

**BREASTSCREEN AOTEAROA**  
**INDEPENDENT MONITORING REPORT:**

**SCREENING AND ASSESSMENT REPORT OF WOMEN ATTENDING BSA**  
**(WOMEN SCREENED JANUARY 2006 TO DECEMBER 2007)**

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## MEMBERS OF THE BSA ADVISORY GROUP

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Prof Richard Taylor	Epidemiologist
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Dr Glenys Round	Medical Oncologist
Jeremy Nicoll	Medical Physicist
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Dr Juliet Walker	Pacific Representative
Dr Reena Ramsaroop	Pathologist
Dr Glyn Thomas	Radiologist
Mr David Moss	Surgeon
Margreet Simpson	Treatment Data Collector

## EXECUTIVE SUMMARY

This report presents cross-sectional data for the period July-December 2007 (6 months) and January 2006 to December 2007 (2 years), and trend data from programme inception to December 2007 for all BreastScreen Aotearoa screening and assessment indicators. Treatment indicators are located in a companion report.<sup>1</sup> 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. Targets are provided for indicators for women aged 50-69 years. Due to the paucity of trial and screening service evidence, there is insufficient data on which to base targets for the screening of women under 50 years at present. Therefore, BSA and provider performance for the 45-49 age group is documented throughout the report, but there are no specific recommendations. Trend data for key indicators are presented for women aged 50-64 years, however, a new times-series has also been established for the target age group of women aged 50-69 years. Some indicators in this report have 'expected' and 'desirable' targets. In the text of this Executive Summary quoted targets relate to 'expected' target values.

An additional development from the previous reporting period, which continues to impact upon data for the current reporting period, was the restructure of BreastScreen Auckland & North (BSAN) into three Lead Providers BreastScreen Auckland Limited (BSAL), BreastScreen Counties Manukau (BSCM), and BreastScreen Waitemata (BSWN). This occurred during the July to December (2005) reporting period, with BSCM beginning screens in September 2005.

### 1. Coverage

BSA screened 92,459 women aged 45-69 years over the 6-month period from July to December 2007, of which 69,587 were aged between 50 and 69 years. For women in this age group, the biennial participation was 61.7%, which was below the target of 70%. Of biennial screens, 15.0% were initial screens and 85.0% were subsequent screens. The proportion of initial screens has declined over time, reflecting the maturing BSA programme and the increasing number of women attending for subsequent screens.

For women aged 50-69 years, significantly lower biennial participation was evident for the eligible Maori and Pacific populations (44.7% and 45.6% respectively), compared with the remaining ethnic groups (63.8%). There is, however, an upward trend in coverage for Maori and Pacific groups for most Lead Providers.

BSSL continues to exceed the biennial coverage target of 70%, and has consistently had higher biennial coverage relative to other lead providers (although coverage has declined in BSSL following age-extension to 50-69 years). The BSA Advisory Group has recommended that the BSSL recruitment process could be emulated by other Lead Providers to improve coverage. The BSSL recruitment process involves working with GP's, remuneration of GP's, co-ordination of health promotion including partnership with NGO's, and targeting service provision.

#### *Re-screening proportion and timeliness*

The proportion of women re-screened for the six-month period for women aged 50-69 years was 85.6% within 27 months (target >85%). Of those who attended for re-screen, 83.4% attended within 20-24 months (target >75%). The 20-24-month re-screen rate was statistically above the target, with most Lead Providers exceeding the target value.

### 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 6-month reporting period. For women 50-69 years, the two-year referral to assessment was 8.9% (target <10%) and 3.9% (target <5%) for initial and subsequent screens respectively.

#### *False positives and positive predictive value*

The proportion of false positives for women aged 50-69 years for the 6 month period was 7.6% for initial screens (target <9%), and 2.4% for subsequent screens (target <4%). The positive predictive value (PPV) for the programme

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<sup>1</sup> Page A, Taylor R. BreastScreen Aotearoa: Independent Monitoring Report -Treatment of women with screen detected cancers (women screened Jan-Dec, 2006). BreastScreen Aotearoa: Wellington 2008.

for the 6 month reporting period was 9.4% for initial screens and 16.9% for subsequent screens, for women aged 50-69 years.

#### *Technical recall*

Technical recall rates for fixed sites achieved the target of <0.5% for BSA and continue to show an improving trend overall (and for the majority of Lead Providers). Expected targets were not met for a number of indicators. Technical recall rates for mobile sites exceeded the target value of <3% overall for BSA, and showed increasing disparity between Lead Providers, with declining trends for BSM and BSSL, and increasing trends in BSC, BSHC and BSCtoC. The reason for high technical recalls for some Lead Providers should be investigated, and standardised requirements should be developed for inadequate films.

### **3. Early detection of DCIS or invasive breast cancer**

#### *DCIS and invasive cancer detection rate*

The biennial cancer detection per 1,000 screens - invasive and DCIS combined - for women aged 50-69 years was 9.1 per 1,000 for initial screens and 5.4 per 1,000 for subsequent screens. This represented 1,614 cancers detected through BSA for the 2-year period. Trends in cancer detection for initial and subsequent screens have remained relatively stable across Lead Providers, with the exception of significant increasing trends in cancer detection for initial rounds in BSSL. The proportion of DCIS of all cancers for this age group over the biennium was 22.4%, ranging from 19.2% to 32.4% across Lead Providers. Trends in proportion of DCIS have remained relatively stable across Lead Providers.

A total of 380 cases of invasive cancer and DCIS (combined) were detected through BSA for women 50-69 years in the 6 month reporting period for initial and subsequent screens combined. The BSA cancer detection for the six-month period (DCIS and invasive combined) for women 50-69 years was 8.2 per 1,000 for initial screens and 5.0 per 1,000 women screened for subsequent screens.

#### *Invasive cancer detection rate*

Separate biennial cancer detection for invasive cancers and DCIS can be derived for women aged 50-69 years. The BSA biennial invasive cancer detection for women aged 50-69 years was 6.8 per 1,000 women screened for initial screens (achieving the target of  $\geq 6.1$  per 1,000) and 4.0 per 1,000 for subsequent screens (achieving the target of  $\geq 3.45$  per 1,000). This represented 1,196 invasive cancers detected by BSA for the 2-year reporting period. The overall proportion of node negative cancers (of all invasive cancers) was 72.2% for initial screens (target >70%) and 80.9% for subsequent screens (target >75%).

#### *Invasive cancer detected $\leq 10$ mm*

For women 50-69 years the overall proportion of screen detected invasive cancers  $\leq 10$ mm in size for the 2-year period was 28.5% for initial screens (target  $\geq 25\%$ ) and 39.5% for subsequent screens (target  $\geq 30\%$ ). The corresponding detection rates per 10,000 women screened for invasive cancers  $\leq 10$ mm were better than the target value at 19.5 for initial screens (target  $\geq 15.2$  per 10,000 screens) and 15.8 for subsequent screens (target  $\geq 10.45$  per 10,000 screens).

#### *Invasive cancer detected <15mm*

For women 50-69 years the overall proportion of screen detected invasive cancers <15mm in size for the 2-year reporting period was 45.1% for initial screens (not significantly different from the target value of >50%) and 60.3% for subsequent screens (exceeding the target of >50%). The corresponding detection rates per 10,000 women screened for invasive cancers <15mm were better than the target at 30.9 for initial screens (target value >30.5 per 10,000 screens) and 24.2 for subsequent screens (target value >17.3 per 10,000 screens).

### **4. 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.

The overall proportion of women in the 6-month period who were notified of screening results within 10 working days was 95.5% for women 50-69 years, which was higher than the target value of  $\geq 90\%$ .

#### *Assessment*

The overall proportion of women offered a first assessment within 15 working days for the biennium for women 50-69 years was 81.2%, which was below the target value of 90%. Trend data for this indicator show an increase for the programme overall, and for most Lead Providers relative to earlier periods of the programme, but continue to decline in BSHC.

*Time taken from assessment to final diagnostic biopsy*

The proportion of women receiving an open biopsy within 15 working days (of those who required an open biopsy) was below the target value of 90%. The biennial proportion for this indicator for women 50-69 years was 66.4%. For the 6-month period the overall proportion receiving an open biopsy within 15 days was 64.7% for women 50-69 years.

The proportion of women who received their final diagnostic biopsy results within 5 working days was 85.8%, which was on target for this indicator (target value 90%). The overall proportion for the 6-month period was 87.6% for women aged 50-69 years.

## **5. Conclusion**

BSA is a population-based mammography screening programme that has participation rates across the target age group 50-69 years approaching the target of 70%, notwithstanding associated service capacity constraints related to the recent age extension into the 45-49 and 65-69 year age groups. Coverage rates lower than the target value can be attributed to the significantly lower coverage in Maori and Pacific groups. Overall, targets for key indicators are being exceeded, or are close to being achieved. There is 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:

- Coverage for Maori and Pacific groups (1a.7)
- Technical recall rates for mobile sites (2b.2)
- Percentage receiving an open biopsy within 15 working days (5c.2)

## **BSA ADVISORY GROUP COMMENTS AND RECOMMENDATIONS**

The BSA Advisory Group congratulates BreastScreen South Limited on its achieving all the target indicators in the 2006-07 IMR for screening and assessment.

Digital mammography brings significant gains to the programme as a whole. One of these gains is reduced technical recall. Technical recall impacts on acceptability of service and harms (radiation doses) to women participating in BSA through the mobile service. The BSA Advisory Group therefore recommends implementation of digital mammography across the programme. This should enable the mobile service technical recall rate to better reflect that of fixed sites. The BSA Advisory Group acknowledges the conversion to digital will be an expensive process for the programme.

The BSA Advisory Group is concerned at the continual failure to meet the 90 percent target for the time from assessment to final biopsy indicator. While there are likely to be a number of reasons for this, the BSA Advisory Group considers this may reflect a wider issue with resourcing the surgical treatment of breast cancer. The BSA Advisory Group recommends:

- the indicator be changed from 15 working days to 20 working days to bring it into alignment with the standard time for surgical treatment of confirmed breast cancer
- consideration should be given to the level of resource available for the surgical treatment of breast cancer in New Zealand as targets are consistently not be achieved.

## **FOREWORD: BSA MONITORING PROCESS**

Data are sent monthly from the eight BreastScreen Aotearoa Lead Providers (LPs) to the New Zealand Health Information Service of the Ministry of Health (NZHIS). The data are checked at NZHIS, amalgamated into a single file and sent to the National Screening Unit (NSU). The NSU runs further checks, encrypts the National Health Index (NHI) numbers and produces 6-monthly data extraction and tables of performance indicators by Lead Provider for the preceding 6 months and preceding 2 years of the reporting period.

The tables are sent to the BSA Independent Monitoring Group (IMG) at the University of Queensland (Australia). The IMG produces an Independent Monitoring Report (IMR) including calculations of confidence intervals (CI's), time trend graphs, an analysis of data against national indicators and targets, explanatory notes and commentary. The IMG can request additional tabulations where it is felt appropriate. The IMG sends the first draft of IMR to NSU for verification and review, after which the IMR is updated.

The updated IMR draft is sent to members of the BSA Advisory Group (AG) prior to a collective meeting, where multidisciplinary and consumer context is added to comments regarding outliers. The draft report is then circulated to LPs for further comment and a final version is produced. The NSU publishes the final report and distributes to providers.

This BSA Independent Monitoring Report was reviewed by the BSA Advisory Group on 29 October, 2008.



## TECHNICAL NOTES FOR INTERPRETING THIS REPORT

### Presentation of age extension data

As for previous reports, following age extension to women 45-49 years and 65-69 years, this report has aggregated the upper age group and presents data for women aged 50-69 years as the target age group. Data for women aged 45-49 years are presented separately. Interpreting trends in this report should take into consideration that indicators for a comparable age group are not available for periods prior to Jul-Dec, 2006. Trend data are presented for women age 50-64 years for the programme from the first reporting period in 2001 to the June 2006, after which time-series data are broken and a new series has been established for women aged 50-69 years.

### Changes to BSA Lead Providers

BreastScreen Auckland and North was split into 3 separate Lead Providers during the current reporting period: BSAL, BSCM, BSWN. The following table provides a listing of Lead Providers clarifying these changes. BSWN is now the only Lead Provider where a biennium has not yet completely elapsed. Biennial data are presented for all other Lead Providers in this report.

Lead Provider	Abbreviation	Inception and period of programme
BreastScreen Auckland and North	BSAN	1999-June 2005
BreastScreen Auckland Limited	BSAL	July, 2005-Present
BreastScreen Counties Manukau	BSCM	October, 2005-Present
BreastScreen Waitemata and North	BSWN	February, 2006-Present
BreastScreen Midland	BSM	1999-Present
BreastScreen Coast to Coast	BSCtoC	1999-Present
BreastScreen Central	BSC	1999-Present
BreastScreen South Limited	BSSL	1999-Present
BreastScreen HealthCare	BSHC	1999-Present

### Trends in programme indicators

As noted above, this report presents trend data for women 50-64 years from the first reporting period in 2001 to June 2007. For the current reporting period a new time series has been established for women aged 50-69 years, which aggregates the first biennium of data for women aged 65-69 years with women aged 50-64 years. Given the large number of indicators and the fact that, for many indicators, large stochastic variations are evident over time (due to small underlying numbers), trend data have been presented for: (1) key programme indicators relating to participation, referral to assessment, and cancer detection; and (2) for other indicators where noteworthy trends were evident. Trend data have not been presented for women aged 45-49 years.

### Population denominators

Population denominators for this report are based on smoothed estimates (by age group and ethnic group). Six-monthly population denominators are estimates based on weighted interpolation using annual population projections provided for each year. Population estimates for this report, and previous reporting periods (used in trend estimates), are provided in Appendix A and Appendix B.

Projected resident populations in each Lead Provider district for each year were 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 assumptions. The denominators for each ethnic group are also taken from the Census, and are calculated from projected resident populations in each Lead Provider district, as 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.

## **Confidence Intervals (CI's)**

95% CI's have been reported for all indicators in this report. From the Central Limit Theorem, the estimate for a particular indicator - for example, invasive cancer detection rate in a 6 month period - 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 with small numbers where proportions represent cases and non-cases the 95% confidence interval is based on the Exact Binomial distribution.

## **Differences between observed and target values**

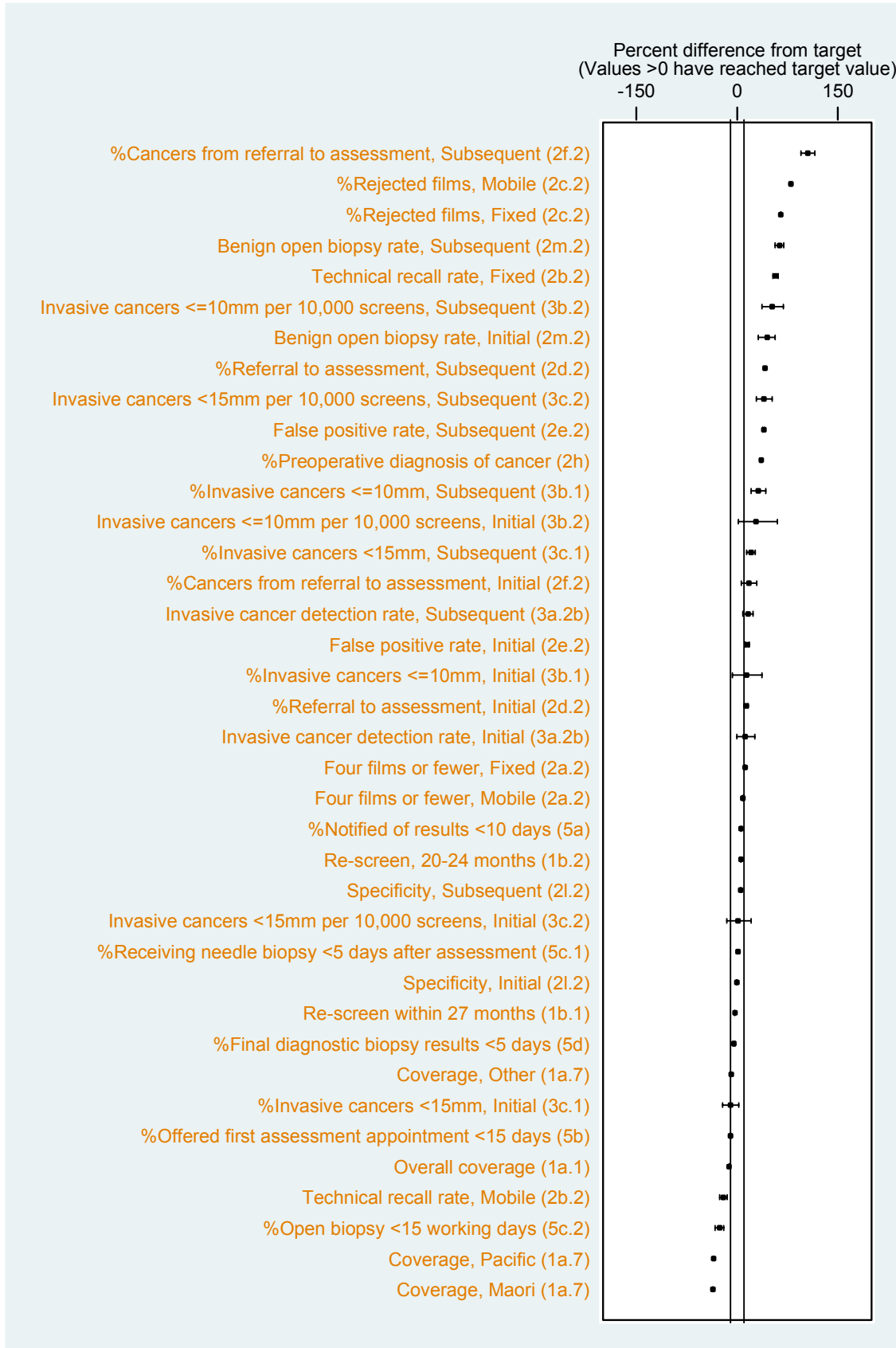
The magnitude of the difference between the observed value and the target value is important in the interpretation of each indicator. In this report, differences of  $\geq 5\%$  that are statistically significantly different from the target value based on 95% confidence intervals are noted as important differences, and are indicated by '✓✓' if better than the target, or 'xx' if worse than the target. Differences of  $\geq 10\%$  that are statistically significant (from the target value) are indicated by '✓✓✓' if better than the target, or 'xxx' if worse than the target. Differences of  $<5\%$  from the target value and/or differences which are not significantly different from the target value are indicated by '✓' and are considered 'on target'. 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 relative magnitude of 0-5%, moderate differences of 5-9%, and large differences  $>10\%$ .

Formal assessment of observed values in comparison to target values do not apply to 45-49 year old women as there is no long term trial data to indicate the achievable and optimal targets for this age group.

Target values relate only to biennial rates for women in the target age-group (50-69 years) for all indicators, and ticks and crosses for 6-month rates are not presented.

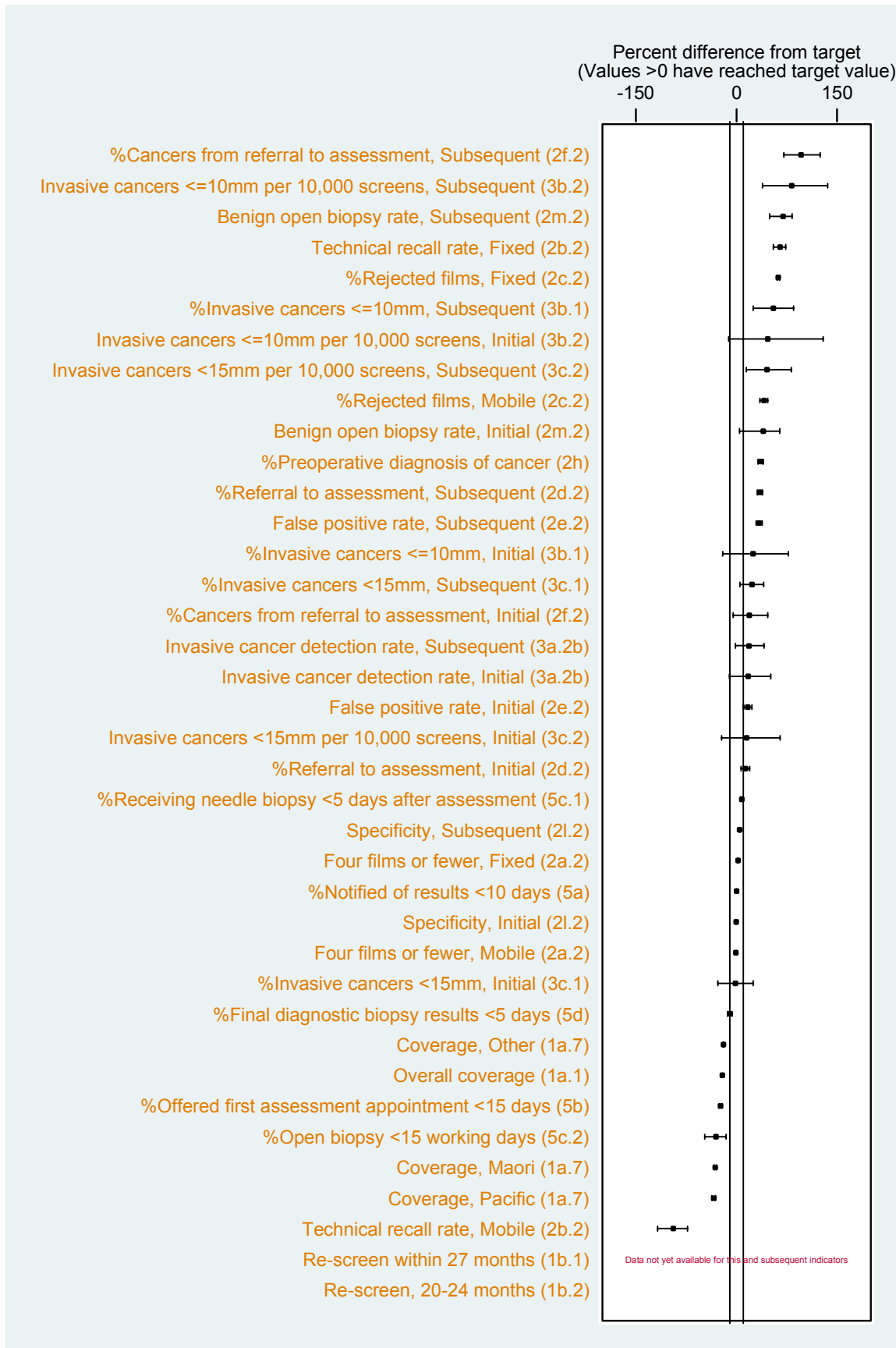
## AT A GLANCE: BIENNIAL INDICATORS FOR WOMEN 50-69 YEARS

**Figure 1: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSA as measured by percent difference between observed and target value (Table reference in brackets)**



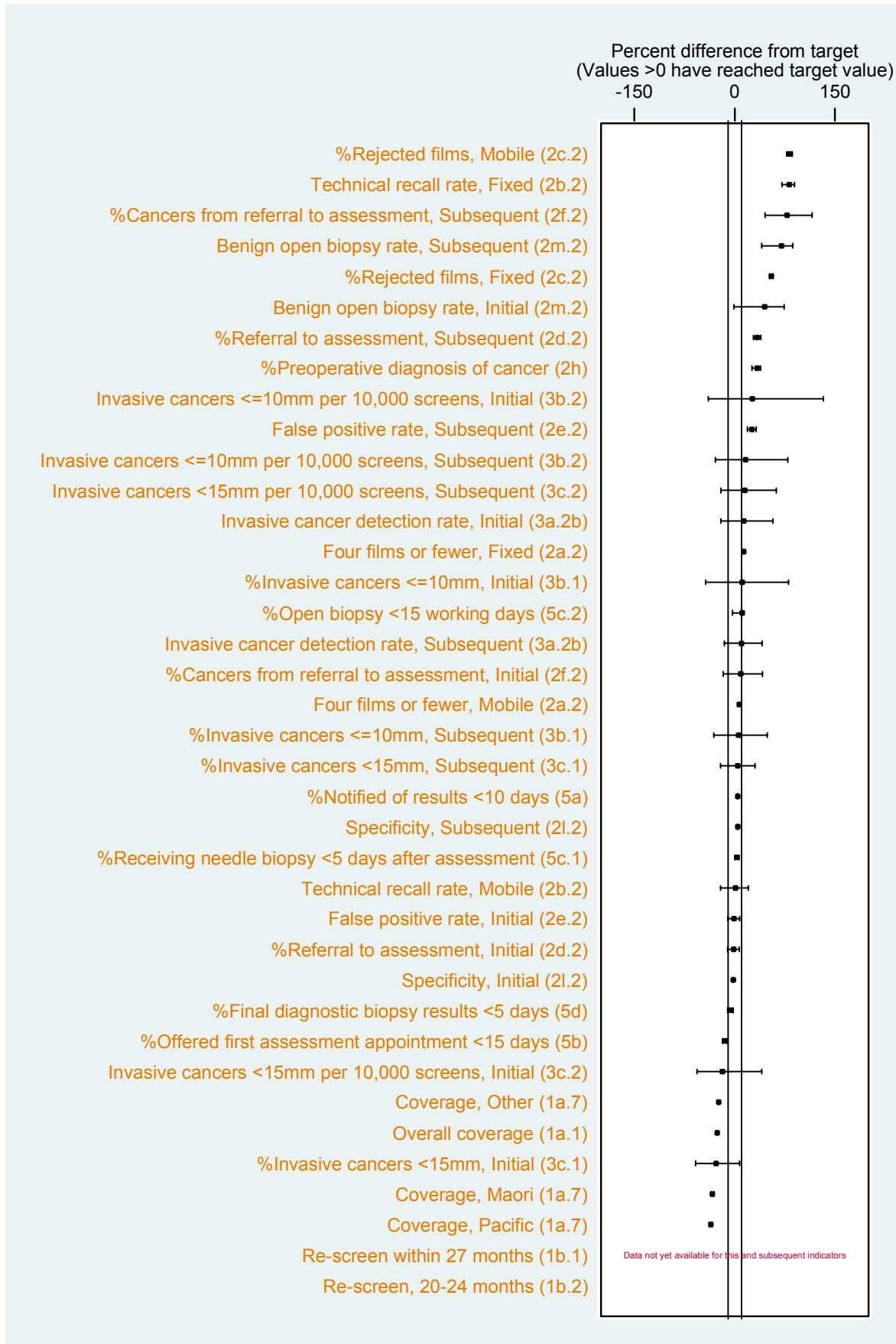
NB: The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

**Figure 2: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSWN as measured by percent difference between observed and target value (Table reference in brackets). Note: These data are for an almost complete biennium following re-distribution of BSAN areas.**



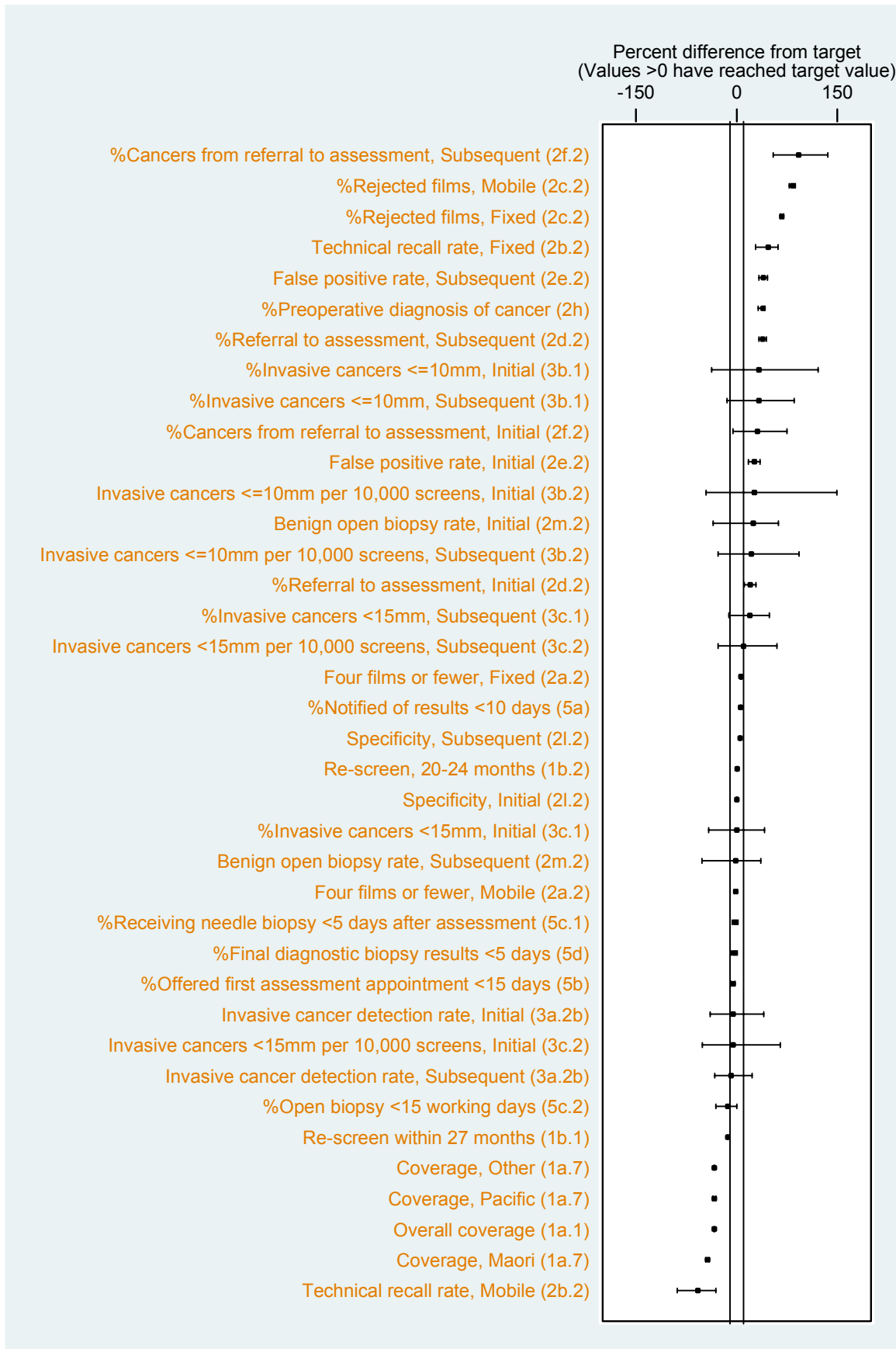
NB: The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

**Figure 3: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSCM as measured by percent difference between observed and target value (Table reference in brackets).**



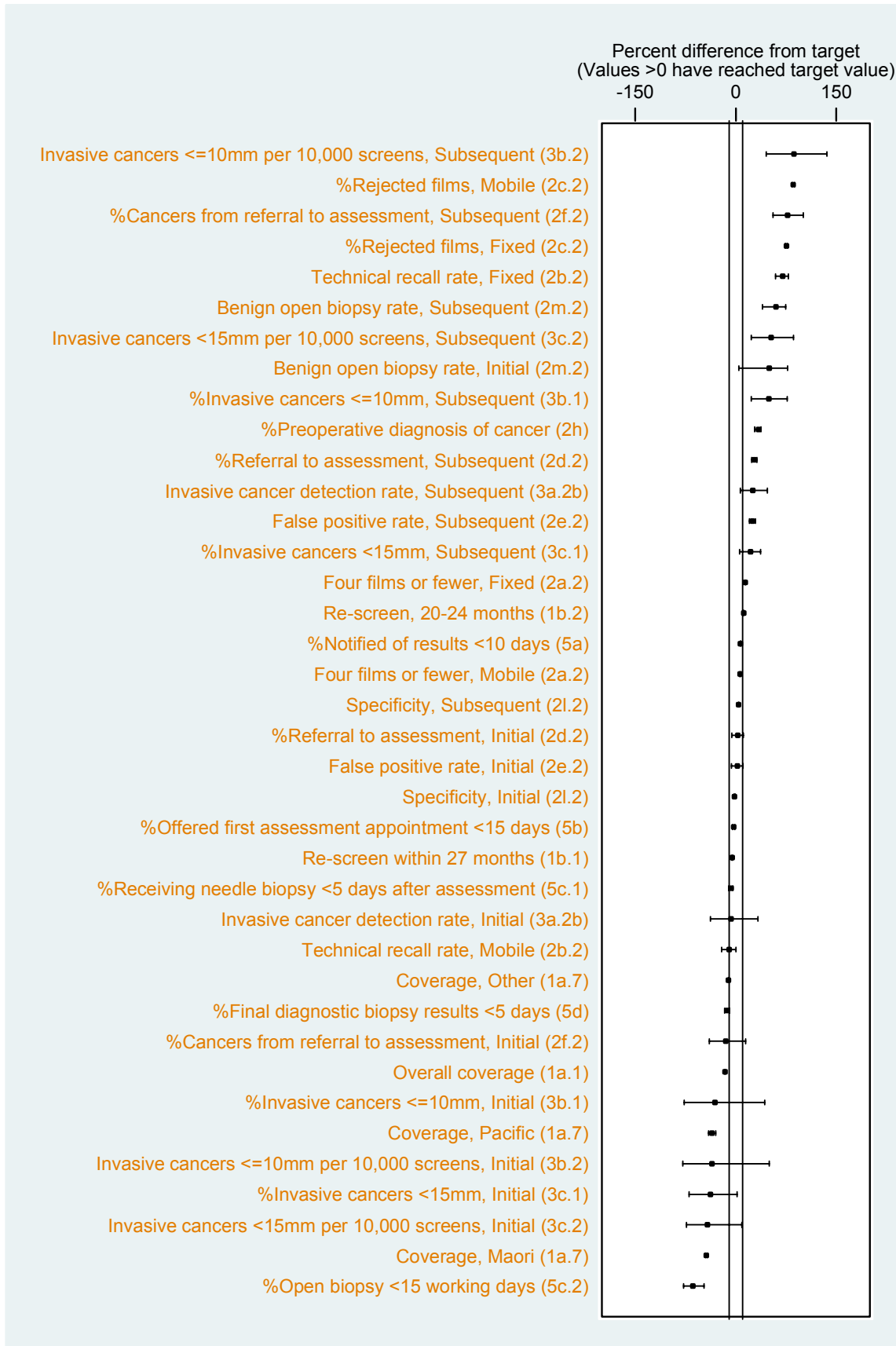
**NB:** The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

**Figure 4: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSAL as measured by percent difference between observed and target value (Table reference in brackets). Note: These data are for an almost complete biennium following re-distribution of BSAN areas.**



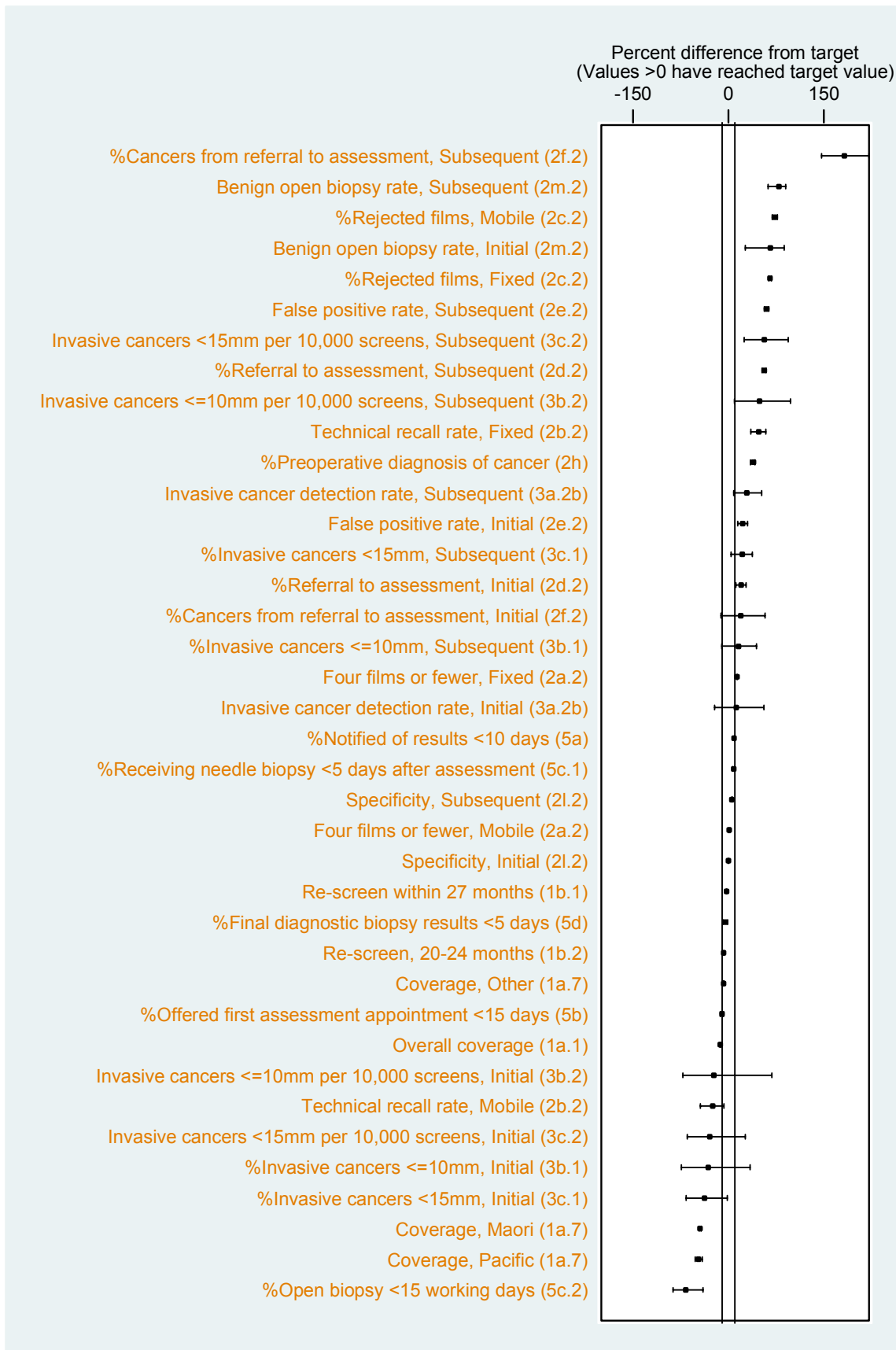
**NB:** The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

**Figure 5: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSM as measured by percent difference between observed and target value (Table reference in brackets)**



NB: The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

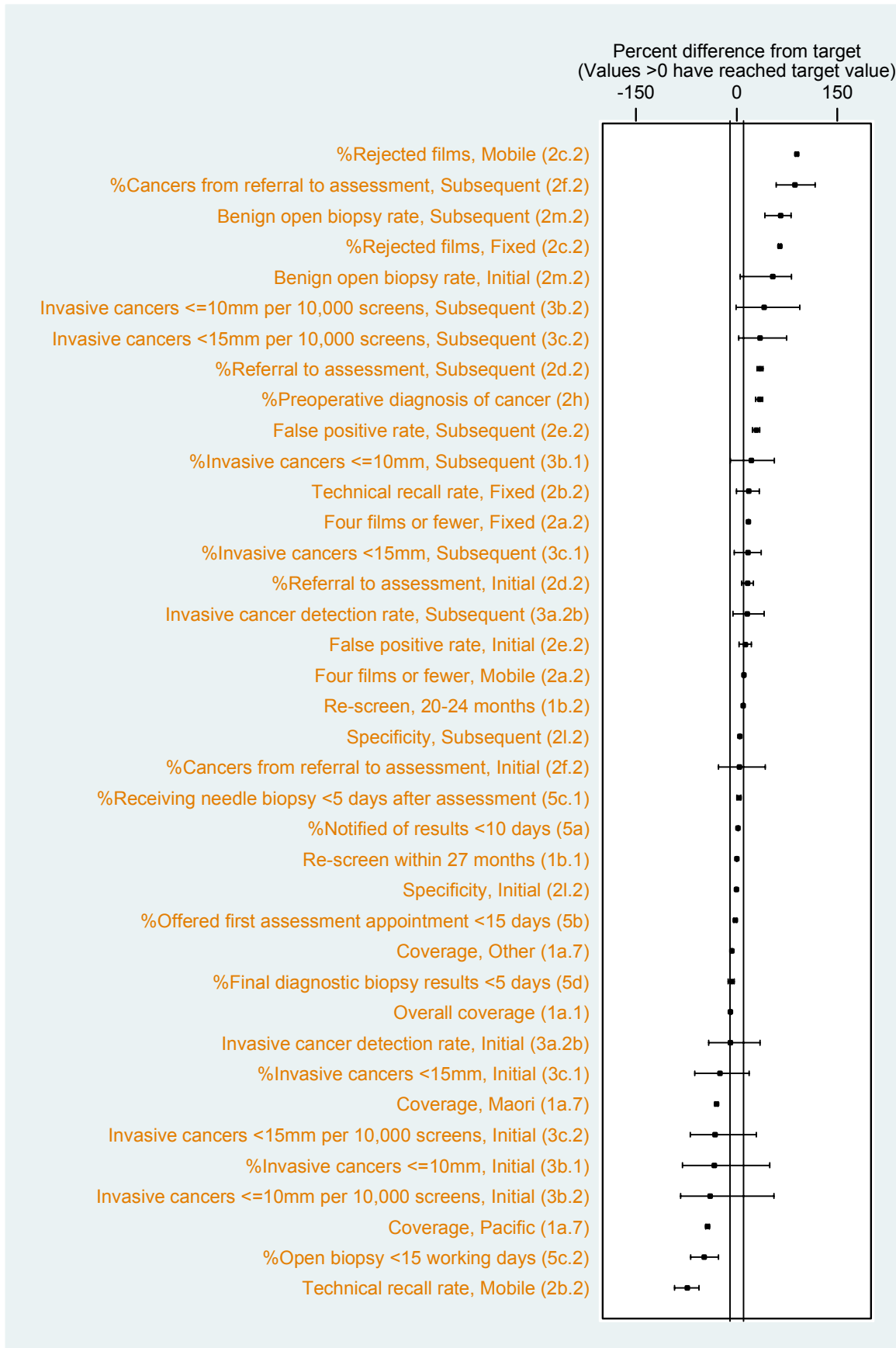
**Figure 6: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSCtoC as measured by percent difference between observed and target value (Table reference in brackets)**



