Pacific Islander groups, presumably reflecting the differing ethnic characteristics of the catchment areas. There are very few women in the un-stated category.

Coverage by Ethnicity, Summary for last 2 years, 65-69 years

Screening in this age group commenced in July 2004, and as such the number of screens represent a 6 month period not a biennium.

1.a.8. Coverage of Maori women

Table 1a.8 Coverage of Maori women

Lead Provider	Eligible Population*	Last 6 Months		Last 2 Years	
		Jul 2004 to Dec 2004		Jan 2003 to Dec 2004	
		Number of Women Screened	Coverage %	Number of Women Screened	Coverage %
<i>45-49 years</i>					
BSAN	5720	10	0.2%	11	
BSM	4480	12	0.3%	12	
BSCtoC	3330	0	0.0%	0	
BSC	1555	2	0.1%	2	
BSS	1250	0	0.0%	0	
BSHC	530	20	3.8%	20	
BSA Total	16865	44	0.3%	45	
<i>50-64 years</i>					
BSAN	9820	1141	11.6%	4843	49.3%
BSM	7660	585	7.6%	2956	38.6%
BSCtoC	5950	343	5.8%	2076	34.9%
BSC	2620	204	7.8%	1075	41.0%
BSS	2135	413	19.3%	1502	70.4%
BSHC	945	144	15.2%	495	52.4%
BSA Total	29130	2830	9.7%	12947	44.4%
<i>65-69 years</i>					
BSAN	1820	223	12.3%	279	
BSM	1460	147	10.1%	186	
BSCtoC	1160	112	9.7%	140	
BSC	395	72	18.2%	84	
BSS	340	78	22.9%	85	
BSHC	140	15	10.7%	18	
BSA Total	5315	647	12.2%	792	

Note: Eligible population is based on the 2004 projected population

Comment:

Coverage of Maori women, 45-49 years

Screening in this age group commenced in July 2004. The 6 month screening rate (0.3%) was substantially lower than that of the 50-64 and 65-69 year age-group. The biennial rate cannot be interpreted, as a 2 year period in this age group has not yet elapsed.

Coverage of Maori women, 50-64 years

Coverage of Maori women has decreased slightly since the previous report (both six monthly data and biennial rates) with a variation between lead providers. However, denominators have changed compared with the previous report.

Coverage of Maori women, 65-69 years

Screening in this age group commenced in July 2004. The 6 month screening rate of 12.2% was slightly higher than the 6 month rate for the 50-64 year age group. The biennial rate cannot be interpreted, as a 2 year period in this age group has not yet elapsed.

1.a.9. Coverage of Pacific women

Table 1a.9 Coverage of Pacific women

Lead Provider	Eligible Population*	Last 6 Months		Last 2 Years	
		Jul 2004 to Dec 2004		Jan 2003 to Dec 2004	
		Number of Women Screened	Coverage %	Number of Women Screened	Coverage %
<i>45-49 years</i>					
BSAN	4445	3	0.1%	3	
BSM	325	0	0.0%	0	
BSCtoC	265	0	0.0%	0	
BSC	875	0	0.0%	0	
BSS	240	0	0.0%	0	
BSHC	70	3	4.3%	3	
BSA Total	6220	6	0.1%	6	
<i>50-64 years</i>					
BSAN	8500	1099	12.9%	3745	44.1%
BSM	525	49	9.3%	255	48.6%
BSCtoC	455	20	4.4%	143	31.4%
BSC	1720	146	8.5%	547	31.8%
BSS	390	65	16.7%	275	70.5%
BSHC	130	16	12.3%	59	45.4%
BSA Total	11720	1395	11.9%	5024	42.9%
<i>65-69 years</i>					
BSAN	1665	160	9.6%	186	
BSM	125	6	4.8%	11	
BSCtoC	85	5	5.9%	6	
BSC	310	37	11.9%	39	
BSS	60	13	21.7%	15	
BSHC	15	2	13.3%	2	
BSA Total	2260	223	9.9%	259	

Comment:

Coverage of Pacific women, 45-49 years

Screening in this age group commenced in July 2004. The BSA 6 month rate was low (0.1%) compared with older age-groups, and only very small numbers were screened in all lead providers. The biennial rate cannot be interpreted, as a 2 year period in this age group has not yet elapsed.

Coverage of Pacific women, 50-64 years

Coverage of Pacific Island women remained the same over the six month period (11% overall) compared to the previous report and biennial rates did not change substantially. As noted previously, denominators have changed from the previous report. There is a variation between lead providers.

Coverage of Pacific women, 65-69 years

Screening in this age group commenced in July 2004. The BSA 6 month rate of 9.9% was of a similar magnitude to the 50-64 year age group (11.9%), however there was large variation between lead providers with rates ranging from 5.9% to 21.7%. The biennial rate cannot be interpreted, as a 2 year period in this age group has not yet elapsed.

1.a.10. Coverage of Other women, 50-64 years

Table 1a.10 Coverage of Other women

Lead Provider	Eligible Population*	Last 6 Months		Last 2 Years	
		Jul 2004 to Dec 2004		Jan 2003 to Dec 2004	
		Number of Women Screened	Coverage %	Number of Women Screened	Coverage %
<i>45-49 years</i>					
BSAN	41980	40	0.1%	43	
BSM	17600	94	0.5%	94	
BSCtoC	15480	4	0.0%	4	
BSC	13320	39	0.3%	39	
BSS	23500	2	0.0%	2	
BSHC	9760	401	4.1%	401	
BSA Total	121640	580	0.5%	583	
<i>50-64 years</i>					
BSAN	95890	12208	12.7%	51938	54.2%
BSM	43390	7000	16.1%	28043	64.6%
BSCtoC	37770	5166	13.7%	23883	63.2%
BSC	31320	4062	13.0%	19700	62.9%
BSS	56270	10964	19.5%	46129	82.0%
BSHC	22790	4134	18.1%	16562	72.7%
BSA Total	287430	43534	15.1%	186255	64.8%
<i>65-69 years</i>					
BSAN	19880	3218	16.2%	3808	
BSM	10350	2930	28.3%	3346	
BSCtoC	9090	2243	24.7%	2508	
BSC	6740	1757	26.1%	1965	
BSS	12580	3109	24.7%	3459	
BSHC	5470	809	14.8%	951	
BSA Total	64110	14066	21.9%	16037	

Comment:

1.a.10. Coverage of Other women, 45-49 years

Screening in this age group commenced in July 2004. The BSA 6 month rate was low (0.5%) compared with older age-groups, with variation across lead providers. The biennial rate cannot be interpreted, as a 2 year period in this age group has not yet elapsed.

1.a.10. Coverage of Other women, 50-64 years

Coverage of women from ethnic groups other than Maori or Pacific Islander (15.1%) was lower than the rate for the previous the six month period (19% overall), and biennial rates did not change substantially. As noted previously, denominators have changed from the previous report. There is a variation between lead providers.

1.a.10. Coverage of Other women, 65-69 years

Screening in this age group commenced in July 2004. The BSA 6 month rate of 21.9% was greater than the 50-64 year age group (15.1%). There was variation between lead providers with rates ranging from 14.8% to 28.3%. The biennial rate cannot be interpreted, as a 2 year period in this age group has not yet elapsed.

1.b. Routine re-screening

Description: The proportion of enrolled eligible women who are re-screened, this measures the acceptability of the programme

Target:

- > 85% of women who are eligible for rescreen are re-screened, within 27 months
- > 75% of women who return for a screen are re-screened between 20 to 24 months of their previous screen

Table 1b.1 Percentage of women eligible for rescreen who are re-screened, within 27months

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	Women re-screened within 27 months	Women eligible for rescreen	Proportion of women re-screened	Women re-screened within 27 months	Women eligible for rescreen	Proportion of women re-screened
BSAN	11996	14103	85.1%	42044	65376	64.3%
BSM	6104	7614	80.2%	20531	35555	57.7%
BSCtoC	5174	6152	84.1%	19148	29559	64.8%
BSC	3905	4625	84.4%	15863	25674	61.8%
BSS	10959	12092	90.6%	34689	54659	63.5%
BSHC	3914	4528	86.4%	13087	20091	65.1%
BSA Total	42052	49114	85.6%	145362	230914	63.0%

Table 1b.2 Percentage of women who return for a screen who are re-screened within 20-24months

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	Number of rescreens within 20-24 months of previous screen	Women re-screened within 27 months	Proportion of women re-screened within 20-24 months	Number of rescreens within 20-24 months of previous screen	Women re-screened within 27 months	Proportion of women re-screened within 20-24 months
BSAN	9672	11996	80.6%	35988	42044	85.6%
BSM	5216	6104	85.5%	15493	20531	75.5%
BSCtoC	3613	5174	69.8%	12526	19148	65.4%
BSC	3490	3905	89.4%	14004	15863	88.3%
BSS	9665	10959	88.2%	30816	34689	88.8%
BSHC	2566	3914	65.6%	9540	13087	72.9%
BSA Total	34222	42052	81.4%	118367	145362	81.4%

Comment:

Women aged 45-49 years and 65-69 years commenced screening in July, 2004, and are not yet eligible for to return for a re-screen. Re-screen data is present for the 50-64 year age group only.

1.b.1. Re-screened within 27 months

The data from the previous six months shows that the target of 85% is being met overall; although the 2 year data show lower rates presumably because of lower re-screen rates in the early part of this period. This is a very commendable result, with no lead providers more than 5 percentage points below target.

1.b.2. Re-screened 20-24 months

Both six monthly and 2 yearly data show that the target of 75% is being met over all, although some lead providers are under target.

2. PROVISION OF HIGH QUALITY SCREENING AND ASSESSMENT

2.a. Screened women who have no more than four films taken

Description:

The percentage of women who have no more than four films taken

Target:

> 80% of women screened have four films taken or fewer.

2.a.1. Percentage of women having 4 films or less by Lead Provider, last 6 months

Table 2a.1 Percentage of women having 4 films or fewer by Lead Provider, last 6 months

Lead Provider	Jul 2004 to Dec 2004					
	Fixed			Mobile		
	Women having 4 films or fewer	Number of Women Screened	% of Women Screened	Women having 4 films or fewer	Number of Women Screened	% of Women Screened
<i>45-49 years</i>						
BSAN	6	9	66.7%	36	45	80.0%
BSM	2	2	100.0%	92	104	88.5%
BSCtoC	4	4	100.0%	0	0	0.0%
BSC	16	18	88.9%	24	26	92.3%
BSS	2	2	100.0%	0	0	0.0%
BSHC	227	251	90.4%	169	179	94.4%
BSA Total	257	286	89.9%	321	354	90.7%
<i>50-64 years</i>						
BSAN	9306	11598	80.2%	2242	2916	76.9%
BSM	5030	5666	88.8%	1675	1978	84.7%
BSCtoC	3812	4290	88.9%	1127	1364	82.6%
BSC	2472	2932	84.3%	1349	1524	88.5%
BSS	8741	10267	85.1%	1095	1245	88.0%
BSHC	2761	3235	85.3%	1011	1100	91.9%
BSA Total	32122	37988	84.6%	8499	10127	83.9%
<i>65-69 years</i>						
BSAN	2259	2896	78.0%	549	724	75.8%
BSM	2239	2507	89.3%	485	579	83.8%
BSCtoC	1778	2050	86.7%	284	334	85.0%
BSC	1232	1420	86.8%	397	451	88.0%
BSS	2227	2678	83.2%	444	540	82.2%
BSHC	419	498	84.1%	298	338	88.2%
BSA Total	10154	12049	84.3%	2457	2966	82.8%

Comment:

Percentage of women (45-49 years) having 4 films or less by Lead Provider, last 6 months

The BSA program percentage and all lead providers reached the target of 80% for fixed sites. Similarly, for mobile sites the overall percentage of 90.7% was above the target. Two lead providers are yet to conduct screens at mobile units for this age group.

Percentage of women (50-64 years) having 4 films or less by Lead Provider, last 6 months

The BSA program percentage and all lead providers reached the target of 80% for fixed sites. Similarly for mobile sites, the overall percentage of 83.9% was above the target, with only one lead provider marginally (<5 percentage points) below.

Percentage of women (65-69 years) having 4 films or less by Lead Provider, last 6 months

The BSA program percentage and all lead providers reached the target of 80% for fixed sites. Similarly for mobile sites, the overall percentage of 82.8% was above the target, with only one lead provider marginally (<5 percentage points) below.

Description:

The percentage of women who have no more than four films taken

Target:

> 80% of women screened have four films taken or fewer.

2.a.2. Percentage of women having 4 films or less by Lead Provider, last 2 years

Table 2a.2 Percentage of women having 4 films or less by Lead Provider, last 2 years

Lead Provider	Jan 2003 to Dec 2004					
	Fixed			Mobile		
	Women having 4 films or fewer	Number of Women Screened	% of Women Screened	Women having 4 films or fewer	Number of Women Screened	% of Women Screened
<i>45-49 years</i>						
BSAN	10	13		36	45	
BSM	2	2		92	104	
BSCtoC	4	4		0	0	
BSC	16	18		24	26	
BSS	2	2		0	0	
BSHC	227	251		169	179	
BSA Total	261	290		321	354	
<i>50-64 years</i>						
BSAN	43050	52388	82.2%	6685	8664	77.2%
BSM	20774	23233	89.4%	6656	8040	82.8%
BSCtoC	18358	20982	87.5%	4436	5513	80.5%
BSC	11378	14555	78.2%	5465	6823	80.1%
BSS	35519	41784	85.0%	5578	6408	87.0%
BSHC	9800	11587	84.6%	5204	5689	91.5%
BSA Total	138879	164529	84.4%	34024	41137	82.7%
<i>65-69 years</i>						
BSAN	2760	3500		602	798	
BSM	2582	2881		557	665	
BSCtoC	1994	2295		328	386	
BSC	1316	1529		482	565	
BSS	2507	3021		457	558	
BSHC	490	590		347	392	
BSA Total	11649	13816		2773	3364	

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Percentage of women (45-49 years) having 4 films or less by Lead Provider, last 2 years

Screening in this age group commenced in July, 2004, therefore these data represent a 6 month period. A 2 year period has not yet elapsed for this indicator to be interpreted appropriately.

Percentage of women (50-64 years) having 4 films or less by Lead Provider, last 2 years

The BSA program percentage reached the target of 80% for fixed sites and mobile sites. There was little variability across lead providers, although two lead providers were slightly below the target.

Percentage of women (65-69 years) having 4 films or less by Lead Provider, last 2 years

Screening in this age group commenced in July, 2004, therefore these data represent a 6 month period. A 2 year period has not yet elapsed for this indicator to be interpreted appropriately.

