BREASTSCREEN AOTEAROA

INDEPENDENT MONITORING REPORT:

SCREENING AND ASSESSMENT REPORT OF WOMEN ATTENDING BSA

(WOMEN SCREENED JULY 2007 TO JUNE 2009)

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EXECUTIVE SUMMARY

This report presents cross-sectional data for the period January-June 2009 (6 months) and July 2007 to June 2009 (2 years), and trend data from programme inception to June 2009 for all BreastScreen Aotearoa screening and assessment indicators. Treatment indicators are located in a companion report.[1] 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 years 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.

1. Coverage

BSA screened 107,176 women aged 45-69 years over the 6-month period from January to June 2009, of which 80,885 were aged between 50 and 69 years. For women in this age group, the biennial participation was 65.2%, which was below the target of 70%. Of biennial screens, 12.3% were initial screens and 87.7% 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 (52.0% and 55.9% respectively), compared with the remaining ethnic groups (66.7%). However, biennial coverage in Maori and Pacific groups continues show a sustained increase over time.

BSSL continues to exceed the biennial coverage target of 70% reaching 79.6%, and has consistently had higher biennial coverage relative to other lead providers. BSHC also continues to exceed the biennial coverage target of 70% and for this reporting period reached 73.8%.

Re-screening proportion and timeliness
The proportion of women re-screened for the six-month period for women aged 50-69 years was 86.0% within 27 months (target >85%). Of those who attended for re-screen, 83.4% attended within 20-24 months (target >75%). The biennial re-screen rate (84.3%) for women returning for a mammogram within 27 months was also on target, with most Lead Providers meeting or exceeding the target value, with the exception of BSAL, BSM, and BSCM, with the latter two services showing a declining trend.

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 9.8% (target <10%) for initial screens, and 3.0% (target <5%) for subsequent screens. BSHC had a 2 year referral to assessment rate for initial screens (14.2%) that was significantly above the range of <10%.

False positives and positive predictive value
The proportion of false positives for women aged 50-69 years for the 6 month period was 8.5% for initial screens (target <9%), and 2.3% for subsequent screens (target <4%). The positive predictive value (PPV) for the programme for the 6 month reporting period was 9.8% for initial screens and 19.3% for subsequent screens, for women aged 50-69 years.

Technical recall
Technical recall rates for fixed sites for the 2-year period achieved the target of <0.5% for BSA and continue to show an improving trend overall (and for the majority of Lead Providers). Technical recall rates for mobile sites

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[1] Page A, Taylor R. BreastScreen Aotearoa: Independent Monitoring Report -Treatment of women with BSA detected cancers (women screened July 2006-June 2008). BreastScreen Aotearoa: Wellington 2010.

exceeded the target value of <3% overall for BSA for the 2-year period, and showed increasing disparity between Lead Providers. The reason for high technical recalls for some Lead Providers should be investigated.

3. Early detection of DCIS or invasive breast cancer

DCIS and invasive cancer detection rate
A total of 490 cases of DCIS or invasive cancer (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 9.5 per 1,000 for initial screens and 5.7 per 1,000 women screened for subsequent screens.

The biennial cancer detection per 1,000 screens - invasive and DCIS combined - for women aged 50-69 years was 9.4 per 1,000 for initial screens and 5.6 per 1,000 for subsequent screens. This represented 1,774 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. Declining trends in cancer detection are evident for initial screens in BSSL (see comments under Technical Notes) and in subsequent screens for BSCtoC.

The proportion of DCIS of all cancers for women aged 50-69 over the biennium was 22.2%, ranging from 16.5% to 25.6% across Lead Providers. The proportion of DCIS of all cancers has remained relatively stable for BSA overall.

Invasive cancer detection rate
The BSA biennial invasive cancer detection for women aged 50-69 years was 7.0 per 1,000 women screened for initial screens (achieving the target of $\geq$ 6.1 per 1,000) and 4.2 per 1,000 for subsequent screens (achieving the target of $\geq$ 3.45 per 1,000). This represented 1,338 invasive cancers detected by BSA for the 2-year reporting period. The overall proportion of node negative cancers (of all invasive cancers) was 74.4% for initial screens (target >70%) and 78.1% for subsequent screens (target >75%).

Invasive cancer detected $\leq$ 10mm
For women 50-69 years the overall proportion of screen detected invasive cancers $\leq$ 10mm in size for the 2-year period was 28.0% for initial screens (target $\geq$ 25%) and 39.9% for subsequent screens (target $\geq$ 30%). The corresponding detection rates per 10,000 women screened for invasive cancers $\leq$ 10mm were better than the target value at 19.6 for initial screens (target $\geq$ 15.2 per 10,000 screens) and 16.8 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 41.7% for initial screens (which continues to be significantly below the target value of >50%) and 58.5% for subsequent screens (exceeding the target of >50%). The corresponding detection rates per 10,000 women screened for invasive cancers <15mm were on target at 29.3 for initial screens (target value >30.5 per 10,000 screens) and 24.6 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 met.

The overall proportion of women in the 6-month period who were notified of screening results within 10 working days was 97.6% 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 79.4%, which was below the target value of 90%. Trend data for this indicator show stable estimates for the programme overall in the most recent period, but a continued significant decline in BSHC, and also recent declines in BSAL.

Time taken from assessment to final diagnostic biopsy
The proportion of women receiving an open biopsy within 20 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 68.8%. For

the 6-month period the overall proportion receiving an open biopsy within 20 working days was 69.0% for women 50-69 years.

The proportion of women who received their final diagnostic biopsy results within 5 working days was 86.8%, which was on target for this indicator (target value 90%). The overall proportion for the 6-month period was 87.4% for women aged 50-69 years.

5. Specific summary comments for each Lead Provider

For the following summary comments, indicators for each Lead Provider are included where targets were significantly exceeded (given most targets were achieved or exceeded across Lead Providers) and also for targets not achieved. Specifically, indicators are noted if (i) Lead Providers significantly exceeded targets for biennial indicators (i.e. exceeded the target by ≥10% and was statistically significant) or (ii) Lead Providers were significantly below target

BreastScreen Waitemata and North (BSWN)
BSWN were either on target or exceeded targets for almost all biennial indicators for women in the target age range of 50-69 years. In particular, BSWN significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection for subsequent screens, technical recall rates at fixed sites, the percentage of rejected films at fixed and mobile sites, benign open biopsy rates in women attending for a subsequent screen, false positive rates, node negative cancers for a subsequent screen and preoperative diagnosis of cancer. Targets were not achieved for overall coverage (64.3%, target value 70%) and Maori coverage (63.0%, target value 70%), and also technical recall rates for mobile sites (4.4%, target value <3%), the percentage of women offered first assessment within 15 working days (74.6%, target 90%), the percentage of women receiving an open biopsy within 20 working days (61.1%, target 90%), and the proportion of women receiving final biopsy results within 5 working days (81.2%, target 90%).

BreastScreen Counties Manukau (BSCM)
BSCM were either on target or exceeded targets for almost all biennial indicators for women in the target age range of 50-69 years. In particular, BSCM significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, small invasive cancer detection for subsequent screens, benign open biopsy rates in women attending for a subsequent screen, false positive rates for subsequent screens, preoperative diagnosis of cancer, and technical recall rates at fixed sites and the percentage of rejected films (fixed and mobile) sites. Targets were not achieved for overall coverage (54.3%, target value 70%), Pacific coverage (52.6%, target value 70%) and Maori coverage (49.7%, target value 70%), and also the percentage of women eligible for re-screen who were re-screened within 27 months (76.8%, target 85%) - with a declining trend, and percentage of women offered first assessment within 15 working days (76.0%, target 90%).

BreastScreen Auckland Limited (BSAL)
BSAL were either on target or exceeded targets for almost all biennial indicators for women in the target age range of 50-69 years. In particular, BSAL significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection, the percentage of rejected films at fixed and mobile sites, preoperative diagnosis of cancer, and false positive rates for subsequent screens. Targets were not achieved for overall coverage (52.6%, target value 70%), Pacific coverage (57.5%, target value 70%) and Maori coverage (44.5%, target value 70%), and also the percentage of women eligible for re-screen who were re-screened within 27 months (74.8%, target 85%), technical recall rates for mobile sites (3.9%, target value <3%), and the percentage of women offered first assessment within 15 working days (73.6%, target 90%).

BreastScreen Midland (BSM)
BSM were either on target or exceeded targets for most biennial indicators for women in the target age range of 50-69 years. In particular, BSM significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection for subsequent screens, technical recall rates at fixed sites, the percentage of rejected films at fixed and mobile sites, preoperative diagnosis of cancer, and false positive rates for subsequent screens. Targets were not achieved for overall coverage (58.9%, target value 70%), Pacific coverage (50.9%, target value 70%) and Maori coverage (42.3%, target value 70%), and also the percentage of women eligible for re-screen who were re-screened within 27 months (73.6%, target 85%) - with a declining trend

and 20-24 months (60.9%, target 75%), proportion of invasive cancers <15mm (30.3, target 50%), technical recall rates for mobile sites (4.6%, target value <3%), the percentage of women receiving needle biopsy within 5 working days (81.6%, target 90%), continuing a decreasing trend from previous reporting periods, the percentage of women offered first assessment within 15 working days (81.7%, target 90%), the percentage of women receiving an open biopsy within 20 working days (41.7%, target 90%), and the proportion of women receiving final biopsy results within 5 working days (79.3%, target 90%).

BreastScreen Coast to Coast (BSCtoC)
BSCtoC were either on target or exceeded targets for almost all biennial indicators for women in the target age range of 50-69 years. In particular, BSCtoC significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, benign open biopsy rates, technical recall rates at fixed sites, the percentage of rejected films at fixed and mobile sites, false positive rates, and preoperative diagnosis of cancer. Targets were not achieved for overall coverage (65.9%, target value 70%), Pacific coverage (49.1%, target value 70%) and Maori coverage (49.0%, target value 70%), and the percentage of women receiving an open biopsy within 20 working days (27.8%, target 90%). Declining trends in cancer detection are evident for BSCtoC subsequent screens.

BreastScreen Central (BSC)
BSC were either on target or exceeded targets for almost all biennial indicators for women in the target age range of 50-69 years. In particular, BSC significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection, the percentage of rejected films at fixed and mobile sites, benign open biopsy rates in women attending for a subsequent screen, and preoperative diagnosis of cancer. Targets were not achieved for overall coverage (65.8%, target value 70%), Pacific coverage (45.7%, target value 70%) and Maori coverage (56.6%, target value 70%), technical recall rates for mobile sites (4.4%, target value <3%) and fixed sites (0.8%, target value <0.5%), and the percentage of women receiving an open biopsy within 20 working days (73.9%, target 90%).

BreastScreen South Limited (BSSL)
BSSL were either on target or exceeded targets for all biennial indicators for women in the target age range of 50-69 years. In particular, BSSL significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection for subsequent screens, benign open biopsy rates, technical recall rates at fixed and mobile sites and the percentage of rejected films for both mobile and fixed sites, false positive rates for subsequent screens, and preoperative diagnosis of cancer. Declining trends in cancer detection are evident for initial screens in BSSL (see comments under Technical Notes).

BreastScreen Health Care (BSHC)
BSHC were either on target or exceeded targets for most biennial indicators for women in the target age range of 50-69 years. In particular, BSHC significantly exceeded targets for the percentage of cancers from referral to assessment in women attending for a subsequent screen, benign open biopsy rates for women attending for a subsequent screen, the percentage of rejected films for both mobile and fixed sites, false positive rates in subsequent screens, and preoperative diagnosis of breast cancer. Targets were not achieved for Maori coverage (56.9%, target value 70%), the percentage of women eligible for re-screen who were re-screened within 20-24 months (68.7%, target 75%), technical recall rates for mobile sites (4.9%, target value <3%), and false positive rates for initial screens (13.1%, target <9%). Additional targets not achieved included the percentage of women referred to assessment for initial screens (14.2%, target <10%) continuing a marked increasing trend from previous reporting periods, the percentage of cancers from referral to assessment for initial screens (4.6%, target ≥9%), the estimated specificity (the proportion of women without breast cancer at screening who have a negative screen result) for initial screens (87.1%, target value >93%), the proportion of invasive cancers <15mm for initial screens (16.7, target 50%), and the percentage of women offered first assessment within 15 working days (34.5%, target 90%). In addition, BSHC cancer detection for both initial and subsequent screens has consistently been below the BSA total cancer detection rate, although not significantly different from the average (see comments under Technical Notes).

6. 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 offered first assessment appointment within 15 working days (5b)
- Percentage of women having receiving an open biopsy within 20 working days (5c.2)

BSA ADVISORY GROUP COMMENTS AND RECOMMENDATIONS

1. Epidemiologists feedback on initial cancer detection data

The BSA Advisory group notes the comments on interpretation of the initial cancer detection data contained in the report (see under 'Technical Notes For Interpreting this Report').

2. Coverage

The BSA Advisory Group is pleased to note the sustained upward trend in coverage, especially for Māori and Pacific women.

However, despite increases, the overall coverage is still below the target of 70%. Disparities in coverage for Māori and Pacific women still exist.

The BSA Advisory Group recommends that Lead Providers simplify their enrolment processes and reduce multiple points of contact with women.

3. Time from Screening to First Offered Assessment

The BSA Advisory Group recommends that BreastScreen Health Care review the mechanisms available to them to improve timeliness from screening to assessment as a high priority.

4. Re-screening

Reasons for the low re-screen rates in some services require investigation.

5. Timeliness of Open Biopsy

The NSU has changed the target to 20 days, in line with the recommendation made by the BSA Surgeons UDG. This allows the target to be brought into alignment with the standard time for surgical treatment of confirmed breast cancer cases.

The BSA Advisory Group is still concerned about the failure to meet the target (90%) for the time from assessment to final biopsy.

In response to recommendations above, the BSA Advisory Group will consider Lead Provider feedback on the report template at the next meeting on 30 July 2010.

FOREWORD: BSA MONITORING PROCESS

Data are sent monthly from the eight BreastScreen Aotearoa Lead Providers (LPs) to the Information Directorate of the Ministry of Health. The data are checked by the Information Directorate, amalgamated into a single file, and sent to the National Screening Unit (NSU). The NSU runs further checks and produces performance indicator tables 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 comment and a final version is produced. The NSU publishes the final report on the NSU website.

This BSA Independent Monitoring Report was reviewed by the BSA Advisory Group on 29 April 2010.

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 main eligible 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 aged 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 previous reporting periods: BSAL, BSCM, BSWN. The following table provides a listing of Lead Providers clarifying these changes, and explains the absence of some data in figures showing programme trends.

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 aged 50-64 years from the first reporting period in 2001 to the reporting period Jan-Jan 2006. For the reporting period Jul-Dec 2006 onwards a new time series has been established for women aged 50-69 years. This time series 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. Interpolations are used to reflect population increases (or declines) in each 6-month period and result in more stable estimates for each indicator presented. This ensures that there are no artefactual increases in reported estimates due to the same annual denominator population being applied to changing 6-monthly indicator data. 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

Both the magnitude of differences, and their statistical significance, are used to assess the relation of observed to target values.

The magnitude of the difference between the observed value and the target value is important in the interpretation of each indicator. In this report, differences of ≥ 5% in magnitude 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 ≥ 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% in magnitude 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 in magnitude 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 in magnitude would contain values ranging from 72%-88%. If the standard is 10%, then a 10% difference in magnitude 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.

Initial cancer detection rates

As a mammographic screening program matures the proportion of visits for initial screening diminish and the proportion of subsequent visits increase. During the most recent screening period, for women 50-69 years, the proportion of initial screens are only 12% whereas the subsequent screens are 88% (see 1.a.2 below). As well as a reduction in absolute numbers with maturity (widening 95% CIs of rates), the age profile of women changes from all age groups 50-69 years at the beginning of the program, to mostly younger age groups (new entrants to the program) at maturity. Since the breast cancer incidence rate in younger women is lower than older women, the cancer detection rate from screening will decrease as the age profile of the initial screens becomes younger. The above should be borne in mind when interpreting cancer detection rates from initial screens.

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)

Percent difference from target
(Values >0 have reached target value)

-150   0   150

%Cancers from referral to assessment, Subsequent (2f.2)
%Rejected films, Mobile (2c.2)
Benign open biopsy rate, Subsequent (2m.2)
%Rejected films, Fixed (2c.2)
Invasive cancers <=10mm per 10,000 screens, Subsequent (3b.2)
Technical recall rate, Fixed (2b.2)
Invasive cancers <15mm per 10,000 screens, Subsequent (3c.2)
Benign open biopsy rate, Initial (2m.2)
%Referral to assessment, Subsequent (2d.2)
False positive rate, Subsequent (2e.2)
%Preoperative diagnosis of cancer (2h)
%Invasive cancers <=10mm, Subsequent (3b.1)
Invasive cancers <=10mm per 10,000 screens, Initial (3b.2)
Invasive cancer detection rate, Subsequent (3a.2b)
%Invasive cancers <15mm, Subsequent (3c.1)
Invasive cancer detection rate, Initial (3a.2b)
Four films or fewer, Fixed (2a.2)
%Invasive cancers <=10mm, Initial (3b.1)
Four films or fewer, Mobile (2a.2)
Re-screen, 20-24 months (1b.2)
%Cancers from referral to assessment, Initial (2f.2)
%Notified of results <10 days (5a)
Specificity, Subsequent (2l.2)
False positive rate, Initial (2e.2)
%Referral to assessment, Initial (2d.2)
%Receiving needle biopsy <5 days after assessment (5c.1)
Re-screen within 27 months (1b.1)
Specificity, Initial (2l.2)
%Final diagnostic biopsy results <5 days (5d)
Invasive cancers <15mm per 10,000 screens, Initial (3c.2)
Coverage, Other (1a.7)
Overall coverage (1a.1)
%Offered first assessment appointment <15 days (5b)
%Invasive cancers <15mm, Initial (3c.1)
Coverage, Pacific (1a.7)
%Open biopsy <20 working days (5c.2)
Coverage, Maori (1a.7)
Technical recall rate, Mobile (2b.2)

NB: The vertical line represent a ± 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).

Percent difference from target
(Values >0 have reached target value)
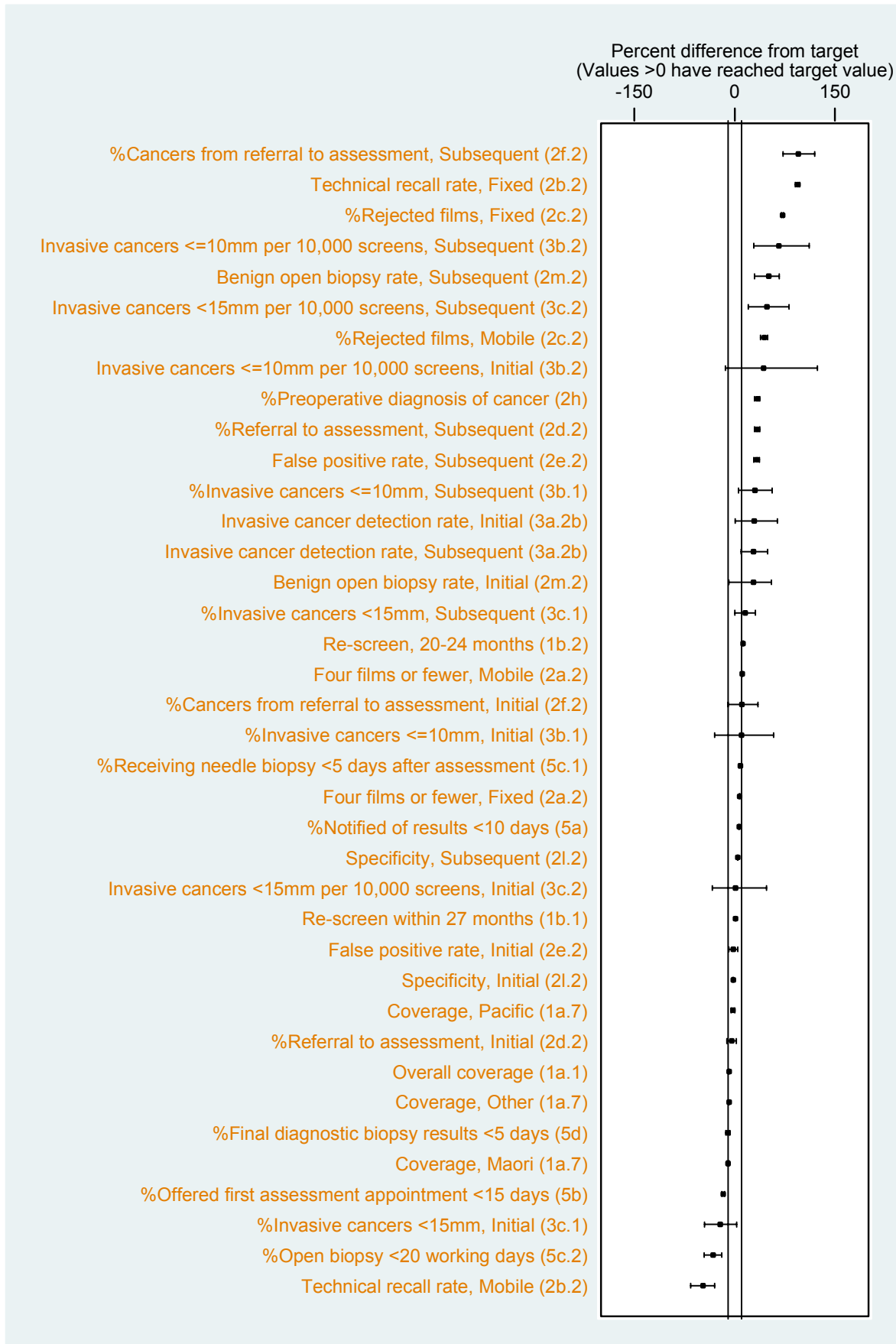
NB: The vertical line represent a ± 10% difference between the observed value and the target value

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).

Percent difference from target
(Values >0 have reached target value)

-150   0   150

%Cancers from referral to assessment, Subsequent (2f.2)
Technical recall rate, Fixed (2b.2)
Invasive cancers <=10mm per 10,000 screens, Subsequent (3b.2)
%Rejected films, Mobile (2c.2)
Benign open biopsy rate, Subsequent (2m.2)
Invasive cancers <15mm per 10,000 screens, Subsequent (3c.2)
Benign open biopsy rate, Initial (2m.2)
%Rejected films, Fixed (2c.2)
False positive rate, Subsequent (2e.2)
%Referral to assessment, Subsequent (2d.2)
%Preoperative diagnosis of cancer (2h)
%Invasive cancers <=10mm, Subsequent (3b.1)
Invasive cancer detection rate, Subsequent (3a.2b)
%Invasive cancers <=10mm, Initial (3b.1)
Invasive cancers <=10mm per 10,000 screens, Initial (3b.2)
%Invasive cancers <15mm, Subsequent (3c.1)
%Cancers from referral to assessment, Initial (2f.2)
Re-screen, 20-24 months (1b.2)
Four films or fewer, Fixed (2a.2)
%Notified of results <10 days (5a)
False positive rate, Initial (2e.2)
%Open biopsy <20 working days (5c.2)
Specificity, Subsequent (2l.2)
Four films or fewer, Mobile (2a.2)
%Referral to assessment, Initial (2d.2)
%Final diagnostic biopsy results <5 days (5d)
Invasive cancer detection rate, Initial (3a.2b)
Specificity, Initial (2l.2)
Technical recall rate, Mobile (2b.2)
%Receiving needle biopsy <5 days after assessment (5c.1)
Re-screen within 27 months (1b.1)
%Offered first assessment appointment <15 days (5b)
Coverage, Other (1a.7)
Overall coverage (1a.1)
%Invasive cancers <15mm, Initial (3c.1)
Coverage, Pacific (1a.7)
Invasive cancers <15mm per 10,000 screens, Initial (3c.2)
Coverage, Maori (1a.7)

NB: The vertical line represent a + 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).

NB: The vertical line represent a + 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)

Percent difference from target
(Values >0 have reached target value)

NB: The vertical line represent a ± 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)

Percent difference from target
(Values >0 have reached target value)

NB: The vertical line represent a ± 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 ± 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)
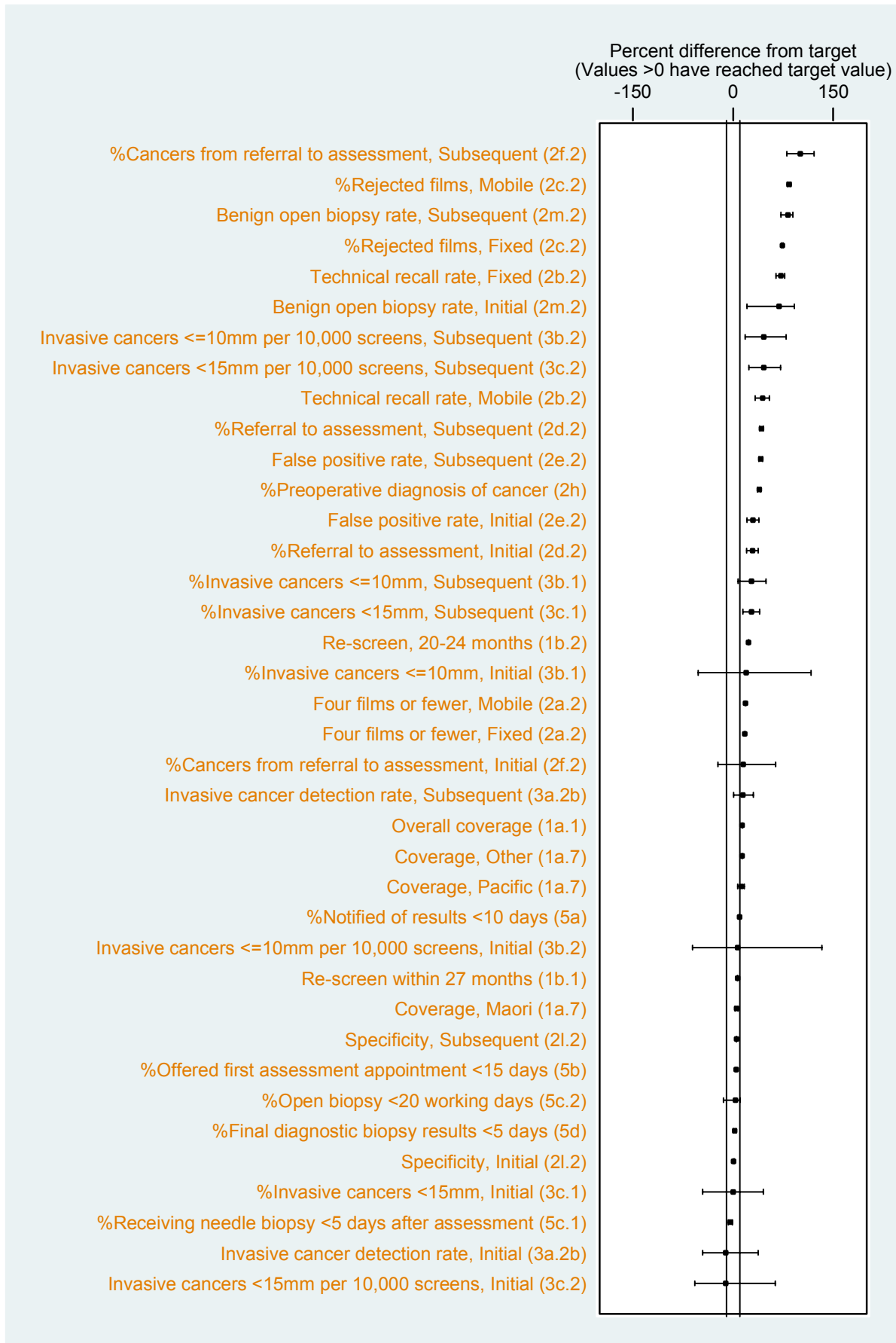
NB: The vertical line represent a ± 10% difference between the observed value and the target value

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)
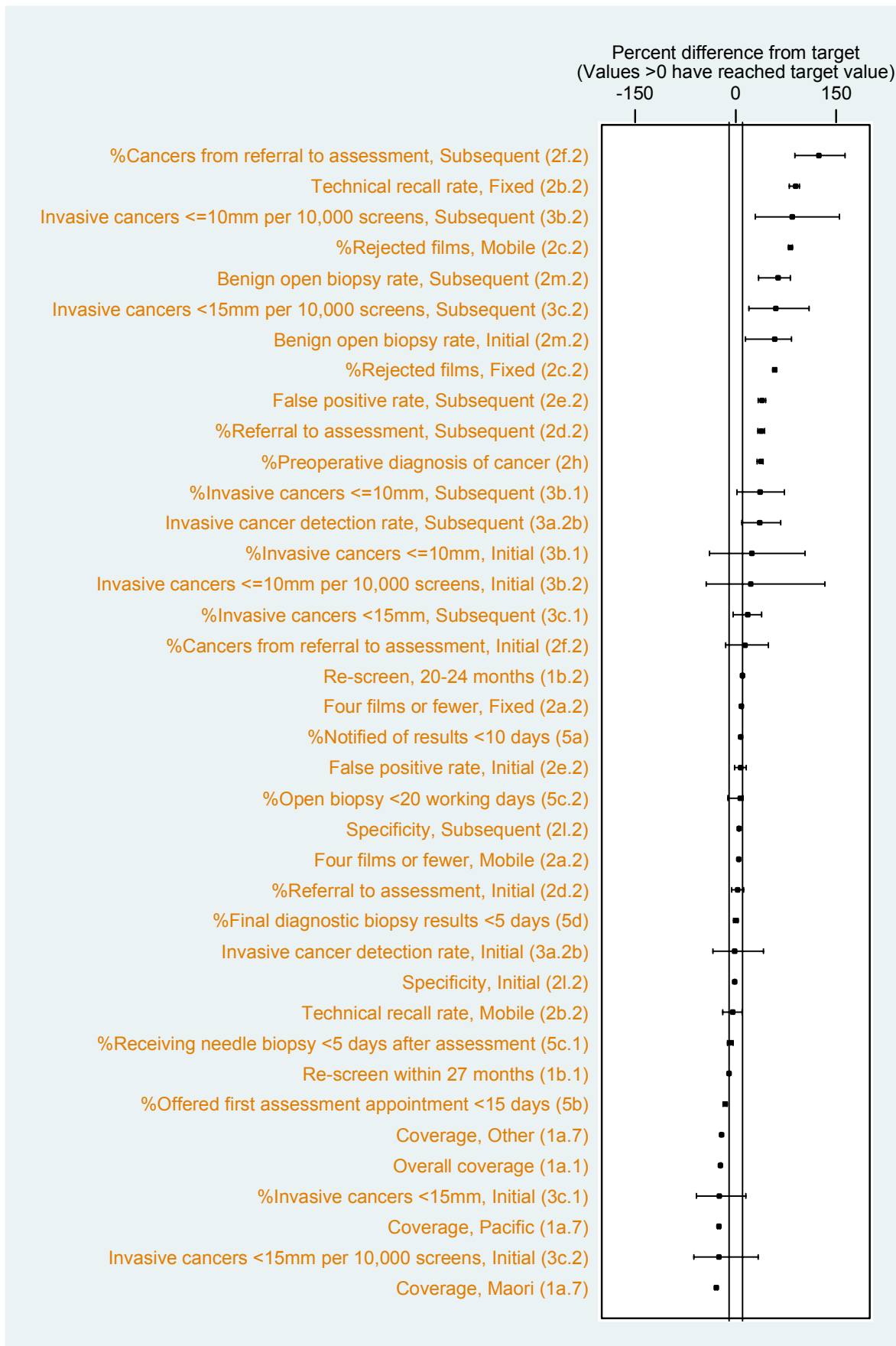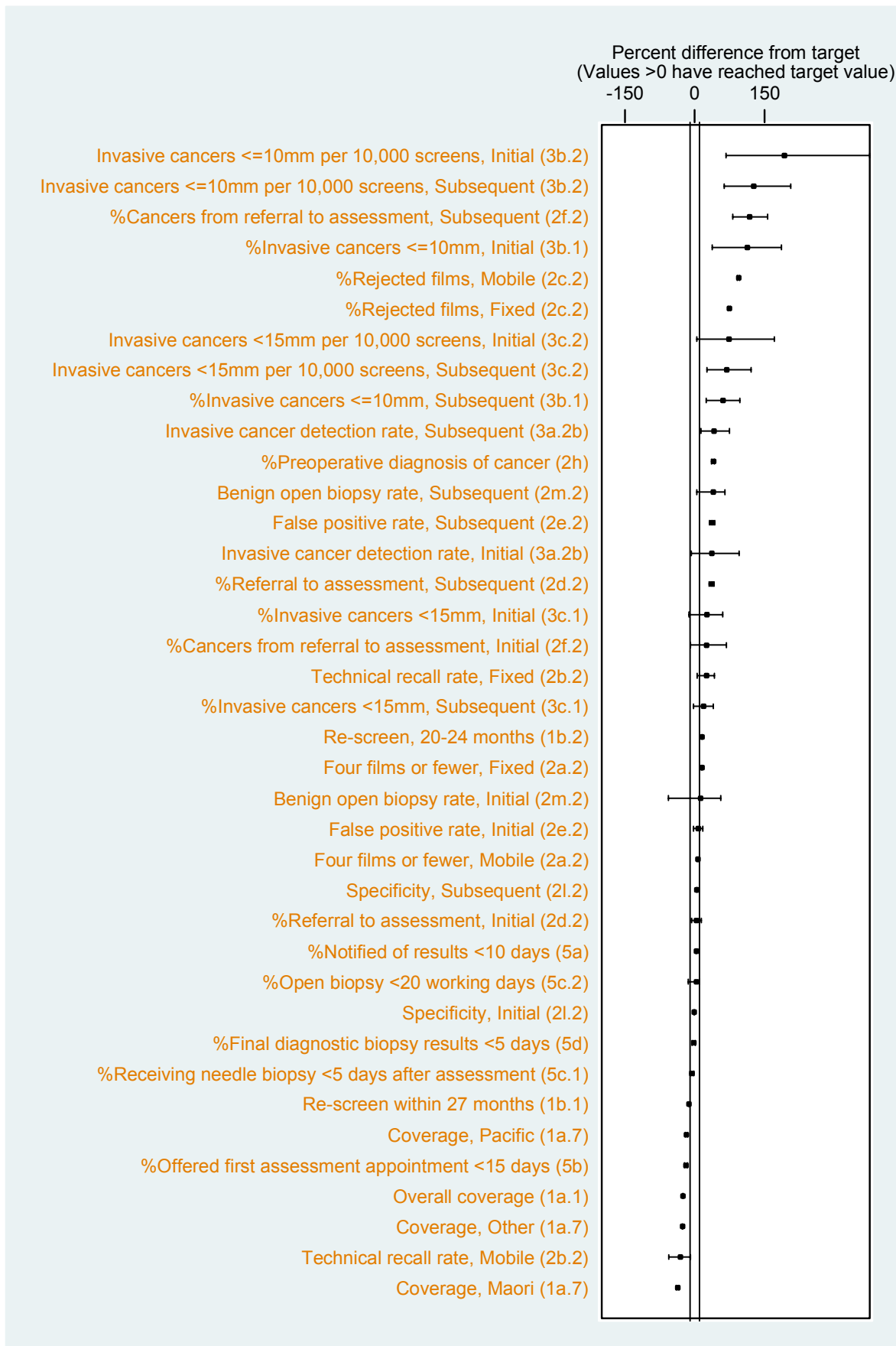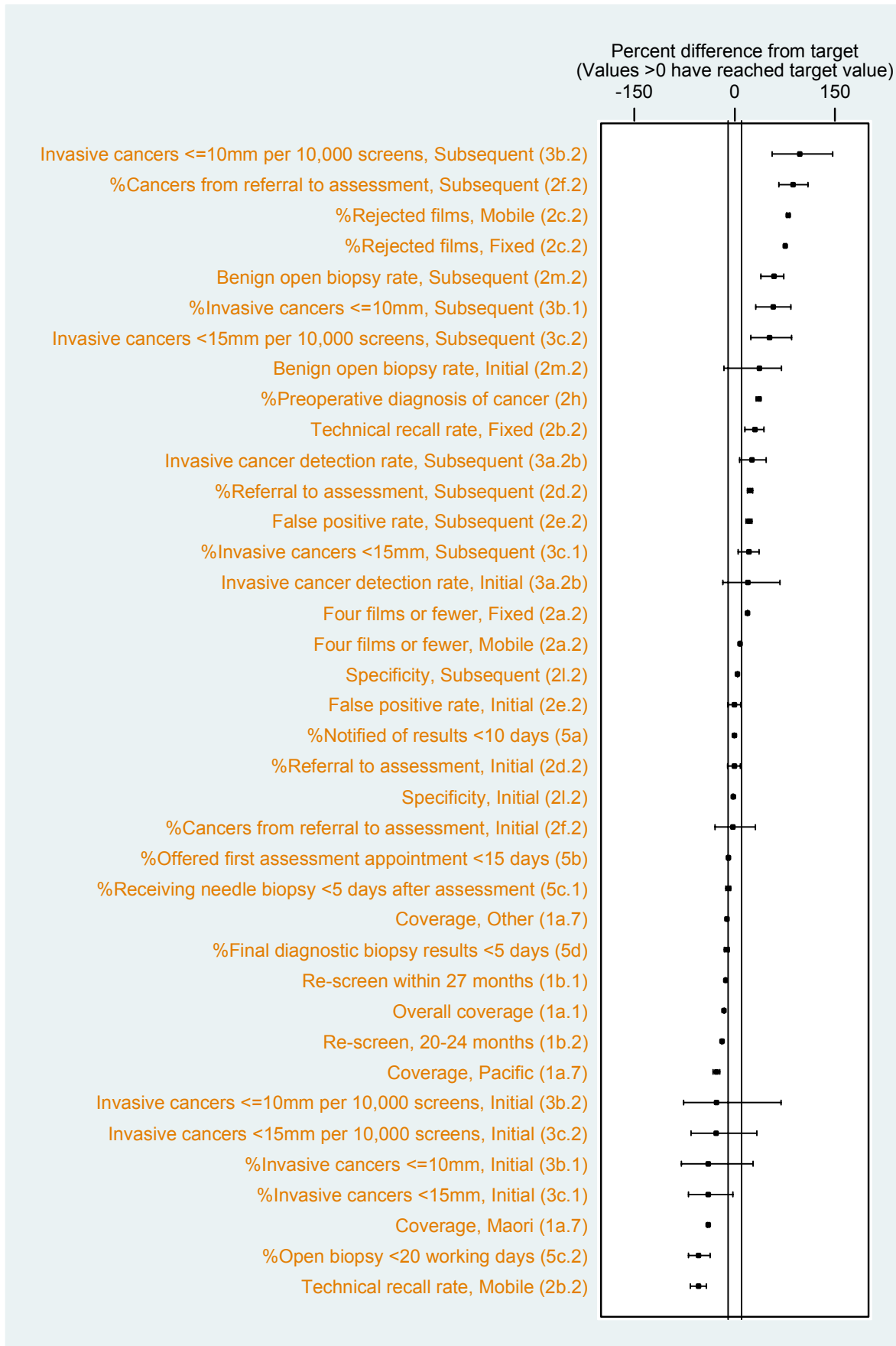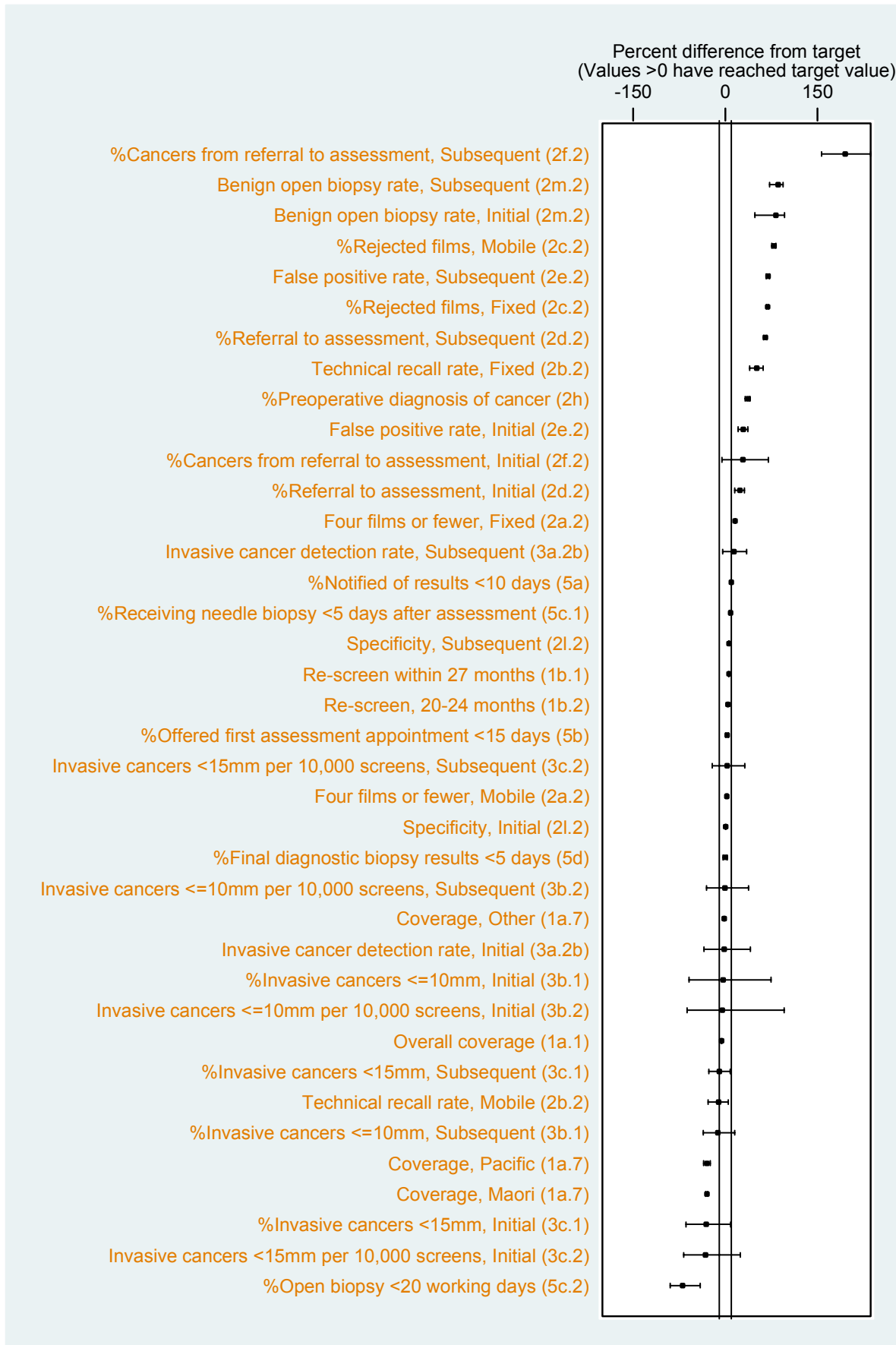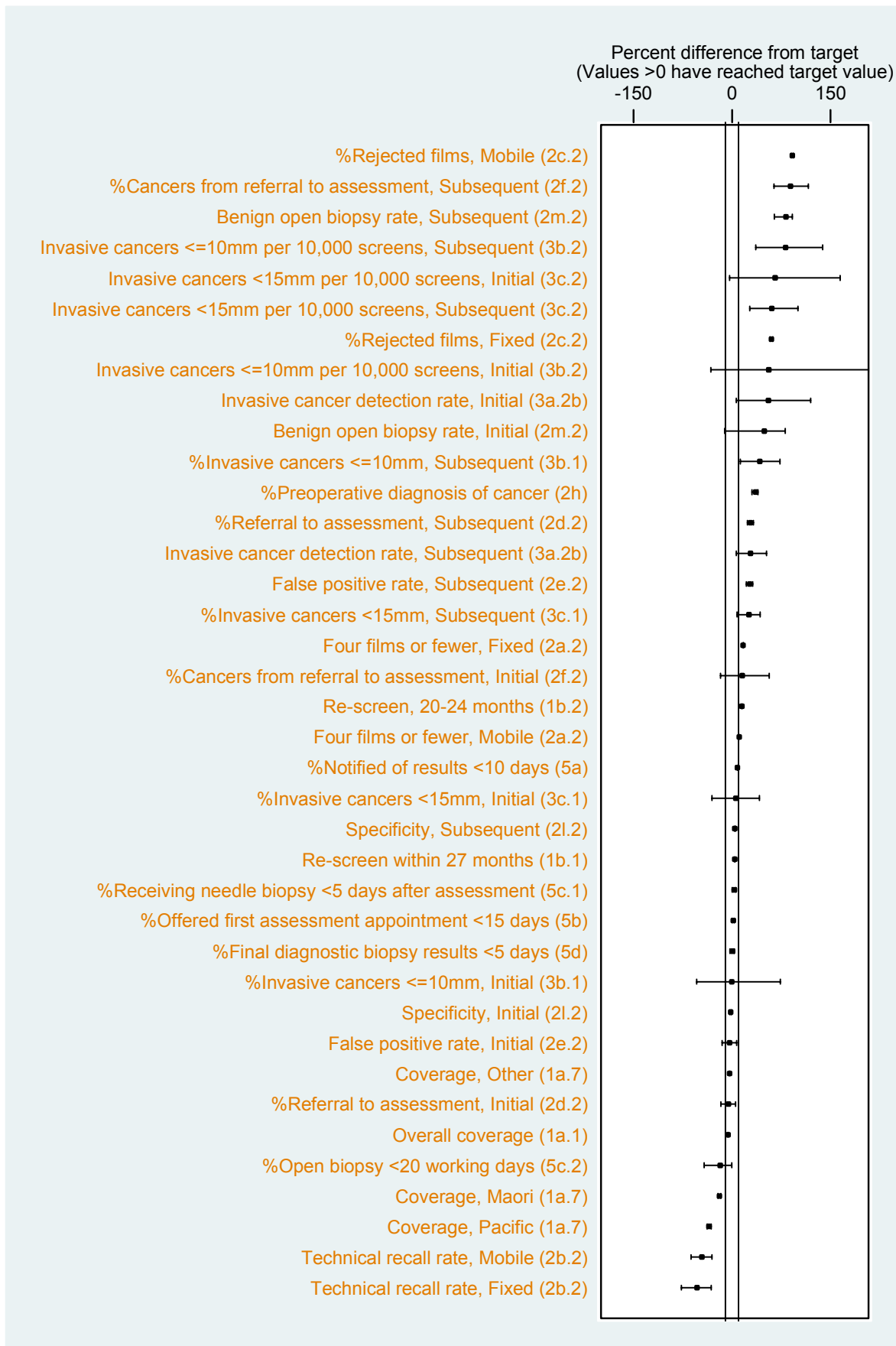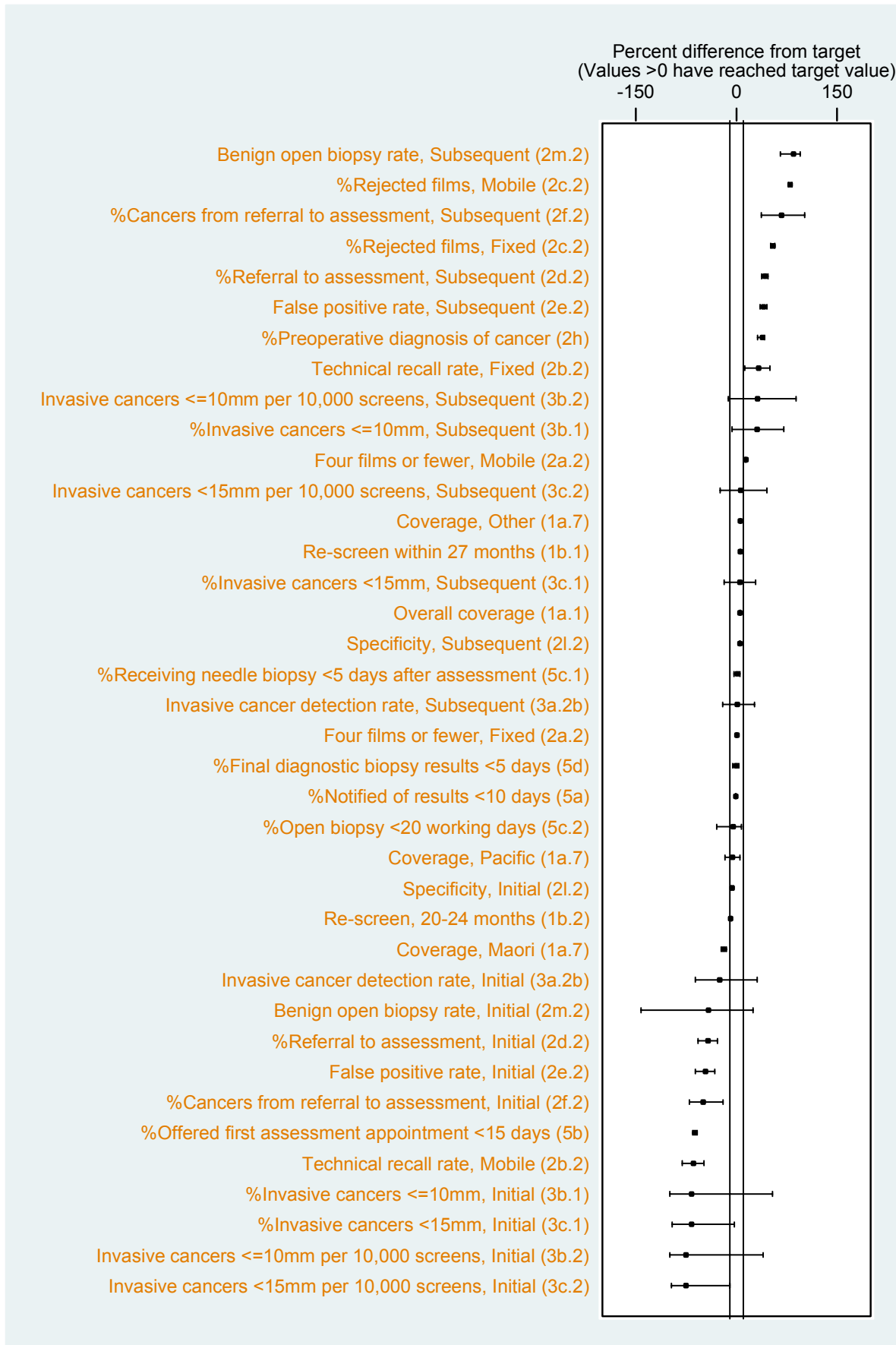