NB: The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

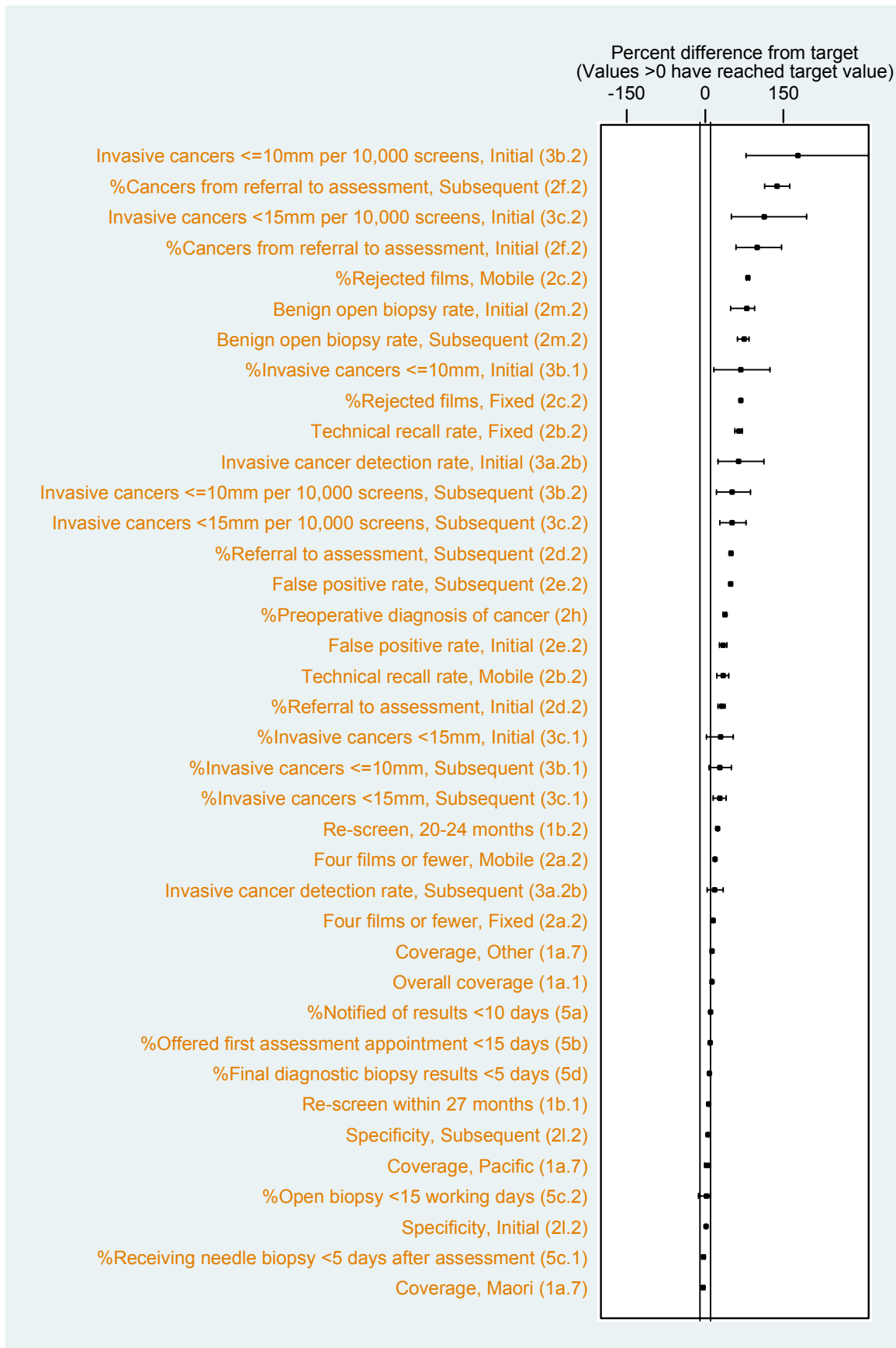


**Figure 7: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSC as measured by percent difference between observed and target value (Table reference in brackets)**



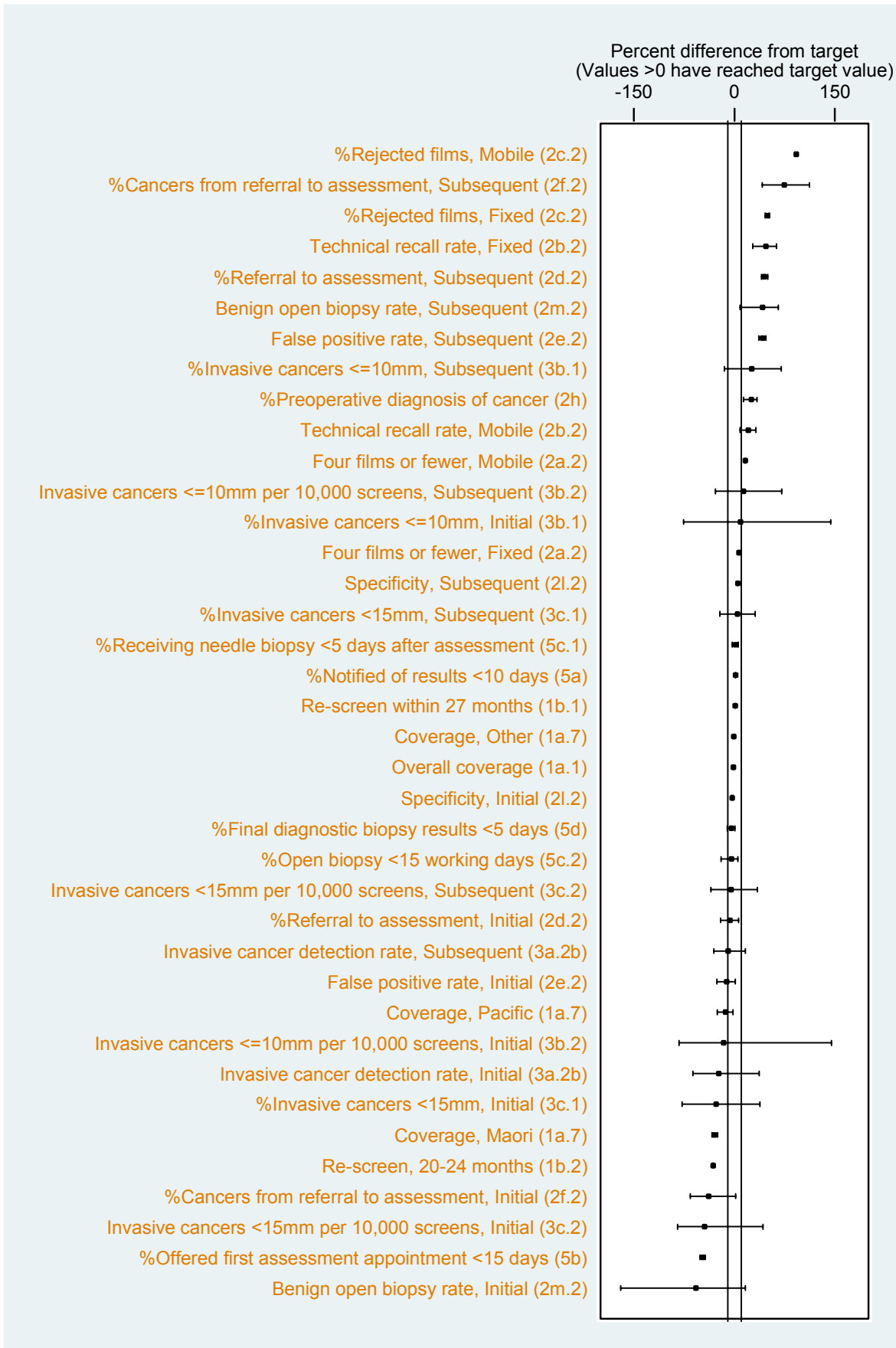
NB: The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

**Figure 8: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSSL as measured by percent difference between observed and target value (Table reference in brackets)**



NB: The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

**Figure 9: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSHC as measured by percent difference between observed and target value (Table reference in brackets)**



NB: The vertical line represent a  $\pm 10\%$  difference between the observed value and the target value

## 1. COVERAGE

### 1.a.1. Overall coverage of eligible women

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

*Target:* ≥ 70% of eligible women receive a screen within the programme in the most recent 24-month period

**Table 1.a.1. Overall coverage of eligible women**

	Last 6 months			Last 2 years				
	Number of women screened	Eligible Population	% (95%CI)	Number of women screened	Eligible Population	% (95%CI)		
<i>45-49 years</i>								
BSWN	3,551	26,115	13.6 (13.2-14.0)	11,643	26,115	44.6 (44.0-45.2)		
BSCM	2,273	15,965	14.2 (13.7-14.8)	5,826	15,965	36.5 (35.7-37.2)		
BSAL	1,372	15,940	8.6 (8.2-9.1)	5,127	15,940	32.2 (31.4-32.9)		
BSM	2,878	24,285	11.9 (11.4-12.3)	10,327	24,285	42.5 (41.9-43.1)		
BSCtoC	3,119	20,525	15.2 (14.7-15.7)	8,745	20,525	42.6 (41.9-43.3)		
BSC	2,370	17,545	13.5 (13.0-14.0)	7,464	17,545	42.5 (41.8-43.3)		
BSSL	4,912	26,955	18.2 (17.8-18.7)	20,557	26,955	76.3 (75.8-76.8)		
BSHC	2,397	11,180	21.4 (20.7-22.2)	5,423	11,180	48.5 (47.6-49.4)		
BSA Total	22,872	158,510	14.4 (14.3-14.6)	75,112	158,510	47.4 (47.1-47.6)		
<i>50-69 years</i>								
BSWN	10,789	70,595	15.3 (15.0-15.6)	39,095	70,595	55.4 (55.0-55.7)	***	*
BSCM	5,675	42,070	13.5 (13.2-13.8)	21,747	42,070	51.7 (51.2-52.2)	***	*
BSAL	4,237	39,390	10.8 (10.5-11.1)	18,354	39,390	46.6 (46.1-47.1)	***	*
BSM	10,392	69,925	14.9 (14.6-15.1)	41,139	69,925	58.8 (58.5-59.2)	***	*
BSCtoC	9,028	58,905	15.3 (15.0-15.6)	36,064	58,905	61.2 (60.8-61.6)	***	*
BSC	7,180	46,505	15.4 (15.1-15.8)	29,596	46,505	63.6 (63.2-64.1)	**	*
BSSL	15,523	78,345	19.8 (19.5-20.1)	62,025	78,345	79.2 (78.9-79.5)	✓✓✓	*
BSHC	6,763	31,590	21.4 (21.0-21.9)	21,833	31,590	69.1 (68.6-69.6)	✓	*
BSA Total	69,587	437,325	15.9 (15.8-16.0)	269,853	437,325	61.7 (61.6-61.8)	***	*

Note: Eligible population is based on the 2007 projected population. Data for BSWN for '2 years' is based on 23 month period.

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

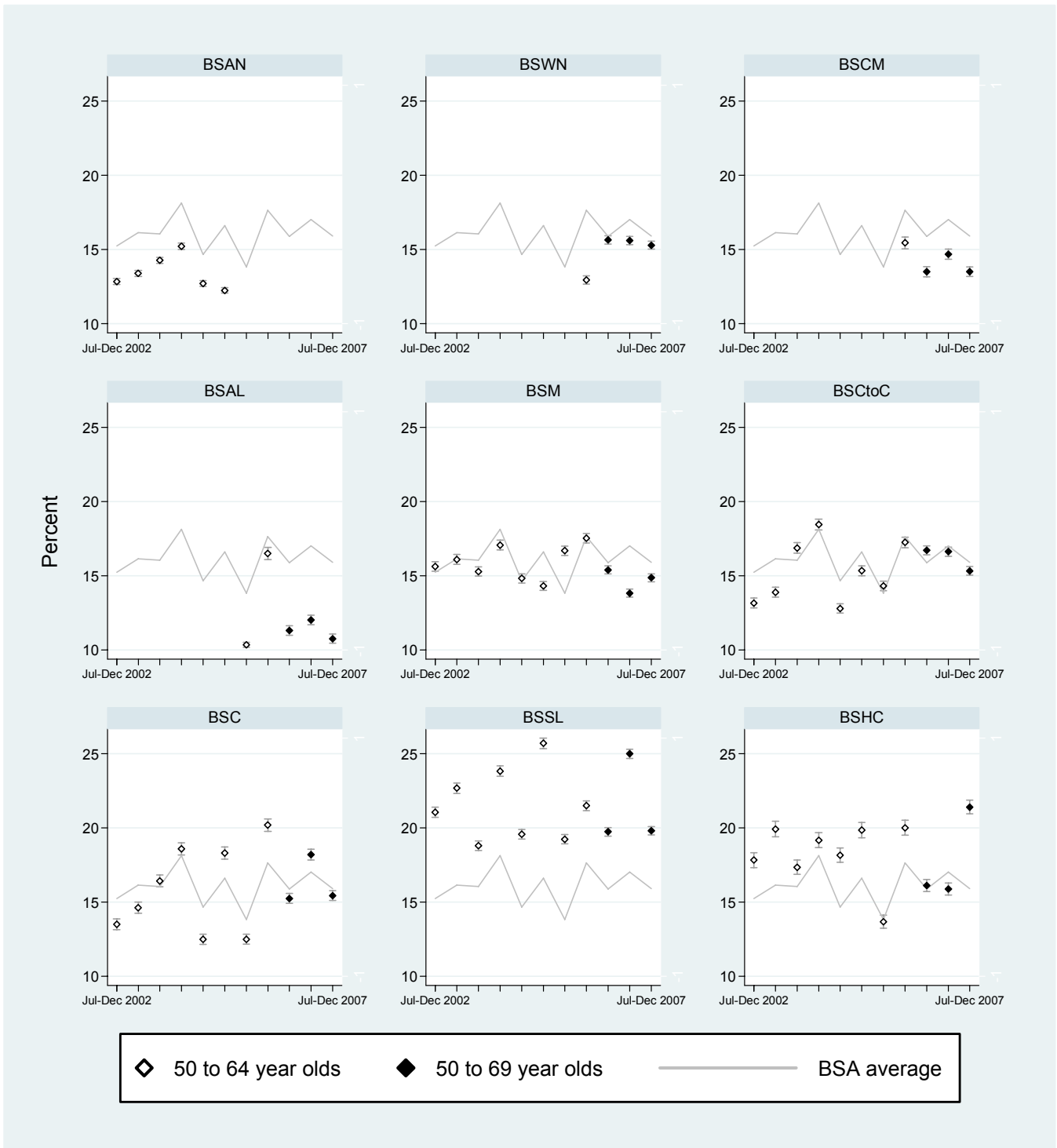
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

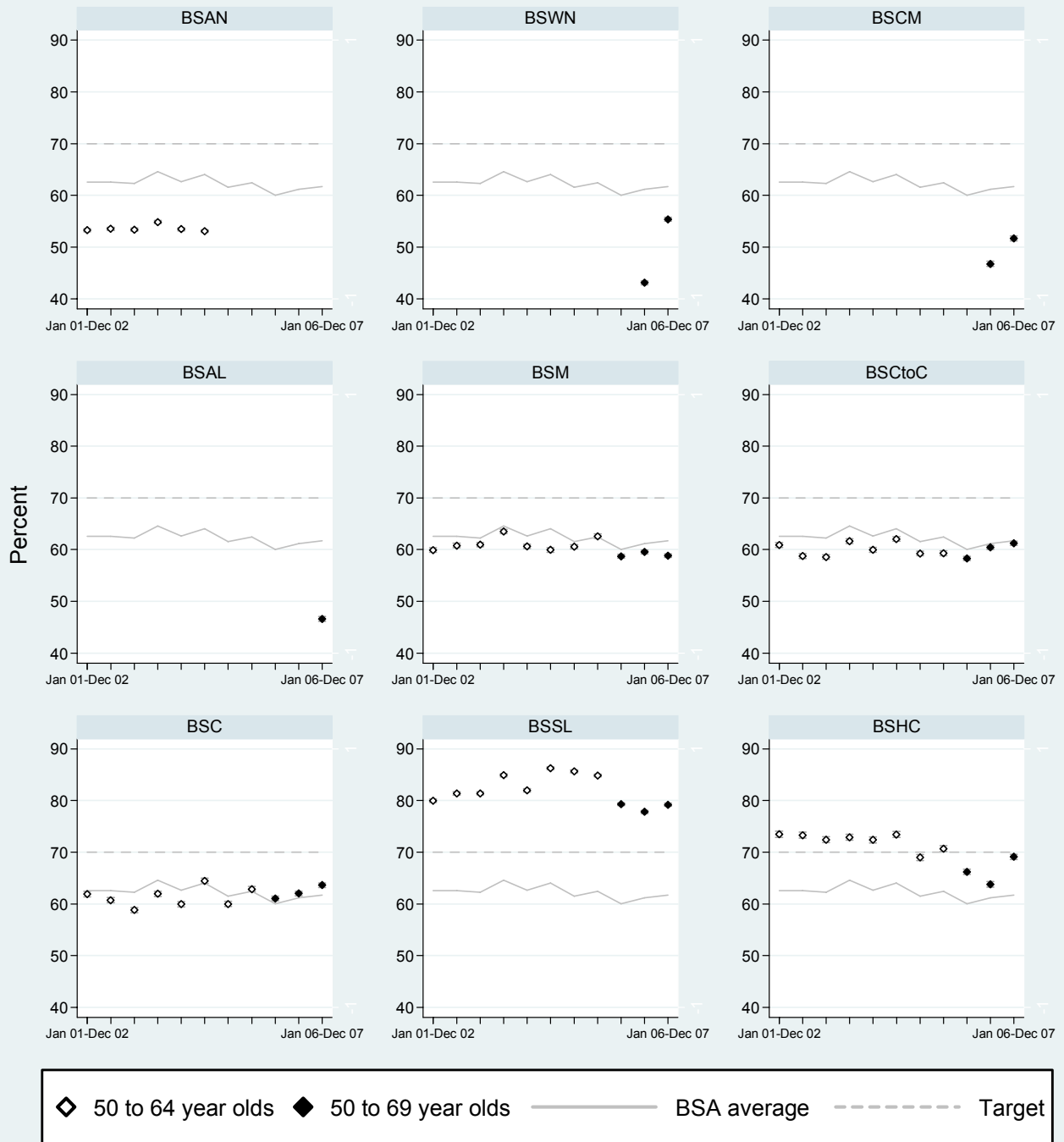
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 1a.1: Trends in 6 month coverage of eligible women**



**Figure 1a.1: Trends in biennial coverage of eligible women**



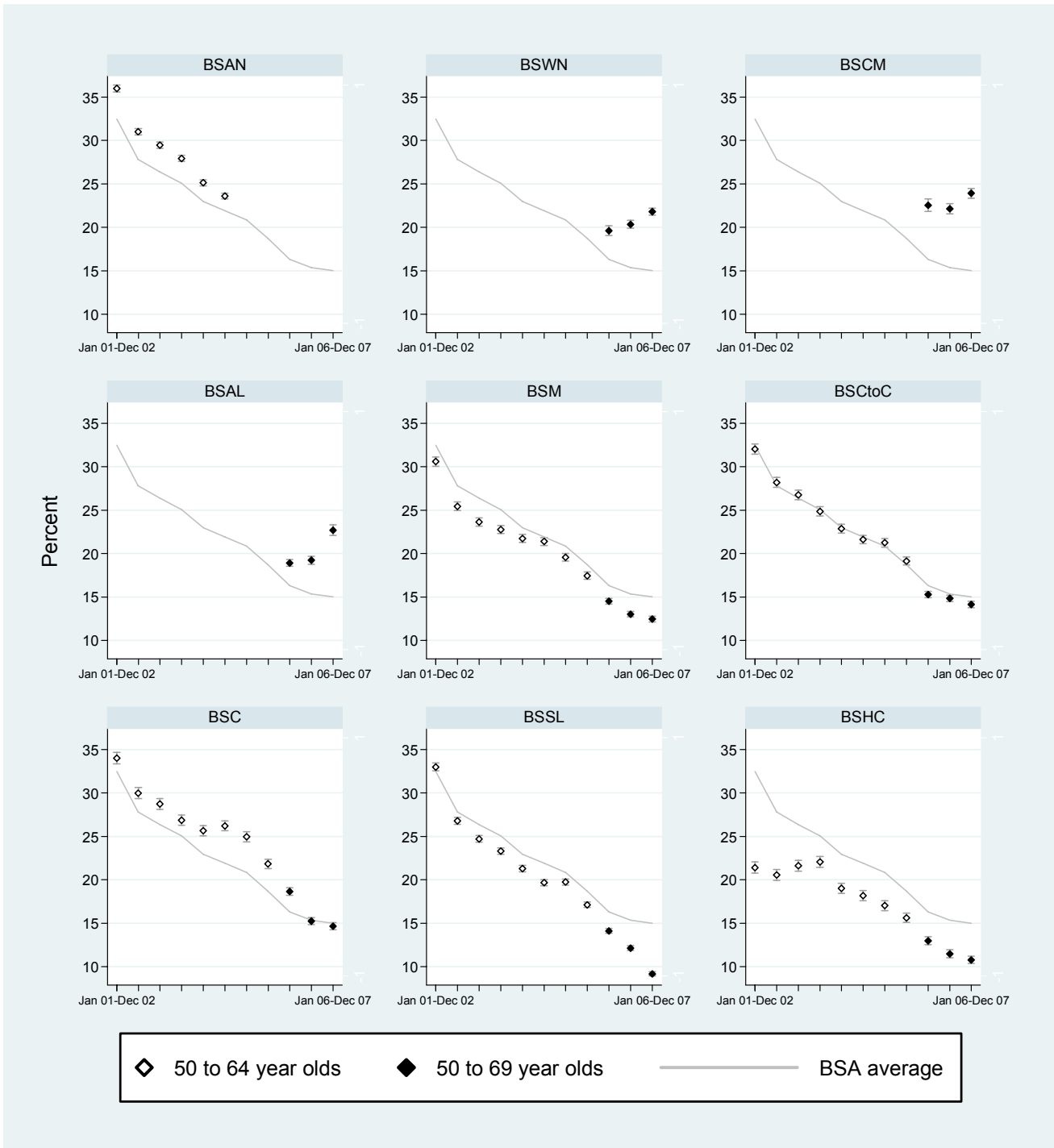
## 1.a.2. The percentage of screens that are initial and subsequent screens

**Table 1.a.2. The percentage of screens that are initial and subsequent screens, 2 years**

	Initial screens	Number of women screened	% (95%CI)	Subsequent screens	Number of women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	10,908	11,643	93.7 (93.2-94.1)	735	11,643	6.3 (5.9-6.8)
BSCM	5,589	5,826	95.9 (95.4-96.4)	237	5,826	4.1 (3.6-4.6)
BSAL	4,824	5,127	94.1 (93.4-94.7)	303	5,127	5.9 (5.3-6.6)
BSM	8,169	10,327	79.1 (78.3-79.9)	2,158	10,327	20.9 (20.1-21.7)
BSCtoC	7,086	8,745	81.0 (80.2-81.8)	1,659	8,745	19.0 (18.2-19.8)
BSC	6,037	7,464	80.9 (80.0-81.8)	1,427	7,464	19.1 (18.2-20.0)
BSSL	17,623	20,557	85.7 (85.2-86.2)	2,934	20,557	14.3 (13.8-14.8)
BSHC	4,097	5,423	75.5 (74.4-76.7)	1,326	5,423	24.5 (23.3-25.6)
BSA Total	64,333	75,112	85.6 (85.4-85.9)	10,779	75,112	14.4 (14.1-14.6)
<i>50-69 years</i>						
BSWN	8,520	39,095	21.8 (21.4-22.2)	30,575	39,095	78.2 (77.8-78.6)
BSCM	5,199	21,747	23.9 (23.3-24.5)	16,548	21,747	76.1 (75.5-76.7)
BSAL	4,164	18,354	22.7 (22.1-23.3)	14,190	18,354	77.3 (76.7-77.9)
BSM	5,122	41,139	12.5 (12.1-12.8)	36,017	41,139	87.5 (87.2-87.9)
BSCtoC	5,103	36,064	14.1 (13.8-14.5)	30,961	36,064	85.9 (85.5-86.2)
BSC	4,341	29,596	14.7 (14.3-15.1)	25,255	29,596	85.3 (84.9-85.7)
BSSL	5,689	62,025	9.2 (8.9-9.4)	56,336	62,025	90.8 (90.6-91.1)
BSHC	2,357	21,833	10.8 (10.4-11.2)	19,476	21,833	89.2 (88.8-89.6)
BSA Total	40,495	269,853	15.0 (14.9-15.1)	229,358	269,853	85.0 (84.9-85.1)

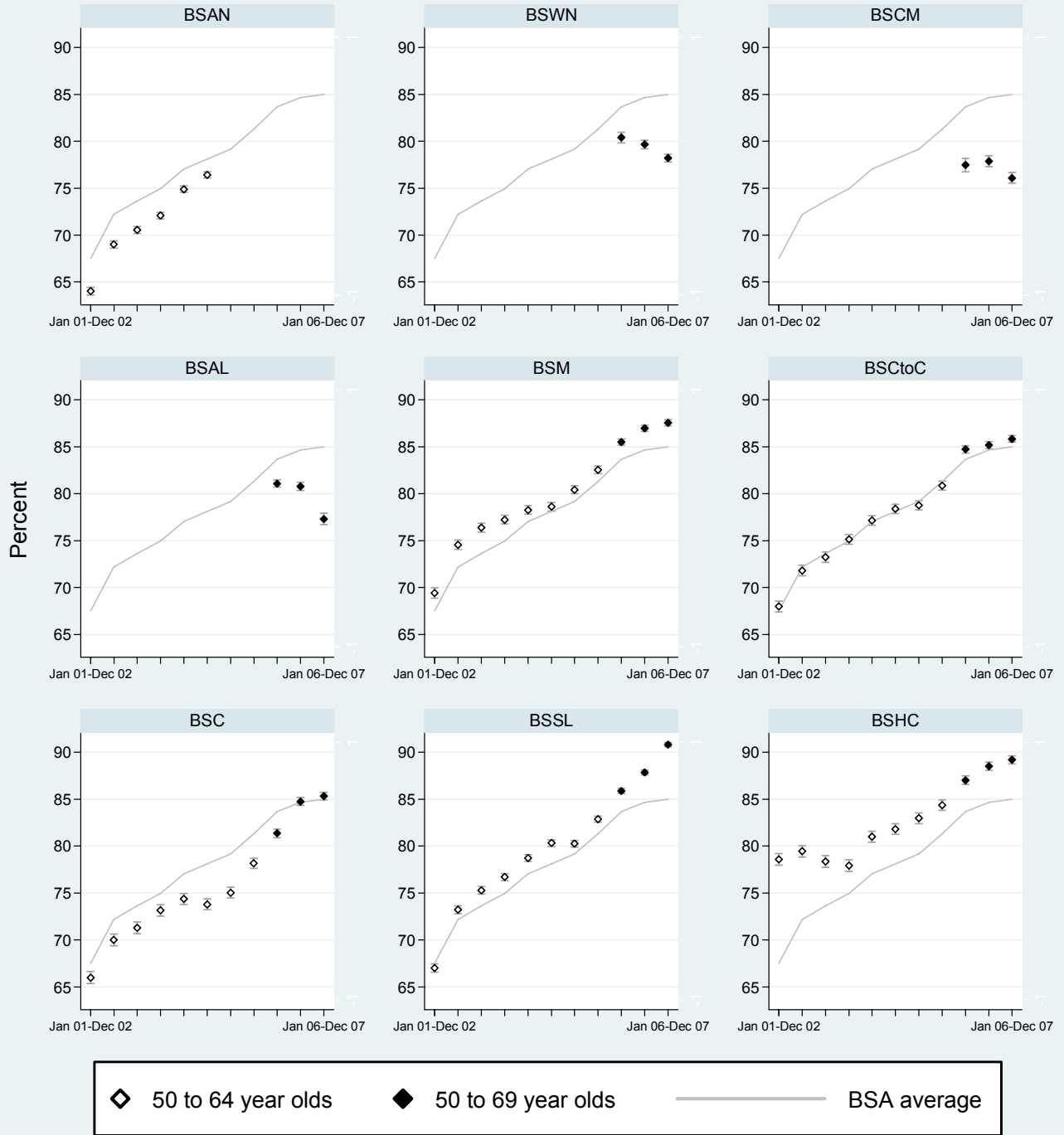
Note: Data for BSWN for '2 years' is based on 23 month period

**Figure 1a.2: Percentage of initial screens for each screening biennium**





**Figure 1a.2: Percentage of subsequent screens for each screening biennium**



### 1.a.3. The percentage of women screened by type of screening unit

**Table 1.a.3. Percentage of women screened by type of screening unit**

	Fixed site screens	Number of women screened	% (95%CI)	Mobile site screens,	Number of women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	10,231	11,643	87.9 (87.3-88.5)	1,412	11,643	12.1 (11.5-12.7)
BSCM	4,145	5,826	71.1 (70.0-72.3)	1,681	5,826	28.9 (27.7-30.0)
BSAL	3,785	5,127	73.8 (72.6-75.0)	1,342	5,127	26.2 (25.0-27.4)
BSM	7,185	10,327	69.6 (68.7-70.5)	3,142	10,327	30.4 (29.5-31.3)
BSCtoC	7,525	8,745	86.0 (85.3-86.8)	1,220	8,745	14.0 (13.2-14.7)
BSC	5,901	7,464	79.1 (78.1-80.0)	1,563	7,464	20.9 (20.0-21.9)
BSSL	18,286	20,557	89.0 (88.5-89.4)	2,271	20,557	11.0 (10.6-11.5)
BSHC	3,192	5,423	58.9 (57.5-60.2)	2,231	5,423	41.1 (39.8-42.5)
<b>BSA Total</b>	<b>60,250</b>	<b>75,112</b>	<b>80.2 (79.9-80.5)</b>	<b>14,862</b>	<b>75,112</b>	<b>19.8 (19.5-20.1)</b>
<i>50-69 years</i>						
BSWN	33,967	39,095	86.9 (86.5-87.2)	5,128	39,095	13.1 (12.8-13.5)
BSCM	18,573	21,747	85.4 (84.9-85.9)	3,174	21,747	14.6 (14.1-15.1)
BSAL	15,799	18,354	86.1 (85.6-86.6)	2,555	18,354	13.9 (13.4-14.4)
BSM	28,691	41,139	69.7 (69.3-70.2)	12,448	41,139	30.3 (29.8-30.7)
BSCtoC	31,259	36,064	86.7 (86.3-87.0)	4,805	36,064	13.3 (13.0-13.7)
BSC	22,723	29,596	76.8 (76.3-77.3)	6,873	29,596	23.2 (22.7-23.7)
BSSL	55,422	62,025	89.4 (89.1-89.6)	6,603	62,025	10.6 (10.4-10.9)
BSHC	14,373	21,833	65.8 (65.2-66.5)	7,460	21,833	34.2 (33.5-34.8)
<b>BSA Total</b>	<b>220,807</b>	<b>269,853</b>	<b>81.8 (81.7-82.0)</b>	<b>49,046</b>	<b>269,853</b>	<b>18.2 (18.0-18.3)</b>

Note: Data for BSWN for '2 years' is based on 23 month period

## 1.a.4 Age-specific coverage of women aged 50-69 years

**Table 1.a.4: Age-specific coverage of women aged 50-69 years**

	Last 6 months			Last 2 years				
	Number of women screened	Eligible Population	% (95%CI)	Number of women screened	Eligible Population	% (95%CI)		
<i>50-54 years</i>								
BSWN	3,077	21,765	14.1 (13.7-14.6)	11,204	21,765	51.5 (50.8-52.1)	***	*
BSCM	1,711	13,275	12.9 (12.3-13.5)	6,528	13,275	49.2 (48.3-50.0)	***	*
BSAL	1,180	13,290	8.9 (8.4-9.4)	5,741	13,290	43.2 (42.4-44.0)	***	*
BSM	2,756	21,400	12.9 (12.4-13.3)	10,799	21,400	50.5 (49.8-51.1)	***	*
BSCtoC	2,798	17,965	15.6 (15.0-16.1)	10,051	17,965	55.9 (55.2-56.7)	***	*
BSC	2,182	14,525	15.0 (14.4-15.6)	8,573	14,525	59.0 (58.2-59.8)	***	*
BSSL	6,271	23,845	26.3 (25.7-26.9)	18,863	23,845	79.1 (78.6-79.6)	✓✓✓	*
BSHC	2,300	9,535	24.1 (23.3-25.0)	6,452	9,535	67.7 (66.7-68.6)	✓	*
BSA Total	22,275	135,600	16.4 (16.2-16.6)	78,211	135,600	57.7 (57.4-57.9)	***	*
<i>55-59 years</i>								
BSWN	2,906	19,655	14.8 (14.3-15.3)	11,262	19,655	57.3 (56.6-58.0)	***	*
BSCM	1,555	11,820	13.2 (12.6-13.8)	6,249	11,820	52.9 (52.0-53.8)	***	*
BSAL	1,254	11,070	11.3 (10.7-11.9)	5,506	11,070	49.7 (48.8-50.7)	***	*
BSM	2,814	18,945	14.9 (14.3-15.4)	11,429	18,945	60.3 (59.6-61.0)	***	*
BSCtoC	2,321	16,155	14.4 (13.8-14.9)	10,389	16,155	64.3 (63.6-65.0)	**	*
BSC	2,069	13,150	15.7 (15.1-16.4)	8,687	13,150	66.1 (65.2-66.9)	**	*
BSSL	3,881	22,045	17.6 (17.1-18.1)	17,779	22,045	80.6 (80.1-81.2)	✓✓✓	*
BSHC	1,834	8,765	20.9 (20.1-21.8)	6,145	8,765	70.1 (69.1-71.1)	✓	ns
BSA Total	18,634	121,605	15.3 (15.1-15.5)	77,446	121,605	63.7 (63.4-64.0)	**	*
<i>60-64 years</i>								
BSWN	2,778	16,165	17.2 (16.6-17.8)	9,478	16,165	58.6 (57.9-59.4)	***	*
BSCM	1,408	9,485	14.8 (14.1-15.6)	5,165	9,485	54.5 (53.4-55.5)	***	*
BSAL	1,059	8,340	12.7 (12.0-13.4)	4,226	8,340	50.7 (49.6-51.8)	***	*
BSM	2,395	15,900	15.1 (14.5-15.6)	9,964	15,900	62.7 (61.9-63.4)	***	*
BSCtoC	2,170	13,220	16.4 (15.8-17.1)	8,539	13,220	64.6 (63.8-65.4)	**	*
BSC	1,815	10,335	17.6 (16.8-18.3)	6,897	10,335	66.7 (65.8-67.6)	✓	*
BSSL	3,106	17,675	17.6 (17.0-18.1)	14,226	17,675	80.5 (79.9-81.1)	✓✓✓	*
BSHC	1,536	7,055	21.8 (20.8-22.8)	5,159	7,055	73.1 (72.1-74.2)	✓	*
BSA Total	16,267	98,175	16.6 (16.3-16.8)	63,654	98,175	64.8 (64.5-65.1)	**	*
<i>65-69 years</i>								
BSWN	2,028	13,010	15.6 (15.0-16.2)	7,151	13,010	55.0 (54.1-55.8)	***	*
BSCM	1,001	7,490	13.4 (12.6-14.2)	3,805	7,490	50.8 (49.7-51.9)	***	*
BSAL	744	6,690	11.1 (10.4-11.9)	2,881	6,690	43.1 (41.9-44.3)	***	*
BSM	2,427	13,680	17.7 (17.1-18.4)	8,947	13,680	65.4 (64.6-66.2)	**	*
BSCtoC	1,739	11,565	15.0 (14.4-15.7)	7,085	11,565	61.3 (60.4-62.2)	***	*
BSC	1,114	8,495	13.1 (12.4-13.8)	5,439	8,495	64.0 (63.0-65.0)	**	*
BSSL	2,265	14,780	15.3 (14.7-15.9)	11,157	14,780	75.5 (74.8-76.2)	✓✓	*
BSHC	1,093	6,235	17.5 (16.6-18.5)	4,077	6,235	65.4 (64.2-66.6)	**	*
BSA Total	12,411	81,945	15.1 (14.9-15.4)	50,542	81,945	61.7 (61.3-62.0)	***	*

Note: Data for BSWN for '2 years' is based on 23 month period

## 1.a.7 Coverage by ethnicity

### 1.a.7a Coverage by ethnicity, summary for 2 years, women 45-49 years

**Table 1.a.7a Coverage by ethnicity women 45-49 years**

	6 months			2 years		
	Number of women screened	Eligible population	% (95%CI)	Number of women screened	Eligible population	% (95%CI)
<i>Maori</i>						
BSWN	387	3,200	12.1 (11.0-13.3)	1,015	3,200	31.7 (30.1-33.4)
BSCM	265	2,220	11.9 (10.6-13.4)	669	2,220	30.1 (28.2-32.1)
BSAL	100	1,100	9.1 (7.5-10.9)	339	1,100	30.8 (28.1-33.6)
BSM	400	5,010	8.0 (7.2-8.8)	1,378	5,010	27.5 (26.3-28.8)
BSCtoC	377	3,845	9.8 (8.9-10.8)	909	3,845	23.6 (22.3-25.0)
BSC	202	1,905	10.6 (9.3-12.1)	595	1,905	31.2 (29.2-33.4)
BSSL	221	1,505	14.7 (12.9-16.6)	963	1,505	64.0 (61.5-66.4)
BSHC	85	670	12.7 (10.3-15.4)	172	670	25.7 (22.4-29.2)
BSA Total	2,037	19,455	10.5 (10.0-10.9)	6,040	19,455	31.0 (30.4-31.7)
<i>Pacific</i>						
BSWN	123	1,145	10.7 (9.0-12.7)	396	1,145	34.6 (31.8-37.4)
BSCM	348	2,525	13.8 (12.5-15.2)	806	2,525	31.9 (30.1-33.8)
BSAL	174	1,630	10.7 (9.2-12.3)	587	1,630	36.0 (33.7-38.4)
BSM	44	345	12.8 (9.4-16.7)	108	345	31.3 (26.4-36.5)
BSCtoC	29	310	9.4 (6.4-13.2)	69	310	22.3 (17.8-27.3)
BSC	81	930	8.7 (7.0-10.7)	248	930	26.7 (23.8-29.6)
BSSL	57	280	20.4 (15.8-25.6)	169	280	60.4 (54.4-66.1)
BSHC	8	80	10.0 (4.4-18.8)	28	80	35.0 (24.7-46.5)
BSA Total	864	7,245	11.9 (11.2-12.7)	2,411	7,245	33.3 (32.2-34.4)
<i>Other</i>						
BSWN	3,032	21,770	13.9 (13.5-14.4)	10,178	21,770	46.8 (46.1-47.4)
BSCM	1,620	11,220	14.4 (13.8-15.1)	4,291	11,220	38.2 (37.3-39.2)
BSAL	1,084	13,210	8.2 (7.7-8.7)	4,165	13,210	31.5 (30.7-32.3)
BSM	2,421	18,930	12.8 (12.3-13.3)	8,823	18,930	46.6 (45.9-47.3)
BSCtoC	2,699	16,370	16.5 (15.9-17.1)	7,706	16,370	47.1 (46.3-47.8)
BSC	2,085	14,710	14.2 (13.6-14.7)	6,206	14,710	42.2 (41.4-43.0)
BSSL	4,551	25,170	18.1 (17.6-18.6)	19,286	25,170	76.6 (76.1-77.1)
BSHC	2,278	10,430	21.8 (21.1-22.6)	5,171	10,430	49.6 (48.6-50.5)
BSA Total	19,770	131,810	15.0 (14.8-15.2)	65,826	131,810	49.9 (49.7-50.2)

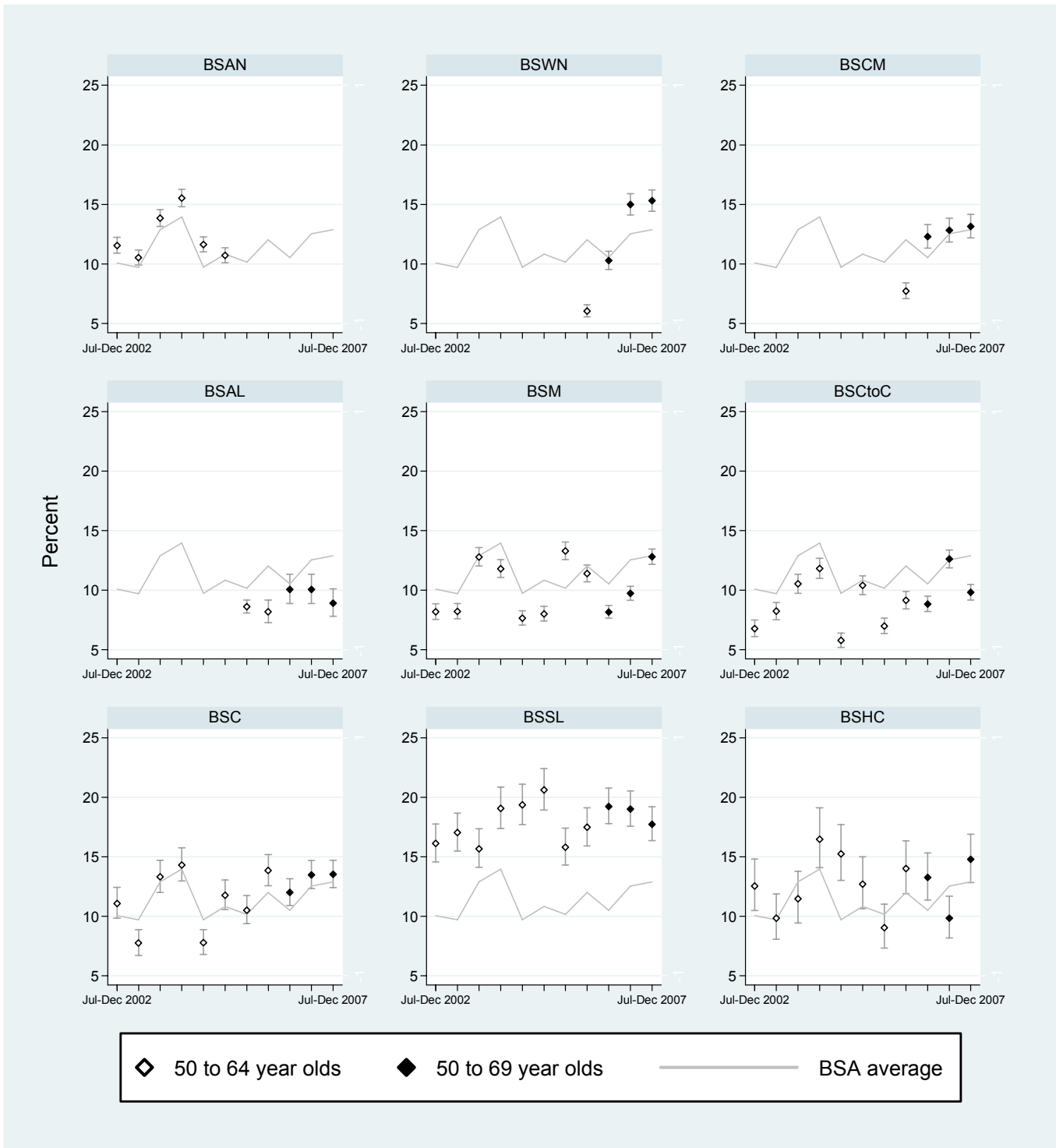
Note: Data for BSWN for '2 years' is based on 23 month period