2.b. Technical Recall Rate

Description: The number of women who have to return to a screening unit (either Fixed or Mobile) for further films to complete their screening episode, expressed as a percentage of the number screened.

Target:

Fixed: <0.5%

Mobile: <3%

2.b.1. Women having technical recall as a percentage of Women screened, last 6 Months

Table 2b.1 Women having technical recall as a percentage of Women screened, last 6 Months

Lead Provider	Jul 2004 to Dec 2004					
	Fixed			Mobile		
	Women having Technical Recall	Number of Women Screened	% of Women Screened	Women having Technical Recall	Number of Women Screened	% of Women Screened
45-49 years						
BSAN	0	9	0%	4	45	8.9% (2.2-22.2)
BSM	0	2	0%	2	104	1.9% (0.0-6.7)
BSCtoC	0	4	0%	0	0	-
BSC	0	18	0%	2	26	7.7% (0.0-26.9)
BSS	0	2	0%	0	0	-
BSHC	2	251	0.80% (0.00-2.79)	2	179	1.1% (0.0-3.9)
BSA Total	2	286	0.70% (0.00-2.45)	10	354	2.8% (1.4-5.1)
50-64 years						
BSAN	25	11598	0.22% (0.14-0.32)	123	2916	4.2% (3.5-5.0)
BSM	10	5666	0.18% (0.09-0.32)	81	1978	4.1% (3.2-5.1)
BSCtoC	0	4290	0.00% (0.00-0.07)	48	1364	3.5% (2.6-4.7)
BSC	4	2932	0.14% (0.03-0.34)	40	1524	2.6% (1.9-3.5)
BSS	39	10267	0.38% (0.27-0.52)	16	1245	1.3% (0.7-2.1)
BSHC	11	3235	0.34% (0.15-0.62)	29	1100	2.6% (1.7-3.8)
BSA Total	89	37988	0.23% (0.19-0.29)	337	10127	3.3% (3-3.7)
65-69 years						
BSAN	6	2896	0.21% (0.08-0.45)	32	724	4.4% (3.0-6.2)
BSM	11	2507	0.44% (0.22-0.79)	29	579	5.0% (3.4-7.2)
BSCtoC	4	2050	0.20% (0.05-0.50)	13	334	3.9% (2.1-6.7)
BSC	3	1420	0.21% (0.04-0.62)	23	451	5.1% (3.2-7.7)
BSS	9	2678	0.34% (0.15-0.64)	15	540	2.8% (1.6-4.6)
BSHC	1	498	0.20% (0.01-1.12)	8	338	2.4% (1.0-4.7)
BSA Total	34	12049	0.28% (0.20-0.39)	120	2966	4% (3.4-4.8)

Poisson 95% Confidence Intervals presented

Comment:

Women having technical recall as a percentage of Women screened, last 6 Months, women aged 45-49 years

The BSA program percentage (0.7%) was slightly over the target of 0.5% for fixed sites, however 95% confidence intervals contained the target value and numbers of screens are small. Similarly, the BSA program percentage for mobile sites (2.8%) was below the target of <3%, however 95% confidence intervals contained values below the target value.

Women having technical recall as a percentage of Women screened, last 6 Months, women aged 50-64 years

The BSA program percentage, and all lead providers reached target of <0.5% for fixed sites, but for mobile sites the BSA program percentage was significantly over target of <3% at 3.3%, with some lead providers over 4%. These results are similar to the previous period. 95% confidence intervals indicate that some of the differences between lead providers are significant for mobile sites.

Women having technical recall as a percentage of Women screened, last 6 Months, women aged 65-69 years

The BSA program percentage, and all lead providers reached target of <0.5% for fixed sites, but for mobile sites the BSA program percentage was significantly over the target of <3% at 4.0%. Three of the six lead providers had percentages over 4%. These results are similar to the previous period.

Description: The number of women who have to return to a screening unit (either Fixed or Mobile) for further films to complete their screening episode, expressed as a percentage of the number screened.

Target:

Fixed: <0.5%

Mobile: <3%

2.b.2. Women having technical recall as a percentage of Women screened, last 2 years

Table 2b.2 Women having technical recall as a percentage of Women screened, last 2 years

Lead Provider	Jan 2003 to Dec 2004					
	Fixed			Mobile		
	Women having Technical Recall	Number of Women Screened	% of Women Screened	Women having Technical Recall	Number of Women Screened	% of Women Screened
<i>45-49 years</i>						
BSAN	0	9		7	45	
BSM	0	2		2	104	
BSCtoC	0	4		4	0	
BSC	2	18		5	26	
BSS	1	2		0	0	
BSHC	3	251		5	179	
BSA Total	30	290		23	354	
<i>50-64 years</i>						
BSAN	121	52388	0.23% (0.19-0.28)	419	8664	4.8% (4.4-5.3)
BSM	34	23233	0.15% (0.10-0.21)	272	8040	3.4% (3.0-3.8)
BSCtoC	25	20982	0.12% (0.08-0.18)	282	5513	5.1% (4.5-5.8)
BSC	80	14555	0.55% (0.43-0.69)	228	6823	3.3% (2.9-3.8)
BSS	158	41784	0.38% (0.32-0.44)	127	6408	2% (1.7-2.4)
BSHC	32	11587	0.28% (0.19-0.39)	148	5689	2.6% (2.2-3.1)
BSA Total	450	164529	0.27% (0.25-0.30)	1476	41137	3.6% (3.4-3.8)
<i>65 years</i>						
BSAN	31	3500		38	798	
BSM	11	2881		32	665	
BSCtoC	4	2295		21	386	
BSC	5	1529		30	565	
BSS	13	3021		15	558	
BSHC	2	590		12	392	
BSA Total	66	13816		148	3364	

Poisson 95% Confidence Intervals presented

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Women having technical recall as a percentage of women screened, last 2 years, 45-49 years

Screening in this age group commenced in July, 2004. These data represent a 6 month period. A 2 year period has not yet elapsed for this indicator to be interpreted appropriately.

Women having technical recall as a percentage of women screened, last 2 years, 50-64 years

The BSA program percentage, and all lead providers (but one) reached the target of <0.5% for fixed sites, but for mobile sites the BSA program percentage was over target of <3% at 3.6%, with 2 lead providers over 4%. Overall results are similar to the previous period.

Women having technical recall as a percentage of women screened, last 2 years, 65-69 years

Screening in this age group commenced in July, 2004. These data represent data for a 6 month period. A 2 year period has not yet elapsed for this indicator to be interpreted appropriately.

2.c. Technical reject rate

Description: The number of films rejected as a percentage of the number of films taken, calculated separately for women who are screened in a fixed unit and a mobile unit.

Target:

Fixed: <3%

Mobile: <3%

2.c.1. Rejected films as a percentage of total films taken

Table 2c.1 Rejected films as a percentage of total films taken, last 6 Months

Lead Provider	Jul 2004 to Dec 2004					
	Fixed			Mobile		
	Total Films Rejected	Total Films Taken	% of Total Films	Total Films Rejected	Total Films Taken	% of Total Films
<i>45-49 years</i>						
BSAN	0	41	0.0%	5	194	2.6%
BSM	0	8	0.0%	2	435	0.5%
BSCtoC	0	16	0.0%	0	0	0.0%
BSC	1	75	1.3%	0	107	0.0%
BSS	0	8	0.0%	0	0	0.0%
BSHC	8	1037	0.8%	1	734	0.1%
BSA Total	9	1185	0.8%	8	1470	0.5%
<i>50-64 years</i>						
BSAN	566	50218	1.1%	79	12731	0.6%
BSM	172	23775	0.7%	73	8395	0.9%
BSCtoC	160	17851	0.9%	64	5832	1.1%
BSC	119	12380	1.0%	1	6363	0.0%
BSS	611	43400	1.4%	39	5245	0.7%
BSHC	171	13710	1.2%	20	4569	0.4%
BSA Total	1799	161334	1.1%	276	43135	0.6%
<i>65- 69 years</i>						
BSAN	142	12579	1.1%	27	3182	0.8%
BSM	64	10436	0.6%	17	2457	0.7%
BSCtoC	66	8586	0.8%	21	1425	1.5%
BSC	50	5947	0.8%	0	1904	0.0%
BSS	150	11280	1.3%	21	2334	0.9%
BSHC	17	2114	0.8%	3	1427	0.2%
BSA Total	489	50942	1.0%	89	12729	0.7%

Comment:

Rejected films as a percentage of total films taken, last 6 Months, women aged 45-49 years

The BSA program percentage reached the target of <3% for fixed and mobile sites, with all lead providers below the target value.

Rejected films as a percentage of total films taken, last 6 Months, women aged 50-64 years

The BSA program percentage, and all lead providers reached the target of <3% for fixed and mobile sites. These results are similar to the previous period.

Rejected films as a percentage of total films taken, last 6 Months, women aged 65-69 years

The BSA program percentage, and all lead providers, reached the target of <3% for fixed and mobile sites.

Description: The number of films rejected as a percentage of the number of films taken, calculated separately for women who are screened in a fixed unit and a mobile unit.

Target:

Fixed: <3%

Mobile: <3%

2.c.2. Rejected films as a percentage of total films taken, last 2 Years

Table 2c.2 Rejected films as a percentage of total films taken, last 2 Years

Lead Provider	Jan 2003 to Dec 2004					
	Fixed			Mobile		
	Total Films Rejected	Total Films Taken	% of Total Films	Total Films Rejected	Total Films Taken	% of Total Films
<i>45-49 years</i>						
BSAN	0	57		5	194	
BSM	0	8		2	435	
BSCtoC	0	16		0	0	
BSC	1	75		0	107	
BSS	0	8		0	0	
BSHC	8	1037		1	734	
BSA Total	9	1201		8	1470	
<i>50-64 years</i>						
BSAN	2460	224131	1.1%	288	37807	0.8%
BSM	676	97284	0.7%	215	34490	0.6%
BSCtoC	1026	87690	1.2%	342	23845	1.4%
BSC	784	63037	1.2%	12	29492	0.0%
BSS	2278	176530	1.3%	186	27150	0.7%
BSHC	661	49319	1.3%	33	23575	0.1%
BSA Total	7885	697991	1.1%	1076	176359	0.6%
<i>65-69 years</i>						
BSAN	172	15133		30	3512	
BSM	72	11992		23	2822	
BSCtoC	85	9608		27	1643	
BSC	55	6414		1	2401	
BSS	170	12729		21	2416	
BSHC	25	2514		3	1650	
BSA Total	579	58390		105	14444	

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

2.c.2. Rejected films as a percentage of total films taken, last 2 Years, women aged 45-49 years

Screening in this age group commenced in July, 2004. The data represent a 6 month period, and cannot be interpreted as a biennial rate.

2.c.2. Rejected films as a percentage of total films taken, last 2 Years, women aged 50-64 years

The BSA program percentage, and all lead providers reached the target of <3% for fixed and mobile sites. These results are similar to the previous period.

2.c.2. Rejected films as a percentage of total films taken, last 2 Years, women aged 65-69 years

Screening in this age group commenced in July, 2004. The data represent a 6 month period, and cannot be interpreted as a biennial rate.

2.d. Assessment rate

Description:

Number of women referred to assessment as a percentage of all women screened

Target:

Initial (Prevalent) screen: expected value <10% and the desired value is <7%

Subsequent (Incident) screen: expected value <5% and the desired value is <4%

2.d.1. Referral to Assessment as a percentage of Women screened

Table 2d.1 Referral to Assessment as a percentage of Women screened, last 6 Months

Lead Provider	Jul 2004 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
	Referral to Assessment	Number of Women Screened	% of Women Screened	Referral to Assessment	Number of Women Screened	% of Women Screened
45-49 years						
BSAN	3	53	5.7% (1.2-16.5)	0	1	
BSM	12	106	11.3% (5.8-19.8)	0	0	
BSCtoC	0	4	0%	0	0	
BSC	6	44	13.6% (5.0-29.7)	0	0	
BSS	0	2	0%	0	0	
BSHC	25	430	5.8% (3.8-8.6)	0	0	
BSA Total	46	639	7.2% (5.3-9.6)	0	1	
50-64 years						
BSAN	259	3443	7.5% (6.6-8.5)	280	11071	2.5% (2.2-2.8)
BSM	126	1466	8.6% (7.2-10.2)	238	6178	3.9% (3.4-4.4)
BSCtoC	94	1320	7.1% (5.8-8.7)	117	4334	2.7% (2.2-3.2)
BSC	154	1324	11.6% (9.9-13.6)	91	3132	2.9% (2.3-3.6)
BSS	203	2202	9.2% (8.0-10.6)	331	9310	3.6% (3.2-4.0)
BSHC	54	626	8.6% (6.5-11.3)	74	3709	2.0% (1.6-2.5)
BSA Total	890	10381	8.6% (8.0-9.2)	1131	37734	3.0% (2.8-3.2)
65-69 years						
BSAN	33	473	7.0% (4.8-9.8)	91	3147	2.9% (2.3-3.6)
BSM	15	150	10.0% (5.6-16.5)	139	2936	4.7% (4.0-5.6)
BSCtoC	10	197	5.1% (2.4-9.3)	66	2187	3.0% (2.3-3.8)
BSC	11	100	11% (5.5-19.7)	77	1771	4.3% (3.4-5.4)
BSS	19	240	7.9% (4.8-12.4)	117	2978	3.9% (3.2-4.7)
BSHC	0	7	0.0% (0.0-52.7)	18	829	2.2% (1.3-3.4)
BSA Total	88	1167	7.5% (6.0-9.3)	508	13848	3.7% (3.4-4.0)

Poisson 95% Confidence Intervals presented

Comment:

Referral to Assessment as a percentage of Women screened, last 6 Months, women aged 45-49 years

Screening commenced in this age group in July, 2004. For initial screens, the BSA program percentage (7.2%) was less than the target of 10% for the six month period. There was variation between lead providers initial screens, however these differences are based on small numbers of screens and were not statistically significant. The percentages for initial screens reflect the proportion of true prevalent screens in each service, as well as other factors. As screening has only commenced recently in this age group, a biennium has not elapsed for subsequent screens to have occurred.

Referral to Assessment as a percentage of Women screened, last 6 Months, women aged 50-64 years

For initial screens the BSA program percentage (8.6%) was less than the expected value of <10% for the six month period, but more than the desired value of <7%. There was variation among lead providers however confidence intervals contained the target value for all lead providers. For subsequent screens, the BSA program percentage was less than the desired value of <4%, which was the case for all lead providers. Percentages are similar to the previous period.