NB: The vertical line represent a $\pm$ 10% difference between the observed value and the target value

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

	6 months			2 years				
	Number of women screened	Eligible Population	% (95%CI)	Number of women screened	Eligible Population	% (95%CI)		
45-49 years								
BSWN	4,295	26,840	16.0 (15.6-16.4)	15,886	26,840	59.2 (58.6-59.8)		
BSCM	2,541	16,580	15.3 (14.8-15.9)	8,162	16,580	49.2 (48.5-50.0)		
BSAL	2,205	16,690	13.2 (12.7-13.7)	7,472	16,690	44.8 (44.0-45.5)		
BSM	3,403	24,770	13.7 (13.3-14.2)	11,279	24,770	45.5 (44.9-46.2)		
BSCtoC	3,263	20,885	15.6 (15.1-16.1)	11,838	20,885	56.7 (56.0-57.4)		
BSC	2,623	18,125	14.5 (14.0-15.0)	9,341	18,125	51.5 (50.8-52.3)		
BSSL	6,010	27,320	22.0 (21.5-22.5)	24,015	27,320	87.9 (87.5-88.3)		
BSHC	1,951	11,255	17.3 (16.6-18.0)	7,691	11,255	68.3 (67.5-69.2)		
BSA Total	26,291	162,465	16.2 (16.0-16.4)	95,684	162,465	58.9 (58.7-59.1)		
50-69 years								
BSWN	11,666	72,905	16.0 (15.7-16.3)	46,892	72,905	64.3 (64.0-64.7)	✗✗	*
BSCM	6,702	43,490	15.4 (15.1-15.8)	23,609	43,490	54.3 (53.8-54.8)	✗✗✗	*
BSAL	5,943	40,650	14.6 (14.3-15.0)	21,389	40,650	52.6 (52.1-53.1)	✗✗✗	*
BSM	11,699	72,060	16.2 (16.0-16.5)	42,466	72,060	58.9 (58.6-59.3)	✗✗✗	*
BSCtoC	10,548	60,265	17.5 (17.2-17.8)	39,720	60,265	65.9 (65.5-66.3)	✗✗	*
BSC	9,000	47,725	18.9 (18.5-19.2)	31,383	47,725	65.8 (65.3-66.2)	✗✗	*
BSSL	19,322	80,655	24.0 (23.7-24.3)	64,218	80,655	79.6 (79.3-79.9)	✓✓✓	*
BSHC	6,005	32,325	18.6 (18.2-19.0)	23,846	32,325	73.8 (73.3-74.2)	✓✓	*
BSA Total	80,885	450,075	18.0 (17.9-18.1)	293,523	450,075	65.2 (65.1-65.4)	✗✗	*

Note: Eligible population for 2008 is based on projections from the 2001 census
* 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
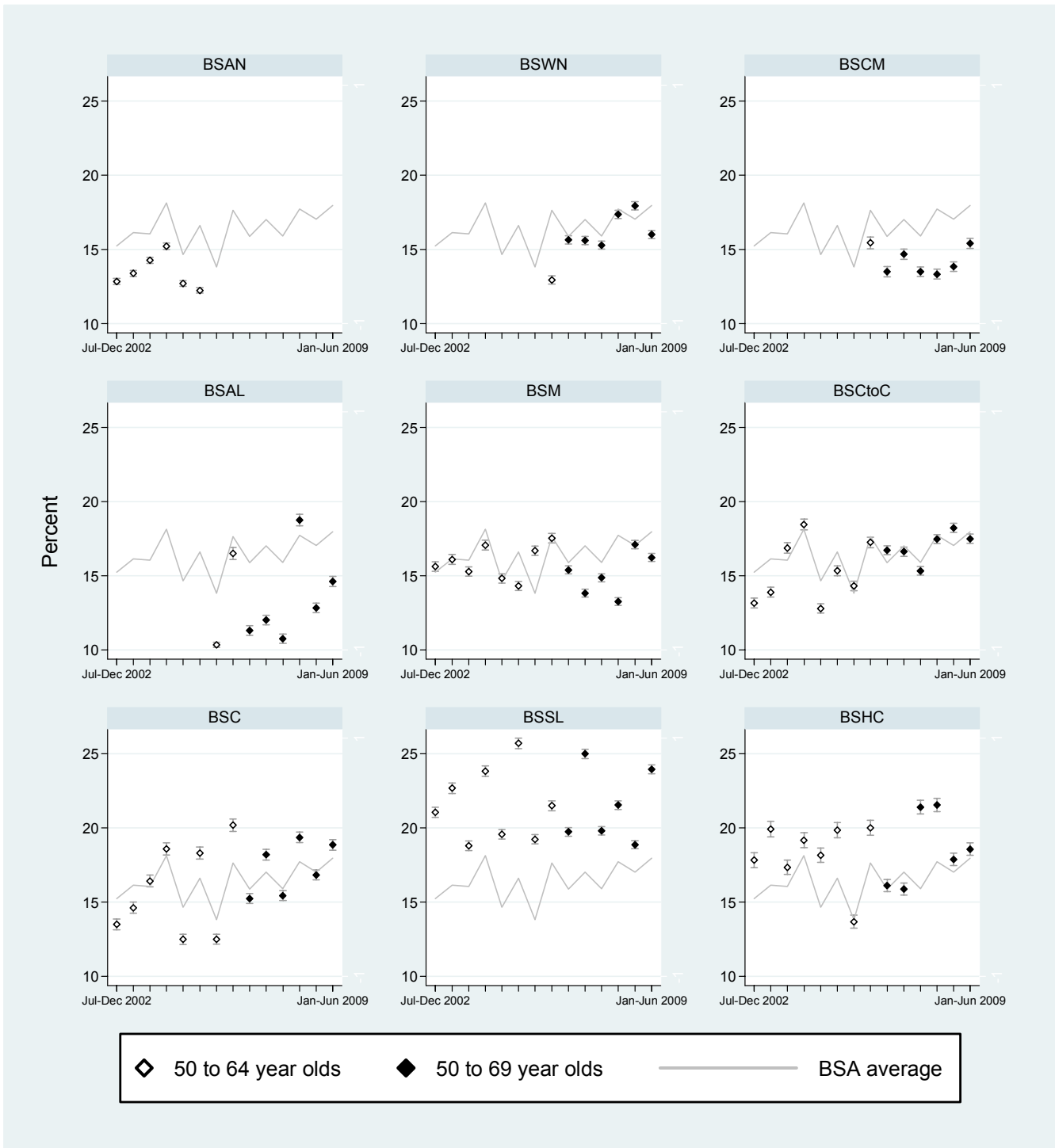
Figure 1a.1: Trends in biennial coverage of eligible women
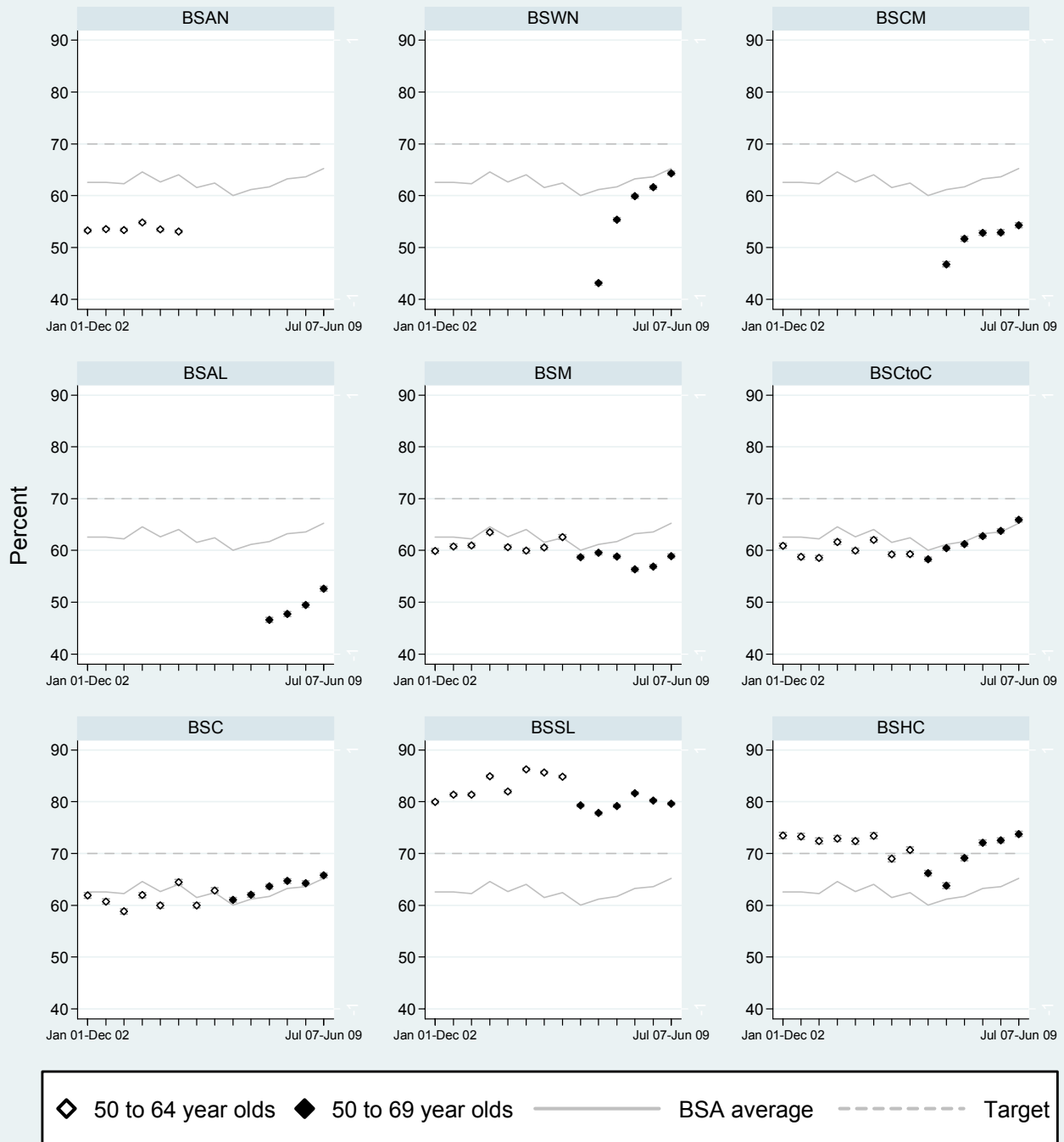
1.a.2. The percentage of screens that are initial and subsequent screens

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)
45-49 years						
BSWN	11,023	15,886	69.4 (68.7-70.1)	4,863	15,886	30.6 (29.9-31.3)
BSCM	6,531	8,162	80.0 (79.1-80.9)	1,631	8,162	20.0 (19.1-20.9)
BSAL	4,838	7,472	64.7 (63.7-65.8)	2,634	7,472	35.3 (34.2-36.3)
BSM	6,396	11,279	56.7 (55.8-57.6)	4,883	11,279	43.3 (42.4-44.2)
BSCtoC	7,267	11,838	61.4 (60.5-62.3)	4,571	11,838	38.6 (37.7-39.5)
BSC	5,276	9,341	56.5 (55.5-57.5)	4,065	9,341	43.5 (42.5-44.5)
BSSL	11,143	24,015	46.4 (45.8-47.0)	12,872	24,015	53.6 (53.0-54.2)
BSHC	5,197	7,691	67.6 (66.5-68.6)	2,494	7,691	32.4 (31.4-33.5)
BSA Total	57,671	95,684	60.3 (60.0-60.6)	38,013	95,684	39.7 (39.4-40.0)
50-69 years						
BSWN	8,732	46,892	18.6 (18.3-19.0)	38,160	46,892	81.4 (81.0-81.7)
BSCM	4,822	23,609	20.4 (19.9-20.9)	18,787	23,609	79.6 (79.1-80.1)
BSAL	3,589	21,389	16.8 (16.3-17.3)	17,800	21,389	83.2 (82.7-83.7)
BSM	4,524	42,466	10.7 (10.4-11.0)	37,942	42,466	89.3 (89.0-89.6)
BSCtoC	4,854	39,720	12.2 (11.9-12.5)	34,866	39,720	87.8 (87.5-88.1)
BSC	3,365	31,383	10.7 (10.4-11.1)	28,018	31,383	89.3 (88.9-89.6)
BSSL	3,687	64,218	5.7 (5.6-5.9)	60,531	64,218	94.3 (94.1-94.4)
BSHC	2,624	23,846	11.0 (10.6-11.4)	21,222	23,846	89.0 (88.6-89.4)
BSA Total	36,197	293,523	12.3 (12.2-12.5)	257,326	293,523	87.7 (87.5-87.8)

Figure 1a.2: Percentage of initial screens for each screening biennium
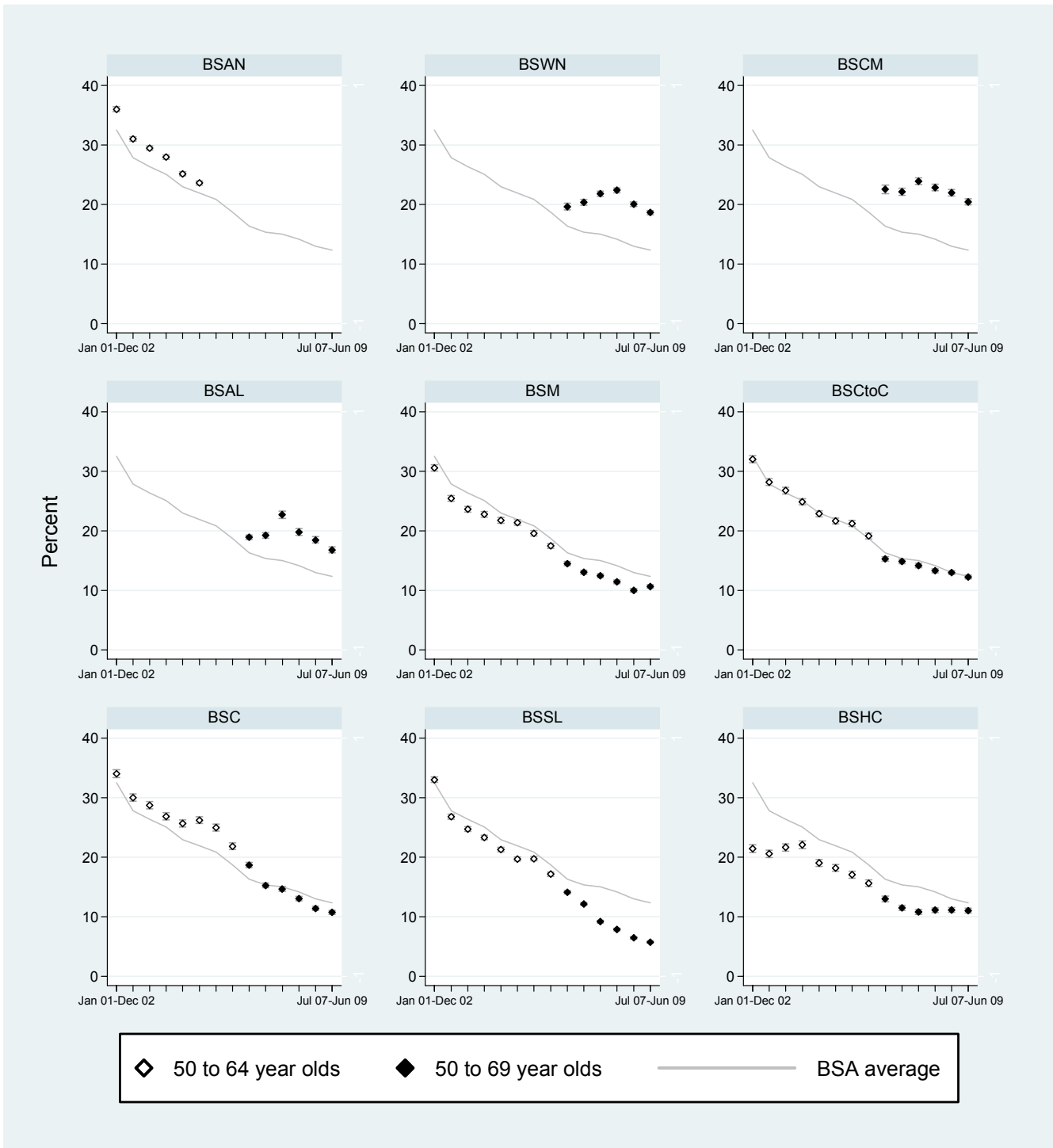
Figure 1a.2: Percentage of subsequent screens for each screening biennium
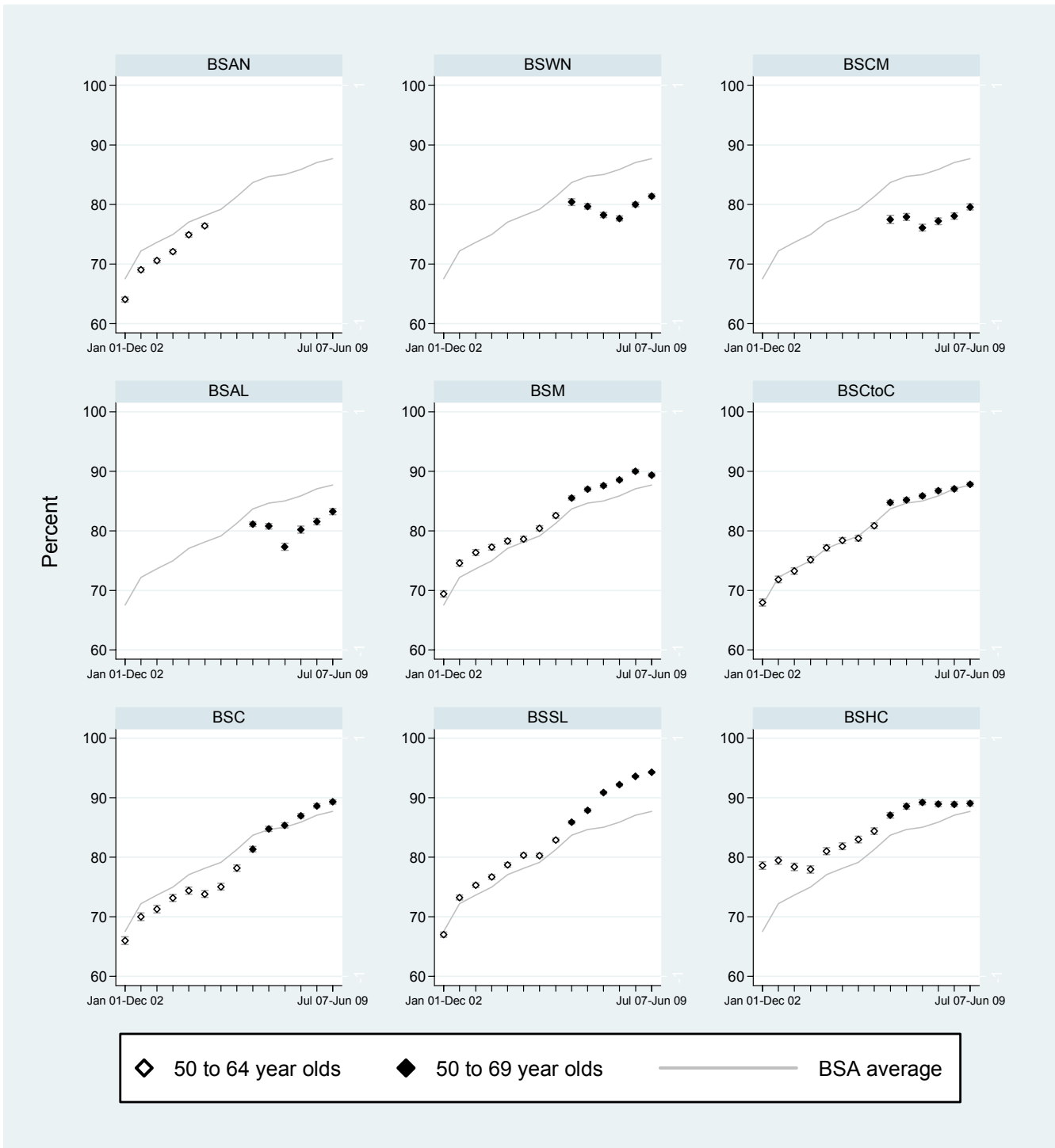
1.a.3. The percentage of women screened by type of screening unit

Table 1.a.3. Percentage of women screened by type of screening unit, 2 years

	Fixed site screens	Number of women screened	% (95%CI)	Mobile site screens,	Number of women screened	% (95%CI)
45-49 years						
BSWN	13,879	15,886	87.4 (86.8-87.9)	2,007	15,886	12.6 (12.1-13.2)
BSCM	5,565	8,162	68.2 (67.2-69.2)	2,597	8,162	31.8 (30.8-32.8)
BSAL	6,302	7,472	84.3 (83.5-85.2)	1,170	7,472	15.7 (14.8-16.5)
BSM	7,843	11,279	69.5 (68.7-70.4)	3,436	11,279	30.5 (29.6-31.3)
BSCtoC	10,224	11,838	86.4 (85.7-87.0)	1,614	11,838	13.6 (13.0-14.3)
BSC	7,641	9,341	81.8 (81.0-82.6)	1,700	9,341	18.2 (17.4-19.0)
BSSL	21,594	24,015	89.9 (89.5-90.3)	2,421	24,015	10.1 (9.7-10.5)
BSHC	5,024	7,691	65.3 (64.2-66.4)	2,667	7,691	34.7 (33.6-35.8)
BSA Total	78,072	95,684	81.6 (81.3-81.8)	17,612	95,684	18.4 (18.2-18.7)
50-69 years						
BSWN	40,908	46,892	87.2 (86.9-87.5)	5,984	46,892	12.8 (12.5-13.1)
BSCM	17,178	23,609	72.8 (72.2-73.3)	6,431	23,609	27.2 (26.7-27.8)
BSAL	18,075	21,389	84.5 (84.0-85.0)	3,314	21,389	15.5 (15.0-16.0)
BSM	28,521	42,466	67.2 (66.7-67.6)	13,945	42,466	32.8 (32.4-33.3)
BSCtoC	34,185	39,720	86.1 (85.7-86.4)	5,535	39,720	13.9 (13.6-14.3)
BSC	23,884	31,383	76.1 (75.6-76.6)	7,499	31,383	23.9 (23.4-24.4)
BSSL	57,608	64,218	89.7 (89.5-89.9)	6,610	64,218	10.3 (10.1-10.5)
BSHC	15,570	23,846	65.3 (64.7-65.9)	8,276	23,846	34.7 (34.1-35.3)
BSA Total	235,929	293,523	80.4 (80.2-80.5)	57,594	293,523	19.6 (19.5-19.8)

Poisson 95% Confidence Intervals presented

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

	6 months			2 years				
	Number of women screened	Eligible Population	% (95%CI)	Number of women screened	Eligible Population	% (95%CI)		
50-54 years								
BSWN	3,617	22,575	16.0 (15.5-16.5)	13,715	22,575	60.8 (60.1-61.4)	×××	*
BSCM	2,061	13,655	15.1 (14.5-15.7)	7,142	13,655	52.3 (51.5-53.1)	×××	*
BSAL	1,821	13,620	13.4 (12.8-14.0)	6,539	13,620	48.0 (47.2-48.9)	×××	*
BSM	3,337	22,125	15.1 (14.6-15.6)	11,282	22,125	51.0 (50.3-51.7)	×××	*
BSCtoC	3,100	18,320	16.9 (16.4-17.5)	11,145	18,320	60.8 (60.1-61.5)	×××	*
BSC	2,774	14,855	18.7 (18.0-19.3)	8,965	14,855	60.4 (59.6-61.1)	×××	*
BSSL	4,320	24,460	17.7 (17.2-18.1)	18,693	24,460	76.4 (75.9-77.0)	✓✓	*
BSHC	1,620	9,840	16.5 (15.7-17.2)	7,122	9,840	72.4 (71.5-73.3)	✓	*
BSA Total	22,650	139,450	16.2 (16.0-16.4)	84,603	139,450	60.7 (60.4-60.9)	×××	*
55-59 years								
BSWN	3,018	19,765	15.3 (14.8-15.8)	12,799	19,765	64.8 (64.1-65.4)	××	*
BSCM	1,636	11,980	13.7 (13.0-14.3)	6,473	11,980	54.0 (53.1-54.9)	×××	*
BSAL	1,606	11,240	14.3 (13.6-14.9)	6,206	11,240	55.2 (54.3-56.1)	×××	*
BSM	2,866	19,195	14.9 (14.4-15.4)	11,145	19,195	58.1 (57.4-58.8)	×××	*
BSCtoC	2,647	16,255	16.3 (15.7-16.9)	10,937	16,255	67.3 (66.6-68.0)	✓	*
BSC	2,250	13,075	17.2 (16.6-17.9)	8,834	13,075	67.6 (66.8-68.4)	✓	*
BSSL	5,644	22,175	25.5 (24.9-26.0)	17,759	22,175	80.1 (79.6-80.6)	✓✓✓	*
BSHC	1,631	8,690	18.8 (18.0-19.6)	6,414	8,690	73.8 (72.9-74.7)	✓✓	*
BSA Total	21,298	122,375	17.4 (17.2-17.6)	80,567	122,375	65.8 (65.6-66.1)	××	*
60-64 years								
BSWN	2,828	17,310	16.3 (15.8-16.9)	11,581	17,310	66.9 (66.2-67.6)	✓	*
BSCM	1,716	10,175	16.9 (16.1-17.6)	5,757	10,175	56.6 (55.6-57.5)	×××	*
BSAL	1,522	9,030	16.9 (16.1-17.6)	5,102	9,030	56.5 (55.5-57.5)	×××	*
BSM	2,760	16,860	16.4 (15.8-16.9)	10,873	16,860	64.5 (63.8-65.2)	××	*
BSCtoC	2,726	14,005	19.5 (18.8-20.1)	9,905	14,005	70.7 (70.0-71.5)	✓	ns
BSC	2,230	11,145	20.0 (19.3-20.8)	7,763	11,145	69.7 (68.8-70.5)	✓	ns
BSSL	5,450	19,025	28.6 (28.0-29.3)	15,889	19,025	83.5 (83.0-84.0)	✓✓✓	*
BSHC	1,519	7,545	20.1 (19.2-21.1)	5,748	7,545	76.2 (75.2-77.1)	✓✓	*
BSA Total	20,751	105,095	19.7 (19.5-20.0)	72,618	105,095	69.1 (68.8-69.4)	✓	*
65-69 years								
BSWN	2,203	13,255	16.6 (16.0-17.3)	8,797	13,255	66.4 (65.6-67.2)	××	*
BSCM	1,289	7,680	16.8 (16.0-17.6)	4,237	7,680	55.2 (54.0-56.3)	×××	*
BSAL	994	6,760	14.7 (13.9-15.6)	3,542	6,760	52.4 (51.2-53.6)	×××	*
BSM	2,736	13,880	19.7 (19.1-20.4)	9,166	13,880	66.0 (65.2-66.8)	××	*
BSCtoC	2,075	11,685	17.8 (17.1-18.5)	7,733	11,685	66.2 (65.3-67.0)	××	*
BSC	1,746	8,650	20.2 (19.3-21.0)	5,821	8,650	67.3 (66.3-68.3)	✓	*
BSSL	3,908	14,995	26.1 (25.4-26.8)	11,877	14,995	79.2 (78.5-79.9)	✓✓✓	*
BSHC	1,235	6,250	19.8 (18.8-20.8)	4,562	6,250	73.0 (71.9-74.1)	✓	*
BSA Total	16,186	83,155	19.5 (19.2-19.7)	55,735	83,155	67.0 (66.7-67.3)	✓	*

Note: Eligible population for 2008 is based on projections from the 2001 census.
 * 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

1.a.7 Coverage by ethnicity

1.a.7a Coverage by ethnicity, 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)
Maori						
BSWN	533	3,400	15.7 (14.5-16.9)	1,766	3,400	51.9 (50.2-53.6)
BSCM	291	2,350	12.4 (11.1-13.8)	925	2,350	39.4 (37.4-41.4)
BSAL	140	1,160	12.1 (10.2-14.1)	496	1,160	42.8 (39.9-45.7)
BSM	559	5,230	10.7 (9.9-11.6)	1,631	5,230	31.2 (29.9-32.5)
BSCtoC	475	4,075	11.7 (10.7-12.7)	1,624	4,075	39.9 (38.3-41.4)
BSC	199	2,015	9.9 (8.6-11.3)	858	2,015	42.6 (40.4-44.8)
BSSL	328	1,545	21.2 (19.2-23.4)	1,172	1,545	75.9 (73.6-78.0)
BSHC	68	720	9.4 (7.4-11.8)	311	720	43.2 (39.5-46.9)
BSA Total	2,593	20,495	12.7 (12.2-13.1)	8,783	20,495	42.9 (42.2-43.5)
Pacific						
BSWN	207	1,210	17.1 (15.0-19.3)	710	1,210	58.7 (55.8-61.5)
BSCM	374	2,670	14.0 (12.7-15.4)	1,278	2,670	47.9 (46.0-49.8)
BSAL	256	1,710	15.0 (13.3-16.8)	829	1,710	48.5 (46.1-50.9)
BSM	37	310	11.9 (8.5-16.1)	121	310	39.0 (33.6-44.7)
BSCtoC	32	310	10.3 (7.2-14.3)	135	310	43.5 (38.0-49.3)
BSC	98	970	10.1 (8.3-12.2)	362	970	37.3 (34.3-40.4)
BSSL	65	305	21.3 (16.9-26.3)	242	305	79.3 (74.4-83.7)
BSHC	11	75	14.7 (7.6-24.7)	48	75	64.0 (52.1-74.8)
BSA Total	1,080	7,560	14.3 (13.5-15.1)	3,725	7,560	49.3 (48.1-50.4)
Other						
BSWN	3,532	22,230	15.9 (15.4-16.4)	13,367	22,230	60.1 (59.5-60.8)
BSCM	1,876	11,560	16.2 (15.6-16.9)	5,959	11,560	51.5 (50.6-52.5)
BSAL	1,764	13,820	12.8 (12.2-13.3)	6,018	13,820	43.5 (42.7-44.4)
BSM	2,793	19,230	14.5 (14.0-15.0)	9,475	19,230	49.3 (48.6-50.0)
BSCtoC	2,751	16,500	16.7 (16.1-17.3)	10,014	16,500	60.7 (59.9-61.4)
BSC	2,303	15,140	15.2 (14.6-15.8)	8,046	15,140	53.1 (52.3-53.9)
BSSL	5,591	25,470	22.0 (21.4-22.5)	22,481	25,470	88.3 (87.9-88.7)
BSHC	1,857	10,460	17.8 (17.0-18.5)	7,271	10,460	69.5 (68.6-70.4)
BSA Total	22,467	134,410	16.7 (16.5-16.9)	82,631	134,410	61.5 (61.2-61.7)