**Table 1.a.7a Coverage by ethnicity women 50-69 years**

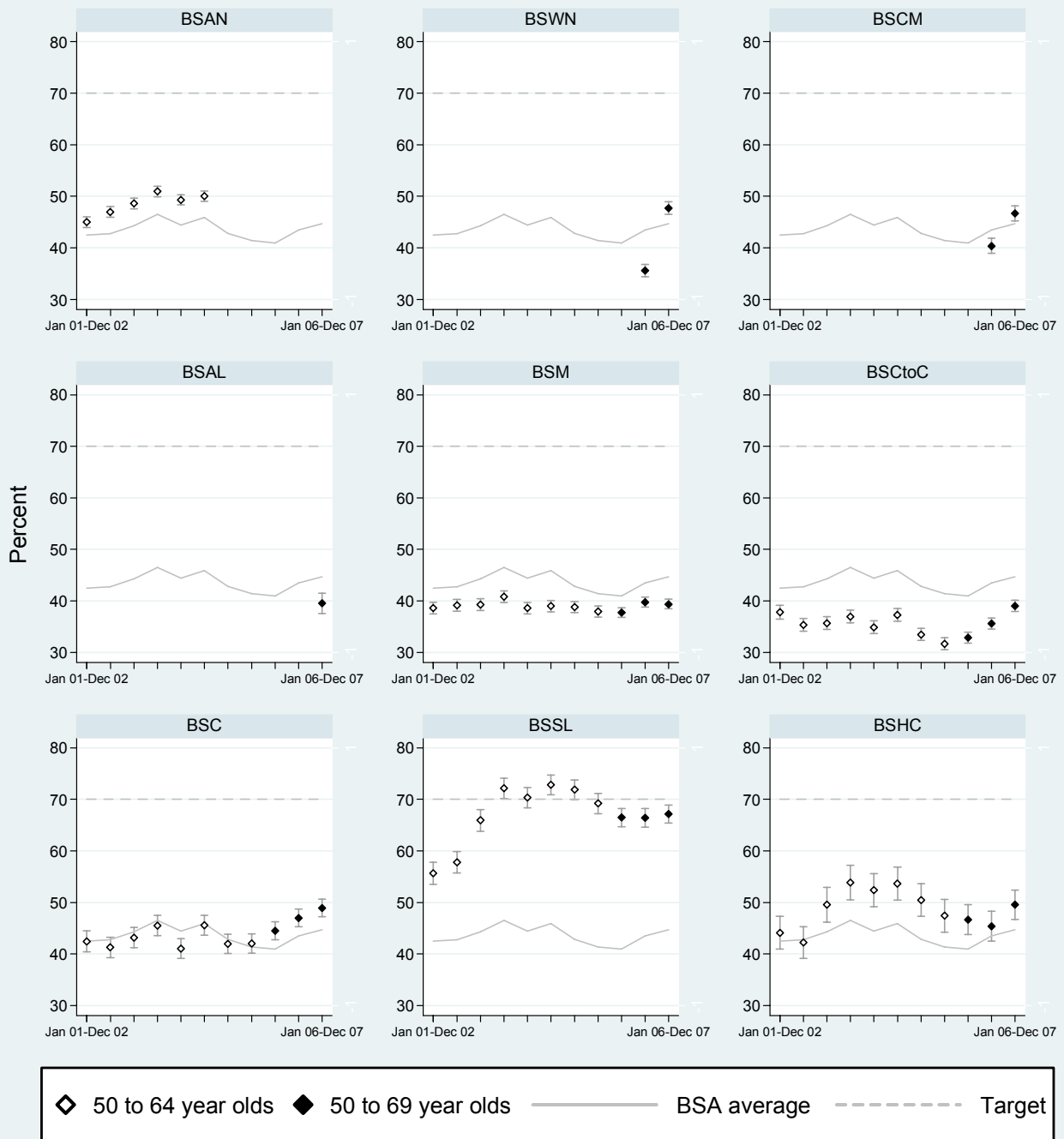
	6 months			2 years				
	Number of women screened	Eligible population	% (95%CI)	Number of women screened	Eligible population	% (95%CI)		
<i>Maori</i>								
BSWN	984	6,430	15.3 (14.4-16.2)	3,068	6,430	47.7 (46.5-48.9)	***	*
BSCM	598	4,550	13.1 (12.2-14.2)	2,123	4,550	46.7 (45.2-48.1)	***	*
BSAL	218	2,450	8.9 (7.8-10.1)	968	2,450	39.5 (37.6-41.5)	***	*
BSM	1,358	10,620	12.8 (12.2-13.4)	4,182	10,620	39.4 (38.4-40.3)	***	*
BSCtoC	786	8,010	9.8 (9.2-10.5)	3,127	8,010	39.0 (38.0-40.1)	***	*
BSC	469	3,470	13.5 (12.4-14.7)	1,698	3,470	48.9 (47.3-50.6)	***	*
BSSL	507	2,860	17.7 (16.3-19.2)	1,920	2,860	67.1 (65.4-68.9)	✓	*
BSHC	181	1,225	14.8 (12.8-16.9)	607	1,225	49.6 (46.7-52.4)	***	*
BSA Total	5,101	39,615	12.9 (12.5-13.2)	17,693	39,615	44.7 (44.2-45.2)	***	*
<i>Pacific</i>								
BSWN	327	2,445	13.4 (12.0-14.8)	1,129	2,445	46.2 (44.2-48.2)	***	*
BSCM	736	5,510	13.4 (12.5-14.3)	2,483	5,510	45.1 (43.7-46.4)	***	*
BSAL	372	3,450	10.8 (9.8-11.9)	1,608	3,450	46.6 (44.9-48.3)	***	*
BSM	140	715	19.6 (16.7-22.7)	323	715	45.2 (41.5-48.9)	***	*
BSCtoC	61	590	10.3 (8.0-13.1)	220	590	37.3 (33.4-41.3)	***	*
BSC	322	2,285	14.1 (12.7-15.6)	905	2,285	39.6 (37.6-41.6)	***	*
BSSL	120	545	22.0 (18.6-25.7)	398	545	73.0 (69.1-76.7)	✓	ns
BSHC	33	145	22.8 (16.2-30.5)	88	145	60.7 (52.2-68.7)	***	*
BSA Total	2,111	15,685	13.5 (12.9-14.0)	7,154	15,685	45.6 (44.8-46.4)	***	*
<i>Other</i>								
BSWN	9,466	61,720	15.3 (15.1-15.6)	34,842	61,720	56.5 (56.1-56.8)	***	*
BSCM	4,297	32,010	13.4 (13.1-13.8)	17,071	32,010	53.3 (52.8-53.9)	***	*
BSAL	3,603	33,490	10.8 (10.4-11.1)	15,640	33,490	46.7 (46.2-47.2)	***	*
BSM	8,876	58,590	15.1 (14.9-15.4)	36,609	58,590	62.5 (62.1-62.9)	***	*
BSCtoC	8,170	50,305	16.2 (15.9-16.6)	32,623	50,305	64.9 (64.4-65.3)	**	*
BSC	6,382	40,750	15.7 (15.3-16.0)	26,515	40,750	65.1 (64.6-65.5)	**	*
BSSL	14,819	74,940	19.8 (19.5-20.1)	59,423	74,940	79.3 (79.0-79.6)	✓✓✓	*
BSHC	6,501	30,220	21.5 (21.1-22.0)	20,985	30,220	69.4 (68.9-70.0)	✓	*
BSA Total	62,114	382,025	16.3 (16.1-16.4)	243,708	382,025	63.8 (63.6-63.9)	**	*

Note: Data for BSWN for '2 years' is based on 23 month period

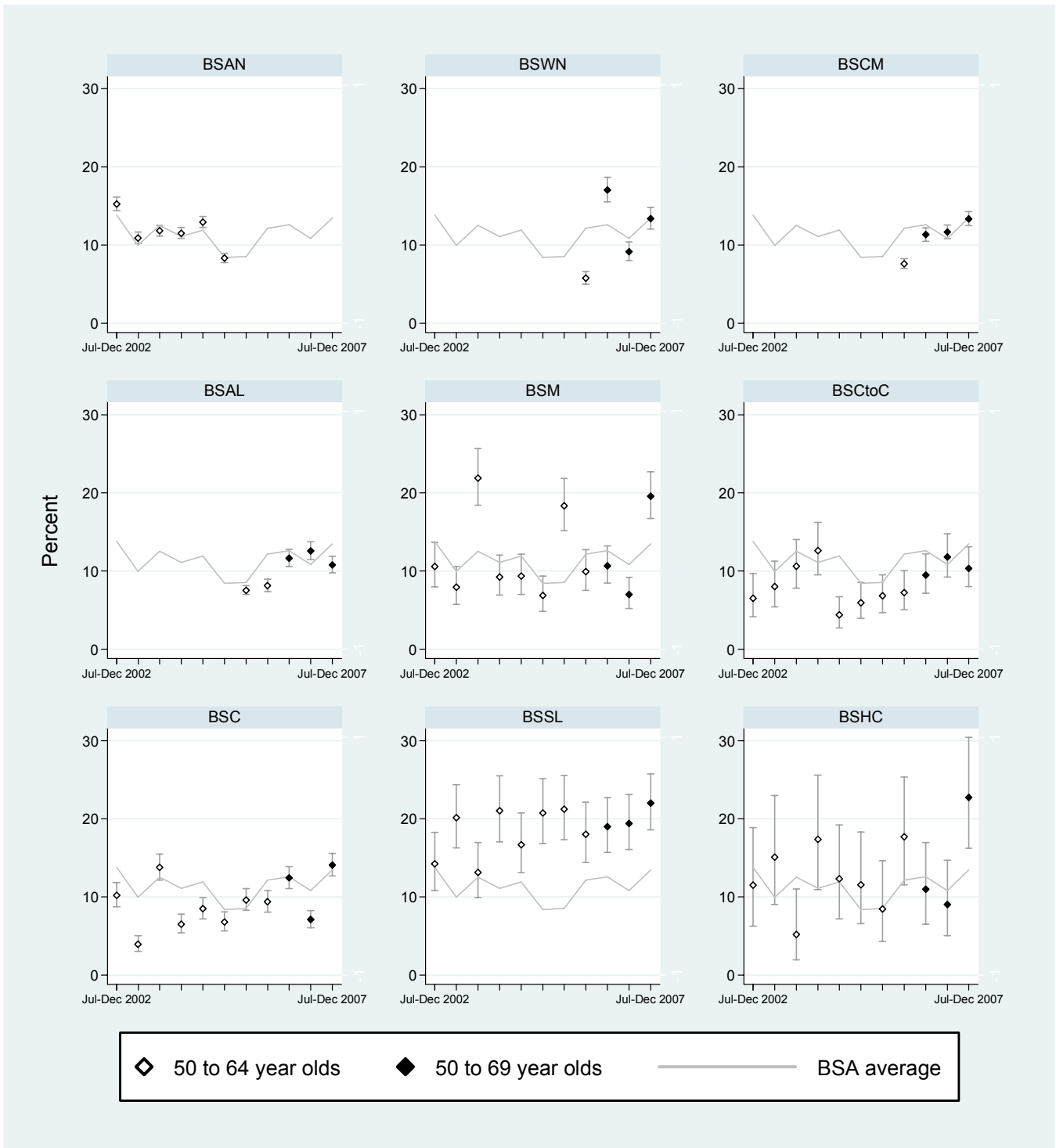
**Figure 1a7.1: Trends in 6 month coverage for Maori**



**Figure 1a7.1: Trends in biennial coverage for Maori**

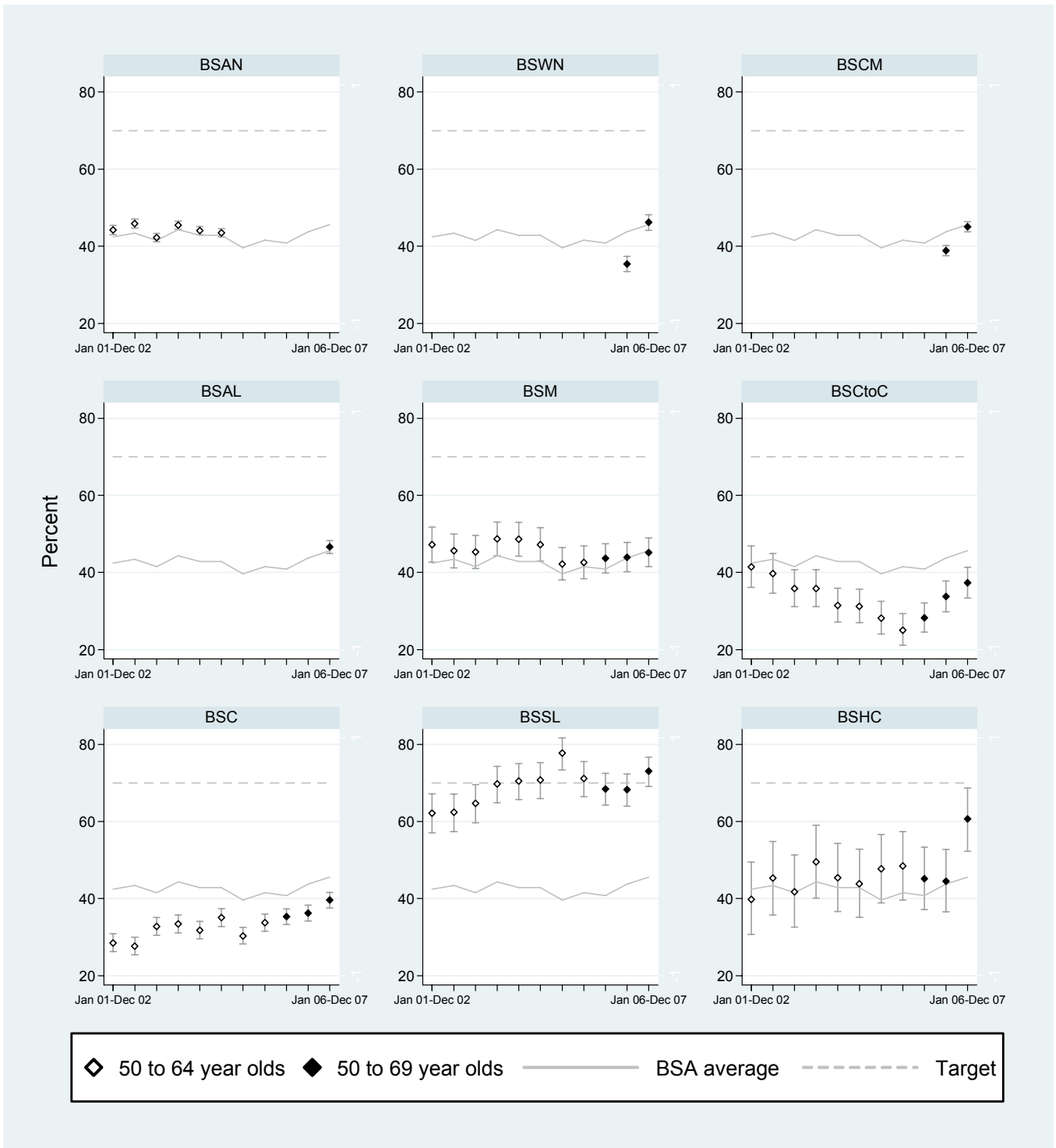


**Figure 1a7.1: Trends in 6 month coverage for Pacific**

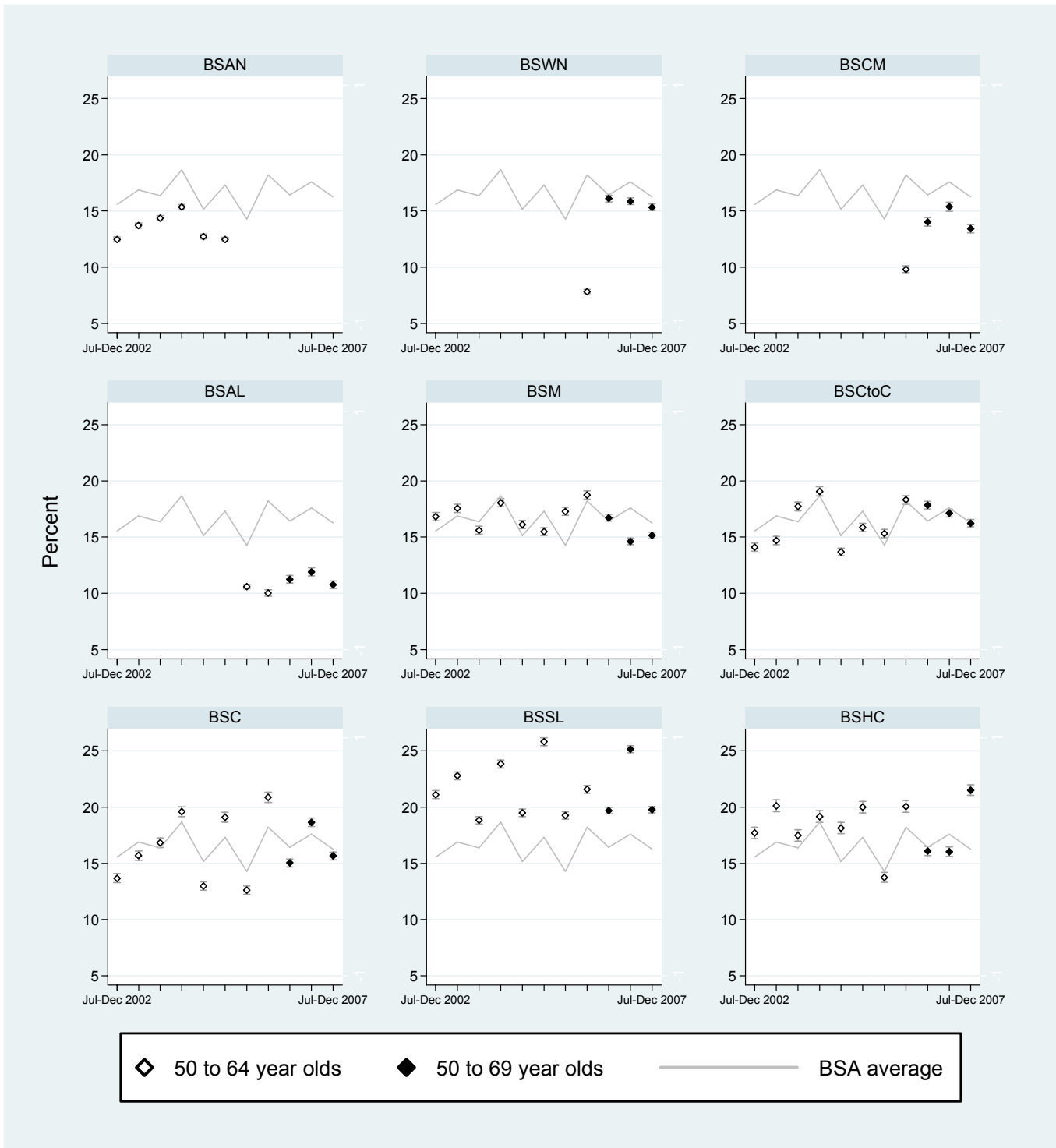




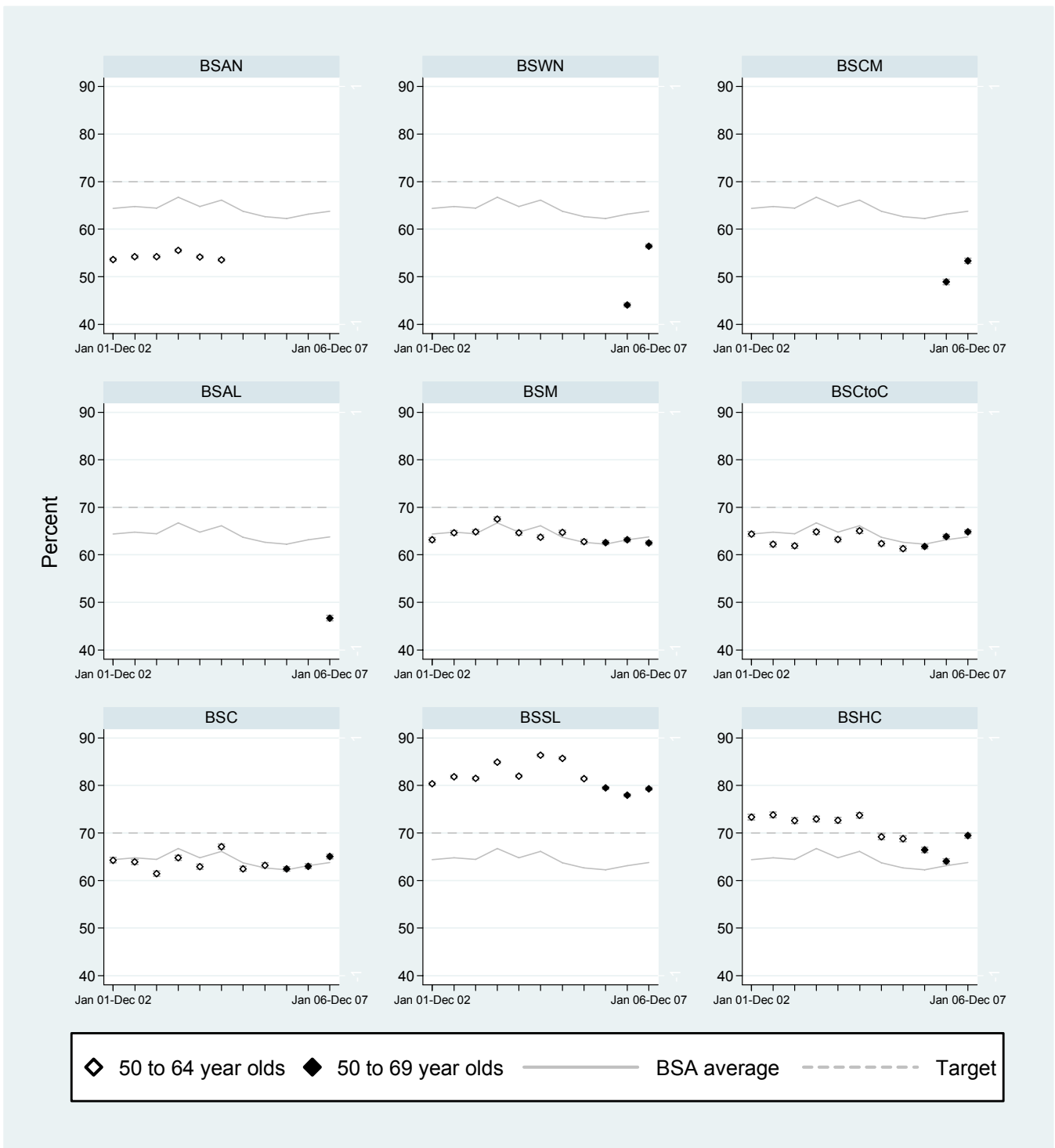
**Figure 1a7.1: Trends in biennial coverage for Pacific**



**Figure 1a7.1: Trends in 6 month coverage for other ethnic groups**



**Figure 1a7.1: Trends in biennial coverage for other ethnic groups**



## 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 re-screen who are re-screened, within 27 months, 50-69 years**

	6 months			2 years				
	Women screened within 27 months	Women eligible for re-screen	% (95%CI)	Women screened within 27 months	Women eligible for re-screen	% (95%CI)		
BSWN	10,337	13,228	78.1 (77.4-78.8)	39,164	53,096	73.8 (73.4-74.1)	***	*
BSCM								
BSAL								
BSM	6,106	7,406	82.4 (81.6-83.3)	21,426	26,675	80.3 (79.8-80.8)	xx	*
BSCtoC	5,293	5,996	88.3 (87.4-89.1)	19,605	23,652	82.9 (82.4-83.4)	✓	*
BSC	4,577	5,132	89.2 (88.3-90.0)	16,884	19,792	85.3 (84.8-85.8)	✓	ns
BSSL	13,159	14,375	91.5 (91.1-92.0)	39,874	44,124	90.4 (90.1-90.6)	✓✓	*
BSHC	3,603	4,174	86.3 (85.2-87.3)	12,856	14,912	86.2 (85.6-86.8)	✓	*
BSA Total	43,075	50,311	85.6 (85.3-85.9)	149,809	182,251	82.2 (82.0-82.4)	✓	*

Note: Due to re-configuration of BSAN into 3 providers, re-screen data for BSWN, BSCM and BSAL does not cover a full 24-month screening period. Re-screen rates for this indicator only are aggregated and presented for BSAN to ensure consistency between those who return for a re-screen and the original screened cohort of women.

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Table 1b.2: Percentage of women who return for a screen who are re-screened within 20-24 months, 50 to 69 years**

	6 months			2 years				
	Women screened within 20-24 months	Women re-screened within 27 months	% (95% CI)	Women screened within 20-24 months	Women re-screened within 27 months	% (95% CI)		
BSWN	8,905	10,337	86.2 (85.5-86.8)	29,583	39,164	75.5 (75.1-76.0)	✓	*
BSCM								
BSAL								
BSM	5,022	6,106	82.2 (81.3-83.2)	17,950	21,426	83.8 (83.3-84.3)	✓✓✓	*
BSCtoC	4,530	5,293	85.6 (84.6-86.5)	13,666	19,605	69.7 (69.1-70.3)	xx	*
BSC	3,915	4,577	85.5 (84.5-86.5)	13,918	16,884	82.4 (81.9-83.0)	✓✓	*
BSSL	12,364	13,159	94.0 (93.5-94.4)	37,080	39,874	93.0 (92.7-93.2)	✓✓✓	*
BSHC	1,260	3,602	35.0 (33.4-36.6)	6,589	12,853	51.3 (50.4-52.1)	***	*
BSA Total	35,996	43,074	83.6 (83.2-83.9)	118,786	149,806	79.3 (79.1-79.5)	✓✓	*

Note: Due to re-configuration of BSAN into 3 providers, re-screen data for BSWN, BSCM and BSAL does not cover a full 24-month screening period. Re-screen rates for this indicator only are aggregated and presented for BSAN to ensure consistency between those who return for a re-screen and the original screened cohort of women.

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

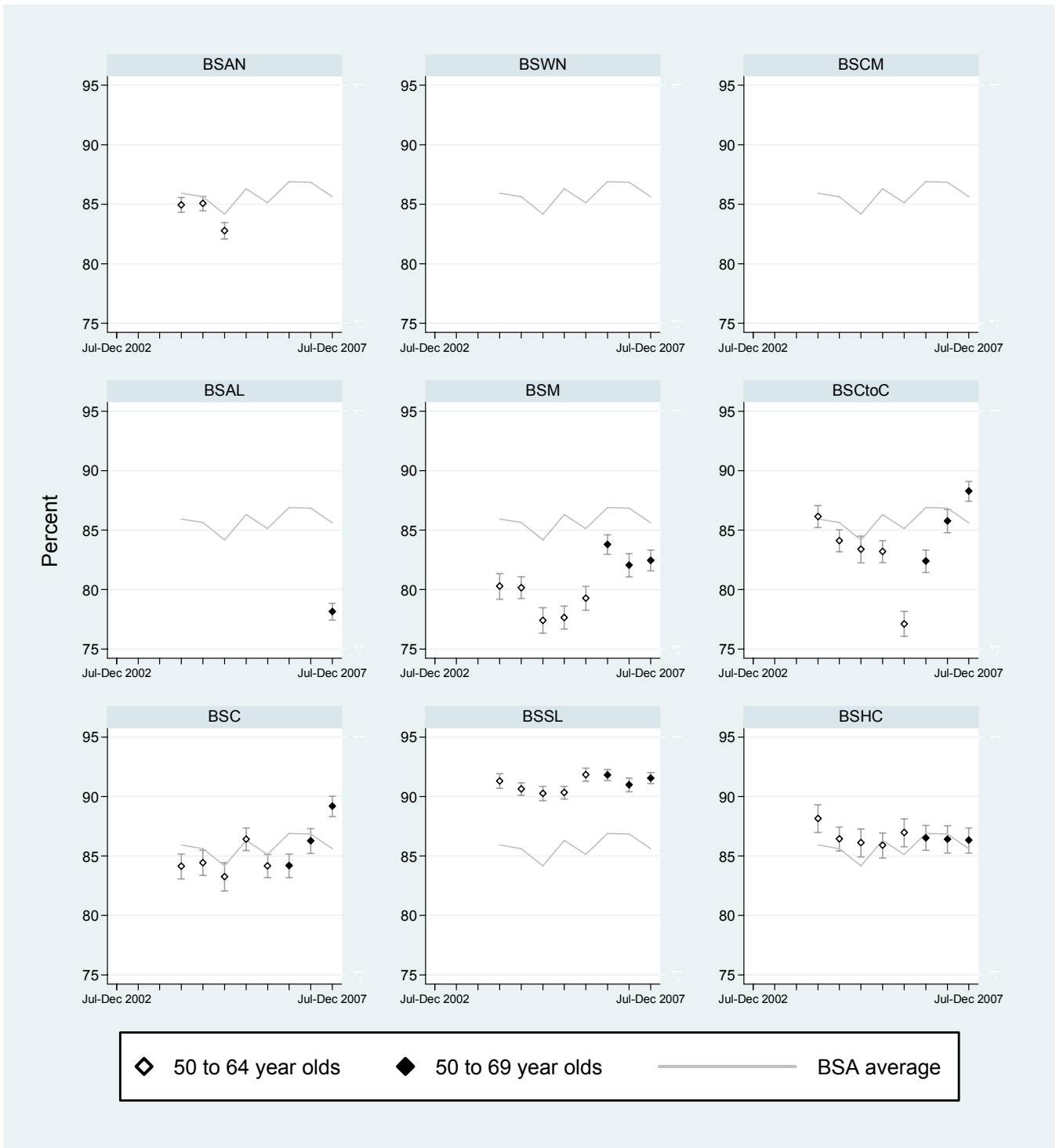
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

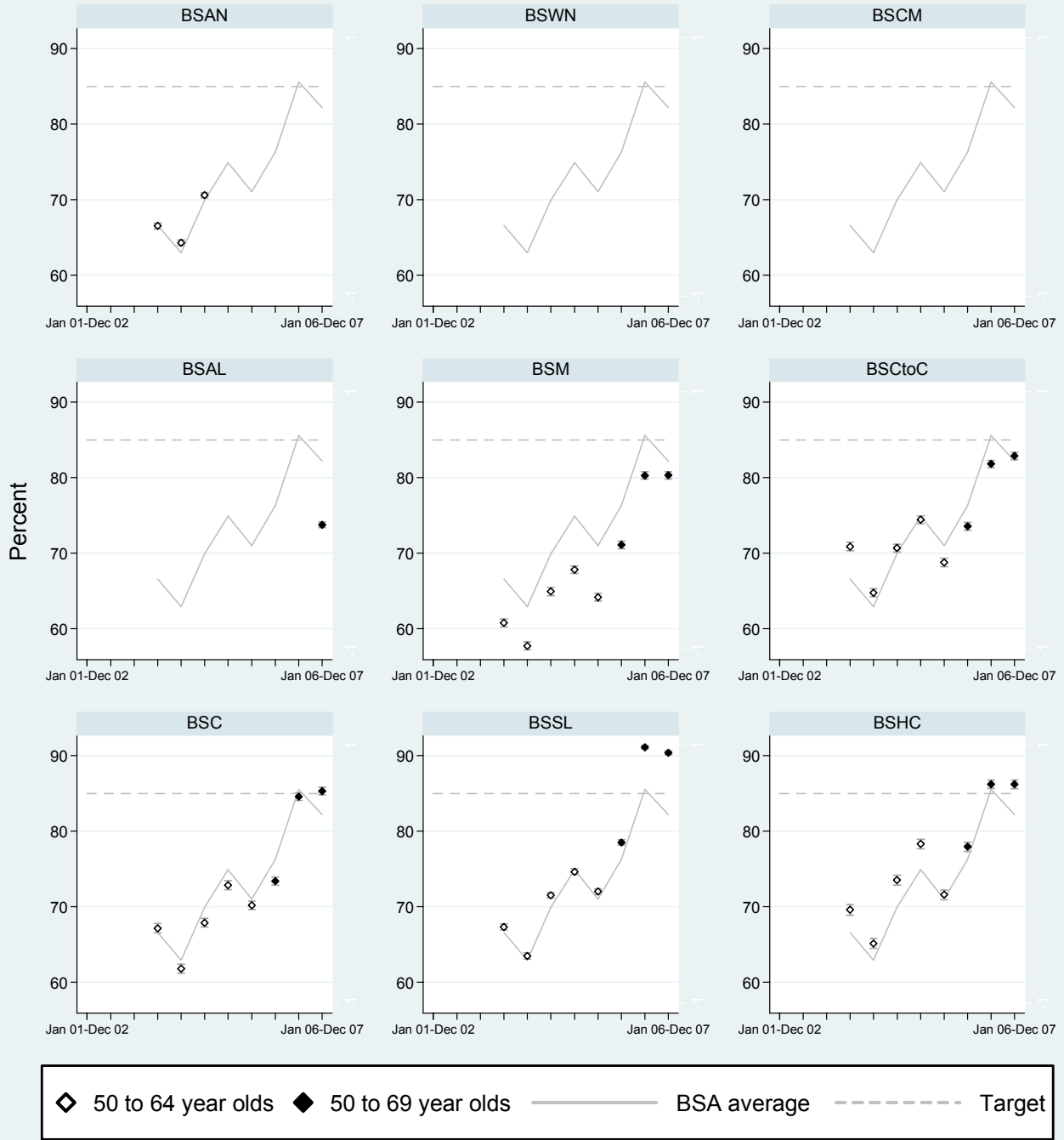
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 1b.1: Trends in re-screen rates (within 27 months), 6 months**



Note: The single point in the BSAL panel is the aggregate estimate of the re-screen rate combining BSWN, BSCM, and BSAL

**Figure 1b.1: Trends in re-screen rates (within 27 months), 2 years**



Note: The single point in the BSAL panel is the aggregate estimate of the re-screen rate combining BSWN, BSCM, and BSAL

## 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.

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

	Fixed site			Mobile site		
	Women having ≤4 films	Women screened	% (95%CI)	Women having ≤4 films	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	2,630	3,107	84.6 (83.3-85.9)	372	444	83.8 (80.0-87.1)
BSCM	1,218	1,439	84.6 (82.7-86.5)	706	834	84.7 (82.0-87.0)
BSAL	889	1,081	82.2 (79.8-84.5)	238	291	81.8 (76.9-86.0)
BSM	1,648	1,788	92.2 (90.8-93.4)	954	1,090	87.5 (85.4-89.4)
BSCtoC	2,471	2,760	89.5 (88.3-90.6)	321	359	89.4 (85.8-92.4)
BSC	1,718	1,920	89.5 (88.0-90.8)	417	450	92.7 (89.9-94.9)
BSSL	3,882	4,333	89.6 (88.6-90.5)	531	579	91.7 (89.2-93.8)
BSHC	1,177	1,507	78.1 (75.9-80.2)	819	890	92.0 (90.0-93.7)
BSA Total	15,633	17,935	87.2 (86.7-87.7)	4,358	4,937	88.3 (87.3-89.2)
<i>50-69 years</i>						
BSWN	7,625	9,190	83.0 (82.2-83.7)	1,297	1,599	81.1 (79.1-83.0)
BSCM	3,644	4,297	84.8 (83.7-85.9)	1,126	1,378	81.7 (79.6-83.7)
BSAL	2,829	3,416	82.8 (81.5-84.1)	664	821	80.9 (78.0-83.5)
BSM	6,046	6,514	92.8 (92.2-93.4)	3,296	3,878	85.0 (83.8-86.1)
BSCtoC	7,308	8,106	90.2 (89.5-90.8)	793	922	86.0 (83.6-88.2)
BSC	4,939	5,607	88.1 (87.2-88.9)	1,425	1,573	90.6 (89.0-92.0)
BSSL	12,087	13,453	89.8 (89.3-90.4)	1,884	2,070	91.0 (89.7-92.2)
BSHC	3,434	4,604	74.6 (73.3-75.8)	1,917	2,159	88.8 (87.4-90.1)
BSA Total	47,912	55,187	86.8 (86.5-87.1)	12,402	14,400	86.1 (85.5-86.7)

*Description:*

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

*Target:*

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

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

	Fixed site			Mobile site						
	Women having ≤4 films	Women screened	% (95%CI)	Women having ≤4 films	Women screened	% (95%CI)				
<i>45-49 years</i>										
BSWN	8,500	10,231	83.1 (82.3-83.8)	1,125	1,412	79.7 (77.5-81.7)				
BSCM	3,504	4,145	84.5 (83.4-85.6)	1,425	1,681	84.8 (83.0-86.5)				
BSAL	3,102	3,785	82.0 (80.7-83.2)	1,101	1,342	82.0 (79.9-84.1)				
BSM	6,538	7,185	91.0 (90.3-91.6)	2,691	3,142	85.6 (84.4-86.9)				
BSCtoC	6,822	7,525	90.7 (90.0-91.3)	1,040	1,220	85.2 (83.1-87.2)				
BSC	5,422	5,901	91.9 (91.2-92.6)	1,429	1,563	91.4 (89.9-92.8)				
BSSL	16,587	18,286	90.7 (90.3-91.1)	2,149	2,271	94.6 (93.6-95.5)				
BSHC	2,701	3,192	84.6 (83.3-85.9)	2,087	2,231	93.5 (92.4-94.5)				
BSA Total	53,176	60,250	88.3 (88.0-88.5)	13,047	14,862	87.8 (87.3-88.3)				
<i>50-69 years</i>										
BSWN	27,856	33,967	82.0 (81.6-82.4)	✓	*	4,061	5,128	79.2 (78.1-80.3)	✓	ns
BSCM	16,855	18,573	90.8 (90.3-91.2)	✓✓✓	*	2,717	3,174	85.6 (84.3-86.8)	✓✓	*
BSAL	13,467	15,799	85.2 (84.7-85.8)	✓✓	*	2,014	2,555	78.8 (77.2-80.4)	✓	ns
BSM	26,265	28,691	91.5 (91.2-91.9)	✓✓✓	*	10,615	12,448	85.3 (84.6-85.9)	✓✓	*
BSCtoC	28,532	31,259	91.3 (91.0-91.6)	✓✓✓	*	3,899	4,805	81.1 (80.0-82.2)	✓	*
BSC	21,411	22,723	94.2 (93.9-94.5)	✓✓✓	*	6,088	6,873	88.6 (87.8-89.3)	✓✓✓	*
BSSL	51,211	55,422	92.4 (92.2-92.6)	✓✓✓	*	6,284	6,603	95.2 (94.6-95.7)	✓✓✓	*
BSHC	12,261	14,373	85.3 (84.7-85.9)	✓✓	*	6,932	7,460	92.9 (92.3-93.5)	✓✓✓	*
BSA Total	197,858	220,807	89.6 (89.5-89.7)	✓✓✓	*	42,610	49,046	86.9 (86.6-87.2)	✓✓	*

Note: Data for BSWN for '2 years' is based on 23 month period

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant



## 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%

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

	Fixed site			Mobile site		
	Women having technical recall	Women screened	% (95%CI)	Women having technical recall	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	4	3,107	0.1 (0.0-0.3)	26	444	5.9 (3.8-8.6)
BSCM	0	1,439	0.0 (0.0-0.3)	21	834	2.5 (1.6-3.8)
BSAL	4	1,081	0.4 (0.1-0.9)	9	291	3.1 (1.4-5.9)
BSM	4	1,788	0.2 (0.1-0.6)	36	1,090	3.3 (2.3-4.6)
BSCtoC	3	2,760	0.1 (0.0-0.3)	17	359	4.7 (2.8-7.6)
BSC	13	1,920	0.7 (0.4-1.2)	20	450	4.4 (2.7-6.9)
BSSL	12	4,333	0.3 (0.1-0.5)	9	579	1.6 (0.7-3.0)
BSHC	10	1,507	0.7 (0.3-1.2)	39	890	4.4 (3.1-6.0)
BSA Total	50	17,935	0.3 (0.2-0.4)	177	4,937	3.6 (3.1-4.2)
<i>50-69 years</i>						
BSWN	6	9,190	0.1 (0.0-0.1)	77	1,599	4.8 (3.8-6.0)
BSCM	1	4,297	0.0 (0.0-0.1)	42	1,378	3.0 (2.2-4.1)
BSAL	9	3,416	0.3 (0.1-0.5)	21	821	2.6 (1.6-3.9)
BSM	10	6,514	0.2 (0.1-0.3)	141	3,878	3.6 (3.1-4.3)
BSCtoC	18	8,106	0.2 (0.1-0.4)	29	922	3.1 (2.1-4.5)
BSC	23	5,607	0.4 (0.3-0.6)	57	1,573	3.6 (2.7-4.7)
BSSL	27	13,453	0.2 (0.1-0.3)	35	2,070	1.7 (1.2-2.4)
BSHC	26	4,604	0.6 (0.4-0.8)	99	2,159	4.6 (3.7-5.6)
BSA Total	120	55,187	0.2 (0.2-0.3)	501	14,400	3.5 (3.2-3.8)