Referral to Assessment as a percentage of Women screened, last 6 Months, women aged 65-69 years

Screening in this age group commenced in July, 2004. The BSA program percentage was less than the expected value of <10% but greater than the desired value of <7%. For subsequent screens the BSA program percentage (3.7%) was less than the desired value of <4%. All lead providers were below the expected value of <5%, however upper confidence intervals exceeded the target value in some cases. A larger number of screens in this age group were subsequent, rather than initial screens, as women who had previously attended the program aged into the extended age group of 65-69 years.

Description:

Number of women referred to assessment as a percentage of all women screened

Target:

Initial (Prevalent) screen: expected value <10% and the desired value is <7%

Subsequent (Incident) screen: expected value <5% and the desired value is <4%

2.d.2 Referral to Assessment as a percentage of Women screened, last 2 Years

Table 2d.2 Referral to Assessment as a percentage of Women screened, last 2 Years

Lead Provider	Jan 2003 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
	Referral to Assessment	Number of Women Screened	% of Women Screened	Referral to Assessment	Number of Women Screened	% of Women Screened
<i>45-49 years</i>						
BSAN	3	56		1	2	
BSM	12	106		0	0	
BSCtoC	0	4		0	0	
BSC	6	44		0	0	
BSS	0	2		0	0	
BSHC	25	430		0	0	
BSA Total	46	642		1	2	
<i>50-64 years</i>						
BSAN	1255	15337	8.2% (7.7-8.6)	1412	45715	3.1% (2.9-3.3)
BSM	606	6799	8.9% (8.2-9.7)	949	24474	3.9% (3.6-4.1)
BSCtoC	440	6056	7.3% (6.6-8.0)	534	20439	2.6% (2.4-2.8)
BSC	642	5481	11.7% (10.8-12.7)	593	15897	3.7% (3.4-4.0)
BSS	999	10256	9.7% (9.1-10.4)	1418	37936	3.7% (3.5-3.9)
BSHC	266	3284	8.1% (7.2-9.1)	268	13992	1.9% (1.7-2.2)
BSA Total	4208	47213	8.9% (8.6-9.2)	5174	158453	3.3% (3.2-3.4)
<i>65-69 years</i>						
BSAN	43	556		108	3742	
BSM	16	172		160	3374	
BSCtoC	11	235		71	2446	
BSC	19	153		83	1941	
BSS	22	285		125	3294	
BSHC	0	9		19	973	
BSA Total	111	1410		566	15770	

Poisson 95% Confidence Intervals presented

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Referral to Assessment as a percentage of Women screened, last 2 Years, women 45-49 years

Screening in this age group commenced in July, 2004. This indicator cannot be interpreted, as a 2 year period has not yet elapsed.

Referral to Assessment as a percentage of Women screened, last 2 Years, women 50-64 years

For initial screens the BSA program percentage (8.9%) met the expected target value of <10% for the biennium, but not the desired value of <7%. There was variation among lead providers with only one service (BSC) statistically above 10%. The percentages for initial screens reflect the proportion of true prevalent screens in each service, as well as other factors. For subsequent screens, the overall percentage (3.3%) met the desired value of <4%, which was also the case for most lead providers although upper confidence limits exceeded the target value in some cases. Percentages are similar to the previous period.

Referral to Assessment as a percentage of Women screened, last 2 Years, women 65-69 years

Screening in this age group commenced in July, 2004. For initial screens the data cannot be interpreted as a biennium has not yet elapsed.

2.e. False Positive Rate

Description:

Measures the proportion of women who are recalled to assessment, but after assessment are found not to have cancer

Target:

Initial (Prevalent) screen: expected value <9%, desired target <6%

Subsequent (Incident) screen: expected value <4%, desired target <3%

2.e.1. False positives as a percentage of women screened

Table 2e.1 Number with false positive results as a percentage of women screened, Last 6 Months

Lead Provider	Jul 2004 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
	Number of False Positives	Number of Women Screened	% of Women Screened	Number of False Positives	Number of Women Screened	% of Women Screened
<i>45-49 years</i>						
BSAN	3	53	5.7% (1.9-11.3)	0	1	
BSM	10	106	9.4% (4.7-14.2)	0	0	
BSCtoC	0	4	0.0%	0	0	
BSC	6	44	13.6% (6.8-22.7)	0	0	
BSS	0	2	0.0%	0	0	
BSHC	25	430	5.8% (4.0-7.7)	0	0	
BSA Total	44	639	6.9% (5.3-8.6)	0	1	
<i>50-64 years</i>						
BSAN	203	3443	5.9% (5.3-6.6)	207	11071	1.9% (1.7-2.1)
BSM	116	1466	7.9% (6.8-9.1)	204	6178	3.3% (2.9-3.7)
BSCtoC	80	1320	6.1% (5.0-7.1)	94	4334	2.2% (1.8-2.5)
BSC	148	1324	11.2% (9.7-12.6)	77	3132	2.5% (2.0-2.9)
BSS	180	2202	8.2% (7.2-9.1)	284	9310	3.1% (2.8-3.4)
BSHC	50	626	8% (6.2-9.7)	56	3709	1.5% (1.2-1.8)
BSA Total	777	10381	7.5% (7.1-7.9)	922	37734	2.4% (2.3-2.6)
<i>65-69 years</i>						
BSAN	25	473	5.3% (3.6-7.0)	58	3147	1.8% (1.5-2.3)
BSM	14	150	9.3% (5.3-13.3)	114	2936	3.9% (3.3-4.5)
BSCtoC	7	197	3.6% (1.5-6.1)	48	2187	2.2% (1.7-2.7)
BSC	11	100	11.0% (6.0-16.0)	64	1771	3.6% (2.9-4.3)
BSS	15	240	6.3% (3.8-8.8)	89	2978	3.0% (2.5-3.5)
BSHC	0	7	0.0%	11	829	1.3% (0.7-2.1)
BSA Total	72	1167	6.2% (5.1-7.4)	384	13848	2.8% (2.5-3.0)

Exact binomial 95% Confidence Intervals presented

Comment:

False positives as a percentage of Women screened, last 6 months, women aged 45-49 years

For initial screens the BSA program false positive rate was 6.9%, which met the expected value of <9% but was slightly above the desired value of <6%. The majority of lead providers were below the target value of <9%, with some lead providers yet to conduct screens for this age group. As screening in this age group commenced in July, 2004 and women have not yet returned for a subsequent screen, the subsequent screens data cannot be interpreted.

False positives as a percentage of Women screened, last 6 months, women aged 50-64 years

For initial screens the BSA program percentage met the expected value of <9%, but was more than the desired value of <6%. There was variation among lead providers ranging from 5.9% to 11.2% with only one service statistically above 9% (BSC). The BSA program percentage (7.5%) was not substantially different from the previous 6 month period (7.8%). For subsequent screens, the BSA program percentage met the desired value of <3%, which was also the case for all but two lead providers (BSM, BSS). All were below the expected value of <4%. Percentages were similar to the previous 6 month period.

False positives as a percentage of Women screened, last 6 months, women aged 65-69 years

For initial screens the BSA program percentage (6.2%) met the target of <9%. There was variation across lead providers (false positive rates ranged from 5.3% to 11.0% for initial screens), with the variation likely attributable to the small numbers of initial screens in this age group (screening commenced in July, 2004). For subsequent screens, the BSA program percentage (2.8%), and the percentage for each lead provider, met the expected value of <4%. There was no substantial variation across lead providers, with upper confidence intervals for a number of lead providers exceeding the target value.

Description:

Measures the proportion of women who are recalled to assessment, but after assessment are found not to have cancer

Target:

Initial (Prevalent) screen: expected value <9%, desired target <6%

Subsequent (Incident) screen: expected value <4%, desired target <3%

2.e.2. False positives as a percentage of Women screened, last 2 years

Table 2e.2 Number with false positive results as a percentage of women screened, Last 2 Years

Lead Provider	Jan 2003 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
	Number of False Positives	Number of Women Screened	% of Women Screened	Number of False Positives	Number of Women Screened	% of Women Screened
45-49 years						
BSAN	3	56		1	2	
BSM	10	106		0	0	
BSCtoC	0	4		0	0	
BSC	6	44		0	0	
BSS	0	2		0	0	
BSHC	25	430		0	0	
BSA Total	44	642		1	2	
50-64 years						
BSAN	1026	15337	6.7% (6.4-7.0)	1129	45715	2.5% (2.4-2.6)
BSM	551	6799	8.1% (7.6-8.6)	807	24474	3.3% (3.1-3.5)
BSCtoC	390	6056	6.4% (5.9-7.0)	433	20439	2.1% (2-2.3.0)
BSC	595	5481	10.9% (10.2-11.5)	499	15897	3.1% (2.9-3.4)
BSS	899	10256	8.8% (8.3-9.2)	1232	37936	3.2% (3.1-3.4)
BSHC	243	3284	7.4% (6.7-8.2)	197	13992	1.4% (1.2-1.6)
BSA Total	3704	47213	7.8% (7.6-8.0)	4297	158453	2.7% (2.6-2.8)
65-69 years						
BSAN	33	556		67	3742	
BSM	15	172		132	3374	
BSCtoC	7	235		51	2446	
BSC	18	153		68	1941	
BSS	17	285		96	3294	
BSHC	0	9		12	973	
BSA Total	90	1410		426	15770	

Exact binomial 95% Confidence Intervals presented

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

False positives as a percentage of Women screened, last 2 years, women 45-49 years

Screening in this age group commenced in July, 2004. The data for both initial and subsequent screens represent a six month period, and cannot be interpreted as a biennium has not yet elapsed.

False positives as a percentage of Women screened, last 2 years, women 50-64 years

For initial screens the BSA program percentage met the expected value of <9%, but was more than the desired value of <6%, and was similar to the previous 6 month period (7.8%). There was variation among lead providers with only one service statistically higher than the 9% target value (BSC). False positive rates for each lead provider were similar to the previous 6 month reporting period. For subsequent screens, the BSA program percentage met the desired value of <3%, although confidence intervals for a number of lead providers exceeded the target value of 3%. All met the expected value of <4%. Percentages were similar to the previous period.

False positives as a percentage of Women screened, last 2 years, 65-69 years

Screening in this age group commenced in July, 2004. The data for initial and subsequent screens represent a six month period, and cannot be interpreted as a 2 year period has not yet elapsed.

2.f. Positive Predictive Value

Description:

The proportion of women screened positive who are ultimately diagnosed as having cancer

Target:

$\geq 9\%$. The number with diagnosed cancer as a percentage of the number referred to assessment.

2.f.1. Breast Cancers as a percentage of Referrals to Assessment, last 6 months

Table 2f.1 Cancers as a percentage of Referrals to Assessment, Last 6 Months

Lead Provider	Jul 2004 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
	Number of Cancers	Number of Referrals	% of Referrals	Number of Cancers	Number of Referrals	% of Referrals
<i>45-49 years</i>						
BSAN	0	3	0.0%	0	0	
BSM	2	12	16.7% (0.0-33.3)	0	0	
BSCtoC	0	0	0.0%	0	0	
BSC	0	6	0.0%	0	0	
BSS	0	0	0.0%	0	0	
BSHC	0	25	0.0%	0	0	
BSA Total	2	46	4.3% (0.0-8.7)	0	0	
<i>50-64 years</i>						
BSAN	36	259	13.9% (10.4-17.4)	57	280	20.4% (16.4-24.3)
BSM	9	126	7.1% (4.0-11.1)	31	238	13% (9.7-16.8)
BSCtoC	10	94	10.6% (5.3-16.0)	22	117	18.8% (12.8-24.8)
BSC	6	154	3.9% (1.3-6.5)	13	91	14.3% (8.8-20.9)
BSS	22	203	10.8% (7.4-14.3)	45	331	13.6% (10.6-16.6)
BSHC	2	54	3.7% (0.0-7.4)	18	74	24.3% (16.2-32.4)
BSA Total	85	890	9.6% (8.0-11.2)	186	1131	16.4% (14.7-18.3)
<i>65-69 years</i>						
BSAN	5	33	15.2% (6.1-27.3)	30	91	33% (25.3-40.7)
BSM	1	15	6.7% (0.0-20)	25	139	18% (12.9-23.7)
BSCtoC	2	10	20% (0.0-40)	18	66	27.3% (18.2-36.4)
BSC	0	11	0.0%	12	77	15.6% (9.1-22.1)
BSS	3	19	15.8% (5.3-31.6)	27	117	23.1% (17.1-29.9)
BSHC	0	0	0.0%	6	18	33.3% (16.7-50.0)
BSA Total	11	88	12.5% (6.8-18.2)	118	508	23.2% (20.3-26.4)

Exact binomial 95% Confidence Intervals presented

Comment:

Breast Cancers as a percentage of Referrals to Assessment, Last 6 Months, women aged 45-49 years

For initial screens the BSA program percentage was 4.3%, which was statistically below the target of $\geq 9\%$, and was also lower than percentages in older age groups. However this estimate is based on 2 cancers detected, and should not be over-interpreted. Screening commenced in July, 2004 in this age group, and a biennium has not yet elapsed for women to return for a subsequent screen.

Breast Cancers as a percentage of Referrals to Assessment, Last 6 Months, women aged 50-64 years

For initial screens the BSA program percentage (9.6%) was slightly above the target value of $\geq 9\%$ but confidence intervals contained the target value. The BSA percentage was slightly higher than for the previous 6 month period (BSA program percentage 8.7%). There was variation among lead providers (percentages ranging from 3.7% to 13.9%) with half the services less than the 9% target. For subsequent screens, the BSA program percentage (16.4%) was higher than the target value of 9%, and higher than the overall percentage from the previous six month period (15.1%). All lead providers were above the target of $\geq 9\%$, with percentages ranging from 13.0% to 24.3%, although confidence intervals contained the target value for some lead providers.

Breast Cancers as a percentage of Referrals to Assessment, Last 6 Months, women aged 65-69 years

For initial screens, the BSA program percentage in this age group was 12.5% which was above the $\geq 9\%$ target value, however confidence intervals contained the target value. There was variation across lead providers with very small numbers of cancers and referrals. For subsequent screens, the BSA program percentage was 23.2%, which was well above the target of $\geq 9\%$. All lead providers were above the target, with percentages ranging from 15.6% to 33.3%.

Description:

The proportion of women screened positive who are ultimately diagnosed as having cancer

Target:

>= 9%. The number with diagnosed cancer as a percentage of the number referred to assessment.