Poisson 95% Confidence Intervals presented

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)		
Maori								
BSWN	1,120	6,670	16.8 (15.9-17.7)	4,204	6,670	63.0 (61.9-64.2)	✗✗	*
BSCM	673	4,750	14.2 (13.2-15.2)	2,363	4,750	49.7 (48.3-51.2)	✗✗✗	*
BSAL	320	2,560	12.5 (11.2-13.8)	1,140	2,560	44.5 (42.6-46.5)	✗✗✗	*
BSM	1,441	11,140	12.9 (12.3-13.6)	4,716	11,140	42.3 (41.4-43.3)	✗✗✗	*
BSCtoC	1,277	8,270	15.4 (14.7-16.2)	4,054	8,270	49.0 (47.9-50.1)	✗✗✗	*
BSC	546	3,640	15.0 (13.9-16.2)	2,059	3,640	56.6 (54.9-58.2)	✗✗✗	*
BSSL	699	3,070	22.8 (21.3-24.3)	2,263	3,070	73.7 (72.1-75.3)	✓✓	*
BSHC	165	1,315	12.5 (10.8-14.5)	748	1,315	56.9 (54.2-59.6)	✗✗✗	*
BSA Total	6,241	41,415	15.1 (14.7-15.4)	21,547	41,415	52.0 (51.5-52.5)	✗✗✗	*
Pacific								
BSWN	416	2,585	16.1 (14.7-17.6)	1,763	2,585	68.2 (66.4-70.0)	✓	*
BSCM	806	5,800	13.9 (13.0-14.8)	3,048	5,800	52.6 (51.3-53.8)	✗✗✗	*
BSAL	584	3,550	16.5 (15.2-17.7)	2,040	3,550	57.5 (55.8-59.1)	✗✗✗	*
BSM	99	750	13.2 (10.9-15.8)	382	750	50.9 (47.3-54.6)	✗✗✗	*
BSCtoC	89	635	14.0 (11.4-17.0)	312	635	49.1 (45.2-53.1)	✗✗✗	*
BSC	248	2,385	10.4 (9.2-11.7)	1,089	2,385	45.7 (43.6-47.7)	✗✗✗	*
BSSL	142	565	25.1 (21.6-28.9)	444	565	78.6 (75.0-81.9)	✓✓✓	*
BSHC	19	150	12.7 (7.8-19.1)	99	150	66.0 (57.8-73.5)	✓	ns
BSA Total	2,403	16,420	14.6 (14.1-15.2)	9,177	16,420	55.9 (55.1-56.7)	✗✗✗	*
Other								
BSWN	10,082	63,650	15.8 (15.6-16.1)	40,837	63,650	64.2 (63.8-64.5)	✗✗	*
BSCM	5,223	32,940	15.9 (15.5-16.3)	18,196	32,940	55.2 (54.7-55.8)	✗✗✗	*
BSAL	4,888	34,540	14.2 (13.8-14.5)	17,854	34,540	51.7 (51.2-52.2)	✗✗✗	*
BSM	10,134	60,170	16.8 (16.5-17.1)	37,286	60,170	62.0 (61.6-62.4)	✗✗✗	*
BSCtoC	9,168	51,360	17.9 (17.5-18.2)	35,229	51,360	68.6 (68.2-69.0)	✓	*
BSC	8,160	41,700	19.6 (19.2-20.0)	28,082	41,700	67.3 (66.9-67.8)	✓	*
BSSL	18,420	77,020	23.9 (23.6-24.2)	61,300	77,020	79.6 (79.3-79.9)	✓✓✓	*
BSHC	5,801	30,860	18.8 (18.4-19.2)	22,896	30,860	74.2 (73.7-74.7)	✓✓	*
BSA Total	71,876	392,240	18.3 (18.2-18.4)	261,680	392,240	66.7 (66.6-66.9)	✓	*

Note: Eligible population for 2008 is based on projections from the 2001 census.
 * 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 1a7.1: Trends in 6 month coverage for Maori
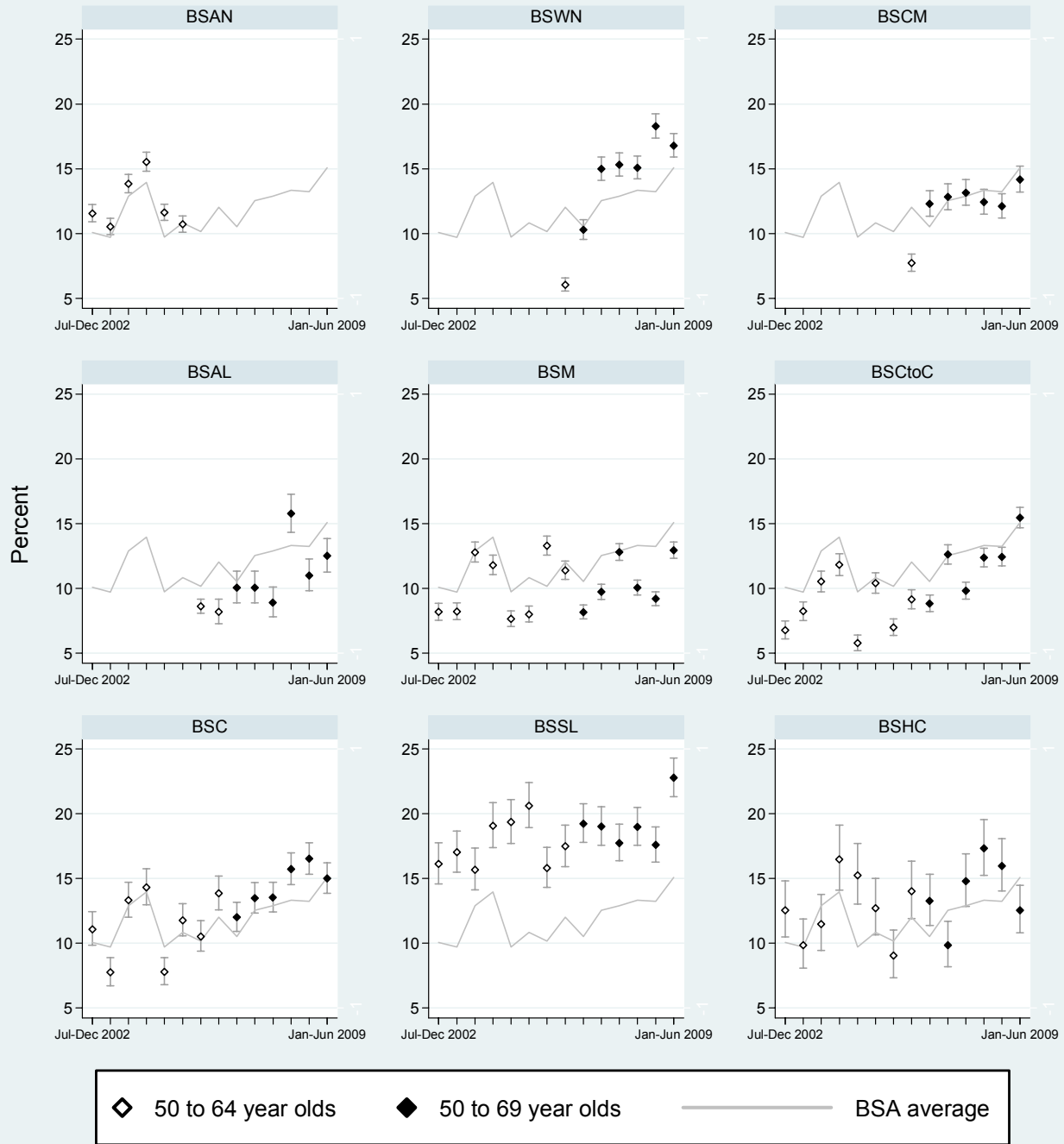
Figure 1a7.1: Trends in biennial coverage for Maori
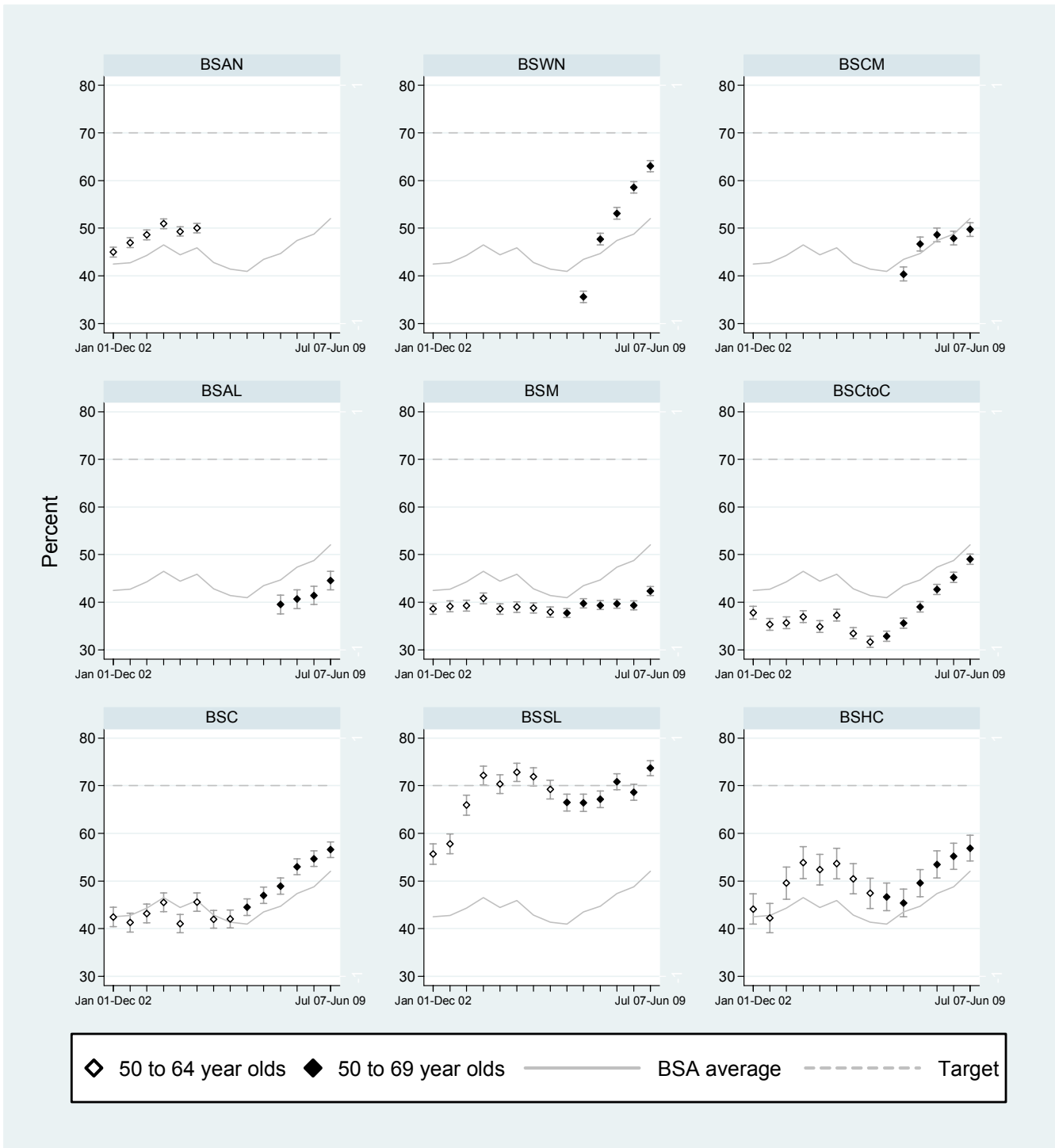
Figure 1a7.1: Trends in 6 month coverage for Pacific
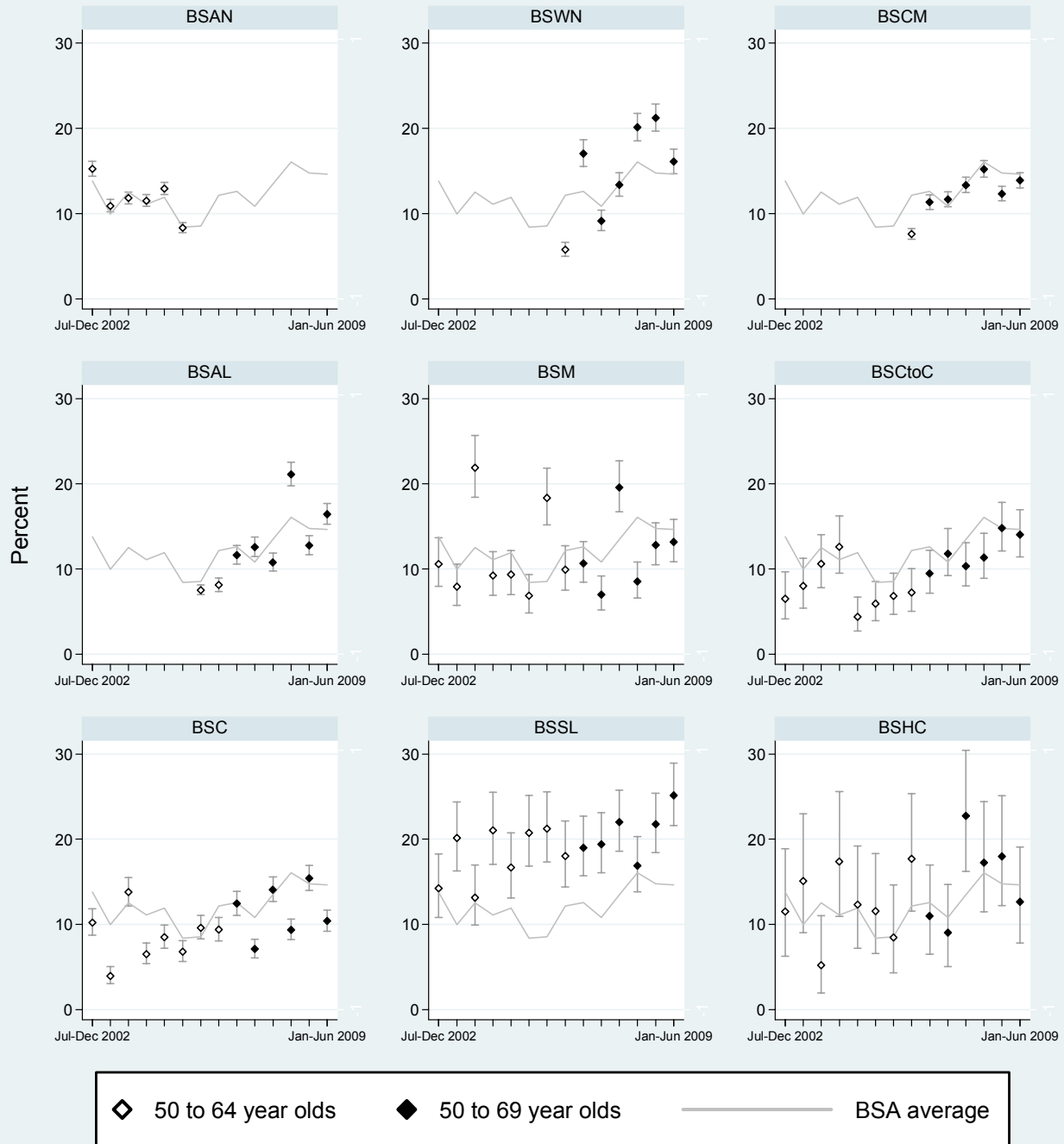
Figure 1a7.1: Trends in biennial coverage for Pacific
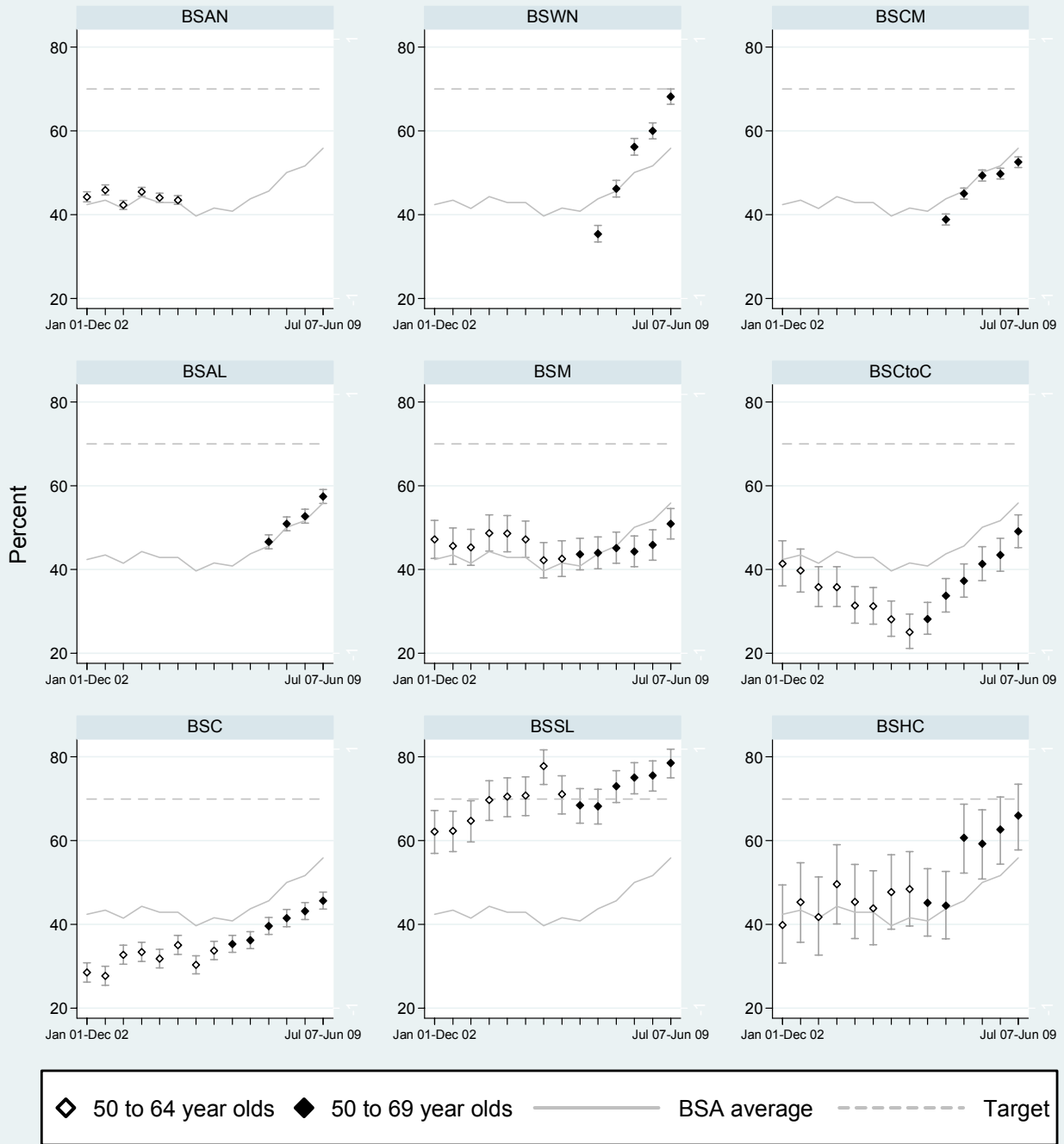
Figure 1a7.1: Trends in 6 month coverage for other ethnic groups

Percent

50 to 64 year olds   ◆ 50 to 69 year olds   ———— BSA average
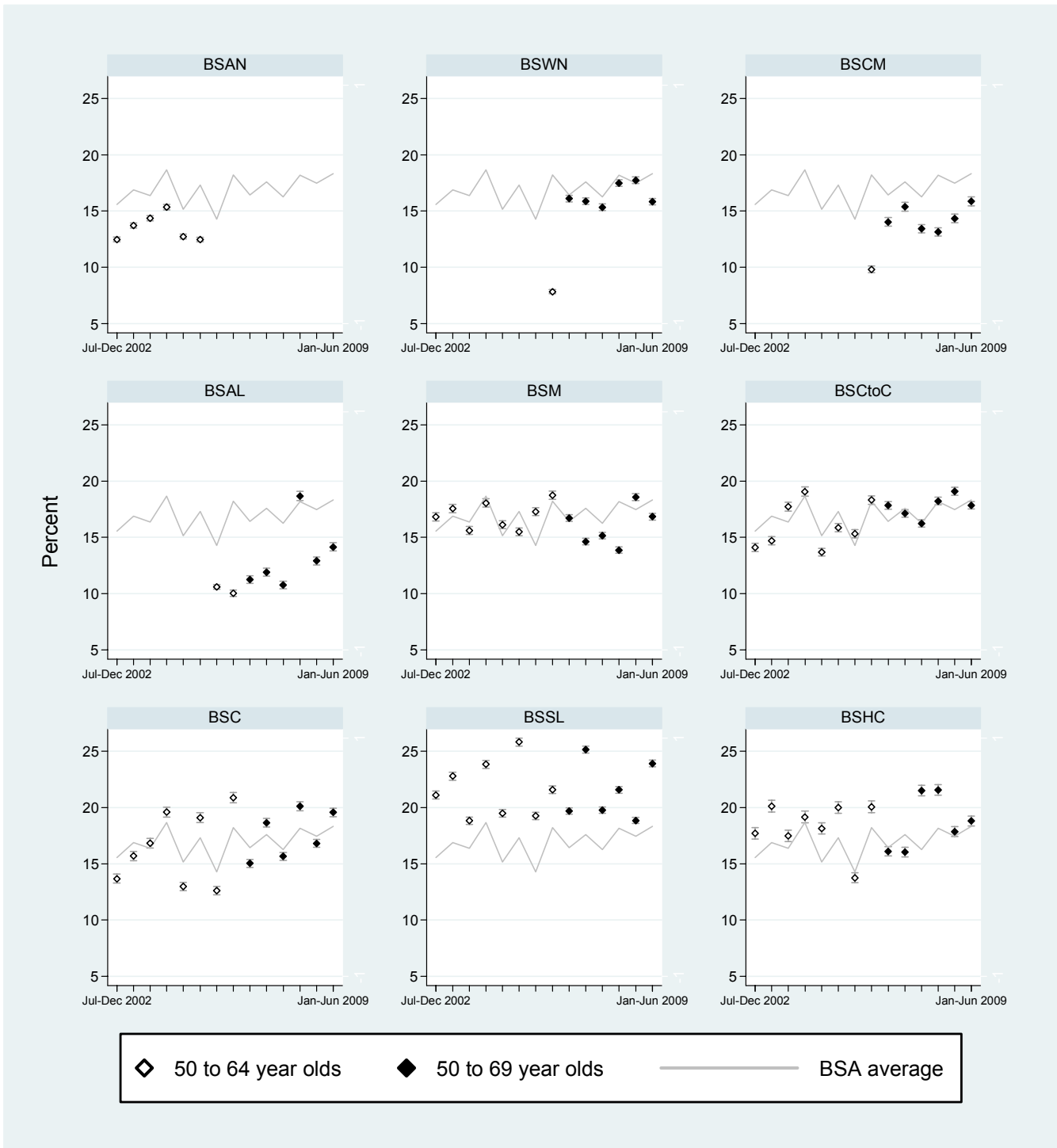
Figure 1a7.1: Trends in biennial coverage for other ethnic groups
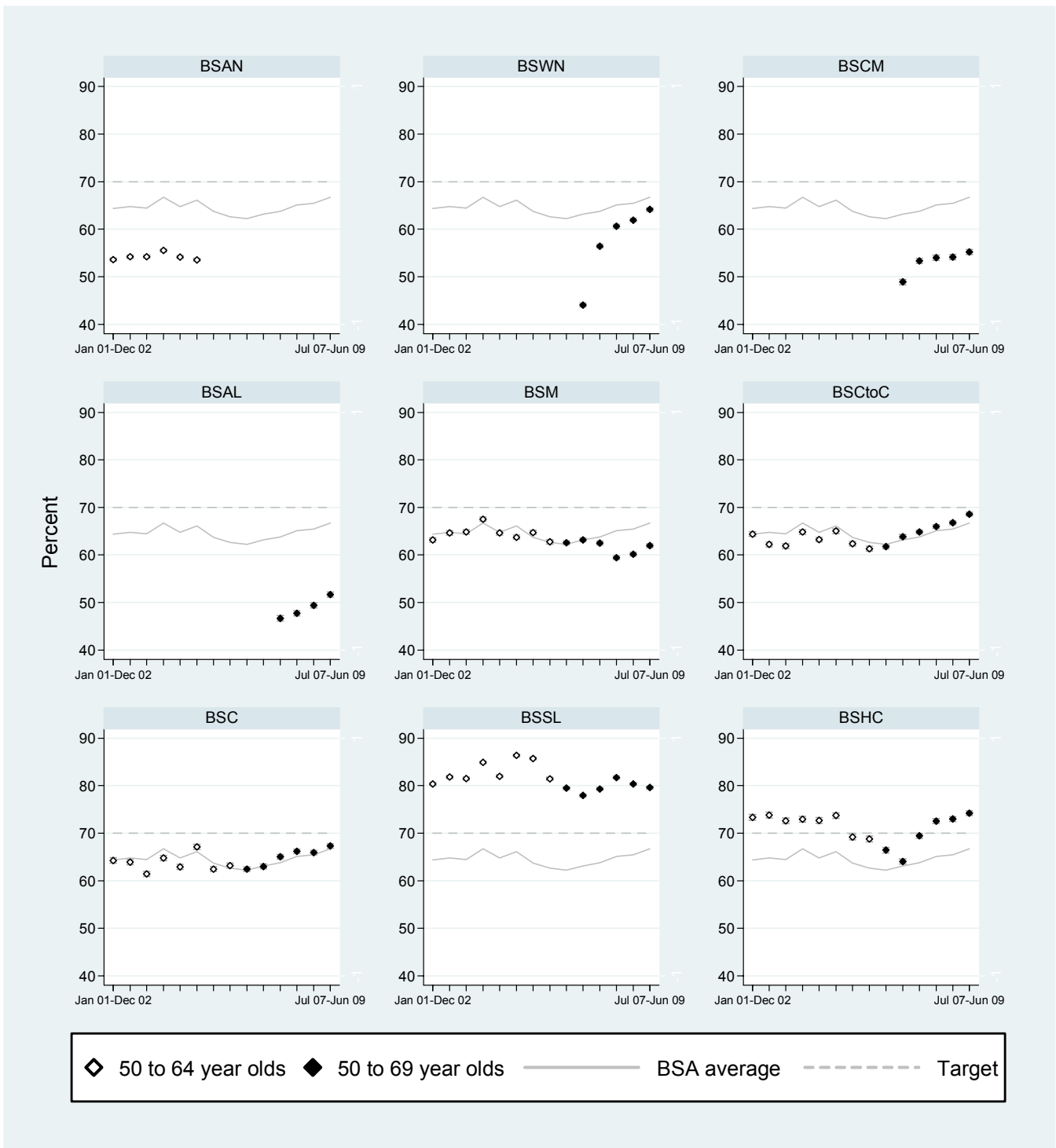
1.b. Routine re-screening

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, 45-69 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)		
45-49 years								
BSWN	1,763	3,261	54.1 (52.3-55.8)	3,244	6,245	51.9 (50.7-53.2)		
BSCM	828	1,967	42.1 (39.9-44.3)	1,055	2,603	40.5 (38.6-42.4)		
BSAL	1,019	1,874	54.4 (52.1-56.6)	2,471	5,263	47.0 (45.6-48.3)		
BSM	806	1,984	40.6 (38.5-42.8)	4,223	9,968	42.4 (41.4-43.3)		
BSCtoC	1,045	1,781	58.7 (56.3-61.0)	3,814	7,058	54.0 (52.9-55.2)		
BSC	1,016	1,718	59.1 (56.8-61.5)	3,562	6,316	56.4 (55.2-57.6)		
BSSL	3,074	4,610	66.7 (65.3-68.0)	11,029	19,912	55.4 (54.7-56.1)		
BSHC	442	897	49.3 (46.0-52.6)	2,284	4,440	51.4 (50.0-52.9)		
BSA Total	9,993	18,092	55.2 (54.5-56.0)	31,682	61,805	51.3 (50.9-51.7)		
50-69 years								
BSWN	6,429	7,439	86.4 (85.6-87.2)	15,264	17,750	86.0 (85.5-86.5)	✓	*
BSCM	2,964	3,978	74.5 (73.1-75.9)	9,013	11,739	76.8 (76.0-77.5)	✗✗	*
BSAL	2,937	3,395	86.5 (85.3-87.6)	20,610	27,555	74.8 (74.3-75.3)	✗✗✗	*
BSM	4,031	5,639	71.5 (70.3-72.7)	20,669	28,098	73.6 (73.0-74.1)	✗✗✗	*
BSCtoC	5,358	5,809	92.2 (91.5-92.9)	22,005	24,461	90.0 (89.6-90.3)	✓✓	*
BSC	5,221	5,857	89.1 (88.3-89.9)	18,370	20,704	88.7 (88.3-89.2)	✓	*
BSSL	9,372	10,223	91.7 (91.1-92.2)	39,844	43,909	90.7 (90.5-91.0)	✓✓	*
BSHC	2,687	2,988	89.9 (88.8-91.0)	13,313	14,829	89.8 (89.3-90.3)	✓✓	*
BSA Total	38,999	45,328	86.0 (85.7-86.4)	159,088	189,045	84.2 (84.0-84.3)	✓	*

Note: Denominator for re-screens indexed according to original screening provider.
* 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, 45 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)		
45-49 years								
BSWN	1,486	1,763	84.3 (82.5-86.0)	2,674	3,244	82.4 (81.1-83.7)		
BSCM	624	828	75.4 (72.3-78.3)	807	1,055	76.5 (73.8-79.0)		
BSAL	965	1,019	94.7 (93.1-96.0)	2,239	2,471	90.6 (89.4-91.7)		
BSM	483	806	59.9 (56.4-63.3)	2,519	4,223	59.6 (58.2-61.1)		
BSCtoC	889	1,045	85.1 (82.8-87.2)	2,949	3,814	77.3 (76.0-78.6)		
BSC	943	1,016	92.8 (91.1-94.3)	3,092	3,562	86.8 (85.6-87.9)		
BSSL	2,712	3,074	88.2 (87.0-89.3)	10,173	11,029	92.2 (91.7-92.7)		
BSHC	334	442	75.6 (71.3-79.5)	1,448	2,284	63.4 (61.4-65.4)		
BSA Total	8,436	9,993	84.4 (83.7-85.1)	25,901	31,682	81.8 (81.3-82.2)		
50-69 years								
BSWN	5,491	6,429	85.4 (84.5-86.3)	12,866	15,264	84.3 (83.7-84.9)	✓✓✓	*
BSCM	2,251	2,964	75.9 (74.4-77.5)	7,467	9,013	82.8 (82.1-83.6)	✓✓✓	*
BSAL	2,738	2,937	93.2 (92.3-94.1)	17,942	20,610	87.1 (86.6-87.5)	✓✓✓	*
BSM	2,382	4,031	59.1 (57.6-60.6)	12,593	20,669	60.9 (60.3-61.6)	✗✗✗	*
BSCtoC	4,392	5,358	82.0 (80.9-83.0)	17,212	22,005	78.2 (77.7-78.8)	✓	*
BSC	4,735	5,221	90.7 (89.9-91.5)	15,872	18,370	86.4 (85.9-86.9)	✓✓✓	*
BSSL	8,318	9,372	88.8 (88.1-89.4)	36,836	39,844	92.5 (92.2-92.7)	✓✓✓	*
BSHC	2,204	2,687	82.0 (80.5-83.5)	9,141	13,313	68.7 (67.9-69.4)	✗✗	*
BSA Total	32,511	38,999	83.4 (83.0-83.7)	129,929	159,088	81.7 (81.5-81.9)	✓✓	*

Note: Denominator for re-screens indexed according to original screening provider.
* 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
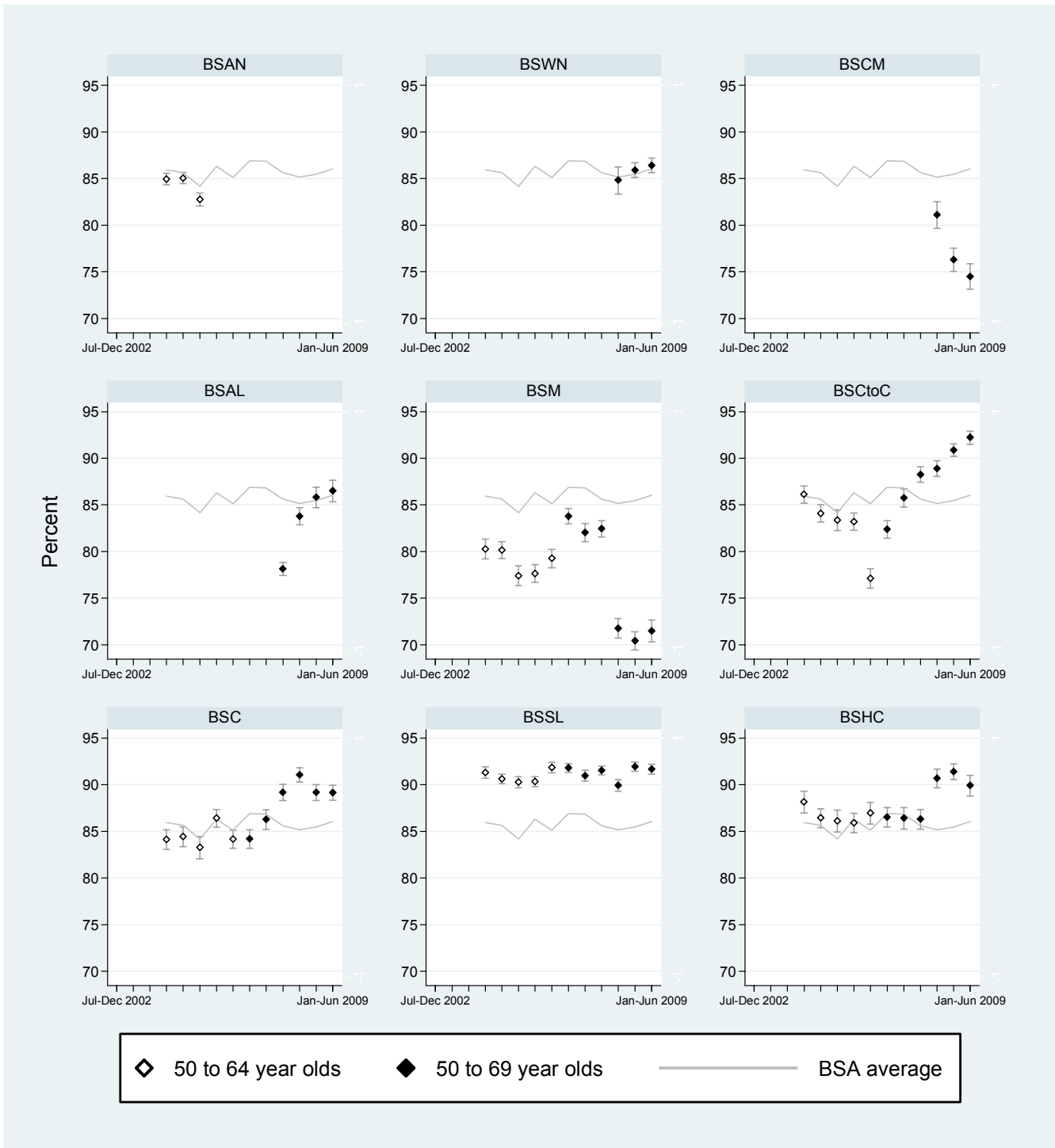
Figure 1b.1: Trends in re-screen rates (within 27 months), 2 years

50 to 64 year olds ◇   50 to 69 year olds ◆   BSA average ———   Target - - - - -
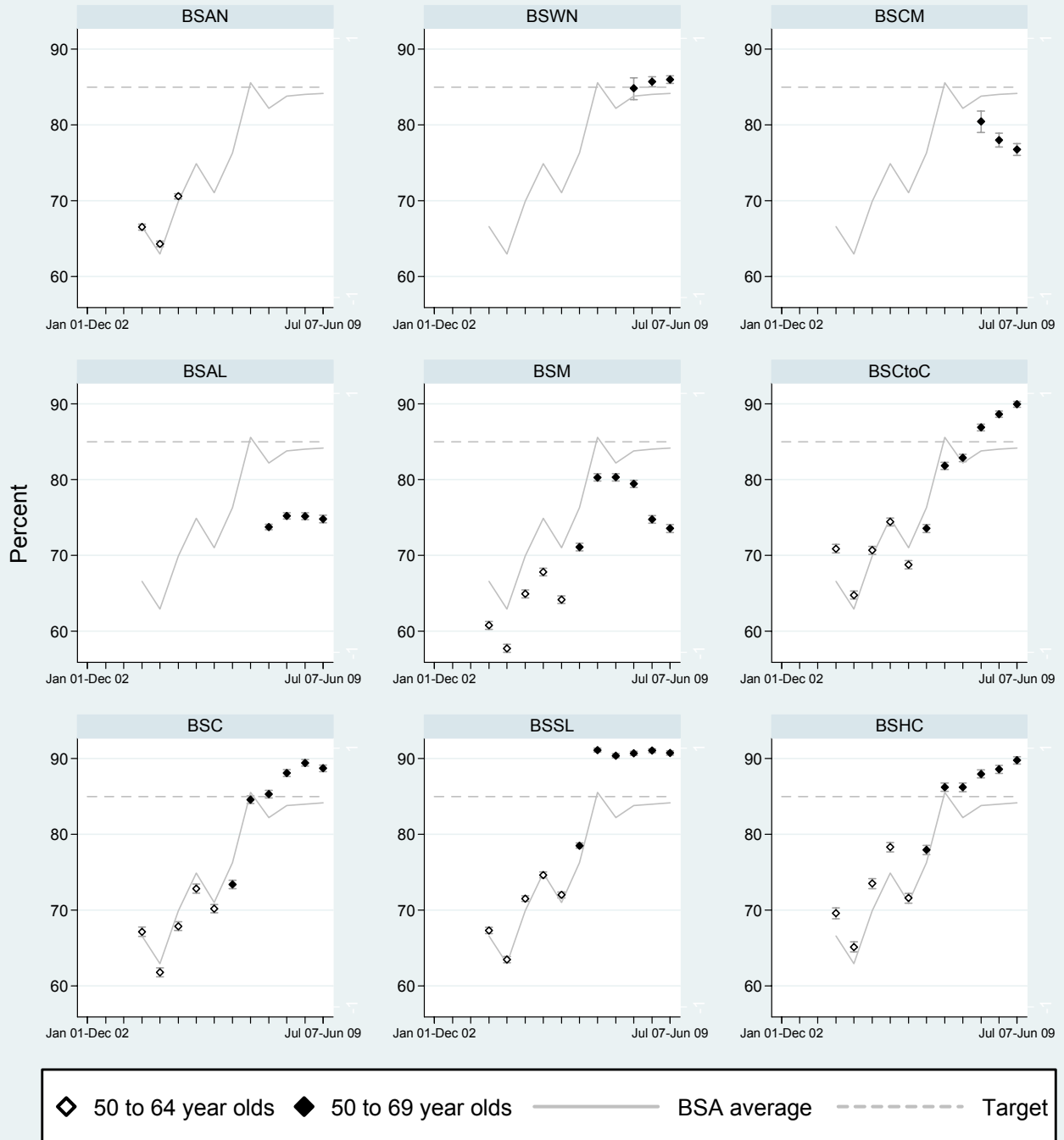
2. PROVISION OF HIGH QUALITY SCREENING AND ASSESSMENT

2.a. Screened women who have no more than four films taken
Description:
 The percentage of women who have no more than four films taken.
Target:
> 80% of women screened have four films taken or fewer.