Poisson 95% Confidence Intervals presented

*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%

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

	Fixed site				Mobile site				
	Women having technical recall	Women screened	% (95%CI)		Women having technical recall	Women screened	% (95%CI)		
<i>45-49 years</i>									
BSWN	38	10,231	0.4 (0.3-0.5)		99	1,412	7.0 (5.7-8.5)		
BSCM	5	4,145	0.1 (0.0-0.3)		50	1,681	3.0 (2.2-3.9)		
BSAL	32	3,785	0.8 (0.6-1.2)		50	1,342	3.7 (2.8-4.9)		
BSM	14	7,185	0.2 (0.1-0.3)		112	3,142	3.6 (2.9-4.3)		
BSCtoC	16	7,525	0.2 (0.1-0.3)		47	1,220	3.9 (2.8-5.1)		
BSC	44	5,901	0.7 (0.5-1.0)		68	1,563	4.4 (3.4-5.5)		
BSSL	49	18,286	0.3 (0.2-0.4)		51	2,271	2.2 (1.7-3.0)		
BSHC	14	3,192	0.4 (0.2-0.7)		66	2,231	3.0 (2.3-3.8)		
BSA Total	212	60,250	0.4 (0.3-0.4)		543	14,862	3.7 (3.4-4.0)		
<i>50-69 years</i>									
BSWN	59	33,967	0.2 (0.1-0.2)	✓✓✓ *	299	5,128	5.8 (5.2-6.5)	xxx *	
BSCM	17	18,573	0.1 (0.1-0.1)	✓✓✓ *	94	3,174	3.0 (2.4-3.6)	✓ ns	
BSAL	42	15,799	0.3 (0.2-0.4)	✓✓✓ *	121	2,555	4.7 (3.9-5.7)	xxx *	
BSM	43	28,691	0.1 (0.1-0.2)	✓✓✓ *	411	12,448	3.3 (3.0-3.6)	✓ ns	
BSCtoC	81	31,259	0.3 (0.2-0.3)	✓✓✓ *	179	4,805	3.7 (3.2-4.3)	xxx *	
BSC	93	22,723	0.4 (0.3-0.5)	✓ ns	358	6,873	5.2 (4.7-5.8)	xxx *	
BSSL	99	55,422	0.2 (0.1-0.2)	✓✓✓ *	130	6,603	2.0 (1.6-2.3)	✓✓✓ *	
BSHC	38	14,373	0.3 (0.2-0.4)	✓✓✓ *	177	7,460	2.4 (2.0-2.7)	✓✓✓ *	
BSA Total	472	220,807	0.2 (0.2-0.2)	✓✓✓ *	1,769	49,046	3.6 (3.4-3.8)	xxx *	

Poisson 95% Confidence Intervals presented. Data for BSWN for '2 years' is based on 23 month period

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

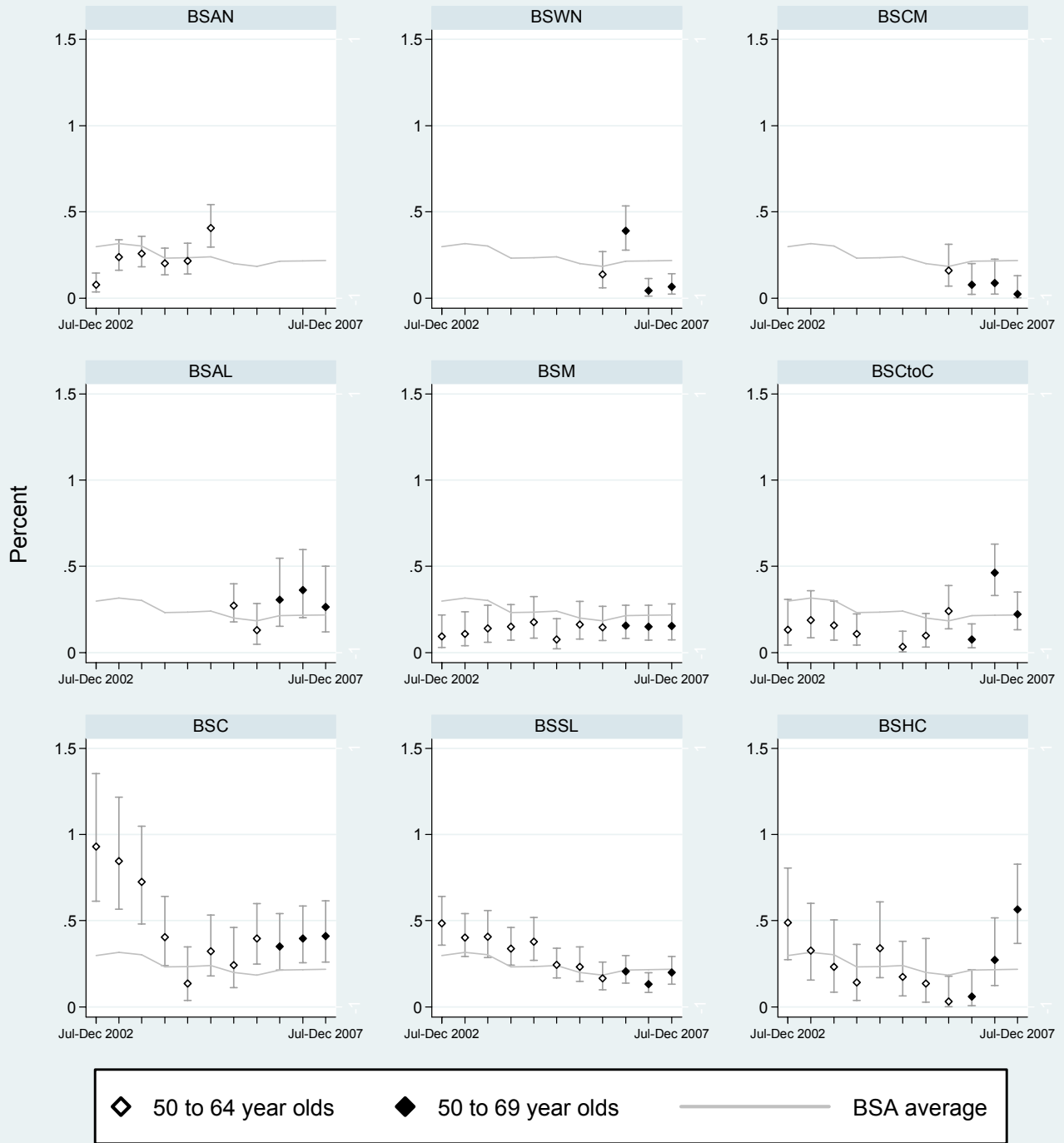
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

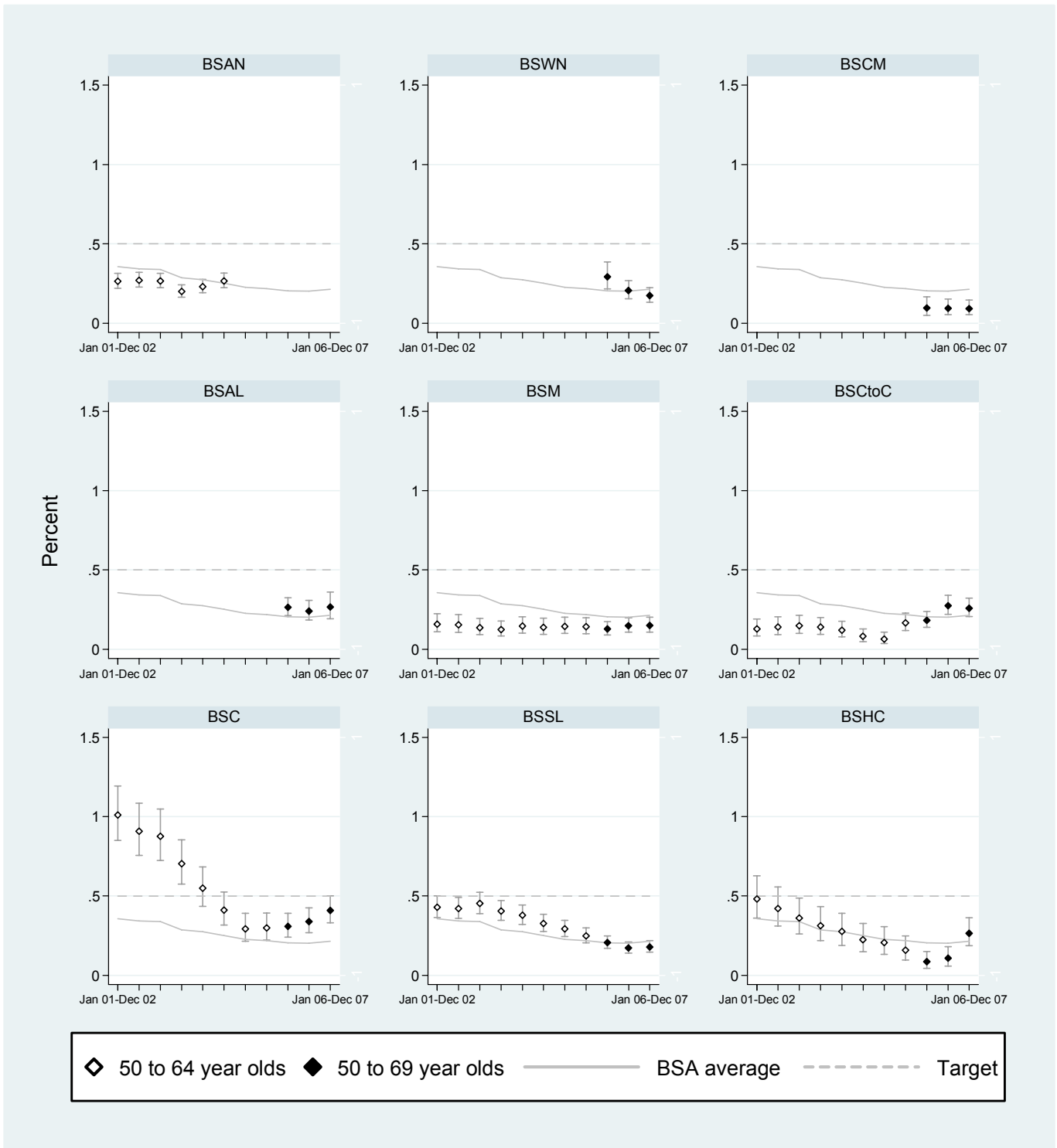
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

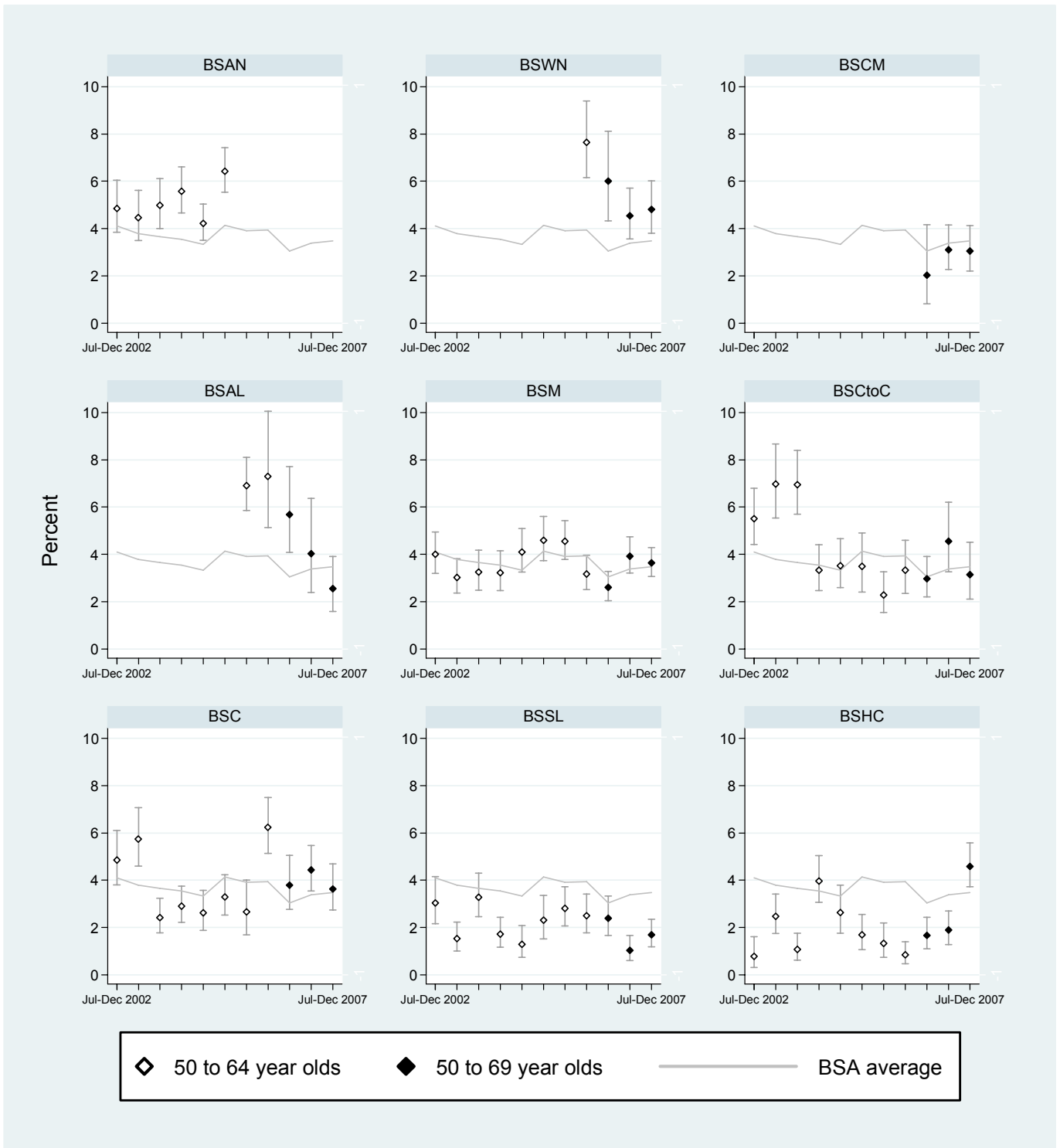
**Figure 2b1: Technical recall rates for fixed sites, women aged 50-69 years, fixed sites, 6 months**



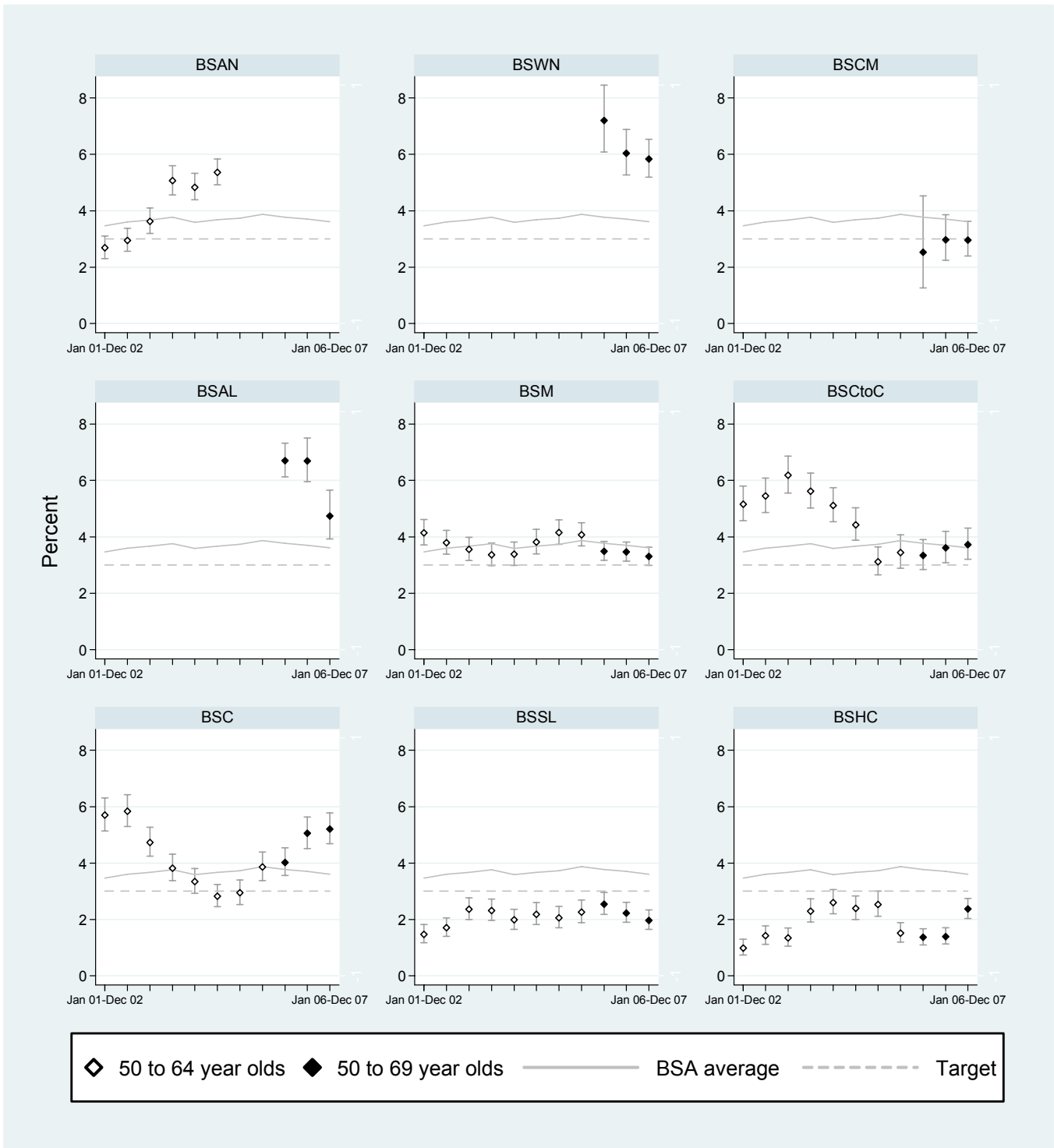
**Figure 2b1: Technical recall rates for fixed sites, women aged 50-69 years, fixed sites, 2 years**



**Figure 2b.2: Technical recall rates for mobile sites, women aged 50-69 years, 6 months**



**Figure 2b.2: Technical recall rates for mobile sites, women aged 50-69 years, 2 years**



## 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, 6 Months

**Table 2c.1: Rejected films as a percentage of total films taken, 6 months**

	Fixed site			Mobile site		
	Films rejected	Total films taken	% (95%CI)	Films rejected	Total films taken	% (95%CI)
<i>45-49 years</i>						
BSWN	105	13,258	0.8 (0.6-1.0)	55	1,922	2.9 (2.2-3.7)
BSCM	67	6,158	1.1 (0.8-1.4)	15	3,560	0.4 (0.2-0.7)
BSAL	44	4,661	0.9 (0.7-1.3)	0	1,252	0.0 (0.0-0.3)
BSM	56	7,397	0.8 (0.6-1.0)	17	4,574	0.4 (0.2-0.6)
BSCtoC	146	11,455	1.3 (1.1-1.5)	8	1,494	0.5 (0.2-1.1)
BSC	89	7,994	1.1 (0.9-1.4)	4	1,851	0.2 (0.1-0.6)
BSSL	172	17,987	1.0 (0.8-1.1)	13	2,408	0.5 (0.3-0.9)
BSHC	82	6,592	1.2 (1.0-1.5)	0	3,681	0.0 (0.0-0.1)
BSA Total	761	75,502	1.0 (0.9-1.1)	112	20,742	0.5 (0.4-0.6)
<i>50-69 years</i>						
BSWN	341	39,144	0.9 (0.8-1.0)	140	6,960	2.0 (1.7-2.4)
BSCM	178	18,186	1.0 (0.8-1.1)	33	5,939	0.6 (0.4-0.8)
BSAL	101	14,585	0.7 (0.6-0.8)	2	3,521	0.1 (0.0-0.2)
BSM	156	26,816	0.6 (0.5-0.7)	78	16,380	0.5 (0.4-0.6)
BSCtoC	357	33,583	1.1 (1.0-1.2)	23	3,907	0.6 (0.4-0.9)
BSC	319	23,348	1.4 (1.2-1.5)	18	6,508	0.3 (0.2-0.4)
BSSL	467	55,704	0.8 (0.8-0.9)	50	8,596	0.6 (0.4-0.8)
BSHC	272	20,374	1.3 (1.2-1.5)	15	8,985	0.2 (0.1-0.3)
BSA Total	2,191	231,740	0.9 (0.9-1.0)	359	60,796	0.6 (0.5-0.7)

Poisson 95% Confidence Intervals presented

*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, 2 Years

**Table 2c.2: Rejected films as a percentage of total films taken, 2 years**

	Fixed site			Mobile site		
	Films rejected	Total films taken	% (95%CI)	Films rejected	Total films taken	% (95%CI)
<i>45-49 years</i>						
BSWN	450	43,807	1.0 (0.9-1.1)	131	6,278	2.1 (1.7-2.5)
BSCM	228	17,679	1.3 (1.1-1.5)	43	7,174	0.6 (0.4-0.8)
BSAL	210	16,429	1.3 (1.1-1.5)	22	5,762	0.4 (0.2-0.6)
BSM	233	29,895	0.8 (0.7-0.9)	62	13,330	0.5 (0.4-0.6)
BSCtoC	365	31,672	1.2 (1.0-1.3)	31	5,181	0.6 (0.4-0.8)
BSC	248	25,044	1.0 (0.9-1.1)	15	6,481	0.2 (0.1-0.4)
BSSL	817	77,759	1.1 (1.0-1.1)	66	10,010	0.7 (0.5-0.8)
BSHC	192	14,027	1.4 (1.2-1.6)	19	9,170	0.2 (0.1-0.3)
BSA Total	2,743	256,312	1.1 (1.0-1.1)	389	63,386	0.6 (0.6-0.7)
<i>50-69 years</i>						
BSWN	1,700	150,793	1.1 (1.1-1.2) ✓✓✓ *	414	23,264	1.8 (1.6-2.0) ✓✓✓ *
BSCM	1,141	83,937	1.4 (1.3-1.4) ✓✓✓ *	72	13,441	0.5 (0.4-0.7) ✓✓✓ *
BSAL	686	70,034	1.0 (0.9-1.1) ✓✓✓ *	56	11,113	0.5 (0.4-0.7) ✓✓✓ *
BSM	884	119,446	0.7 (0.7-0.8) ✓✓✓ *	224	52,689	0.4 (0.4-0.5) ✓✓✓ *
BSCtoC	1,363	132,896	1.0 (1.0-1.1) ✓✓✓ *	165	20,761	0.8 (0.7-0.9) ✓✓✓ *
BSC	1,074	100,045	1.1 (1.0-1.1) ✓✓✓ *	88	28,686	0.3 (0.2-0.4) ✓✓✓ *
BSSL	2,266	238,619	0.9 (0.9-1.0) ✓✓✓ *	158	29,238	0.5 (0.5-0.6) ✓✓✓ *
BSHC	979	64,124	1.5 (1.4-1.6) ✓✓✓ *	69	30,971	0.2 (0.2-0.3) ✓✓✓ *
BSA Total	10,093	959,894	1.1 (1.0-1.1) ✓✓✓ *	1,246	210,163	0.6 (0.6-0.6) ✓✓✓ *

Poisson 95% Confidence Intervals presented. Data for BSWN for '2 years' is based on 23 month period

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant



## 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, 6 Months

**Table 2d.1: Referral to assessment as a percentage of women screened, 6 months**

	Initial			Subsequent		
	Referral to assessment	Women screened	% (95%CI)	Referral to assessment	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	283	3,256	8.7 (7.7-9.8)	17	295	5.8 (3.4-9.2)
BSCM	228	2,186	10.4 (9.1-11.9)	3	87	3.4 (0.7-10.1)
BSAL	99	1,240	8.0 (6.5-9.7)	0	132	0.0 (0.0-2.8)
BSM	175	1,764	9.9 (8.5-11.5)	52	1,114	4.7 (3.5-6.1)
BSCtoC	155	2,077	7.5 (6.3-8.7)	29	1,042	2.8 (1.9-4.0)
BSC	120	1,473	8.1 (6.8-9.7)	38	897	4.2 (3.0-5.8)
BSSL	163	2,154	7.6 (6.5-8.8)	119	2,758	4.3 (3.6-5.2)
BSHC	184	1,639	11.2 (9.7-13.0)	19	758	2.5 (1.5-3.9)
BSA Total	1,407	15,789	8.9 (8.5-9.4)	277	7,083	3.9 (3.5-4.4)
<i>50-69 years</i>						
BSWN	252	2,603	9.7 (8.5-11.0)	283	8,186	3.5 (3.1-3.9)
BSCM	117	1,462	8.0 (6.6-9.6)	119	4,213	2.8 (2.3-3.4)
BSAL	76	1,034	7.4 (5.8-9.2)	86	3,203	2.7 (2.1-3.3)
BSM	110	1,171	9.4 (7.7-11.3)	343	9,221	3.7 (3.3-4.1)
BSCtoC	102	1,310	7.8 (6.3-9.5)	123	7,718	1.6 (1.3-1.9)
BSC	70	1,002	7.0 (5.4-8.8)	189	6,178	3.1 (2.6-3.5)
BSSL	64	885	7.2 (5.6-9.2)	444	14,638	3.0 (2.8-3.3)
BSHC	100	834	12.0 (9.8-14.6)	160	5,929	2.7 (2.3-3.2)
BSA Total	891	10,301	8.6 (8.1-9.2)	1747	59,286	2.9 (2.8-3.1)

Poisson 95% Confidence Intervals presented

## 2.d.2. Referral to Assessment as a percentage of Women screened, 2 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%.

**Table 2d.2: Referral to assessment as a percentage of women screened, 2 years**

	Initial			Subsequent						
	Referral to assessment	Women screened	% (95%CI)	Referral to assessment	Women screened	% (95%CI)				
<i>45-49 years</i>										
BSWN	944	10,908	8.7 (8.1-9.2)	36	735	4.9 (3.4-6.8)				
BSCM	553	5,589	9.9 (9.1-10.8)	9	237	3.8 (1.7-7.2)				
BSAL	386	4,824	8.0 (7.2-8.8)	5	303	1.7 (0.5-3.9)				
BSM	746	8,169	9.1 (8.5-9.8)	99	2,158	4.6 (3.7-5.6)				
BSCtoC	511	7,086	7.2 (6.6-7.9)	44	1,659	2.7 (1.9-3.6)				
BSC	483	6,037	8.0 (7.3-8.7)	65	1,427	4.6 (3.5-5.8)				
BSSL	1,073	17,623	6.1 (5.7-6.5)	123	2,934	4.2 (3.5-5.0)				
BSHC	402	4,097	9.8 (8.9-10.8)	52	1,326	3.9 (2.9-5.1)				
BSA Total	5,098	64,333	7.9 (7.7-8.1)	433	10,779	4.0 (3.6-4.4)				
<i>50-69 years</i>										
BSWN	738	8,520	8.7 (8.0-9.3)	✓✓✓	*	995	30,575	3.3 (3.1-3.5)	✓✓✓	*
BSCM	528	5,199	10.2 (9.3-11.1)	✓	ns	548	16,548	3.3 (3.0-3.6)	✓✓✓	*
BSAL	331	4,164	7.9 (7.1-8.9)	✓✓✓	*	433	14,190	3.1 (2.8-3.4)	✓✓✓	*
BSM	497	5,122	9.7 (8.9-10.6)	✓	ns	1,305	36,017	3.6 (3.4-3.8)	✓✓✓	*
BSCtoC	408	5,103	8.0 (7.2-8.8)	✓✓✓	*	672	30,961	2.2 (2.0-2.3)	✓✓✓	*
BSC	363	4,341	8.4 (7.5-9.3)	✓✓✓	*	822	25,255	3.3 (3.0-3.5)	✓✓✓	*
BSSL	389	5,689	6.8 (6.2-7.6)	✓✓✓	*	1,423	56,336	2.5 (2.4-2.7)	✓✓✓	*
BSHC	251	2,357	10.6 (9.4-12.1)	✓	ns	535	19,476	2.7 (2.5-3.0)	✓✓✓	*
BSA Total	3,505	40,495	8.7 (8.4-8.9)	✓✓✓	*	6,733	229,358	2.9 (2.9-3.0)	✓✓✓	*

Note. Data for BSWN for '2 years' is based on 23 month period

Poisson 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

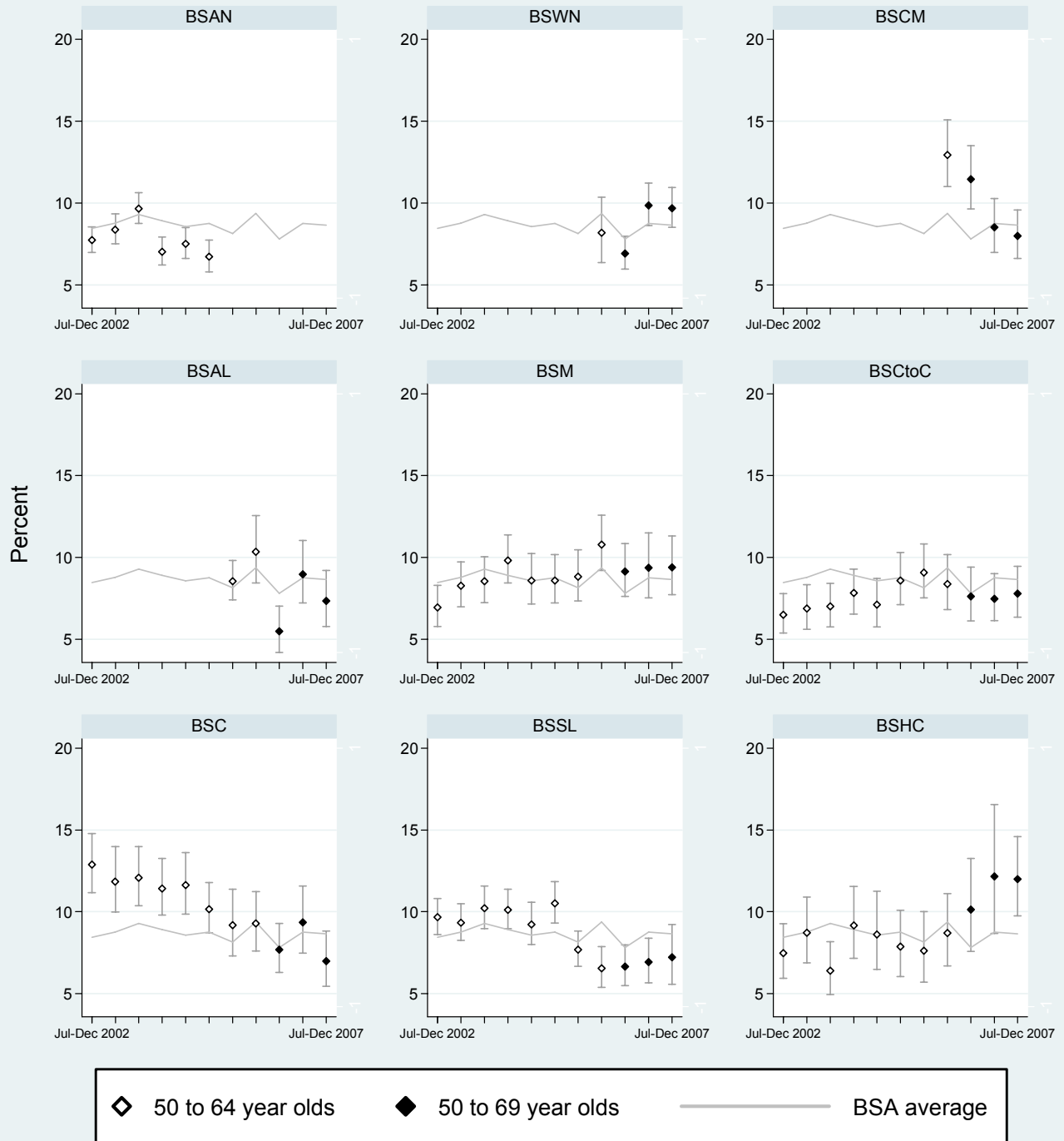
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

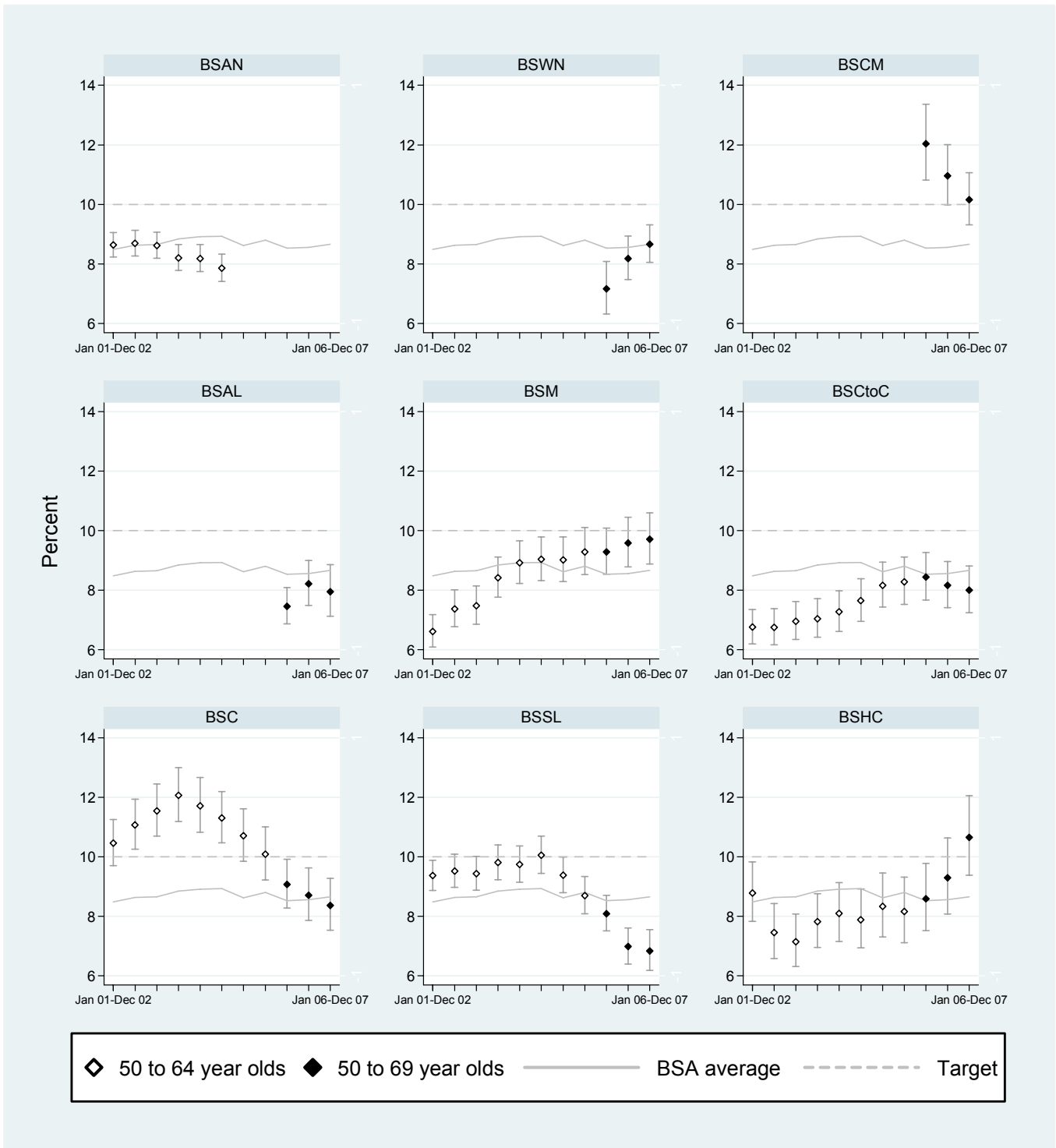
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

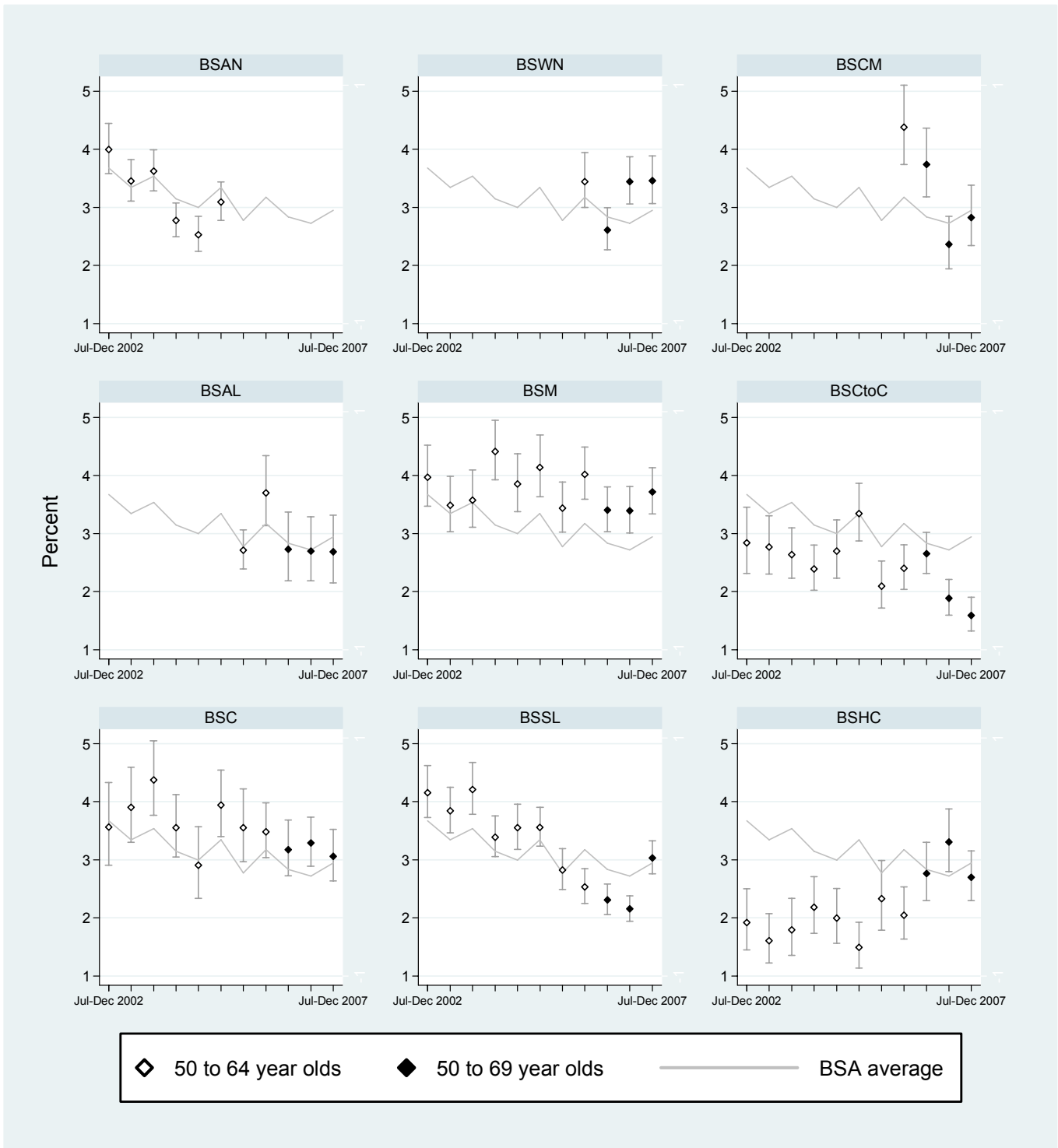
**Figure 2d.1: Trends in referral to assessment for initial screens, 6 months**