2.f.2. Breast Cancers as a percentage of Referrals to Assessment, Last 2 Years

Table 2f.2 Cancers as a percentage of Referrals to Assessment, Last 2 Years

Lead Provider	Jan 2003 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
	Number of Cancers	Number of Referrals	% of Referrals	Number of Cancers	Number of Referrals	% of Referrals
<i>45-49 years</i>						
BSAN	0	3		0	1	
BSM	2	12		0	0	
BSCtoC	0	0		0	0	
BSC	0	6		0	0	
BSS	0	0		0	0	
BSHC	0	25		0	0	
BSA Total	2	46		0	1	
<i>50-64 years</i>						
BSAN	150	1255	12% (10.4-13.5)	229	1412	16.2% (14.6-17.8)
BSM	48	606	7.9% (6.1-9.7)	133	949	14% (12.2-15.9)
BSCtoC	38	440	8.6% (6.6-10.9)	93	534	17.4% (14.8-20.2)
BSC	38	642	5.9% (4.4-7.5)	88	593	14.8% (12.5-17.2)
BSS	93	999	9.3% (7.8-10.8)	180	1418	12.7% (11.3-14.2)
BSHC	17	266	6.4% (4.1-9.0)	66	268	24.6% (20.5-29.1)
BSA Total	384	4208	9.1% (8.4-9.9)	789	5174	15.2% (14.4-16.1)
<i>65-69 years</i>						
BSAN	6	43		38	108	
BSM	1	16		27	160	
BSCtoC	3	11		20	71	
BSC	1	19		14	83	
BSS	4	22		28	125	
BSHC	0	0		6	19	
BSA Total	15	111		133	566	

Exact binomial 95% Confidence Intervals presented

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Breast Cancers as a percentage of Referrals to Assessment, Last 2 Years, women 45-49 years

Screening commenced in this age group in July, 2004 and the data represent a 6 month period. These data cannot be interpreted as a 2 year period has not yet elapsed.

Breast Cancers as a percentage of Referrals to Assessment, Last 2 Years, women 50-64 years

For initial screens the BSA program percentage (9.1%) was above the target value of >= 9%, however 95% confidence intervals overlapped the target value. There was variation among lead providers with 4 of the services <9% although confidence intervals contained the target value for some lead providers. Percentages ranged from 5.9% to 12.0%. For subsequent screens, the BSA program percentage (15.2%) was higher than the target value of 9%, and this was the case for all lead providers. Percentages are similar to the previous period.

Breast Cancers as a percentage of Referrals to Assessment, Last 2 Years, women 65-69 years

Screening commenced in this age group in July, 2004. A two year period has not yet elapsed.

2.g. Benign biopsy weight

Description:

Measures the weight of the open biopsy specimen presented to the pathologist

Target:

> 90% or more of open biopsies, which prove to be benign, should weigh < 30g.

2.g. Benign open biopsies which weigh <30g , last 2 years

Table 2g Benign Open Biopsies weighing <30g as a percent of all Benign Open Biopsies

Lead Provider	Last 2 Years			
	Jan 2003 to Dec 2004			
	Benign Open Biopsies < 30g	Total Benign Open Biopsies	% of Benign Open Biopsies	95% Confidence Interval
<i>45-49 years</i>				
BSAN	1	1	100.0%	
BSM	0	0	0.0%	
BSCtoC	*	*	*	*
BSC	0	0	0.0%	
BSS	0	0	0.0%	
BSHC	1	2	50.0%	
BSA Total	2	3	66.7%	
<i>50-64 years</i>				
BSAN	73	92	79.3%	73.2-85.5
BSM	22	39	56.4%	44.0-68.9
BSCtoC	*	*	*	*
BSC	10	18	55.6%	30.8-78.5
BSS	23	47	48.9%	37.2-60.6
BSHC	22	31	71.0%	58.7-83.2
BSA Total	150	227	66.1%	61.3-70.9
<i>65-69 years</i>				
BSAN	4	4	100.0%	
BSM	1	4	25.0%	
BSCtoC	*	*	*	*
BSC	7	8	87.5%	
BSS	1	3	33.3%	
BSHC	0	3	0.0%	
BSA Total	13	22	59.1%	42.8-75.4

* 50% of the benign open biopsies had a default weight recorded within the national monitoring data set so results for BreastScreen Coast to Coast have not been reported.

Exact binomial 95% Confidence Intervals presented

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Benign open biopsies which weigh <30g , last 2 years, women aged 45-49 years

Screening commenced in this age group in July 2004. These data represent a 6 month period, and cannot be interpreted as a biennial rate.

Benign open biopsies which weigh <30g , last 2 years, women aged 50-64 years

The BSA program percentage and all of the lead providers registered values less than the target of >90%. Analysis of 95% confidence intervals indicates that a few of the differences between providers are statistically significant.

Benign open biopsies which weigh <30g , last 2 years, women aged 65-69 years

Screening commenced in this age group in July 2004. These data represent a 6 month period, and cannot be interpreted as a biennial rate.

2.h. Pre-operative diagnosis rate, women aged 45-69 years

Description:

The number of women in which a needle biopsy provides the definitive diagnosis (pre-operative diagnosis), as a percentage of all women diagnosed with breast cancer in the programme

Target:

> 90% (desired target)

> 70% (expected target)

Table 2h Percentage of women with a preoperative diagnosis of cancer

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	Preoperative diagnosis of Cancer	Number of Cancers	Percentage of cancers with a preoperative diagnosis	Preoperative diagnosis of Cancer	Number of Cancers	Percentage of cancers with a preoperative diagnosis
<i>45-49 years</i>						
BSAN	0	0		0	0	
BSM	2	2		2	2	
BSCtoC	0	0		0	0	
BSC	0	0		0	0	
BSS	0	0		0	0	
BSHC	0	0		0	0	
BSA Total	2	2		2	2	
<i>50-64 years</i>						
BSAN	87	93	93.5% (89.2-97.8)	349	379	92.1% (89.7-94.2)
BSM	38	40	95.0% (90.0-100.0)	171	181	94.5% (91.7-97.2)
BSCtoC	32	32	100% (91.1-100.0)	125	131	95.4% (92.4-98.5)
BSC	15	19	78.9% (63.2-94.7)	105	126	83.3% (77.8-88.9)
BSS	60	67	89.6% (83.6-95.5)	256	273	93.8% (91.2-96.0)
BSHC	15	20	75% (60.0-90.0)	63	83	75.9% (67.5-83.1)
BSA Total	247	271	91.1% (88.2-93.7)	1069	1173	91.1% (89.8-92.5)
<i>65-69 years</i>						
BSAN	32	35	91.4% (82.9-97.1)	40	44	
BSM	26	26	100% (89.1-100.0)	28	28	
BSCtoC	20	20	100% (86.1-100.0)	23	23	
BSC	12	12	100% (77.9-100.0)	13	15	
BSS	27	30	90.0% (80.0-96.7)	29	32	
BSHC	3	6	50.0% (16.7-83.3)	3	6	
BSA Total	120	129	93.0% (89.1-96.1)	136	148	

Exact binomial 95% Confidence Intervals presented

Comment:

Pre-operative diagnosis rate, women aged 45-49 years

For the last 6 month period the overall percentage was based on 2 cases of cancer, and cannot be interpreted appropriately in relation to the target value.

Pre-operative diagnosis rate, women aged 50-64 years

For both the last 6 months and the last 2 years the BSA program percentage of women diagnosed by needle biopsy was greater than the expected value of >70%, and marginally above the desired value of >90% although confidence intervals contained the target value. There was little variation across lead providers, and confidence intervals contained the target value for some lead providers.

Pre-operative diagnosis rate, women aged 65-69 years

For the last 6 month period the BSA program percentage was above the expected target of >70%, and exceeded the desired target of >90%. There was little variation across lead providers with the exception of BSHC, which reported small number of cancers relative to other lead providers. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

2.1. Specificity

Description:

Specificity is the proportion of women without breast cancer at screening who have a negative screen result. This is estimated by expressing the number of women who have a negative screen result as a percentage of all women screened excluding the women screened positive with cancer.

This is calculated as: Number with true negative screening results as a percentage of this number plus the number with false positive screening results.

Target:

> 93 %

2.1.1. Specificity, last 6 months

Table 21.1 Estimated Specificity of BSA by Lead Provider, Last 6 Months

Lead Provider	Jul 2004 to Dec 2004						
	Initial (Prevalent)			Subsequent (Incident)			Total Estimated Specificity (%)
	Negative Screens (RRS from Screen)	Negative Screens plus False Positives	Estimated Specificity (%)	Negative Screens (RRS from Screen)	Negative Screens plus False Positives	Estimated Specificity (%)	
45-49 years							
BSAN	50	53	94.3%	1	1		94.4%
BSM	94	104	90.4%	0	0		90.4%
BSCtoC	4	4	100.0%	0	0		100.0%
BSC	38	44	86.4%	0	0		86.4%
BSS	2	2	100.0%	0	0		100.0%
BSHC	405	430	94.2%	0	0		94.2%
BSA Total	593	637	93.1%	1	1		93.1%
50-64 years							
BSAN	3184	3387	94.0%	10791	10998	98.1%	97.1%
BSM	1340	1456	92.0%	5940	6144	96.7%	95.8%
BSCtoC	1226	1306	93.9%	4217	4311	97.8%	96.9%
BSC	1170	1318	88.8%	3041	3118	97.5%	94.9%
BSS	1999	2179	91.7%	8979	9263	96.9%	95.9%
BSHC	572	622	92.0%	3635	3691	98.5%	97.5%
BSA Total	9491	10268	92.4%	36603	37525	97.5%	96.4%
65-69 years							
BSAN	440	465	94.6%	3056	3114	98.1%	97.7%
BSM	135	149	90.6%	2797	2911	96.1%	95.8%
BSCtoC	187	194	96.4%	2121	2169	97.8%	97.7%
BSC	89	100	89.0%	1694	1758	96.4%	96.0%
BSS	221	236	93.6%	2861	2950	97.0%	96.7%
BSHC	7	7	100.0%	811	822	98.7%	98.7%
BSA Total	1079	1151	93.7%	13340	13724	97.2%	96.9%

Comment:

Interval cancers are not included in calculations.

Specificity, last 6 months, women aged 45-49 years

For initial screens, BSA program specificity was 93.1%, slightly above the target of >93%. There was little variation across lead providers for this 6 month period, and only a small number of screens were conducted relative to older age groups. Screening commenced in this age group in July, 2004, and the subsequent screening data cannot be interpreted.

Specificity, last 6 months, women aged 50-64 years

For initial screens, BSA program specificity of 92.4% was close to the target of >93%, but with variation among lead providers. For subsequent screens the BSA program specificity (96.4%), and the specificity for each provider was >93%. Specificities are similar to the previous period.

Specificity, last 6 months, women aged 65-69 years

For initial screens, BSA program specificity was 93.7%, which was greater than the target of >93%. There was little variation across lead providers for this 6 month period, with the exception of BSHC where very small numbers were reported. For subsequent screens, the BSA program specificity was 97%, which was greater than the target of 93%. There was little variation across lead providers.

Description:

Specificity is the proportion of women without breast cancer at screening who have a negative screen result. This is estimated by expressing the number of women who have a negative screen result as a percentage of all women screened excluding the women screened positive with cancer.

This is calculated as: Number with true negative screening results as a percentage of this number plus the number with false positive screening results.

Target:

> 93 %

2.1.2. Specificity, last 2 years

Table 21.2 Estimated Specificity of BSA by Lead Provider, Last 2 Years

Lead Provider	Jan 2003 to Dec 2004						
	Initial (Prevalent)			Subsequent (Incident)			Total Estimated Specificity (%)
	Negative Screens (RRS from Screen)	Negative Screens plus False Positives	Estimated Specificity (%)	Negative Screens (RRS from Screen)	Negative Screens plus False Positives	Estimated Specificity (%)	
45-49 years							
BSAN	53	56		1	2		
BSM	94	104		0	0		
BSCtoC	4	4		0	0		
BSC	38	44		0	0		
BSS	2	2		0	0		
BSHC	405	430		0	0		
BSA Total	596	640		1	2		
50-64 years							
BSAN	14082	15108	93.2%	44303	45432	97.5%	96.4%
BSM	6193	6744	91.8%	23525	24332	96.7%	95.6%
BSCtoC	5616	6006	93.5%	19905	20338	97.9%	96.9%
BSC	4839	5434	89.1%	15304	15803	96.8%	94.8%
BSS	9257	10156	91.1%	36518	37750	96.7%	95.6%
BSHC	3018	3261	92.5%	13724	13921	98.6%	97.4%
BSA Total	43005	46709	92.1%	153279	157576	97.3%	96.1%
65-69 years							
BSAN	513	546		3634	3701		
BSM	156	171		3214	3346		
BSCtoC	224	231		2375	2426		
BSC	134	152		1858	1926		
BSS	263	280		3169	3265		
BSHC	9	9		954	966		
BSA Total	1299	1389		15204	15630		

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Specificity, last 2 years, 45-49 years

Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted

Specificity, last 2 years, 50-64 years

For initial screens, BSA program specificity for the biennium was 92.1%, approaching the target of >93%. There was little variation across lead providers. For subsequent screens the overall specificity (96.1%), and the specificity for each provider was above the target of >93%. Specificities are similar to the previous period.

Specificity, last 2 years, 65-69 years

Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted

2.m. Benign Biopsy Rate

Description:

The number of open biopsies that turn out to be benign lesions, expressed as a proportion of women screened

Target:

Initial (Prevalent) screen: ≤ 3.5 per 1000 women screened

Subsequent (Incident) screen: ≤ 1.6 per 1000 women screened

2.m.1. Benign open biopsies, last 2 years

Table 2m.2 Benign Open Biopsies as a proportion of women screened, Last 2 Years

Lead Provider	Jan 2003 to Dec 2004							
	Initial (Prevalent)				Subsequent (Incident)			
	Benign Open Biopsies	Number of screens	Benign Biopsies per 1000 screens	95% Confidence Interval	Benign Open Biopsies	Number of screens	Benign Biopsies per 1000 screens	95% Confidence Interval
<i>45-49 years</i>								
BSAN	1	56			0	2		
BSM	0	106			0	0		
BSCtoC	0	4			0	0		
BSC	0	44			0	0		
BSS	0	2			0	0		
BSHC	2	430			0	0		
BSA Total	3	642			0	2		
<i>50-64 years</i>								
BSAN	47	15337	3.1	2.3-4.1	45	45715	1.0	0.7-1.3
BSM	14	6799	2.1	1.1-3.5	25	24474	1.0	0.7-1.5
BSCtoC	5	6056	0.8	0.3-1.9	9	20439	0.4	0.2-0.8
BSC	8	5481	1.5	0.6-2.9	10	15897	0.6	0.3-1.2
BSS	17	10256	1.7	1.0-2.7	30	37936	0.8	0.5-1.1
BSHC	15	3284	4.6	2.6-7.5	16	13992	1.1	0.7-1.9
BSA Total	106	47213	2.2	1.8-2.7	135	158453	0.9	0.7-1.0
<i>65-69 years</i>								
BSAN	3	556			1	3742		
BSM	1	172			3	3374		
BSCtoC	0	235			0	2446		
BSC	1	153			7	1941		
BSS	1	285			2	3294		
BSHC	0	9			3	973		
BSA Total	6	1410			16	15770		

Poisson 95% Confidence Intervals presented

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

Benign open biopsies, last 2 years, women aged 45-49 years

Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted

Benign open biopsies, last 2 years, women aged 50-64 years

For initial screens the BSA benign open biopsy rate was 2.2 per 1,000, which met the expected target of ≤ 3.5 per 1000 women screened. There was little variation among services, and the majority of all lead providers all achieved the target (based on point estimates). For subsequent screens the BSA benign open biopsy rate was 0.9 per 1,000 which met the target of ≤ 1.6 per 1,000 women screened. There was little variation among services and all lead providers were on target (based on point estimates). Statistical analysis indicates that a few of the differences between providers are significant.