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)
45-49 years						
BSWN	3,341	3,791	88.1 (87.1-89.1)	442	504	87.7 (84.5-90.4)
BSCM	1,412	1,748	80.8 (78.9-82.6)	690	793	87.0 (84.5-89.3)
BSAL	1,691	1,888	89.6 (88.1-90.9)	265	317	83.6 (79.1-87.5)
BSM	2,086	2,321	89.9 (88.6-91.1)	926	1,082	85.6 (83.3-87.6)
BSCtoC	2,717	3,025	89.8 (88.7-90.9)	189	238	79.4 (73.7-84.4)
BSC	1,940	2,254	86.1 (84.6-87.5)	333	369	90.2 (86.7-93.1)
BSSL	4,903	5,428	90.3 (89.5-91.1)	520	582	89.3 (86.6-91.7)
BSHC	1,043	1,365	76.4 (74.1-78.6)	536	586	91.5 (88.9-93.6)
BSA Total	19,133	21,820	87.7 (87.2-88.1)	3,901	4,471	87.3 (86.2-88.2)
50-69 years						
BSWN	8,602	9,908	86.8 (86.1-87.5)	1,553	1,758	88.3 (86.7-89.8)
BSCM	3,910	4,730	82.7 (81.6-83.7)	1,639	1,972	83.1 (81.4-84.7)
BSAL	4,530	5,082	89.1 (88.3-90.0)	710	861	82.5 (79.8-84.9)
BSM	7,055	7,739	91.2 (90.5-91.8)	3,304	3,960	83.4 (82.2-84.6)
BSCtoC	8,570	9,599	89.3 (88.6-89.9)	704	949	74.2 (71.3-76.9)
BSC	5,935	6,844	86.7 (85.9-87.5)	1,929	2,156	89.5 (88.1-90.7)
BSSL	15,638	17,204	90.9 (90.5-91.3)	1,889	2,118	89.2 (87.8-90.5)
BSHC	2,769	3,692	75.0 (73.6-76.4)	2,041	2,313	88.2 (86.9-89.5)
BSA Total	57,009	64,798	88.0 (87.7-88.2)	13,769	16,087	85.6 (85.0-86.1)

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)		
45-49 years										
BSWN	12,114	13,879	87.3 (86.7-87.8)			1,766	2,007	88.0 (86.5-89.4)		
BSCM	4,721	5,565	84.8 (83.9-85.8)			2,261	2,597	87.1 (85.7-88.3)		
BSAL	5,778	6,302	91.7 (91.0-92.4)			1,013	1,170	86.6 (84.5-88.5)		
BSM	7,315	7,843	93.3 (92.7-93.8)			3,042	3,436	88.5 (87.4-89.6)		
BSCtoC	9,426	10,224	92.2 (91.7-92.7)			1,376	1,614	85.3 (83.4-86.9)		
BSC	6,980	7,641	91.3 (90.7-92.0)			1,549	1,700	91.1 (89.7-92.4)		
BSSL	19,683	21,594	91.2 (90.8-91.5)			2,218	2,421	91.6 (90.4-92.7)		
BSHC	3,984	5,024	79.3 (78.2-80.4)			2,479	2,667	93.0 (91.9-93.9)		
BSA Total	70,001	78,072	89.7 (89.4-89.9)			15,704	17,612	89.2 (88.7-89.6)		
50-69 years										
BSWN	35,155	40,908	85.9 (85.6-86.3)	✓✓	*	5,318	5,984	88.9 (88.0-89.7)	✓✓✓	*
BSCM	14,920	17,178	86.9 (86.3-87.4)	✓✓	*	5,393	6,431	83.9 (82.9-84.8)	✓	*
BSAL	16,726	18,075	92.5 (92.1-92.9)	✓✓✓	*	2,842	3,314	85.8 (84.5-86.9)	✓✓	*
BSM	27,256	28,521	95.6 (95.3-95.8)	✓✓✓	*	12,029	13,945	86.3 (85.7-86.8)	✓✓	*
BSCtoC	31,712	34,185	92.8 (92.5-93.0)	✓✓✓	*	4,532	5,535	81.9 (80.8-82.9)	✓	*
BSC	22,353	23,884	93.6 (93.3-93.9)	✓✓✓	*	6,660	7,499	88.8 (88.1-89.5)	✓✓✓	*
BSSL	54,194	57,608	94.1 (93.9-94.3)	✓✓✓	*	6,273	6,610	94.9 (94.3-95.4)	✓✓✓	*
BSHC	12,522	15,570	80.4 (79.8-81.0)	✓	ns	7,552	8,276	91.3 (90.6-91.9)	✓✓✓	*
BSA Total	214,838	235,929	91.1 (90.9-91.2)	✓✓✓	*	50,599	57,594	87.9 (87.6-88.1)	✓✓	*

* 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)
45-49 years							
BSWN	2	3,791	0.1 (0.0-0.2)		14	504	2.8 (1.5-4.7)
BSCM	4	1,748	0.2 (0.1-0.6)		20	793	2.5 (1.5-3.9)
BSAL	6	1,888	0.3 (0.1-0.7)		15	317	4.7 (2.6-7.8)
BSM	14	2,321	0.6 (0.3-1.0)		52	1,082	4.8 (3.6-6.3)
BSCtoC	14	3,025	0.5 (0.3-0.8)		6	238	2.5 (0.9-5.5)
BSC	22	2,254	1.0 (0.6-1.5)		15	369	4.1 (2.3-6.7)
BSSL	12	5,428	0.2 (0.1-0.4)		9	582	1.5 (0.7-2.9)
BSHC	4	1,365	0.3 (0.1-0.8)		18	586	3.1 (1.8-4.9)
BSA Total	78	21,820	0.4 (0.3-0.4)		149	4,471	3.3 (2.8-3.9)
50-69 years							
BSWN	1	9,908	0.0 (0.0-0.1)		57	1,758	3.2 (2.5-4.2)
BSCM	2	4,730	0.0 (0.0-0.2)		64	1,972	3.2 (2.5-4.1)
BSAL	15	5,082	0.3 (0.2-0.5)		28	861	3.3 (2.2-4.7)
BSM	34	7,739	0.4 (0.3-0.6)		199	3,960	5.0 (4.4-5.8)
BSCtoC	53	9,599	0.6 (0.4-0.7)		25	949	2.6 (1.7-3.9)
BSC	41	6,844	0.6 (0.4-0.8)		96	2,156	4.5 (3.6-5.4)
BSSL	15	17,204	0.1 (0.0-0.1)		19	2,118	0.9 (0.5-1.4)
BSHC	4	3,692	0.1 (0.0-0.3)		87	2,313	3.8 (3.0-4.6)
BSA Total	165	64,798	0.3 (0.2-0.3)		575	16,087	3.6 (3.3-3.9)

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)		
45-49 years										
BSWN	10	13,879	0.1 (0.0-0.1)			79	2,007	3.9 (3.1-4.9)		
BSCM	5	5,565	0.1 (0.0-0.2)			66	2,597	2.5 (2.0-3.2)		
BSAL	28	6,302	0.4 (0.3-0.6)			45	1,170	3.8 (2.8-5.1)		
BSM	27	7,843	0.3 (0.2-0.5)			148	3,436	4.3 (3.6-5.1)		
BSCtoC	21	10,224	0.2 (0.1-0.3)			65	1,614	4.0 (3.1-5.1)		
BSC	89	7,641	1.2 (0.9-1.4)			77	1,700	4.5 (3.6-5.7)		
BSSL	59	21,594	0.3 (0.2-0.4)			49	2,421	2.0 (1.5-2.7)		
BSHC	22	5,024	0.4 (0.3-0.7)			121	2,667	4.5 (3.8-5.4)		
BSA Total	261	78,072	0.3 (0.3-0.4)			650	17,612	3.7 (3.4-4.0)		
50-69 years										
BSWN	11	40,908	0.0 (0.0-0.0)	✓✓✓	*	264	5,984	4.4 (3.9-5.0)	✗✗✗	*
BSCM	9	17,178	0.1 (0.0-0.1)	✓✓✓	*	201	6,431	3.1 (2.7-3.6)	✓	ns
BSAL	67	18,075	0.4 (0.3-0.5)	✓✓✓	*	130	3,314	3.9 (3.3-4.7)	✗✗✗	*
BSM	99	28,521	0.3 (0.3-0.4)	✓✓✓	*	644	13,945	4.6 (4.3-5.0)	✗✗✗	*
BSCtoC	83	34,185	0.2 (0.2-0.3)	✓✓✓	*	184	5,535	3.3 (2.9-3.8)	✓	ns
BSC	183	23,884	0.8 (0.7-0.9)	✗✗✗	*	328	7,499	4.4 (3.9-4.9)	✗✗✗	*
BSSL	82	57,608	0.1 (0.1-0.2)	✓✓✓	*	110	6,610	1.7 (1.4-2.0)	✓✓✓	*
BSHC	52	15,570	0.3 (0.2-0.4)	✓✓✓	*	407	8,276	4.9 (4.5-5.4)	✗✗✗	*
BSA Total	586	235,929	0.2 (0.2-0.3)	✓✓✓	*	2,268	57,594	3.9 (3.8-4.1)	✗✗✗	*

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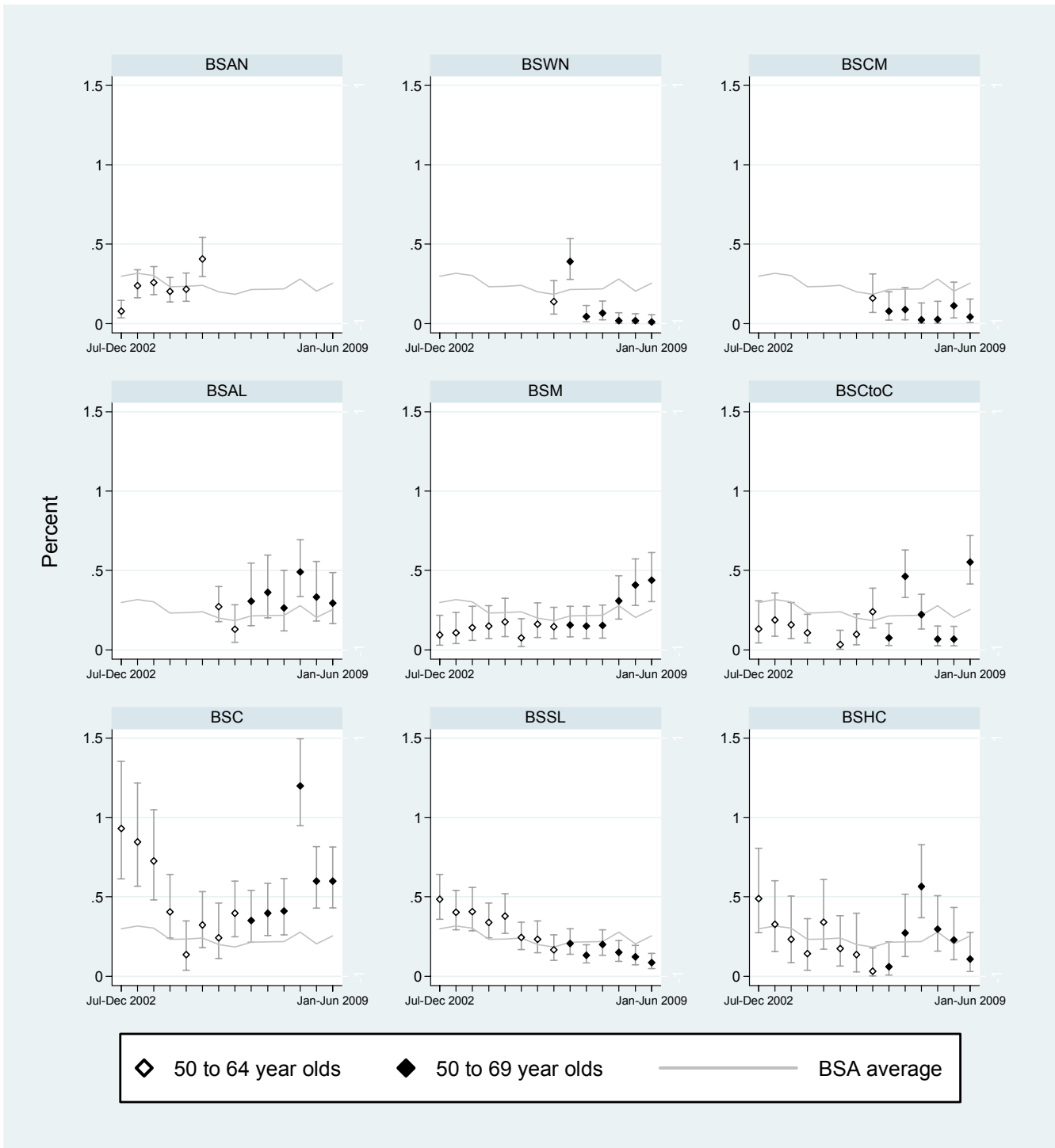
Figure 2b1: Technical recall rates for fixed sites, women aged 50-69 years, fixed sites, 2 years
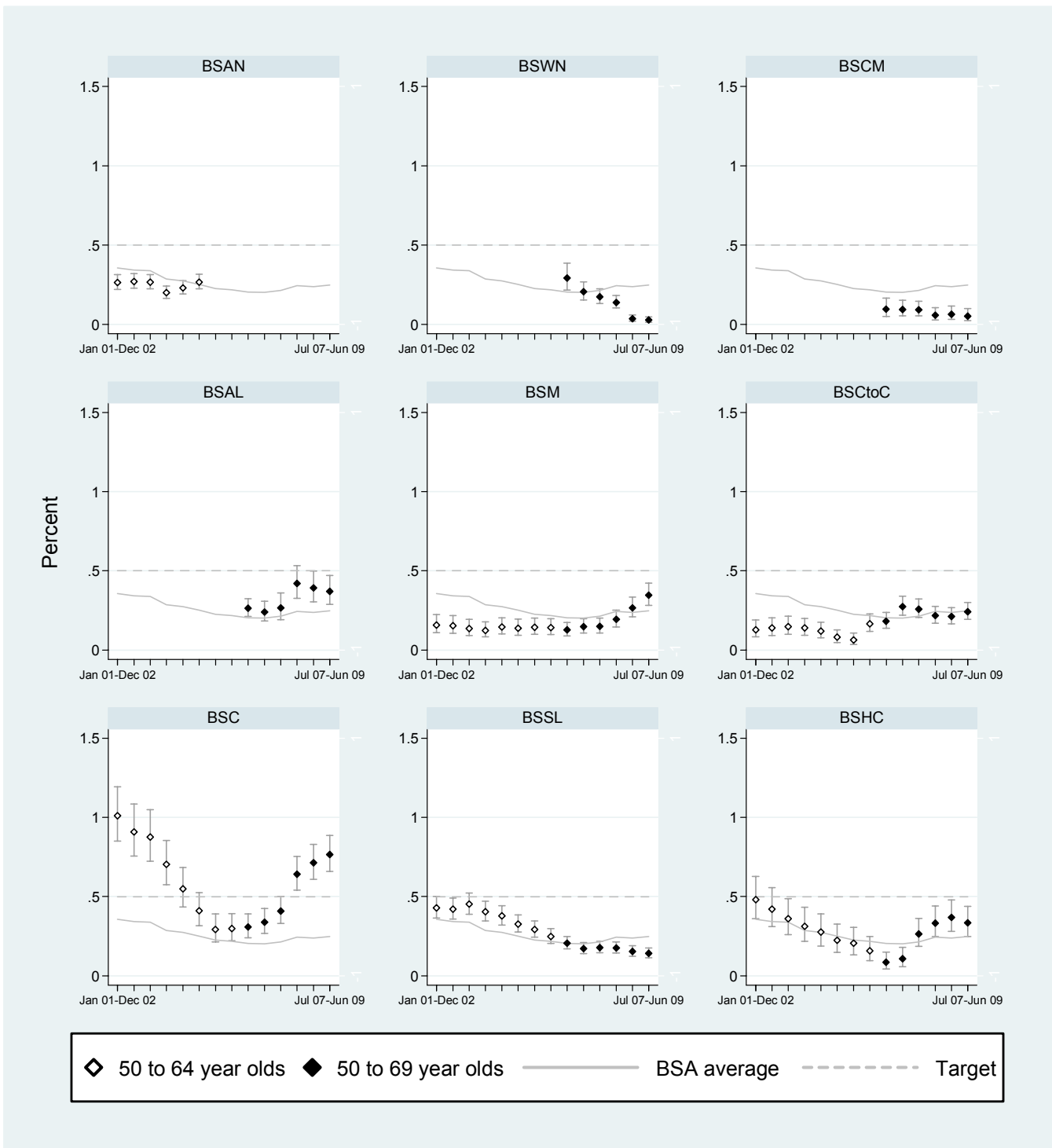
Figure 2b.2: Technical recall rates for mobile sites, women aged 50-69 years, 6 months
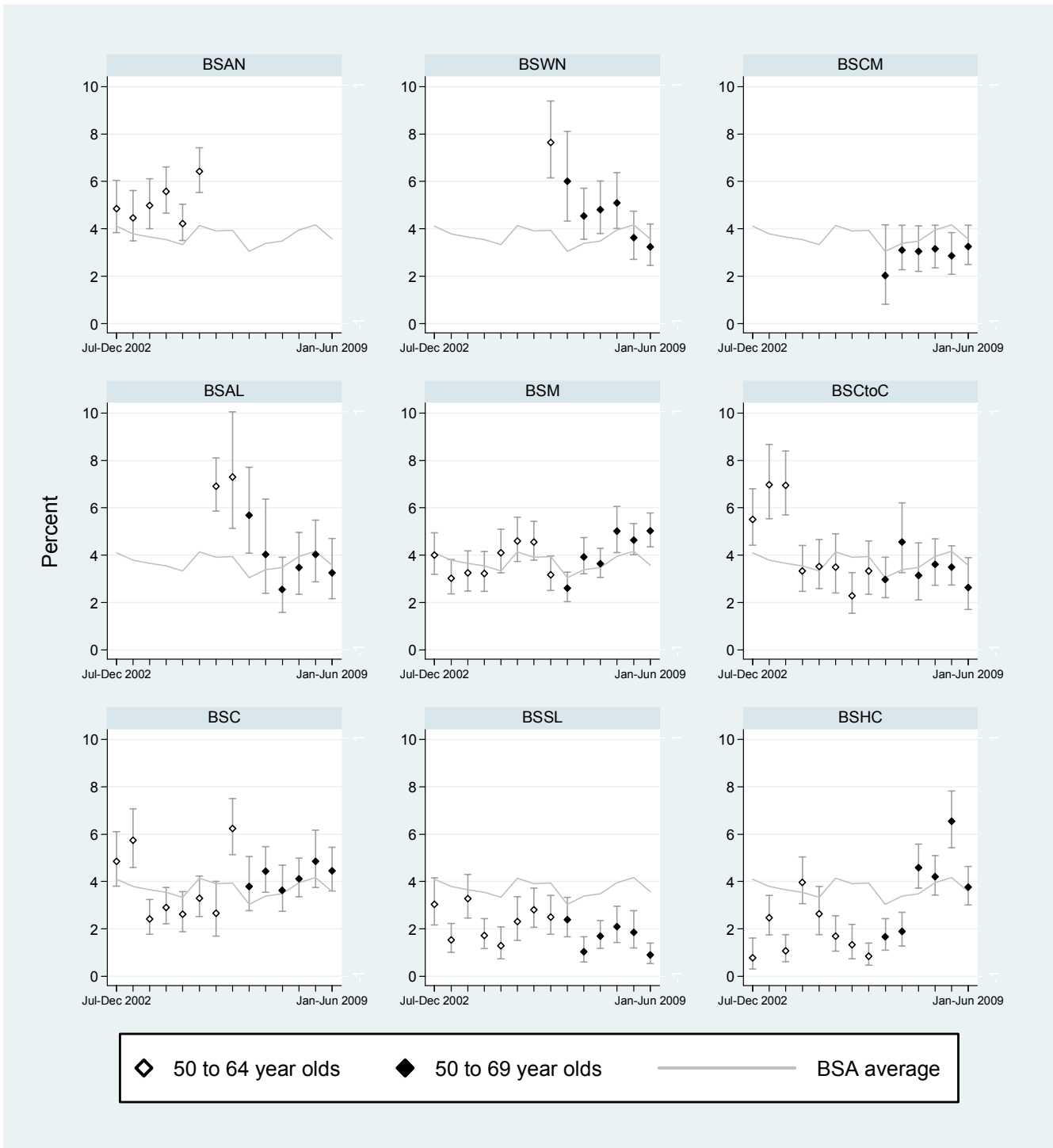
Figure 2b.2: Technical recall rates for mobile sites, women aged 50-69 years, 2 years

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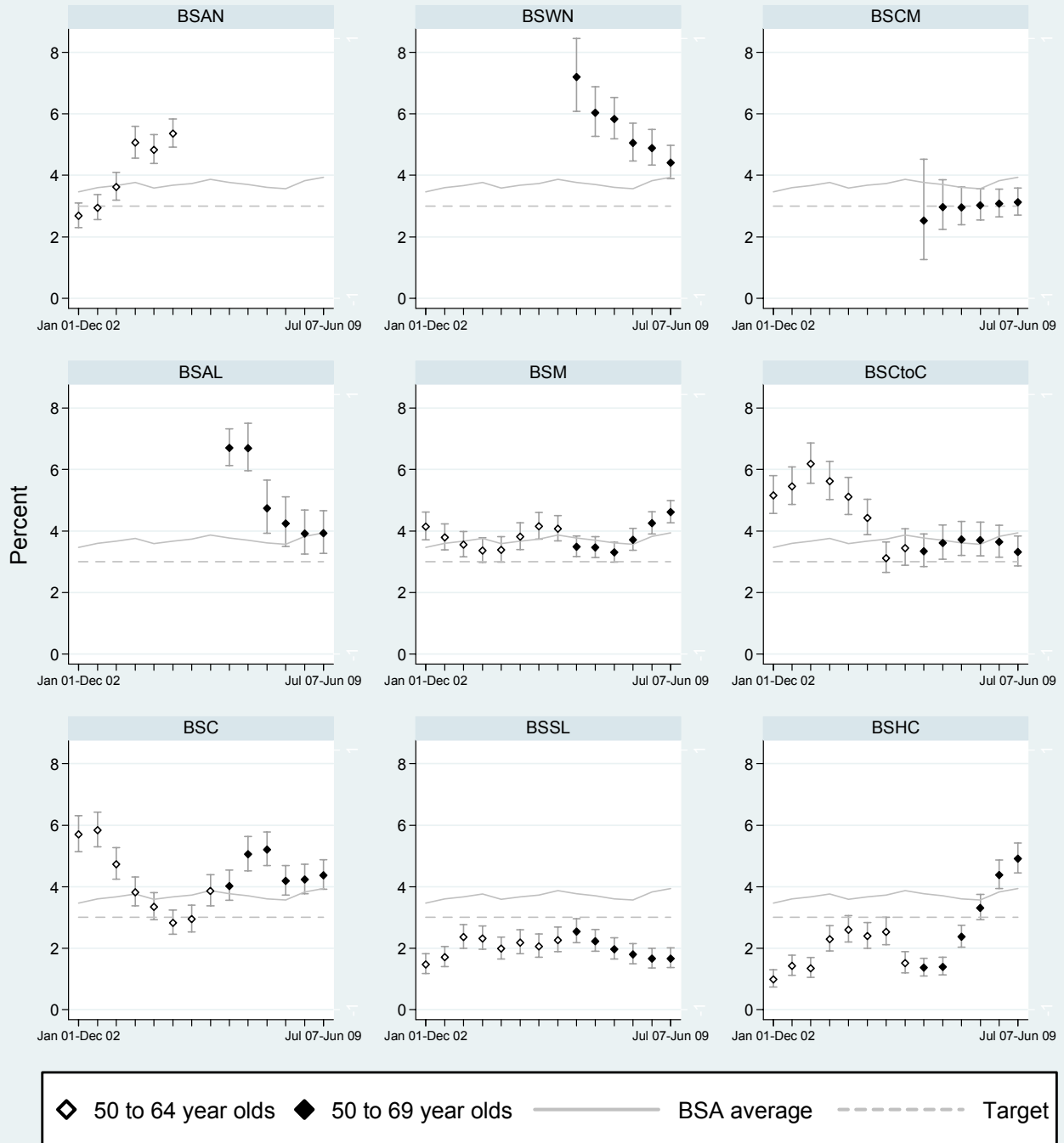
2.c. Technical reject rate

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)
45-49 years							
BSWN	114	15,972	0.7 (0.6-0.9)		48	2,130	2.3 (1.7-3.0)
BSCM	166	7,589	2.2 (1.9-2.5)		19	3,351	0.6 (0.3-0.9)
BSAL	69	7,933	0.9 (0.7-1.1)		0	1,369	0.0 (0.0-0.3)
BSM	109	9,712	1.1 (0.9-1.4)		26	4,571	0.6 (0.4-0.8)
BSCtoC	119	12,621	0.9 (0.8-1.1)		4	1,052	0.4 (0.1-1.0)
BSC	114	9,521	1.2 (1.0-1.4)		0	1,516	0.0 (0.0-0.2)
BSSL	183	22,586	0.8 (0.7-0.9)		8	2,422	0.3 (0.1-0.7)
BSHC	72	5,971	1.2 (0.9-1.5)		11	2,427	0.5 (0.2-0.8)
BSA Total	946	91,905	1.0 (1.0-1.1)		116	18,838	0.6 (0.5-0.7)
50-69 years							
BSWN	312	41,698	0.7 (0.7-0.8)		120	7,374	1.6 (1.3-1.9)
BSCM	359	20,191	1.8 (1.6-2.0)		65	8,475	0.8 (0.6-1.0)
BSAL	179	21,255	0.8 (0.7-1.0)		16	3,719	0.4 (0.2-0.7)
BSM	268	32,035	0.8 (0.7-0.9)		81	16,872	0.5 (0.4-0.6)
BSCtoC	337	39,894	0.8 (0.8-0.9)		21	4,260	0.5 (0.3-0.8)
BSC	295	28,671	1.0 (0.9-1.2)		11	8,891	0.1 (0.1-0.2)
BSSL	513	70,945	0.7 (0.7-0.8)		30	8,842	0.3 (0.2-0.5)
BSHC	243	16,198	1.5 (1.3-1.7)		70	9,637	0.7 (0.6-0.9)
BSA Total	2,506	270,887	0.9 (0.9-1.0)		414	68,070	0.6 (0.6-0.7)

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)		
45-49 years										
BSWN	462	59,283	0.8 (0.7-0.9)			159	8,945	1.8 (1.5-2.1)		
BSCM	350	24,099	1.5 (1.3-1.6)			54	11,194	0.5 (0.4-0.6)		
BSAL	168	27,586	0.6 (0.5-0.7)			2	5,377	0.0 (0.0-0.1)		
BSM	283	32,856	0.9 (0.8-1.0)			73	14,796	0.5 (0.4-0.6)		
BSCtoC	452	43,261	1.0 (1.0-1.1)			45	6,888	0.7 (0.5-0.9)		
BSC	398	33,441	1.2 (1.1-1.3)			11	7,138	0.2 (0.1-0.3)		
BSSL	785	90,856	0.9 (0.8-0.9)			69	10,338	0.7 (0.5-0.8)		
BSHC	273	21,968	1.2 (1.1-1.4)			52	11,648	0.4 (0.3-0.6)		
BSA Total	3,171	333,350	1.0 (0.9-1.0)			465	76,324	0.6 (0.6-0.7)		
50-69 years										
BSWN	1,501	175,590	0.9 (0.8-0.9)	✓✓✓	*	454	27,106	1.7 (1.5-1.8)	✓✓✓	*
BSCM	928	73,919	1.3 (1.2-1.3)	✓✓✓	*	151	27,972	0.5 (0.5-0.6)	✓✓✓	*
BSAL	620	81,136	0.8 (0.7-0.8)	✓✓✓	*	25	15,437	0.2 (0.1-0.2)	✓✓✓	*
BSM	896	121,367	0.7 (0.7-0.8)	✓✓✓	*	361	60,362	0.6 (0.5-0.7)	✓✓✓	*
BSCtoC	1,381	146,436	0.9 (0.9-1.0)	✓✓✓	*	150	23,907	0.6 (0.5-0.7)	✓✓✓	*
BSC	1,287	107,195	1.2 (1.1-1.3)	✓✓✓	*	74	31,745	0.2 (0.2-0.3)	✓✓✓	*
BSSL	1,924	247,692	0.8 (0.7-0.8)	✓✓✓	*	140	29,223	0.5 (0.4-0.6)	✓✓✓	*
BSHC	1,004	72,947	1.4 (1.3-1.5)	✓✓✓	*	218	36,852	0.6 (0.5-0.7)	✓✓✓	*
BSA Total	9,541	1,026,282	0.9 (0.9-0.9)	✓✓✓	*	1,573	252,604	0.6 (0.6-0.7)	✓✓✓	*

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

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)
45-49 years							
BSWN	229	2,545	9.0 (7.9-10.2)		74	1,750	4.2 (3.3-5.3)
BSCM	156	1,520	10.3 (8.7-12.0)		41	1,021	4.0 (2.9-5.4)
BSAL	115	1,271	9.0 (7.5-10.9)		50	934	5.4 (4.0-7.1)
BSM	209	2,079	10.1 (8.7-11.5)		71	1,324	5.4 (4.2-6.8)
BSCtoC	129	1,852	7.0 (5.8-8.3)		32	1,411	2.3 (1.6-3.2)
BSC	159	1,433	11.1 (9.4-13.0)		56	1,190	4.7 (3.6-6.1)
BSSL	217	3,102	7.0 (6.1-8.0)		123	2,908	4.2 (3.5-5.0)
BSHC	225	1,498	15.0 (13.1-17.1)		28	453	6.2 (4.1-8.9)
BSA Total	1,439	15,300	9.4 (8.9-9.9)		475	10,991	4.3 (3.9-4.7)
50-69 years							
BSWN	212	1,976	10.7 (9.3-12.3)		276	9,690	2.8 (2.5-3.2)
BSCM	104	1,062	9.8 (8.0-11.9)		196	5,640	3.5 (3.0-4.0)
BSAL	94	914	10.3 (8.3-12.6)		158	5,029	3.1 (2.7-3.7)
BSM	125	1,422	8.8 (7.3-10.5)		384	10,277	3.7 (3.4-4.1)
BSCtoC	80	1,192	6.7 (5.3-8.4)		130	9,356	1.4 (1.2-1.6)
BSC	93	826	11.3 (9.1-13.8)		294	8,174	3.6 (3.2-4.0)
BSSL	71	937	7.6 (5.9-9.6)		497	18,385	2.7 (2.5-3.0)
BSHC	60	344	17.4 (13.3-22.5)		178	5,661	3.1 (2.7-3.6)
BSA Total	839	8,673	9.7 (9.0-10.4)		2113	72,212	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)		
45-49 years										
BSWN	1,065	11,023	9.7 (9.1-10.3)			197	4,863	4.1 (3.5-4.7)		
BSCM	659	6,531	10.1 (9.3-10.9)			59	1,631	3.6 (2.8-4.7)		
BSAL	429	4,838	8.9 (8.0-9.7)			128	2,634	4.9 (4.1-5.8)		
BSM	660	6,396	10.3 (9.5-11.1)			251	4,883	5.1 (4.5-5.8)		
BSCtoC	510	7,267	7.0 (6.4-7.7)			118	4,571	2.6 (2.1-3.1)		
BSC	512	5,276	9.7 (8.9-10.6)			198	4,065	4.9 (4.2-5.6)		
BSSL	814	11,143	7.3 (6.8-7.8)			532	12,872	4.1 (3.8-4.5)		
BSHC	733	5,197	14.1 (13.1-15.2)			86	2,494	3.4 (2.8-4.3)		
BSA Total	5,382	57,671	9.3 (9.1-9.6)			1,569	38,013	4.1 (3.9-4.3)		
50-69 years										
BSWN	912	8,732	10.4 (9.8-11.1)	✓	ns	1,265	38,160	3.3 (3.1-3.5)	✓✓✓	*
BSCM	467	4,822	9.7 (8.8-10.6)	✓	ns	580	18,787	3.1 (2.8-3.3)	✓✓✓	*
BSAL	344	3,589	9.6 (8.6-10.7)	✓	ns	561	17,800	3.2 (2.9-3.4)	✓✓✓	*
BSM	455	4,524	10.1 (9.2-11.0)	✓	ns	1,454	37,942	3.8 (3.6-4.0)	✓✓✓	*
BSCtoC	371	4,854	7.6 (6.9-8.5)	✓✓✓	*	610	34,866	1.7 (1.6-1.9)	✓✓✓	*
BSC	355	3,365	10.5 (9.5-11.7)	✓	ns	1,004	28,018	3.6 (3.4-3.8)	✓✓✓	*
BSSL	260	3,687	7.1 (6.2-8.0)	✓✓✓	*	1,735	60,531	2.9 (2.7-3.0)	✓✓✓	*
BSHC	373	2,624	14.2 (12.8-15.7)	✗✗✗	*	611	21,222	2.9 (2.7-3.1)	✓✓✓	*
BSA Total	3,537	36,197	9.8 (9.5-10.1)	✓	ns	7,820	257,326	3.0 (3.0-3.1)	✓✓✓	*

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
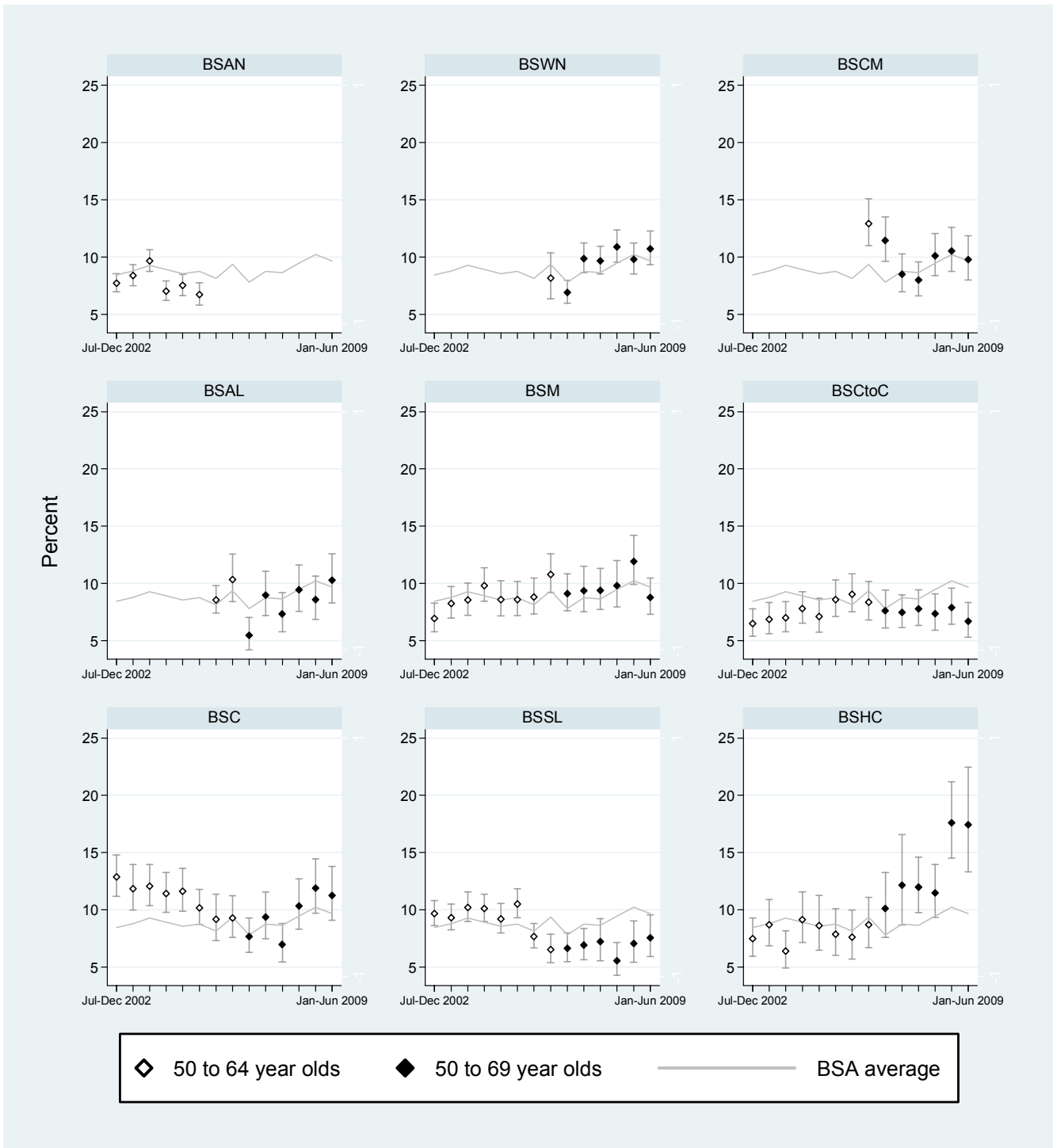
Figure 2d.1: Trends in referral to assessment for initial screens, 2 years
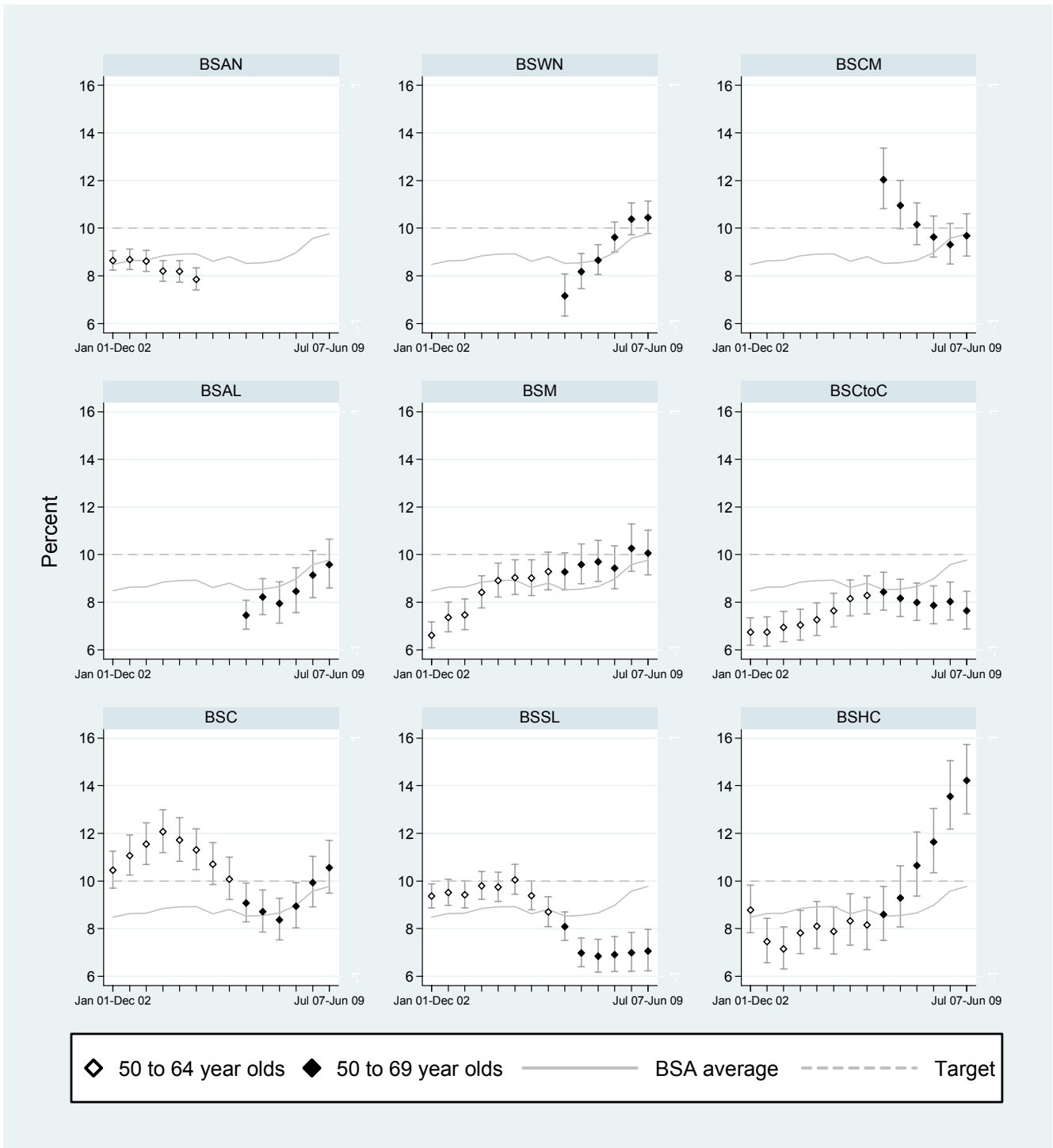
Figure 2d.2: Trends in referral to assessment for subsequent screens, 6 months
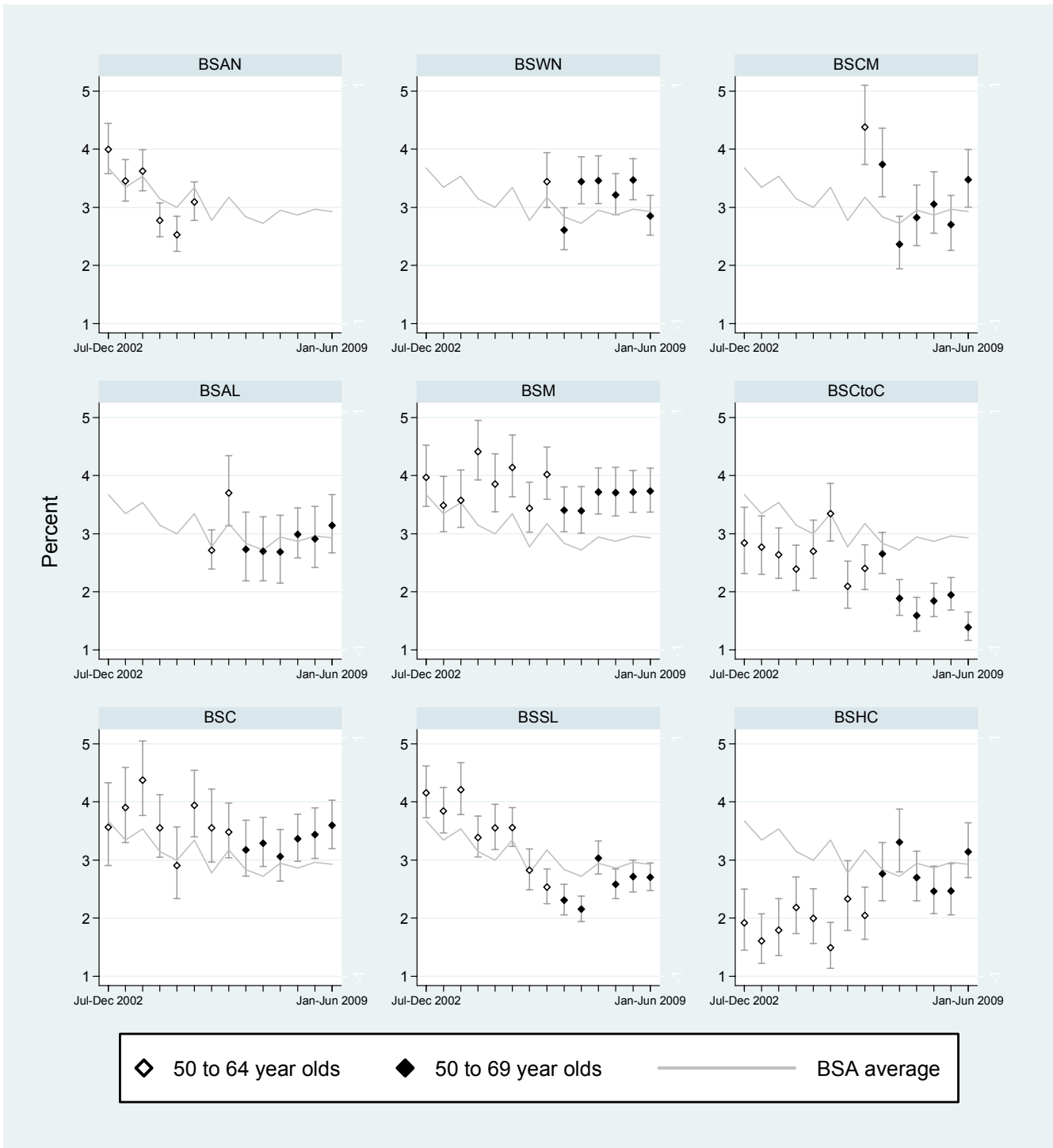
Figure 2d.2: Trends in referral to assessment for subsequent screens, 2 years
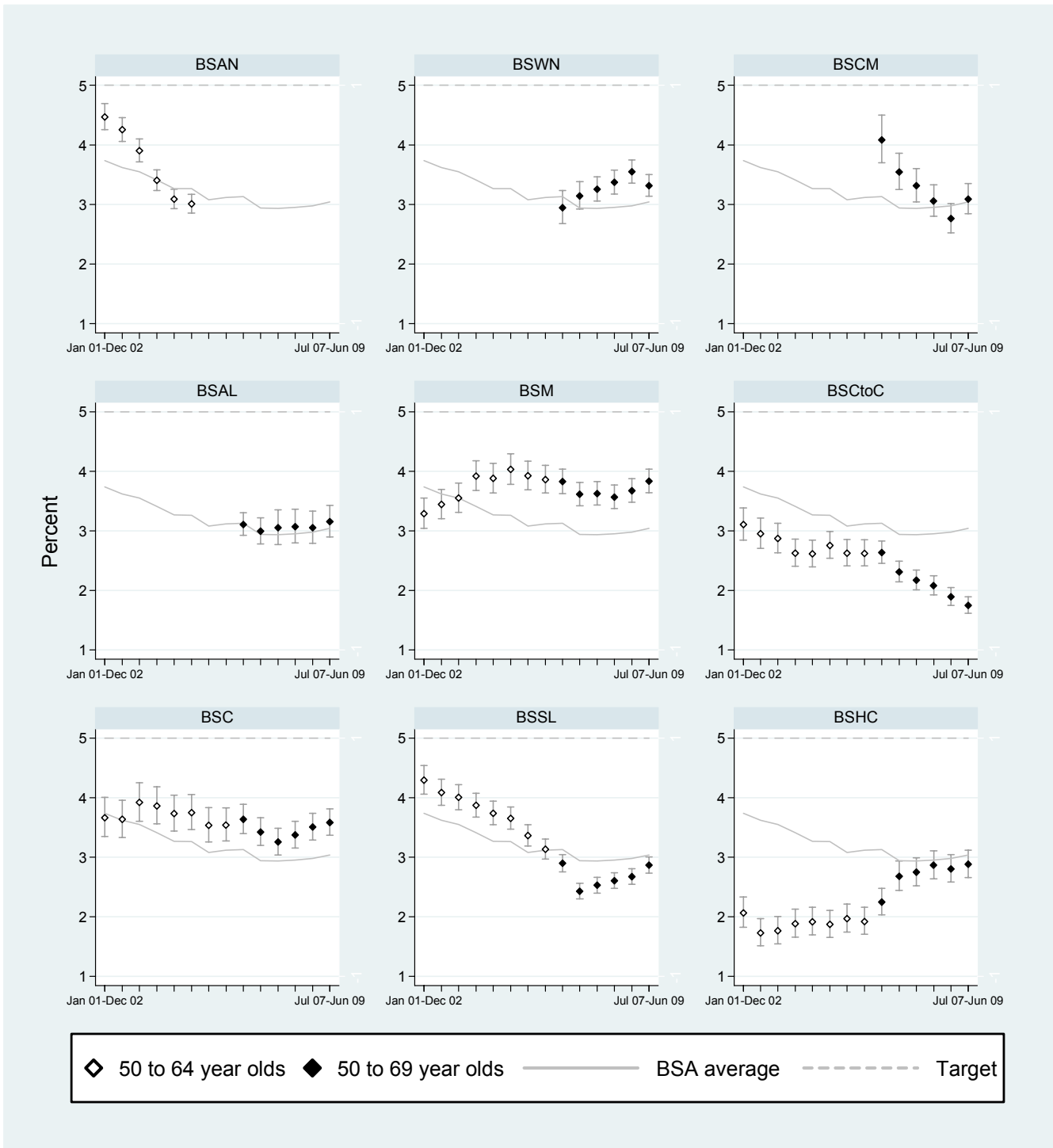
2.e. False positive rate

Description:

Measures the proportion of women who are recalled to assessment, but after assessment are found not to have cancer (DCIS and invasive).