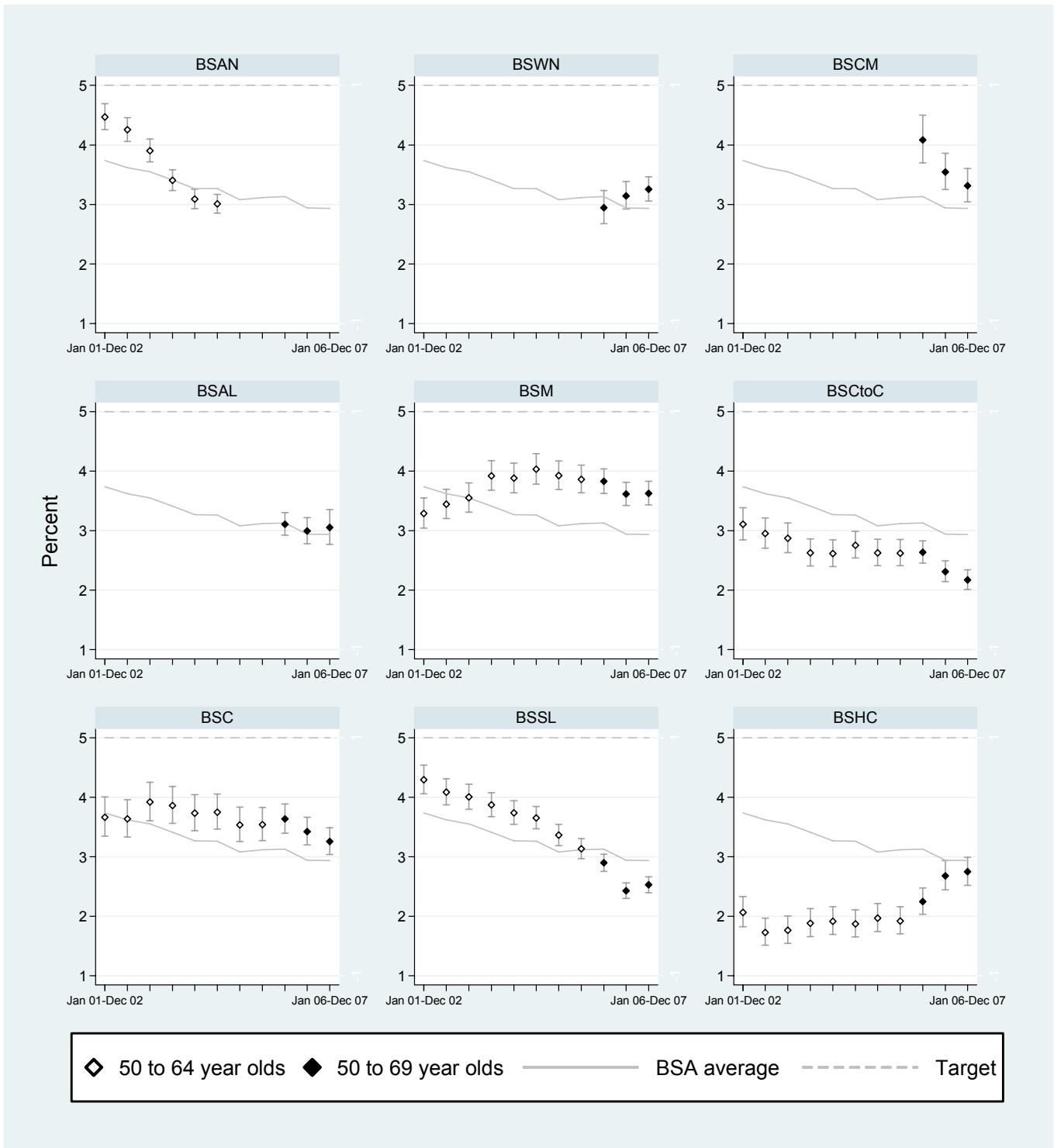
**Figure 2d.1: Trends in referral to assessment for initial screens, 2 years**



**Figure 2d.2: Trends in referral to assessment for subsequent screens, 6 months**



**Figure 2d.2: Trends in referral to assessment for subsequent screens, 2 years**



## 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, 6 months

**Table 2e.1: False positives as a percentage of women screened, 6 months**

	Initial			Subsequent		
	Number of false positives	Women screened	% (95%CI)	Number of false positives	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	265	3,256	8.1 (7.2-9.1)	15	295	5.1 (2.9-8.2)
BSCM	216	2,186	9.9 (8.7-11.2)	3	87	3.4 (0.7-9.7)
BSAL	83	1,240	6.7 (5.4-8.2)	0	132	0.0 (0.0-2.8)
BSM	158	1,764	9.0 (7.7-10.4)	47	1,114	4.2 (3.1-5.6)
BSCtoC	141	2,077	6.8 (5.7-8.0)	25	1,042	2.4 (1.6-3.5)
BSC	108	1,473	7.3 (6.1-8.8)	34	897	3.8 (2.6-5.3)
BSSL	153	2,154	7.1 (6.1-8.3)	114	2,758	4.1 (3.4-4.9)
BSHC	175	1,639	10.7 (9.2-12.3)	19	758	2.5 (1.5-3.9)
BSA Total	1,299	15,789	8.2 (7.8-8.7)	257	7,083	3.6 (3.2-4.1)
<i>50-69 years</i>						
BSWN	224	2,603	8.6 (7.6-9.7)	235	8,186	2.9 (2.5-3.3)
BSCM	98	1,462	6.7 (5.5-8.1)	96	4,213	2.3 (1.8-2.8)
BSAL	67	1,034	6.5 (5.1-8.2)	68	3,203	2.1 (1.7-2.7)
BSM	99	1,171	8.5 (6.9-10.2)	273	9,221	3.0 (2.6-3.3)
BSCtoC	88	1,310	6.7 (5.4-8.2)	90	7,718	1.2 (0.9-1.4)
BSC	61	1,002	6.1 (4.7-7.8)	151	6,178	2.4 (2.1-2.9)
BSSL	52	885	5.9 (4.4-7.6)	364	14,638	2.5 (2.2-2.8)
BSHC	92	834	11.0 (9.0-13.4)	138	5,929	2.3 (2.0-2.7)
BSA Total	781	10,301	7.6 (7.1-8.1)	1,415	59,286	2.4 (2.3-2.5)

Exact binomial 95% Confidence Intervals presented

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

### 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%

**Table 2e.2: False positives as a percentage of women screened, 2 years**

	Initial			Subsequent		
	Number of false positives	Women screened	% (95%CI)	Number of false positives	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	863	10,908	7.9 (7.4-8.4)	32	735	4.4 (3.0-6.1)
BSCM	524	5,589	9.4 (8.6-10.2)	7	237	3.0 (1.2-6.0)
BSAL	313	4,824	6.5 (5.8-7.2)	5	303	1.7 (0.5-3.8)
BSM	695	8,169	8.5 (7.9-9.1)	90	2,158	4.2 (3.4-5.1)
BSCtoC	479	7,086	6.8 (6.2-7.4)	39	1,659	2.4 (1.7-3.2)
BSC	462	6,037	7.7 (7.0-8.4)	56	1,427	3.9 (3.0-5.1)
BSSL	1,055	17,623	6.0 (5.6-6.3)	117	2,934	4.0 (3.3-4.8)
BSHC	387	4,097	9.4 (8.6-10.4)	49	1,326	3.7 (2.7-4.9)
BSA Total	4,778	64,333	7.4 (7.2-7.6)	395	10,779	3.7 (3.3-4.0)
<i>50-69 years</i>						
BSWN	637	8,520	7.5 (6.9-8.1) ✓✓✓ *	811	30,575	2.7 (2.5-2.8) ✓✓✓ *
BSCM	472	5,199	9.1 (8.3-9.9) ✓ ns	492	16,548	3.0 (2.7-3.2) ✓✓✓ *
BSAL	275	4,164	6.6 (5.9-7.4) ✓✓✓ *	341	14,190	2.4 (2.2-2.7) ✓✓✓ *
BSM	449	5,122	8.8 (8.0-9.6) ✓ ns	1,084	36,017	3.0 (2.8-3.2) ✓✓✓ *
BSCtoC	354	5,103	6.9 (6.3-7.7) ✓✓✓ *	490	30,961	1.6 (1.4-1.7) ✓✓✓ *
BSC	340	4,341	7.8 (7.1-8.7) ✓✓✓ *	716	25,255	2.8 (2.6-3.0) ✓✓✓ *
BSSL	334	5,689	5.9 (5.3-6.5) ✓✓✓ *	1,153	56,336	2.0 (1.9-2.2) ✓✓✓ *
BSHC	237	2,357	10.1 (8.9-11.3) ✓ ns	453	19,476	2.3 (2.1-2.5) ✓✓✓ *
BSA Total	3,098	40,495	7.7 (7.4-7.9) ✓✓✓ *	5,540	229,358	2.4 (2.4-2.5) ✓✓✓ *

Note. Data for BSWN for '2 years' is based on 23 month period

Exact binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant



## 2.f. Positive predictive value

### 2.f.1. Breast Cancers as a percentage of Referrals to Assessment, 6 Months

*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.

**Table 2f.1: Cancers as a percentage of referrals to assessment, 6 months**

	Initial			Subsequent		
	Number of cancers	Number of referrals	% (95%CI)	Number of cancers	Number of referrals	% (95%CI)
<i>45-49 years</i>						
BSWN	11	283	3.9 (2.0-6.8)	2	17	11.8 (1.5-36.4)
BSCM	8	228	3.5 (1.5-6.8)	0	3	0.0 (0.0-70.8)
BSAL	10	99	10.1 (5.0-17.8)	0	0	
BSM	13	175	7.4 (4.0-12.4)	3	52	5.8 (1.2-15.9)
BSCtoC	5	155	3.2 (1.1-7.4)	3	29	10.3 (2.2-27.4)
BSC	8	120	6.7 (2.9-12.7)	4	38	10.5 (2.9-24.8)
BSSL	10	163	6.1 (3.0-11.0)	5	119	4.2 (1.4-9.5)
BSHC	6	184	3.3 (1.2-7.0)	0	19	0.0 (0.0-17.6)
BSA Total	71	1,407	5.0 (4.0-6.3)	17	277	6.1 (3.6-9.6)
<i>50-69 years</i>						
BSWN	23	252	9.1 (5.9-13.4)	43	283	15.2 (11.2-19.9)
BSCM	11	117	9.4 (4.8-16.2)	22	119	18.5 (12.0-26.6)
BSAL	9	76	11.8 (5.6-21.3)	13	86	15.1 (8.3-24.5)
BSM	5	110	4.5 (1.5-10.3)	62	343	18.1 (14.1-22.6)
BSCtoC	11	102	10.8 (5.5-18.5)	26	123	21.1 (14.3-29.4)
BSC	9	70	12.9 (6.1-23.0)	33	189	17.5 (12.3-23.6)
BSSL	12	64	18.8 (10.1-30.5)	79	444	17.8 (14.3-21.7)
BSHC	4	100	4.0 (1.1-9.9)	18	160	11.2 (6.8-17.2)
BSA Total	84	891	9.4 (7.6-11.5)	296	1,747	16.9 (15.2-18.8)

Exact binomial 95% Confidence Intervals presented

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

*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.

**Table 2f.2: Cancers as a percentage of referrals to assessment, 2 years**

	Initial			Subsequent						
	Number of cancers	Number of referrals	% (95%CI)	Number of cancers	Number of referrals	% (95%CI)				
<i>45-49 years</i>										
BSWN	57	944	6.0 (4.6-7.8)	3	36	8.3 (1.8-22.5)				
BSCM	25	553	4.5 (2.9-6.6)	2	9	22.2 (2.8-60.0)				
BSAL	41	386	10.6 (7.7-14.1)	0	5	0.0 (0.0-52.2)				
BSM	43	746	5.8 (4.2-7.7)	6	99	6.1 (2.3-12.7)				
BSCtoC	24	511	4.7 (3.0-6.9)	4	44	9.1 (2.5-21.7)				
BSC	27	483	5.6 (3.7-8.0)	9	65	13.8 (6.5-24.7)				
BSSL	57	1,073	5.3 (4.0-6.8)	6	123	4.9 (1.8-10.3)				
BSHC	14	402	3.5 (1.9-5.8)	2	52	3.8 (0.5-13.2)				
BSA Total	288	5,098	5.6 (5.0-6.3)	32	433	7.4 (5.1-10.3)				
<i>50-69 years</i>										
BSWN	79	738	10.7 (8.6-13.2)	✓	ns	176	995	17.7 (15.4-20.2)	✓✓✓	*
BSCM	52	528	9.8 (7.4-12.7)	✓	ns	88	548	16.1 (13.1-19.4)	✓✓✓	*
BSAL	39	331	11.8 (8.5-15.8)	✓	ns	75	433	17.3 (13.9-21.2)	✓✓✓	*
BSM	38	497	7.6 (5.5-10.3)	✓	ns	208	1,305	15.9 (14.0-18.0)	✓✓✓	*
BSCtoC	44	408	10.8 (7.9-14.2)	✓	ns	171	672	25.4 (22.2-28.9)	✓✓✓	*
BSC	34	363	9.4 (6.6-12.8)	✓	ns	138	822	16.8 (14.3-19.5)	✓✓✓	*
BSSL	70	389	18.0 (14.3-22.2)	✓✓✓	*	304	1,423	21.4 (19.3-23.6)	✓✓✓	*
BSHC	14	251	5.6 (3.1-9.2)	✓	ns	84	535	15.7 (12.7-19.1)	✓✓✓	*
BSA Total	370	3,505	10.6 (9.6-11.6)	✓✓✓	*	1,244	6,733	18.5 (17.6-19.4)	✓✓✓	*

Note: Data for BSWN for '2 years' is based on 23 month period

Exact binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

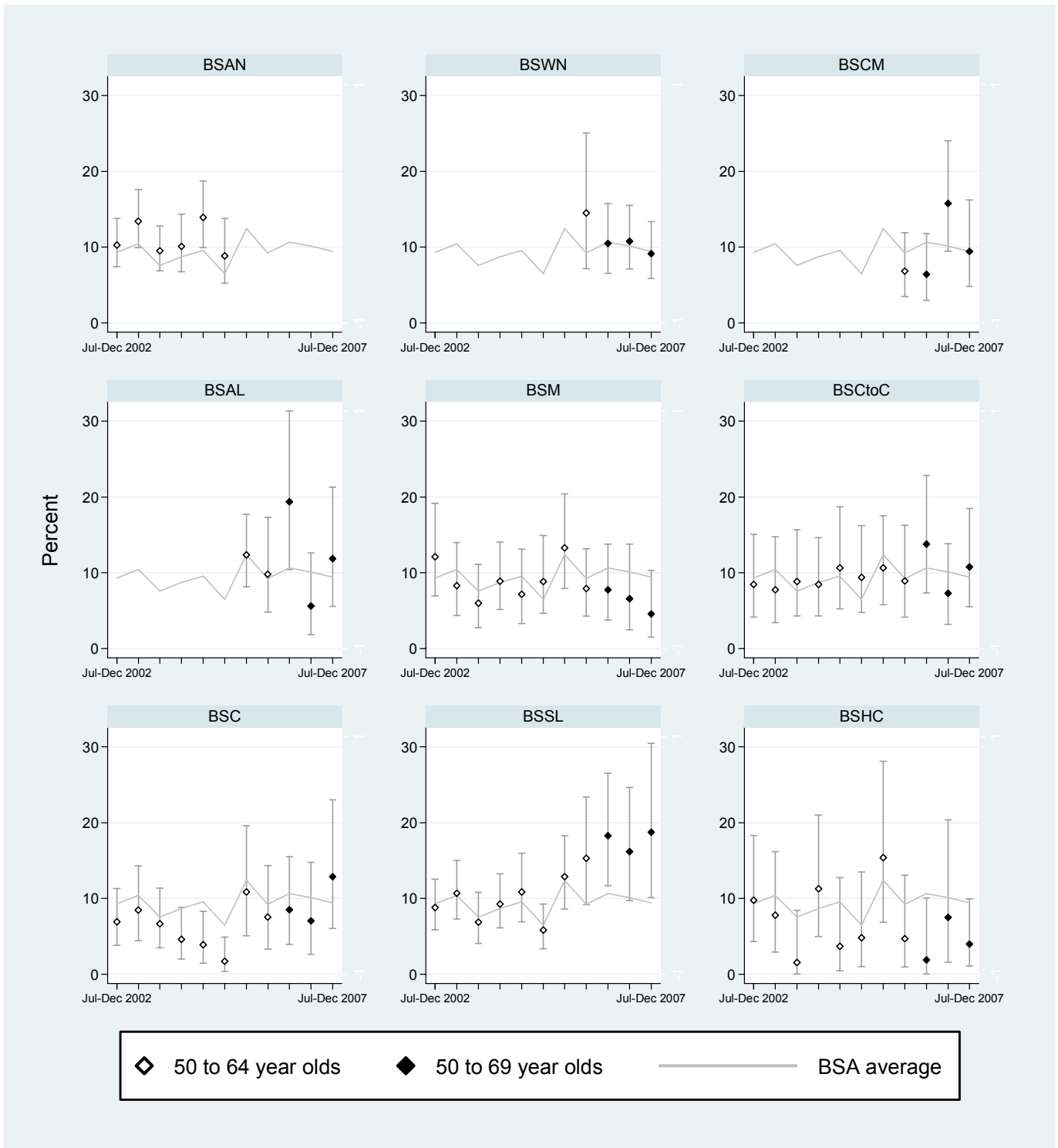
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

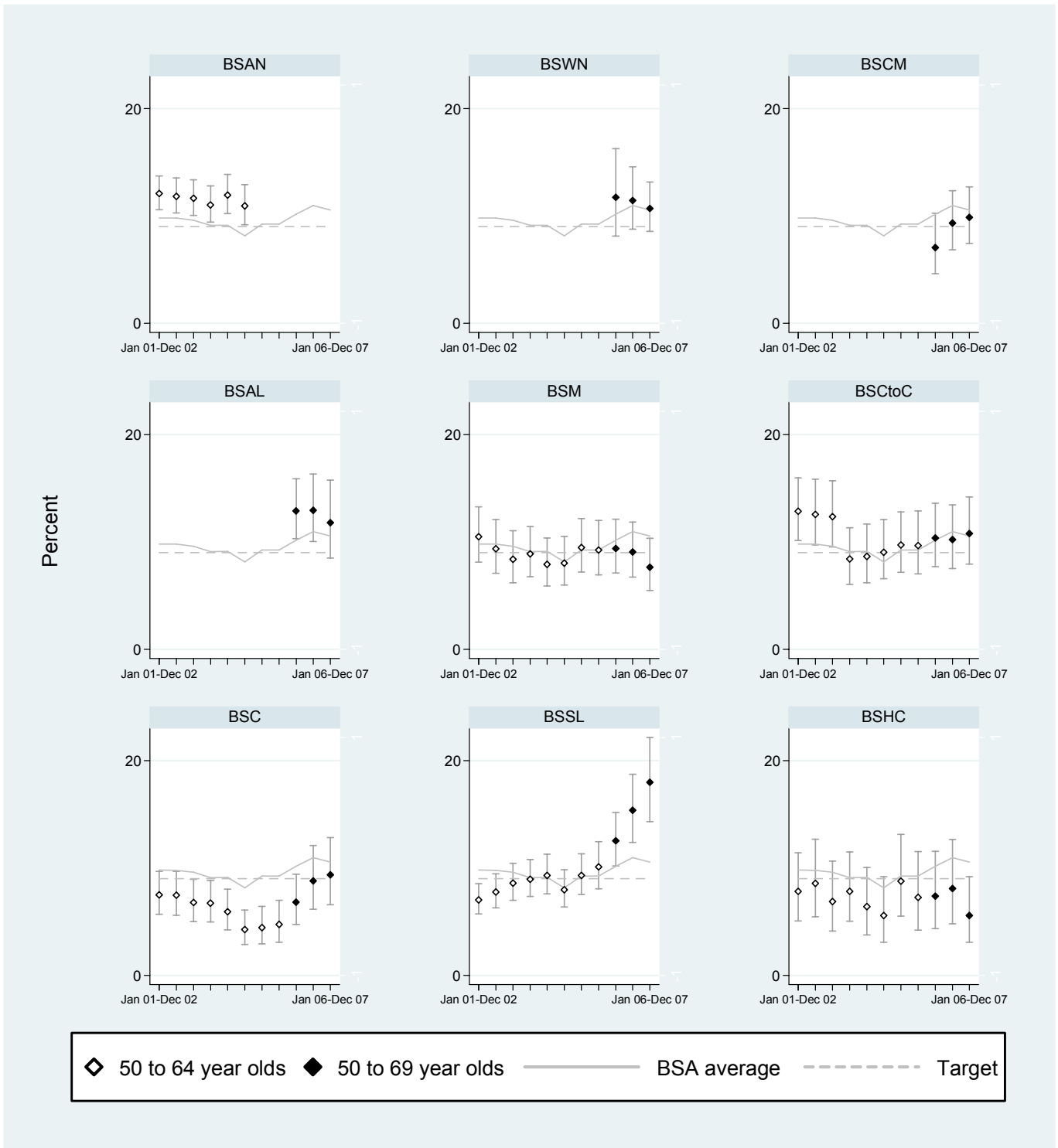
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

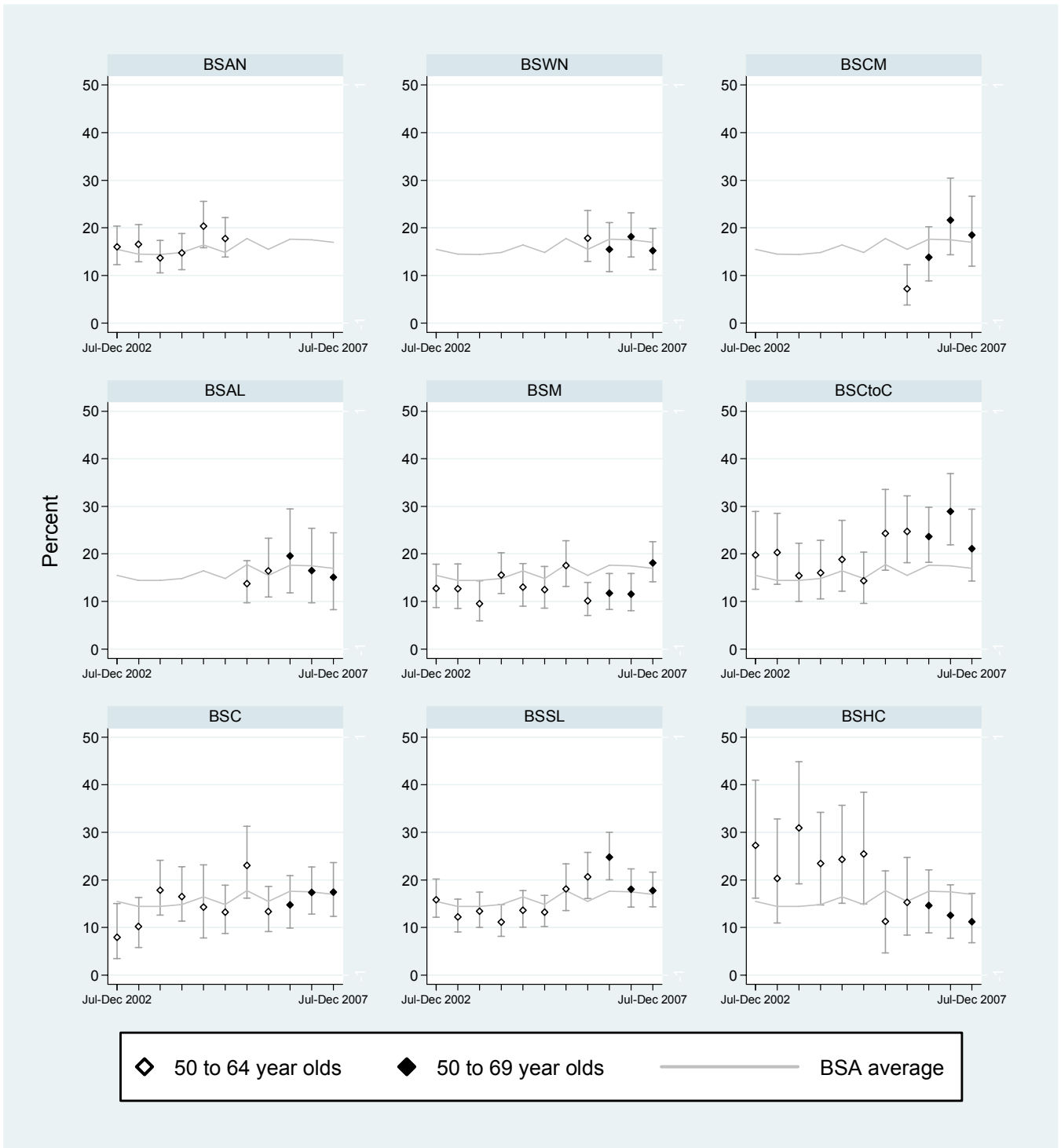
**Figure 2f.1a: Cancers as a percentage of referrals to assessment for initial screens, women 50-69 years, 6 months**



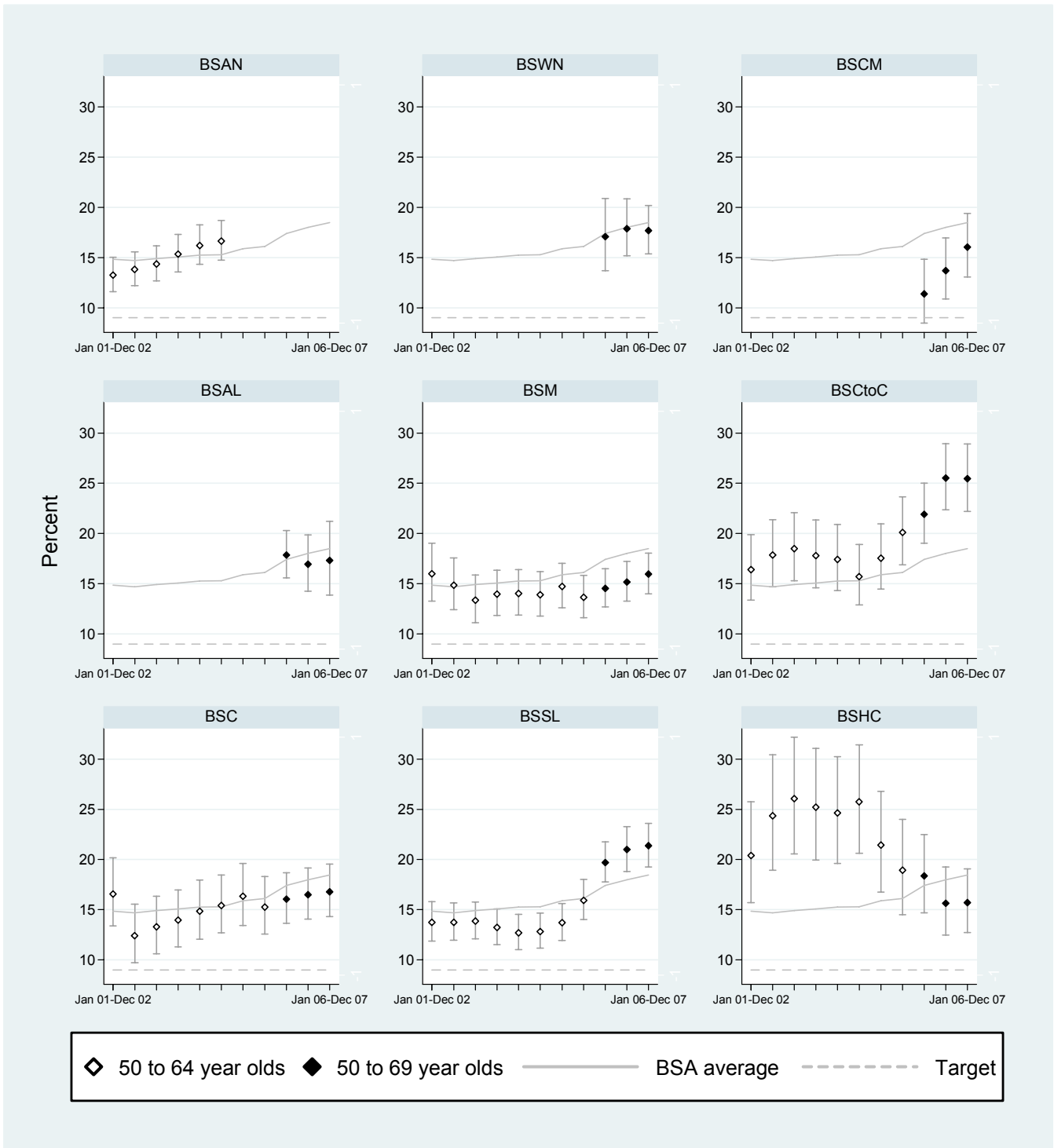
**Figure 2f.1b: Cancers as a percentage of referrals to assessment for initial screens, women 50-69 years, 2 years**



**Figure 2f.2a: Cancers as a percentage of referrals to assessment for subsequent screens, women 50-69 years, 6 months**



**Figure 2f.2b: Cancers as a percentage of referrals to assessment for subsequent screens, women 50-69 years, 2 years**



## 2.g. Benign biopsy weight

### Description:

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

## 2.g. Benign open biopsies by weight, 2 years, women aged 45-69 years

**Table 2g: Benign open biopsies (OB) weighing < 30 g as a percent of all benign open biopsies, 2 years**

	Total benign OBs	<30 gm	% (95% CIs)	30-49 gm	% (95% CIs)	50-69 gm	% (95% CIs)	≥70 gm	% (95% CIs)	Unknown	% (95% CIs)
<i>45-49 years</i>											
BSWN	19	13	68.4 (43.4-87.4)	4	21.1 (6.1-45.6)	1	5.3 (0.1-26.0)	0	0.0 (0.0-17.6)	1	5.3 (0.1-26.0)
BSCM	9	8	88.9 (51.8-99.7)	1	11.1 (0.3-48.2)	0	0.0 (0.0-33.6)	0	0.0 (0.0-33.6)	0	0.0 (0.0-33.6)
BSAL	11	11	100.0 (71.5-100.0)	0	0.0 (0.0-28.5)	0	0.0 (0.0-28.5)	0	0.0 (0.0-28.5)	0	0.0 (0.0-28.5)
BSM	18	17	94.4 (72.7-99.9)	1	5.6 (0.1-27.3)	0	0.0 (0.0-18.5)	0	0.0 (0.0-18.5)	0	0.0 (0.0-18.5)
BSCtoC	7	3	42.9 (9.9-81.6)	0	0.0 (0.0-41.0)	1	14.3 (0.4-57.9)	1	14.3 (0.4-57.9)	2	28.6 (3.7-71.0)
BSC	5	3	60.0 (14.7-94.7)	1	20.0 (0.5-71.6)	0	0.0 (0.0-52.2)	0	0.0 (0.0-52.2)	1	20.0 (0.5-71.6)
BSSL	19	13	68.4 (43.4-87.4)	1	5.3 (0.1-26.0)	2	10.5 (1.3-33.1)	3	15.8 (3.4-39.6)	0	0.0 (0.0-17.6)
BSHC	15	10	66.7 (38.4-88.2)	2	13.3 (1.7-40.5)	2	13.3 (1.7-40.5)	0	0.0 (0.0-21.8)	1	6.7 (0.2-31.9)
BSA Total	103	78	75.7 (66.3-83.6)	10	9.7 (4.8-17.1)	6	5.8 (2.2-12.2)	4	3.9 (1.1-9.6)	5	4.9 (1.6-11.0)
<i>50-69 years</i>											
BSWN	37	30	81.1 (64.8-92.0)	5	13.5 (4.5-28.8)	1	2.7 (0.1-14.2)	0	0.0 (0.0-9.5)	1	2.7 (0.1-14.2)
BSCM	18	14	77.8 (52.4-93.6)	3	16.7 (3.6-41.4)	1	5.6 (0.1-27.3)	0	0.0 (0.0-18.5)	0	0.0 (0.0-18.5)
BSAL	34	30	88.2 (72.5-96.7)	4	11.8 (3.3-27.5)	0	0.0 (0.0-10.3)	0	0.0 (0.0-10.3)	0	0.0 (0.0-10.3)
BSM	33	25	75.8 (57.7-88.9)	4	12.1 (3.4-28.2)	0	0.0 (0.0-10.6)	1	3.0 (0.1-15.8)	3	9.1 (1.9-24.3)
BSCtoC	16	4	25.0 (7.3-52.4)	2	12.5 (1.6-38.3)	0	0.0 (0.0-20.6)	1	6.3 (0.2-30.2)	9	56.3 (29.9-80.2)
BSC	21	19	90.5 (69.6-98.8)	0	0.0 (0.0-16.1)	1	4.8 (0.1-23.8)	0	0.0 (0.0-16.1)	1	4.8 (0.1-23.8)
BSSL	27	17	63.0 (42.4-80.6)	8	29.6 (13.8-50.2)	1	3.7 (0.1-19.0)	1	3.7 (0.1-19.0)	0	0.0 (0.0-12.8)
BSHC	30	19	63.3 (43.9-80.1)	4	13.3 (3.8-30.7)	1	3.3 (0.1-17.2)	1	3.3 (0.1-17.2)	5	16.7 (5.6-34.7)
BSA Total	216	158	73.1 (66.7-78.9)	30	13.9 (9.6-19.2)	5	2.3 (0.8-5.3)	4	1.9 (0.5-4.7)	19	8.8 (5.4-13.4)

Exact binomial 95% Confidence Intervals presented

## 2.h. Pre-operative diagnosis rate

### 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**

	Last 6 months			Last 2 years		
	Preoperative diagnosis of cancer	Number of cancers	% (95%CI)	Preoperative diagnosis of cancer	Number of cancers	% (95%CI)
<i>45-49 years</i>						
BSWN	11	13		55	60	91.7 (81.6-97.2)
BSCM	8	8		26	27	96.3 (81.0-99.9)
BSAL	10	10		39	41	95.1 (83.5-99.4)
BSM	16	16		47	49	95.9 (86.0-99.5)
BSCtoC	5	8		23	28	82.1 (63.1-93.9)
BSC	12	12		31	36	86.1 (70.5-95.3)
BSSL	14	15		60	63	95.2 (86.7-99.0)
BSHC	4	6		14	16	87.5 (61.7-98.4)
BSA Total	80	88	90.9 (82.9-96.0)	295	320	92.2 (88.7-94.9)
<i>50-69 years</i>						
BSWN	60	66	90.9 (81.3-96.6) ✓✓✓ *	244	255	95.7 (92.4-97.8) ✓✓✓ *
BSCM	31	33	93.9 (79.8-99.3) ✓✓✓ *	131	140	93.6 (88.1-97.0) ✓✓✓ *
BSAL	22	22	100.0 (84.6-100.0) ✓✓✓ *	111	114	97.4 (92.5-99.5) ✓✓✓ *
BSM	67	67	100.0 (94.6-100.0) ✓✓✓ *	230	246	93.5 (89.7-96.2) ✓✓✓ *
BSCtoC	37	37	100.0 (90.5-100.0) ✓✓✓ *	210	215	97.7 (94.7-99.2) ✓✓✓ *
BSC	38	42	90.5 (77.4-97.3) ✓✓✓ *	162	172	94.2 (89.6-97.2) ✓✓✓ *
BSSL	90	91	98.9 (94.0-100.0) ✓✓✓ *	361	374	96.5 (94.1-98.1) ✓✓✓ *
BSHC	22	22	100.0 (84.6-100.0) ✓✓✓ *	86	98	87.8 (79.6-93.5) ✓✓✓ *
BSA Total	367	380	96.6 (94.2-98.2) ✓✓✓ *	1,535	1,614	95.1 (93.9-96.1) ✓✓✓ *

Note: Estimates for small numbers not presented

Data for BSWN for '2 years' is based on 23 month period

Exact binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

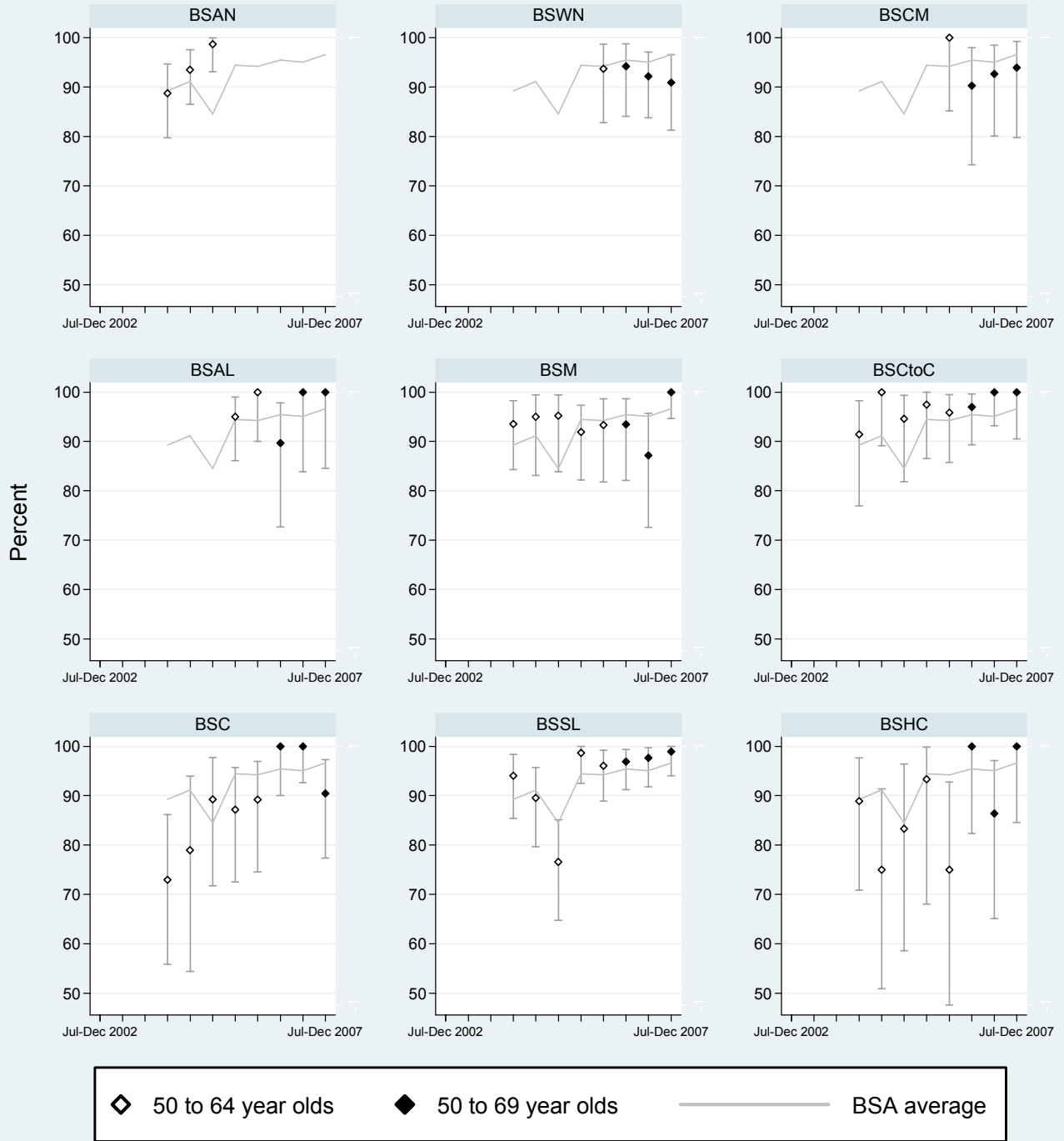
✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

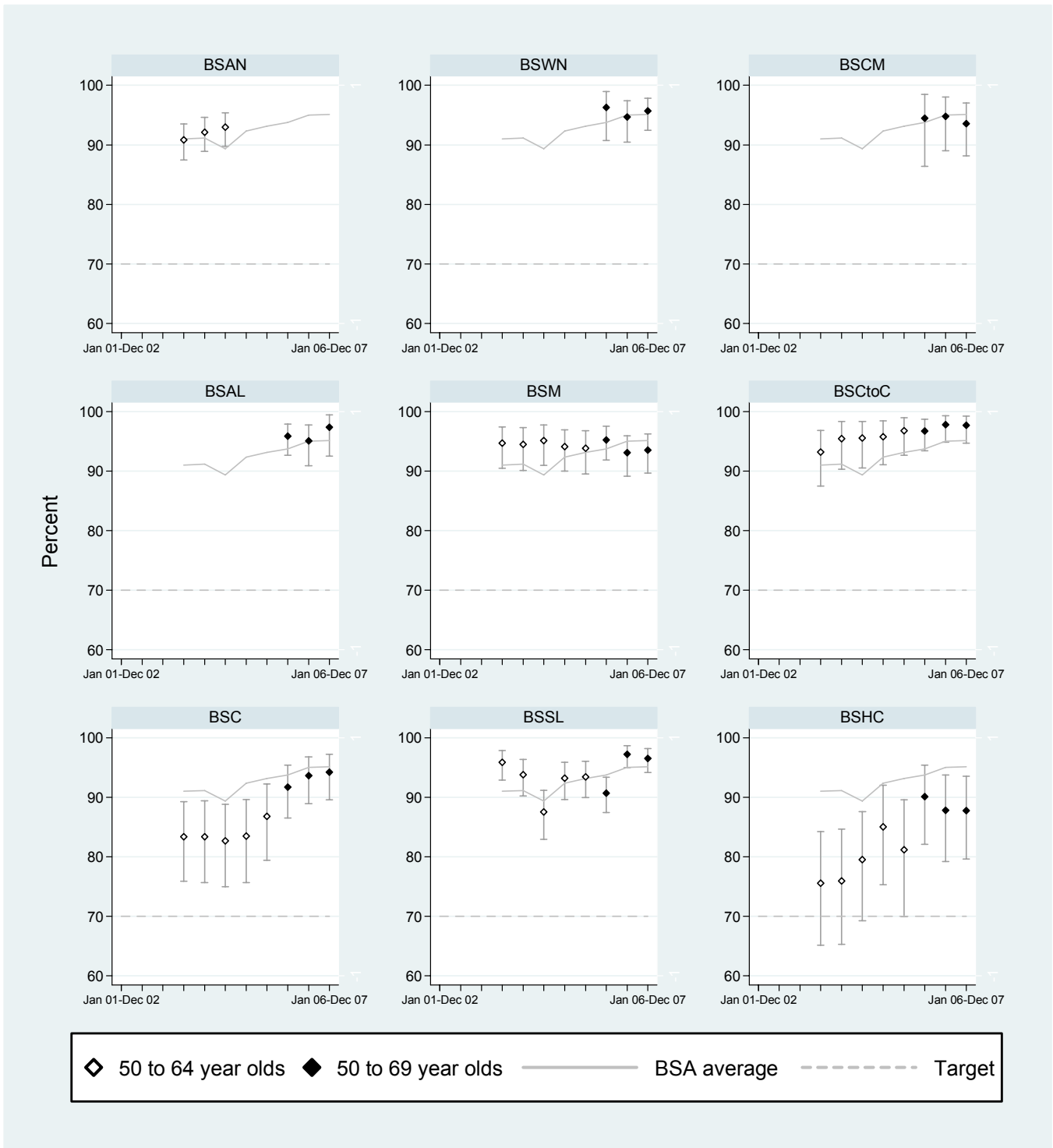
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant



**Figure 2h.a: Percentage of women with a preoperative diagnosis of cancer, 6 months**



**Figure 2h.b: Percentage of women with a preoperative diagnosis of cancer, 2 years**



## 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. (NB: Interval cancers excluded)

### Target:

> 93 %

### 2.1.1. Specificity, 6 months

**Table 21.1: Estimated specificity of BSA by Lead Provider, 6 months**

	Initial			Subsequent		
	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)
<i>45-49 years</i>						
BSWN	2,973	3,238	91.8 (90.8-92.7)	278	293	94.9 (91.7-97.1)
BSCM	1,958	2,174	90.1 (88.7-91.3)	84	87	96.6 (90.3-99.3)
BSAL	1,141	1,224	93.2 (91.7-94.6)	132	132	100.0 (97.2-100.0)
BSM	1,589	1,747	91.0 (89.5-92.3)	1,062	1,109	95.8 (94.4-96.9)
BSCtoC	1,922	2,063	93.2 (92.0-94.2)	1,013	1,038	97.6 (96.5-98.4)
BSC	1,353	1,461	92.6 (91.1-93.9)	859	893	96.2 (94.7-97.3)
BSSL	1,991	2,144	92.9 (91.7-93.9)	2,639	2,753	95.9 (95.0-96.6)
BSHC	1,455	1,630	89.3 (87.7-90.7)	739	758	97.5 (96.1-98.5)
BSA Total	14,382	15,681	91.7 (91.3-92.1)	6,806	7,063	96.4 (95.9-96.8)
<i>50-69 years</i>						
BSWN	2,351	2,575	91.3 (90.1-92.4)	7,903	8,138	97.1 (96.7-97.5)
BSCM	1,345	1,443	93.2 (91.8-94.5)	4,094	4,190	97.7 (97.2-98.1)
BSAL	958	1,025	93.5 (91.8-94.9)	3,117	3,185	97.9 (97.3-98.3)
BSM	1,061	1,160	91.5 (89.7-93.0)	8,878	9,151	97.0 (96.6-97.4)
BSCtoC	1,208	1,296	93.2 (91.7-94.5)	7,595	7,685	98.8 (98.6-99.1)
BSC	932	993	93.9 (92.2-95.3)	5,989	6,140	97.5 (97.1-97.9)
BSSL	821	873	94.0 (92.3-95.5)	14,194	14,558	97.5 (97.2-97.7)
BSHC	734	826	88.9 (86.5-90.9)	5,769	5,907	97.7 (97.2-98.0)
BSA Total	9,410	10,191	92.3 (91.8-92.8)	57,539	58,954	97.6 (97.5-97.7)

Exact binomial 95% Confidence Intervals presented

## 2.1.2. Specificity, 2 years

### 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. (NB: Interval cancers excluded)

### Target:

> 93 %

**Table 21.2: Estimated specificity of BSA by Lead Provider, 2years**

	Initial			Subsequent		
	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)
<b>45-49 years</b>						
BSWN	9,990	10,853	92.0 (91.5-92.6)	699	731	95.6 (93.9-97.0)
BSCM	5,039	5,563	90.6 (89.8-91.3)	228	235	97.0 (94.0-98.8)
BSAL	4,460	4,773	93.4 (92.7-94.1)	298	303	98.3 (96.2-99.5)
BSM	7,440	8,135	91.5 (90.8-92.1)	2,059	2,149	95.8 (94.9-96.6)
BSCtoC	6,667	7,146	93.3 (92.7-93.9)	1,615	1,654	97.6 (96.8-98.3)
BSC	5,664	6,126	92.5 (91.8-93.1)	1,365	1,421	96.1 (94.9-97.0)
BSSL	16,983	18,038	94.2 (93.8-94.5)	2,812	2,929	96.0 (95.2-96.7)
BSHC	3,764	4,151	90.7 (89.8-91.5)	1,274	1,323	96.3 (95.1-97.2)
BSA Total	60,007	64,785	92.6 (92.4-92.8)	10,350	10,745	96.3 (96.0-96.7)
<b>50-69 years</b>						
BSWN	7,832	8,469	92.5 (91.9-93.0)	30,655	31,466	97.4 (97.2-97.6)
BSCM	4,752	5,224	91.0 (90.2-91.7)	17,140	17,632	97.2 (97.0-97.4)
BSAL	3,875	4,150	93.4 (92.6-94.1)	14,258	14,599	97.7 (97.4-97.9)
BSM	4,646	5,095	91.2 (90.4-92.0)	34,854	35,938	97.0 (96.8-97.2)
BSCtoC	4,813	5,167	93.1 (92.4-93.8)	30,917	31,407	98.4 (98.3-98.6)
BSC	4,129	4,469	92.4 (91.6-93.2)	25,587	26,303	97.3 (97.1-97.5)
BSSL	5,590	5,924	94.4 (93.7-94.9)	57,034	58,187	98.0 (97.9-98.1)
BSHC	2,181	2,418	90.2 (88.9-91.4)	19,481	19,934	97.7 (97.5-97.9)
BSA Total	37,818	40,916	92.4 (92.2-92.7)	229,926	235,466	97.6 (97.6-97.7)

Note: Data for BSWN for '2 years' is based on 23 month period

Exact binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% confidence interval not significantly different from the target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

## 2.m. Benign biopsy rate

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

#### Description:

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

#### Target:

Initial (Prevalent) screen:  $\leq 3.5$  per 1000 women screened

Subsequent (Incident) screen:  $\leq 1.6$  per 1000 women screened

**Table 2m.2: Benign open biopsies, 2 years**

	Initial			Subsequent		
	Benign open biopsies	Number of screens	Rate per 1,000 (95%CI)	Benign open biopsies	Number of screens	Rate per 1,000 (95%CI)
<i>45-49 years</i>						
BSWN	19	10,908	1.7 (1.0-2.7)	0	735	
BSCM	9	5,589	1.6 (0.7-3.1)	0	237	
BSAL	11	4,824	2.3 (1.1-4.1)	0	303	
BSM	17	8,169	2.1 (1.2-3.3)	1	2,158	
BSCtoC	7	7,086	1.0 (0.4-2.0)	0	1,659	
BSC	4	6,037	0.7 (0.2-1.7)	1	1,427	
BSSL	15	17,623	0.9 (0.5-1.4)	4	2,934	
BSHC	13	4,097	3.2 (1.7-5.4)	1	1,326	
BSA Total	95	64,333	1.5 (1.2-1.8)	7	10,779	
<i>50-69 years</i>						
BSWN	18	8,520	2.1 (1.3-3.3) ✓✓✓ *	15	30,575	0.5 (0.3-0.8) ✓✓✓ *
BSCM	10	5,199	1.9 (0.9-3.5) ✓ ns	8	16,548	0.5 (0.2-1.0) ✓✓✓ *
BSAL	11	4,164	2.6 (1.3-4.7) ✓ ns	23	14,190	1.6 (1.0-2.4) ✓ ns
BSM	9	5,122	1.8 (0.8-3.3) ✓✓✓ *	23	36,017	0.6 (0.4-1.0) ✓✓✓ *
BSCtoC	6	5,103	1.2 (0.4-2.6) ✓✓✓ *	10	30,961	0.3 (0.2-0.6) ✓✓✓ *
BSC	7	4,341	1.6 (0.6-3.3) ✓✓✓ *	14	25,255	0.6 (0.3-0.9) ✓✓✓ *
BSSL	4	5,689	0.7 (0.2-1.8) ✓✓✓ *	23	56,336	0.4 (0.3-0.6) ✓✓✓ *
BSHC	13	2,357	5.5 (2.9-9.4) ✓ ns	18	19,476	0.9 (0.5-1.5) ✓✓✓ *
BSA Total	78	40,495	1.9 (1.5-2.4) ✓✓✓ *	134	229,358	0.6 (0.5-0.7) ✓✓✓ *

Note: Data for BSWN for '2 years' is based on 23 month period

Poisson 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

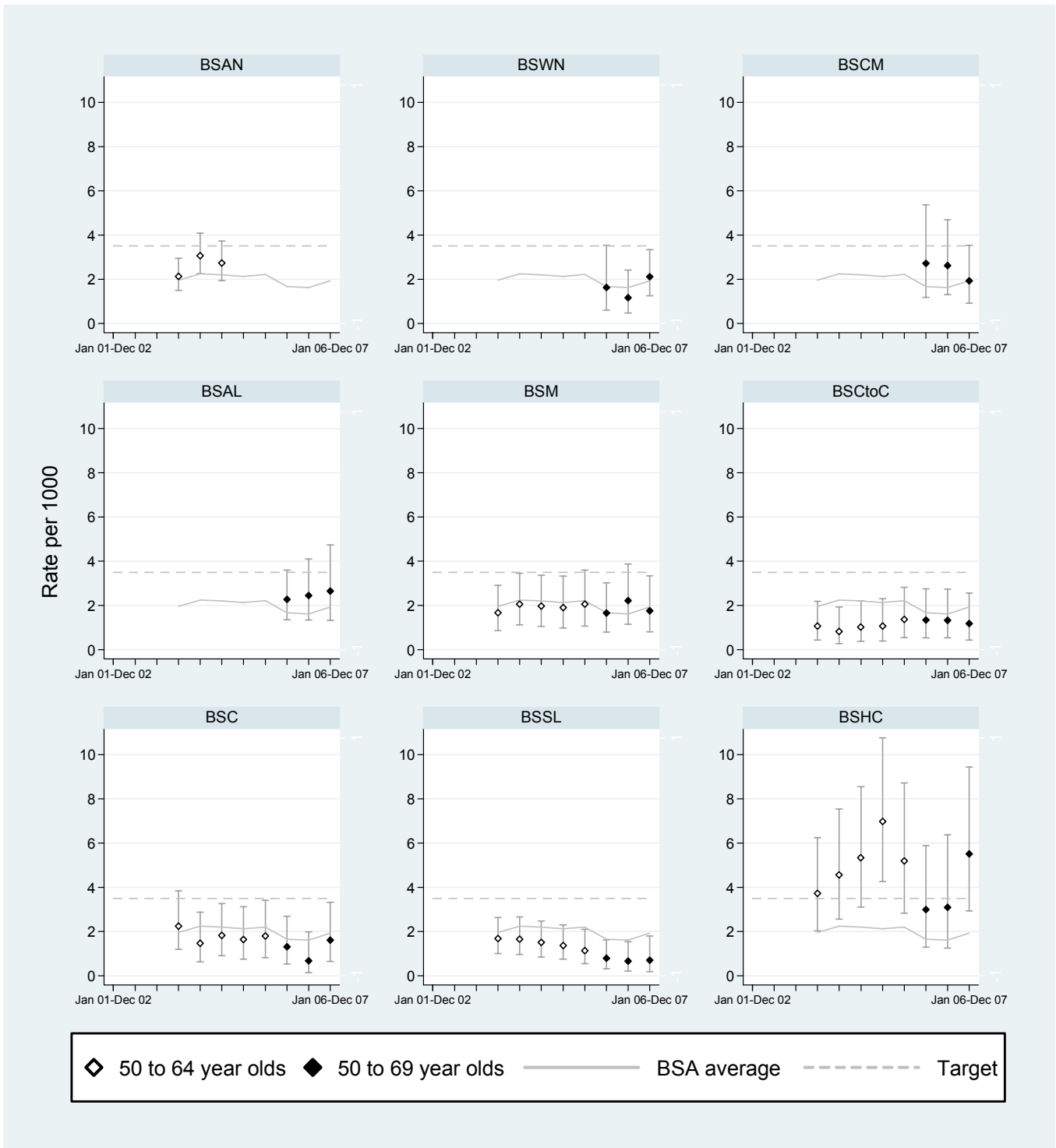
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of  $\geq 10\%$  magnitude better than target value and statistically significant

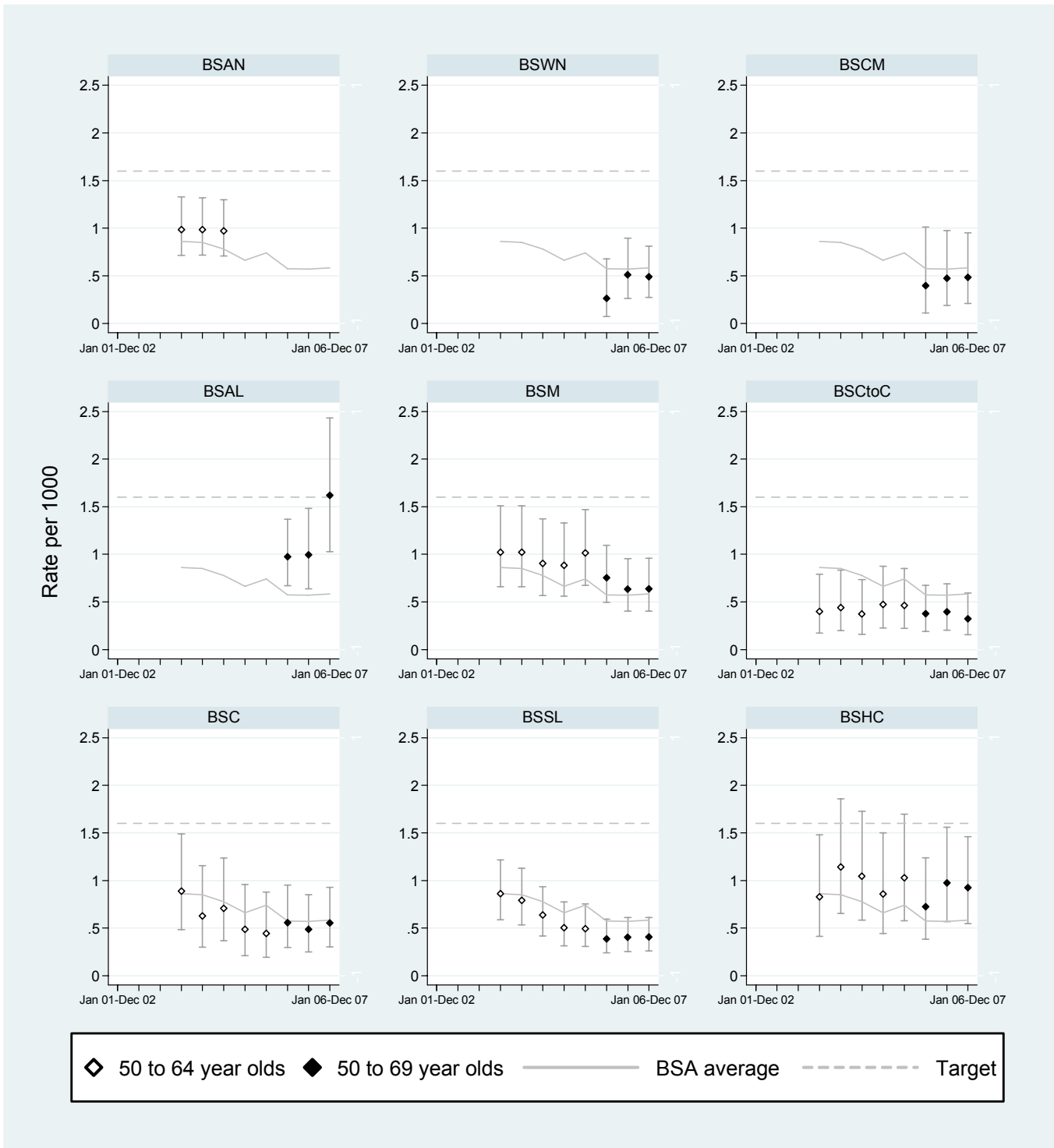
xx Difference of  $\geq 5-9\%$  magnitude worse than target value and statistically significant

xxx Difference of  $\geq 10\%$  magnitude worse than target value and statistically significant

**Figure 2m2: Benign open biopsy rate for initial screens, 2 years**



**Figure 2m2: Benign open biopsy rate for subsequent screens, 2 years**



### 3. EARLY DETECTION OF DCIS OR INVASIVE BREAST CANCER

#### 3.a.1. DCIS and invasive cancer, 6 months

*Description:*

The number of women who have ductal carcinoma *in situ* and/or invasive breast cancer detected within BSA, expressed as a rate per 1000 women screened.

This is influenced by the background incidence of cancer in the population in the absence of screening. All other things being equal, the higher the cancer incidence, the higher the cancer detection rate will be. The cancer detection targets now relate to invasive cancers only, however total (DCIS and invasive) cancer detection rates will continue to be reported.

**Table 3a.1: Detection rate of DCIS and invasive breast cancer per 1,000 women screened, 6 months**

	Initial			Subsequent		
	Number	Women screened	Rate per 1000 (95%CI)	Number	Women screened	Rate per 1000 (95%CI)
<i>45-49 years</i>						
BSWN	11	3,256	3.4 (1.7-6.0)	2	295	6.8 (0.8-24.5)
BSCM	8	2,186	3.7 (1.6-7.2)	0	87	0.0 (0.0-42.4)
BSAL	10	1,240	8.1 (3.9-14.8)	0	132	0.0 (0.0-27.9)
BSM	13	1,764	7.4 (3.9-12.6)	3	1,114	2.7 (0.6-7.9)
BSCtoC	5	2,077	2.4 (0.8-5.6)	3	1,042	2.9 (0.6-8.4)
BSC	8	1,473	5.4 (2.3-10.7)	4	897	4.5 (1.2-11.4)
BSSL	10	2,154	4.6 (2.2-8.5)	5	2,758	1.8 (0.6-4.2)
BSHC	6	1,639	3.7 (1.3-8.0)	0	758	0.0 (0.0-4.9)
BSA Total	71	15,789	4.5 (3.5-5.7)	17	7,083	2.4 (1.4-3.8)
<i>50-69 years</i>						
BSWN	23	2,603	8.8 (5.6-13.3)	43	8,186	5.3 (3.8-7.1)
BSCM	11	1,462	7.5 (3.8-13.5)	22	4,213	5.2 (3.3-7.9)
BSAL	9	1,034	8.7 (4.0-16.5)	13	3,203	4.1 (2.2-6.9)
BSM	5	1,171	4.3 (1.4-10.0)	62	9,221	6.7 (5.2-8.6)
BSCtoC	11	1,310	8.4 (4.2-15.0)	26	7,718	3.4 (2.2-4.9)
BSC	9	1,002	9.0 (4.1-17.1)	33	6,178	5.3 (3.7-7.5)
BSSL	12	885	13.6 (7.0-23.7)	79	14,638	5.4 (4.3-6.7)
BSHC	4	834	4.8 (1.3-12.3)	18	5,929	3.0 (1.8-4.8)
BSA Total	84	10,301	8.2 (6.5-10.1)	296	59,286	5.0 (4.4-5.6)

Poisson 95% Confidence Intervals presented



### 3a.2. DCIS and invasive cancer, 2 years

*Description:*

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

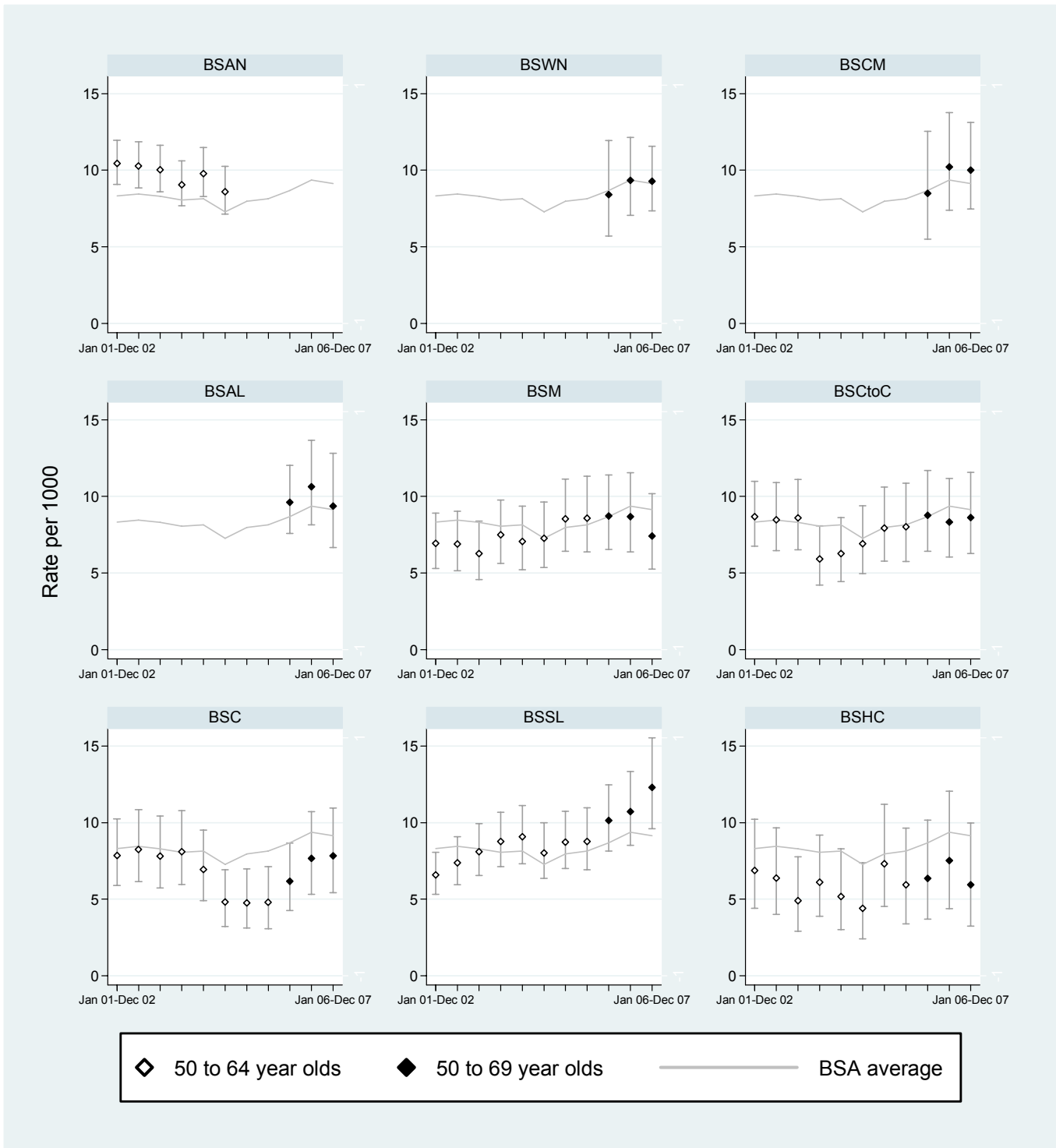
This is influenced by the background incidence of cancer in the population in the absence of screening. All other things being equal, the higher the cancer incidence, the higher the cancer detection rate will be.

**Table 3a.2: Detection rate of DCIS and invasive breast cancer per 1,000 women screened, 2 years**

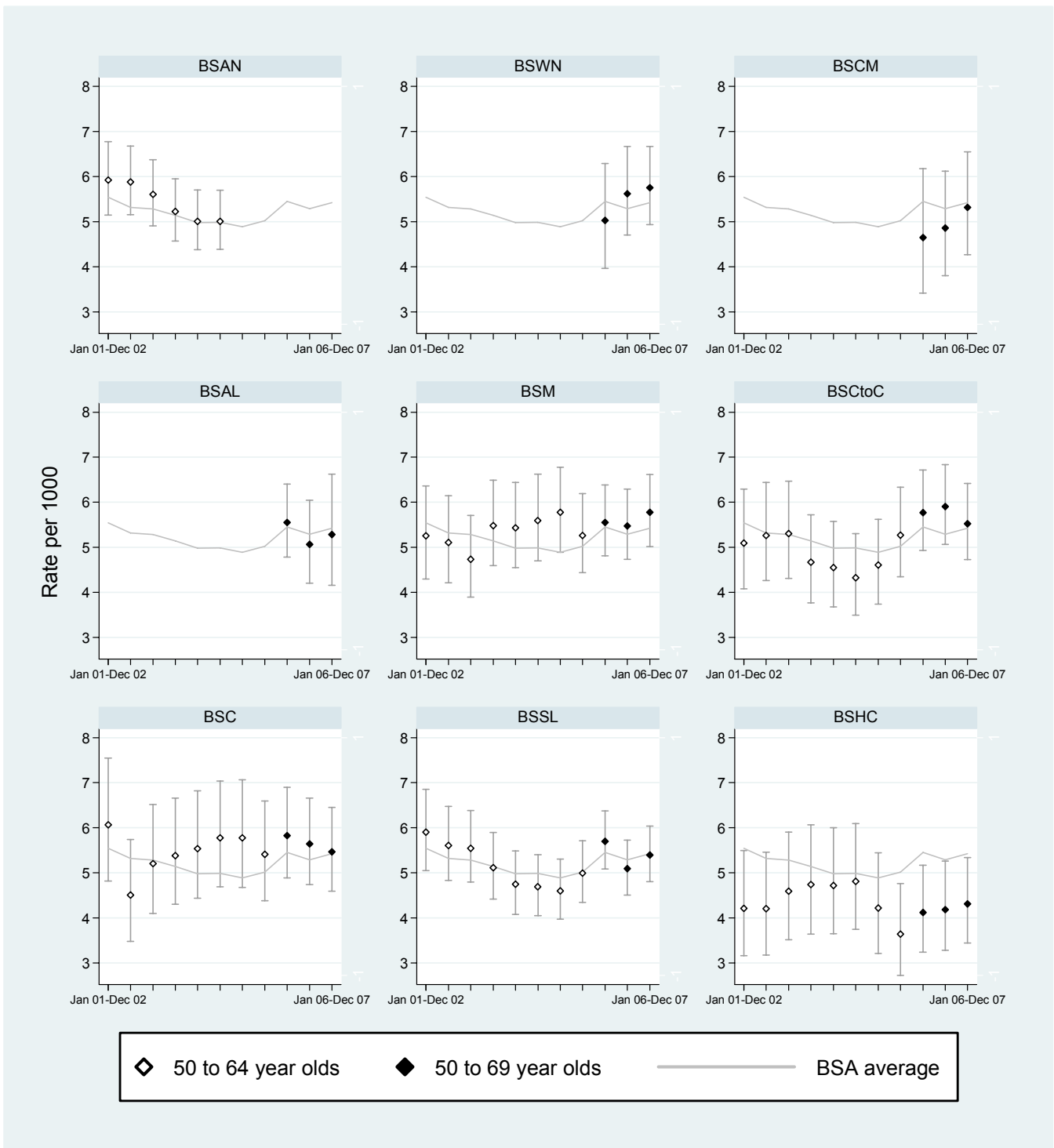
	Initial			Subsequent		
	Number	Women screened	Rate per 1,000 (95%CI)	Number	Women screened	Rate per 1,000 (95%CI)
<i>45-49 years</i>						
BSWN	57	10,908	5.2 (4.0-6.8)	3	735	4.1 (0.8-11.9)
BSCM	25	5,589	4.5 (2.9-6.6)	2	237	8.4 (1.0-30.5)
BSAL	41	4,824	8.5 (6.1-11.5)	0	303	0.0 (0.0-12.2)
BSM	43	8,169	5.3 (3.8-7.1)	6	2,158	2.8 (1.0-6.1)
BSCtoC	24	7,086	3.4 (2.2-5.0)	4	1,659	2.4 (0.7-6.2)
BSC	27	6,037	4.5 (2.9-6.5)	9	1,427	6.3 (2.9-12.0)
BSSL	57	17,623	3.2 (2.4-4.2)	6	2,934	2.0 (0.8-4.5)
BSHC	14	4,097	3.4 (1.9-5.7)	2	1,326	1.5 (0.2-5.4)
<b>BSA Total</b>	<b>288</b>	<b>64,333</b>	<b>4.5 (4.0-5.0)</b>	<b>32</b>	<b>10,779</b>	<b>3.0 (2.0-4.2)</b>
<i>50-69 years</i>						
BSWN	79	8,520	9.3 (7.3-11.6)	176	30,575	5.8 (4.9-6.7)
BSCM	52	5,199	10.0 (7.5-13.1)	88	16,548	5.3 (4.3-6.6)
BSAL	39	4,164	9.4 (6.7-12.8)	75	14,190	5.3 (4.2-6.6)
BSM	38	5,122	7.4 (5.3-10.2)	208	36,017	5.8 (5.0-6.6)
BSCtoC	44	5,103	8.6 (6.3-11.6)	171	30,961	5.5 (4.7-6.4)
BSC	34	4,341	7.8 (5.4-10.9)	138	25,255	5.5 (4.6-6.5)
BSSL	70	5,689	12.3 (9.6-15.5)	304	56,336	5.4 (4.8-6.0)
BSHC	14	2,357	5.9 (3.2-10.0)	84	19,476	4.3 (3.4-5.3)
<b>BSA Total</b>	<b>370</b>	<b>40,495</b>	<b>9.1 (8.2-10.1)</b>	<b>1,244</b>	<b>229,358</b>	<b>5.4 (5.1-5.7)</b>

Note: Data for BSWN for '2 years' is based on 23 month period  
Poisson 95% Confidence Intervals presented

**Figure 3a: Detection rate of DCIS and invasive breast cancer, initial screens, 2 years**



**Figure 3a: Detection rate of DCIS and invasive breast cancer, subsequent screens, 2 years**



### 3.a.2b. Invasive cancer detection, 6 months and 2 years

*Description:*

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

This is influenced by the background incidence of cancer in the population in the absence of screening. All other things being equal, the higher the cancer incidence, the higher the cancer detection rate will be.

*Target:*

Initial (Prevalent) round:  $\geq 6.1$  per 1000 women screened

Subsequent (Incident) round:  $\geq 3.45$  per 1000 women screened.

**Table 3a.2b: Invasive cancers (6 months and 2 years) for initial and subsequent screens, women 50-69 years**

	Initial			Subsequent						
	Number	Women screened	Rate per 1,000 (95%CI)	Number	Women screened	Rate per 1,000 (95%CI)				
<i>6 months</i>										
BSWN	17	2,603	6.5 (3.8-10.5)	31	8,186	3.8 (2.6-5.4)				
BSCM*	5	1,462	3.4 (1.1-8.0)	14	4,213	3.3 (1.8-5.6)				
BSAL*	5	1,034	4.8 (1.6-11.3)	9	3,203	2.8 (1.3-5.3)				
BSM*	3	1,171	2.6 (0.5-7.5)	42	9,221	4.6 (3.3-6.2)				
BSCtoC	8	1,310	6.1 (2.6-12.0)	23	7,718	3.0 (1.9-4.5)				
BSC	7	1,002	7.0 (2.8-14.4)	22	6,178	3.6 (2.2-5.4)				
BSSL	10	885	11.3 (5.4-20.8)	60	14,638	4.1 (3.1-5.3)				
BSHC	3	834	3.6 (0.7-10.5)	11	5,929	1.9 (0.9-3.3)				
BSA Total	58	10,301	5.6 (4.3-7.3)	212	59,286	3.6 (3.1-4.1)				
<i>2 years</i>										
BSWN	61	8,520	7.2 (5.5-9.2)	✓	ns	125	30,575	4.1 (3.4-4.9)	✓	ns
BSCM	36	5,199	6.9 (4.8-9.6)	✓	ns	63	16,548	3.8 (2.9-4.9)	✓	ns
BSAL	24	4,164	5.8 (3.7-8.6)	✓	ns	45	14,190	3.2 (2.3-4.2)	✓	ns
BSM	29	5,122	5.7 (3.8-8.1)	✓	ns	156	36,017	4.3 (3.7-5.1)	✓✓✓	*
BSCtoC	35	5,103	6.9 (4.8-9.5)	✓	ns	138	30,961	4.5 (3.7-5.3)	✓✓✓	*
BSC	24	4,341	5.5 (3.5-8.2)	✓	ns	101	25,255	4.0 (3.3-4.9)	✓	ns
BSSL	57	5,689	10.0 (7.6-13.0)	✓✓✓	*	230	56,336	4.1 (3.6-4.6)	✓✓✓	*
BSHC	11	2,357	4.7 (2.3-8.4)	✓	ns	61	19,476	3.1 (2.4-4.0)	✓	ns
BSA Total	277	40,495	6.8 (6.1-7.7)	✓	ns	919	229,358	4.0 (3.8-4.3)	✓✓✓	*

Note: Number of Invasive Cancers for BSS is 1 record different to totals reported in tables 3b.1, 3c.1 and 3d due to a known data issue with 1 record due to a NHI merge. Data for BSWN for '2 years' is based on 23 month period  
Poisson 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of  $\geq 10\%$  magnitude better than target value and statistically significant

xx Difference of  $\geq 5-9\%$  magnitude worse than target value and statistically significant

xxx Difference of  $\geq 10\%$  magnitude worse than target value and statistically significant

### 3.a Summary of referral to assessment, specificity, false positives and detection rate of DCIS and invasive cancer

**Table 3.a: Summary of referral to assessment, specificity, false positives and detection rate of DCIS and invasive cancer, women 50-69 years**

	Referral to assessment as % of women screened	Estimated specificity	Positive Predictive Value	DCIS and invasive cancer detection rate per 1,000 women screened
<b>6 months</b>				
<i>Initial round</i>				
BSWN	9.7 (8.5-11.0)	91.3 (90.1-92.4)	9.1 (5.9-13.4)	8.8 (5.6-13.3)
BSCM	8.0 (6.6-9.6)	93.2 (91.8-94.5)	9.4 (4.8-16.2)	7.5 (3.8-13.5)
BSAL	7.4 (5.8-9.2)	93.5 (91.8-94.9)	11.8 (5.6-21.3)	8.7 (4.0-16.5)
BSM	9.4 (7.7-11.3)	91.5 (89.7-93.0)	4.5 (1.5-10.3)	4.3 (1.4-10.0)
BSCtoC	7.8 (6.3-9.5)	93.2 (91.7-94.5)	10.8 (5.5-18.5)	8.4 (4.2-15.0)
BSC	7.0 (5.4-8.8)	93.9 (92.2-95.3)	12.9 (6.1-23.0)	9.0 (4.1-17.1)
BSSL	7.2 (5.6-9.2)	94.0 (92.3-95.5)	18.8 (10.1-30.5)	13.6 (7.0-23.7)
BSHC	12.0 (9.8-14.6)	88.9 (86.5-90.9)	4.0 (1.1-9.9)	4.8 (1.3-12.3)
<b>BSA Total</b>	<b>8.6 (8.1-9.2)</b>	<b>92.3 (91.8-92.8)</b>	<b>9.4 (7.6-11.5)</b>	<b>8.2 (6.5-10.1)</b>
<i>Subsequent round</i>				
BSWN	3.5 (3.1-3.9)	97.1 (96.7-97.5)	15.2 (11.2-19.9)	5.3 (3.8-7.1)
BSCM	2.8 (2.3-3.4)	97.7 (97.2-98.1)	18.5 (12.0-26.6)	5.2 (3.3-7.9)
BSAL	2.7 (2.1-3.3)	97.9 (97.3-98.3)	15.1 (8.3-24.5)	4.1 (2.2-6.9)
BSM	3.7 (3.3-4.1)	97.0 (96.6-97.4)	18.1 (14.1-22.6)	6.7 (5.2-8.6)
BSCtoC	1.6 (1.3-1.9)	98.8 (98.6-99.1)	21.1 (14.3-29.4)	3.4 (2.2-4.9)
BSC	3.1 (2.6-3.5)	97.5 (97.1-97.9)	17.5 (12.3-23.6)	5.3 (3.7-7.5)
BSSL	3.0 (2.8-3.3)	97.5 (97.2-97.7)	17.8 (14.3-21.7)	5.4 (4.3-6.7)
BSHC	2.7 (2.3-3.2)	97.7 (97.2-98.0)	11.2 (6.8-17.2)	3.0 (1.8-4.8)
<b>BSA Total</b>	<b>2.9 (2.8-3.1)</b>	<b>97.6 (97.5-97.7)</b>	<b>16.9 (15.2-18.8)</b>	<b>5.0 (4.4-5.6)</b>
<b>2 years</b>				
<i>Initial round</i>				
BSWN	8.7 (8.0-9.3)	92.5 (91.9-93.0)	10.7 (8.6-13.2)	9.3 (7.3-11.6)
BSCM	10.2 (9.3-11.1)	91.0 (90.2-91.7)	9.8 (7.4-12.7)	10.0 (7.5-13.1)
BSAL	7.9 (7.1-8.9)	93.4 (92.6-94.1)	11.8 (8.5-15.8)	9.4 (6.7-12.8)
BSM	9.7 (8.9-10.6)	91.2 (90.4-92.0)	7.6 (5.5-10.3)	7.4 (5.3-10.2)
BSCtoC	8.0 (7.2-8.8)	93.1 (92.4-93.8)	10.8 (7.9-14.2)	8.6 (6.3-11.6)
BSC	8.4 (7.5-9.3)	92.4 (91.6-93.2)	9.4 (6.6-12.8)	7.8 (5.4-10.9)
BSSL	6.8 (6.2-7.6)	94.4 (93.7-94.9)	18.0 (14.3-22.2)	12.3 (9.6-15.5)
BSHC	10.6 (9.4-12.1)	90.2 (88.9-91.4)	5.6 (3.1-9.2)	5.9 (3.2-10.0)
<b>BSA Total</b>	<b>8.7 (8.4-8.9)</b>	<b>92.4 (92.2-92.7)</b>	<b>10.6 (9.6-11.6)</b>	<b>9.1 (8.2-10.1)</b>
<i>Subsequent round</i>				
BSWN	3.3 (3.1-3.5)	97.4 (97.2-97.6)	17.7 (15.4-20.2)	5.8 (4.9-6.7)
BSCM	3.3 (3.0-3.6)	97.2 (97.0-97.4)	16.1 (13.1-19.4)	5.3 (4.3-6.6)
BSAL	3.1 (2.8-3.4)	97.7 (97.4-97.9)	17.3 (13.9-21.2)	5.3 (4.2-6.6)
BSM	3.6 (3.4-3.8)	97.0 (96.8-97.2)	15.9 (14.0-18.0)	5.8 (5.0-6.6)
BSCtoC	2.2 (2.0-2.3)	98.4 (98.3-98.6)	25.4 (22.2-28.9)	5.5 (4.7-6.4)
BSC	3.3 (3.0-3.5)	97.3 (97.1-97.5)	16.8 (14.3-19.5)	5.5 (4.6-6.5)
BSSL	2.5 (2.4-2.7)	98.0 (97.9-98.1)	21.4 (19.3-23.6)	5.4 (4.8-6.0)
BSHC	2.7 (2.5-3.0)	97.7 (97.5-97.9)	15.7 (12.7-19.1)	4.3 (3.4-5.3)
<b>BSA Total</b>	<b>2.9 (2.9-3.0)</b>	<b>97.6 (97.6-97.7)</b>	<b>18.5 (17.6-19.4)</b>	<b>5.4 (5.1-5.7)</b>

### 3.b. Detection of invasive cancers ≤ 10 mm

#### Description:

Proportion and rate of primary invasive breast cancer of diameter ≤ 10 mm.