Benign open biopsies, last 2 years, women aged 65-69 years

Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted

3. EARLY DETECTION OF DCIS OR INVASIVE BREAST CANCER

Description:

The number of women who have breast cancer detected within BSA, expressed as a rate per 1000 women screened.

Target:

Initial (Prevalent) round: ≥ 6.9 per 1000 women screened

Subsequent (Incident) round: ≥ 3.45 per 1000 women screened

3.a. DCIS and invasive cancer, last 6 months

Table 3a Detection rate of DCIS and invasive breast cancer per 1000 women screened

Lead Provider	Last 6 Months					
	Jul 2004 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
	Number	Rate per 1000	95% Confidence Interval	Number	Rate per 1000	95% Confidence Interval
<i>45-49 years</i>						
BSAN	0	0.0		0	0.0	
BSM	2	18.9		0	0.0	
BSCtoC	0	0.0		0	0.0	
BSC	0	0.0		0	0.0	
BSS	0	0.0		0	0.0	
BSHC	0	0.0		0	0.0	
BSA Total	2	3.1	0.4-11.3	0	0.0	
<i>50-64 years</i>						
BSAN	36	10.5	7.3-14.5	57	5.1	3.9-6.7
BSM	9	6.1	2.8-11.7	31	5.0	3.4-7.1
BSCtoC	10	7.6	3.6-13.9	22	5.1	3.2-7.7
BSC	6	4.5	1.7-9.9	13	4.2	2.2-7.1
BSS	22	10.0	6.3-15.1	45	4.8	3.5-6.5
BSHC	2	3.2	0.4-11.5	18	4.9	2.9-7.7
BSA Total	85	8.2	6.5-10.1	186	4.9	4.2-5.7
<i>65-69 years</i>						
BSAN	5	10.6	3.4-24.7	30	9.5	6.4-13.6
BSM	1	6.7	0.2-37.1	25	8.5	5.5-12.6
BSCtoC	2	10.2	1.2-36.7	18	8.2	4.9-13.0
BSC	0	0.0	0.0-36.9	12	6.8	3.5-11.8
BSS	3	12.5	2.6-36.5	27	9.1	6.0-13.2
BSHC	0	0.0	0.0-527.0	6	7.2	2.7-15.8
BSA Total	11	9.4	4.7-16.9	118	8.5	7.1-10.2

Poisson 95% Confidence Intervals presented

Comment:

DCIS and invasive cancer, last 6 months, women aged 45-49 years

For initial screens the BSA program detection rate of 3.1 per 1,000 for the 6 month was below the target of ≥ 6.9 per 1,000. Upper 95% CIs are in the target range, however confidence intervals are very wide due to small numbers (2 cancers only). Screening commenced in this age group in July, 2004, and the subsequent screening data cannot be interpreted

DCIS and invasive cancer, last 6 months, women aged 50-64 years

For initial screens the BSA program detection rate at 8.2 per 1,000 was on target (≥ 6.9 per 1000), and the upper 95% CIs for all services are in the target range. For subsequent screens the BSA program detection rate at 4.9 per 1000 was on target (≥ 3.45 per 1000), and the upper 95% CIs for all services were in the target range. Detection rates are similar to the previous period. Statistical analysis indicates that a few of the differences between providers are significant.

DCIS and invasive cancer, last 6 months, women aged 65-69 years

For initial screens, the BSA program detection rate of 9.4 per 1,000 for the 6 month period was above the target of ≥ 6.9 per 1,000. Detection rates across lead providers ranged from 0.0 to 12.5 per 1,000. Wide confidence intervals are evident due to small numbers of cancers, and no statistically significant differences across lead providers were evident. For subsequent screens the BSA program detection rate of 8.5 per 1,000 was above the target of ≥ 3.45 per 1,000. There was little variation across lead providers, with most providers achieving the target value.

Description:

The number of women who have breast cancer detected within BSA, expressed as a rate per 1000 women screened.

Target:

Initial (Prevalent) round: ≥ 6.9 per 1000 women screened

Subsequent (Incident) round: ≥ 3.45 per 1000 women screened

3.b. DCIS and invasive cancer, last 2 years

Table 3b Detection rate of DCIS and invasive breast cancer per 1000 women screened

Lead Provider	Last 2 Years					
	Jan 2003 to Dec 2004					
	Initial (Prevalent)			Subsequent (Incident)		
Number	Rate per 1000	95% Confidence Interval	Number	Rate per 1000	95% Confidence Interval	
<i>45-49 years</i>						
BSAN	0			0		
BSM	2			0		
BSCtoC	0			0		
BSC	0			0		
BSS	0			0		
BSHC	0			0		
BSA Total	2			0		
<i>50-64 years</i>						
BSAN	150	9.8	8.3-11.5	229	5.0	4.4-5.7
BSM	48	7.1	5.2-9.4	133	5.4	4.6-6.4
BSCtoC	38	6.3	4.4-8.6	93	4.6	3.7-5.6
BSC	38	6.9	4.9-9.5	88	5.5	4.4-6.8
BSS	93	9.1	7.3-11.1	180	4.7	4.1-5.5
BSHC	17	5.2	3.0-8.3	66	4.7	3.6-6.0
BSA Total	384	8.1	7.3-9.0	789	5.0	4.6-5.3
<i>65-69 years</i>						
BSAN	6			38		
BSM	1			27		
BSCtoC	3			20		
BSC	1			14		
BSS	4			28		
BSHC	0			6		
BSA Total	15			133		

Poisson 95% Confidence Intervals presented

Note: Data for women aged 45-49 and 65-69 years represent 6 month period only.

Comment:

DCIS and invasive cancer, last 2 years, women 45-49 years

Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted

DCIS and invasive cancer, last 2 years, women 50-64 years

For initial screens the BSA program detection rate at 8.1 per 1000 was on target (≥ 6.9 per 1000), and the upper 95% CIs for all services were in the target range. For subsequent screens the BSA detection rate at 5.0 per 1000 was on target (≥ 3.45 per 1000), and the point estimates for all services were on target. All 95% CI were above target. Detection rates were similar to the previous period. Statistical analysis indicates that a few of the differences between providers are significant.

DCIS and invasive cancer, last 2 years, women 65-69 years

Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

3.a.1. Summary initial screening

Table 3a.1 Summary for Initial (Prevalent) screening by Lead Provider

Lead Provider	Last 6 Months				Last 2 Years			
	Jul 2004 to Dec 2004				Jan 2003 to Dec 2004			
	Referral to Assessment as % of Women screened	Estimated Specificity	Positive Predictive Value	Detection rate per 1000 women screened	Referral to Assessment as % of Women screened	Estimated Specificity	Positive Predictive Value	Detection rate per 1000 women screened
<i>45-49 years</i>								
BSAN	5.7%	94.3%	0.0%	0.0				
BSM	11.3%	90.4%	16.7%	18.9				
BSCtoC	0.0%	100.0%	0.0%	0.0				
BSC	13.6%	86.4%	0.0%	0.0				
BSS	0.0%	100.0%	0.0%	0.0				
BSHC	5.8%	94.2%	0.0%	0.0				
BSA Total	7.2%	93.1%	4.3%	3.1				
<i>50-64 years</i>								
BSAN	7.5%	94.0%	13.9%	10.5	8.2%	93.2%	12.0%	9.8
BSM	8.6%	92.0%	7.1%	6.1	8.9%	91.8%	7.9%	7.1
BSCtoC	7.1%	93.9%	10.6%	7.6	7.3%	93.5%	8.6%	6.3
BSC	11.6%	88.8%	3.9%	4.5	11.7%	89.1%	5.9%	6.9
BSS	9.2%	91.7%	10.8%	10.0	9.7%	91.1%	9.3%	9.1
BSHC	8.6%	92.0%	3.7%	3.2	8.1%	92.5%	6.4%	5.2
BSA Total	8.6%	92.4%	9.6%	8.2	8.9%	92.1%	9.1%	8.1
<i>65-69 years</i>								
BSAN	7.0%	94.6%	15.2%	10.6				
BSM	10.0%	90.6%	6.7%	6.7				
BSCtoC	5.1%	96.4%	20.0%	10.2				
BSC	11.0%	89.0%	0.0%	0.0				
BSS	7.9%	93.6%	15.8%	12.5				
BSHC	0.0%	100.0%	0.0%	0.0				
BSA Total	7.5%	93.7%	12.5%	9.4				

Comment:

This table summarises statistics already considered individually.

3.a.2. Summary subsequent screening

Table 3a.2 Summary for Subsequent (Incident) screening by Lead Provider

Lead Provider	Last 6 Months				Last 2 Years			
	Jul 2004 to Dec 2004				Jan 2003 to Dec 2004			
	Referral to Assessment as % of Women screened	Estimated Specificity	Positive Predictive Value	Detection rate per 1000 women screened	Referral to Assessment as % of Women screened	Estimated Specificity	Positive Predictive Value	Detection rate per 1000 women screened
<i>45-49 years</i>								
BSAN	0.0%	100.0%	0.0%	0.0%				
BSM	0.0%	0.0%	0.0%	0.0%				
BSCtoC	0.0%	0.0%	0.0%	0.0%				
BSC	0.0%	0.0%	0.0%	0.0%				
BSS	0.0%	0.0%	0.0%	0.0%				
BSHC	0.0%	0.0%	0.0%	0.0%				
BSA Total	0.0%	100.0%	0.0%	0.0%				
<i>50-64 years</i>								
BSAN	2.5%	98.1%	20.4%	5.1	3.1%	97.5%	16.2%	5.0
BSM	3.9%	96.7%	13.0%	5.0	3.9%	96.7%	14.0%	5.4
BSCtoC	2.7%	97.8%	18.8%	5.1	2.6%	97.9%	17.4%	4.6
BSC	2.9%	97.5%	14.3%	4.2	3.7%	96.8%	14.8%	5.5
BSS	3.6%	96.9%	13.6%	4.8	3.7%	96.7%	12.7%	4.7
BSHC	2.0%	98.5%	24.3%	4.9	1.9%	98.6%	24.6%	4.7
BSA Total	3.0%	97.5%	16.4%	4.9	3.3%	97.3%	15.2%	5.0
<i>65-69 years</i>								
BSAN	2.9%	98.1%	33.0%	9.5				
BSM	4.7%	96.1%	18.0%	8.5				
BSCtoC	3.0%	97.8%	27.3%	8.2				
BSC	4.3%	96.4%	15.6%	6.8				
BSS	3.9%	97.0%	23.1%	9.1				
BSHC	2.2%	98.7%	33.3%	7.2				
BSA Total	3.7%	97.2%	23.2%	8.5				

Comment:

This table summarises statistics already considered individually.

3.a.3. Treatment data completeness, last 2 years

Description:

Lead Providers have 9 months to complete treatment data entry for women referred to treatment.

Target:

$\geq 90\%$

Table 3a2 Treatment Data Completeness

Lead Provider	Apr 2002 to Mar 2004			
	Women Referred for Treatment	Women with Incomplete Staging and Grading Data	Women with Completed Staging and Grading Data	% Staging and Grading Data Completed
BSAN	397	21	376	95%
BSM	185	0	185	100%
BSCtoC	148	0	148	100%
BSC	134	8	126	94%
BSS	290	8	282	97%
BSHC	86	2	84	98%
BSA Total	1240	39	1201	97%

Comment:

Treatment data completeness, last 2 years, women 50-64 years

The overall treatment data completeness was 97%, which was greater than the target of $\geq 90\%$. All lead providers achieved the expected target.

3.b. Invasive cancers <=10mm

Description:

Rate and proportion of primary invasive breast cancer of diameter <=10mm

Target:

Initial (Prevalent) round: >= 25%, which gives a rate of >= 17.3 per 10,000 screens

Subsequent (Incident) round: >= 30%, which gives a rate of >= 10.45 per 10,000 screens

Table 3b.1 Proportion of Invasive Cancers less than or equal to 10mm

Lead Provider	Initial (Prevalent)			Incident		
	Apr 2002 to Mar 2004			Apr 2002 to Mar 2004		
	Initial (Prevalent) Invasive Cancers <=10mm	Total Initial (Prevalent) Invasive Cancers	Proportion of Invasive Cancers <= 10mm	Incident Invasive Cancers <=10mm	Total Incident Invasive Cancers	Proportion of Incident Invasive Cancers <= 10mm
BSAN	35	109	32.1% (23.5-41.7)	56	151	37.1% (29.4-45.3)
BSM	9	39	23.1% (11.1-39.3)	34	100	34% (24.8-44.2)
BSCtoC	8	44	18.2% (8.2-32.7)	33	86	38.4% (28.1-49.5)
BSC	14	38	36.8% (21.8-54)	29	60	48.3% (35.2-61.6)
BSS	18	64	28.1% (17.6-40.8)	61	155	39.4% (31.6-47.5)
BSHC	2	12	16.7% (2.1-48.4)	17	49	34.7% (21.7-49.6)
BSA Total	86	306	28.1% (23.1-33.5)	230	601	38.3% (34.4-42.3)

Exact Binomial 95% Confidence Intervals presented

Table 3b.2 Invasive Cancers, less than or equal to 10mm, per 10,000 screens

Lead Provider	Initial (Prevalent)				Incident			
	Apr 2002 to Mar 2004				Apr 2002 to Mar 2004			
	Initial (Prevalent) Invasive Cancers <=10mm	Total Initial (Prevalent) Screens	Invasive Cancers <= 10mm, per 10,000 screens	95% Confidence Interval	Incident Invasive Cancers <=10mm	Total Incident Screens	Incident Invasive Cancers <= 10mm, per 10,000 screens	95% Confidence Interval
BSAN	35	16922	20.7	14.4-28.8	56	42082	13.3	10.1-17.3
BSM	9	7312	12.3	5.6-23.4	34	23265	14.6	10.1-20.4
BSCtoC	8	6782	11.8	5.1-23.2	33	18983	17.4	12-24.4
BSC	14	5666	24.7	13.5-41.5	29	15287	19.0	12.7-27.2
BSS	18	11191	16.1	9.5-25.4	61	35853	17.0	13.0-21.9
BSHC	2	3811	5.2	0.6-19	17	13292	12.8	7.5-20.5
BSA Total	86	51684	16.6	13.3-20.5	230	148762	15.5	13.5-17.6

Poisson 95% Confidence Intervals presented

Comment:

3.b.1. Proportion invasive cancers <=10mm, women aged 50-64 years

For initial screens, the BSA program proportion (28%) was greater than the target of >=25%. There was variation across lead providers, although 4 of the 6 lead providers achieved the target. For subsequent screens, the BSA proportion was 38% which was greater than the target of >=30%. All lead providers were above the target value for small cancers detected at subsequent screens.