 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)
45-49 years							
BSWN	213	2,545	8.4 (7.3-9.5)		61	1,750	3.5 (2.7-4.5)
BSCM	144	1,520	9.5 (8.0-11.1)		36	1,021	3.5 (2.5-4.8)
BSAL	111	1,271	8.7 (7.2-10.4)		45	934	4.8 (3.5-6.4)
BSM	189	2,079	9.1 (7.9-10.4)		64	1,324	4.8 (3.7-6.1)
BSCtoC	119	1,852	6.4 (5.4-7.6)		30	1,411	2.1 (1.4-3.0)
BSC	149	1,433	10.4 (8.9-12.1)		51	1,190	4.3 (3.2-5.6)
BSSL	204	3,102	6.6 (5.7-7.5)		112	2,908	3.9 (3.2-4.6)
BSHC	215	1,498	14.4 (12.6-16.2)		26	453	5.7 (3.8-8.3)
BSA Total	1,344	15,300	8.8 (8.3-9.2)		425	10,991	3.9 (3.5-4.2)
50-69 years							
BSWN	181	1,976	9.2 (7.9-10.5)		212	9,690	2.2 (1.9-2.5)
BSCM	92	1,062	8.7 (7.0-10.5)		153	5,640	2.7 (2.3-3.2)
BSAL	80	914	8.8 (7.0-10.8)		123	5,029	2.4 (2.0-2.9)
BSM	113	1,422	7.9 (6.6-9.5)		308	10,277	3.0 (2.7-3.3)
BSCtoC	67	1,192	5.6 (4.4-7.1)		91	9,356	1.0 (0.8-1.2)
BSC	79	826	9.6 (7.6-11.8)		234	8,174	2.9 (2.5-3.2)
BSSL	69	937	7.4 (5.8-9.2)		399	18,385	2.2 (2.0-2.4)
BSHC	53	344	15.4 (11.8-19.7)		150	5,661	2.6 (2.2-3.1)
BSA Total	734	8,673	8.5 (7.9-9.1)		1,670	72,212	2.3 (2.2-2.4)

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 (DCIS and invasive)

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)		
45-49 years										
BSWN	995	11,023	9.0 (8.5-9.6)			173	4,863	3.6 (3.1-4.1)		
BSCM	615	6,531	9.4 (8.7-10.2)			54	1,631	3.3 (2.5-4.3)		
BSAL	382	4,838	7.9 (7.2-8.7)			118	2,634	4.5 (3.7-5.3)		
BSM	610	6,396	9.5 (8.8-10.3)			228	4,883	4.7 (4.1-5.3)		
BSCtoC	460	7,267	6.3 (5.8-6.9)			102	4,571	2.2 (1.8-2.7)		
BSC	477	5,276	9.0 (8.3-9.8)			181	4,065	4.5 (3.8-5.1)		
BSSL	764	11,143	6.9 (6.4-7.3)			494	12,872	3.8 (3.5-4.2)		
BSHC	699	5,197	13.5 (12.5-14.4)			78	2,494	3.1 (2.5-3.9)		
BSA Total	5,002	57,671	8.7 (8.4-8.9)			1,428	38,013	3.8 (3.6-4.0)		
50-69 years										
BSWN	800	8,732	9.2 (8.6-9.8)	✓	ns	1,023	38,160	2.7 (2.5-2.8)	✓✓✓	*
BSCM	402	4,822	8.3 (7.6-9.2)	✓	ns	455	18,787	2.4 (2.2-2.7)	✓✓✓	*
BSAL	297	3,589	8.3 (7.4-9.2)	✓	ns	442	17,800	2.5 (2.3-2.7)	✓✓✓	*
BSM	408	4,524	9.0 (8.2-9.9)	✓	ns	1,193	37,942	3.1 (3.0-3.3)	✓✓✓	*
BSCtoC	310	4,854	6.4 (5.7-7.1)	✓✓✓	*	429	34,866	1.2 (1.1-1.4)	✓✓✓	*
BSC	314	3,365	9.3 (8.4-10.4)	✓	ns	818	28,018	2.9 (2.7-3.1)	✓✓✓	*
BSSL	232	3,687	6.3 (5.5-7.1)	✓✓✓	*	1,414	60,531	2.3 (2.2-2.5)	✓✓✓	*
BSHC	345	2,624	13.1 (11.9-14.5)	✗✗✗	*	505	21,222	2.4 (2.2-2.6)	✓✓✓	*
BSA Total	3,108	36,197	8.6 (8.3-8.9)	✓	*	6,279	257,326	2.4 (2.4-2.5)	✓✓✓	*

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 (DCIS and invasive)
Target:
$\geq 9\%$. The number with diagnosed cancer as a percentage of the number referred to assessment.

Table 2f.1: Positive predictive value (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)
45-49 years						
BSWN	13	229	5.7 (3.1-9.5)	11	74	14.9 (7.7-25.0)
BSCM	5	156	3.2 (1.0-7.3)	5	41	12.2 (4.1-26.2)
BSAL	4	115	3.5 (1.0-8.7)	2	50	4.0 (0.5-13.7)
BSM	12	209	5.7 (3.0-9.8)	6	71	8.5 (3.2-17.5)
BSCtoC	7	129	5.4 (2.2-10.9)	1	32	3.1 (0.1-16.2)
BSC	8	159	5.0 (2.2-9.7)	4	56	7.1 (2.0-17.3)
BSSL	12	217	5.5 (2.9-9.5)	11	123	8.9 (4.5-15.4)
BSHC	3	225	1.3 (0.3-3.8)	2	28	7.1 (0.9-23.5)
BSA Total	64	1,439	4.4 (3.4-5.6)	42	475	8.8 (6.4-11.8)
50-69 years						
BSWN	25	212	11.8 (7.8-16.9)	59	276	21.4 (16.7-26.7)
BSCM	10	104	9.6 (4.7-17.0)	39	196	19.9 (14.5-26.2)
BSAL	9	94	9.6 (4.5-17.4)	34	158	21.5 (15.4-28.8)
BSM	9	125	7.2 (3.3-13.2)	70	384	18.2 (14.5-22.5)
BSCtoC	9	80	11.3 (5.3-20.3)	35	130	26.9 (19.5-35.4)
BSC	13	93	14.0 (7.7-22.7)	57	294	19.4 (15.0-24.4)
BSSL	2	71	2.8 (0.3-9.8)	91	497	18.3 (15.0-22.0)
BSHC	5	60	8.3 (2.8-18.4)	23	178	12.9 (8.4-18.8)
BSA Total	82	839	9.8 (7.8-12.0)	408	2,113	19.3 (17.6-21.1)

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 (DCIS and invasive)

Target:

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

Table 2f.2: Positive predictive value (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)		
45-49 years										
BSWN	56	1,065	5.3 (4.0-6.8)			21	197	10.7 (6.7-15.8)		
BSCM	27	659	4.1 (2.7-5.9)			5	59	8.5 (2.8-18.7)		
BSAL	39	429	9.1 (6.5-12.2)			7	128	5.5 (2.2-10.9)		
BSM	41	660	6.2 (4.5-8.3)			21	251	8.4 (5.3-12.5)		
BSCtoC	38	510	7.5 (5.3-10.1)			10	118	8.5 (4.1-15.0)		
BSC	28	512	5.5 (3.7-7.8)			13	198	6.6 (3.5-11.0)		
BSSL	48	814	5.9 (4.4-7.7)			35	532	6.6 (4.6-9.0)		
BSHC	18	733	2.5 (1.5-3.9)			7	86	8.1 (3.3-16.1)		
BSA Total	295	5,382	5.5 (4.9-6.1)			119	1,569	7.6 (6.3-9.0)		
50-69 years										
BSWN	91	912	10.0 (8.1-12.1)	✓	ns	222	1,265	17.5 (15.5-19.8)	✓✓✓	*
BSCM	48	467	10.3 (7.7-13.4)	✓	ns	117	580	20.2 (17.0-23.7)	✓✓✓	*
BSAL	39	344	11.3 (8.2-15.2)	✓	ns	110	561	19.6 (16.4-23.1)	✓✓✓	*
BSM	40	455	8.8 (6.4-11.8)	✓	ns	245	1,454	16.9 (15.0-18.9)	✓✓✓	*
BSCtoC	43	371	11.6 (8.5-15.3)	✓	ns	162	610	26.6 (23.1-30.3)	✓✓✓	*
BSC	37	355	10.4 (7.4-14.1)	✓	ns	171	1,004	17.0 (14.8-19.5)	✓✓✓	*
BSSL	27	260	10.4 (7.0-14.7)	✓	ns	313	1,735	18.0 (16.3-19.9)	✓✓✓	*
BSHC	17	373	4.6 (2.7-7.2)	✗✗✗	*	92	611	15.1 (12.3-18.1)	✓✓✓	*
BSA Total	342	3,537	9.7 (8.7-10.7)	✓	ns	1,432	7,820	18.3 (17.5-19.2)	✓✓✓	*

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: DCIS and invasive cancers as a percentage of referrals to assessment for initial screens, women 50-69 years, 6 months
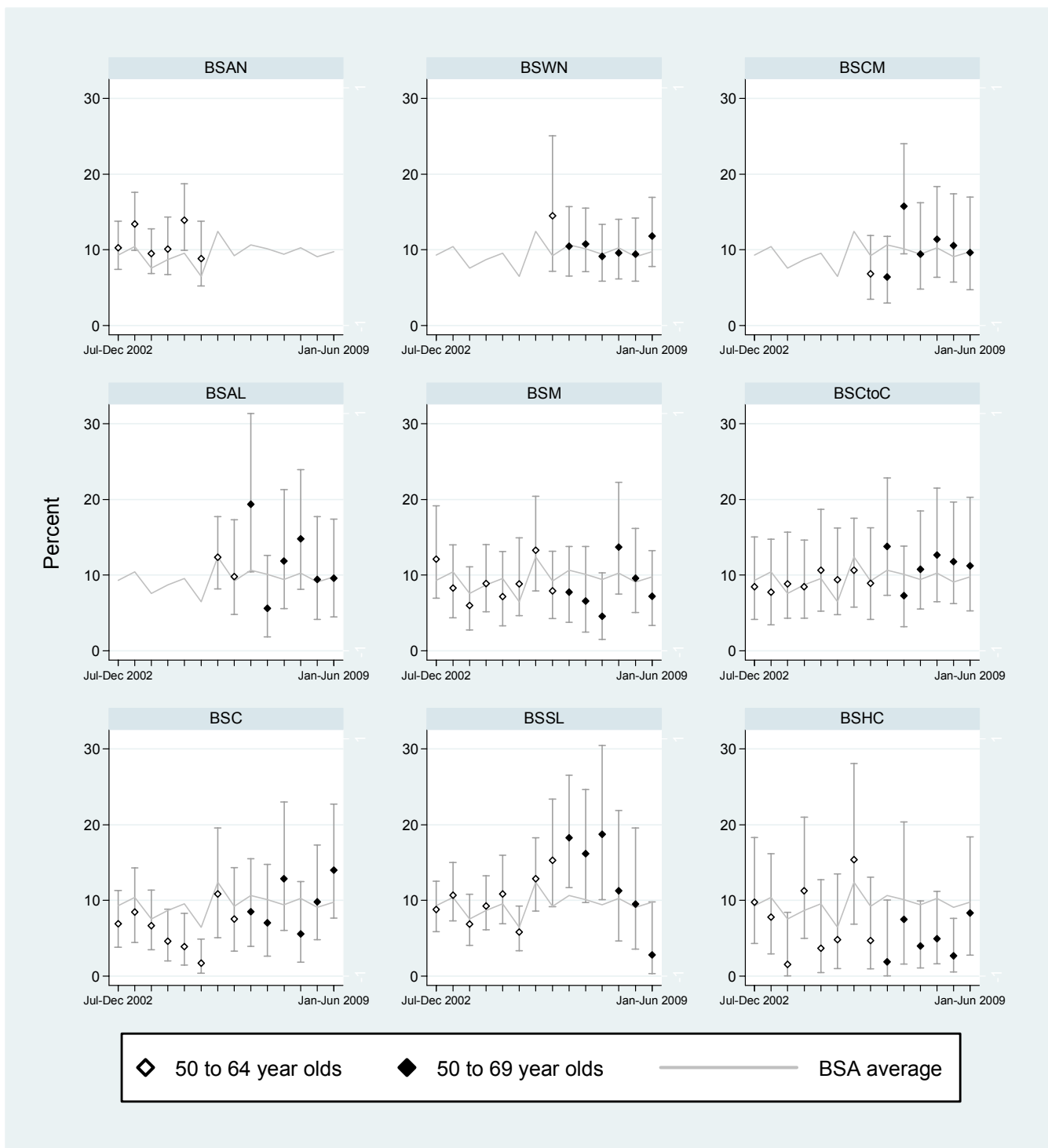
Figure 2f.1b: DCIS and invasive cancers as a percentage of referrals to assessment for initial screens, women 50-69 years, 2 years
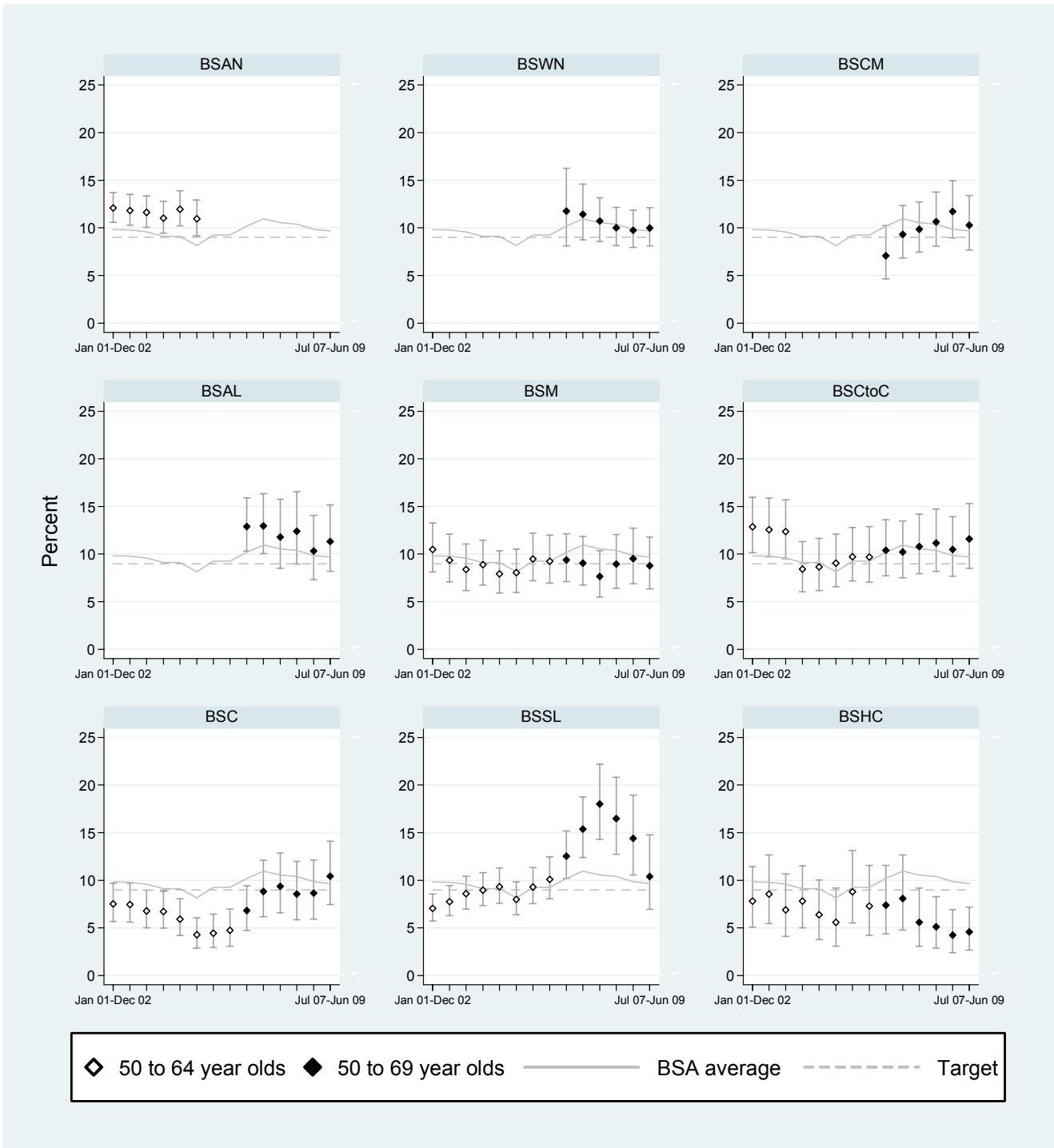
Figure 2f.2a: DCIS and invasive cancers as a percentage of referrals to assessment for subsequent screens, women 50-69 years, 6 months
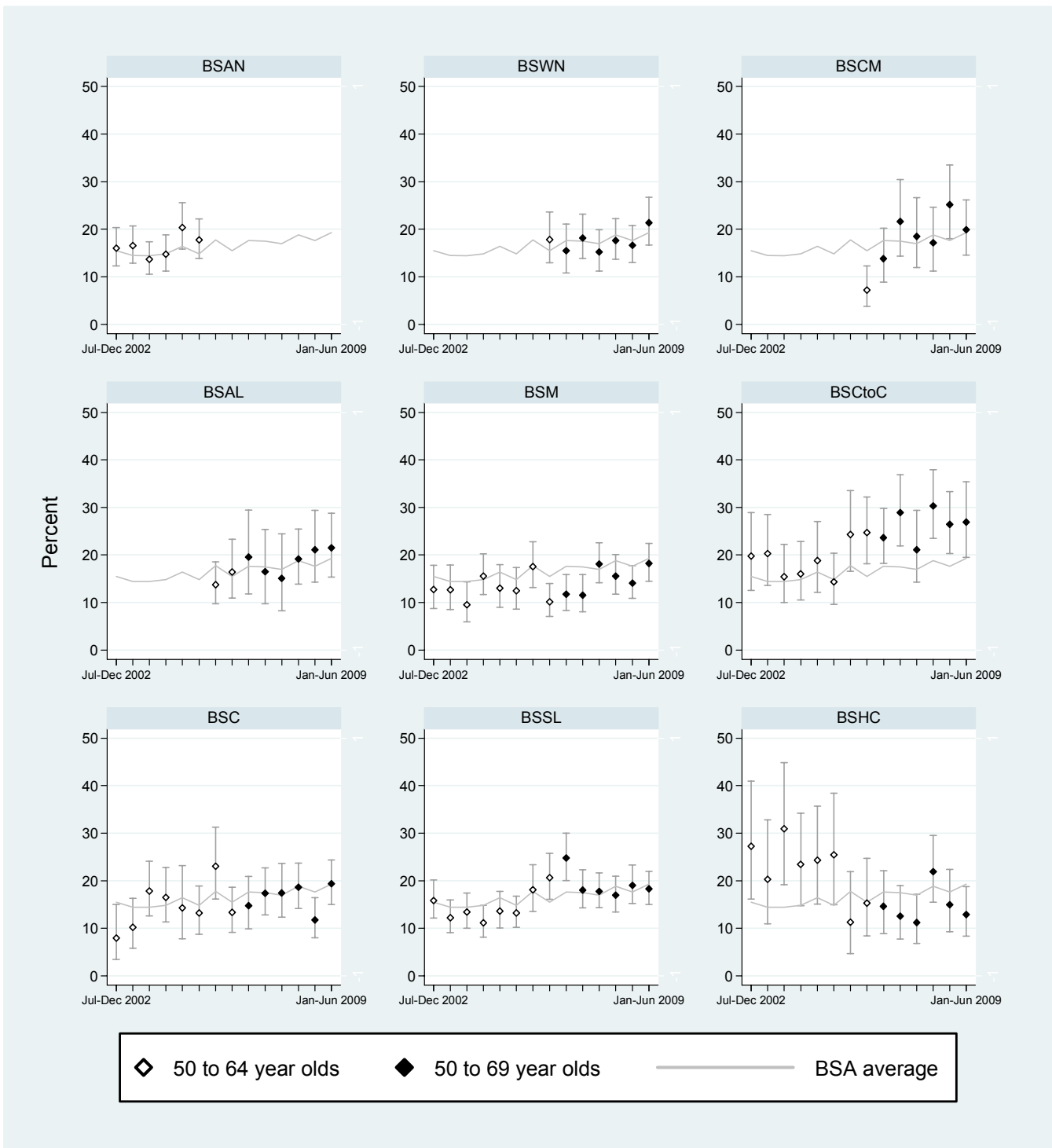
Figure 2f.2b: DCIS and invasive cancers as a percentage of referrals to assessment for subsequent screens, women 50-69 years, 2 years
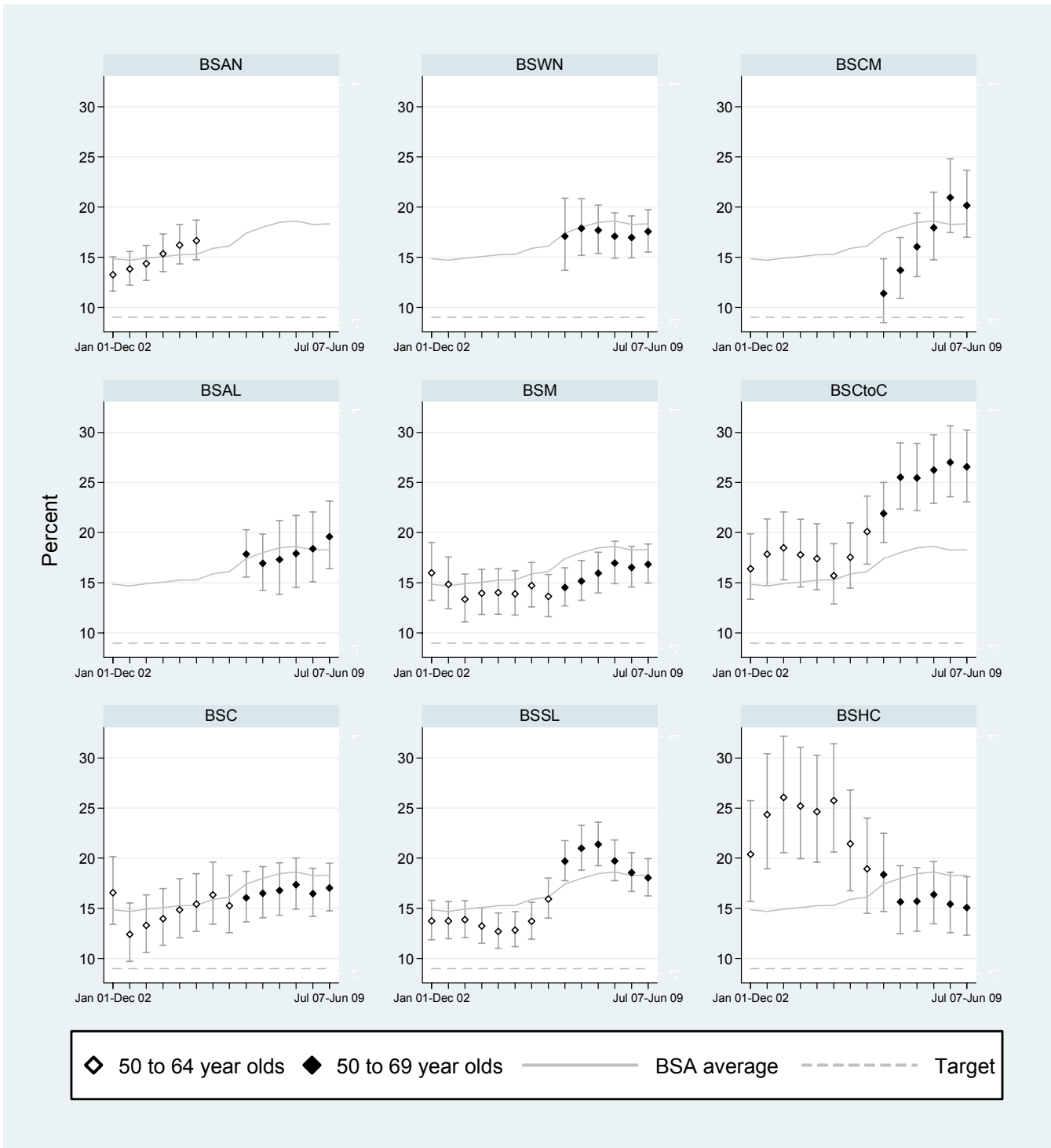
2.g. Benign biopsy weight

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)
45-49 years											
BSWN	39	37	94.9 (82.7-99.4)	2	5.1 (0.6-17.3)	0	0.0 (0.0-9.0)	0	0.0 (0.0-9.0)	0	0.0 (0.0-9.0)
BSCM	10	7	70.0 (34.8-93.3)	3	30.0 (6.7-65.2)	0	0.0 (0.0-30.8)	0	0.0 (0.0-30.8)	0	0.0 (0.0-30.8)
BSAL	20	19	95.0 (75.1-99.9)	1	5.0 (0.1-24.9)	0	0.0 (0.0-16.8)	0	0.0 (0.0-16.8)	0	0.0 (0.0-16.8)
BSM	14	8	57.1 (28.9-82.3)	1	7.1 (0.2-33.9)	2	14.3 (1.8-42.8)	0	0.0 (0.0-23.2)	3	21.4 (4.7-50.8)
BSCtoC	8	7	87.5 (47.3-99.7)	0	0.0 (0.0-36.9)	0	0.0 (0.0-36.9)	0	0.0 (0.0-36.9)	1	12.5 (0.3-52.7)
BSC	8	5	62.5 (24.5-91.5)	0	0.0 (0.0-36.9)	0	0.0 (0.0-36.9)	0	0.0 (0.0-36.9)	3	37.5 (8.5-75.5)
BSSL	14	8	57.1 (28.9-82.3)	5	35.7 (12.8-64.9)	1	7.1 (0.2-33.9)	0	0.0 (0.0-23.2)	0	0.0 (0.0-23.2)
BSHC	17	15	88.2 (63.6-98.5)	1	5.9 (0.1-28.7)	0	0.0 (0.0-19.5)	1	5.9 (0.1-28.7)	0	0.0 (0.0-19.5)
BSA Total	130	106	81.5 (73.8-87.8)	13	10.0 (5.4-16.5)	3	2.3 (0.5-6.6)	1	0.8 (0.0-4.2)	7	5.4 (2.2-10.8)
50-69 years											
BSWN	54	48	88.9 (77.4-95.8)	4	7.4 (2.1-17.9)	1	1.9 (0.0-9.9)	1	1.9 (0.0-9.9)	0	0.0 (0.0-6.6)
BSCM	19	17	89.5 (66.9-98.7)	2	10.5 (1.3-33.1)	0	0.0 (0.0-17.6)	0	0.0 (0.0-17.6)	0	0.0 (0.0-17.6)
BSAL	28	25	89.3 (71.8-97.7)	3	10.7 (2.3-28.2)	0	0.0 (0.0-12.3)	0	0.0 (0.0-12.3)	0	0.0 (0.0-12.3)
BSM	36	24	66.7 (49.0-81.4)	7	19.4 (8.2-36.0)	1	2.8 (0.1-14.5)	1	2.8 (0.1-14.5)	3	8.3 (1.8-22.5)
BSCtoC	11	6	54.5 (23.4-83.3)	3	27.3 (6.0-61.0)	0	0.0 (0.0-28.5)	0	0.0 (0.0-28.5)	2	18.2 (2.3-51.8)
BSC	14	11	78.6 (49.2-95.3)	2	14.3 (1.8-42.8)	1	7.1 (0.2-33.9)	0	0.0 (0.0-23.2)	0	0.0 (0.0-23.2)
BSSL	21	15	71.4 (47.8-88.7)	4	19.0 (5.4-41.9)	2	9.5 (1.2-30.4)	0	0.0 (0.0-16.1)	0	0.0 (0.0-16.1)
BSHC	18	13	72.2 (46.5-90.3)	3	16.7 (3.6-41.4)	1	5.6 (0.1-27.3)	1	5.6 (0.1-27.3)	0	0.0 (0.0-18.5)
BSA Total	201	159	79.1 (72.8-84.5)	28	13.9 (9.5-19.5)	6	3.0 (1.1-6.4)	3	1.5 (0.3-4.3)	5	2.5 (0.8-5.7)

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 (DCIS and invasive)

	6 months					2 years				
	Preoperative diagnosis of cancer	Number of cancers	% (95%CI)			Preoperative diagnosis of cancer	Number of cancers	% (95%CI)		
45-49 years										
BSWN	21	24				68	77	88.3 (79.0-94.5)		
BSCM	9	10				30	32	93.8 (79.2-99.2)		
BSAL	6	6				45	46	97.8 (88.5-99.9)		
BSM	18	18				59	62	95.2 (86.5-99.0)		
BSCtoC	7	8				40	48	83.3 (69.8-92.5)		
BSC	10	12				38	41	92.7 (80.1-98.5)		
BSSL	23	23				81	83	97.6 (91.6-99.7)		
BSHC	4	5				22	25	88.0 (68.8-97.5)		
BSA Total	98	106	92.5 (85.7-96.7)			383	414	92.5 (89.5-94.9)		
50-69 years										
BSWN	81	84	96.4 (89.9-99.3)	✓✓✓	*	294	313	93.9 (90.7-96.3)	✓✓✓	*
BSCM	49	49	100.0 (92.7-100.0)	✓✓✓	*	159	165	96.4 (92.3-98.7)	✓✓✓	*
BSAL	43	43	100.0 (91.8-100.0)	✓✓✓	*	147	149	98.7 (95.2-99.8)	✓✓✓	*
BSM	72	79	91.1 (82.6-96.4)	✓✓✓	*	272	285	95.4 (92.3-97.5)	✓✓✓	*
BSCtoC	42	44	95.5 (84.5-99.4)	✓✓✓	*	197	205	96.1 (92.5-98.3)	✓✓✓	*
BSC	66	70	94.3 (86.0-98.4)	✓✓✓	*	198	208	95.2 (91.3-97.7)	✓✓✓	*
BSSL	91	93	97.8 (92.4-99.7)	✓✓✓	*	332	340	97.6 (95.4-99.0)	✓✓✓	*
BSHC	27	28	96.4 (81.7-99.9)	✓✓✓	*	106	109	97.2 (92.2-99.4)	✓✓✓	*
BSA Total	471	490	96.1 (94.0-97.6)	✓✓✓	*	1,705	1,774	96.1 (95.1-97.0)	✓✓✓	*

Note: Estimates for small numbers not presented
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 (DCIS and invasive), 6 months
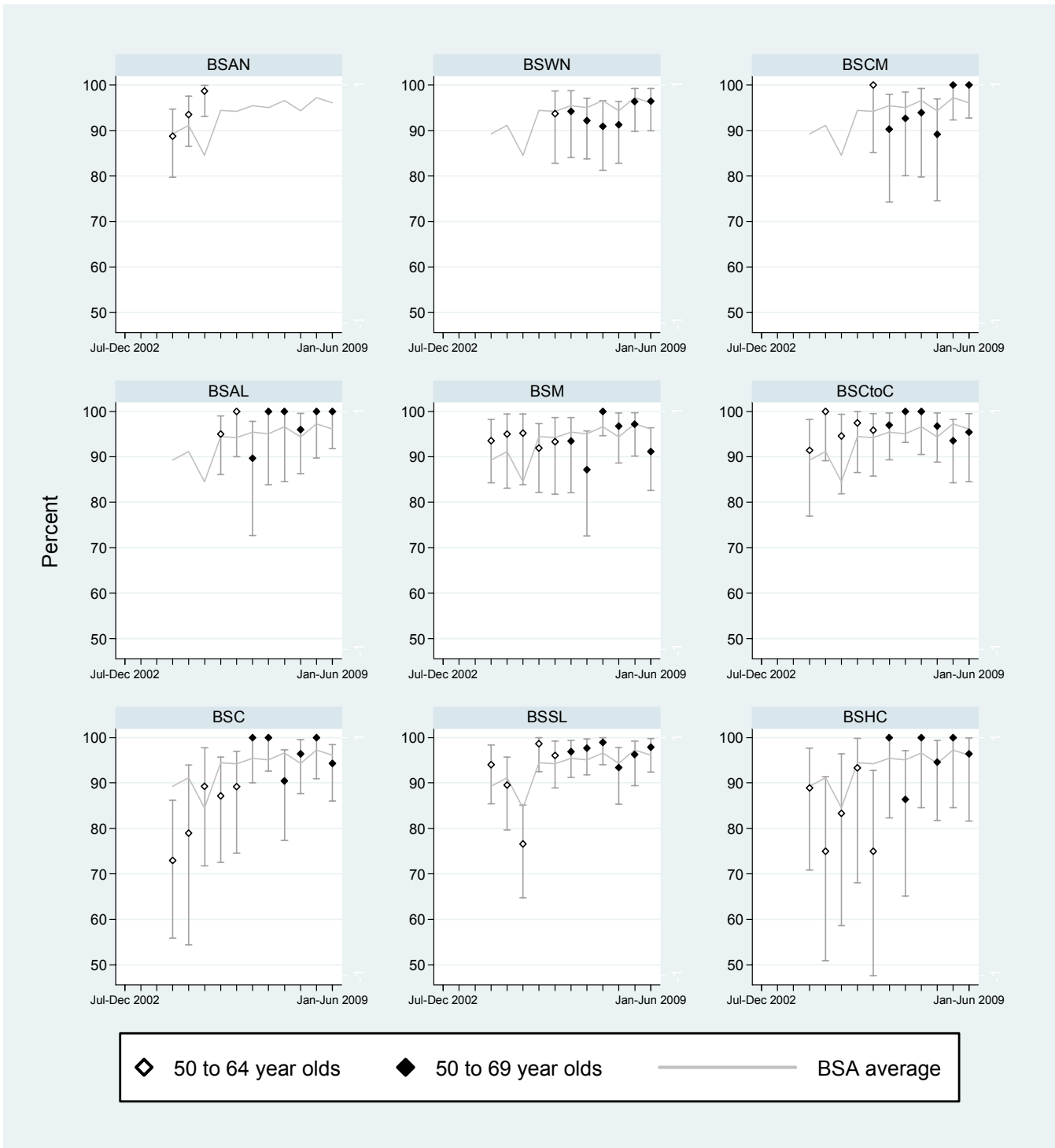
Figure 2h.b: Percentage of women with a preoperative diagnosis of cancer (DCIS and invasive), 2 years
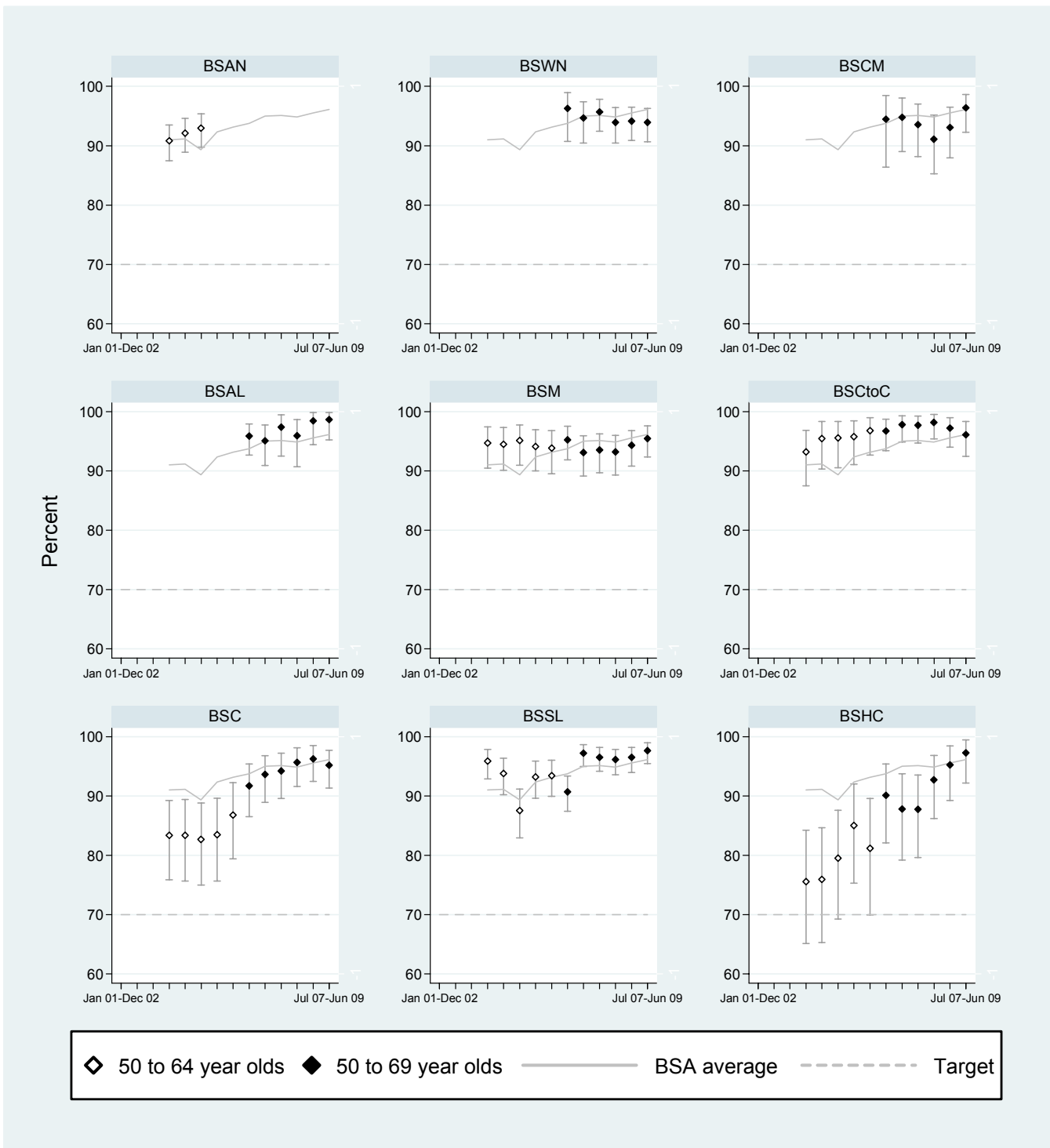
2.l. Specificity