#### Target:

Initial (Prevalent) round: ≥ 25%, which gives a rate of ≥ 15.2 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 10 mm, 2 years, women aged 50-69 years**

	Initial					Subsequent				
	Invasive cancers ≤10 mm	Total invasive cancers	% (95%CI)			Invasive cancers ≤10 mm	Total invasive cancers	% (95%CI)		
BSWN	19	61	31.1 (19.9-44.3)	✓	ns	58	125	46.4 (37.4-55.5)	✓✓✓	*
BSCM	10	36	27.8 (14.2-45.2)	✓	ns	20	63	31.7 (20.6-44.7)	✓	ns
BSAL	8	24	33.3 (15.6-55.3)	✓	ns	18	45	40.0 (25.7-55.7)	✓	ns
BSM	5	29	17.2 (5.8-35.8)	✓	ns	70	156	44.9 (36.9-53.0)	✓✓✓	*
BSCtoC	6	35	17.1 (6.6-33.6)	✓	ns	48	138	34.8 (26.9-43.4)	✓	ns
BSC	4	24	16.7 (4.7-37.4)	✓	ns	37	101	36.6 (27.3-46.8)	✓	ns
BSSL	24	57	42.1 (29.1-55.9)	✓✓✓	*	89	231	38.5 (32.2-45.1)	✓✓✓	*
BSHC	3	11	27.3 (6.0-61.0)	✓	ns	23	61	37.7 (25.6-51.0)	✓	ns
BSA Total	79	277	28.5 (23.3-34.2)	✓	ns	363	920	39.5 (36.3-42.7)	✓✓✓	*

Note: Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Table 3b.2: Invasive cancers, less than or equal to 10 mm per 10,000 screens, 2 years, women aged 50-69 years**

	Initial				Subsequent					
	Invasive cancers ≤10 mm	Women screened	Rate per 10,000 (95%CI)		Invasive cancers ≤10 mm	Women screened	Rate per 10,000 (95%CI)			
BSWN	19	8,520	22.3 (13.4-34.8)	✓	ns	58	30,575	19.0 (14.4-24.5)	✓✓✓	*
BSCM	10	5,199	19.2 (9.2-35.4)	✓	ns	20	16,548	12.1 (7.4-18.7)	✓	ns
BSAL	8	4,164	19.2 (8.3-37.9)	✓	ns	18	14,190	12.7 (7.5-20.0)	✓	ns
BSM	5	5,122	9.8 (3.2-22.8)	✓	ns	70	36,017	19.4 (15.2-24.6)	✓✓✓	*
BSCtoC	6	5,103	11.8 (4.3-25.6)	✓	ns	48	30,961	15.5 (11.4-20.6)	✓✓✓	*
BSC	4	4,341	9.2 (2.5-23.6)	✓	ns	37	25,255	14.7 (10.3-20.2)	✓	ns
BSSL	24	5,689	42.2 (27.0-62.8)	✓✓✓	*	89	56,336	15.8 (12.7-19.4)	✓✓✓	*
BSHC	3	2,357	12.7 (2.6-37.2)	✓	ns	23	19,476	11.8 (7.5-17.7)	✓	ns
BSA Total	79	40,495	19.5 (15.4-24.3)	✓✓✓	*	363	229,358	15.8 (14.2-17.5)	✓✓✓	*

Note: Data for BSWN for '2 years' is based on 23 month period

Poisson 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

### 3.c. Detection of invasive cancers <15 mm

Description:

Proportion and rate of primary invasive breast cancer of diameter <15 mm

Target:

Initial (Prevalent) round: >50%, which gives a rate of >30.5 per 10,000 screens

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

#### 3.c.1. Proportion of invasive cancers <15 mm, women aged 50-69 years

**Table 3c.1: Proportion of invasive cancers <15 mm, 2 years, women aged 50-69 years**

	Initial					Subsequent				
	Invasive cancers <15 mm	Total invasive cancers	% (95%CI)			Invasive cancers <15 mm	Total invasive cancers	% (95%CI)		
BSWN	30	61	49.2	(36.1-62.3)	✓ ns	77	125	61.6	(52.5-70.2)	✓✓✓ *
BSCM	13	36	36.1	(20.8-53.8)	✓ ns	33	63	52.4	(39.4-65.1)	✓ ns
BSAL	12	24	50.0	(29.1-70.9)	✓ ns	27	45	60.0	(44.3-74.3)	✓ ns
BSM	9	29	31.0	(15.3-50.8)	✓ ns	95	156	60.9	(52.8-68.6)	✓✓✓ *
BSCtoC	11	35	31.4	(16.9-49.3)	xxx *	84	138	60.9	(52.2-69.1)	✓✓✓ *
BSC	9	24	37.5	(18.8-59.4)	✓ ns	59	101	58.4	(48.2-68.1)	✓ ns
BSSL	37	57	64.9	(51.1-77.1)	✓✓✓ *	148	231	64.1	(57.5-70.3)	✓✓✓ *
BSHC	4	11	36.4	(10.9-69.2)	✓ ns	32	61	52.5	(39.3-65.4)	✓ ns
BSA Total	125	277	45.1	(39.2-51.2)	✓ ns	555	920	60.3	(57.1-63.5)	✓✓✓ *

Note: Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from target

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Table 3c.2: Invasive cancers, <15 mm, per 10,000 screens, 2 years, women aged 50-69 years**

	Initial				Subsequent					
	Invasive cancers <15 mm	Women screened	Rate per 10,000 (95%CI)			Invasive cancers <15 mm	Women screened	Rate per 10,000 (95%CI)		
BSWN	30	8,520	35.2	(23.8-50.3)	✓ ns	77	30,575	25.2	(19.9-31.5)	✓✓✓ *
BSCM	13	5,199	25.0	(13.3-42.8)	✓ ns	33	16,548	19.9	(13.7-28.0)	✓ ns
BSAL	12	4,164	28.8	(14.9-50.3)	✓ ns	27	14,190	19.0	(12.5-27.7)	✓ ns
BSM	9	5,122	17.6	(8.0-33.4)	✓ ns	95	36,017	26.4	(21.3-32.2)	✓✓✓ *
BSCtoC	11	5,103	21.6	(10.8-38.6)	✓ ns	84	30,961	27.1	(21.6-33.6)	✓✓✓ *
BSC	9	4,341	20.7	(9.5-39.4)	✓ ns	59	25,255	23.4	(17.8-30.1)	✓✓✓ *
BSSL	37	5,689	65.0	(45.8-89.6)	✓✓✓ *	148	56,336	26.3	(22.2-30.9)	✓✓✓ *
BSHC	4	2,357	17.0	(4.6-43.5)	✓ ns	32	19,476	16.4	(11.2-23.2)	✓ ns
BSA Total	125	40,495	30.9	(25.7-36.8)	✓ ns	555	229,358	24.2	(22.2-26.3)	✓✓✓ *

Note: Data for BSWN for '2 years' is based on 23 month period

Poisson 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from target

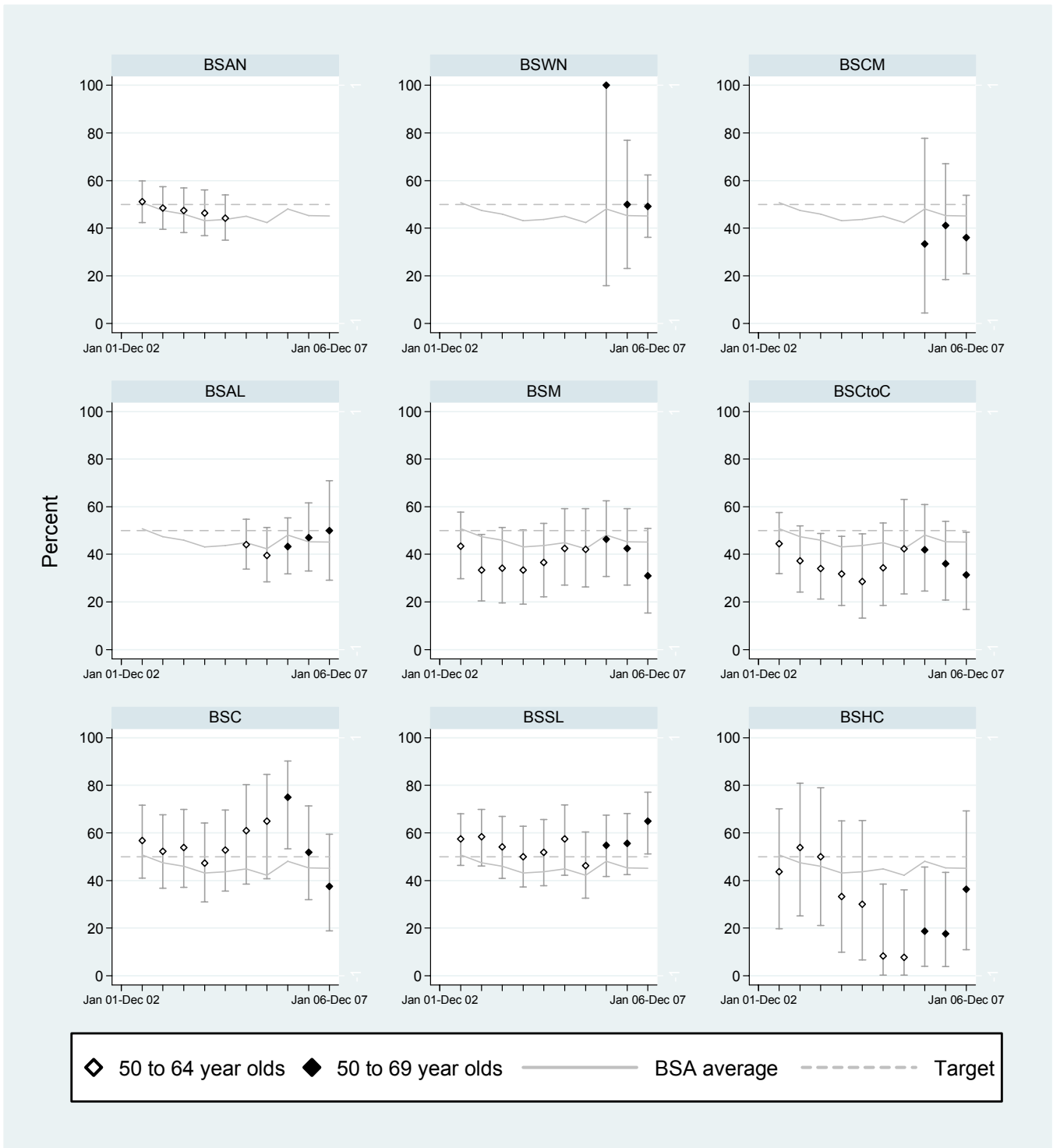
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

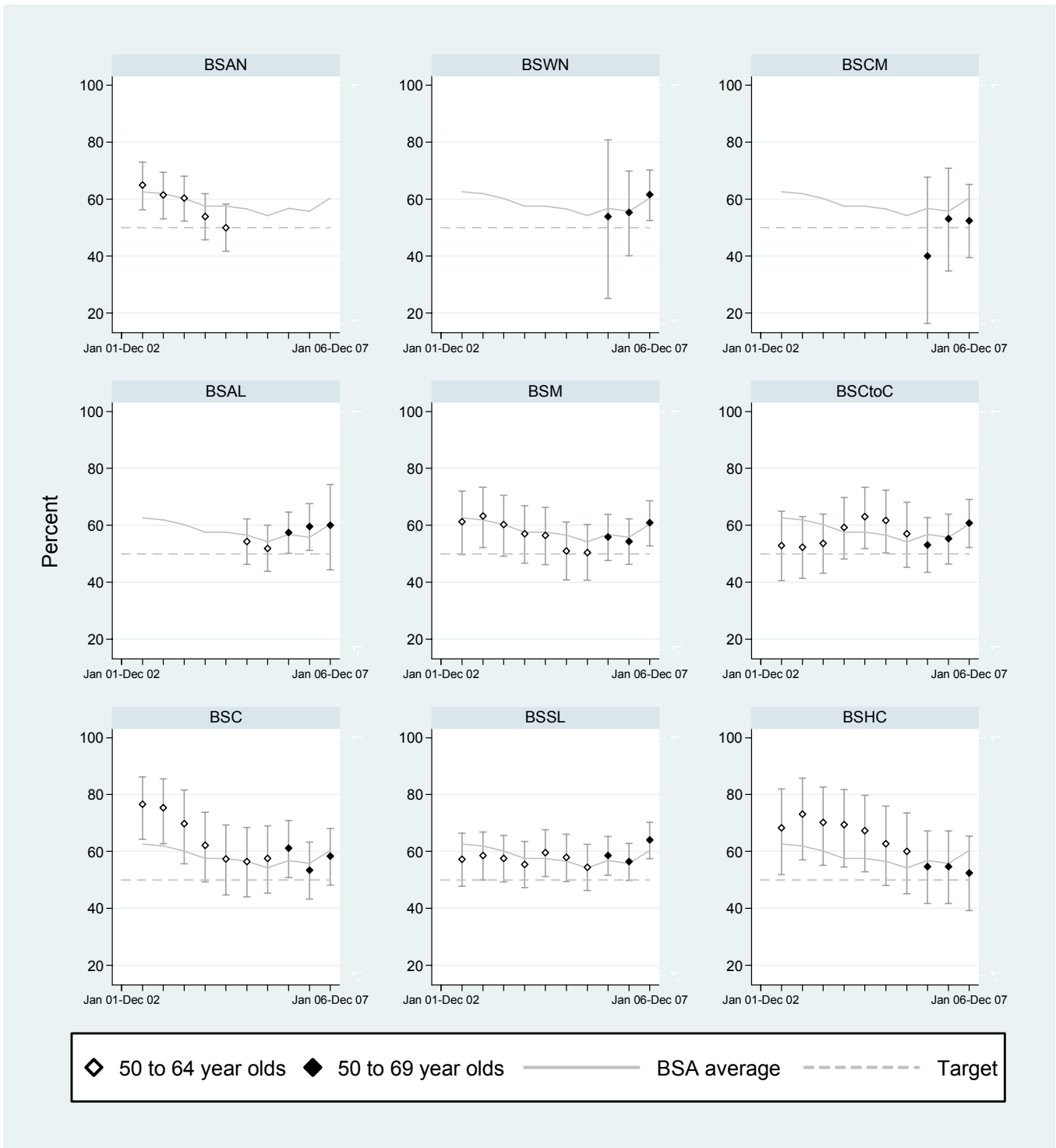
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 3c.1: Proportion invasive cancers <15mm, initial screens, 2 years**

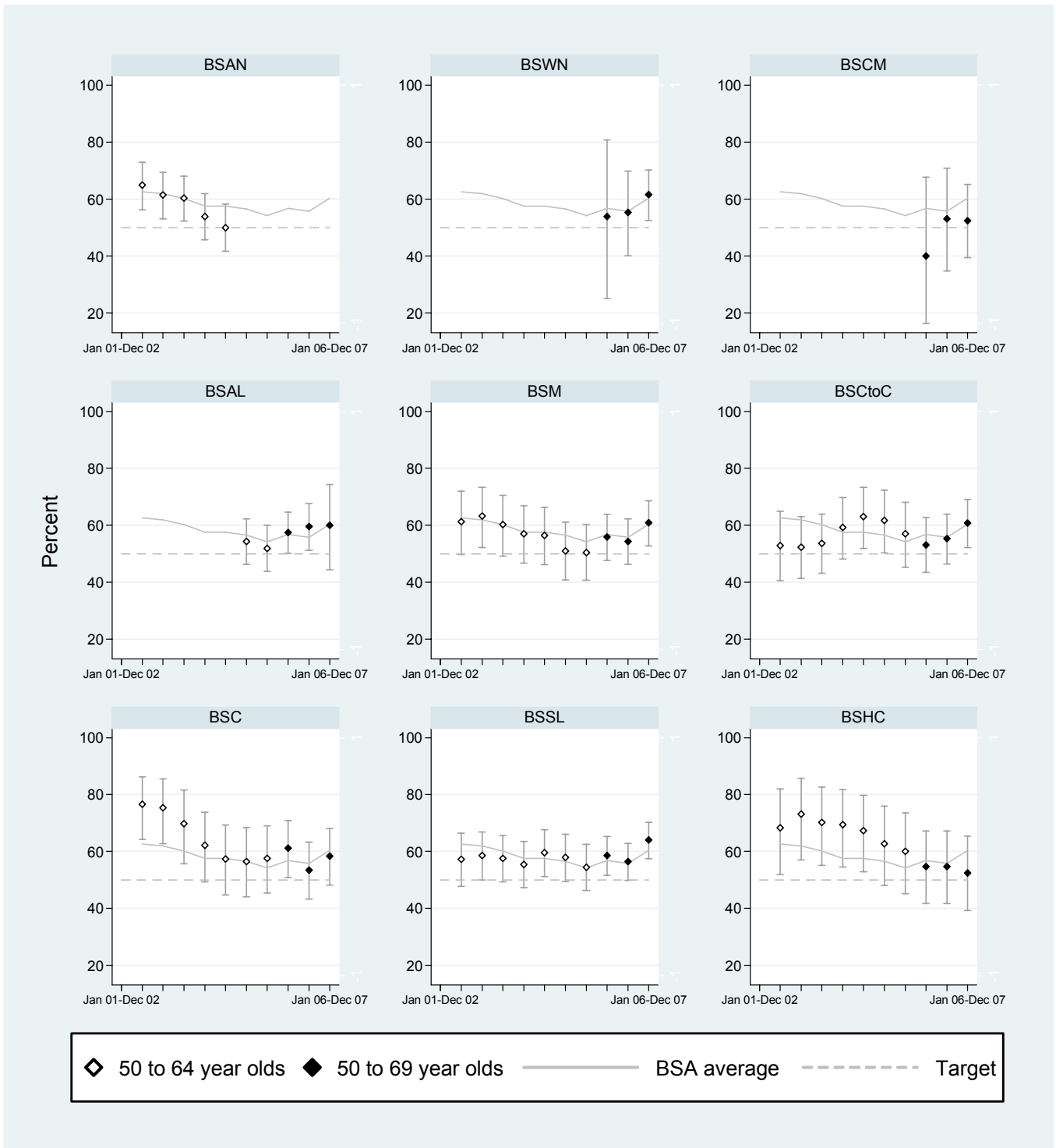




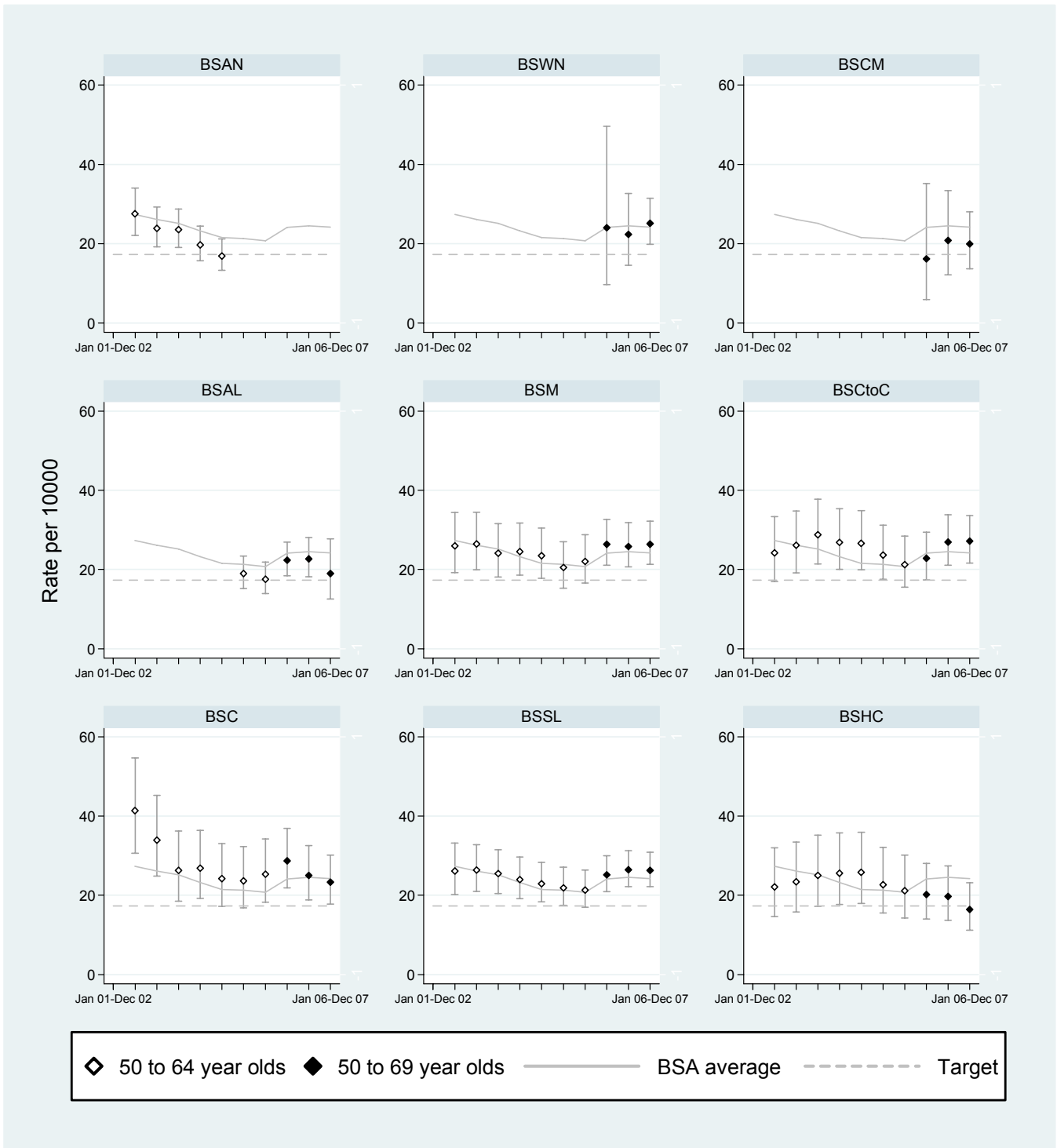
**Figure 3c.1: Proportion invasive cancers <15mm, subsequent screens, 2 years**



**Figure 3c.2: Invasive cancers <15mm per 10,000 women screened, initial screens, 2 years**



**Figure 3c.2: Invasive cancers <15mm per 10,000 women screened, subsequent screens, 2 years**



### 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 50-69 years

**Table 3d: Proportion of node negative invasive cancers, women aged 50-69 years, 2 years**

	Initial					Subsequent				
	Invasive cancers, node negative	Total invasive cancers	% (95%CI)			Invasive cancers, node negative	Total invasive cancers	% (95%CI)		
BSWN	51	61	83.6 (71.9-91.8)	✓✓✓	*	111	125	88.8 (81.9-93.7)	✓✓✓	*
BSCM	27	36	75.0 (57.8-87.9)	✓	ns	51	63	81.0 (69.1-89.8)	✓	ns
BSAL	18	24	75.0 (53.3-90.2)	✓	ns	40	45	88.9 (75.9-96.3)	✓✓✓	*
BSM	16	29	55.2 (35.7-73.6)	✓	ns	123	156	78.8 (71.6-85.0)	✓	ns
BSCtoC	21	35	60.0 (42.1-76.1)	✓	ns	110	138	79.7 (72.0-86.1)	✓	ns
BSC	15	24	62.5 (40.6-81.2)	✓	ns	83	101	82.2 (73.3-89.1)	✓	ns
BSSL	46	57	80.7 (68.1-90.0)	✓	ns	178	231	77.1 (71.1-82.3)	✓	ns
BSHC	6	11	54.5 (23.4-83.3)	✓	ns	48	61	78.7 (66.3-88.1)	✓	ns
BSA Total	200	277	72.2 (66.5-77.4)	✓	ns	744	920	80.9 (78.2-83.4)	✓✓	*

Note: Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval

✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

### 3.e. DCIS diagnosis

#### *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 programme are DCIS.

### 3.e. DCIS, women aged 50-69 years

**Table 3e: Women with DCIS as a percentage of all screen detected cancers, 2 years**

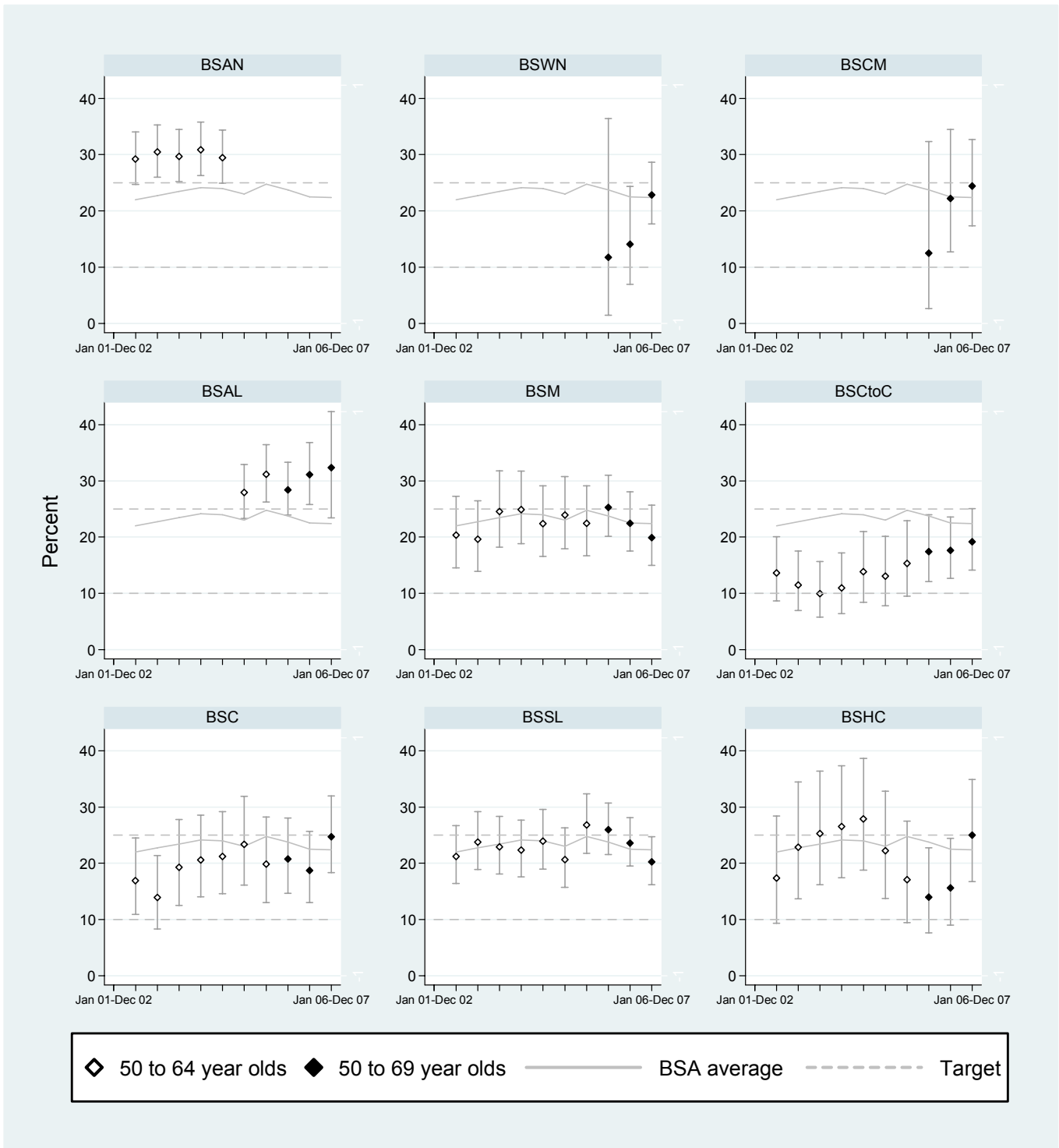
	DCIS	Total cancers	% (95%CI)
BSWN	55	241	22.8 (17.7-28.6)
BSCM	32	131	24.4 (17.3-32.7)
BSAL	33	102	32.4 (23.4-42.3)
BSM	46	231	19.9 (15.0-25.7)
BSCtoC	41	214	19.2 (14.1-25.1)
BSC	41	166	24.7 (18.3-32.0)
BSSL	73	361	20.2 (16.2-24.7)
BSHC	24	96	25.0 (16.7-34.9)
BSA Total	345	1,542	22.4 (20.3-24.5)

Note: Data for BSWN for '2 years' is based on 23 month period

Note: The number of invasive cancers noted in Staging and Grading and Treatment indicator tables may differ from earlier tables in the screening and assessment section. Only completed treatment data is included in the Staging and Grading / Treatment section of this report. Some data maybe incomplete at report date, or some woman diagnosed with cancer may decline treatment and therefore will not be included in staging and grading data.

Exact Binomial 95% Confidence Intervals presented

**Figure 3e: Women with DCIS as a percentage of all screen detected cancers, 2 years**



## 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:*

≥ 90% notified within 10 working days (expected).

≥ 95% notified within 10 working days (desirable).

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

	Last 6 months			Last 2 years						
	Women notified within 10 working days	Women screened	% (95%CI)	Women notified within 10 working days	Women screened	% (95%CI)				
<i>45-49 years</i>										
BSWN	3,226	3,551	90.8 (89.9-91.8)	10,232	11,643	87.9 (87.3-88.5)				
BSCM	2,150	2,273	94.6 (93.6-95.5)	5,443	5,826	93.4 (92.8-94.0)				
BSAL	1,233	1,372	89.9 (88.1-91.4)	4,661	5,127	90.9 (90.1-91.7)				
BSM	2,637	2,878	91.6 (90.6-92.6)	9,799	10,327	94.9 (94.4-95.3)				
BSCtoC	3,079	3,119	98.7 (98.3-99.1)	8,563	8,745	97.9 (97.6-98.2)				
BSC	2,296	2,370	96.9 (96.1-97.5)	6,696	7,464	89.7 (89.0-90.4)				
BSSL	4,783	4,912	97.4 (96.9-97.8)	20,262	20,557	98.6 (98.4-98.7)				
BSHC	1,999	2,397	83.4 (81.8-84.9)	4,566	5,423	84.2 (83.2-85.2)				
BSA Total	21,403	22,872	93.6 (93.3-93.9)	70,222	75,112	93.5 (93.3-93.7)				
<i>50-69 years</i>										
BSWN	10,091	10,789	93.5 (93.0-94.0)	✓	*	35,164	39,095	89.9 (89.6-90.2)	✓	ns
BSCM	5,431	5,675	95.7 (95.1-96.2)	✓✓	*	20,462	21,747	94.1 (93.8-94.4)	✓	*
BSAL	4,013	4,237	94.7 (94.0-95.4)	✓✓	*	17,516	18,354	95.4 (95.1-95.7)	✓✓	*
BSM	9,616	10,392	92.5 (92.0-93.0)	✓	*	39,602	41,139	96.3 (96.1-96.4)	✓✓	*
BSCtoC	8,938	9,028	99.0 (98.8-99.2)	✓✓✓	*	35,497	36,064	98.4 (98.3-98.6)	✓✓	*
BSC	7,013	7,180	97.7 (97.3-98.0)	✓✓	*	27,201	29,596	91.9 (91.6-92.2)	✓	*
BSSL	15,255	15,523	98.3 (98.1-98.5)	✓✓	*	61,529	62,025	99.2 (99.1-99.3)	✓✓✓	*
BSHC	6,120	6,763	90.5 (89.8-91.2)	✓	ns	19,968	21,833	91.5 (91.1-91.8)	✓	*
BSA Total	66,477	69,587	95.5 (95.4-95.7)	✓✓	*	256,939	269,853	95.2 (95.1-95.3)	✓✓	*

Note: Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

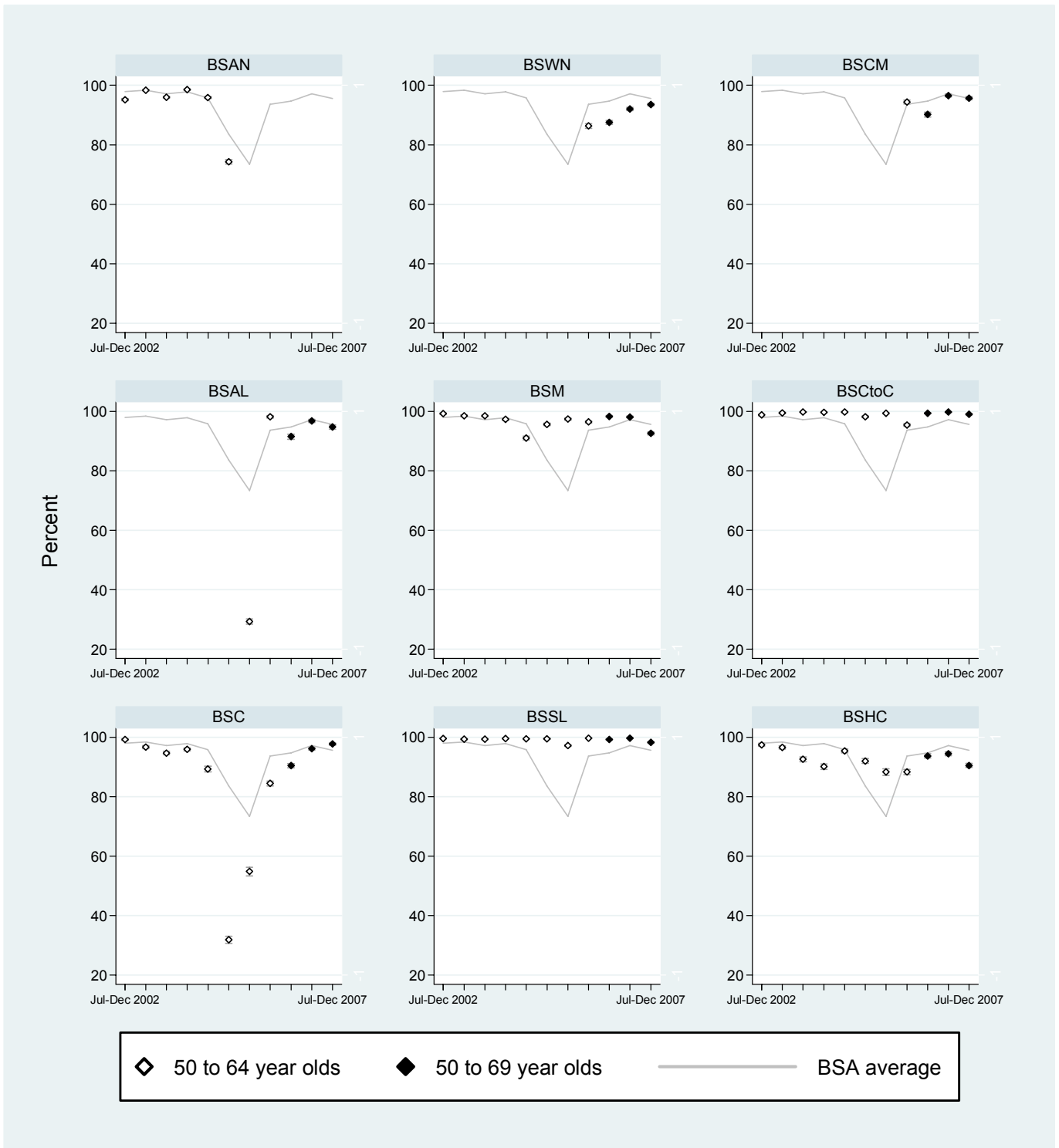
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

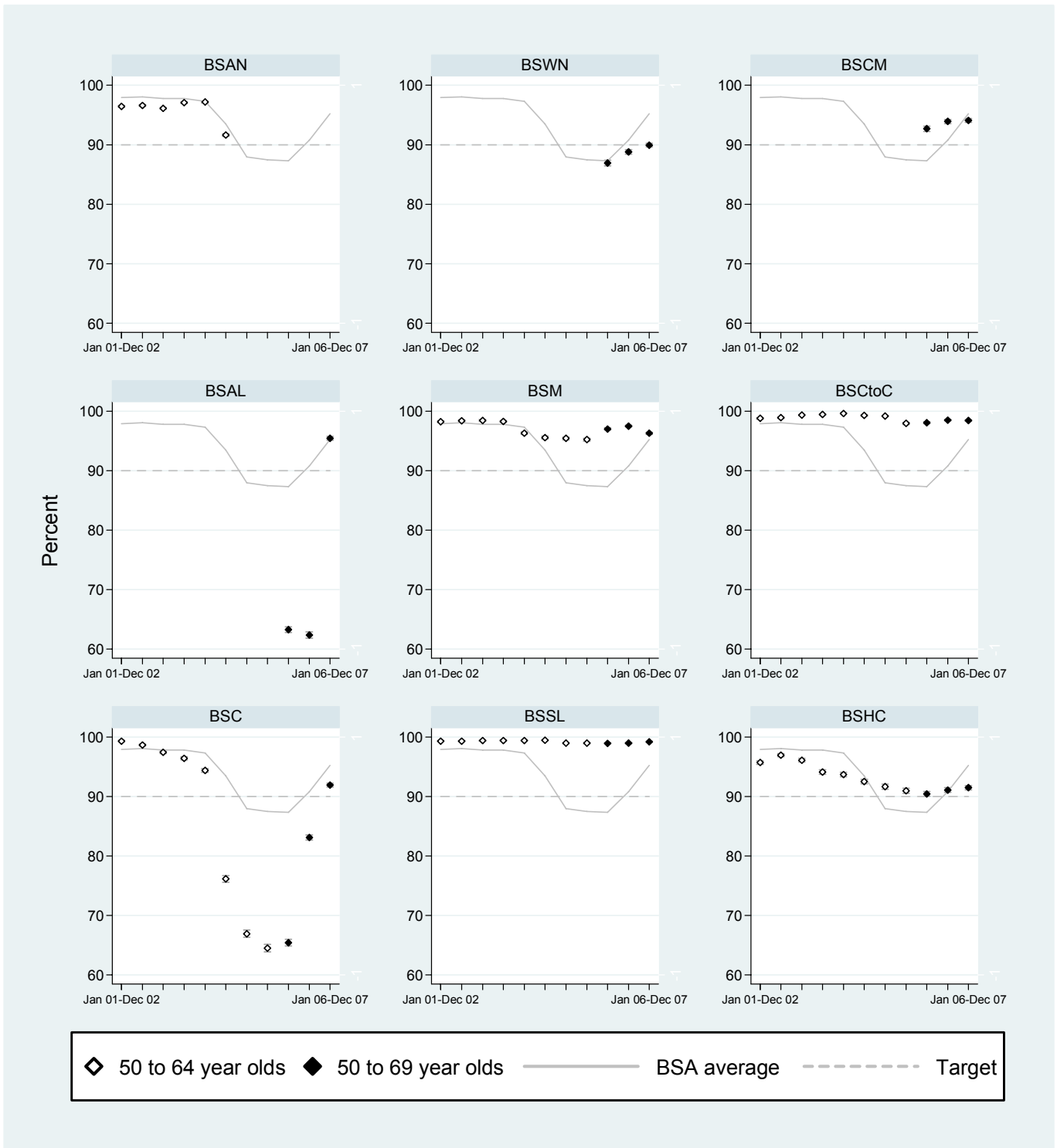
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 5a: Percentage of women notified of screening results within 10 working days, 6 months**





**Figure 5a: Percentage of women notified of screening results within 10 working days, 2 years**



## 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 first assessment appointment within 15 working days**

	Last 6 months			Last 2 years		
	Number offered assessment within 15 working days	Number referred to assessment	% (95%CI)	Number offered assessment within 15 working days	Number referred to assessment	% (95%CI)
<i>45-49 years</i>						
BSWN	229	300	76.3 (71.1-81.0)	682	980	69.6 (66.6-72.5)
BSCM	180	231	77.9 (72.0-83.1)	424	562	75.4 (71.7-79.0)
BSAL	66	99	66.7 (56.5-75.8)	281	391	71.9 (67.1-76.3)
BSM	183	227	80.6 (74.9-85.5)	748	845	88.5 (86.2-90.6)
BSCtoC	164	184	89.1 (83.7-93.2)	465	555	83.8 (80.4-86.8)
BSC	138	158	87.3 (81.1-92.1)	484	548	88.3 (85.3-90.9)
BSSL	271	282	96.1 (93.1-98.0)	1,195	1,196	99.9 (99.5-100.0)
BSHC	52	203	25.6 (19.8-32.2)	156	454	34.4 (30.0-38.9)
BSA Total	1,283	1,684	76.2 (74.1-78.2)	4,435	5,531	80.2 (79.1-81.2)
<i>50-69 years</i>						
BSWN	398	535	74.4 (70.5-78.0) *** *	1,189	1,733	68.6 (66.4-70.8) *** *
BSCM	167	236	70.8 (64.5-76.5) *** *	822	1,076	76.4 (73.7-78.9) *** *
BSAL	117	162	72.2 (64.7-79.0) *** *	652	764	85.3 (82.6-87.8) ** *
BSM	346	453	76.4 (72.2-80.2) *** *	1,568	1,802	87.0 (85.4-88.5) ✓ *
BSCtoC	186	225	82.7 (77.1-87.4) ** *	875	1,080	81.0 (78.6-83.3) ** *
BSC	228	259	88.0 (83.4-91.7) ✓ ns	1,045	1,185	88.2 (86.2-90.0) ✓ *
BSSL	482	508	94.9 (92.6-96.6) ✓✓ *	1,789	1,812	98.7 (98.1-99.2) ✓✓ *
BSHC	96	260	36.9 (31.0-43.1) *** *	372	786	47.3 (43.8-50.9) *** *
BSA Total	2,020	2,638	76.6 (74.9-78.2) *** *	8,312	10,238	81.2 (80.4-81.9) ** *

Note: Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

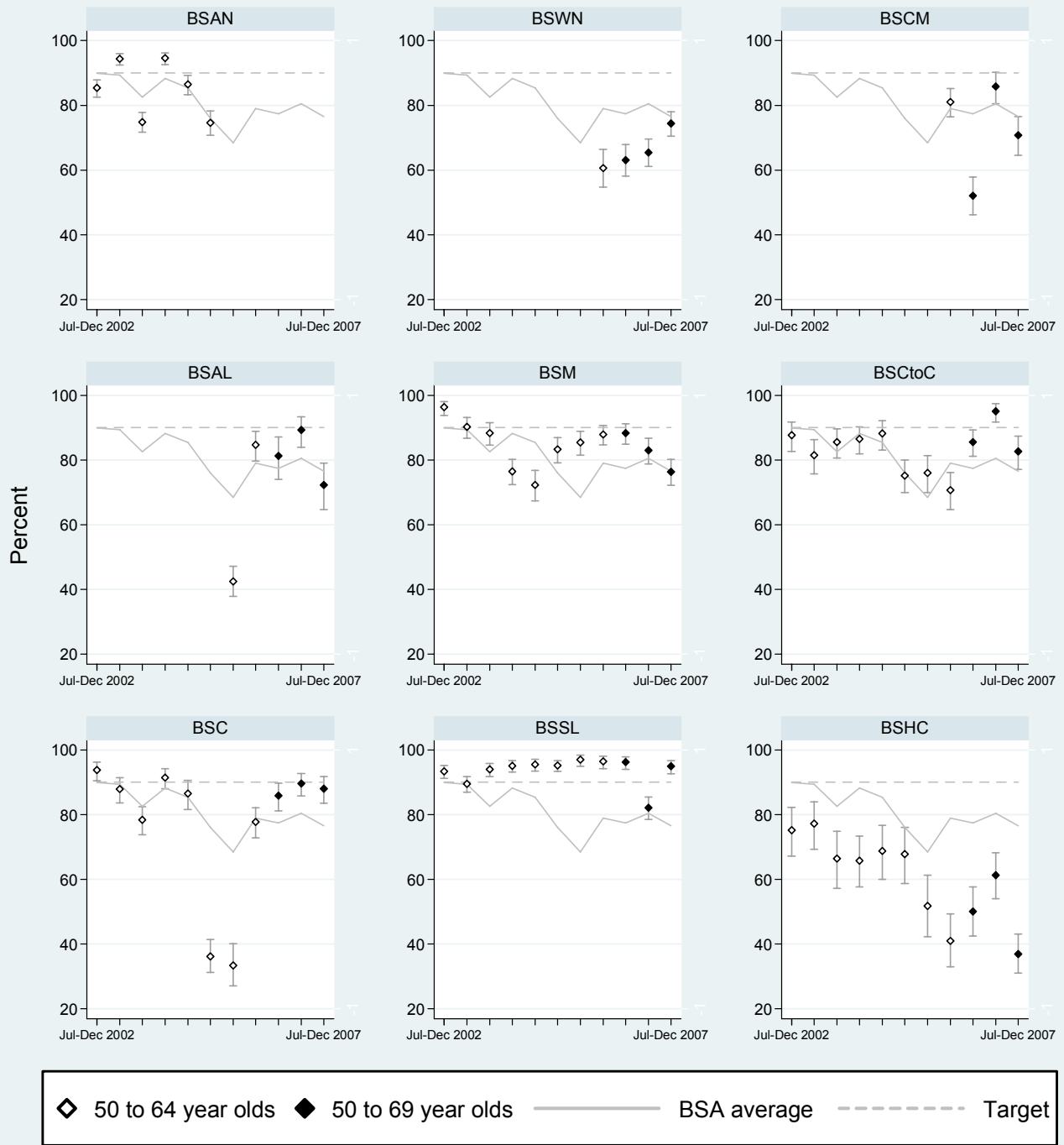
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