3.b.2. Invasive cancers <=10mm per 10,000 screens, women aged 50-64 years

For initial screens, the BSA program rate per 10,000 screens of 16.6 was below the target of >=17.3, however 95% CIs encompassed the target. Rates across lead providers ranged from 5.2 to 24.7 per 10,000 with all 95% CIs encompassing the target value of >=17.3 per 10,000 screens. For subsequent screens the BSA rate of 15.5 per 10,000 screens was greater than the target value of 10.45. All lead providers reached the target value based on point estimates, however lower 95% CIs were lower than the target value for some lead providers. There was little variation across lead providers.

3.c. Invasive cancer <15 mm

Description:

Rate and proportion of primary invasive breast cancer of diameter <15mm

Target:

Initial (Prevalent) round: > 50%, which gives a rate of > 34.5 per 10,000 screens

Subsequent (Incident) round: > 50%, which gives a rate of > 17.3 per 10,000 screens

3.c.1. Proportion invasive cancers <15mm, women aged 50-64 years

Table 3c.1 Proportion of Invasive Cancers less than 15mm

Lead Provider	Initial (Prevalent)			Incident		
	Apr 2002 to Mar 2004			Apr 2002 to Mar 2004		
	Initial (Prevalent) Invasive Cancers <15mm	Total Initial (Prevalent) Invasive Cancers	% of Invasive Cancers <15mm	Incident Invasive Cancers <15mm	Total Incident Invasive Cancers	% of Incident Invasive Cancers <15mm
BSAN	51	109	46.8% (37.2-56.6)	81	151	53.6% (29.4-45.3)
BSM	13	39	33.3% (19.1-50.2)	57	100	57% (24.8-44.2)
BSCtoC	14	44	31.8% (18.6-47.6)	51	86	59.3% (28.1-49.5)
BSC	18	38	47.4% (31.0-64.2)	37	60	61.7% (35.2-61.6)
BSS	32	64	50% (37.2-62.8)	86	155	55.5% (31.6-47.5)
BSHC	4	12	33.3% (9.9-65.1)	34	49	69.4% (21.7-49.6)
BSA Total	132	306	43.1% (37.5-48.9)	346	601	57.6% (34.4-42.3)

Exact Binomial 95% Confidence Intervals presented

Table 3c.2 Invasive Cancers, less than 15mm, per 10,000 screens

Lead Provider	Initial (Prevalent)				Incident			
	Apr 2002 to Mar 2004				Apr 2002 to Mar 2004			
	Initial (Prevalent) Invasive Cancers <15mm	Total Initial (Prevalent) Screens	Invasive Cancers <15mm, per 10,000 screens	95% Confidence Interval	Incident Invasive Cancers <15mm	Total Incident Screens	Incident Invasive Cancers <15mm, per 10,000 screens	95% Confidence Interval
BSAN	51	16922	30.1	22.4-39.6	81	42082	19.2	15.3-23.9
BSM	13	7312	17.8	9.5-30.4	57	23265	24.5	18.6-31.7
BSCtoC	14	6782	20.6	11.3-34.6	51	18983	26.9	20-35.3
BSC	18	5666	31.8	18.8-50.2	37	15287	24.2	17.0-33.4
BSS	32	11191	28.6	19.6-40.4	86	35853	24.0	19.2-29.6
BSHC	4	3811	10.5	2.9-26.9	34	13292	25.6	17.7-35.7
BSA Total	132	51684	25.5	21.4-30.3	346	148762	23.3	20.9-25.8

Poisson 95% Confidence Intervals presented

Comment:

3.c.1. Proportion invasive cancers <15mm, women aged 50-64 years

For initial screens, the BSA program percentage of 43% was below the target of >50%. All lead providers were below this target. For subsequent screens, the BSA program percentage of 58% was above the target of >50%. All lead providers reached the target value, although lower confidence limits contained values below the target value.

3.c.2. Invasive cancers <15mm per 10,000 screens, women aged 50-64 years

For initial screens, the BSA program rate per 10,000 screens of 25.5 was statistically below the target of >34.5. Rates across lead providers ranged from 10.5 to 31.8 per 10,000 with 95% CIs for 4 of the 6 lead providers encompassing the target value of >34.5 per 10,000 screens. For subsequent screens the BSA program rate of 23.3 per 10,000 screens was statistically higher than the target value of 17.3. All lead providers reached the target value based on point estimates, however lower 95% CIs were lower than the target value for some lead providers. There was little variation across lead providers.

3.d. Nodal involvement

Description:

The proportion of women with invasive screen detected breast cancer who do not have nodal involvement.

Note: This is calculated as 1 minus the proportion of women with invasive screen detected breast cancer who do have nodal involvement

Target:

Initial (Prevalent) round: > 70%

Subsequent (Incident) round: > 75%

3.d. Proportion of node negative invasive cancers, women aged 50-64 years

Table 3d Invasive Cancers, who do not have nodal involvement

Lead Provider	Initial (Prevalent)			Incident		
	Apr 2002 to Mar 2004			Apr 2002 to Mar 2004		
	Initial (Prevalent) women with Invasive Cancers who are node positive	Total Initial (Prevalent) Invasive Cancers	% of Initial (Prevalent) Invasive Cancers with no nodal involvement	Subsequent (Incident) women with Invasive Cancers who are node positive	Total Incident Invasive Cancers	% of Incident Invasive Cancers with no nodal involvement
BSAN	23	109	78.9% (72.5-85.3)	41	151	72.8% (66.9-78.8)
BSM	12	39	69.2% (56.4-82.1)	24	100	76.0% (69.0-83.0)
BSCtoC	11	44	75.0% (63.6-86.4)	16	86	81.4% (74.4-88.4)
BSC	7	38	81.6% (71.1-92.1)	11	60	81.7% (73.3-90.0)
BSS	19	64	70.3% (60.9-79.7)	34	155	78.1% (72.3-83.2)
BSHC	1	12	91.7% (75.0-100.0)	13	49	73.5% (63.3-83.7)
BSA Total	73	306	76.1% (72.2-80.1)	139	601	76.9% (74.0-79.7)

Comment:

3.d. Proportion of node negative invasive cancers, women aged 50-64 years

The BSA program proportion for initial screens (76%) was statistically higher than the target value of >70%. There was variation across the lead providers with percentages ranging from 69% to 92%. All lead providers either exceeded or approached the target for initial screens. The BSA percentage for subsequent screens (77%) was greater than the target value of >75%, but not statistically different from the target, with little variation across lead providers. All lead providers either exceeded the target or approached the target for subsequent screens.

3.e. DCIS

Description:

The percentage of all women with screen detected cancer who are diagnosed as having Ductal Carcinoma in Situ (DCIS) as their primary lesion

Target:

10-25% of all cancers detected by the program are DCIS

3.e. DCIS, women aged 50-64 years

Table 3e Women with DCIS as a percentage of all screen detected cancers

Lead Provider	Apr 2002 to Mar 2004		
	DCIS	Total Cancers	% of Total Cancers
BSAN	116	376	30.9% (26.9-34.8)
BSM	46	185	24.9% (19.5-30.3)
BSCtoC	16	146	11.0% (6.8-15.1)
BSC	26	124	21.0% (15.3-27.4)
BSS	63	282	22.3% (18.4-26.6)
BSHC	22	83	26.5% (19.3-34.9)
BSA Total	289	1196	24.2% (22.2-26.2)

Comment:

3.e. DCIS, women aged 50-64 years

The BSA percentage for this age group was 24%, which was within the target range of 10-25% although upper confidence intervals contained values outside the target range. Percentages ranged from 11% to 31%, with only one lead provider statistically outside the target range (BSAN).

4. TREATMENT

4.a. Invasive cancers >1mm having a surgical axillary procedure

Description:

Percentage of all women who are operated on for a screen detected invasive cancer, over 1mm in size, who have a surgical axillary procedure

Target:

95% of women operated on for invasive cancer over 1mm in size, should normally have a surgical axillary procedure

Table 4a Percentage of Invasive Cancers having a surgical axillary procedure

Lead Provider	Apr 2002 to Mar 2004		
	Number having a surgical axillary procedure for invasive cancers >1mm	Number having an operation for invasive cancers >1mm	% of Invasive Cancers, >1mm, having a surgical axillary procedure
BSAN	148	178	83.1% (76.8-88.3)
BSM	97	110	88.2% (80.6-93.6)
BSCtoC	93	100	93% (86.1-97.1)
BSC	54	54	100% (94.6-100)
BSS	154	160	96.3% (92-98.6)
BSHC	44	46	95.7% (85.2-99.5)
BSA Total	590	648	91% (88.6-93.1)

Exact binomial 95% Confidence Intervals presented

Comment:

4.a. Invasive cancers >1mm having a surgical axillary procedure, women 50-64 years

The BSA percentage (91%) was slightly below the target of 95%. There was variation across lead providers, with percentages ranging from 83% to 100%, with half of the lead providers achieving the target value. Only 2 lead providers (BSAN, BSM) were statistically below the target value.

4.b. Invasive cancers having single excision

Description:

The proportion of women with invasive cancer who have a single excisional breast treatment procedure.

Target:

No target

Table 4b Proportion of Invasive Cancers having a single excisional breast treatment procedure

Lead Provider	Apr 2002 to Mar 2004		
	Number having a single excisional procedure for invasive cancer	Number of invasive cancers having surgical breast procedure	Proportion of Invasive Cancers having a single excisional breast treatment procedure
BSAN	218	257	84.8% (80.9-88.3)
BSM	117	138	84.8% (79.7-89.9)
BSCtoC	99	130	76.2% (70-82.3)
BSC	76	91	83.5% (76.9-90.1)
BSS	190	218	87.2% (83.5-90.8)
BSHC	49	60	81.7% (73.3-90.0)
BSA Total	749	894	83.8% (81.8-85.8)

Exact binomial 95% Confidence Intervals presented

Comment:

4.b. Invasive cancers having single excision, women aged 50-64 years

The BSA proportion of invasive cancers having a single excision was 83.8%. There was little variation across lead providers.

4.c. DCIS with no axillary dissection

Description:

The proportion of women who have surgery for DCIS who do not have an axillary dissection

Target:

> 95 %

Table 4c Proportion of DCIS women not having axillary dissection

Lead Provider	Apr 2002 to Mar 2004		
	Number having surgery for DCIS who do not have an axillary dissection	Number having surgery for DCIS	Proportion of DCIS women not having axillary dissection
BSAN	88	108	81.5% (75.0-87.0)
BSM	35	45	77.8% (66.7-86.7)
BSCtoC	12	16	75.0% (56.3-93.8)
BSC	19	26	73.1% (57.7-88.5)
BSS	49	63	77.8% (68.3-85.7)
BSHC	11	22	50.0% (31.8-68.2)
BSA Total	214	280	76.4% (72.1-80.7)

Exact binomial 95% Confidence Intervals presented

Comment:

4.c. DCIS with no axillary dissection, women 50-64 years

The BSA proportion of DCIS not having an axillary dissection was 76.4%, which was significantly below the target of >95%. All lead providers were below the target value, with percentages ranging from 50% to 81.5%.

4.e. DCIS having breast conserving surgery

Description:

The proportion of women diagnosed with DCIS of pathological diameter ≤ 20 mm who have Breast Conserving Surgery (BCS)

Target:

The majority of screen-detected DCIS ≤ 20 mm are treated by BCS

Table 4e Proportion of DCIS having BCS

Lead Provider	Apr 2002 to Mar 2004		
	Number of DCIS ≤ 20 mm having BCS	Number of DCIS ≤ 20 mm who are operated on	Proportion of DCIS, ≤ 20 mm, who have BCS
BSAN	56	74	75.7% (67.6-83.8)
BSM	18	24	75.0% (58.3-87.5)
BSCtoC	4	9	44.4% (22.2-66.7)
BSC	15	19	78.9% (63.2-94.7)
BSS	33	38	86.8% (76.3-94.7)
BSHC	6	8	75.0% (50.0-100.0)
BSA Total	132	172	76.7% (71.5-82.0)

Exact binomial 95% Confidence Intervals presented

Comment:

4.e. DCIS having breast conserving surgery, women aged 50-64 years

Overall, the majority (76.7%) of DCIS cases had breast conserving surgery. All lead providers, with the exception of BSCtoC were above the $>50\%$ target.

4.f. Invasive cancers ≤ 20 mm having breast conserving surgery

Description:

The proportion of women diagnosed with Invasive Cancer, without a DCIS component, of pathological diameter ≤ 20 mm who have Breast Conserving Surgery (BCS)

Target:

The majority of screen-detected cancers ≤ 20 mm are treated by BCS

Table 4f Proportion of Invasive, without DCIS, having BCS

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, without DCIS, ≤ 20 mm having BCS	Number of Invasive Cancers, without DCIS, ≤ 20 mm who are operated on	Proportion of Invasive Cancers, without DCIS, ≤ 20 mm who have BCS
BSAN	36	45	80% (68.9-88.9)
BSM	27	39	69.2% (56.4-82.1)
BSCtoC	14	31	45.2% (29.0-61.3)
BSC	15	27	55.6% (40.7-70.4)
BSS	31	51	60.8% (49.0-72.5)
BSHC	10	16	62.5% (43.8-81.3)
BSA Total	133	209	63.6% (57.9-68.9)

Exact binomial 95% Confidence Intervals presented

Comment:

4.f. Invasive cancers ≤ 20 mm having breast conserving surgery, women aged 50-64 years

The majority (63.6%) of DCIS had breast conserving surgery. Point estimates for all lead providers, with the exception of BSCtoC, were above the $>50\%$ target, although lower confidence limits contained values below the target for some services.