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.l.1. Specificity, 6 months

Table 2l.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)
45-49 years						
BSWN	2,316	2,529	91.6 (90.4-92.6)	1,676	1,737	96.5 (95.5-97.3)
BSCM	1,364	1,508	90.5 (88.9-91.9)	980	1,016	96.5 (95.1-97.5)
BSAL	1,156	1,267	91.2 (89.5-92.7)	884	929	95.2 (93.6-96.4)
BSM	1,870	2,059	90.8 (89.5-92.0)	1,253	1,317	95.1 (93.8-96.2)
BSCtoC	1,723	1,842	93.5 (92.3-94.6)	1,379	1,409	97.9 (97.0-98.6)
BSC	1,274	1,423	89.5 (87.8-91.1)	1,134	1,185	95.7 (94.4-96.8)
BSSL	2,885	3,089	93.4 (92.5-94.2)	2,785	2,897	96.1 (95.4-96.8)
BSHC	1,273	1,488	85.6 (83.7-87.3)	425	451	94.2 (91.7-96.2)
BSA Total	13,861	15,205	91.2 (90.7-91.6)	10,516	10,941	96.1 (95.7-96.5)
50-69 years						
BSWN	1,764	1,945	90.7 (89.3-91.9)	9,415	9,627	97.8 (97.5-98.1)
BSCM	958	1,050	91.2 (89.4-92.9)	5,444	5,597	97.3 (96.8-97.7)
BSAL	820	900	91.1 (89.1-92.9)	4,871	4,994	97.5 (97.1-97.9)
BSM	1,297	1,410	92.0 (90.4-93.3)	9,893	10,201	97.0 (96.6-97.3)
BSCtoC	1,112	1,179	94.3 (92.8-95.6)	9,226	9,317	99.0 (98.8-99.2)
BSC	733	812	90.3 (88.0-92.2)	7,880	8,114	97.1 (96.7-97.5)
BSSL	866	935	92.6 (90.8-94.2)	17,888	18,287	97.8 (97.6-98.0)
BSHC	284	337	84.3 (79.9-88.0)	5,483	5,633	97.3 (96.9-97.7)
BSA Total	7,834	8,568	91.4 (90.8-92.0)	70,100	71,770	97.7 (97.6-97.8)

Exact binomial 95% Confidence Intervals presented

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2.l.2. Specificity, 2 years

Description:
Specificity is the proportion of women without breast cancer (DCIS and invasive) 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 2l.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)		
45-49 years										
BSWN	10,163	11,158	91.1 (90.5-91.6)			4,672	4,845	96.4 (95.9-96.9)		
BSCM	5,968	6,583	90.7 (89.9-91.4)			1,575	1,629	96.7 (95.7-97.5)		
BSAL	4,699	5,081	92.5 (91.7-93.2)			2,528	2,646	95.5 (94.7-96.3)		
BSM	5,861	6,471	90.6 (89.8-91.3)			4,673	4,901	95.3 (94.7-95.9)		
BSCtoC	6,914	7,374	93.8 (93.2-94.3)			4,501	4,603	97.8 (97.3-98.2)		
BSC	4,981	5,458	91.3 (90.5-92.0)			4,000	4,181	95.7 (95.0-96.3)		
BSSL	10,603	11,367	93.3 (92.8-93.7)			12,381	12,875	96.2 (95.8-96.5)		
BSHC	4,561	5,260	86.7 (85.8-87.6)			2,462	2,540	96.9 (96.2-97.6)		
BSA Total	53,750	58,752	91.5 (91.3-91.7)			36,792	38,220	96.3 (96.1-96.5)		
50-69 years										
BSWN	8,010	8,810	90.9 (90.3-91.5)	✓	*	37,605	38,628	97.4 (97.2-97.5)	✓	*
BSCM	4,433	4,835	91.7 (90.9-92.4)	✓	*	18,521	18,976	97.6 (97.4-97.8)	✓	*
BSAL	3,524	3,821	92.2 (91.3-93.1)	✓	ns	18,367	18,809	97.7 (97.4-97.9)	✓✓	*
BSM	4,151	4,559	91.1 (90.2-91.9)	✓	*	37,629	38,822	96.9 (96.8-97.1)	✓	*
BSCtoC	4,596	4,906	93.7 (93.0-94.3)	✓	ns	35,278	35,707	98.8 (98.7-98.9)	✓✓	*
BSC	3,198	3,512	91.1 (90.1-92.0)	✓	*	28,676	29,494	97.2 (97.0-97.4)	✓	*
BSSL	3,557	3,789	93.9 (93.1-94.6)	✓	*	61,392	62,806	97.7 (97.6-97.9)	✓✓	*
BSHC	2,322	2,667	87.1 (85.7-88.3)	✗✗	*	22,048	22,553	97.8 (97.6-97.9)	✓✓	*
BSA Total	33,791	36,899	91.6 (91.3-91.9)	✓	*	259,516	265,795	97.6 (97.6-97.7)	✓	*

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)		
45-49 years										
BSWN	28	11,023	2.5 (1.7-3.7)			11	4,863			
BSCM	9	6,531	1.4 (0.6-2.6)			1	1,631			
BSAL	15	4,838	3.1 (1.7-5.1)			5	2,634			
BSM	13	6,396	2.0 (1.1-3.5)			1	4,883			
BSCtoC	6	7,267	0.8 (0.3-1.8)			1	4,571			
BSC	5	5,276	0.9 (0.3-2.2)			3	4,065			
BSSL	9	11,143	0.8 (0.4-1.5)			5	12,872			
BSHC	15	5,197	2.9 (1.6-4.8)			1	2,494			
BSA Total	100	57,671	1.7 (1.4-2.1)			28	38,013			
50-69 years										
BSWN	22	8,732	2.5 (1.6-3.8)	✓	ns	30	38,160	0.8 (0.5-1.1)	✓✓✓	*
BSCM	7	4,822	1.5 (0.6-3.0)	✓✓✓	*	11	18,787	0.6 (0.3-1.0)	✓✓✓	*
BSAL	11	3,589	3.1 (1.5-5.5)	✓	ns	17	17,800	1.0 (0.6-1.5)	✓✓✓	*
BSM	10	4,524	2.2 (1.1-4.1)	✓	ns	25	37,942	0.7 (0.4-1.0)	✓✓✓	*
BSCtoC	3	4,854	0.6 (0.1-1.8)	✓✓✓	*	8	34,866	0.2 (0.1-0.5)	✓✓✓	*
BSC	6	3,365	1.8 (0.7-3.9)	✓	ns	8	28,018	0.3 (0.1-0.6)	✓✓✓	*
BSSL	4	3,687	1.1 (0.3-2.8)	✓✓✓	*	17	60,531	0.3 (0.2-0.4)	✓✓✓	*
BSHC	13	2,624	5.0 (2.6-8.5)	✓	ns	5	21,222	0.2 (0.1-0.5)	✓✓✓	*
BSA Total	76	36,197	2.1 (1.7-2.6)	✓✓✓	*	121	257,326	0.5 (0.4-0.6)	✓✓✓	*

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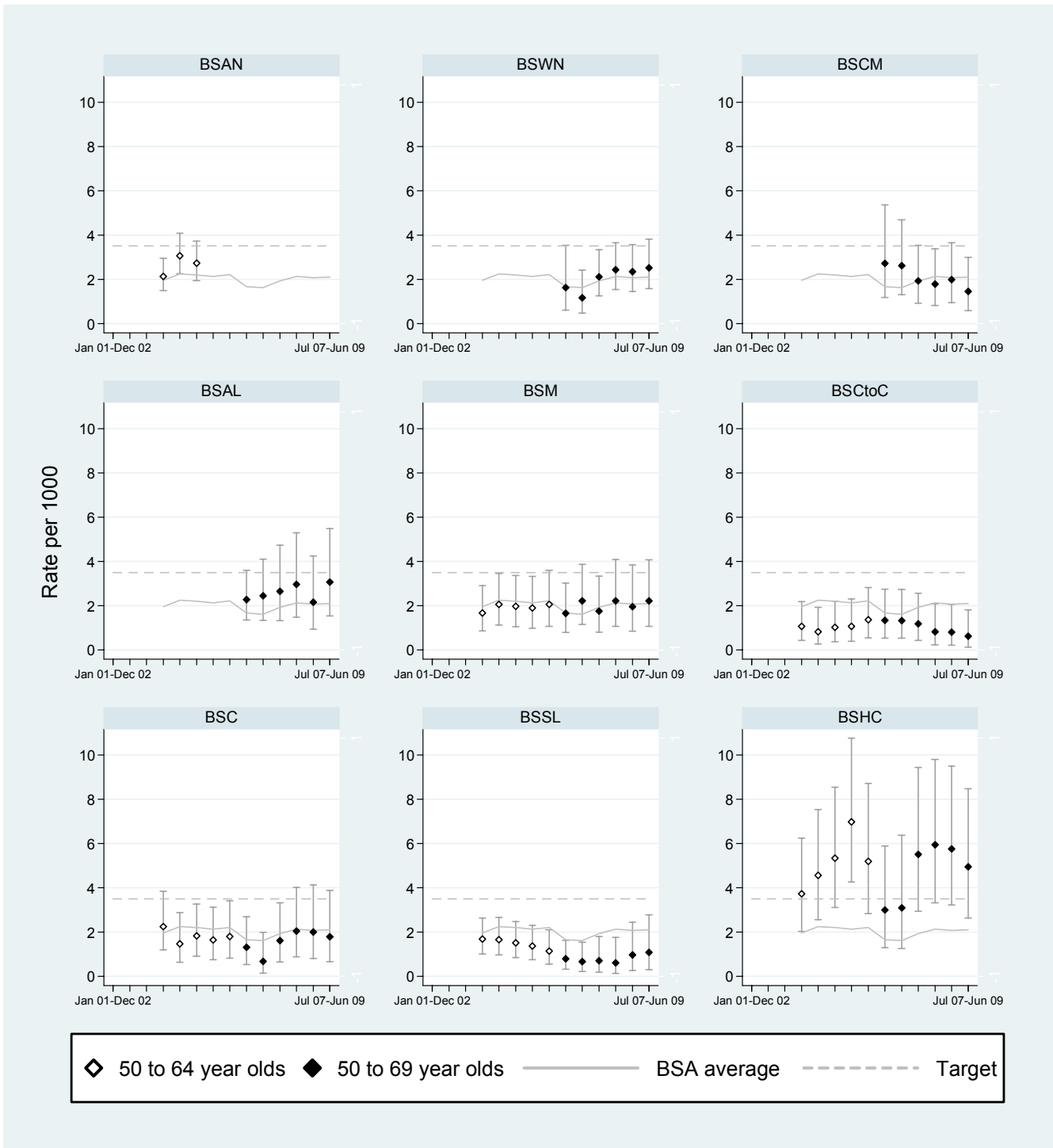
Figure 2m2: Benign open biopsy rate for subsequent screens, 2 years

BSA Screening and Assessment Report - Women screened July 2007-June 2009
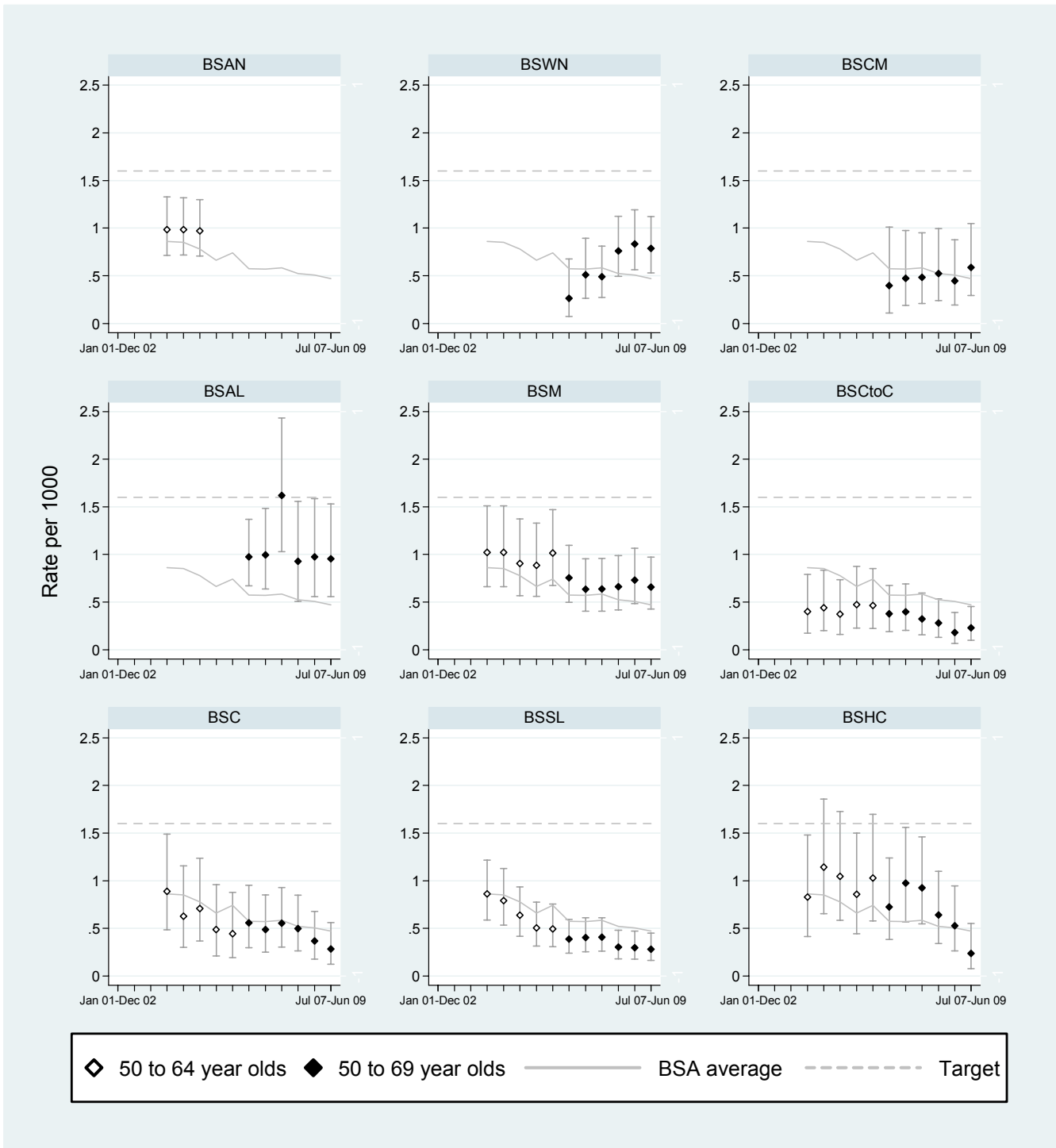
3. EARLY DETECTION OF DCIS OR INVASIVE BREAST CANCER

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)
45-49 years						
BSWN	13	2,545	5.1 (2.7-8.7)	11	1,750	6.3 (3.1-11.2)
BSCM	5	1,520	3.3 (1.1-7.7)	5	1,021	4.9 (1.6-11.4)
BSAL	4	1,271	3.1 (0.9-8.1)	2	934	2.1 (0.3-7.7)
BSM	12	2,079	5.8 (3.0-10.1)	6	1,324	4.5 (1.7-9.9)
BSCtoC	7	1,852	3.8 (1.5-7.8)	1	1,411	0.7 (0.0-3.9)
BSC	8	1,433	5.6 (2.4-11.0)	4	1,190	3.4 (0.9-8.6)
BSSL	12	3,102	3.9 (2.0-6.8)	11	2,908	3.8 (1.9-6.8)
BSHC	3	1,498	2.0 (0.4-5.9)	2	453	4.4 (0.5-15.9)
BSA Total	64	15,300	4.2 (3.2-5.3)	42	10,991	3.8 (2.8-5.2)
50-69 years						
BSWN	25	1,976	12.7 (8.2-18.7)	59	9,690	6.1 (4.6-7.9)
BSCM	10	1,062	9.4 (4.5-17.3)	39	5,640	6.9 (4.9-9.5)
BSAL	9	914	9.8 (4.5-18.7)	34	5,029	6.8 (4.7-9.4)
BSM	9	1,422	6.3 (2.9-12.0)	70	10,277	6.8 (5.3-8.6)
BSCtoC	9	1,192	7.6 (3.5-14.3)	35	9,356	3.7 (2.6-5.2)
BSC	13	826	15.7 (8.4-26.9)	57	8,174	7.0 (5.3-9.0)
BSSL	2	937	2.1 (0.3-7.7)	91	18,385	4.9 (4.0-6.1)
BSHC	5	344	14.5 (4.7-33.9)	23	5,661	4.1 (2.6-6.1)
BSA Total	82	8,673	9.5 (7.5-11.7)	408	72,212	5.7 (5.1-6.2)

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)
45-49 years						
BSWN	56	11,023	5.1 (3.8-6.6)	21	4,863	4.3 (2.7-6.6)
BSCM	27	6,531	4.1 (2.7-6.0)	5	1,631	3.1 (1.0-7.2)
BSAL	39	4,838	8.1 (5.7-11.0)	7	2,634	2.7 (1.1-5.5)
BSM	41	6,396	6.4 (4.6-8.7)	21	4,883	4.3 (2.7-6.6)
BSCtoC	38	7,267	5.2 (3.7-7.2)	10	4,571	2.2 (1.0-4.0)
BSC	28	5,276	5.3 (3.5-7.7)	13	4,065	3.2 (1.7-5.5)
BSSL	48	11,143	4.3 (3.2-5.7)	35	12,872	2.7 (1.9-3.8)
BSHC	18	5,197	3.5 (2.1-5.5)	7	2,494	2.8 (1.1-5.8)
BSA Total	295	57,671	5.1 (4.5-5.7)	119	38,013	3.1 (2.6-3.7)
50-69 years						
BSWN	91	8,732	10.4 (8.4-12.8)	222	38,160	5.8 (5.1-6.6)
BSCM	48	4,822	10.0 (7.3-13.2)	117	18,787	6.2 (5.2-7.5)
BSAL	39	3,589	10.9 (7.7-14.9)	110	17,800	6.2 (5.1-7.4)
BSM	40	4,524	8.8 (6.3-12.0)	245	37,942	6.5 (5.7-7.3)
BSCtoC	43	4,854	8.9 (6.4-11.9)	162	34,866	4.6 (4.0-5.4)
BSC	37	3,365	11.0 (7.7-15.2)	171	28,018	6.1 (5.2-7.1)
BSSL	27	3,687	7.3 (4.8-10.7)	313	60,531	5.2 (4.6-5.8)
BSHC	17	2,624	6.5 (3.8-10.4)	92	21,222	4.3 (3.5-5.3)
BSA Total	342	36,197	9.4 (8.5-10.5)	1,432	257,326	5.6 (5.3-5.9)

Poisson 95% Confidence Intervals presented

Figure 3a: Detection rate of DCIS and invasive breast cancer, initial screens, 2 years
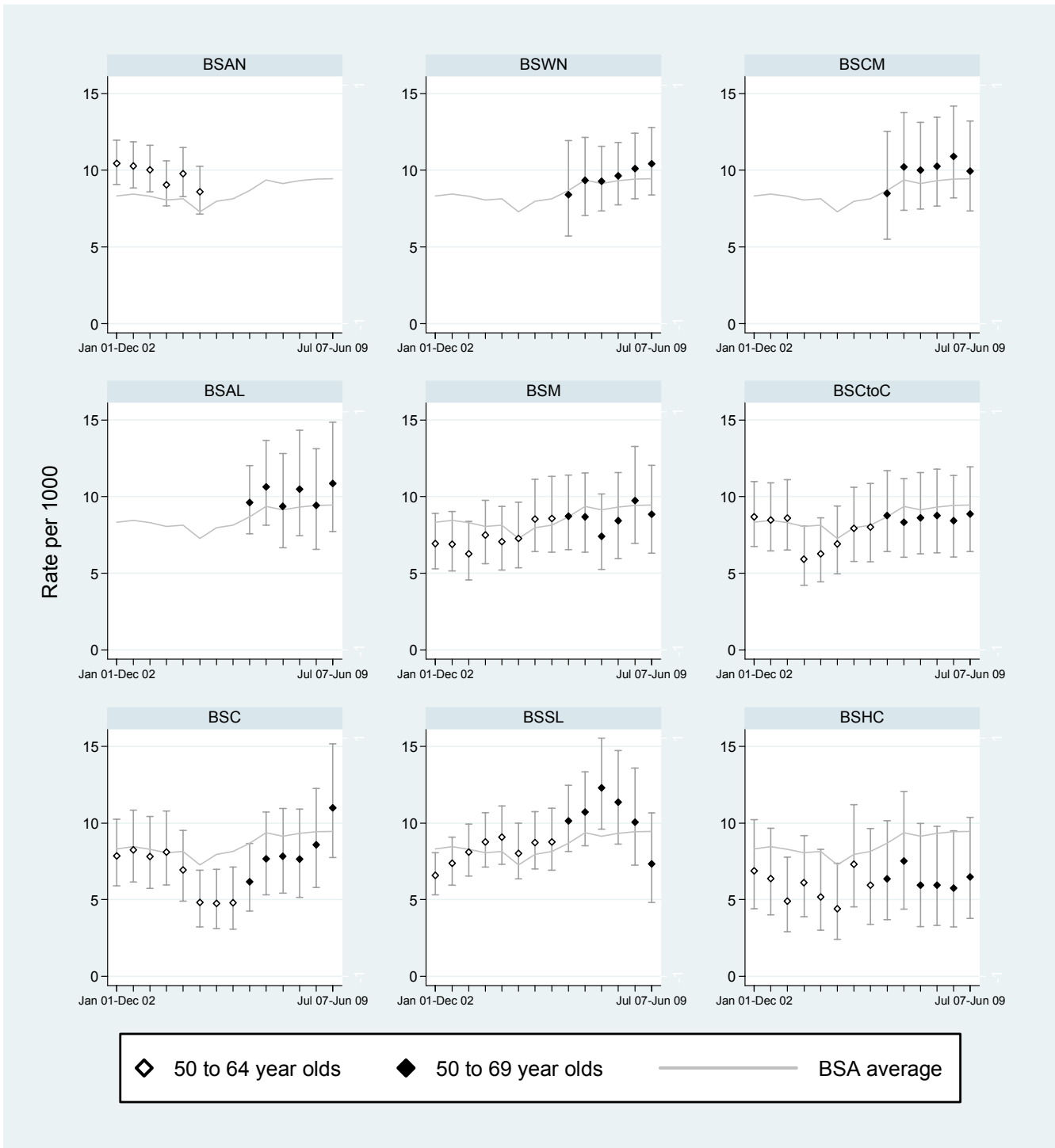
Figure 3a: Detection rate of DCIS and invasive breast cancer, subsequent screens, 2 years
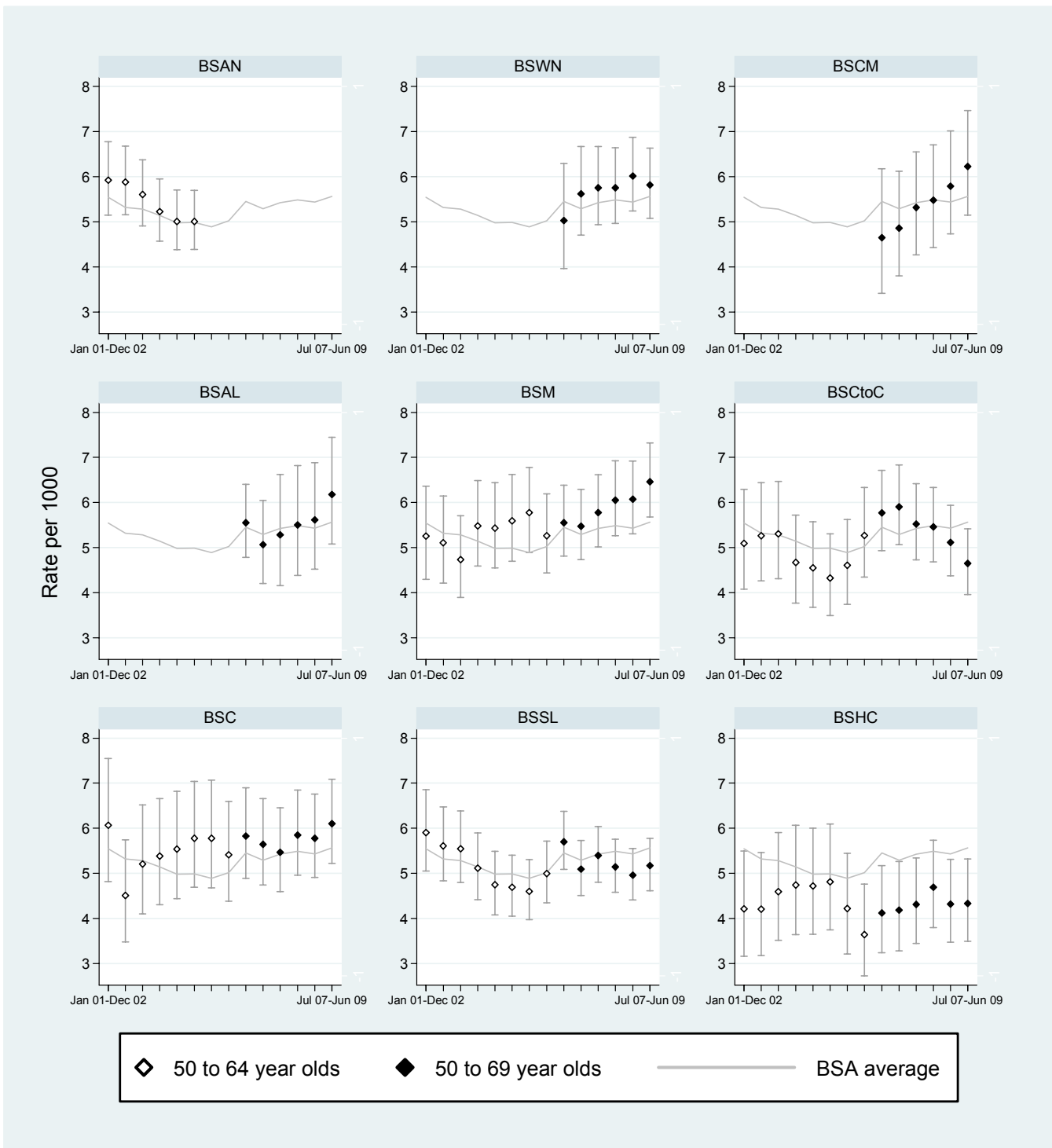
3.a.2b. Invasive cancer detection, 6 months and 2 years

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: ≥ 6.1 per 1000 women screened
Subsequent (Incident) round: ≥ 3.45 per 1000 women screened.

Table 3a.2b: Invasive cancers for initial and subsequent screens, women 45-69 years, 6 months

	Initial			Subsequent		
	Number	Women screened	Rate per 1,000 (95%CI)	Number	Women screened	Rate per 1,000 (95%CI)
45-49 years						
BSWN	8	2,545	3.1 (1.4-6.2)	6	1,750	3.4 (1.3-7.5)
BSCM*	1	1,520	0.7 (0.0-3.7)	3	1,021	2.9 (0.6-8.6)
BSAL*	0	1,271	0.0 (0.0-2.9)	0	934	0.0 (0.0-3.9)
BSM*	6	2,079	2.9 (1.1-6.3)	4	1,324	3.0 (0.8-7.7)
BSCtoC	5	1,852	2.7 (0.9-6.3)	1	1,411	0.7 (0.0-3.9)
BSC	5	1,433	3.5 (1.1-8.1)	3	1,190	2.5 (0.5-7.4)
BSSL	9	3,102	2.9 (1.3-5.5)	8	2,908	2.8 (1.2-5.4)
BSHC	1	1,498	0.7 (0.0-3.7)	2	453	4.4 (0.5-15.9)
BSA Total	35	15,300	2.3 (1.6-3.2)	27	10,991	2.5 (1.6-3.6)
50-69 years						
BSWN	17	1,976	8.6 (5.0-13.8)	42	9,690	4.3 (3.1-5.9)
BSCM	5	1,062	4.7 (1.5-11.0)	29	5,640	5.1 (3.4-7.4)
BSAL	8	914	8.8 (3.8-17.2)	26	5,029	5.2 (3.4-7.6)
BSM	6	1,422	4.2 (1.5-9.2)	43	10,277	4.2 (3.0-5.6)
BSCtoC	5	1,192	4.2 (1.4-9.8)	29	9,356	3.1 (2.1-4.5)
BSC	11	826	13.3 (6.6-23.8)	44	8,174	5.4 (3.9-7.2)
BSSL	2	937	2.1 (0.3-7.7)	69	18,385	3.8 (2.9-4.7)
BSHC	3	344	8.7 (1.8-25.5)	18	5,661	3.2 (1.9-5.0)
BSA Total	57	8,673	6.6 (5.0-8.5)	300	72,212	4.2 (3.7-4.7)

Poisson 95% Confidence Intervals presented

Table 3a.2b: Invasive cancers for initial and subsequent screens, women 45-69 years, 2 years

	Initial					Subsequent				
	Number	Women screened	Rate per 1,000 (95%CI)			Number	Women screened	Rate per 1,000 (95%CI)		
45-49 years										
BSWN	39	11,023	3.5 (2.5-4.8)			13	4,863	2.7 (1.4-4.6)		
BSCM	16	6,531	2.4 (1.4-4.0)			3	1,631	1.8 (0.4-5.4)		
BSAL	26	4,838	5.4 (3.5-7.9)			2	2,634	0.8 (0.1-2.7)		
BSM	27	6,396	4.2 (2.8-6.1)			10	4,883	2.0 (1.0-3.8)		
BSCtoC	22	7,267	3.0 (1.9-4.6)			10	4,571	2.2 (1.0-4.0)		
BSC	20	5,276	3.8 (2.3-5.9)			12	4,065	3.0 (1.5-5.2)		
BSSL	36	11,143	3.2 (2.3-4.5)			25	12,872	1.9 (1.3-2.9)		
BSHC	12	5,197	2.3 (1.2-4.0)			7	2,494	2.8 (1.1-5.8)		
BSA Total	198	57,671	3.4 (3.0-3.9)			82	38,013	2.2 (1.7-2.7)		
50-69 years										
BSWN	69	8,732	7.9 (6.1-10.0)	✓✓✓	*	169	38,160	4.4 (3.8-5.1)	✓✓✓	*
BSCM	29	4,822	6.0 (4.0-8.6)	✓	ns	88	18,787	4.7 (3.8-5.8)	✓✓✓	*
BSAL	30	3,589	8.4 (5.6-11.9)	✓	ns	87	17,800	4.9 (3.9-6.0)	✓✓✓	*
BSM	33	4,524	7.3 (5.0-10.2)	✓	ns	165	37,942	4.3 (3.7-5.1)	✓✓✓	*
BSCtoC	29	4,854	6.0 (4.0-8.6)	✓	ns	137	34,866	3.9 (3.3-4.6)	✓	ns
BSC	32	3,365	9.5 (6.5-13.4)	✓✓✓	*	124	28,018	4.4 (3.7-5.3)	✓✓✓	*
BSSL	20	3,687	5.4 (3.3-8.4)	✓	ns	240	60,531	4.0 (3.5-4.5)	✓✓✓	*
BSHC	12	2,624	4.6 (2.4-8.0)	✓	ns	74	21,222	3.5 (2.7-4.4)	✓	ns
BSA Total	254	36,197	7.0 (6.2-7.9)	✓✓✓	*	1,084	257,326	4.2 (4.0-4.5)	✓✓✓	*

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

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
6 months				
Initial round				
BSWN	10.7 (9.3-12.3)	90.7 (89.3-91.9)	11.8 (7.8-16.9)	12.7 (8.2-18.7)
BSCM	9.8 (8.0-11.9)	91.2 (89.4-92.9)	9.6 (4.7-17.0)	9.4 (4.5-17.3)
BSAL	10.3 (8.3-12.6)	91.1 (89.1-92.9)	9.6 (4.5-17.4)	9.8 (4.5-18.7)
BSM	8.8 (7.3-10.5)	92.0 (90.4-93.3)	7.2 (3.3-13.2)	6.3 (2.9-12.0)
BSCtoC	6.7 (5.3-8.4)	94.3 (92.8-95.6)	11.2 (5.3-20.3)	7.6 (3.5-14.3)
BSC	11.3 (9.1-13.8)	90.3 (88.0-92.2)	14.0 (7.7-22.7)	15.7 (8.4-26.9)
BSSL	7.6 (5.9-9.6)	92.6 (90.8-94.2)	2.8 (0.3-9.8)	2.1 (0.3-7.7)
BSHC	17.4 (13.3-22.5)	84.3 (79.9-88.0)	8.3 (2.8-18.4)	14.5 (4.7-33.9)
BSA Total	9.7 (9.0-10.4)	91.4 (90.8-92.0)	9.8 (7.8-12.0)	9.5 (7.5-11.7)
Subsequent round				
BSWN	2.8 (2.5-3.2)	97.8 (97.5-98.1)	21.4 (16.7-26.7)	6.1 (4.6-7.9)
BSCM	3.5 (3.0-4.0)	97.3 (96.8-97.7)	19.9 (14.5-26.2)	6.9 (4.9-9.5)
BSAL	3.1 (2.7-3.7)	97.5 (97.1-97.9)	21.5 (15.4-28.8)	6.8 (4.7-9.4)
BSM	3.7 (3.4-4.1)	97.0 (96.6-97.3)	18.2 (14.5-22.5)	6.8 (5.3-8.6)
BSCtoC	1.4 (1.2-1.6)	99.0 (98.8-99.2)	26.9 (19.5-35.4)	3.7 (2.6-5.2)
BSC	3.6 (3.2-4.0)	97.1 (96.7-97.5)	19.4 (15.0-24.4)	7.0 (5.3-9.0)
BSSL	2.7 (2.5-3.0)	97.8 (97.6-98.0)	18.3 (15.0-22.0)	4.9 (4.0-6.1)
BSHC	3.1 (2.7-3.6)	97.3 (96.9-97.7)	12.9 (8.4-18.8)	4.1 (2.6-6.1)
BSA Total	2.9 (2.8-3.1)	97.7 (97.6-97.8)	19.3 (17.6-21.1)	5.7 (5.1-6.2)
2 years				
Initial round				
BSWN	10.4 (9.8-11.1)	90.9 (90.3-91.5)	10.0 (8.1-12.1)	10.4 (8.4-12.8)
BSCM	9.7 (8.8-10.6)	91.7 (90.9-92.4)	10.3 (7.7-13.4)	10.0 (7.3-13.2)
BSAL	9.6 (8.6-10.7)	92.2 (91.3-93.1)	11.3 (8.2-15.2)	10.9 (7.7-14.9)
BSM	10.1 (9.2-11.0)	91.1 (90.2-91.9)	8.8 (6.4-11.8)	8.8 (6.3-12.0)
BSCtoC	7.6 (6.9-8.5)	93.7 (93.0-94.3)	11.6 (8.5-15.3)	8.9 (6.4-11.9)
BSC	10.5 (9.5-11.7)	91.1 (90.1-92.0)	10.4 (7.4-14.1)	11.0 (7.7-15.2)
BSSL	7.1 (6.2-8.0)	93.9 (93.1-94.6)	10.4 (7.0-14.7)	7.3 (4.8-10.7)
BSHC	14.2 (12.8-15.7)	87.1 (85.7-88.3)	4.6 (2.7-7.2)	6.5 (3.8-10.4)
BSA Total	9.8 (9.5-10.1)	91.6 (91.3-91.9)	9.7 (8.7-10.7)	9.4 (8.5-10.5)
Subsequent round				
BSWN	3.3 (3.1-3.5)	97.4 (97.2-97.5)	17.5 (15.5-19.8)	5.8 (5.1-6.6)
BSCM	3.1 (2.8-3.3)	97.6 (97.4-97.8)	20.2 (17.0-23.7)	6.2 (5.2-7.5)
BSAL	3.2 (2.9-3.4)	97.7 (97.4-97.9)	19.6 (16.4-23.1)	6.2 (5.1-7.4)
BSM	3.8 (3.6-4.0)	96.9 (96.8-97.1)	16.9 (15.0-18.9)	6.5 (5.7-7.3)
BSCtoC	1.7 (1.6-1.9)	98.8 (98.7-98.9)	26.6 (23.1-30.3)	4.6 (4.0-5.4)
BSC	3.6 (3.4-3.8)	97.2 (97.0-97.4)	17.0 (14.8-19.5)	6.1 (5.2-7.1)
BSSL	2.9 (2.7-3.0)	97.7 (97.6-97.9)	18.0 (16.3-19.9)	5.2 (4.6-5.8)
BSHC	2.9 (2.7-3.1)	97.8 (97.6-97.9)	15.1 (12.3-18.1)	4.3 (3.5-5.3)
BSA Total	3.0 (3.0-3.1)	97.6 (97.6-97.7)	18.3 (17.5-19.2)	5.6 (5.3-5.9)

3.b. Detection of invasive cancers ≤ 10 mm

Description:
Proportion and rate of 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

	Initial					Subsequent				
	Invasive cancers ≤10 mm	Total invasive cancers	% (95%CI)			Invasive cancers ≤10 mm	Total invasive cancers	% (95%CI)		
45-49 years										
BSWN	10	39	25.6 (13.0-42.1)			4	13	30.8 (9.1-61.4)		
BSCM	3	16	18.8 (4.0-45.6)			2	3	66.7 (9.4-99.2)		
BSAL	6	26	23.1 (9.0-43.6)			1	2	50.0 (1.3-98.7)		
BSM	6	27	22.2 (8.6-42.3)			2	10	20.0 (2.5-55.6)		
BSCtoC	8	22	36.4 (17.2-59.3)			2	10	20.0 (2.5-55.6)		
BSC	4	20	20.0 (5.7-43.7)			6	12	50.0 (21.1-78.9)		
BSSL	11	36	30.6 (16.3-48.1)			4	25	16.0 (4.5-36.1)		
BSHC	3	12	25.0 (5.5-57.2)			0	7	0.0 (0.0-41.0)		
BSA Total	51	198	25.8 (19.8-32.4)			21	82	25.6 (16.6-36.4)		
50-69 years										
BSWN	19	69	27.5 (17.5-39.6)	✓	ns	66	169	39.1 (31.7-46.8)	✓✓✓	*
BSCM	9	29	31.0 (15.3-50.8)	✓	ns	36	88	40.9 (30.5-51.9)	✓✓✓	*
BSAL	16	30	53.3 (34.3-71.7)	✓✓✓	*	42	87	48.3 (37.4-59.2)	✓✓✓	*
BSM	5	33	15.2 (5.1-31.9)	✓	ns	78	165	47.3 (39.5-55.2)	✓✓✓	*
BSCtoC	7	29	24.1 (10.3-43.5)	✓	ns	36	137	26.3 (19.1-34.5)	✓	ns
BSC	8	32	25.0 (11.5-43.4)	✓	ns	53	124	42.7 (33.9-51.9)	✓✓✓	*
BSSL	6	20	30.0 (11.9-54.3)	✓	ns	92	240	38.3 (32.2-44.8)	✓✓✓	*
BSHC	1	12	8.3 (0.2-38.5)	✓	ns	29	74	39.2 (28.0-51.2)	✓	ns
BSA Total	71	254	28.0 (22.5-33.9)	✓	ns	432	1084	39.9 (36.9-42.8)	✓✓✓	*