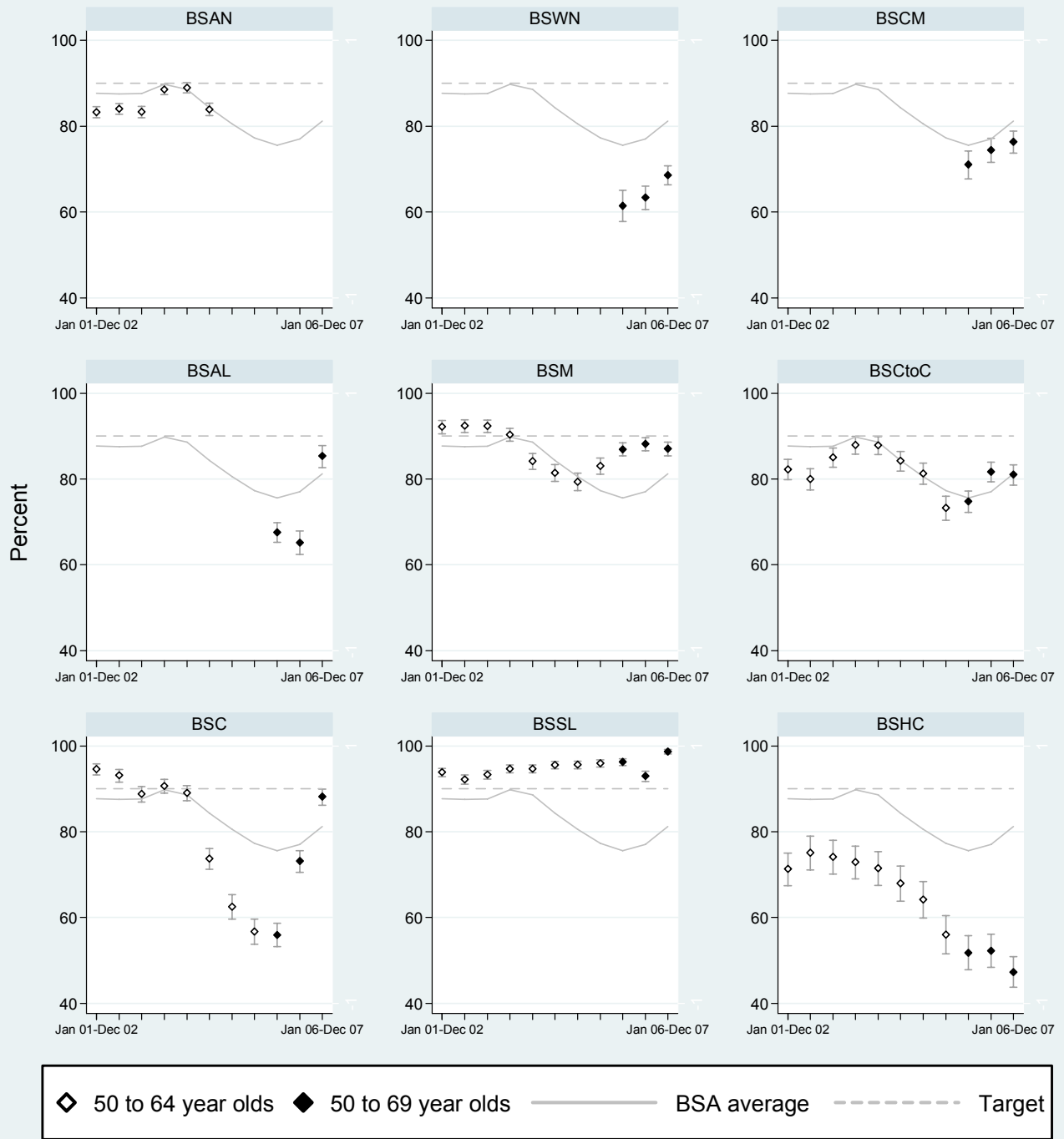
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 5b: Percentage of women offered first assessment appointment within 15 working days, 6 months.**



**Figure 5b: Percentage of women offered first assessment appointment within 15 working days, 2 years**



## 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: Women receiving needle biopsy within 5 working days of assessment**

	6 months				2 years					
	Needle biopsies within 5 days of assessment	Total needle biopsies	% (95%CI)		Needle biopsies within 5 days of assessment	Total needle biopsies	% (95%CI)			
<i>45-49 years</i>										
BSWN	74	76	97.4 (90.8-99.7)		267	274	97.4 (94.8-99.0)			
BSCM	60	68	88.2 (78.1-94.8)		169	184	91.8 (86.9-95.4)			
BSAL	41	44	93.2 (81.3-98.6)		151	170	88.8 (83.1-93.1)			
BSM	59	73	80.8 (69.9-89.1)		221	255	86.7 (81.9-90.6)			
BSCtoC	46	47	97.9 (88.7-99.9)		160	165	97.0 (93.1-99.0)			
BSC	34	36	94.4 (81.3-99.3)		131	138	94.9 (89.8-97.9)			
BSSL	60	71	84.5 (74.0-92.0)		307	367	83.7 (79.5-87.3)			
BSHC	36	43	83.7 (69.3-93.2)		86	98	87.8 (79.6-93.5)			
BSA Total	410	458	89.5 (86.3-92.2)		1,492	1,651	90.4 (88.8-91.8)			
<i>50-69 years</i>										
BSWN	167	172	97.1 (93.3-99.0)	✓✓	*	595	611	97.4 (95.8-98.5)	✓✓	*
BSCM	73	83	88.0 (79.0-94.1)	✓	ns	350	376	93.1 (90.0-95.4)	✓	*
BSAL	58	72	80.6 (69.5-88.9)	xxx	*	283	321	88.2 (84.1-91.5)	✓	ns
BSM	123	152	80.9 (73.8-86.8)	xxx	*	518	620	83.5 (80.4-86.4)	xx	*
BSCtoC	84	86	97.7 (91.9-99.7)	✓✓	*	420	429	97.9 (96.1-99.0)	✓✓	*
BSC	66	71	93.0 (84.3-97.7)	✓	ns	320	343	93.3 (90.1-95.7)	✓	*
BSSL	144	166	86.7 (80.6-91.5)	✓	ns	627	722	86.8 (84.2-89.2)	✓	*
BSHC	50	51	98.0 (89.6-100.0)	✓	ns	182	198	91.9 (87.2-95.3)	✓	ns
BSA Total	765	853	89.7 (87.4-91.6)	✓	ns	3,295	3,620	91.0 (90.0-91.9)	✓	*

Note: Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

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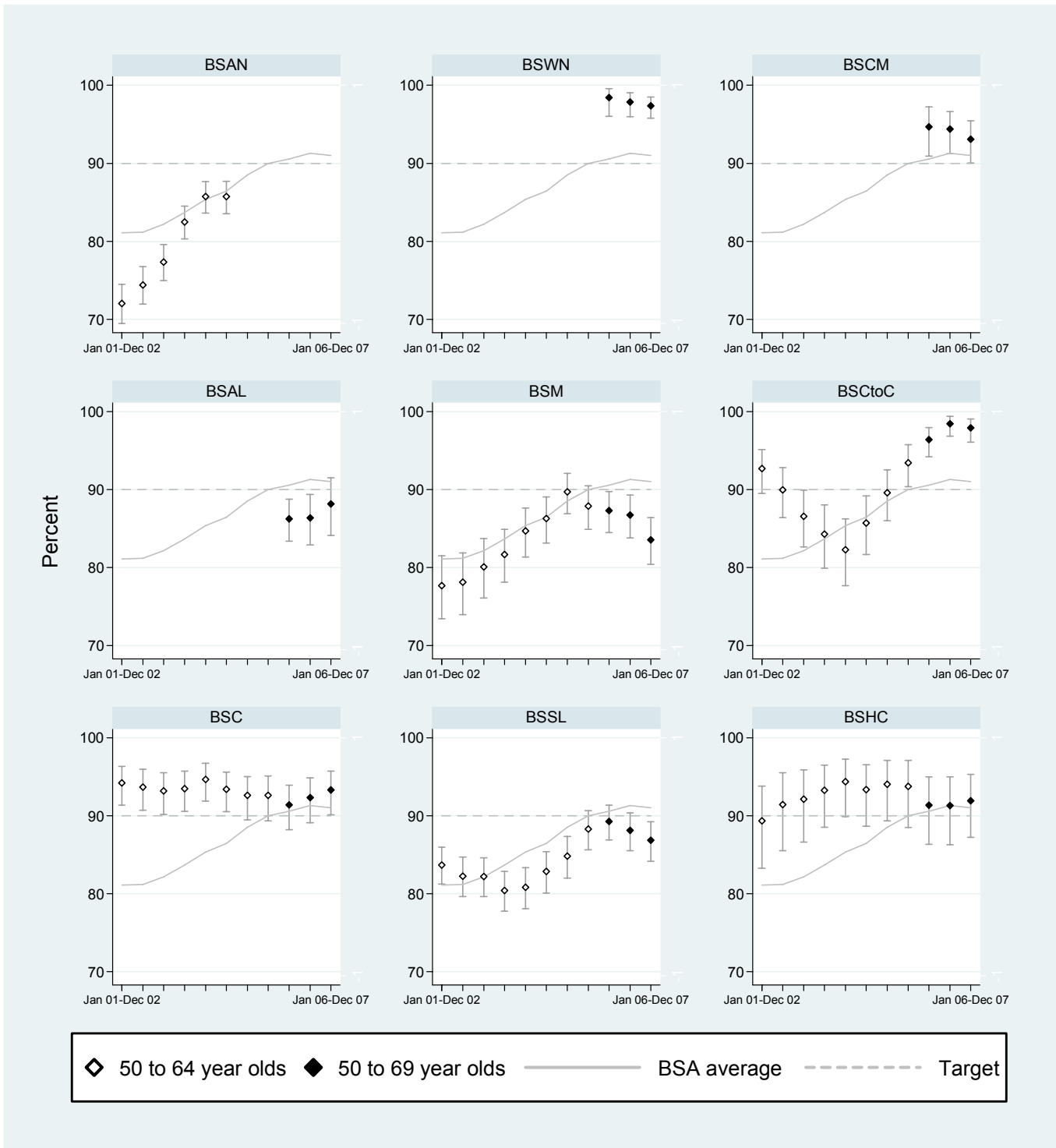
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 5c1: Proportion of women having a needle biopsy procedure within 5 working days, 2 years**



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

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.

**Table 5c.2: Proportion of women having an open biopsy procedure within 15 working days**

	Last 6 months			Last 2 years				
	Open biopsies within 15 working days of notification	Total open biopsies	% (95%CI)	Open biopsies within 15 working days of notification	Total open biopsies	% (95%CI)		
<i>45-49 years</i>								
BSWN	3	5		10	24	41.7 (22.1-63.4)		
BSCM	1	1		10	10	100.0 (69.2-100.0)		
BSAL	1	2		10	13	76.9 (46.2-95.0)		
BSM	3	4		6	20	30.0 (11.9-54.3)		
BSCtoC	1	6		3	12	25.0 (5.5-57.2)		
BSC	0	2		7	10	70.0 (34.8-93.3)		
BSSL	4	4		20	21	95.2 (76.2-99.9)		
BSHC	8	8		15	17	88.2 (63.6-98.5)		
BSA Total	21	32	65.6 (46.8-81.4)	81	127	63.8 (54.8-72.1)		
<i>50-69 years</i>								
BSWN	8	18		30	48	62.5 (47.4-76.0)	***	*
BSCM	3	3		27	27	100.0 (87.2-100.0)	✓	ns
BSAL	7	8		29	37	78.4 (61.8-90.2)	✓	ns
BSM	5	9		16	49	32.7 (19.9-47.5)	***	*
BSCtoC	0	2		6	20	30.0 (11.9-54.3)	***	*
BSC	6	11		14	30	46.7 (28.3-65.7)	***	*
BSSL	7	8		35	38	92.1 (78.6-98.3)	✓	ns
BSHC	8	9		37	43	86.0 (72.1-94.7)	✓	ns
BSA Total	44	68	64.7 (52.2-75.9)	194	292	66.4 (60.7-71.8)	***	*

Note: 6 monthly data for lead providers not shown due to small numbers.

Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

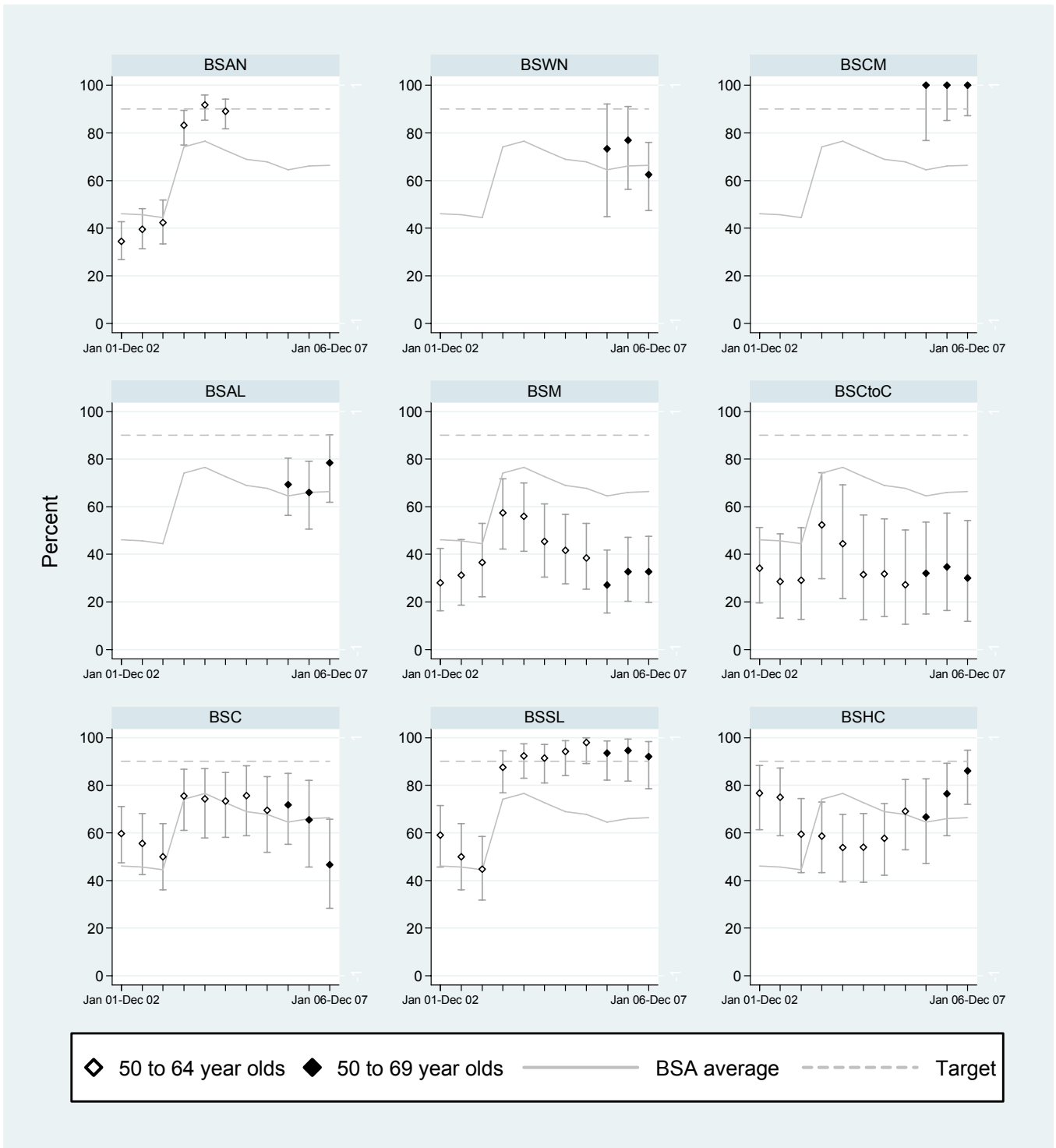
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 5c2: Proportion of women having an open biopsy procedure within 15 working days, 2 years**





#### 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 five working days of final diagnostic biopsy.

**Table 5d: Percentage of women receiving final diagnostic biopsy results within 5 working days**

	Last 6 months				Last 2 years				
	Results reported within 5 working days of final biopsy	Number with final diagnostic biopsy	% (95%CI)		Results reported within 5 working days of final biopsy	Number with final diagnostic biopsy	% (95%CI)		
<i>45-49 years</i>									
BSWN	72	84	85.7 (76.4-92.4)		252	304	82.9 (78.2-87.0)		
BSCM	64	68	94.1 (85.6-98.4)		160	186	86.0 (80.2-90.7)		
BSAL	43	44	97.7 (88.0-99.9)		163	170	95.9 (91.7-98.3)		
BSM	58	73	79.5 (68.4-88.0)		191	258	74.0 (68.2-79.3)		
BSCtoC	43	48	89.6 (77.3-96.5)		152	168	90.5 (85.0-94.5)		
BSC	35	37	94.6 (81.8-99.3)		120	139	86.3 (79.5-91.6)		
BSSL	74	77	96.1 (89.0-99.2)		364	373	97.6 (95.5-98.9)		
BSHC	44	49	89.8 (77.8-96.6)		91	107	85.0 (76.9-91.2)		
BSA Total	433	480	90.2 (87.2-92.7)		1,493	1,705	87.6 (85.9-89.1)		
BSWN	142	185	76.8 (70.0-82.6)	*** *	527	649	81.2 (78.0-84.1)	** *	
BSCM	75	84	89.3 (80.6-95.0)	✓ ns	322	380	84.7 (80.7-88.2)	** *	
BSAL	67	76	88.2 (78.7-94.4)	✓ ns	285	327	87.2 (83.0-90.6)	✓ ns	
BSM	133	156	85.3 (78.7-90.4)	✓ ns	493	627	78.6 (75.2-81.8)	*** *	
BSCtoC	78	84	92.9 (85.1-97.3)	✓ ns	370	429	86.2 (82.6-89.4)	✓ *	
BSC	65	72	90.3 (81.0-96.0)	✓ ns	287	346	82.9 (78.6-86.8)	** *	
BSSL	162	168	96.4 (92.4-98.7)	✓✓ *	706	727	97.1 (95.6-98.2)	✓✓ *	
BSHC	49	55	89.1 (77.8-95.9)	✓ ns	181	210	86.2 (80.8-90.6)	✓ ns	
BSA Total	771	880	87.6 (85.3-89.7)	✓ *	3,171	3,695	85.8 (84.7-86.9)	✓ *	

Data for BSWN for '2 years' is based on 23 month period

Exact Binomial 95% Confidence Intervals presented

\* Statistically different from target value, ns Not significant

✓ On target, difference of <5% better or worse than target value based on point estimate or 95% Confidence Interval not significantly different from the target

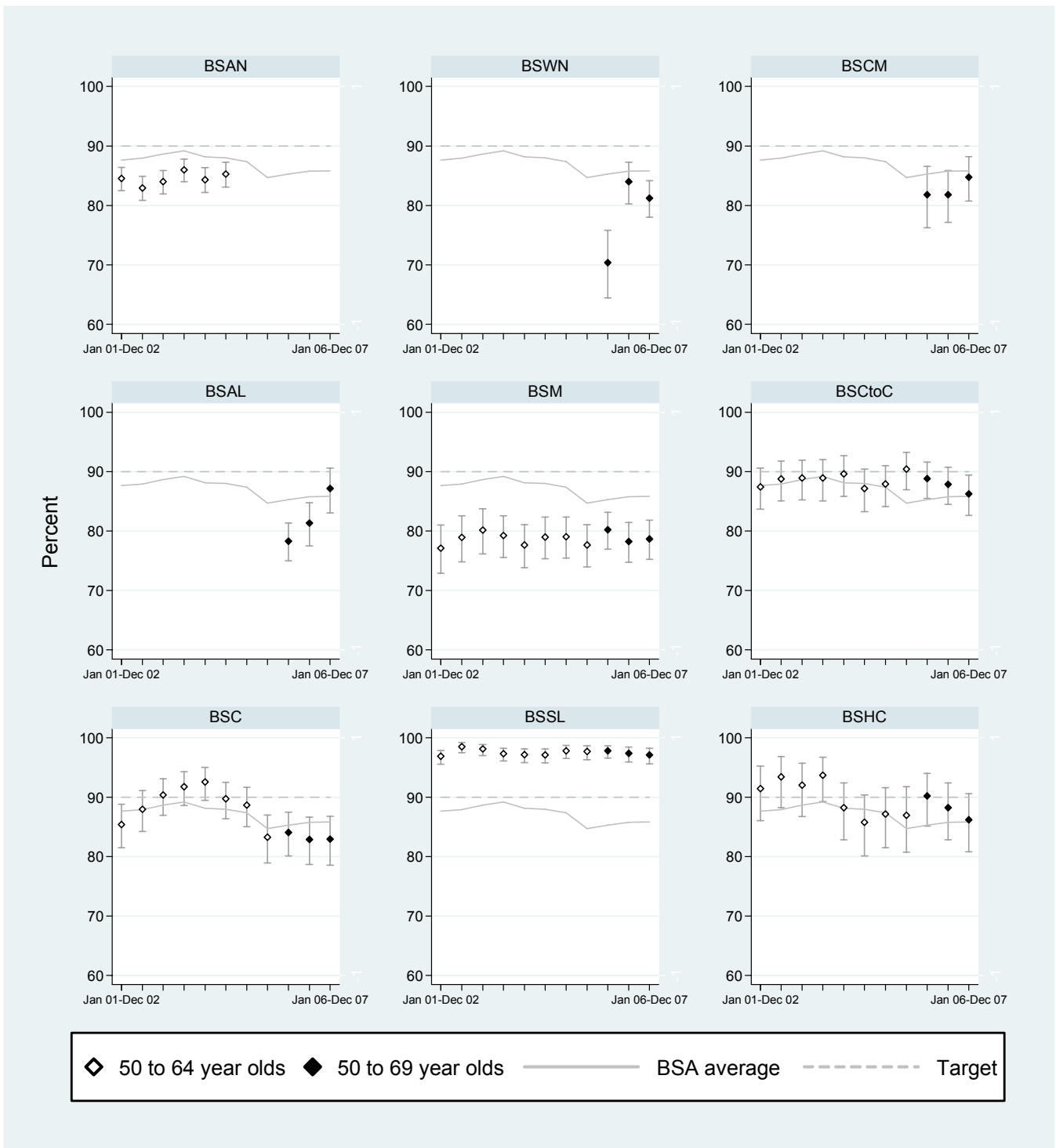
✓✓ Difference of 5-9% magnitude better than target value and statistically significant

✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

**Figure 5d: Percentage of women receiving final diagnostic biopsy results within 5 working days, 2 years**



## APPENDIX A: POPULATION DENOMINATORS BY AGE-GROUP

Year	Lead Provider	Reporting period	Annual Census projection estimates						Smoothed 6 monthly population estimates					
			45-49	50-54	55-59	60-64	65-69	50-69*	45-49	50-54	55-59	60-64	65-69	50-69*
2007	BSWN	Jul-Dec, 2007	26115	21765	19655	16165	13010	70595	26115	21765	19655	16165	13010	70595
2007	BSWN	Jan-Jun, 2007	25260	21110	19535	15245	12445	68335	25688	21438	19595	15705	12728	69465
2006	BSWN	Jul-Dec, 2006	25260	21110	19535	15245	12445	68335	25260	21110	19535	15245	12445	68335
2006	BSWN	Jan-Jun, 2006		20530	19010	14790		54330		20530	19010	14790		54330
2007	BSAL	Jul-Dec, 2007	15940	13290	11070	8340	6690	39390	15940	13290	11070	8340	6690	39390
2007	BSAL	Jan-Jun, 2007	15370	13000	11000	7840	6360	38200	15655	13145	11035	8090	6525	38795
2006	BSAL	Jul-Dec, 2006	15370	13000	11000	7840	6360	38200	15370	13000	11000	7840	6360	38200
2006	BSAL			12610	10670	7610		30890		12610	10670	7610		30890
2005	BSAL			12685	11295	8625		32605		12685	11295	8625		32605
2007	BSCM	Jul-Dec, 2007	15965	13275	11820	9485	7490	42070	15965	13275	11820	9485	7490	42070
2007	BSCM	Jan-Jun, 2007	15255	12980	11670	8975	7035	40660	15610	13128	11745	9230	7263	41365
2006	BSCM	Jul-Dec, 2006	15255	12980	11670	8975	7035	40660	15255	12980	11670	8975	7035	40660
2006	BSCM	Jan-Jun, 2006		12685	11295	8625		32605		12685	11295	8625		32605
2005	BSCM	Jul-Dec, 2005		12685	11295	8625		32605		12685	11295	8625		32605
2005	BSAN	Jan-Jun, 2005		44870	39290	30050		114210		45135	39703	30323		115160
2004	BSAN	Jul-Dec, 2004		44870	39290	30050		114210		44870	39290	30050		114210
2004	BSAN	Jan-Jun, 2004		43810	37640	28960		110410		44340	38465	29505		112310
2003	BSAN	Jul-Dec, 2003		43810	37640	28960		110410		43810	37640	28960		110410
2003	BSAN	Jan-Jun, 2003		44338	36540	28258		109135		43317	35964	27926		107206
2002	BSAN	Jul-Dec, 2002		42824	34287	26891		104002		42824	34287	26891		104002
2007	BSM	Jul-Dec, 2007	24285	21400	18945	15900	13680	69925	24285	21400	18945	15900	13680	69925
2007	BSM	Jan-Jun, 2007	23590	20580	18950	15055	13170	67755	23938	20990	18948	15478	13425	67755
2006	BSM	Jul-Dec, 2006	23590	20580	18950	15055	13170	67755	23590	20580	18950	15055	13170	67755
2006	BSM	Jan-Jun, 2006		20025	18305	15005		53335		20303	18628	15030		53960
2005	BSM	Jul-Dec, 2005		20025	18305	15005		53335		20025	18305	15005		53335
2005	BSM	Jan-Jun, 2005		19495	17485	14595		51575		19760	17895	14800		52455
2004	BSM	Jul-Dec, 2004		19495	17485	14595		51575		19495	17485	14595		51575
2004	BSM	Jan-Jun, 2004		18900	16800	14190		49890		19198	17143	14393		50733
2003	BSM	Jul-Dec, 2003		18900	16800	14190		49890		18900	16800	14190		49890
2003	BSM	Jan-Jun, 2003		18713	16175	13935		48823		18765	16246	13960		48971
2002	BSM	Jul-Dec, 2002		18629	15692	13730		48051		18629	15692	13730		48051
2007	BSCtoC	Jul-Dec, 2007	20525	17965	16155	13220	11565	58905	20525	17965	16155	13220	11565	58905
2007	BSCtoC	Jan-Jun, 2007	20035	17435	16190	12585	11130	57340	20280	17700	16173	12903	11348	57340
2006	BSCtoC	Jul-Dec, 2006	20035	17435	16190	12585	11130	57340	20035	17435	16190	12585	11130	57340
2006	BSCtoC	Jan-Jun, 2006		17090	15565	12465		45120		17263	15878	12525		45665
2005	BSCtoC	Jul-Dec, 2005		17090	15565	12465		45120		17090	15565	12465		45120
2005	BSCtoC	Jan-Jun, 2005		16810	14990	12375		44175		16950	15278	12420		44648
2004	BSCtoC	Jul-Dec, 2004		16810	14990	12375		44175		16810	14990	12375		44175
2004	BSCtoC	Jan-Jun, 2004		16525	14365	12135		43025		16668	14678	12255		43600
2003	BSCtoC	Jul-Dec, 2003		16525	14365	12135		43025		16525	14365	12135		43025
2003	BSCtoC	Jan-Jun, 2003		16795	13935	12013		42743		16353	13756	11800		41909
2002	BSCtoC	Jul-Dec, 2002		16181	13146	11465		40792		16181	13146	11465		40792

\*Note: 50-69 populations presented from Jul-Dec, 2006. For previous 6 month periods this column represents 50-64 year populations.

Year	Lead Provider	Reporting period	Annual Census projection estimates						Smoothed 6 monthly population estimates					
			45-49	50-54	55-59	60-64	65-69	50-69*	45-49	50-54	55-59	60-64	65-69	50-69*
2007	BSC	Jul-Dec, 2007	17545	14525	13150	10335	8495	46505	17545	14525	13150	10335	8495	46505
2007	BSC	Jan-Jun, 2007	16950	14225	13200	9795	8175	45395	17248	14375	13175	10065	8335	45950
2006	BSC	Jul-Dec, 2006	16950	14225	13200	9795	8175	37220	16950	14225	13200	9795	8175	45395
2006	BSC	Jan-Jun, 2006		13920	12905	9675		36500		14073	13053	9735		36860
2005	BSC	Jul-Dec, 2005		13920	12905	9675		36500		13920	12905	9675		36500
2005	BSC	Jan-Jun, 2005		13725	12460	9475		35660		13823	12683	9575		36080
2004	BSC	Jul-Dec, 2004		13725	12460	9475		35660		13725	12460	9475		35660
2004	BSC	Jan-Jun, 2004		13690	11820	9320		34830		13708	12140	9398		35245
2003	BSC	Jul-Dec, 2003		13690	11820	9320		34830		13690	11820	9320		34830
2003	BSC	Jan-Jun, 2003		13723	11293	8913		33928		13560	11248	8940		33747
2002	BSC	Jul-Dec, 2002		13430	10675	8559		32664		13430	10675	8559		32664
2007	BSSL	Jul-Dec, 2007	26955	23845	22045	17675	14780	78345	26955	23845	22045	17675	14780	78345
2007	BSSL	Jan-Jun, 2007	26290	23295	21945	16705	14130	76075	26623	23570	21995	17190	14455	77210
2006	BSSL	Jul-Dec, 2006	26290	23295	21945	16705	14130	76075	26290	23295	21945	16705	14130	76075
2006	BSSL	Jan-Jun, 2006		22660	21435	16295		60390		22978	21690	16500		61168
2005	BSSL	Jul-Dec, 2005		22660	21435	16295		60390		22660	21435	16295		60390
2005	BSSL	Jan-Jun, 2005		22435	20435	15925		58795		22548	20935	16110		59593
2004	BSSL	Jul-Dec, 2004		22435	20435	15925		58795		22435	20435	15925		58795
2004	BSSL	Jan-Jun, 2004		22240	19300	15530		57070		22338	19868	15728		57933
2003	BSSL	Jul-Dec, 2003		22240	19300	15530		57070		22240	19300	15530		57070
2003	BSSL	Jan-Jun, 2003		22320	18390	15250		55960		22059	18366	15147		55572
2002	BSSL	Jul-Dec, 2002		21878	17432	14764		54074		21878	17432	14764		54074
2007	BSHC	Jul-Dec, 2007	11180	9535	8765	7055	6235	31590	11180	9535	8765	7055	6235	31590
2007	BSHC	Jan-Jun, 2007	10890	9435	8760	6670	5970	30835	11035	9485	8763	6863	6103	31213
2006	BSHC	Jul-Dec, 2006	10890	9435	8760	6670	5970	30835	10890	9435	8760	6670	5970	30835
2006	BSHC	Jan-Jun, 2006		9160	8520	6745		24425		9298	8640	6708		24645
2005	BSHC	Jul-Dec, 2005		9160	8520	6745		24425		9160	8520	6745		24425
2005	BSHC	Jan-Jun, 2005		8975	8265	6625		23865		9068	8393	6685		24145
2004	BSHC	Jul-Dec, 2004		8975	8265	6625		23865		8975	8265	6625		23865
2004	BSHC	Jan-Jun, 2004		8950	7850	6600		23400		8963	8058	6613		23633
2003	BSHC	Jul-Dec, 2003		8950	7850	6600		23400		8950	7850	6600		23400
2003	BSHC	Jan-Jun, 2003		9085	7405	6383		22873		8967	7433	6409		22808
2002	BSHC	Jul-Dec, 2002		8983	7015	6217		22215		8983	7015	6217		22215
2007	BSA Total	Jul-Dec, 2007	158510	135600	121605	98175	81945	437325	158510	135600	121605	98175	81945	437325
2007	BSA Total	Jan-Jun, 2007	153640	132060	121250	92870	78415	424595	156075	133830	121428	95523	80180	430960
2006	BSA Total	Jul-Dec, 2006	153640	132060	121250	92870	78415	424595	153640	132060	121250	92870	78415	424595
2006	BSA Total	Jan-Jun, 2006		128680	117705	91210		337595		130370	119478	92040		341888
2005	BSA Total	Jul-Dec, 2005		128680	117705	91210		337595		128680	117705	91210		337595
2005	BSA Total	Jan-Jun, 2005		126310	112925	89045		328280		127283	114885	89913		332080
2004	BSA Total	Jul-Dec, 2004		126310	112925	89045		328280		126310	112925	89045		328280
2004	BSA Total	Jan-Jun, 2004		124115	107775	86735		318625		125213	110350	87890		323453
2003	BSA Total	Jul-Dec, 2003		124115	107775	86735		318625		124115	107775	86735		318625
2003	BSA Total	Jan-Jun, 2003		124973	103738	84750		313460		123020	103011	84181		310212
2002	BSA Total	Jul-Dec, 2002		121925	98247	81626		301798		121925	98247	81626		301798

\*Note: 50-69 populations presented from Jul-Dec, 2006. For previous 6 month periods this column presents 50-64 year populations.

## APPENDIX B: POPULATION DENOMINATORS BY ETHNIC GROUP

Year	Lead Provider	Report period	Annual Census projection estimates			Smoothed 6 monthly population estimates		
			Maori	Pacific	Other	Maori	Pacific	Other
2007	BSWN	Jul-Dec, 2007	6430	2445	61720	6430	2445	61720
2007	BSWN	Jan-Jun,2007	6180	2305	59850	6180	2305	59850
2006	BSWN	Jul-Dec, 2006	6180	2305	59850	6180	2305	59850
2006	BSWN	Jan-Jun, 2006	8730	3195	78490	8730	3195	78490
2007	BSAL	Jul-Dec, 2007	2450	3450	33490	2450	3450	33490
2007	BSAL	Jan-Jun, 2007	2360	3360	32480	2360	3360	32480
2006	BSAL	Jul-Dec, 2006	2360	3360	32480	2360	3360	32480
2006	BSAL	Jan-Jun, 2006	3300	4780	43800	3300	4780	43800
2005	BSAL	Jul-Dec, 2005	3540	4275	24790	3540	4275	24790
2007	BSCM	Jul-Dec, 2007	4550	5510	32010	4550	5510	32010
2007	BSCM	Jan-Jun, 2007	4330	5280	31050	4330	5280	31050
2006	BSCM	Jul-Dec, 2006	4330	5280	2365	4330	5280	31050
2006	BSCM	Jan-Jun, 2006	6120	7290	40530	6120	7290	40530
2005	BSCM	Jul-Dec, 2005	1890	2690	26310	1890	2690	26310
2005	BSAN	Jan-Jun, 2005	9820	8500	95890	9933	8590	96640
2004	BSAN	Jul-Dec, 2004	9820	8500	95890	9820	8500	95890
2004	BSAN	Jan-Jun, 2004	9370	8140	92890	9595	8320	94390
2003	BSAN	Jul-Dec, 2003	9370	8140	92890	9370	8140	92890
2003	BSAN	Jan-Jun, 2003	9210	7010	92915	9115	7398	91188
2002	BSAN	Jul-Dec, 2002	8860	6655	89485	8860	6655	89485
2007	BSM	Jul-Dec, 2007	10620	715	58590	10620	715	58590
2007	BSM	Jan-Jun, 2007	10050	685	57020	10050	685	57020
2006	BSM	Jul-Dec, 2006	10050	685	57020	10050	685	57020
2006	BSM	Jan-Jun, 2006	8080	545	44710	8185	550	45040
2005	BSM	Jul-Dec, 2005	8080	545	44710	8080	545	44710
2005	BSM	Jan-Jun, 2005	7660	525	43390	7870	535	44050
2004	BSM	Jul-Dec, 2004	7660	525	43390	7660	525	43390
2004	BSM	Jan-Jun, 2004	7300	530	42090	7480	528	42740
2003	BSM	Jul-Dec, 2003	7300	530	42090	7300	530	42090
2003	BSM	Jan-Jun, 2003	7090	518	41215	7180	507	41483
2002	BSM	Jul-Dec, 2002	7060	483	40875	7060	483	40875
2007	BSCtoC	Jul-Dec, 2007	8010	590	50305	8010	590	50305
2007	BSCtoC	Jan-Jun, 2007	7690	560	49090	7690	560	49090
2006	BSCtoC	Jul-Dec, 2006	7690	560	49090	7690	560	49090
2006	BSCtoC	Jan-Jun, 2006	6155	455	38510	6206	455	38695
2005	BSCtoC	Jul-Dec, 2005	6155	455	38510	6155	455	38510
2005	BSCtoC	Jan-Jun, 2005	5950	455	37770	6053	455	38140
2004	BSCtoC	Jul-Dec, 2004	5950	455	37770	5950	455	37770
2004	BSCtoC	Jan-Jun, 2004	5725	405	36900	5838	430	37335
2003	BSCtoC	Jul-Dec, 2003	5725	405	36900	5725	405	36900
2003	BSCtoC	Jan-Jun, 2003	5705	363	36675	5473	372	35998
2002	BSCtoC	Jul-Dec, 2002	5220	338	35095	5220	338	35095
2007	BSC	Jul-Dec, 2007	3470	2285	40750	3470	2285	40750
2007	BSC	Jan-Jun,2007	3260	2195	39940	3260	2195	39940
2006	BSC	Jul-Dec, 2006	3260	2195	39940	3260	2195	39940
2006	BSC	Jan-Jun, 2006	2740	1790	31970	2770	1808	32133
2005	BSC	Jul-Dec, 2005	2740	1790	31970	2740	1790	31970
2005	BSC	Jan-Jun, 2005	2620	1720	31320	2680	1755	31645
2004	BSC	Jul-Dec, 2004	2620	1720	31320	2620	1720	31320
2004	BSC	Jan-Jun, 2004	2495	1670	30630	2558	1695	30975
2003	BSC	Jul-Dec, 2003	2495	1670	30630	2495	1670	30630
2003	BSC	Jan-Jun, 2003	2440	1568	29920	2413	1584	29928
2002	BSC	Jul-Dec, 2002	2330	1498	29225	2330	1498	29225
2007	BSSL	Jul-Dec, 2007	2860	545	74940	2860	545	74940
2007	BSSL	Jan-Jun,2007	2725	510	72840	2725	510	72840
2006	BSSL	Jul-Dec, 2006	2725	510	72840	2725	510	72840
2006	BSSL	Jan-Jun, 2006	2215	405	57770	2235	409	58145
2005	BSSL	Jul-Dec, 2005	2215	405	57770	2215	405	57770
2005	BSSL	Jan-Jun, 2005	2135	390	56270	2175	398	57020
2004	BSSL	Jul-Dec, 2004	2135	390	56270	2135	390	56270
2004	BSSL	Jan-Jun, 2004	2010	380	54680	2073	385	55475
2003	BSSL	Jul-Dec, 2003	2010	380	54680	2010	380	54680
2003	BSSL	Jan-Jun, 2003	2203	398	53360	2060	373	53163
2002	BSSL	Jul-Dec, 2002	2110	365	51645	2110	365	51645

\*Note: 50-69 populations presented from Jul-Dec, 2006. For previous 6 month periods 50-64 year populations are presented.

Year	Lead Provider	Report period	Annual Census projection estimates			Smoothed 6 monthly population estimates		
			Maori	Pacific	Other	Maori	Pacific	Other
2007	BSHC	Jul-Dec, 2007	1225	145	30220	1225	145	30220
2007	BSHC	Jan-Jun, 2007	1170	155	29510	1170	155	29510
2006	BSHC	Jul-Dec, 2006	1170	155	29510	1170	155	29510
2006	BSHC	Jan-Jun, 2006	985	130	23310	995	130	23440
2005	BSHC	Jul-Dec, 2005	985	130	23310	985	130	23310
2005	BSHC	Jan-Jun, 2005	945	130	22790	965	130	23050
2004	BSHC	Jul-Dec, 2004	945	130	22790	945	130	22790
2004	BSHC	Jan-Jun, 2004	880	115	22390	913	123	22590
2003	BSHC	Jul-Dec, 2003	880	115	22390	880	115	22390
2003	BSHC	Jan-Jun, 2003	1005	113	21755	915	114	21828
2002	BSHC	Jul-Dec, 2002	950	113	21265	950	113	21265
2007	BSA Total	Jul-Dec, 2007	39615	15685	382025	39615	15685	382025
2007	BSA Total	Jan-Jun, 2007	37765	15050	371780	37765	15050	371780
2006	BSA Total	Jul-Dec, 2006	37765	15050	371780	37765	15050	371780
2006	BSATotal	Jan-Jun, 2006	30445	12150	295000	30661	12176	296183
2005	BSATotal	Jul-Dec, 2005	30445	12150	295000	30445	12150	295000
2005	BSATotal	Jan-Jun, 2005	29130	11720	287430	29675	11863	290545
2004	BSATotal	Jul-Dec, 2004	29130	11720	287430	29130	11720	287430
2004	BSATotal	Jan-Jun, 2004	27780	11240	279580	28455	11480	283505
2003	BSATotal	Jul-Dec, 2003	27780	11240	279580	27780	11240	279580
2003	BSATotal	Jan-Jun, 2003	27653	9968	275840	27155	10346	273585
2002	BSATotal	Jul-Dec, 2002	26530	9452	267590	26530	9452	267590

\*Note: 50-69 populations presented from Jul-Dec, 2006. For previous 6 month periods 50-64 year populations are presented.

## APPENDIX C: 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

### **Axillary dissection**

A formal dissection of the axilla that removes lymph nodes for examination in the staging of breast cancer to determine if further treatment is required.

### **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, 50-69 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

### **High risk invasive breast cancer**

Having at least one of the following features:

- a.  $pT > 2\text{cm}$  (pathological tumour size)
- and/or
- b. Grade 2-3 (histologic and/or nuclear grade)

### **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



APPENDIX D: Map of BSA Lead Provider Regions