4.g. Proportion of invasive cancers having radiotherapy

Description:

The proportion of women diagnosed with Invasive Cancer, who have Breast Conserving Surgery (BCS), who go on to have Radiotherapy

Target:

>= 95 %

Table 4g Proportion of Invasive, having BCS and having Radiotherapy

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, having BCS, who have Radiotherapy	Number of Invasive Cancers, having BCS	Proportion of Invasive Cancers, having BCS, who have Radiotherapy
BSAN	143	165	86.7% (80.5-91.5)
BSM	80	89	89.9% (81.7-95.3)
BSCtoC	66	67	98.5% (92.0-100.0)
BSC	41	43	95.3% (84.2-99.4)
BSS	110	115	95.7% (90.2-98.6)
BSHC	31	35	88.6% (73.3-96.8)
BSA Total	471	514	91.6% (88.9-93.9)

Exact binomial 95% Confidence Intervals presented

Comment:

4.g. Proportion of invasive cancers having radiotherapy, women aged 50-64 years

The BSA proportion of women with invasive cancer who had radiotherapy was 91.6%, which was slightly below the target of >=95%. There was little variation across lead providers, with half of services achieving a value greater than the target, although confidence intervals contained the target values for most lead providers.

4.h. Proportion of DCIS having radiotherapy

Description:

The proportion of women diagnosed solely with DCIS, who have Breast Conserving Surgery (BCS), who go on to have Radiotherapy

Target:

No target

Table 4h Proportion of DCIS, having BCS and having Radiotherapy

Lead Provider	Apr 2002 to Mar 2004		
	Number of DCIS, having BCS, who have Radiotherapy	Number of DCIS, having BCS	Proportion of DCIS, having BCS, who have Radiotherapy
BSAN	37	78	47.4% (36-59.1)
BSM	15	24	62.5% (40.6-81.2)
BSCtoC	2	7	28.6% (3.7-71.0)
BSC	3	16	18.8% (4.1-45.7)
BSS	17	39	43.6% (27.8-60.4)
BSHC	8	9	88.9% (51.8-99.7)
BSA Total	82	173	47.4% (39.8-55.1)

Exact binomial 95% Confidence Intervals presented

Comment:

Proportion of DCIS having radiotherapy

Overall 47.4% of women diagnosed with DCIS only go on to have breast conserving surgery. There was variation in this indicator by lead provider, ranging from 19% to 89%, indicative of small underlying numbers..

4.i. Proportion of invasive cancers having chemotherapy

Description:

The proportion of women diagnosed with Invasive Cancer who have Chemotherapy, reported by disease character groups

Target:

No target

Table 4i1 Group 1, Node positive, ER/PR negative

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, in Group 1, having Chemotherapy	Number of Invasive Cancers, in Group 1	Proportion of Invasive Cancers, in Group 1, having Chemotherapy
BSAN	1	3	33.3% (0-66.7)
BSM	2	3	66.7% (33.3-100)
BSCtoC	4	6	66.7% (33.3-100)
BSC	1	3	33.3% (0-66.7)
BSS	12	13	92.3% (76.9-100)
BSHC	1	1	100.0% (5.0-100.0)
BSA Total	21	29	72.4% (58.6-86.2)

Exact binomial 95% Confidence Intervals presented

Table 4i2 Group 2, Node negative, high risk, and ER/PR negative

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, in Group 2, having Chemotherapy	Number of Invasive Cancers, in Group 2	Proportion of Invasive Cancers, in Group 2, having Chemotherapy
BSAN	2	4	50.0% (0.0-100.0)
BSM	1	5	20.0% (0.0-60.0)
BSCtoC	3	9	33.3% (11.1-55.6)
BSC	1	6	16.7% (0.0-50.0)
BSS	4	22	18.2% (4.5-31.8)
BSHC	1	4	25.0% (0.0-75.0)
BSA Total	12	50	24.0% (14.0-34.0)

Exact binomial 95% Confidence Intervals presented

Table 4i3 Group 3, Node positive, either ER or PR positive

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, in Group 3, having Chemotherapy	Number of Invasive Cancers, in Group 3	Proportion of Invasive Cancers, in Group 3, having Chemotherapy
BSAN	4	10	40.0% (20.0-70.0)
BSM	6	11	54.5% (27.3-81.8)
BSCtoC	12	23	52.2% (34.8-69.6)
BSC	12	13	92.3% (76.9-100.0)
BSS	19	40	47.5% (35.0-60.0)
BSHC	8	16	50.0% (31.3-68.8)
BSA Total	61	113	54.0% (46.0-61.9)

Exact binomial 95% Confidence Intervals presented

Table 4i4 Group 4, Node negative, high risk, either ER or PR positive

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, in Group 4, having Chemotherapy	Number of Invasive Cancers, in Group 4	Proportion of Invasive Cancers, in Group 4, having Chemotherapy
BSAN	0	22	0.0% (0.0-12.7)
BSM	3	12	25.0% (8.3-50.0)
BSCtoC	3	32	9.4% (3.1-18.8)
BSC	0	22	0.0% (0.0-12.7)
BSS	4	80	5.0% (1.3-8.8)
BSHC	1	20	5.0% (0.0-15.0)
BSA Total	11	188	5.9% (3.2-9.0)

Exact binomial 95% Confidence Intervals presented

4.j. Proportion of invasive cancers having endocrine therapy

Description:

The proportion of women diagnosed with Invasive Cancer who have Endocrine therapy reported by disease character groups

Target:

No target

Table 4j1 Group 1, Node positive and either ER or PR positive

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, in Group 1, having Endocrine	Number of Invasive Cancers, in Group 1	Proportion of Invasive Cancers, in Group 1, having Endocrine
BSAN	0	10	0.0% (0.0-25.9)
BSM	5	11	45.5% (18.2-72.7)
BSCtoC	0	23	0.0% (0.0-12.2)
BSC	1	13	7.7% (0.0-23.1)
BSS	5	40	12.5% (5.0-22.5)
BSHC	4	16	25.0% (6.3-43.8)
BSA Total	15	113	13.3% (8.0-18.6)

Exact binomial 95% Confidence Intervals presented

Table 4j2 Group 2, Node negative, high risk, and either ER or PR positive

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, in Group 2, having Endocrine	Number of Invasive Cancers, in Group 2	Proportion of Invasive Cancers, in Group 2, having Endocrine
BSAN	10	22	45.5% (27.3-63.6)
BSM	6	12	50% (25.0-75.0)
BSCtoC	5	32	15.6% (6.3-28.1)
BSC	1	22	4.5% (0.0-13.6)
BSS	24	80	30% (21.3-38.8)
BSHC	8	20	40% (20.0-60.0)
BSA Total	54	188	28.7% (23.4-34)

Exact binomial 95% Confidence Intervals presented

Table 4j3 Group 3, Node positive, low risk and either ER or PR positive

Lead Provider	Apr 2002 to Mar 2004		
	Number of Invasive Cancers, in Group 3, having Endocrine	Number of Invasive Cancers, in Group 3	Proportion of Invasive Cancers, in Group 3, having Endocrine
BSAN	26	40	65.0% (52.5-77.5)
BSM	7	26	26.9% (11.5-42.3)
BSCtoC	12	63	19.0% (11.1-27.0)
BSC	5	41	12.2% (4.9-22.0)
BSS	52	137	38.0% (31.4-44.5)
BSHC	14	34	41.2% (26.5-55.9)
BSA Total	116	341	34.0% (29.9-38.1)

Exact binomial 95% Confidence Intervals presented

5. PROVISION OF AN APPROPRIATE AND ACCEPTABLE SERVICE

5.a. Time taken for provision of screening results

Description:

The time since screening that it takes for a woman to be sent the results of her mammogram

Target:

95% notified within 10 working days

Table 5a Percentage of women notified of screening results within 10 working days

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	# notified within 10 working days	Number of Women Screened	% notified within 10 working days	# notified within 10 working days	Number of Women Screened	% notified within 10 working days
<i>45-49 years</i>						
BSAN	51	54	94.4% (84.6-98.8)	55	58	
BSM	85	106	80.2% (71.3-87.3)	85	106	
BSCtoC	4	4	100% (47.3-100.0)	4	4	
BSC	39	44	88.6% (75.4-96.2)	39	44	
BSS	2	2	100% (22.4-100.0)	2	2	
BSHC	411	430	95.6% (93.2-97.3)	411	430	
BSA Total	592	640	92.5% (90.2-94.4)	596	644	
<i>50-64 years</i>						
BSAN	13919	14514	95.9% (95.6-96.2)	59329	61052	97.2% (97.0-97.3)
BSM	6951	7644	90.9% (90.3-91.6)	30106	31273	96.3% (96.3-96.1)
BSCtoC	5639	5654	99.7% (99.6-99.9)	26395	26495	99.6% (99.5-99.7)
BSC	3979	4456	89.3% (88.4-90.2)	20172	21378	94.4% (94.0-94.7)
BSS	11446	11512	99.4% (99.3-99.6)	47894	48192	99.4% (99.3-99.5)
BSHC	4133	4335	95.3% (94.7-96)	16184	17276	93.7% (93.3-94.0)
BSA Total	46067	48115	95.7% (95.6-95.9)	200080	205666	97.3% (97.2-97.4)
<i>65-69 years</i>						
BSAN	3510	3620	97.0% (96.4-97.5)	4182	4298	
BSM	2898	3086	93.9% (93.0-94.7)	3352	3546	
BSCtoC	2375	2384	99.6% (99.3-99.8)	2672	2681	
BSC	1715	1871	91.7% (90.3-92.9)	1928	2094	
BSS	3202	3218	99.5% (99.2-99.7)	3563	3579	
BSHC	796	836	95.2% (93.5-96.6)	927	982	
BSA Total	14496	15015	96.5% (96.2-96.8)	16624	17180	

Exact binomial 95% Confidence Intervals presented

Comment:

Time taken for provision of screening results, women aged 45-49 years

The BSA program proportion of women notified of results within 10 working days was 92.5% for the 6 month period, which was slightly below the target of 95%. There was variation across lead providers. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

Time taken for provision of screening results, women aged 50-64 years

The BSA program proportion of women notified of screening results within 10 working days for the last 6 months (95.7%) and last 2 years (97.3%) was above the target of 95%. There was little variation across lead providers, and one lead provider was slightly below target for the biennial rate (BSHC). These results are similar to the previous period.

Time taken for provision of screening results, women aged 65-69 years

The BSA program proportion of women notified within 10 working days was 96.5% for the last 6 months, which was above the target of 95%. There was little variation across lead providers and, and 2 lead providers were slightly below the target (BSM, BSC). Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

5.b. Time taken from screening visit to first offer of an assessment

Description:

The time between screening and the earliest appointment date the woman is offered for assessment. In some cases this date may not coincide with the actual date of assessment due to the fact that many women arrange for a time that suits them better.

Target:

90% offered an assessment appointment within 15 working days

Table 5b Percentage of Women offered 1st assessment appointment within 15 working days

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	# offered assessment within 14 working days	Number Referred to Assessed	% offered apptmt within 15 working days	# offered assessment within 14 working days	Number Referred to Assessed	% offered apptmt within 15 working days
<i>45-49 years</i>						
BSAN	3	3	100% (36.8-100.0)	4	4	
BSM	8	12	66.7% (34.9-90.1)	8	12	
BSCtoC	0	0	-	0	0	
BSC	6	6	100% (60.7-100.0)	6	6	
BSS	0	0	-	0	0	
BSHC	24	25	96% (79.7-99.9)	24	25	
BSA Total	41	46	89.1% (76.4-96.4)	42	47	
<i>50-64 years</i>						
BSAN	466	539	86.5% (83.3-89.2)	2373	2667	89% (87.7-90.1)
BSM	263	364	72.3% (67.4-76.8)	1309	1555	84.2% (82.3-86)
BSCtoC	186	211	88.2% (83.0-92.2)	856	974	87.9% (85.7-89.9)
BSC	212	245	86.5% (81.6-90.5)	1100	1235	89.1% (87.2-90.8)
BSS	510	534	95.5% (93.4-97.1)	2288	2417	94.7% (93.7-95.5)
BSHC	88	128	68.8% (60.0-76.7)	382	534	71.5% (67.5-75.3)
BSA Total	1725	2021	85.4% (83.7-86.9)	8308	9382	88.6% (87.9-89.2)
<i>65-69 years</i>						
BSAN	113	124	91.1% (84.7-95.5)	139	151	
BSM	120	154	77.9% (70.5-84.2)	140	176	
BSCtoC	69	76	90.8% (81.9-96.2)	74	82	
BSC	76	88	86.4% (77.4-92.8)	87	102	
BSS	132	136	97.1% (92.6-99.2)	143	147	
BSHC	11	18	61.1% (35.8-82.7)	11	19	
BSA Total	521	596	87.4% (84.5-90.0)	594	677	

Exact binomial 95% Confidence Intervals presented

Comment:

Time taken from screening visit to first offer of an assessment, women aged 45-49 years

The BSA program proportion for the last 6 months was 89.1%, which approached the target of 90%. There was variation across lead providers, however some lead providers are yet to conduct screens in this age group. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

Time taken from screening visit to first offer of an assessment, women aged 50-64 years

For the last 6 months and last 2 years the BSA program percentage of women offered a first assessment appointment within 15 working days was 85.4% and 88.6% respectively which was slightly below the target of 90%. Some lead providers were statistically below target (BSM, BSCtoC, BSHC). These results are similar to the previous period.

Time taken from screening visit to first offer of an assessment, women aged 65-69 years

The BSA program proportion for the last 6 months was 87.4% which was slightly below the target value of 90%. Point estimates for half of the lead providers were below the target value of 90%, although upper confidence limits contained the target value. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

5.c. Time taken from assessment to final diagnostic biopsy

Description:

The time between first level assessment and the final assessment procedure producing a diagnosis

Target:

At least 90% of women requiring needle biopsy have that procedure completed within five working days of their assessment

At least 90% of women requiring open biopsy should have this performed within 15 working days of being notified of the need for this operation

5.c.1. Women receiving Needle Biopsy within 5 working days of assessment

Table 5c.1 Percentage of women receiving Needle Biopsy within 5 working days of assessment.