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

	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)		
45-49 years										
BSWN	10	11,023	9.1 (4.4-16.7)			4	4,863	8.2 (2.2-21.1)		
BSCM	3	6,531	4.6 (0.9-13.4)			2	1,631	12.3 (1.5-44.3)		
BSAL	6	4,838	12.4 (4.6-27.0)			1	2,634	3.8 (0.1-21.2)		
BSM	6	6,396	9.4 (3.4-20.4)			2	4,883	4.1 (0.5-14.8)		
BSCtoC	8	7,267	11.0 (4.8-21.7)			2	4,571	4.4 (0.5-15.8)		
BSC	4	5,276	7.6 (2.1-19.4)			6	4,065	14.8 (5.4-32.1)		
BSSL	11	11,143	9.9 (4.9-17.7)			4	12,872	3.1 (0.8-8.0)		
BSHC	3	5,197	5.8 (1.2-16.9)			0	2,494	0.0 (0.0-14.8)		
BSA Total	51	57,671	8.8 (6.6-11.6)			21	38,013	5.5 (3.4-8.4)		
50-69 years										
BSWN	19	8,732	21.8 (13.1-34.0)	✓	ns	66	38,160	17.3 (13.4-22.0)	✓✓✓	*
BSCM	9	4,822	18.7 (8.5-35.4)	✓	ns	36	18,787	19.2 (13.4-26.5)	✓✓✓	*
BSAL	16	3,589	44.6 (25.5-72.4)	✓✓✓	*	42	17,800	23.6 (17.0-31.9)	✓✓✓	*
BSM	5	4,524	11.1 (3.6-25.8)	✓	ns	78	37,942	20.6 (16.3-25.7)	✓✓✓	*
BSCtoC	7	4,854	14.4 (5.8-29.7)	✓	ns	36	34,866	10.3 (7.2-14.3)	✓	ns
BSC	8	3,365	23.8 (10.3-46.8)	✓	ns	53	28,018	18.9 (14.2-24.7)	✓✓✓	*
BSSL	6	3,687	16.3 (6.0-35.4)	✓	ns	92	60,531	15.2 (12.3-18.6)	✓✓✓	*
BSHC	1	2,624	3.8 (0.1-21.2)	✓	ns	29	21,222	13.7 (9.2-19.6)	✓	ns
BSA Total	71	36,197	19.6 (15.3-24.7)	✓✓✓	*	432	257,326	16.8 (15.2-18.4)	✓✓✓	*

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 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 45-69 years

Table 3c.1: Proportion of invasive cancers <15 mm, 2 years

	Initial					Subsequent				
	Invasive cancers <15 mm	Total invasive cancers	% (95%CI)			Invasive cancers <15 mm	Total invasive cancers	% (95%CI)		
45-49 years										
BSWN	17	39	43.6 (27.8-60.4)			8	13	61.5 (31.6-86.1)		
BSCM	3	16	18.8 (4.0-45.6)			3	3	100.0 (29.2-100.0)		
BSAL	10	26	38.5 (20.2-59.4)			1	2	50.0 (1.3-98.7)		
BSM	11	27	40.7 (22.4-61.2)			3	10	30.0 (6.7-65.2)		
BSCtoC	10	22	45.5 (24.4-67.8)			6	10	60.0 (26.2-87.8)		
BSC	8	20	40.0 (19.1-63.9)			7	12	58.3 (27.7-84.8)		
BSSL	16	36	44.4 (27.9-61.9)			8	25	32.0 (14.9-53.5)		
BSHC	5	12	41.7 (15.2-72.3)			0	7	0.0 (0.0-41.0)		
BSA Total	80	198	40.4 (33.5-47.6)			36	82	43.9 (33.0-55.3)		
50-69 years										
BSWN	27	69	39.1 (27.6-51.6)	✓	ns	98	169	58.0 (50.2-65.5)	✓✓✓	*
BSCM	11	29	37.9 (20.7-57.7)	✓	ns	52	88	59.1 (48.1-69.5)	✓	ns
BSAL	19	30	63.3 (43.9-80.1)	✓	ns	52	87	59.8 (48.7-70.1)	✓	ns
BSM	10	33	30.3 (15.6-48.7)	✗✗✗	*	100	165	60.6 (52.7-68.1)	✓✓✓	*
BSCtoC	10	29	34.5 (17.9-54.3)	✓	ns	62	137	45.3 (36.7-54.0)	✓	ns
BSC	17	32	53.1 (34.7-70.9)	✓	ns	78	124	62.9 (53.8-71.4)	✓✓✓	*
BSSL	10	20	50.0 (27.2-72.8)	✓	ns	153	240	63.7 (57.3-69.8)	✓✓✓	*
BSHC	2	12	16.7 (2.1-48.4)	✗✗✗	*	39	74	52.7 (40.7-64.4)	✓	ns
BSA Total	106	254	41.7 (35.6-48.1)	✗✗✗	*	634	1084	58.5 (55.5-61.4)	✓✓✓	*

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

	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)		
45-49 years											
BSWN	17	11,023	15.4 (9.0-24.7)				8	4,863	16.5 (7.1-32.4)		
BSCM	3	6,531	4.6 (0.9-13.4)				3	1,631	18.4 (3.8-53.8)		
BSAL	10	4,838	20.7 (9.9-38.0)				1	2,634	3.8 (0.1-21.2)		
BSM	11	6,396	17.2 (8.6-30.8)				3	4,883	6.1 (1.3-18.0)		
BSCtoC	10	7,267	13.8 (6.6-25.3)				6	4,571	13.1 (4.8-28.6)		
BSC	8	5,276	15.2 (6.5-29.9)				7	4,065	17.2 (6.9-35.5)		
BSSL	16	11,143	14.4 (8.2-23.3)				8	12,872	6.2 (2.7-12.2)		
BSHC	5	5,197	9.6 (3.1-22.5)				0	2,494	0.0 (0.0-14.8)		
BSA Total	80	57,671	13.9 (11.0-17.3)				36	38,013	9.5 (6.6-13.1)		
50-69 years											
BSWN	27	8,732	30.9 (20.4-45.0)	✓	ns		98	38,160	25.7 (20.8-31.3)	✓✓✓	*
BSCM	11	4,822	22.8 (11.4-40.8)	✓	ns		52	18,787	27.7 (20.7-36.3)	✓✓✓	*
BSAL	19	3,589	52.9 (31.9-82.7)	✓✓✓	*		52	17,800	29.2 (21.8-38.3)	✓✓✓	*
BSM	10	4,524	22.1 (10.6-40.7)	✓	ns		100	37,942	26.4 (21.4-32.1)	✓✓✓	*
BSCtoC	10	4,854	20.6 (9.9-37.9)	✓	ns		62	34,866	17.8 (13.6-22.8)	✓	ns
BSC	17	3,365	50.5 (29.4-80.9)	✓	ns		78	28,018	27.8 (22.0-34.7)	✓✓✓	*
BSSL	10	3,687	27.1 (13.0-49.9)	✓	ns		153	60,531	25.3 (21.4-29.6)	✓✓✓	*
BSHC	2	2,624	7.6 (0.9-27.5)	✗✗✗	*		39	21,222	18.4 (13.1-25.1)	✓	ns
BSA Total	106	36,197	29.3 (24.0-35.4)	✓	ns		634	257,326	24.6 (22.8-26.6)	✓✓✓	*

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
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✓✓✓ 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
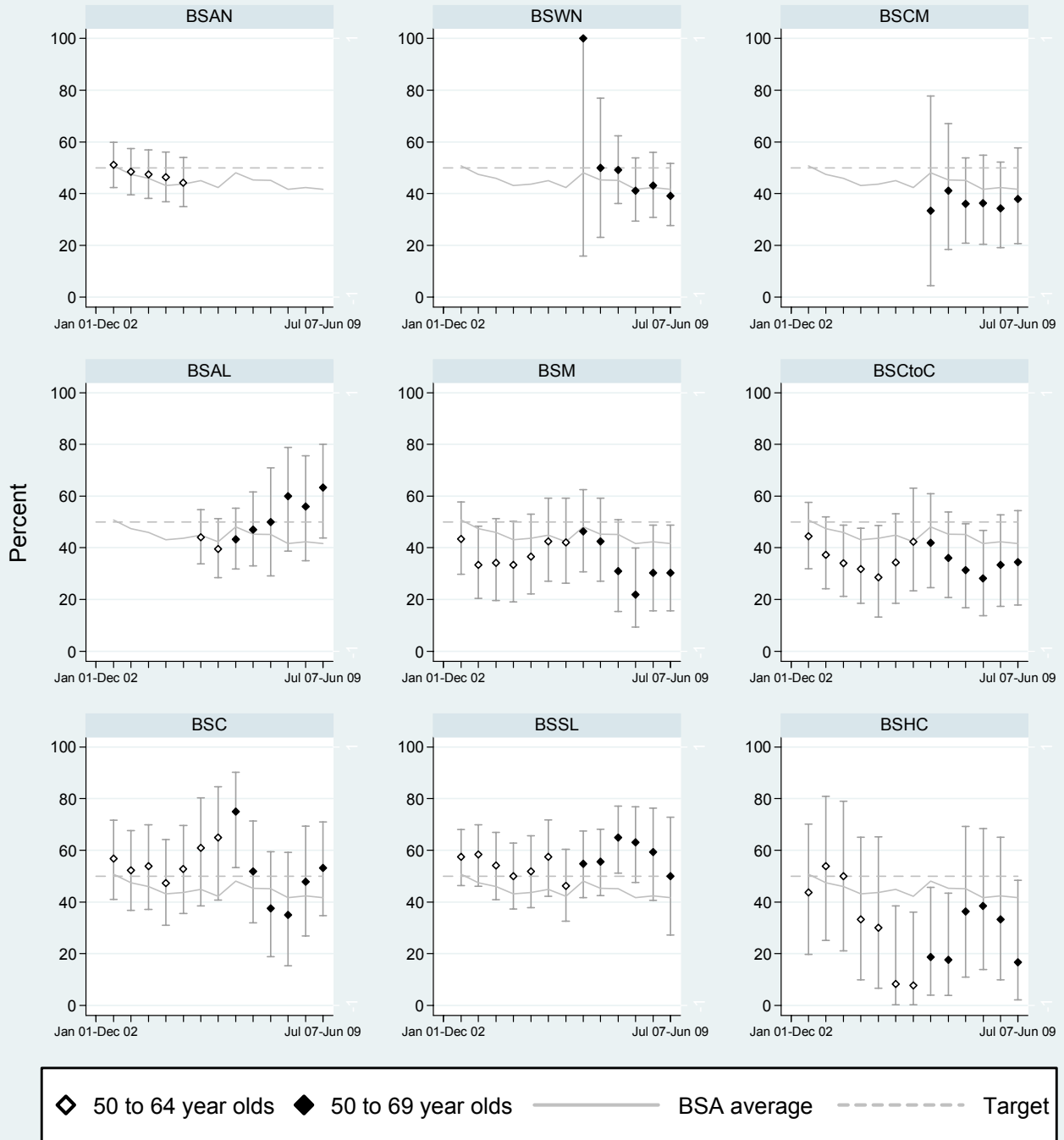
Figure 3c.1: Proportion invasive cancers <15mm, subsequent screens, 2 years
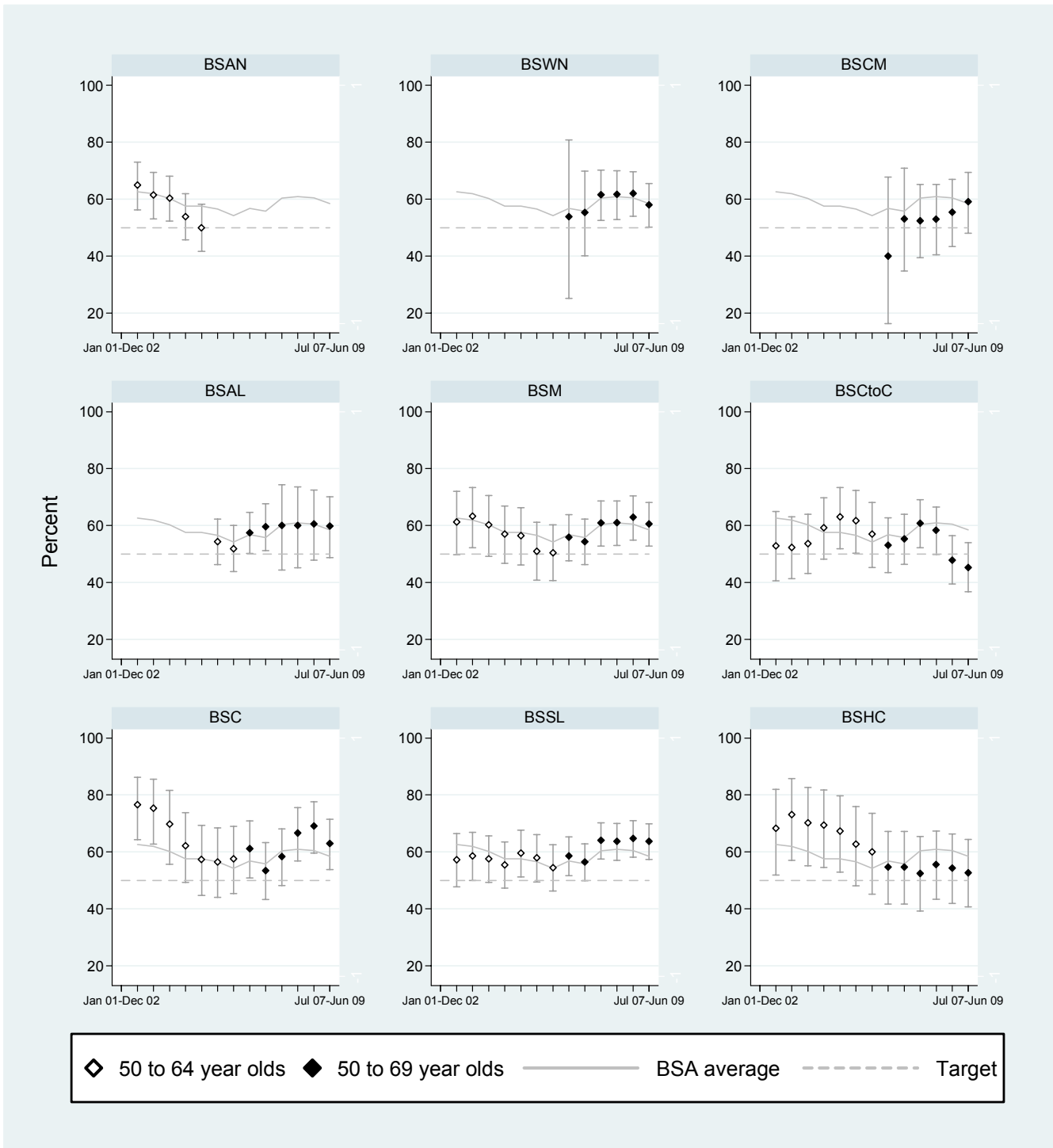
Figure 3c.2: Invasive cancers <15mm per 10,000 women screened, initial screens, 2 years
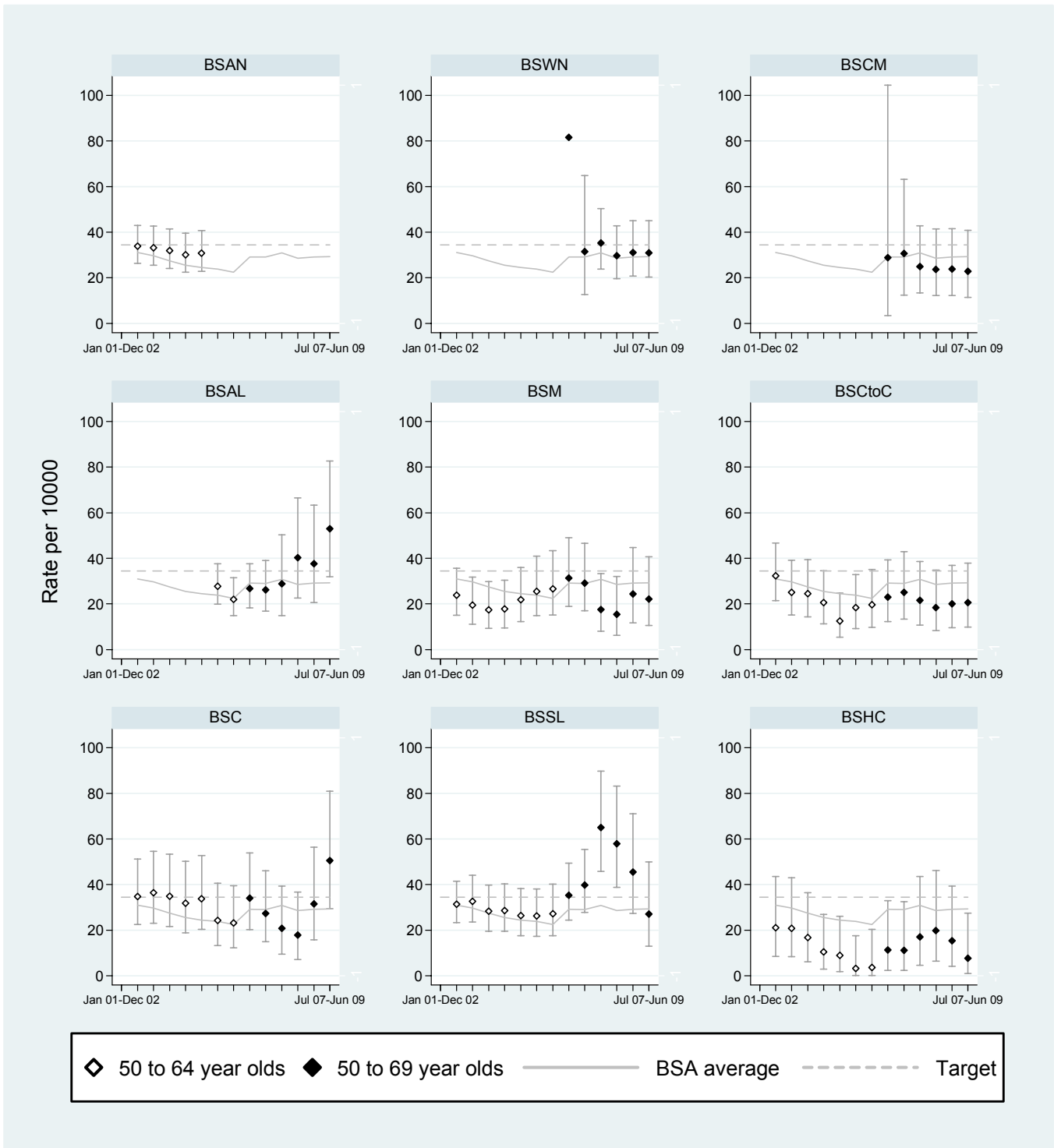
Note: 95%CI for BSWN estimate for Jan 05-Dec 06 is not shown to retain scale of 100 per 10,000 screened. Invasive cancer detection rate <15mm per 10,000 screens for BSWN is 81.6 (95%CI 9.9- 294.9).

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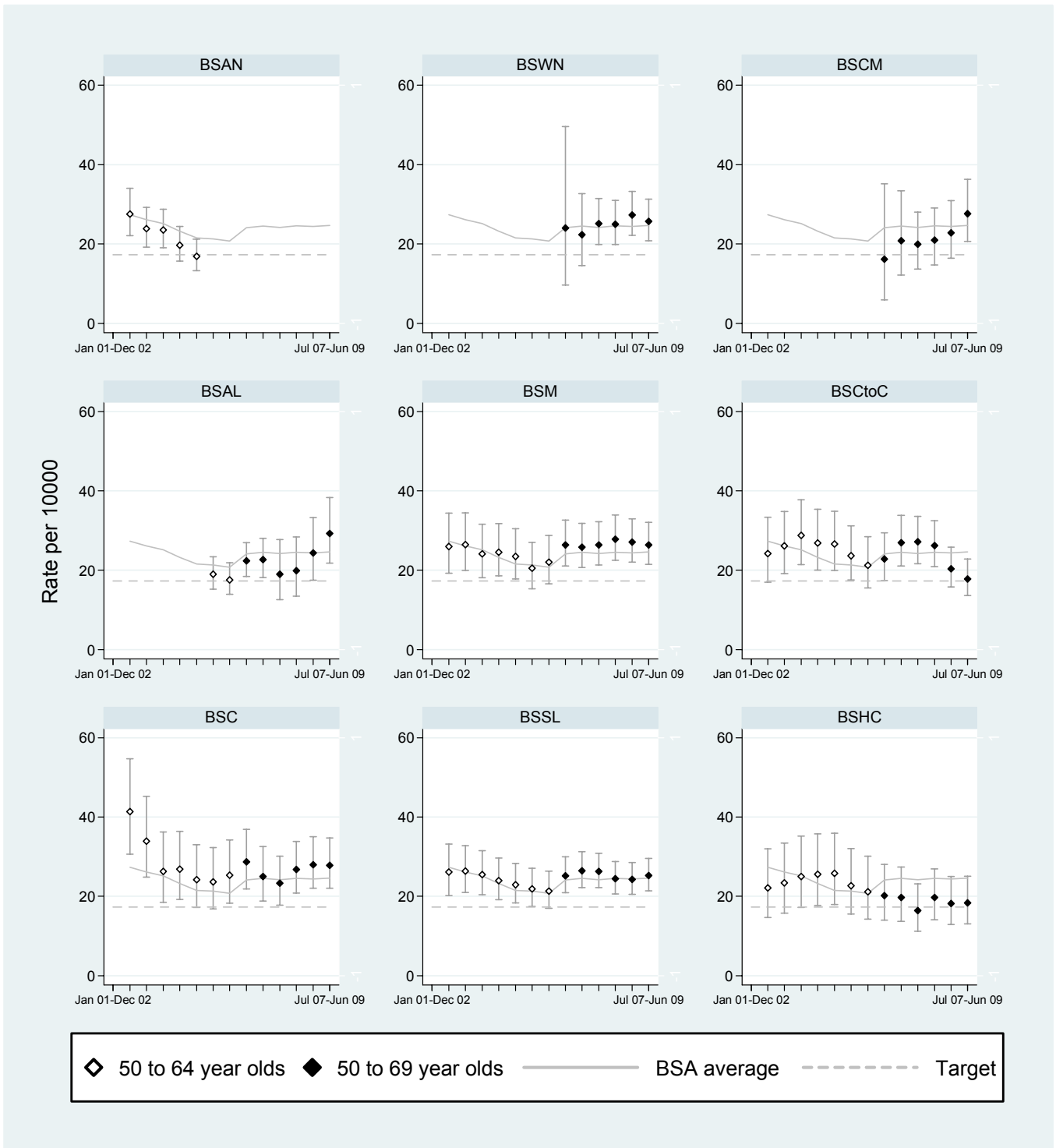
3.d. Nodal involvement

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 45-69 years

Table 3d: Proportion of node negative invasive cancers, 2 years

	Initial					Subsequent				
	Invasive cancers, node negative	Total invasive cancers	% (95%CI)			Invasive cancers, node negative	Total invasive cancers	% (95%CI)		
45-49 years										
BSWN	29	39	74.4 (57.9-87.0)	✓	ns	9	13	69.2 (38.6-90.9)	✓	ns
BSCM	11	16	68.8 (41.3-89.0)	✓	ns	2	3	66.7 (9.4-99.2)	✓	ns
BSAL	20	26	76.9 (56.4-91.0)	✓	ns	2	2	100.0 (15.8-100.0)	✓	ns
BSM	20	27	74.1 (53.7-88.9)	✓	ns	7	10	70.0 (34.8-93.3)	✓	ns
BSCtoC	15	22	68.2 (45.1-86.1)	✓	ns	6	10	60.0 (26.2-87.8)	✓	ns
BSC	15	20	75.0 (50.9-91.3)	✓	ns	8	12	66.7 (34.9-90.1)	✓	ns
BSSL	23	36	63.9 (46.2-79.2)	✓	ns	15	25	60.0 (38.7-78.9)	✓	ns
BSHC	7	12	58.3 (27.7-84.8)	✓	ns	4	7	57.1 (18.4-90.1)	✓	ns
BSA Total	140	198	70.7 (63.8-76.9)	✓	ns	53	82	64.6 (53.3-74.9)	✗✗✗	*
50-69 years										
BSWN	55	69	79.7 (68.3-88.4)	✓	ns	135	169	79.9 (73.0-85.6)	✓	ns
BSCM	20	29	69.0 (49.2-84.7)	✓	ns	75	88	85.2 (76.1-91.9)	✓✓✓	*
BSAL	24	30	80.0 (61.4-92.3)	✓	ns	73	87	83.9 (74.5-90.9)	✓	ns
BSM	21	33	63.6 (45.1-79.6)	✓	ns	133	165	80.6 (73.7-86.3)	✓	ns
BSCtoC	20	29	69.0 (49.2-84.7)	✓	ns	94	137	68.6 (60.1-76.3)	✓	ns
BSC	27	32	84.4 (67.2-94.7)	✓	ns	96	124	77.4 (69.0-84.4)	✓	ns
BSSL	15	20	75.0 (50.9-91.3)	✓	ns	190	240	79.2 (73.5-84.1)	✓	ns
BSHC	7	12	58.3 (27.7-84.8)	✓	ns	51	74	68.9 (57.1-79.2)	✓	ns
BSA Total	189	254	74.4 (68.6-79.7)	✓	ns	847	1084	78.1 (75.6-80.6)	✓	*

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 45-69 years

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

	DCIS	Total cancers	% (95%CI)
45-49 years			
BSWN	23	75	30.7 (20.5-42.4)
BSCM	10	29	34.5 (17.9-54.3)
BSAL	17	45	37.8 (23.8-53.5)
BSM	18	55	32.7 (20.7-46.7)
BSCtoC	12	44	27.3 (15.0-42.8)
BSC	8	40	20.0 (9.1-35.6)
BSSL	20	81	24.7 (15.8-35.5)
BSHC	6	25	24.0 (9.4-45.1)
BSA Total	114	394	28.9 (24.5-33.7)
50-69 years			
BSWN	69	307	22.5 (17.9-27.6)
BSCM	37	154	24.0 (17.5-31.6)
BSAL	28	145	19.3 (13.2-26.7)
BSM	68	266	25.6 (20.4-31.2)
BSCtoC	35	201	17.4 (12.4-23.4)
BSC	51	207	24.6 (18.9-31.1)
BSSL	77	337	22.8 (18.5-27.7)
BSHC	17	103	16.5 (9.9-25.1)
BSA Total	382	1,720	22.2 (20.3-24.2)

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
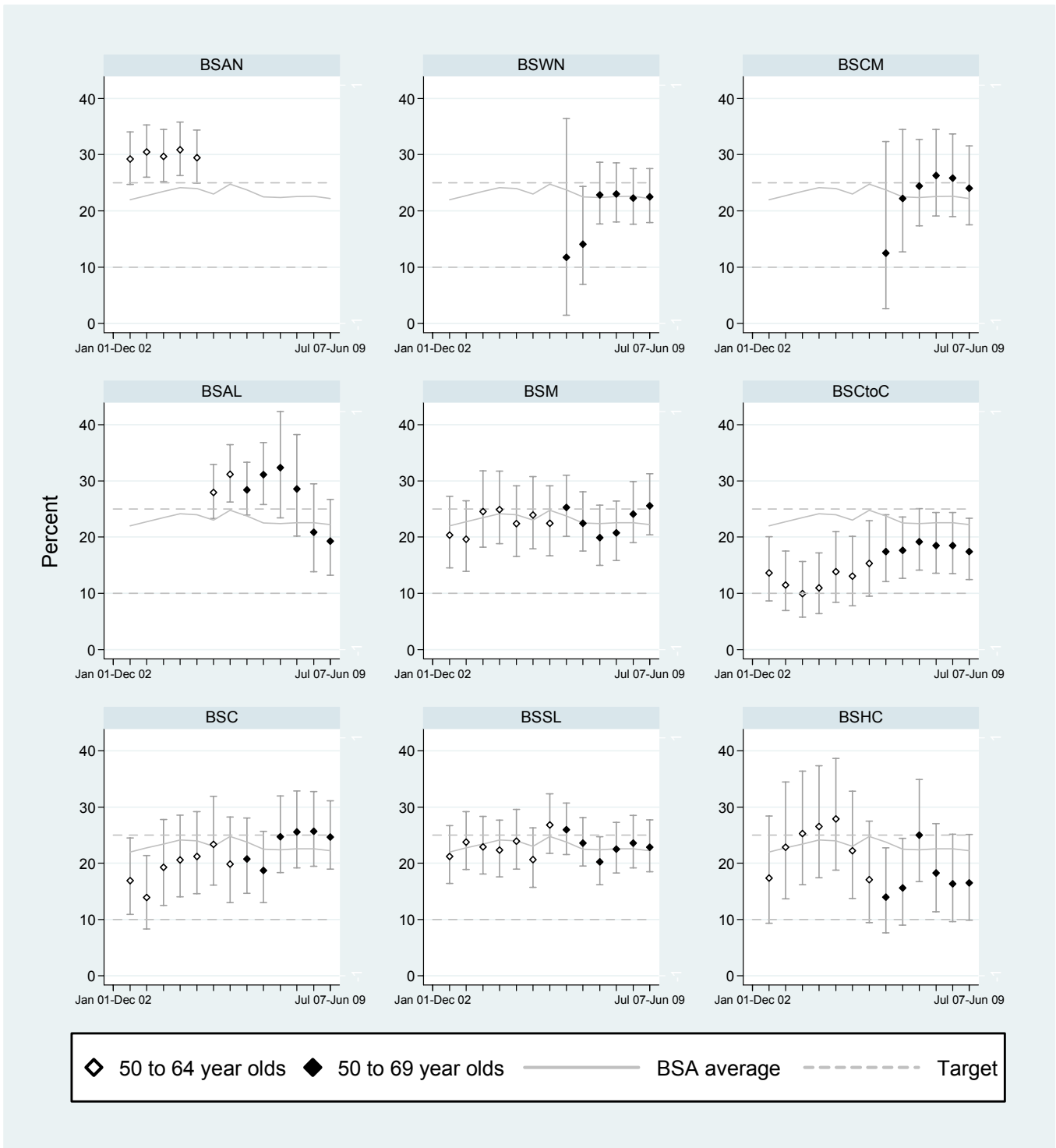
5. PROVISION OF AN APPROPRIATE AND ACCEPTABLE SERVICE

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

	6 months					2 years				
	Women notified within 10 working days	Women screened	% (95%CI)			Women notified within 10 working days	Women screened	% (95%CI)		
45-49 years										
BSWN	4,164	4,295	96.9 (96.4-97.4)			14,945	15,886	94.1 (93.7-94.4)		
BSCM	2,468	2,541	97.1 (96.4-97.7)			7,842	8,162	96.1 (95.6-96.5)		
BSAL	2,061	2,205	93.5 (92.4-94.5)			6,718	7,472	89.9 (89.2-90.6)		
BSM	3,264	3,403	95.9 (95.2-96.6)			9,975	11,279	88.4 (87.8-89.0)		
BSCtoC	3,197	3,263	98.0 (97.4-98.4)			11,680	11,838	98.7 (98.4-98.9)		
BSC	2,585	2,623	98.6 (98.0-99.0)			9,009	9,341	96.4 (96.1-96.8)		
BSSL	5,885	6,010	97.9 (97.5-98.3)			23,482	24,015	97.8 (97.6-98.0)		
BSHC	1,641	1,951	84.1 (82.4-85.7)			6,379	7,691	82.9 (82.1-83.8)		
BSA Total	25,265	26,291	96.1 (95.9-96.3)			90,030	95,684	94.1 (93.9-94.2)		
50-69 years										
BSWN	11,443	11,666	98.1 (97.8-98.3)	✓✓	*	45,017	46,892	96.0 (95.8-96.2)	✓✓	*
BSCM	6,588	6,702	98.3 (98.0-98.6)	✓✓	*	22,863	23,609	96.8 (96.6-97.1)	✓✓	*
BSAL	5,709	5,943	96.1 (95.5-96.5)	✓✓	*	19,983	21,389	93.4 (93.1-93.8)	✓	*
BSM	11,416	11,699	97.6 (97.3-97.9)	✓✓	*	38,045	42,466	89.6 (89.3-89.9)	✓	*
BSCtoC	10,342	10,548	98.0 (97.8-98.3)	✓✓	*	39,214	39,720	98.7 (98.6-98.8)	✓✓	*
BSC	8,878	9,000	98.6 (98.4-98.9)	✓✓	*	30,579	31,383	97.4 (97.3-97.6)	✓✓	*
BSSL	19,116	19,322	98.9 (98.8-99.1)	✓✓	*	63,325	64,218	98.6 (98.5-98.7)	✓✓	*
BSHC	5,465	6,005	91.0 (90.3-91.7)	✓	*	21,292	23,846	89.3 (88.9-89.7)	✓	*
BSA Total	78,957	80,885	97.6 (97.5-97.7)	✓✓	*	280,318	293,523	95.5 (95.4-95.6)	✓✓	*

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
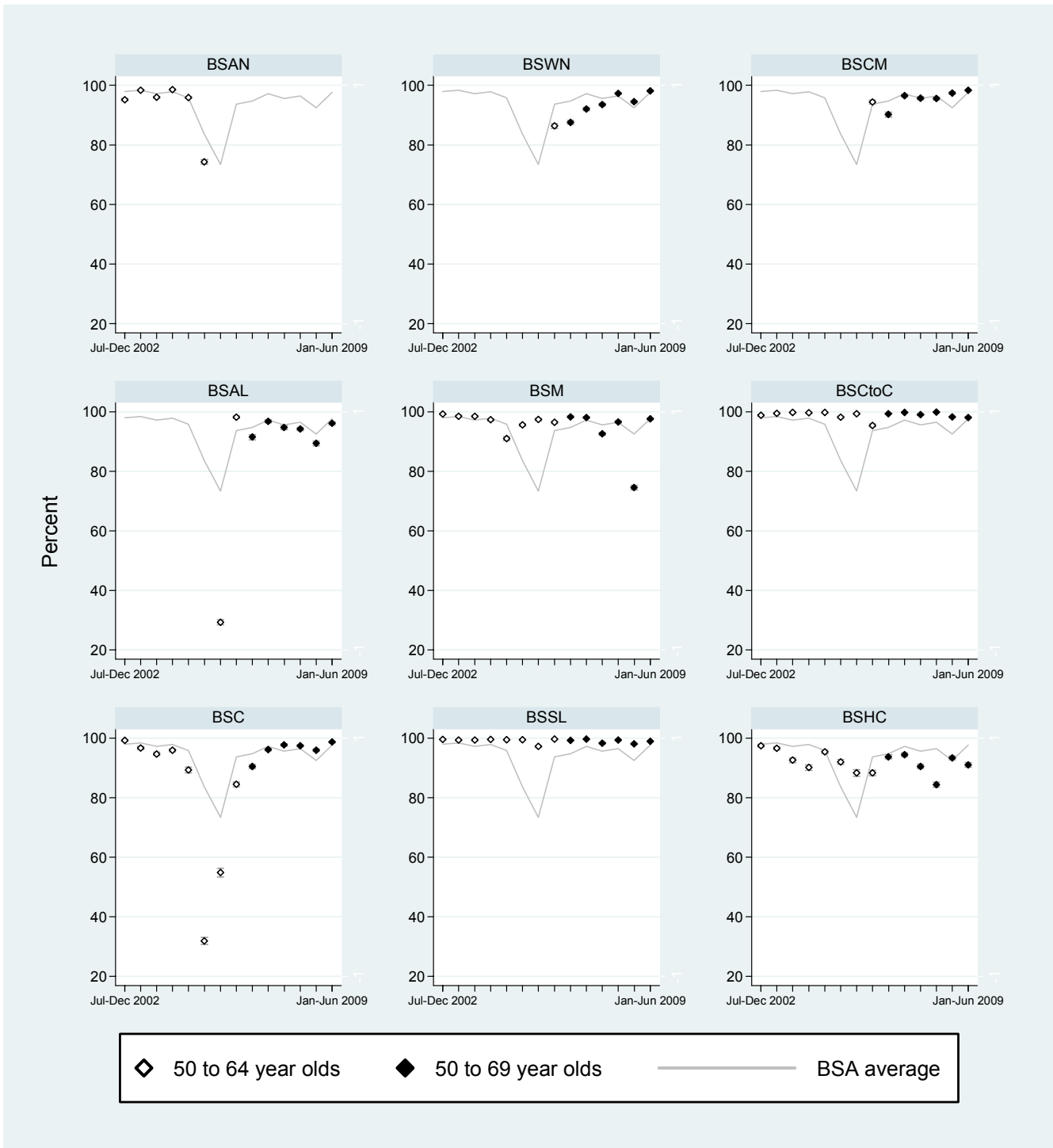
Figure 5a: Percentage of women notified of screening results within 10 working days, 2 years
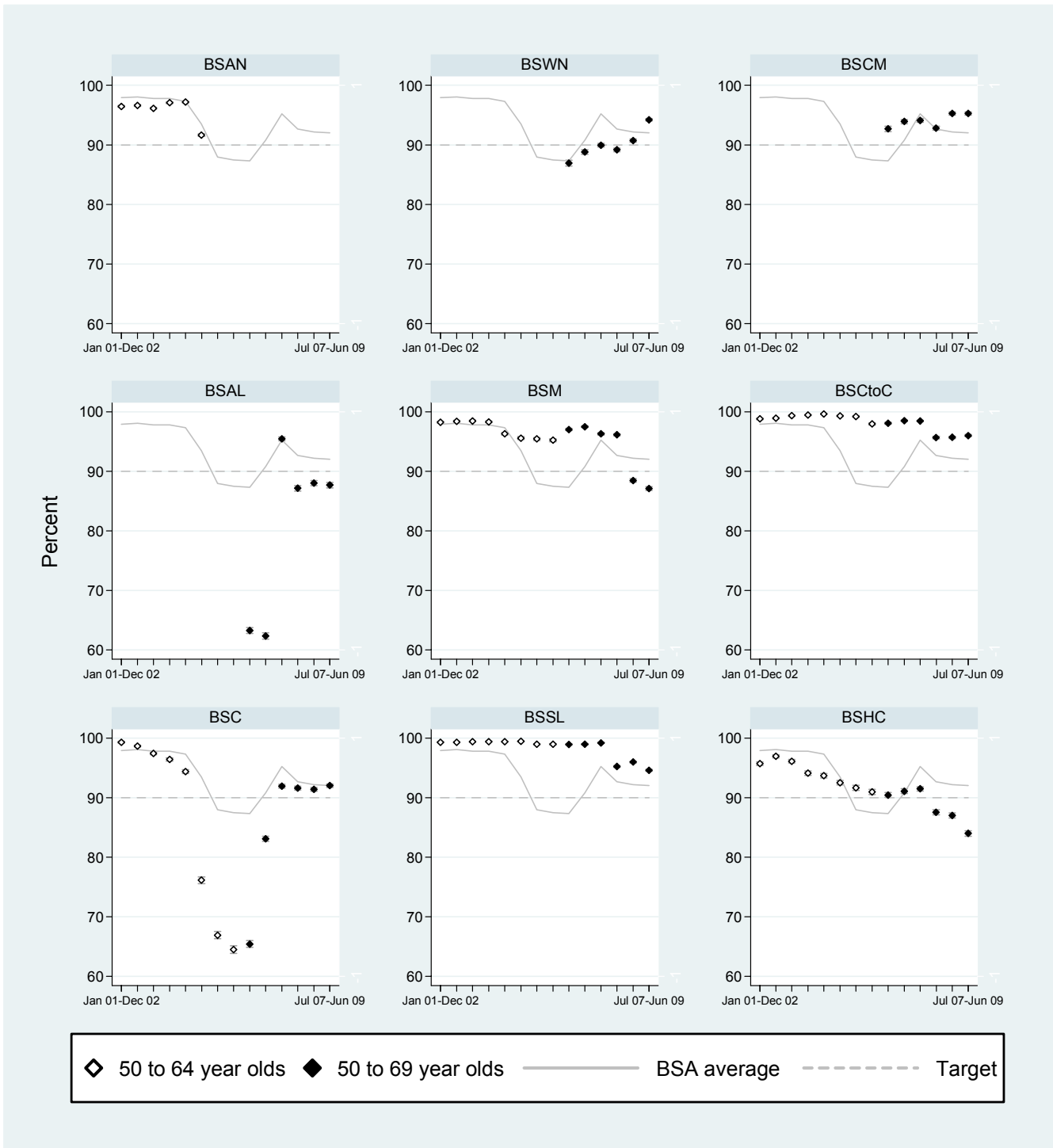
5.b. Time taken from screening visit to first offer of an assessment

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

	6 months					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)		
45-49 years										
BSWN	262	303	86.5 (82.1-90.1)			956	1,262	75.8 (73.3-78.1)		
BSCM	162	197	82.2 (76.2-87.3)			568	718	79.1 (75.9-82.0)		
BSAL	124	165	75.2 (67.8-81.5)			388	557	69.7 (65.7-73.5)		
BSM	252	280	90.0 (85.9-93.3)			760	911	83.4 (80.8-85.8)		
BSCtoC	154	161	95.7 (91.2-98.2)			582	628	92.7 (90.4-94.6)		
BSC	210	215	97.7 (94.7-99.2)			655	710	92.3 (90.0-94.1)		
BSSL	308	340	90.6 (87.0-93.5)			1,275	1,346	94.7 (93.4-95.9)		
BSHC	61	253	24.1 (19.0-29.9)			244	819	29.8 (26.7-33.1)		
BSA Total	1,533	1,914	80.1 (78.2-81.9)			5,428	6,951	78.1 (77.1-79.1)		
50-69 years										
BSWN	417	488	85.5 (82.0-88.5)	✗✗	*	1,623	2,177	74.6 (72.7-76.4)	✗✗✗	*
BSCM	246	300	82.0 (77.2-86.2)	✗✗	*	796	1,047	76.0 (73.3-78.6)	✗✗✗	*
BSAL	201	252	79.8 (74.3-84.5)	✗✗✗	*	666	905	73.6 (70.6-76.4)	✗✗✗	*
BSM	471	509	92.5 (89.9-94.7)	✓	ns	1,559	1,909	81.7 (79.9-83.4)	✗✗	*
BSCtoC	205	210	97.6 (94.5-99.2)	✓✓	*	908	981	92.6 (90.7-94.1)	✓	*
BSC	377	387	97.4 (95.3-98.8)	✓✓	*	1,249	1,359	91.9 (90.3-93.3)	✓	*
BSSL	519	568	91.4 (88.8-93.5)	✓	ns	1,878	1,995	94.1 (93.0-95.1)	✓	*
BSHC	59	238	24.8 (19.4-30.8)	✗✗✗	*	339	984	34.5 (31.5-37.5)	✗✗✗	*
BSA Total	2,495	2,952	84.5 (83.2-85.8)	✗✗	*	9,018	11,357	79.4 (78.6-80.1)	✗✗✗	*

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.
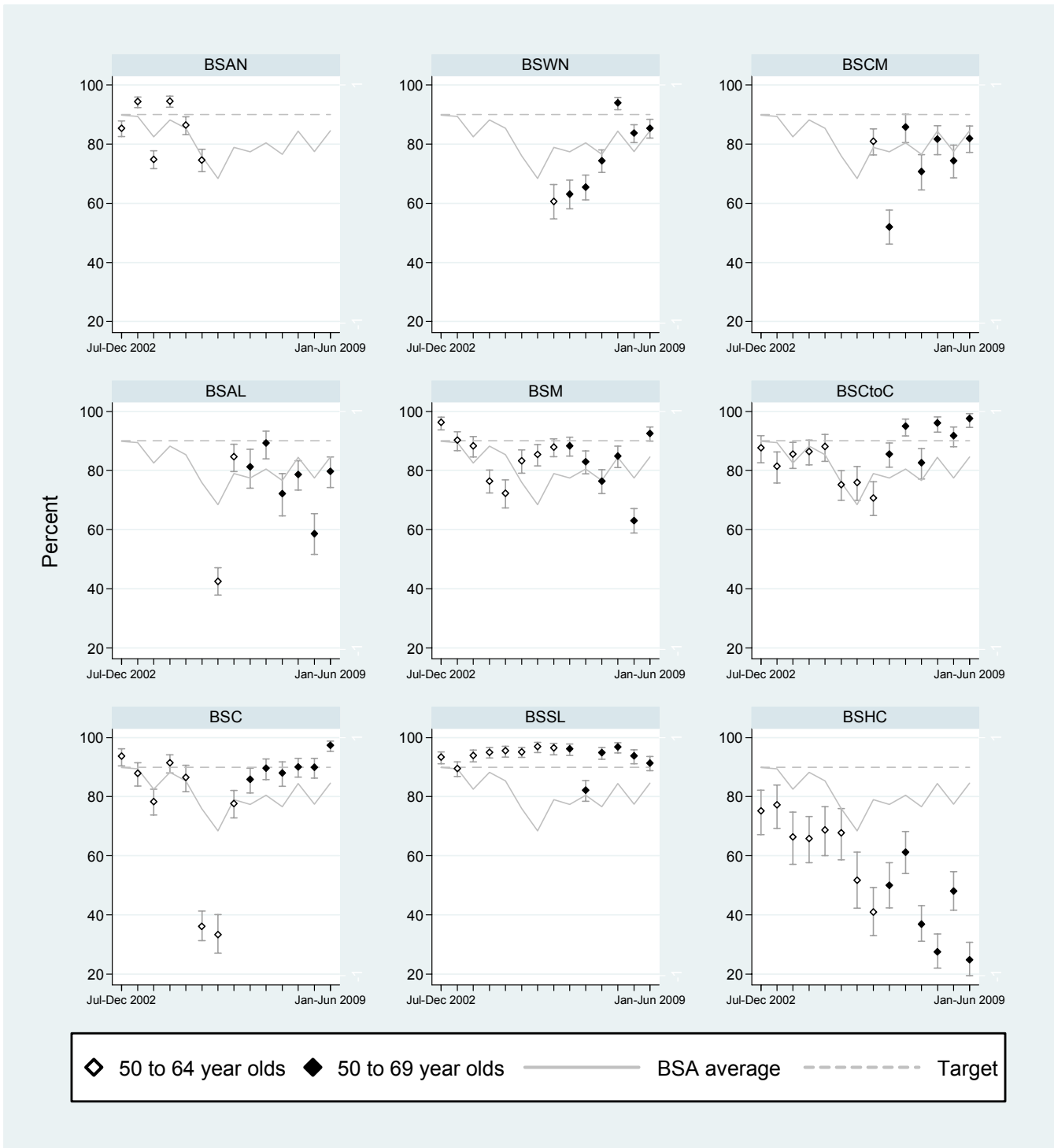
Figure 5b: Percentage of women offered first assessment appointment within 15 working days, 2 years
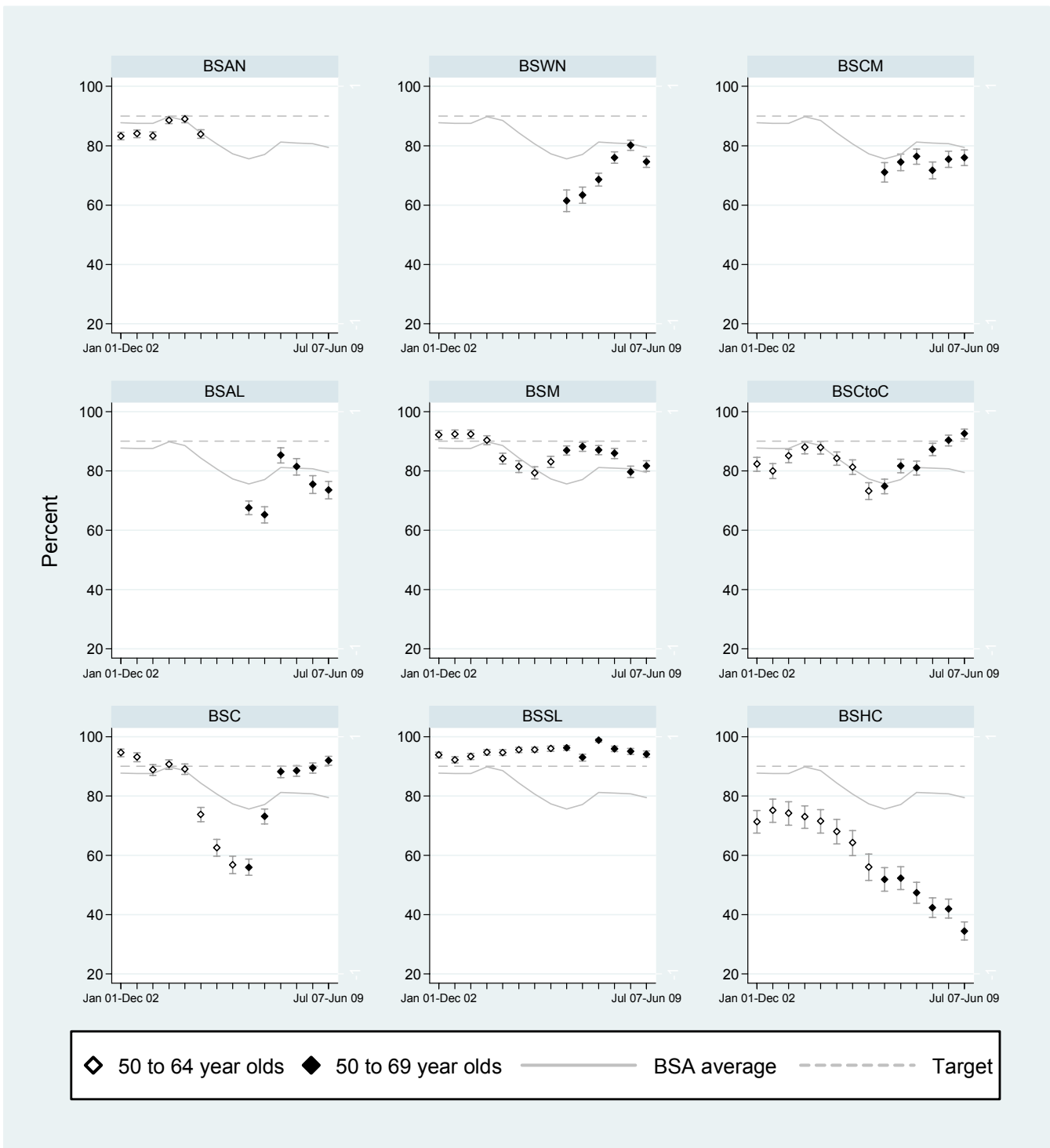
5.c. Time taken from assessment to final diagnostic biopsy

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 20 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 working days of assessment	Total needle biopsies	% (95%CI)			Needle biopsies within 5 working days of assessment	Total needle biopsies	% (95%CI)		
45-49 years										
BSWN	102	103	99.0 (94.7-100.0)			364	371	98.1 (96.2-99.2)		
BSCM	60	75	80.0 (69.2-88.4)			222	256	86.7 (81.9-90.6)		
BSAL	44	53	83.0 (70.2-91.9)			178	212	84.0 (78.3-88.6)		
BSM	53	72	73.6 (61.9-83.3)			209	266	78.6 (73.1-83.3)		
BSCtoC	37	37	100.0 (90.5-100.0)			174	178	97.8 (94.3-99.4)		
BSC	43	47	91.5 (79.6-97.6)			135	144	93.8 (88.5-97.1)		
BSSL	71	82	86.6 (77.3-93.1)			295	337	87.5 (83.5-90.9)		
BSHC	37	38	97.4 (86.2-99.9)			150	163	92.0 (86.7-95.7)		
BSA Total	447	507	88.2 (85.0-90.8)			1,727	1,927	89.6 (88.2-90.9)		
50-69 years										
BSWN	172	176	97.7 (94.3-99.4)	✓✓	*	727	744	97.7 (96.4-98.7)	✓✓	*
BSCM	89	124	71.8 (63.0-79.5)	✗✗✗	*	349	419	83.3 (79.4-86.7)	✗✗	*
BSAL	95	113	84.1 (76.0-90.3)	✓	ns	335	395	84.8 (80.9-88.2)	✗✗	*
BSM	138	165	83.6 (77.1-88.9)	✗✗	*	513	629	81.6 (78.3-84.5)	✗✗	*
BSCtoC	82	83	98.8 (93.5-100.0)	✓✓	*	388	397	97.7 (95.7-99.0)	✓✓	*
BSC	109	114	95.6 (90.1-98.6)	✓✓	*	347	372	93.3 (90.2-95.6)	✓	*
BSSL	154	172	89.5 (84.0-93.7)	✓	ns	536	619	86.6 (83.7-89.2)	✓	*
BSHC	42	48	87.5 (74.8-95.3)	✓	ns	203	223	91.0 (86.5-94.4)	✓	ns
BSA Total	881	995	88.5 (86.4-90.5)	✓	ns	3,398	3,798	89.5 (88.4-90.4)	✓	ns

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 5c1: Proportion of women having a needle biopsy procedure within 5 working days, 2 years
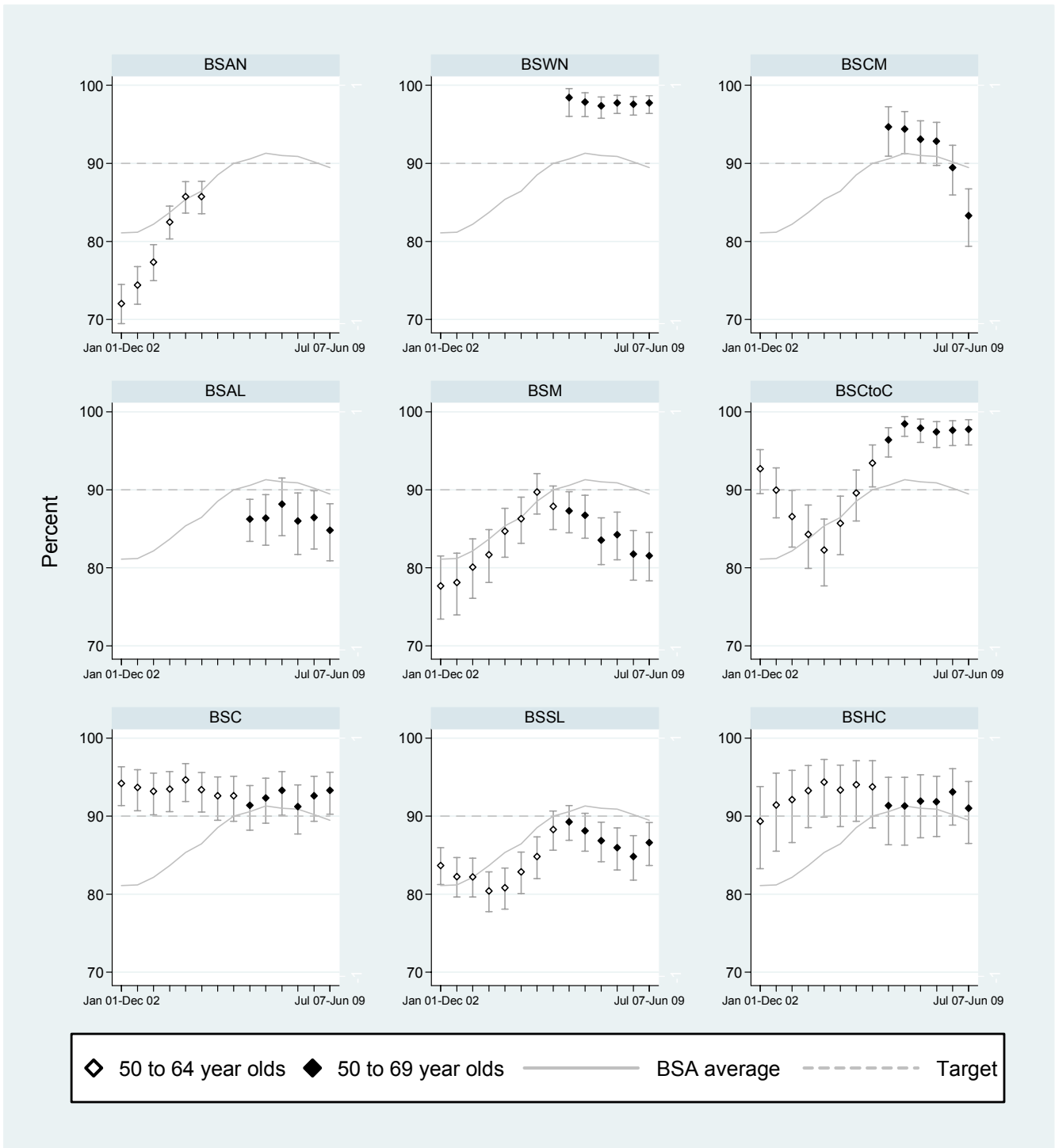
5.c.2. Women having Open Biopsy within 20 working days

At least 90% of women requiring open biopsy should have this performed within 20 working days of being notified of the need for this operation.

This indicator has been changed from 'within 15 working days' to 'within 20 working days'. This change reflects the BSA Advisory Group recommendation that the NSU change the target to 20 days to be in line with the recommendation made by the BSA Surgeons UDG. This allows the target to be brought into alignment with the standard time for surgical treatment of confirmed breast cancer cases.

Table 5c.2: Proportion of women having an open biopsy procedure within 20 working days

	6 months			2 years				
	Open biopsies within 20 working days of notification	Total open biopsies	% (95%CI)	Open biopsies within 20 working days of notification	Total open biopsies	% (95%CI)		
45-49 years								
BSWN	12	17		32	48	66.7 (51.6-79.6)		
BSCM	5	5		12	12	100.0 (73.5-100.0)		
BSAL	2	2		19	21	90.5 (69.6-98.8)		
BSM	2	2		11	17	64.7 (38.3-85.8)		
BSCtoC	1	3		3	12	25.0 (5.5-57.2)		
BSC	4	5		7	11	63.6 (30.8-89.1)		
BSSL	5	5		15	15	100.0 (78.2-100.0)		
BSHC	5	6		16	20	80.0 (56.3-94.3)		
BSA Total	36	45	80.0 (65.4-90.4)	115	156	73.7 (66.1-80.4)		
50-69 years								
BSWN	11	14		44	72	61.1 (48.9-72.4)	✗✗✗	*
BSCM	6	7		24	25	96.0 (79.6-99.9)	✓	ns
BSAL	5	5		28	30	93.3 (77.9-99.2)	✓	ns
BSM	4	10		20	48	41.7 (27.6-56.8)	✗✗✗	*
BSCtoC	2	6		5	18	27.8 (9.7-53.5)	✗✗✗	*
BSC	4	6		17	23	73.9 (51.6-89.8)	✗✗✗	*
BSSL	6	8		27	29	93.1 (77.2-99.2)	✓	ns
BSHC	2	2		18	21	85.7 (63.7-97.0)	✓	ns
BSA Total	40	58	69.0 (55.5-80.5) ✗✗✗ *	183	266	68.8 (62.9-74.3)	✗✗✗	*

Note: 6 monthly data for lead providers not shown due to small numbers.
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*
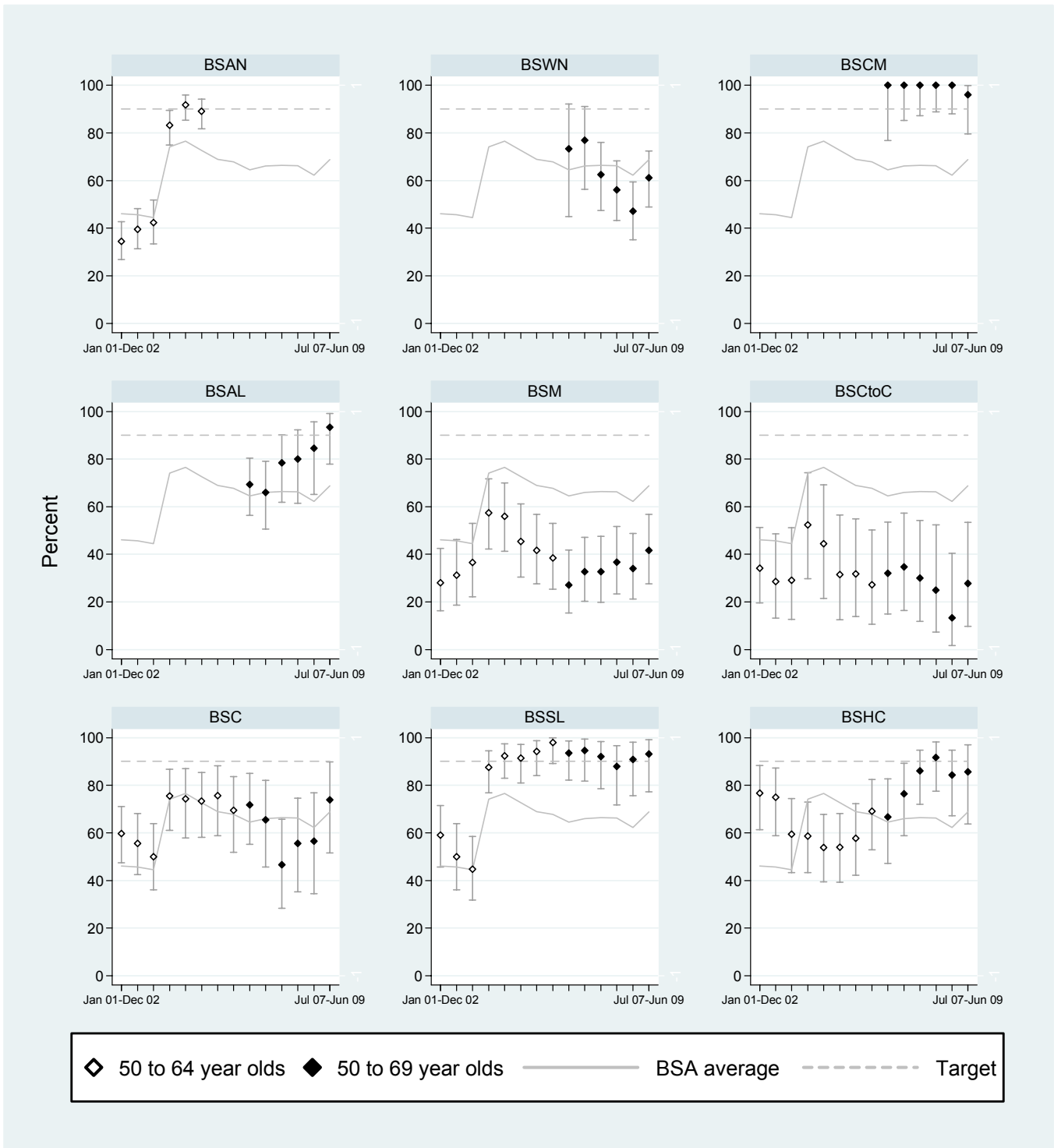
*Note: The Jul 07- Jun09 biennium is comprised of data based on open biopsy procedures within 20 working days, and reflects the BSA Advisory Group change in this indicator from 'within 15 working days' to 'within 20 working days'

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

	6 months					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)		
45-49 years										
BSWN	87	107	81.3 (72.6-88.2)			325	402	80.8 (76.7-84.6)		
BSCM	65	75	86.7 (76.8-93.4)			232	256	90.6 (86.4-93.9)		
BSAL	48	58	82.8 (70.6-91.4)			197	224	87.9 (82.9-91.9)		
BSM	54	71	76.1 (64.5-85.4)			203	268	75.7 (70.2-80.8)		
BSCtoC	33	42	78.6 (63.2-89.7)			166	186	89.2 (83.9-93.3)		
BSC	42	47	89.4 (76.9-96.5)			133	146	91.1 (85.3-95.2)		
BSSL	75	82	91.5 (83.2-96.5)			322	344	93.6 (90.5-95.9)		
BSHC	41	43	95.3 (84.2-99.4)			159	178	89.3 (83.8-93.4)		
BSA Total	445	525	84.8 (81.4-87.7)			1,737	2,004	86.7 (85.1-88.1)		
BSWN	165	189	87.3 (81.7-91.7)	✓	ns	642	791	81.2 (78.3-83.8)	✗✗	*
BSCM	111	127	87.4 (80.3-92.6)	✓	ns	384	424	90.6 (87.4-93.2)	✓	ns
BSAL	105	117	89.7 (82.8-94.6)	✓	ns	363	410	88.5 (85.0-91.5)	✓	ns
BSM	134	164	81.7 (74.9-87.3)	✗✗	*	506	638	79.3 (76.0-82.4)	✗✗✗	*
BSCtoC	72	83	86.7 (77.5-93.2)	✓	ns	362	402	90.0 (86.7-92.8)	✓	ns
BSC	101	116	87.1 (79.6-92.6)	✓	ns	345	381	90.6 (87.2-93.3)	✓	ns
BSSL	159	173	91.9 (86.8-95.5)	✓	ns	585	633	92.4 (90.1-94.4)	✓	*
BSHC	44	50	88.0 (75.7-95.5)	✓	ns	213	237	89.9 (85.3-93.4)	✓	ns
BSA Total	891	1019	87.4 (85.2-89.4)	✓	*	3,400	3,916	86.8 (85.7-87.9)	✓	*

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 5d: Percentage of women receiving final diagnostic biopsy results within 5 working days, 2 years
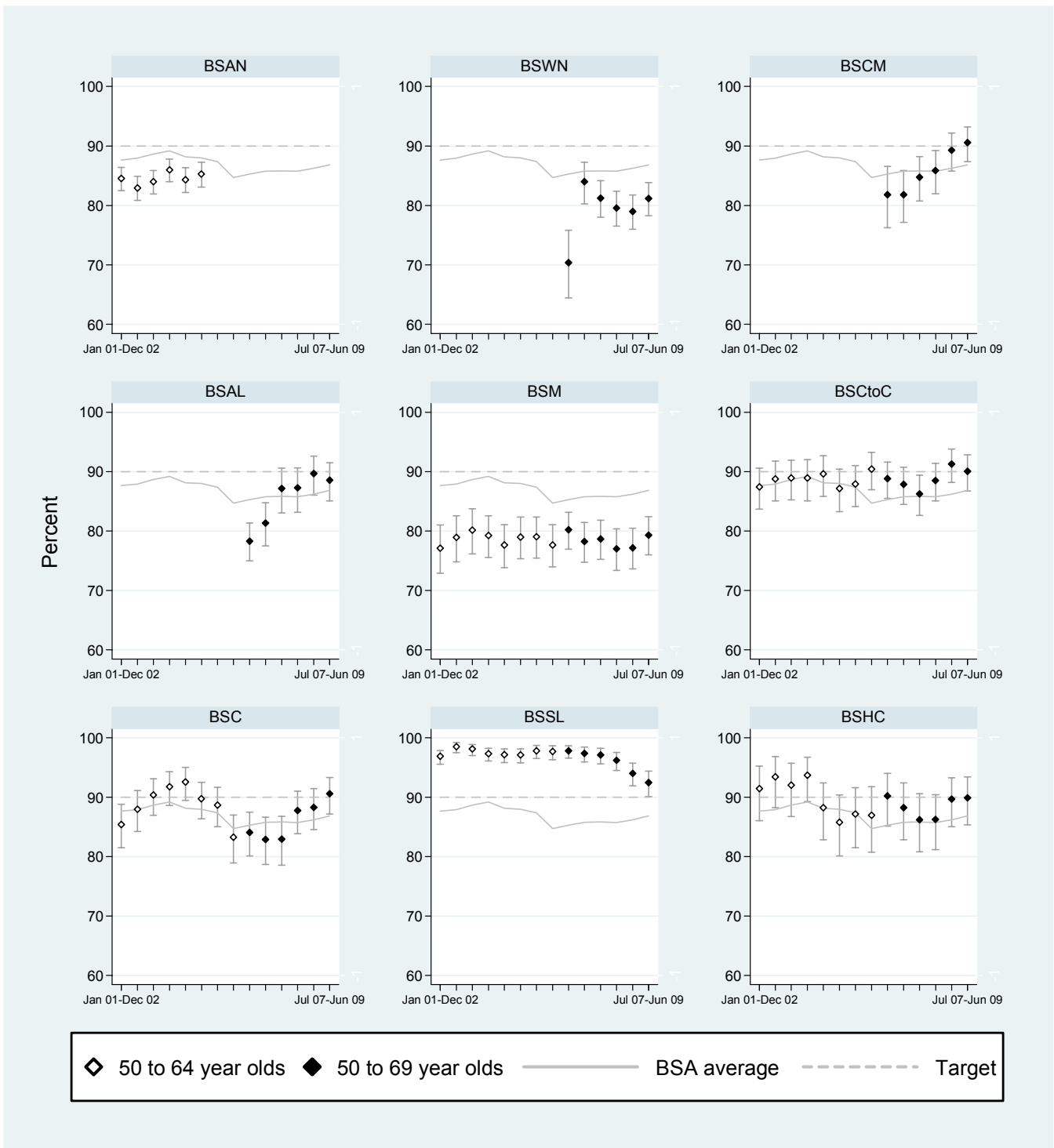
APPENDIX A: POPULATION DENOMINATORS BY AGE-GROUP

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*
2009	BSWN	Jan-Jun, 2009	26840	22575	19765	17310	13255	72905	27203	22980	19820	17883	13378	74060
2008	BSWN	Jul-Dec, 2008	26840	22575	19765	17310	13255	72905	26840	22575	19765	17310	13255	72905
2008	BSWN	Jan-Jun, 2008	26115	21765	19655	16165	13010	70595	26543	22093	19715	16625	13293	71725
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
2009	BSAL	Jan-Jun, 2009	16690	13620	11240	9030	6760	40650	17065	13785	11325	9375	6795	41280
2008	BSAL	Jul-Dec, 2008	16690	13620	11240	9030	6760	40650	16690	13620	11240	9030	6760	40650
2008	BSAL	Jan-Jun, 2008	15940	13290	11070	8340	6690	39390	16225	13435	11105	8590	6855	39985
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	Jan-Jun, 2006		12610	10670	7610		30890		12610	10670	7610		30890
2005	BSAL	Jul-Dec, 2005		12685	11295	8625		32605		12685	11295	8625		32605
2009	BSCM	Jan-Jun, 2009	16580	13655	11980	10175	7680	43490	16888	13845	12060	10520	7775	44200
2008	BSCM	Jul-Dec, 2008	16580	13655	11980	10175	7680	43490	16580	13655	11980	10175	7680	43490
2008	BSCM	Jan-Jun, 2008	15965	13275	11820	9485	7490	42070	16320	13423	11895	9740	7718	42775
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
2009	BSM	Jan-Jun, 2009	24770	22125	19195	16860	13880	72060	25013	22488	19320	17340	13980	73128
2008	BSM	Jul-Dec, 2008	24770	22125	19195	16860	13880	72060	24770	22125	19195	16860	13880	72060
2008	BSM	Jan-Jun, 2008	24285	21400	18945	15900	13680	69925	24633	21810	18943	16323	13935	71010
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

*Note: 45-69 populations presented from Jul-Dec, 2006 following programme age extension. For previous 6 month periods 50-64 year populations are presented.

			Annual Census projection estimates						Smoothed 6 monthly population estimates					
Year	Lead Provider	Reporting period	45-49	50-54	55-59	60-64	65-69	50-69*	45-49	50-54	55-59	60-64	65-69	50-69*
2009	BSCtoC	Jan-Jun, 2009	20885	18320	16255	14005	11685	60265	21065	18498	16305	14398	11745	60945
2008	BSCtoC	Jul-Dec, 2008	20885	18320	16255	14005	11685	60265	20885	18320	16255	14005	11685	60265
2008	BSCtoC	Jan-Jun, 2008	20525	17965	16155	13220	11565	58905	20770	18230	16138	13538	11783	59688
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
2009	BSC	Jan-Jun, 2009	18125	14855	13075	11145	8650	47725	18415	15020	13038	11550	8728	48335
2008	BSC	Jul-Dec, 2008	18125	14855	13075	11145	8650	47725	18125	14855	13075	11145	8650	47725
2008	BSC	Jan-Jun, 2008	17545	14525	13150	10335	8495	46505	17843	14675	13125	10605	8655	47060
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
2009	BSSL	Jan-Jun, 2009	27320	24460	22175	19025	14995	80655	27503	24768	22240	19700	15103	81810
2008	BSSL	Jul-Dec, 2008	27320	24460	22175	19025	14995	80655	27320	24460	22175	19025	14995	80655
2008	BSSL	Jan-Jun, 2008	26955	23845	22045	17675	14780	78345	27288	24120	22095	18160	15105	79480
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

			Annual Census projection estimates						Smoothed 6 monthly population estimates					
Year	Lead Provider	Reporting period	45-49	50-54	55-59	60-64	65-69	50-69*	45-49	50-54	55-59	60-64	65-69	50-69*
2009	BSHC	Jan-Jun, 2009	11255	9840	8690	7545	6250	32325	11293	9993	8653	7790	6258	32693
2008	BSHC	Jul-Dec, 2008	11255	9840	8690	7545	6250	32325	11255	9840	8690	7545	6250	32325
2008	BSHC	Jan-Jun, 2008	11180	9535	8765	7055	6235	31590	11325	9585	8768	7248	6368	31968
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
2009	BSA Total	Jan-Jun, 2009	162465	139450	122375	105095	83155	450075	16444	141375	122760	10855	83760	456450
2008	BSA Total	Jul-Dec, 2008	162465	139450	122375	105095	83155	450075	16246	139450	122375	10509	83155	450075
2008	BSA Total	Jan-Jun, 2008	158510	135600	121605	98175	81945	437325	16094	137370	121783	10082	83710	443690
2007	BSA Total	Jul-Dec, 2007	158510	135600	121605	98175	81945	437325	15851	135600	121605	98175	81945	437325
2007	BSA Total	Jan-Jun, 2007	153640	132060	121250	92870	78415	424595	15607	133830	121428	95523	80180	430960
2006	BSA Total	Jul-Dec, 2006	153640	132060	121250	92870	78415	424595	15364	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: 45-69 populations presented from Jul-Dec, 2006 following programme age extension. For previous 6 month periods 50-64 year populations are presented.

APPENDIX B: POPULATION DENOMINATORS BY ETHNIC GROUP

Year	Lead Provider	Report period	Annual Census projection estimates						Smoothed 6 monthly population estimates					
			45-49			50-69*			45-49			50-69*		
			Maori	Pacific	Other	Maori	Pacific	Other	Maori	Pacific	Other	Maori	Pacific	Other
2009	BSWN	Jan-Jun, 2009	3400	1210	22230	6670	2585	63650	3500	1243	22460	6790	2655	64615
2008	BSWN	Jul-Dec, 2008	3400	1210	22230	6670	2585	63650	3400	1210	22230	6670	2585	63650
2008	BSWN	Jan-Jun, 2008	3200	1145	21770	6430	2445	61720	3300	1178	22000	6550	2515	62685
2007	BSWN	Jul-Dec, 2007	3200	1145	21770	6430	2445	61720	3200	1145	21770	6430	2445	61720
2007	BSWN	Jan-Jun,2007	3020	1080	21160	6180	2305	59850	3110	1113	21465	6180	2305	59850
2006	BSWN	Jul-Dec, 2006	3020	1080	21160	6180	2305	59850	3020	1080	21160	6180	2305	59850
2006	BSWN	Jan-Jun, 2006				8730	3195	78490				8730	3195	78490
2009	BSAL	Jan-Jun, 2009	1160	1710	13820	2560	3550	34540	1190	1750	3600	2615	3600	35065
2008	BSAL	Jul-Dec, 2008	1160	1710	13820	2560	3550	34540	1160	1710	13820	2560	3550	34540
2008	BSAL	Jan-Jun, 2008	1100	1630	13210	2450	3450	33490	1130	1670	13515	2505	3500	34015
2007	BSAL	Jul-Dec, 2007	1100	1630	13210	2450	3450	33490	1100	1630	13210	2450	3450	33490
2007	BSAL	Jan-Jun, 2007	1070	1550	12750	2360	3360	32480	1085	1590	12980	2360	3360	32480
2006	BSAL	Jul-Dec, 2006	1070	1550	12750	2360	3360	32480	1070	1550	12750	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
2009	BSCM	Jan-Jun, 2009	2350	2670	11560	4750	5800	32940	2415	2743	11730	4850	5945	33405
2008	BSCM	Jul-Dec, 2008	2350	2670	11560	4750	5800	32940	2350	2670	11560	4750	5800	32940
2008	BSCM	Jan-Jun, 2008	2220	2525	11220	4550	5510	32010	2285	2598	11390	4650	5655	32475
2007	BSCM	Jul-Dec, 2007	2220	2525	11220	4550	5510	32010	2220	2525	11220	4550	5510	32010
2007	BSCM	Jan-Jun, 2007	2110	2365	10780	4330	5280	31050	2165	2445	11000	4330	5280	31050
2006	BSCM	Jul-Dec, 2006	2110	2365	10780	4330	5280	2365	2110	2365	10780	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
2009	BSM	Jan-Jun, 2009	5230	310	19230	11140	750	60170	5340	293	19380	11400	768	60960
2008	BSM	Jul-Dec, 2008	5230	310	19230	11140	750	60170	5230	310	19230	11140	750	60170
2008	BSM	Jan-Jun, 2008	5010	345	18930	10620	715	58590	5120	328	19080	10880	733	59380
2007	BSM	Jul-Dec, 2007	5010	345	18930	10620	715	58590	5010	345	18930	10620	715	58590
2007	BSM	Jan-Jun, 2007	4850	320	18420	10050	685	57020	4930	333	18675	10050	685	57020
2006	BSM	Jul-Dec, 2006	4850	320	18420	10050	685	57020	4850	320	18420	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

*Note: 45-69 populations presented from Jul-Dec, 2006 following programme age extension. 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					
			45-49			50-69*			45-49			50-69*		
			Maori	Pacific	Other	Maori	Pacific	Other	Maori	Pacific	Other	Maori	Pacific	Other
2009	BSCtoC	Jan-Jun, 2009	4075	310	16500	8270	635	51360	4190	310	16565	8400	658	51888
2008	BSCtoC	Jul-Dec, 2008	4075	310	16500	8270	635	51360	4075	310	16500	8270	635	51360
2008	BSCtoC	Jan-Jun, 2008	3845	310	16370	8010	590	50305	3960	310	16435	8140	613	50833
2007	BSCtoC	Jul-Dec, 2007	3845	310	16370	8010	590	50305	3845	310	16370	8010	590	50305
2007	BSCtoC	Jan-Jun, 2007	3630	295	16110	7690	560	49090	3738	303	16240	7690	560	49090
2006	BSCtoC	Jul-Dec, 2006	3630	295	16110	7690	560	49090	3630	295	16110	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
2009	BSC	Jan-Jun, 2009	2015	970	15140	3640	2385	41700	2070	990	15355	3725	2435	42175
2008	BSC	Jul-Dec, 2008	2015	970	15140	3640	2385	41700	2015	970	15140	3640	2385	41700
2008	BSC	Jan-Jun, 2008	1905	930	14710	3470	2285	40750	1960	950	14925	3555	2335	41225
2007	BSC	Jul-Dec, 2007	1905	930	14710	3470	2285	40750	1905	930	14710	3470	2285	40750
2007	BSC	Jan-Jun,2007	1785	905	14260	3260	2195	39940	1845	918	14485	3260	2195	39940
2006	BSC	Jul-Dec, 2006	1785	905	14260	3260	2195	39940	1785	905	14260	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
2009	BSSL	Jan-Jun, 2009	1545	305	25470	3070	565	77020	1565	318	25620	3175	575	78060
2008	BSSL	Jul-Dec, 2008	1545	305	25470	3070	565	77020	1545	305	25470	3070	565	77020
2008	BSSL	Jan-Jun, 2008	1505	280	25170	2860	545	74940	1525	293	25320	2965	555	75980
2007	BSSL	Jul-Dec, 2007	1505	280	25170	2860	545	74940	1505	280	25170	2860	545	74940
2007	BSSL	Jan-Jun,2007	1385	255	24650	2725	510	72840	1445	268	24910	2725	510	72840
2006	BSSL	Jul-Dec, 2006	1385	255	24650	2725	510	72840	1385	255	24650	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: 45-69 populations presented from Jul-Dec, 2006 following programme age extension. 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					
			45-49			50-69*			45-49			50-69*		
			Maori	Pacific	Other	Maori	Pacific	Other	Maori	Pacific	Other	Maori	Pacific	Other
2009	BSHC	Jan-Jun, 2009	720	75	10460	1315	150	30860	745	73	10475	1360	153	31180
2008	BSHC	Jul-Dec, 2008	720	75	10460	1315	150	30860	720	75	10460	1315	150	30860
2008	BSHC	Jan-Jun, 2008	670	80	10430	1225	145	30220	695	78	10445	1270	148	30540
2007	BSHC	Jul-Dec, 2007	670	80	10430	1225	145	30220	670	80	10430	1225	145	30220
2007	BSHC	Jan-Jun, 2007	615	75	10200	1170	155	29510	643	78	10315	1170	155	29510
2006	BSHC	Jul-Dec, 2006	615	75	10200	1170	155	29510	615	75	10200	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
2009	BSA Total	Jan-Jun, 2009	20495	7560	134410	41415	16420	392240	21015	7718	135710	42315	16788	397348
2008	BSA Total	Jul-Dec, 2008	20495	7560	134410	41415	16420	392240	20495	7560	134410	41415	16420	392240
2008	BSA Total	Jan-Jun, 2008	19455	7245	131810	39615	15685	382025	19975	7403	133110	40515	16053	387133
2007	BSA Total	Jul-Dec, 2007	19455	7245	131810	39615	15685	382025	19455	7245	131810	39615	15685	382025
2007	BSA Total	Jan-Jun, 2007	18465	6845	128330	37765	15050	371780	18960	7045	130070	37765	15050	371780
2006	BSA Total	Jul-Dec, 2006	18465	6845	128330	37765	15050	371780	18465	6845	128330	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: 45-69 populations presented from Jul-Dec, 2006 following programme age extension. 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 in instances where lesions are benign.

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>2cm (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.

Smoothed 6 monthly population estimates
Populations for 6 month periods are estimated by averaging populations from the preceding, current and succeeding calendar year in order to provide more accurate population denominators for 6 monthly periods (and multiples of these) for use in calculations of population rates, such as coverage.

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

BS