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	Women having needle biopsy within 7 days of assessment	Women having Needle Biopsy	% receiving Needle Biopsy within 7 days	Women having needle biopsy within 7 days of assessment	Women having Needle Biopsy	% receiving Needle Biopsy within 7 days
<i>45-49 years</i>						
BSAN	1	1	100% (5.0-100.0)	1	1	
BSM	3	4	75% (19.4-99.4)	3	4	
BSCtoC	0	0	-	0	0	
BSC	3	4	75% (19.4-99.4)	3	4	
BSS	0	0	-	0	0	
BSHC	6	6	100% (60.7-100.0)	6	6	
BSA Total	13	15	86.7% (59.5-98.3)	13	15	
<i>50-64 years</i>						
BSAN	233	260	89.6% (85.3-93.0)	1045	1219	85.7% (83.6-87.6)
BSM	116	129	89.9% (83.4-94.5)	453	535	84.7% (81.3-87.6)
BSCtoC	67	81	82.7% (72.7-90.2)	269	327	82.3% (77.7-86.3)
BSC	72	74	97.3% (90.6-99.7)	354	374	94.7% (91.9-96.7)
BSS	156	183	85.2% (79.3-90.1)	733	907	80.8% (78.1-83.3)
BSHC	40	41	97.6% (87.1-99.9)	167	177	94.4% (89.9-97.3)
BSA Total	684	768	89.1% (86.6-91.2)	3021	3539	85.4% (84.2-86.5)
<i>65-69 years</i>						
BSAN	59	66	89.4% (79.4-95.6)	71	81	
BSM	55	61	90.2% (79.8-96.3)	59	66	
BSCtoC	30	35	85.7% (69.7-95.2)	32	38	
BSC	36	38	94.7% (82.3-99.4)	42	45	
BSS	51	58	87.9% (76.7-95)	54	61	
BSHC	7	8	87.5% (47.4-99.7)	7	8	
BSA Total	238	266	89.5% (85.2-92.9)	265	299	

Exact binomial 95% Confidence Intervals presented

Comment:

Women receiving Needle Biopsy within 5 working days of assessment, women aged 45-49 years

The BSA program percentage of women receiving a needle biopsy within 5 working days (of all those who received a needle biopsy in the 6 month period) was 86.7%, which approached the target value of 90%. Variation across lead providers reflect small numbers of biopsies, and some lead providers are yet to screen women in this age group. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

Women receiving Needle Biopsy within 5 working days of assessment, women aged 50-64 years

For the last 6 months and last 2 years the BSA program percentage of women receiving a needle biopsy within 5 working days (of all those who receive a needle biopsy) was 89.1% and 85.4% respectively; these were slightly below the target of 90% but are an improvement on the figures from the previous period. All but 2 lead providers (BSC, BSHC) were below target, although upper confidence limits contained the target value.

Women receiving Needle Biopsy within 5 working days of assessment, women aged 65-69 years

The BSA program percentage of women receiving a needle biopsy within 5 working days was 89.5% for the 6 month period, which approached the target value of 90%. Percentages across lead providers ranged from 85.7% to 94.7% with 2 of 6 lead providers achieving the target of 90% (BSM, BSC), although lower confidence limits contained values below the target. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

5.c.2. Women having Open Biopsy within 15 working days

Table 5.c.2 Percentage of women having Open Biopsy procedure within 15 working days

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	Women having Open Biopsy within 15 work days of notification	Women having Open Biopsy	% having Open Biopsy within 15 work days of notification	Women having Open Biopsy within 15 work days of notification	Women having Open Biopsy	% having Open Biopsy within 15 work days of notification
<i>45-49 years</i>						
BSAN	1	1		1	1	
BSM	0	0		0	0	
BSCtoC	0	0		0	0	
BSC	0	0		0	0	
BSS	0	0		0	0	
BSHC	1	2		1	2	
BSA Total	2	3	66.7% (9.4-99.2)	2	3	
<i>50-64 years</i>						
BSAN	31	35	88.6% (73.3-96.8)	111	121	91.7% (85.3-96.0)
BSM	8	15	53.3% (26.6-78.7)	28	50	56% (41.3-70.0)
BSCtoC	1	6	16.7% (0.4-64.1)	8	18	44.4% (21.5-69.2)
BSC	7	7	100% (65.2-100.0)	29	39	74.4% (57.9-87.0)
BSS	17	17	100% (83.8-100.0)	60	65	92.3% (83.0-97.5)
BSHC	13	21	61.9% (38.4-81.9)	28	52	53.8% (39.5-67.8)
BSA Total	77	101	76.2% (66.7-84.1)	264	345	76.5% (71.7-80.9)
<i>65-69 years</i>						
BSAN	7	8		8	9	
BSM	0	4		0	4	
BSCtoC	0	0		0	0	
BSC	6	9		8	11	
BSS	5	7		5	7	
BSHC	4	7		4	7	
BSA Total	22	35	62.9% (44.9-78.5)	25	38	

Exact binomial 95% Confidence Intervals presented

Comment:

Women having Open Biopsy within 15 working days, women aged 45-49 years

The BSA program percentage of women having a biopsy within 15 days (of all women requiring an open biopsy) was 66.7% which was below the 90% target, but cannot be interpreted appropriately as the percentage is based on only 3 women having an open biopsy. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

Women having Open Biopsy within 15 working days, women aged 50-64 years

For the last 6 months and last 2 years the BSA program percentage of women having an open biopsy within 15 working days (of all those having an open biopsy) was 76.2% and 76.5% respectively. These were statistically below the target of 90%, but are an improvement on the proportions from the previous period. All but 2 lead providers are below target.

Women having Open Biopsy within 15 working days, women aged 65-69 years

The BSA percentage of women having a biopsy within 15 days (of all women requiring an open biopsy) was 62.9% which was statistically below the 90% target. Numbers across lead providers are too small to interpret appropriately. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

5.d. Time taken from final diagnostic biopsy to reporting assessment results

Description:

The time taken from the final biopsy procedure to reporting the diagnosis to the women

Target:

Results reported to at least 90% of women within seven days of final diagnostic biopsy.

Table 5d Percentage of Women receiving final diagnostic biopsy results within 5 working days

Lead Provider	Last 6 Months			Last 2 Years		
	Jul 2004 to Dec 2004			Jan 2003 to Dec 2004		
	# with results reported within 5 work days of final biopsy	# with final diagnostic biopsy	% receiving final biopsy results within 5 work days	# with results reported within 5 work days of final biopsy	# with final diagnostic biopsy	% receiving final biopsy results within 5 work days
45-49 years						
BSAN	2	2		2	2	
BSM	4	4		4	4	
BSCtoC	0	0		0	0	
BSC	4	4		4	4	
BSS	0	0		0	0	
BSHC	5	7		5	7	
BSA Total	15	17	88.2% (63.6-98.5)	15	17	
50-64 years						
BSAN	224	263	85.2% (80.3-89.2)	1044	1238	84.3% (82.2-86.3)
BSM	97	127	76.4% (68.0-83.5)	416	536	77.6% (73.8-81.1)
BSCtoC	73	82	89% (80.2-94.9)	301	336	89.6% (85.8-92.6)
BSC	68	75	90.7% (81.7-96.2)	349	377	92.6% (89.4-95.0)
BSS	177	183	96.7% (93.0-98.8)	882	908	97.1% (95.8-98.1)
BSHC	41	51	80.4% (66.9-90.2)	172	195	88.2% (82.8-92.4)
BSA Total	680	781	87.1% (84.5-89.3)	3164	3590	88.1% (87.0-89.2)
65-69 years						
BSAN	53	67	79.1% (67.4-88.1)	66	83	
BSM	49	61	80.3% (68.2-89.4)	53	66	
BSCtoC	31	35	88.6% (73.3-96.8)	33	38	
BSC	34	39	87.2% (72.6-95.7)	40	46	
BSS	55	58	94.8% (85.6-98.9)	58	61	
BSHC	10	12	83.3% (51.6-97.9)	10	12	
BSA Total	232	272	85.3% (80.5-89.3)	260	306	

Exact binomial 95% Confidence Intervals presented

Comment:

Time taken from final diagnostic biopsy to reporting assessment results, women aged 45-49 years

The BSA program percentage of women receiving final diagnostic biopsy results within 5 working days was 88.2%, which was below the 90% target value, however the percentage is based on small numbers. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

Time taken from final diagnostic biopsy to reporting assessment results, women aged 50-64 years

For the last 6 months and last 2 years the BSA program percentage of women receiving final diagnostic biopsy results within 5 working days (of all those receiving final diagnostic results) was 87.1% and 88.1% respectively; these approached the target of 90% and were similar to results in the previous period. Some lead providers were below target, although only one lead provider (BSM) was significantly below the target value.

Time taken from final diagnostic biopsy to reporting assessment results, women aged 65-69 years

The BSA program percentage of women receiving final diagnostic biopsy results within 5 working days was 85.3%, which was statistically below the target of 90%. Across lead providers, 4 of the 6 services either made or approached the target. Two services (BSAN and BSM) were significantly below the target of 90%. Screening commenced in this age group in July, 2004, and the biennial data cannot be interpreted.

APPENDIX A: POPULATION DENOMINATORS AND NOTES ON METHOD

Population denominator data

The eligible populations in these reports have been calculated from projected resident populations in each lead provider district, provided by Statistics New Zealand. The projections are based on the 2001 New Zealand Census, assuming medium fertility, medium mortality, medium inter-ethnic mobility and medium migration. The projected population as at December 2004 has been used. This is the same population that is used for all BSA quality and contract monitoring for the period July 2004 to June 2005.

Table 1: Population projections BreastScreen Aotearoa (2004)

Lead Provider	Summary by Age Group					Total Eligible Population (50-64)
	45-49	50-54	55-59	60-64	65-69	
BSAN	52145	44870	39290	30050	23365	114210
BSM	22405	19495	17485	14595	11935	51575
BSCtoC	19075	16810	14990	12375	10335	44175
BSC	15750	13725	12460	9475	7445	35660
BSS	24990	22435	20435	15925	12980	58795
BSHC	10360	8975	8265	6625	5625	23865
BSA Total	144725	126310	112925	89045	71685	328280

Ethnic group denominator

The denominators for each ethnic group are also taken from the census and calculated from projected resident populations in each lead provider district, provided by Statistics New Zealand.

In the census it is possible to choose more than one ethnic group. Where more than one category has been chosen, priority is given to certain ethnic groups for the purposes of classification. Thus, if a woman chooses more than one category and one of these is Maori, she is counted as Maori. Table 2 below uses the prioritised definition of ethnicity.

Table 2. Ethnic populations 2004

Lead Provider	Summary by Ethnicity			Total
	Maori	Pacific	Other	
<i>45-49 years</i>				
BSAN	5720	4445	41980	52145
BSM	4480	325	17600	22405
BSCtoC	3330	265	15480	19075
BSC	1555	875	13320	15750
BSS	1250	240	23500	24990
BSHC	530	70	9760	10360
BSA Total	16865	6220	121640	144725
<i>50-64 years</i>				
BSAN	9820	8500	95890	114210
BSM	7660	525	43390	51575
BSCtoC	5950	455	37770	44175
BSC	2620	1720	31320	35660
BSS	2135	390	56270	58795
BSHC	945	130	22790	23865
BSA Total	29130	11720	287430	328280
<i>65-69 years</i>				
BSAN	1820	1665	19880	23365
BSM	1460	125	10350	11935
BSCtoC	1160	85	9090	10335
BSC	395	310	6740	7445
BSS	340	60	12580	12980
BSHC	140	15	5470	5625
BSA Total	5315	2260	64110	71685

A note on Confidence Intervals

95% confidence intervals have been reported for a number of indicators in this report. From the Central Limit Theorem, the estimate for a particular indicator - for example, invasive cancer detection rate in the previous 6 months - is assumed to come from a hypothetical distribution of values for that indicator. The overall average value of this hypothetical distribution is the universal or 'true' invasive cancer detection rate for the population being studied. The 95% confidence interval indicates that there is a 1 in 20 chance that the 'true' population rate (or proportion, or mean) lies outside the range of values contained by the 95% confidence interval. Thus, the wider the 95% confidence interval, the less precise the estimate is to the true population parameter. Additionally, different statistical distributions provide more accurate and appropriate estimations of the 95% Confidence intervals, and depend upon the type of indicator being studied, and the frequency of the event. For this report, 95% Confidence intervals for rare events occurring in a population have been calculated using the Poisson distribution. For indicators where proportions represent cases and non-cases the 95% Confidence interval is based on the Exact Binomial distribution.

A note on reported differences between observed and target values

The magnitude of the difference between the observed value and the target value is important in the interpretation of each indicator. In this report, differences of >5% are noted as important differences. Differences of <5% are considered not important. For each indicator differences between the observed value and the target value need to be interpreted in the context and meaning of the indicator under investigation. If the standard is 80% then a 10% difference would contain values ranging from 72%-88%. If the standard is 10%, then a 10% difference would contain values ranging from 9%-11%. As a guide, slight differences can be considered to be of a magnitude of 0-5%, moderate differences of 5-10%, and important differences >10%.

APPENDIX B: GLOSSARY OF TERMS

Assessment

Follow-up investigations if something of concern is seen on a mammogram.

Assessment rate

Number of women referred to assessment as a percentage of all women screened

Asymptomatic

Women who do not have symptoms of breast cancer

Biopsy

A sample of a breast abnormality, or the whole abnormality, is removed and examined under a microscope by a pathologist to determine whether it is cancer

Benign biopsy weight

The weight of the open biopsy specimen presented to the pathologist

Benign biopsy rate

Number of open biopsies that turn out to be benign lesions, expressed as a proportion of women screened

BSA

BreastScreen Aotearoa

Coverage

Population-based measure of the percentage of women in the target age group (45-49, 50-64, 65-69 years) who have had a screening mammogram in the programme

Initial screen

A woman's first screening mammogram at any BSA Lead Provider

False negative

A negative screening test result in a woman who does have cancer at the time the screening is conducted.

False positive result

The proportion of women who are recalled to assessment, but after assessment are found not to have cancer

Lead Provider

A service provider who contracts with the National Screening Unit to provide services purchased as a result of the *Request for Proposal*. This term encompasses those individuals or organisations who act as a nominee, agent or subcontracted provider to a Lead Provider.

Positive predictive value

The proportion of women screened positive who are ultimately diagnosed as having cancer

Pre-operative diagnosis rate

Number of women in which a needle biopsy provides the definitive diagnosis (pre-operative diagnosis), as a percentage of all women diagnosed with breast cancer in the programme

Rescreen:

A screening mammogram undertaken two years after the previous screen. In this report, rescreen refers to women who returned for screening within 27 months following their previous screen.

Sensitivity

The proportion of truly diseased persons in the screened population who are identified as diseased by the screening test. Sensitivity is a measure of the probability of correctly diagnosing a case, or the probability that any given case will be identified by the test.

Specificity

The proportion of women without breast cancer at screening who have a negative screen result. This is estimated by expressing the number of women who have a negative screen result as a percentage of all women screened excluding the women screened positive with cancer.

Subsequent screen

A woman's screening mammogram at a BSA Lead Provider when she has previously attended BSA.

Technical recall rate

Number of women who have to return to a screening unit (either Fixed or Mobile) for further films to complete their screening episode, expressed as a percentage of the number screened

Technical reject rate

Number of films rejected as a percentage of the number of films taken, calculated separately for women who are screened in a fixed unit and a mobile unit